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PO Box 20336
Charleston, SC 29413-0336
843-414-1040
843-414-0155 fax

MEMORANDUM

TO: Ms. Linda Tucker
FROM: Kirby Marshall
COPY: Mr. Douglas Kerr
DATE: October 27, 2015
RE: Isle of Palms Marina – Comprehensive Redevelopment Master Plan

Below is a summary of comments from the Project Kickoff and Stakeholder meetings held September 10, 2015 on the Isle of Palms. These meetings were facilitated by ATM and included several key groups: City Staff, the Planning Commission, the City Council, Marina Tenants, and Neighbors/Citizens. Subsequent to these meetings we met with the restaurateur and the marina manager and received additional input. We have also developed a website with a portal for visitors to provide additional comments.

The information presented below has been summarized to provide some level of confidentiality to those who have offered comments. Additionally, a summary of comment frequency is provided.

GROUP A

- Upland issues have become critical. The site has grown for fifteen years without any planning. Pedestrians use the site more and more and it's lucky there hasn't been a major accident.
- Consider pedestrian access along southern property line.
- Pedestrian/bike access should be safe and direct to the places pedestrians want to go so they don't inherently want to cross in front of parking/traffic areas.
- Consideration should be given to separate golf-cart access as well.
- Entrance at 41st Avenue is a blind spot and you can't see the "do not enter" sign.
- There is a lot of overall confusion to the site.
- Distance to the restrooms on the site from various points is an issue.
- The marina and other traffic puts a strain on the restaurant's restrooms.
- The marina tenant's restrooms should remain segregated.
- Separate/more public and private (marina tenants, restaurant, etc.) restrooms should be considered.
- A centralized reception/signage area could help to direct traffic (pedestrian and vehicles).
- Consider piping the ditch of 41st up to fire station for improved off-street parking.
- Consider having 41st street past the fire station the responsibility of the marina operator. It is reportedly City-controlled.

- Employees have to park offsite and it's a long walk without any designated walkways.
- The Restaurant has 60-65 employees per day in the high season.
- Watersports has 22 employees plus 3 managers.
- Consideration may be given to using a shuttle.
- Wild Dunes appears to have an under-utilized parking lot. We may consider opportunities to take advantage of this nearby parking.
- Dewees' facilities have fewer available parking spaces.
- Employees are at the site all day taking up a space, customers cycle through.
- Offsite kiosk and scheduled shuttles at other popular areas (with ample parking) could help bring in additional customers and help parking on site.
- It's important to attract residents during the off-season to keep businesses operating/profitable.
- Kids and families need to feel safe when coming to the site.
- Consideration may be given to using parking areas for special events in the off season (car shows, art shows, farmer's markets, etc.).
- The waterfront area is used for parking and trash pickup right now. This valuable waterfront is severely underutilized.
- The layout of the T-dock along ICWW is not efficient.
- A boardwalk connecting all the water frontage was mentioned as a potential element of the redevelopment.
- Consideration should be given to more businesses and restaurants to create "good competition" which will provide more opportunities for culture and a unique atmosphere for locals.
- More people are utilizing non-motorized modes of transportation both on and off the water. It's dangerous to mix them with motored vehicles.
- 30% of Coastal Expedition's business is from Wild Dunes.
- Kids love boats and want to come to the marina.
- Drystack is viewed favorably.
- The Inn idea from the older plan could be a good idea/component of the redevelopment.
- During the winter the no wake zone is not in effect in front of the marina.
- Hilton Head was mentioned several times with regard to "feel/atmosphere".

GROUP B

- Concerns were voiced over potential noise associated with drystack operations.
- Property owner next to Watersports Dock concerned about the noise and impacts to his quality of life and land value.
- Citizens may not necessarily want a drystack.
- Valet parking goes all the way to 30th Avenue during high season. Question whether this is in violation of current ordinances.
- The parking on the street has gotten worse the past few years.
- Concerns were stated over public safety and emergency vehicle access.
- Comments regarding the use of the boat ramp and designation for island residents. Residents often don't even try to put in on weekends because it's too busy with non-residents. Residents should have at least 51% of the usage.
- Residents feel like they can't use the marina and it's "their" marina.

- Residents are worried that a drystack will only increase traffic on both land and water.
- Concerns voiced over occupancy of the restaurant and the required number of parking spaces for customers and employees.
- Launch rates should be much higher to discourage non-residents from using the ramp and offset costs of having fewer users.
- Comment that "Jet Ski docks make \$18k a year" which, some feel, "isn't worth the impacts they cause."
- The ferry operation to Dewees is reported to be impacted by the Jet Ski business
- Parking spaces at the marina/store/restaurant shouldn't be reserved by individuals.
- Greenspace, paddleboarding, waterfront park would be nice.
- Perhaps the focus should be on minimizing usage rather than fitting a certain amount of activity into the site.
- There is an area that floods by the fire station (on 41st Avenue) that should be addressed during site redevelopment.

GROUP C

- Parking is only bad during the summer/high season.
- Docks on the Intracoastal may be underutilized. Especially at the "T-head" dock.
- The AIWW silts in regularly according to residents.
- There may be an opportunity to bring in more transient boaters but that is counter to improving the area for resident use.
- Consideration may be given to making dry stack available only for land owners on the island.
- The main purpose of purchasing the property was to maintain water access for residents, and that's getting lost.
- Offering more open space may encourage residents to visit/use the facility.
- There is a need for more, dedicated golf cart parking.
- The upland fueling operation is considered an important asset for the City and residents. It's the only source of non-ethanol fuel nearby and provides piece of mind that there are two (2) fueling facilities in the event of an emergency.
- The store is a meeting place for residents and is considered beneficial.
- Ramp usage may be controlled through targeted rates/permits.
- Separate human-powered and motorized launches.
- Drystack may be successful but could exacerbate parking issues.
- Phased improvements should be considered.
- More open space would encourage residents to visit and enjoy the site.

GROUP D

- Parking at the store can block through traffic/access for emergency vehicles.
- An in-water slip for fire boat (20' Pioneer) would be welcomed if it could be secured and protected from wake.
- Docks need to be accessible with stretcher/backboard.
- Possible emergency lane for first responders

- A boathouse (for fire boat) would be ideal.
- Separate human-powered and motorized launch areas are needed for safety
- Signs are too low (Stop, Parking, etc.) and should be per MUTCD (Manual for Uniform Traffic Control Devices, SCDOT).
- Cars often overflow onto the street. These vehicles block the signage further.
- The signage on the site is very confusing.
- The idea of sharing launch facilities with Dewees was mentioned.
- Speed bumps are greatly disliked/discouraged on the Island.
- Cars parked on 41st Avenue can block long truck/trailers that are trying to turn out of the parking lot.
- Question regarding leave or replace buildings was brought up.
- The corner of the property where the restaurant is located is a very important piece of land and should be capitalized upon.
- Underground infrastructure and utilities would be great but it may be expensive.
- The site has evolved over time – it's not planned (i.e. – organic) and is an eyesore.
- The 28th Avenue recreational center has been very successful and was offered as a point of reference.
- The idea of "Bohemian" vs "Resort" experiences were discussed. The general consensus was that residents don't want a resort-type experience.
- Kids love to play in the sand near the ramp which is currently part of the restaurant.
- An opportunity for kids/families to fish would be great. Right now people fish anyway but there is no designated space and it's dangerous for them to wander the property.
- The need for community space was brought up several times.
- A raised wooden deck/pavilion was brought up in reference to community space.
- A previous concept showed an Inn on the property. This idea was never well received and may not be possible through zoning.
- The old plan included a Yacht Club concept which was not well-received by residents.
- The adjacent channel is dredged every 7 years.
- A lot of people ride bikes and bring golf carts to the marina (more golf carts than bikes). There is only one bike rack on the property. LSVs can drive at night but are not as popular as golf carts.

GROUP E

- The marina property is arguably the most valuable piece of property on the island.
- The buildings are commented to be in a state of disrepair.
- There needs to be a balance with regard to the level of activity on the site. The activity that is there currently negatively impacts residents without providing mitigating benefits.
- The number of ramp permits for non-residents vs. residents was discussed.
- The marina is paid for by the tourism fund and lessees on the property. The payment on the note does not come directly from residents/taxes.

- The possibility of “merging” complementing uses between the marina and the adjacent Dewees facilities was discussed.
- The only place for kayaks to launch is at the ramp. This is in a high-traffic area and is in direct conflict with motorized vessel launch.
- Restaurant employees are parking offsite (down 41st, typ.) which negatively impacts residents.
- The potential for additional onsite and nearby/offsite parking was discussed.
- It was mentioned that the marina should be a destination that residents should be able to visit without feeling like they have to buy anything.
- The marina and overall site are thought to be “haphazard” by some.
- Many residents don’t utilize the marina or the boat storage yard. As such, they don’t view the site as a valuable asset or positive contributor to their quality of life.
- Regular vehicle parking does not appear to be as regulated as trailer parking.
- Shuttle for offsite parking was discussed.
- Generally speaking, it was discussed that residents do not like the level of Jet Ski activity in the Waterway.

Comment Summary

The following is general summary of key comment frequency.

14	On-site parking concerns
10	Street parking concerns
9	Provide benefits for residents
8	Community/open space
7	Pedestrian access/safety
5	Unplanned site
5	Potential/Interest in sharing facilities with Dewees or Wild Dunes
5	Separate launch for non-motorized vessels
5	Limit non-resident ramp permits
4	Emergency access
4	Signage improvements
4	Jet Ski/Watersports concerns
4	Traffic flow
4	Access to restrooms
3	Children's play area
3	Bikes/golf cart access/parking
3	Underutilized Intracoastal Dock
3	Drystack (positive)
3	Drystack (negative)
3	Consider off-season business
2	Dredging concerns
2	Emergency vessel (boat) storage
2	Replace buildings
2	Boardwalk/site connectivity
1	No speed bumps
1	Capitalize on corner of property (restaurant site)
1	Bury utilities
1	Casual feel (not resort) (positive)
1	Resort feel/quality (positive)
1	Fishing area
1	On-site inn (positive)
1	On-site inn (negative)
1	Yacht Club (negative)
1	Consider the value of the property
1	Self-sustaining (financially)
1	Transient boating improvements
1	Upland fueling (positive)
1	Consider project phasing
1	Consider positive impacts of Wild Dunes visitation
1	Consider impacts of no wake zone (and annual lifting of this zone)
1	Consider stormwater

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MEMORANDUM

TO: Ms. Linda Tucker
FROM: Kirby Marshall
COPY: Mr. Douglas Kerr
DATE: February 15, 2016
RE: Isle of Palms Marina – Comprehensive Redevelopment Master Plan

Below is a summary of comments received through the website established for the above-referenced project. A total of 23 comments have been received through the site from November 10, 2015 – February 15, 2016.

Comment Summary

The following is general summary of key topic frequency.

6	General Information Requests
5	Drystack Concerns
5	Parking and Traffic Concerns
3	Noise Concerns
3	Resident Enjoyment/Use
2	Limit Boat Ramp Use
2	Public Park
2	Study Financial Impacts
2	Transparency of Public Comments
1	Consider Impact on Taxes
1	Consider Required Maintenance
1	Request for Drystack Storage
1	Research Grant Funding Opportunities

Individual comments are attached hereto for reference.

Additionally, we have received and reviewed a letter from Ms. Elizabeth Campsen related to the proposed project. This letter is also attached for reference.

Attachments

IOP Marina Redevelopment Feedback

Date: November 10, 2015

Name: Stuart Colman

Email: stucolman10@gmail.com

Comments:

Will the residents be able to view the comments made in this forum? I think we should be able to see the comments of our neighbors and the principals in this project.

IOP Marina Redevelopment Feedback

Date: November 11, 2015

Name: Elizabeth Campsen

Email: ecampsen@gmail.com

Comments:

I would like the City to investigate the possibility of receiving a conservation grant or grants for the protection and preservation of the entire marina site, not only for the residents, but for the County and State at large. It is my understanding that the Town of Edisto received \$1 million for a similar plan. The Comprehensive plan highlights the City's desire to add green space to the island and that section of the island has none. It also highlights the City's desire to protect the quality of life of the residents and I agree that taking a hard look at this portion of the island is necessary to ensure that right. I believe that site would be a perfect location for a passive park, that could also allow for limited marina and restaurant services primarily benefiting the residents. Upon review of the Comprehensive Plan, the Zoning regulations and the Codes & Ordinances of the IOP, I believe it is clear that area is intended to provide "a less densely constructed, economically healthy business environment with family-oriented businesses directed primarily to island residents in buildings designed and sited to accommodate automobile and pedestrian traffic". This theme is carried throughout the various city documents. I think we have stepped away from that based upon the traffic, noise and parking issues present at the site and truly hope that the City will look long and hard at reestablishing the area as a site for the residents who voted to purchase it. The money potentially received from a conservation grant could help pay down the bonds and I think the citizens should have the opportunity to decide whether they would be willing to pay some sort of one-time assessment or limited tax increase in order to regain financial control of the site, thereby dedicating it primarily to the residents. At that point, I believe, the traffic, noise and parking issues would take care of themselves. In the alternative, the City may consider offering the option to the residents to turn the entire site into a private yacht and dinner club for island residents, which would also offer a limited number of "off-island" memberships. This may allow us to work with the existing leaseholders for the continuation of similar - though not identical - services. It would also solve the traffic, parking and noise issues. In no instance do I think a dry-stack should be built. The facility currently violates parking regulations on an almost daily basis and a reduction from the current 60 spaces allotted for boats and trailers to the proposed 17 spaces would only serve to compound the problem. I appreciate any consideration given to these comments.

IOP Marina Redevelopment Feedback

Date: November 11, 2015

Name: Phillip W Smith

Email: phillip@phillipsmithcontractor.com

Comments:

please keep me informed thru your portal as progress is made. I would also like to attend all meetings in regards to the marina. I was at your meeting a few months ago and gave them my e mail address but have not received any emails as of today. This was forwarded to me from friend.....Thank you

IOP Marina Redevelopment Feedback

Date: November 11, 2015

Name: Jeff Simon

Email: jsimon294@hotmail.com

Comments:

There are two significant points I feel need to be included in any suggested "improvements" to the marina area. The first is: The marina was purchased by the city as a resource to the residents of the island so the citizens could control the uses of this area. While we enjoy having a restaurant, a marina store and a well maintained boat ramp, these are offsets to the cost of operating the marina and not created to be a city franchised profit center. The operation of each of these must be scaled appropriately to the surrounding residential neighborhoods. 2. There has been discussion of a dry stack marina for 20+ years. It is an industrial operation (size, noise and impact) that is not appropriate for inclusion in this area that abutts residential property on most sides. It is inappropriate based on flood and hurricane requirements as well. It should be ruled out as a possibility early in the discussion.

IOP Marina Redevelopment Feedback

Date: November 11, 2015

Name: Cathy Smith

Email: pwsgc@bellsouth.net

Comments:

As a long time resident and neighbor of the Marina, i have watched it change greatly over the past 16 years. In redeveloping the marina the City needs to make sure they follow the guidelines and ordinances they put in place to protect the residents of the Island who are ultimately the Owners and the City planners our stewards. Not modify these existing ordinances to accommodate the businesses that are leasing the marina space at the expense of the adjoining properties and island residents. Allowing the Morgan Creek Grill to turn the outside space into a live music venue to supplement their revenue because the food they serve doesn't attract sufficient clientele to pay their bills is wrong. Business fail and new ones come in. That is simple economics. Allowing the Marina to self more boat launch permits than they have parking and creating a safety hazard and allowing these vehicles to break the city's parking rules and then going to my guests car in front of my home and giving them a ticket is unconscionable. we have become so focused on revenue and tourism that we have devalued our property values. We are no longer a family island. We are a transient, tourism driven, second home community.

IOP Marina Redevelopment Feedback

Date: November 12, 2015

Name: Chanell Moore

Email: chanell@charter.net

Comments:

As a property owner at Wild Dunes Yacht Harbor (slip) and Goat Island, I wonder how the re-development will impact our properties and taxes. We live in Greenville, SC but use our coastal home weekly. Can I please be added to the stakeholder list.



IOP Marina Redevelopment Feedback

Date: November 13, 2015

Name: Beatrice Love

Email: badlove1@att.net

Comments:

I am against dry stack storage. It will be much too noisy for the neighborhood. Also fear it will add to the parking problem.



IOP Marina Redevelopment Feedback

Date: November 13, 2015

Name: Robert G. McCoy

Email: robertmccoy48@gmail.com

Comments:

My main concern would be the construction of dry stack storage. 1. The noise generated by equipment necessary for stacking (the constant "beeping") The present noise ordinance has restricted Morgan Creek Grill's outdoor music. The noise level will definitely be a factor for quality of life of nearby home owners. 2. Parking: already a problem, especially on weekends when many people boat. The dry stack would certainly increase the number of boats from the few that are stored in the lot next to the fire station. Consequently the number of cars looking for nearby parking. This will be a major factor between Memorial Day and Labor Day when the new parking restrictions are applied (no street parking except for island residents with proper residential parking stickers) 3. Do we really want to offer storage to other than city residents? We have all seen the traffic at the Shem Creek public landing that spills out into the nearby neighborhoods.. Robert G. McCoy 16 43rd Ave IOP

IOP Marina Redevelopment Feedback

Date: November 14, 2015

Name: Harold Mackey

Email: hamackey@gmail.com

Comments:

You have to limit the number of boats and trailers that land at this marina. The empty trailers are now on 41st Avenue and Waterway. I know the landing is a big draw, but we simply cannot maintain that level of capacity. A drys-tack must accommodate parked cars also. Thanks,



IOP Marina Redevelopment Feedback



Date: November 16, 2015

Name: Josh Trowman

Email: jptsails@hotmail.com

Comments:

Sign me up for updates please



IOP Marina Redevelopment Feedback

Date: November 18, 2015

Name: Stuart Colman

Email: stucolman10@gmail.com

Comments:

The Limited Conditions Assessment (DRAFT) points out numerous deficiencies at the present IOP Marina. These indicate a lack of maintenance at the Marina. I don't know who is responsible for these maintenance items, but it seems to me that many of these deficiencies demand immediate resolution. The safety issues identified, put the Marina management and the City liable for injury claims, especially since this document has brought them to light. The responsible party (City or Marina management) should begin a corrective action process beginning with the most serious safety issues.

IOP Marina Redevelopment Feedback

Date: November 23, 2015

Name: William Warner

Email: wpwdelta@gmail.com

Comments:

I believe we should improve the access and parking by way of a new entrance and a paved parking lot. Boat and trailer storage should be eliminated as the land is too valuable and IOP needs to generate the most \$ possible from each square foot. We need to understand the financial impact of any proposal..before / during / after Thanks !

IOP Marina Redevelopment Feedback

Date: November 25, 2015

Name: Stuart Colman

Email: stucolman10@gmail.com

Comments:

The IOP Marina is definitely in need of a make-over. The findings by the contractor, ATM, has shown the need to correct many existing problems including deteriorating docks and mechanicals, as well as poor parking and traffic flow. However, I do not see that dry-stack boat storage will enhance the marina's operation. Sure it will increase the bottom line for the marina if it can be built to a scale that will offset the cost of construction. There are issues that need to be addressed and brought to the residents. 1) How much of the existing site will dry-stack occupy? 2) Where will the boats be placed in the water (displacing existing dock space)? 3) How much dockage will be needed to stage the boats, removing dock space for other customers? 4) How much space will be needed for a maintenance area, since boats will have to be repaired/maintained on-site. 5) How many parking spaces will be needed for people accessing their racked boats?

IOP Marina Redevelopment Feedback

Date: November 30, 2015

Name: Ted Kinghorn

Email: kinghorn.ted@gmail.com

Comments:

The property under study should ensure the best use of these assets and optimize the placement of future improvements. The financial viability should demonstrate a successful business case allowing for both property owner and tenants to achieve pay back of future improvements. Pedestrian use and designated access should be included in the plan.

IOP Marina Redevelopment Feedback

Date: December 19, 2015

Name: Larry Barrett

Email: Larry2960@aol.com

Comments:

Why would you improve the marina right after you gave the current tenants long term leases (without bidding). Parking in the surrounding neighborhood is awful. The original referendum for the purchase of the marina stated "For water access for the citizens of the Isle of Palms" not Charleston County. If this is forgotten, give it to the County. We were better off when this site was used as it once was, a garbage dump.



IOP Marina Redevelopment Feedback

Date: December 19, 2015


Name: Kent Chismar

Email: king1kc@yahoo.com

Comments:

I would like to keep informed about the project !





IOP Marina Redevelopment Feedback

Date: December 19, 2015

Name: Rhett Reidenbach

Email: rreidenbach@comcast.net

Comments:

If you have an e-mail list for regular updates I'd appreciate being added. Thanks, Rhett



IOP Marina Redevelopment Feedback

Date: December 19, 2015

Name: Jimmy Craven aka Bond

Email: jimmy.cravenjr@gmail.com

Comments:

Bring me a dry stack please. 26 ft center console at Seabreeze paying \$450 per month.

IOP Marina Redevelopment Feedback

Date: January 5, 2016

Name: Doug Harbin

Email: douglasharbin@gmail.com

Comments:

Is the marina redevelopment project ongoing? When will it be presented to council?



IOP Marina Redevelopment Feedback

Date: January 11, 2016

Name: Phil Robinson

Email: plrobinson77@gmail.com

Comments:

How can I find out the details of this IOP Marina Redevelopment Project?





IOP Marina Redevelopment Feedback

Date: January 15, 2016

Name: Jim Bethea

Email: jimbethea@AOL.com

Comments:

Area has become too busy in summer. If we have paid off this property, it is time to repurpose it for the benefits of the residents. Should it become a park?



IOP Marina Redevelopment Feedback

Date: February 4, 2016

Name: peter wright

Email: peterwright@comcast.net

Comments:

Firstly a question, how can I see the reports/drafts/plans you have completed for the City so far? Secondly ...no dry stack please! Any notion that this will reduce demand for slips and/or the launch ramp is, in my view, misguided. Such a structure would be visually intrusive, generate both noise and even further parking requirements which cannot be met. The City should not feel the need to shoulder the responsibility of catering for the explosive growth of Mt.Pleasant and Charleston generally. The clear priority should be to accommodate residents needs. Our marina is small and has a limit as to how many people/boats/cars/trailers it can accommodate. When it's full, it's full! We should not seek to densify by cramming more in. I would welcome further discussion. Thank you. Peter Wright

IOP Marina Redevelopment Feedback

Date: February 8, 2016

Name: Nancy B Mackey

Email: nbmackey@hotmail.com

Comments:

My concern is the dry stack. Has anyone thought of the ever constant "beep, beep, beep" from the forklift that lifts the boats in and out of a dry stack. That cannot be eliminated, as it is a necessary safety feature. GO to Daniel Island Marina. I did. The forklift motor and "Beep" could be heard quite a distance away. Also, there is some clanging of boats being installed into a dry stack. Noise carries on the island, especially with the elevated homes. Absolutely OPPOSED to a DRY STACK.

CAMPSEN

32 INTRACOASTAL COURT, ISLE OF PALMS, SC 29451
TELEPHONE: 843-509-5679

February 4, 2016

VIA EMAIL

Applied Technology & Management, Inc.
ATTN: Kirby Marshall and Justin Davis
941 Houston Northcutt Blvd; Suite 201
Mt. Pleasant, SC 29464

RE: ISLE OF PALMS MARINA RE-DEVELOPMENT
TMS# 571-08-00-007

Dear Messers Marshall and Davis:

Please allow this correspondence to serve as a reiteration of my most stringent objection to the use of any portion of the current Isle of Palms marina site for the development of a dry-stack facility. As we discussed in the meet and greet held last year, the site as it currently exists is a singularly commercial outpost (zoned GC-1) surrounded by single family residential neighborhoods (zoned SR-1). By copy of this letter, I am informing the City of my objections as well as they did not appear to have a representative present during the residential meet and greet and may therefore be unaware of the serious concerns raised by those present.

As discussed, the zoning regulations for SR-1 and GC-1 are in place to strengthen, support and enforce the IOP Comprehensive Plan, thereby creating a quiet, low-density area by minimizing the encroachment of commercial uses that generate noise, vibration, dust, etc. which are offensive to a family-oriented community. Specifically, Section 5.4.35(a)(1) reads as follows:

- (1) Purpose. The purpose of the GC-1 general commercial district is:
 - a. To encourage the development of a less densely constructed, economically healthy business environment with family-oriented businesses directed primarily to island residents in buildings designed and sited to accommodate automobile and pedestrian traffic.
 - b. To discourage uses which generate noise, vibration, glare, dust and odor or are offensive to the health, safety and morals of a residential, family-oriented community.

The Marina site is zoned GC-1 and is therefore obligated to adhere to these requirements as well as many other applicable requirements of this chapter and other City ordinances. As you can see, any business or businesses operating in the GC-1 zone are required to be (1) *less densely constructed*, (2) contain *family-oriented businesses* directed *primarily to island residents*, (3) located in buildings

Applied Technology & Management, Inc.
February 4, 2016
Page 2

designed to *accommodate automobile and pedestrian traffic* and which (4) *discourage uses which generate noise, vibration, glare, dust and odor*. The site as it currently exists violates some, if not all, of these requirements which I believe is why the City ultimately decided to hire your firm to analyze the site and propose various re-development options.

The addition of a dry-stack would only contribute to the multitude of problems the island deals with in relation to the site. The dry-stack would increase the noise pollution in our area, increase the traffic in our area and serve to reduce the already scarce on-site parking required, though not currently met, for the site. All of these issues already adversely affect our quality of life. I do not see how a dry-stack could be considered a "family-oriented business". Additionally, I do not believe that a dry-stack would be used, or frankly is even contemplated for use, in a way that is "primarily for island residents". You may recall that during our meeting, a good number of residents complained that they are already unable to launch their boats at the marina site due to the monopolization of the site by off-island residents. The marina operators have proven that they are either incapable or unwilling to monitor the influx of boats and trailers in a way that provides equal access to residents and non-residents alike. I am certain they would be similarly incapable of managing a dry-stack facility.

I would like to make note of the fact that the SC Department of Natural Resources has designated our section of the Intracoastal Waterway and Morgan Creek as the busiest section of water in South Carolina. The addition of anything that would increase the volume of boats, cars and noise would only serve to dump gas on an already burning fire. My husband and I were unfortunate enough to have a boat crash into our fixed pier a number of years ago. One passenger in that boat was in such critical condition she had to be airlifted from the golf course to the hospital. It was terrifying. I truly believe that anything the City can do to minimize the influx of boats and people to the site, thereby reducing the strain put on our section of the waterway and surrounding highland is an obligation it owes to its residents and the public at large as the congestion around the marina site has proven to be a significant public safety issue. The addition of a dry-stack would do the exact opposite.

After reading the Comprehensive Plan and all of the various ordinances related to the site and the businesses operating on it, it is my belief that the City should seek to re-develop the site in a way that serves to lower the density of it, not increase it. It is in the best interest of the City, the residents of the island and all residents of our State to treat this site and the neighborhoods, water and marshlands that surround it with great care as the area is a natural resource that could easily be damaged. I also understand from reading the minutes of various City meetings, that some consider the addition of the dry-stack an additional revenue stream which would help the marina operators remain current under their existing lease. The issue of revenue should not take precedence over quality of life and preservation of our natural resources. I know that the Town of Edisto Beach was able to secure a \$2,000,000.00 grant from the Conservation Bank in order to responsibly develop a marina located on Big Bay Creek. I sincerely hope that an option such as this is thoroughly

Applied Technology & Management, Inc.

February 4, 2016

Page 3

investigated as a way to protect and preserve the site for island residents and visitors in a much more controlled manner.

Finally, I would like to strongly recommend each person take a moment to consider whether they would appreciate a dry-stack, together with all of the noise and congestion associated with it, dropped into the middle of their neighborhood. As Dr. Dawson, a neighbor of mine, pointed out in the meet and greet, the OSHA requirement for a reverse signal alarm on the lift needed to place and remove each boat from a dry slip is mandatorily set at a level "audible above the surrounding noise level", which would only serve to exacerbate the noise issues currently being deliberated by the residents, the marina tenants and the City.

Please do not hesitate to contact me at (843)509-5679 should you have any questions or concerns. Thank you in advance for your thoughtful consideration of this issue as you work to finalize your proposal to the City.

Sincerely,



Elizabeth S. Campsen

cc: Mayor Cronin, the Isle of Palms City Council and the City Administrator

3

Limited Conditions Assessment

For the Isle of Palms Marina

Isle of Palms, South Carolina

Prepared by: Applied Technology & Management, Inc.
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Appendix

- Dock Area Figure
- Epic Engineering Utility Condition Assessment

Introduction

As part of a broader scope of services related to facility redevelopment master planning, Applied Technology & Management, Inc. (ATM) conducted a limited conditions assessment of key physical infrastructure at the Isle of Palms Marina. The goal of this effort was to identify the current general condition of the key structures and utilities onsite and generally assess remaining useful life and suitability for re-use in a redeveloped marina site. The assessment was limited to visual observation only and did not include materials testing, subsurface investigations, subaqueous assessment, etc. The following sections summarize of ATM's findings.

Key Structures

Floating Docks

The floating docks at the Isle of Palms Marina facility provide dockage for a variety of vessels, both on Morgan Creek and the Intracoastal Waterway. ATM conducted a basic condition assessment of the floating docks on the site, beginning with the docks on the south side of the property, adjacent to the Dewees Marina and then wrapping around the Morgan Creek Grill out onto the Intracoastal Waterway and ending at the Watersports Dock. Each dock section reviewed is labeled in the following sections (to correlate to the drawing provided in the Appendix).

Dock Area A

Dock Area A is designated as the floating docks nearest the southern edge of the property, adjacent to the Dewees Marina. This includes the fuel dock area and floating dock office.

This dock has floating timber frame construction and includes polytube flotation and basic timber decking. The dock is anchored with timber piling (along shore) and concrete piling (along outer fuel dock).

In general, the dock is aged and appears to be in fair condition, with several areas of concern noted:

- A number of loose connections exist between adjacent floating dock sections at the gangway landing area on the dock. This has caused a height differential in the walking surface between dock sections. This poses a potential trip hazard and is not compliant with the Americans with Disabilities Act (ADA).
- The alongshore dock section shows evidence of undulating dock framing that has caused “waves” in the walking surface of the dock. The decking on this portion of the dock is very worn and gaps up to 1.5 inches in the walking surface were observed (0.5 inch is the maximum allowable under ADA guidelines).
- The anchor piling of the alongshore portion of the dock was noted to be in good condition, but one pile guide is missing, which reduces the effectiveness of the overall dock anchorage system.
- The floating dock office appears to be in good, serviceable condition, but the connections between the floating dock that supports this structure and the adjacent floating docks appear to be stressed and/or compromised. Substantial height differentials in the walking surface were noted in this area.
- The outer fuel dock and concrete anchor piles appeared to be in fair condition at the time of ATM’s assessment. This dock also doubles as an overnight transient berthing area for vessels arriving after hours. Marina utilities, including the fuel distribution system, will be reviewed in a subsequent section of this report.

Other, minor items were noted, including missing pile guide rollers, minor separation of outer fender boards on the floating docks, etc. These items do not materially affect the current performance or estimated useful life of the overall dock system in this area.



Shore-Side Floating Dock (Note: wave in framing)



Transition to Floating Dock Office

Dock Area B

Dock Area B includes the floating docks along shore from the floating office to the south side of the boat ramp. The construction of this area is similar that of Area A (aging, timber-frame floating dock with polytub flotation and timber decking). In addition to side-tie dockage, however, this dock area also includes several long finger piers, which provide berthing space for a variety of vessels.

Several areas of concern were noted and include:

- The shore-parallel walkway exhibited a severe list (leaning) toward shore. This may be caused, in part, by the large amount of appurtenances located on this side of the dock (dock boxes, fish cleaning stations, etc.).



Shore-Parallel Main Walkway (Note: substantial landward listing)

- The anchor pilings on this dock consist of timber piles along shore and at the end of the finger piers. One concrete pile was noted at the finger pier closest to the floating fuel building. While the piles appear to be in fair or good condition, ATM did note a missing pile guide at one pile location along shore.
- The power pedestals serving the vessels along this dock are located on the shore-side of the shore-parallel dock. This necessitates the routing of utility cords across the walking surface of the dock and presents a potential trip hazard.



Power Cables Routed Across Main Walkway

- The gangways serving this dock, one near the floating fuel building and the other adjacent to the boat ramp, are in fair or poor condition and are not ADA compliant. In fact, the gangway adjacent to the floating fuel building presents users with a 10-inch vertical drop from the gangway walking surface to the dock walking surface. A similar drop is present at the gangway near the boat ramp.



Gangway Landing (Note: vertical transition from gangway to deck surface)

- The condition of the finger piers is generally poor, with areas of loose or separating waler boards, listing (in some cases severe), worn/loose decking, rusting/compromised connections, vessel impact damage, and overall instability common.
 - The fourth finger pier from the boat ramp has recently been repaired and appears to be in fair/good condition. In addition, the finger pier adjacent to the boat ramp in this dock area has recently been re-decked.
 - ATM noted that the loose decking boards observed appear to be due to severe degradation or rot of the underlying framing that forms the substrate for decking attachment. Without sound substrate, decking repairs (and other attachment to the framing) are difficult.
 - Of critical note is the condition of the finger pier adjacent to the boat ramp in this dock section. While recently re-decked, this finger exhibits a severe (5-inch) list away from the ramp. Further, the gangway that services this dock is in poor condition and provides somewhat treacherous access to this heavily used area of the marina (loose handrail, large vertical transition from the gangway down to the dock, tight walking space, etc.). ATM considers the condition of this gangway and floating dock to be a potential threat to the life and safety of marina and, in particular, boat ramp users.



Typical Finger Pier



Finger Pier/Boarding Dock

Dock Area C

Dock Area C refers to the floating docks to the north of the boat ramp along Morgan Creek. These docks include a few dedicated slips with finger piers, but mainly consist of two long side-tie berthing docks that provide mooring for a variety of vessels, including those of transient boaters. These docks are accessed via a gangway immediately adjacent to the north side of the boat ramp and via a secured (gate code) access point adjacent to Morgan Creek Grill.

These docks are of similar construction to the others observed at the Isle of Palms Marina, consisting of aged floating timber structures. Specific observations of note include the following.

- The gangway servicing the dock adjacent to the boat ramp in this area appears to be in fair/poor condition with some rot noted. In addition, there is a substantial vertical transition from the gangway to the floating dock.
- The finger pier/boarding dock adjacent to the boat ramp has recently been re-decked and partially re-framed.
- The decking of the adjacent, shore-parallel dock to the boat ramp finger pier/boarding dock is very worn. ATM understands that this area is used for small boat dockage and no utilities are provided.
- The larger dock that comprises the remainder of Dock Area C is accessed from a secure gate adjacent to the Morgan Creek Grill restaurant. This includes two key areas: an inner (landward) shore-parallel side tie dock and an outer side tie dock.

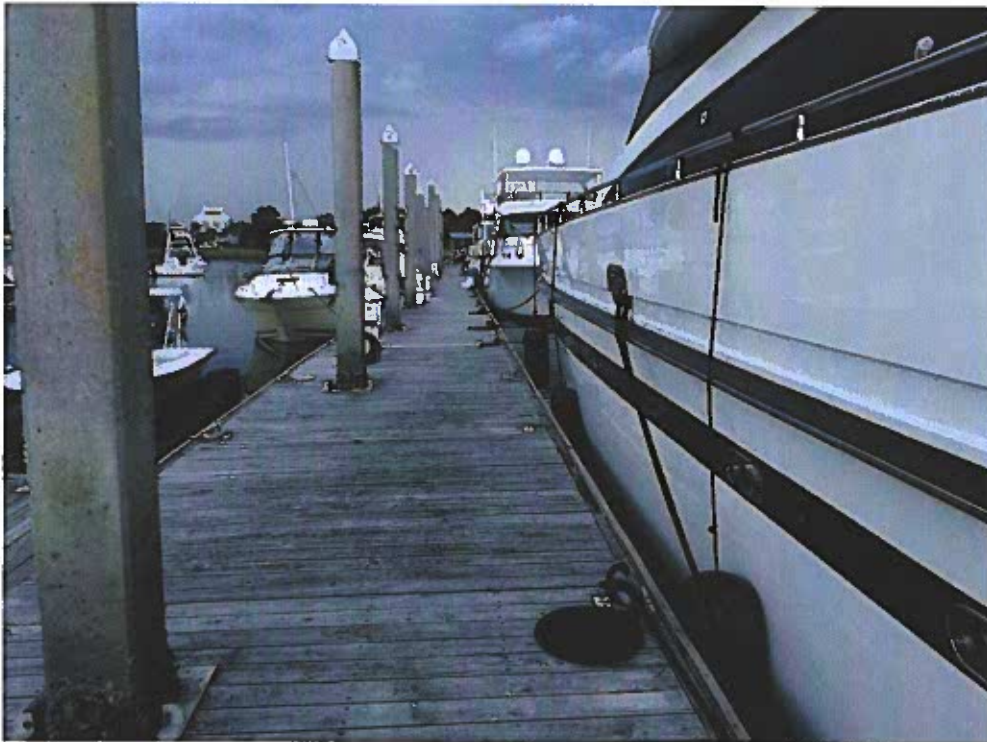


Gangway Landing and Re-Decked Dock Section



Access Gate

- Outer Dock – Dock Area C
 - The outer dock is accessed via an aluminum gangway that is in good condition. Marina personnel identified this as their ADA-accessible gangway.
 - A lone finger pier was observed on the dock section leading from the gangway out to the main outer dock run. This finger pier exhibited a severe list, had a missing pile guide, and was in generally poor condition.
 - This dock is anchored with concrete piling that appear to be in fair/good condition. A few missing pile guide rollers were noted.
 - The decking on this dock is aged and ATM noted some areas where it had been recently replaced.



Main Walkway Outer Dock

- The northern end of this dock protrudes out toward the Atlantic Intracoastal Waterway and is strongly affected by boat wake, particularly during the winter season when the no-wake designation for this area of the waterway is lifted. ATM observed some dock repairs in this area, including new walers, decking, etc. Rot and fungus growth on the northern end of this dock was still evident, likely caused by frequent wetting from passing vessel wakes.
- Inner Dock – Dock Area C
 - This dock is accessed via an aluminum gangway that is in good condition.

- ATM observed two displaced polytub flotation units (shore-side) at the base of the access gangway.



Terminus of Dock on Intracoastal Waterway



Displaced Polytub Flotation

- ATM also observed an ancillary dock section that had been fastened to the main dock walkway to provide wider access for a charter boat. This ancillary dock section was very unstable. A 2-inch gap in the walking surface was measured between this ancillary dock and the main dock walkway.
- ATM also observed framing failures on the outside inflection points where this dock is angled to the west.



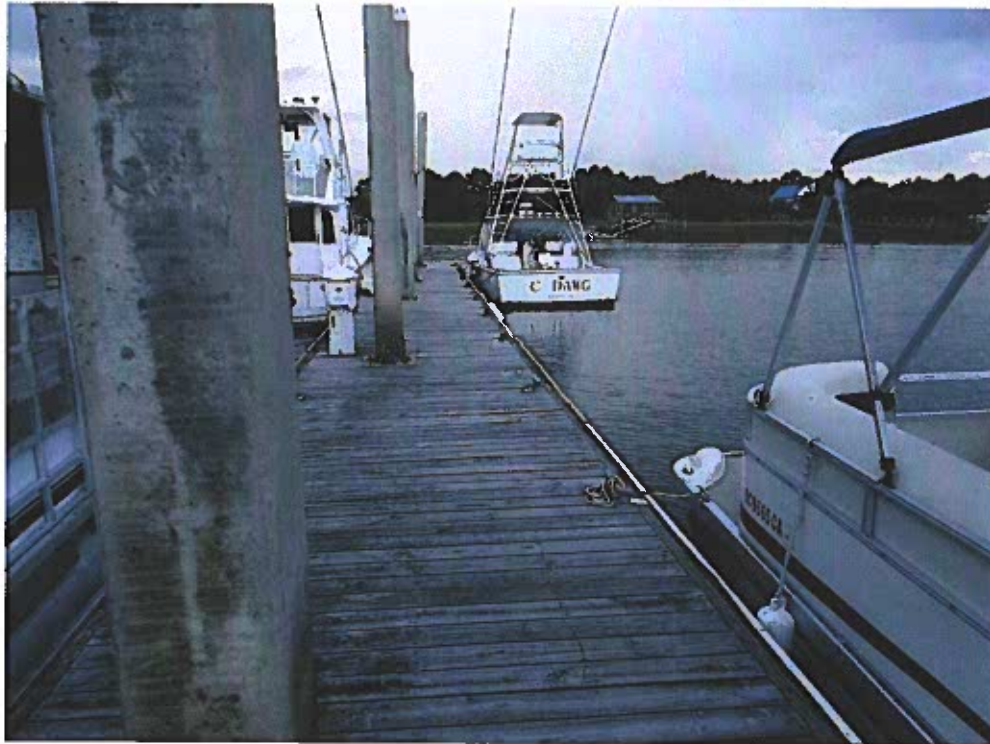
Ancillary Float and Gap



Framing Failure at Inflection Point

- A missing pile guide, worn pile guide rollers, and worn timber piles and dock framing were noted at pile locations.
- Additional displaced polytub floats were observed as was dock listing. Dock listing generally was observed from the angled portion of the dock to the northern terminus.
- Worn decking, damaged water boards, and damaged rub rail/bumper strips was typical.
- Some decking repair/replacement was noted on the northern terminus of this dock along the Intracoastal Waterway.

- The northern portion of this dock is anchored with concrete piling. These appeared to be in generally fair/good condition, although the northernmost piling on the dock was leaning substantially.



Typical Conditions and Listing Pile

Dock Area D

Dock Area D is known as the Intracoastal Dock, since it is located on the Intracoastal Waterway. This dock provides dockage for the Morgan Creek Grill and for the marina. Access is provided from shore via a fixed timber pier. In general, this dock is of similar construction, but newer, than others observed in Dock Areas A, B and C and in much better condition. Specific items of note include the following.

- A framed timber wedge is utilized in lieu of an affixed gangway transition plate. When not monitored, a gap develops between the wedge and the gangway, which can present a trip hazard.



Gangway Landing "Wedge"

- Substantial damage to the vinyl bumper strip around this dock was noted. While not a structural element, the rub strip can help prevent damage to both visiting vessels and the dock by providing a bumper between the two.



Bumper Strip Damage and Corroded Connection Hardware

- Moderately worn decking was observed in some locations on the dock.
- Some degradation of the connection hardware between the finger piers and main walkway was noted. This is likely caused by wake activity from the Intracoastal Waterway.
- Minor corrosion of connection hardware on the fixed timber access pier was noted. This is likely from tidal influences and wake activity/salt splash.

Dock Area E

Dock Area E is known as the Watersports Dock. Tidal Wave Watersports, a marina tenant that offers personal watercraft (PWC) rentals, parasailing, water skiing, and other activities, uses this dock as its base of operations.

This dock area consists of a lengthy fixed timber access pier that leads from shore to two floating dock sections. The inner section provides an area for the gangway landing and various rental equipment (life vests, etc.). The outer section provides dockage for PWCs (via drive-on jet floats) and general operations.



Fixed Timber Access Pier

ATM understands that this dock was renovated within the past 5 years. In general, the elements that comprise this dock area appear to be in good condition. A few areas of note include the following.

- The outer floating section exhibits a severe landward list. This may be due to the large storage boxes present on the docks or possibly the effects of the flotation of attached jet docks.



Severe Dock Listing

- The inner floating section appears older and weathered and is in fair condition.
- The connection between the inner and outer floating sections was measured at 2.25 inches. This exceeds ADA guidelines. Additionally, a separation in walers in this area creates a larger gap in the walking surface of up to 3.5 inches, presenting a potential trip hazard for dock users.



Gap between Dock Sections

Boat Ramp

The boat ramp at the subject site consists of a 3-lane concrete ramp. The ramp is in fair/good condition and is highly popular among island residents and visitors. Ramp lanes are clearly marked with yellow painted lines and afford boaters the opportunity to launch in all but the lowest water conditions.



Boat Ramp (Note: previously highlighted conditions of boarding pier and gangway)

The surface of the boat ramp is semi-smooth concrete. With this texture, marine algae growth does occur and causes the surface to become quite slippery for vehicles and patrons. Marina management reports cleaning the growth regularly and hiring professional cleaners at least quarterly to maintain a safe and clean ramp surface. The professional cleaners were onsite at the time of ATM's assessment.

The approach to the ramp on the upland is somewhat confusing and forces visiting boaters to navigate the upland fueling area as well as a smaller island that contains an electrical transformer and a fire hydrant. No specific location is provided for vessel to "make-ready." Additionally, while there is some space available for vessel tie down, this is limited, unmarked, and can cause some congestion during busy periods of use.

Shoreline Protection

The shoreline at the subject site is protected by bulkhead. The portion of the property fronting Morgan Creek is protected by a substantial steel sheet pile bulkhead structure. This bulkhead also wraps around

the Morgan Creek Grill and transitions to a low profile timber sheet pile bulkhead from the west side of the restaurant to the western edge of the property.

The steel sheet pile bulkhead was designed in 2008 and appears to be in good condition, with some corrosion occurring in the intertidal zone. No bowing, bending, or other obvious structural stresses or failures were apparent during this cursory visual assessment. However, marina management did report backfill loss occurring in the area of the bulkhead behind the marina store. Additionally, marina management identified movement and damage to the adjacent patio deck and building.



Steel Sheet Pile Bulkhead

ATM did not observe the backfill loss on the waterside of the bulkhead, but did note some damage/cracking/apparent stress inside the marina manager's office and sloping of the timber decking behind the marina store that potentially could be indicative of shifting sub-surface conditions behind the bulkhead.

Additional backfill loss was reported at the patio area of Morgan Creek Grill. ATM observed some paver depressions/small voids in this area during the field assessment.



Typical Timber Bulkhead along Intracoastal Waterway

Parking Areas and Adjacent Roadways

Marina Site

The entrance road and a substantial portion of the standard vehicular parking at the Isle of Palms Marina is paved asphalt. The asphalt paved main access road and parking spaces adjacent to the marina store and restaurant are in fair/good condition. The asphalt paving adjacent to the watersports dock is in very poor condition.

The majority of the trailer parking areas at the marina are gravel. The trailer storage area parking is gravel also. In general, the gravel parking areas appeared well maintained, with limited degradation/potholes observed, likely due to vehicular traffic and recent rains. The restaurateur indicated two instances of known patron falls and insurance claims in the gravel areas. Most gravel parking spaces are well marked in terms of intended usage (boat and trailer parking, etc.).

Limited concrete drive parking spaces are provided adjacent to the marina store and the marina facility (southeast side of the property). These areas are in fair/good condition, with some cracks noted.



Main Entrance – Asphalt Paving



Watersports Dock Parking Area



Typical Gravel Parking Area



Concrete Parking Area

No curb and gutter was observed, although there are some stormwater collection catch basins. Recent rains created limited ponding in the gravel parking areas and in grassed areas adjacent to the parking lots.

Adjacent Roadways

The Isle of Palms Marina site is accessed via 41st Avenue. The roadway essentially dead ends into the marina property and provides single lane access to and from the facility. A substantial shoulder on the west side of the roadway is currently being utilized as an overflow parking area for marina property visitors and employees. Parking along 41st Avenue often occurs down to Marginal Road (0.15 mile from the marina site). A large ditch on the west side of the shoulder appears to hold water that fluctuates with the tide.



41st Avenue, Shoulder, and Ditch

In addition to shoulder parking on 41st Avenue, parking along Waterway Boulevard also occurs on busier weekends and holidays (up to 0.25 mile from the marina site). This can be problematic for many reasons: Waterway Boulevard is a popular east-west artery leading to 41st Avenue and the marina; the shoulder width is limited due to the presence of sidewalks; there are residential homes in the area (adjacent to Intracoastal Court) that are somewhat impacted by the presence of tow vehicles and trailers along Waterway; and parking along the shoulder in this area tends to disturb the grass/sod alongside the road and immediately adjacent golf course.

Additional information on the parking areas, uses, etc. will be addressed in a separate report in the Parking and Traffic Assessment for the site.

Upland Buildings

Two substantial buildings exist on the subject site:

- The marina store building
- The Morgan Creek Grill building

ATM conducted a very basic visual/anecdotal assessment of each building to help inform master planning efforts for the site. Detailed review of structural condition and integrity, utilities, code-compliance, etc. was not conducted. General findings and ATM's impressions of each structure are described in the following sections.

Morgan Creek Grill

The Morgan Creek Grill sits on the northeast corner of the property, at the confluence of Morgan Creek and the Atlantic Intracoastal Waterway. According to Carla Pope, the restaurant building has been in place for more than 30 years and has served as the home for Morgan Creek Grill for the past 15 years.

Ms. Pope describes the building as an "old, but good building." She also related that a lot of maintenance goes into the structure, particularly related to the roof.



Exterior of Morgan Creek Grill



Interior Dining Area

The building provides a variety of dining opportunities, including casual with a tiki bar atmosphere on the ground floor, upscale seafood dining in the main dining hall, and a casual lunch and dinner experience on a vast upstairs patio. The main dining hall and the upstairs patio offer expansive views of the marina, Morgan Creek, and the Intracoastal Waterway. The restaurant is popular with tourists and residents alike, and the restaurant operators are enthusiastic about enhancing the restaurant experience for visitors by offering live music, oyster roasts, and improved restaurant grounds.

Jay Clarke, a representative of the restaurant, reports ongoing backfill loss behind the bulkhead along the patio situated on Morgan Creek. The restaurant regularly fills areas of sunken pavers and backfill loss.

Marina Store

The Marina Store is centrally located on the parcel adjacent to Morgan Creek. This facility is essentially at the heart of the overall operations on the site and includes a large, well-stocked convenience and retail store operation and a deli. In addition, a large deck wraps around the south and rear sides of the structure, providing an outdoor seating, eating, and gathering area that overlooks the water.



Marina Store Exterior



Marina Store Interior



Marina Store – Rear Patio

According to Brian Berrigan, the Marina Manager, the building was constructed in 1982. A substantial renovation occurred in 2007. The renovations emphasize a rustic, nautical theme and complement the interior style of the onsite restaurant and the coastal setting of the facility. On the surface, the building appears to be in generally good/serviceable condition. However, Mr. Berrigan identified several areas of concern worth noting.

Since the installation of the steel sheet pile bulkhead along Morgan Creek, Mr. Berrigan has noticed a slight shift of several building elements adjacent to the bulkhead structure. Specifically, the deck adjacent to the building has developed a downward sloping angle (away from the marina store building). In addition, a number of small cracks have occurred in the ceiling and walls of Mr. Berrigan's office, which is located on the Morgan Creek side of the building.

While a detailed structural investigation is beyond the scope of ATM's current assignment, these observations are somewhat concerning. These conditions are generally consistent with Mr. Berrigan's other observation of backfill deposits on the outside/waterside of the bulkhead adjacent to the marina store.



Marina Store – Rear Patio (Note: Walking surface slope away from building)

Other Structures

Several ancillary structures were observed on the marina site, including:

- A walk-in cooler adjacent to the Morgan Creek Grill
- A newly constructed outdoor stage at the Morgan Creek Grill
- A small, enclosed pump house located generally in the center of the property
- A storage shed adjacent to Morgan Creek and the southern edge of the property
- Storage containers (shipping containers) adjacent to the storage shed on the southern edge of the property
- A small outboard motor flush-out station
- A kayak rental hut immediately adjacent to the marina store and the boat ramp

ATM did not review the condition of these structures, but recognizes the importance of each to the current operations at the marina site.

Marina and Upland Utilities

The ATM team also evaluated the general availability and condition of site and marina utilities, including the onsite fuel system. Details of this assessment are provided in the Appendix to this report.

Summary/Takeaways

General Findings

- In general, the floating docks in Dock Areas A, B and C are in poor condition and are at the end of their useful life.
- Dock Area D (the Intracoastal Dock) is in fair/good overall condition, with some maintenance required. Overall, this dock is generally under-utilized due to limited slip sizes.
- Dock Area E (the Watersports Dock) is in generally good condition, with a few items of concern noted.
- Marina utilities, including the fuel dispensers on Dock Areas A, B and C, are also at the end of their useful life.
- Limited marina utilities are provided at Dock Areas D and E.
- Limited fire protection is provided on the docks at the marina.
- Marina appurtenances such as gangways on Dock Areas A, B and C are in generally poor condition.
- The boat ramp is in generally good, serviceable condition but requires maintenance due to the smooth surface of the concrete.
- Shoreline stabilization appears to be in generally good condition, with some maintenance of the steel sheets necessary. The marina manager and the restaurateur identified areas of backfill loss.
- The upland site utility distribution appears to have developed organically over time. Transformers, pump station, and other items are placed in odd, inconvenient spaces throughout the site.
- The upland fuel depot is important to the citizens on Isle of Palms as one of only two on the island. The location of the pump is in a difficult location in relation to the boat ramp access. Fueling infrastructure onsite is older and may require substantial upgrades (tanks, etc.) with any proposed redevelopment/repositioning.
- The parking areas on the site are a mix of concrete and asphalt parking. No curb/gutter or comprehensive stormwater management structures were observed. Gravel parking appeared to be generally well maintained, with some potholes noted. A few falls and insurance claims were noted by the restaurateur.
- Parking on adjacent roadways is commonplace during the busy summer season, on weekends, and during boating holidays. Additional study will be conducted during subsequent project efforts to review this topic further.
- The substantial onsite building structures are aged, but functional. Tenants of both these buildings are very conscientious of maintenance and a significant renovation of the marina store was made in 2007.

Immediate/Life Safety Concerns

Immediate life and safety concerns noted at the project site include:

- Gangway access and boarding dock on the south side of the boat ramp

- Marina electrical circuitry
- Limited fire protection on marina docks
- Improperly sealed electrical junction noted at marina hose reel winders (on dock)

It is ATM's opinion and recommendation that these items be addressed immediately while master planning is ongoing and prior to redevelopment at the subject site. Specific recommendations include:

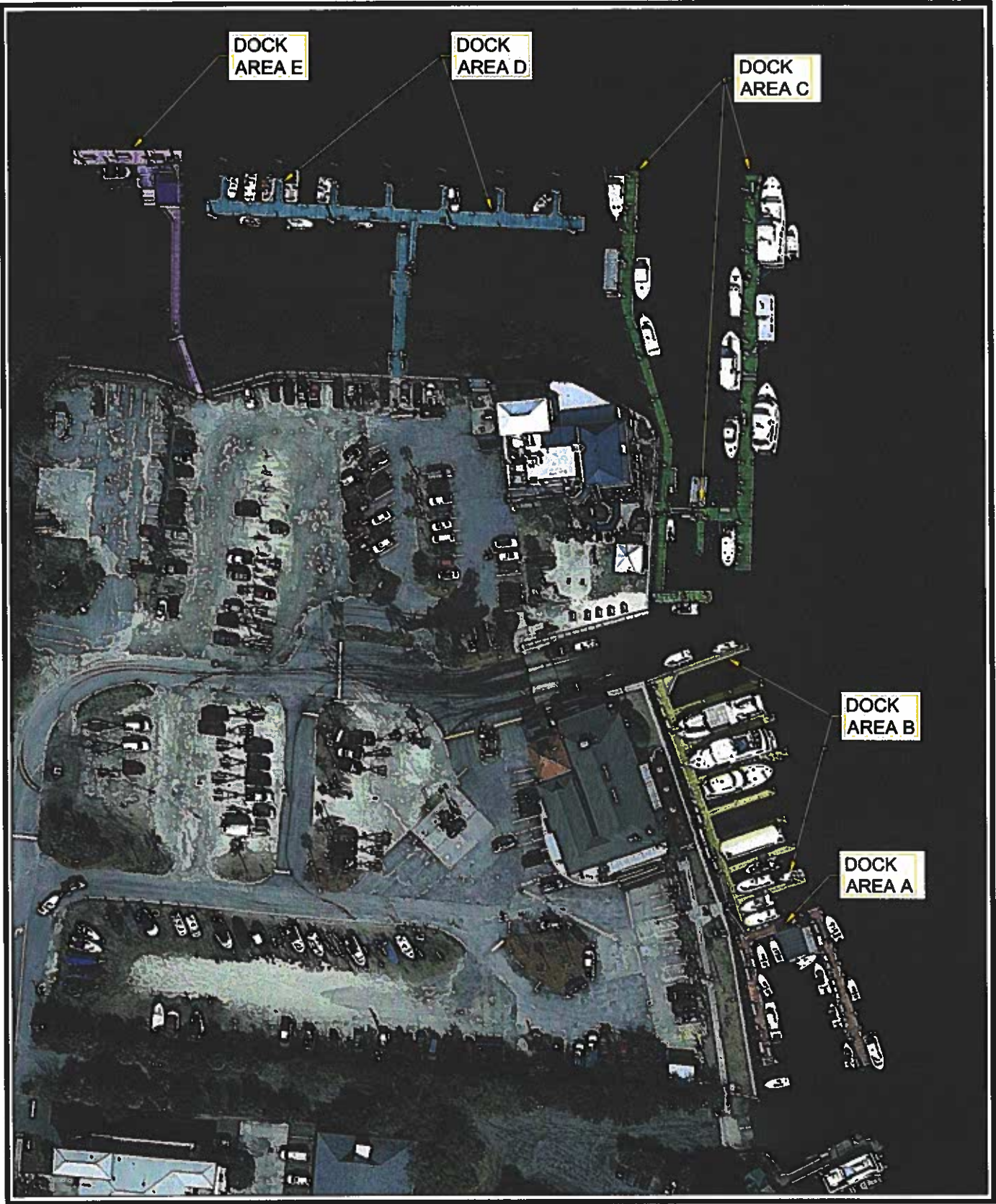
- Repair/replace gangway and repair/replace boat ramp boarding dock on south side of boat ramp
 - Consider installation of permanent transition plates at all gangway landings
 - Include an appropriate transition plate at the boat ramp gangway
- Enlist the services of a qualified electrician to evaluate all circuits for shorts and conduct necessary repairs
 - Include evaluation/repair of junction boxes at fuel hose reel locations.
- Consult with local fire marshal or fire officials regarding marina fire protection on the docks. Evaluate fire extinguisher placement and size. Consider supplemental (e.g., portable fire cart) fire protection.

Master Planning Considerations

- Floating docks in Dock Areas A, B and C should not be considered for re-use in a redeveloped marina
- Marina utilities on these docks (A, B and C) are not suitable for re-use
- Dock Areas D and E are in good, serviceable condition, although the configuration of Dock D is noted as less than ideal
- Fire protection and new site utility configuration/distribution should be given careful attention during redevelopment efforts
- Shoreline stabilization at the site is in good condition with a few areas of concern noted.
 - ATM recommends that the backfill loss behind the marina store and restaurant be investigated more thoroughly and addressed as necessary.
 - Any changes in shoreline use (e.g., placement of structures) should consider shoreline stabilization design limitations
- The location of the upland fuel pump can present some constraints for boat ramp access. Fuel tanks and infrastructure are aged. Substantial renovations/relocation will require upgrades of tanks, etc.
 - Upland fuel pump may be re-used.
- Parking arrangement, distribution, uses, conditions should be improved/optimized in a redeveloped facility
 - Improvement of parking opportunities on 41st Avenue should be studied for potential overflow
- The existing buildings are in serviceable condition. While not new, they are functional. Replacement and/or relocation would be costly.
- Boat ramp traffic flow should be considered and improved.

Appendix

Dock Area Figure



DOCK
AREA E

DOCK
AREA D

DOCK
AREA C

DOCK
AREA B

DOCK
AREA A

ATM
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ATM
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Certificate of Authorization #00359

Isle of Palms Marina
Condition Assessment Figure

REVISIONS

JOB NO: 15-2843

CHECKED BY: KM

DATE: 10/12/2015

DRAWN BY: JE

SCALE: NTS

SHEET: 1

Epic Engineering Utility Condition Assessment

EPIC *ENGINEERING INC.*

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TELEPHONE (843) 849-6878 FAX (843) 849-1445

EPIC Job # 15137

Kirby Marshall

Applied Technology and Management, Inc.

360 Concord St., Suite 300

Charleston, South Carolina

29401

RE: Isle of Palms Marina

Dear Kirby,

On Wednesday September the 30th we conducted a site visit to observe the conditions of the marina we offer the following:

Electrical:

Site power is provided with both overhead and underground electrical services. There are two pad mounted transformers on the ground and one that is pole mounted overhead. The two pad mounted transformers serve the restaurant, the marina store, and the north docks surrounding the restaurant. The transformer serving the Restaurant and Marina Store is positioned in the middle of the road required to exit the marina and enter the boat launch area. The pad serving the transformer that serves the north dock is settling into the earth. The overhead transformer serves the south docks. The power is run through insulated cables in conduit through the bulkheads and supported from the underside of the docks and ramps. The power is then distributed to power pedestals placed along the docks and to a fuel station with an office.

The condition electrical system is typical for the age of the marina. It is not uncommon to see many repairs, discover equipment that is unserviceable, find equipment that does not match, or instances that are no longer up to code in older marinas. There are several types of wire and conduit used throughout the docks, some of which are damaged. The electrical circuits from the main panel to various pedestals throughout the dock have been repaired many times. It has been reported that the breakers often trip and power is unreliable. The electrical system is in poor condition with the exception of the new overhead transformer, panels, and disconnects that have been recently added to serve the south dock. There is no equipment on the docks that can

be re-used in terms of marina redevelopment. For immediate temporary repairs, we recommend a qualified electrician evaluate all circuits for shorts and repair as a matter of life safety.

Issues Noted:

1. The transformer and panel for the restaurant side are leaning and not securely placed. The panel cover cannot open due to a fence and the panel has open holes that will allow water and animals inside. Note: Restauranteur indicates fence is removable and placement was coordinated with SCE&G.
(Photo 8, 9, 10)
2. The power serving the marina is generally in poor condition. There are problems due to extensive cable and equipment nuisance tripping of breakers are quite common. Repairs have been made to the point where the system is not serviceable without a significant replacement.
3. There are junction boxes with standing salt water and poorly insulated wires. Most of the dock mounted power supply towers are damaged and poorly mounted. (Photo 4)
4. Cables to the docks are not properly supported which creates stress on the wiring. (Photo 5, 6)
5. There are protective wire covers that are poorly installed and leave wiring open to elements. (Photo 7)
6. Lighting is in poor condition in many places and needs immediate repair to ensure proper illumination of walk ways. (Photo 11)

Plumbing:

The plumbing domestic water and waste systems for the site are provided by the Isle of Palms Water and Sewer Commission. There are buried water lines that feed a shutoff box and then continue on to supply water for the retail store, restaurant and the docks. The water lines transitioning from land to the docks are mostly flexible hose with a wrapping that is intended to prevent UV wear, the protective wrap is deteriorating in many areas. The water within the docks is constructed with PEX and Polybutylene. The piping is routed below the dock to pedestals with hose bibs. The water lines are mismatched and constructed of different materials, many are

beyond their useful service life. There is no part of the water supply system to the marina that can be re-used in terms of redevelopment.

There is a sewer lift station located in the middle of the site that receives waste from the restaurant, the marina store, and the dock mounted sewage pump out system. The sewage piping within the dock is constructed with PVC and transitions to upland utilizing a flexible hose. The waste pump out system is in good condition and can be re-used in a new application.

Issues Noted:

1. There have been numerous failures of the original equipment and many subsequent repairs made with various materials some appear correct, many are temporary or not acceptable for marina applications. (Photo 13, 14)
2. The water is piped to pedestals mounted on the floating docks. Most pedestals are at the end of their service life and several are in disrepair. (Photo 1, 2)
3. The hose bibs are not properly installed in a few locations none have vacuum breakers. (Photo 15, 16)
4. The water lines serving the docks are undersized to deliver the proper flow and pressure in accordance with the state primary drinking water regulations.
5. There is PEX pipe that is exposed to UV rays that will eventually compromise the integrity of the pipe. (Photo 13)
6. Water lines are not properly supported where it transitions from land to dock which will lead to stress failures and leaking. (Photo 5, 6)
7. There is a waste pump system on the fuel dock that is in good working condition and appears to be recently installed it is acceptable for continued use.

Fire protection:

The marina has no fire protection stand pipe system in place as required by NFPA. There are fire extinguishers placed throughout the docks. They are located in cabinets and are inspected on an annual basis as indicated on the inspection tags. Several of the extinguishers that are currently in place are undersized. All undersized extinguishers should be replaced and additional extinguishers should be added to make the facility more code compliant. There is no existing

equipment that we can recommend for re-use in a redeveloped facility except for a few extinguishers. The existing dock construction would make it cost prohibitive to install a dry standpipe system or any other means of fire system. For current and future marina operations, we recommend coordinating with the local fire marshal to provide one or more portable fire carts that are capable of providing 100 gallons per minute at 100 psi for each dock area. This recommendation is based on the impracticality to construct a dry manual standpipe within the existing floating docks and the general unreliability of standpipe systems.

Issues Noted:

1. There is no fire standpipe system in place as required by NFPA.
2. The fire extinguishers are mostly undersized and in some places are too far apart to meet code. Place 10 pound, class A, B and C extinguishers every 150 feet (so that the maximum travel distance to an extinguisher is 75-ft.).
3. Most of the extinguisher enclosures are damaged; many covers are missing; several mounting brackets are rusted away; and they are poorly supported. (Photo 17, 18)

Fuel dispensing:

There are four buried tanks on the site near the on land fuel dispenser. Two of the tanks are 11,600 gallons each - one containing diesel and the other midgrade gasoline. The other two tanks that are 6,700 gallons each - one contains ethanol blended gasoline and the other contains gasoline that is ethanol free. The fuel products are pumped from the tanks to two fuel dispensers on the floating docks and one multi product two sided dispenser in the parking area of the marina. The existing fuel lines to the marina are double wall flexible lines and are approved for marina use.

The existing dispensers are manufactured by Veeder Root. The hoses and fuel nozzles on the docks are in a field fabricated enclosures on the floating dock and appear functional. There are exposed wires in the hose reel box that need to be enclosed in an explosion proof housing. The dispenser on land appears to be recently installed.

The existing single wall fuel tanks are buried in the middle of the site near the upland dispenser. The marina manager has reported that the tanks are accumulating sludge due to the

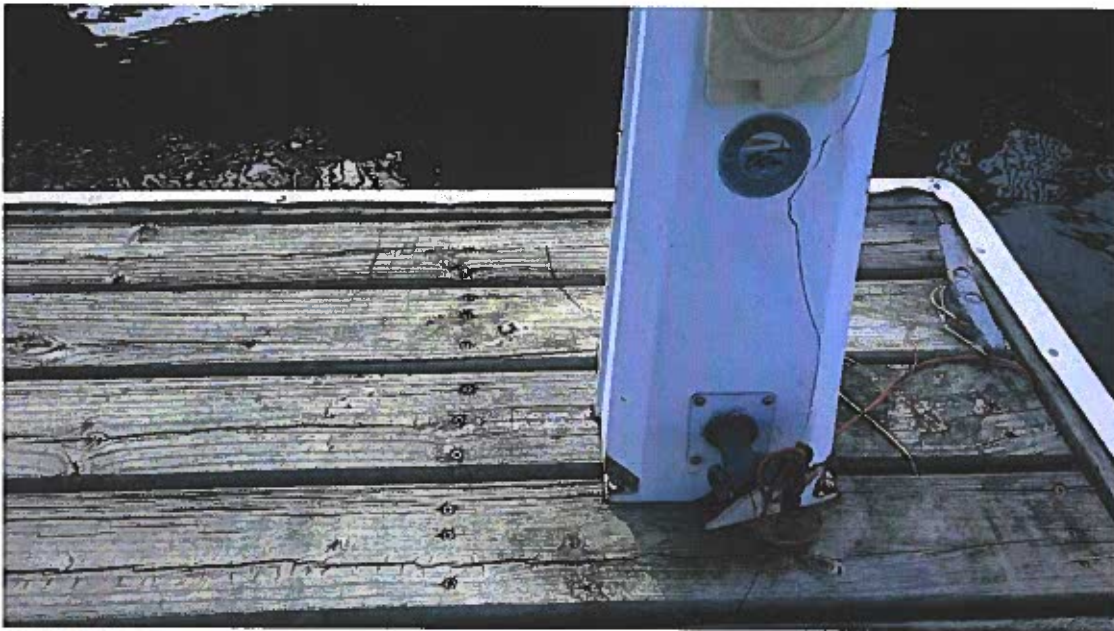
use of ethanol. Forthcoming EPA regulations will grandfather in any existing single wall tanks, but will require regular inspections by certified inspectors, ground monitoring, and ground water monitoring.

The underground storage tanks and the upland fuel dispenser may be re-used if the tanks remain in the same location and an appropriate monitoring system is installed. Tank replacement should be strongly considered with facility redevelopment efforts. The fuel dispensers on the floating dock and associated piping cannot be re-used in the marina redevelopment.

Issues Noted:

1. The fuel pump on land is a Veeder Root multi product system and appears to be only a few years old and in good working order.
2. The storage tanks are single wall and nearing the end of their service life. Tank replacement should be strongly considered in redevelopment planning efforts.
3. Piping transitions from upland to the floating docks are beginning to show signs of wear but are still sound.
4. The dispensers on the dock are beyond their useful service life and need to be replaced. The mounting at the base of both is completely rusted away. Further, there does not appear to be a sump well as required by code. (Photo 19, 20, 21)
5. The fuel reel systems on the docks are functional but the fuel hoses are beginning to show signs of UV wear. The electrical components to the reel winders need to be properly enclosed utilizing an explosion proof fitting and mounted. (Photo 12)

Photos of key observations:



(Photo 1) Dock mounted pedestal damaged beyond repair.



(Photo 2) Dock mounted pedestal missing fasteners and not mounted to dock.



(Photo 3) Junction box rusted and in a wet location.



(Photo 4) There are junction and pull boxes that are not sealed from the salt water.



(Photo 5) The cabling to the marina is not properly supported.



(Photo 6) The cabling to the marina is not properly supported.



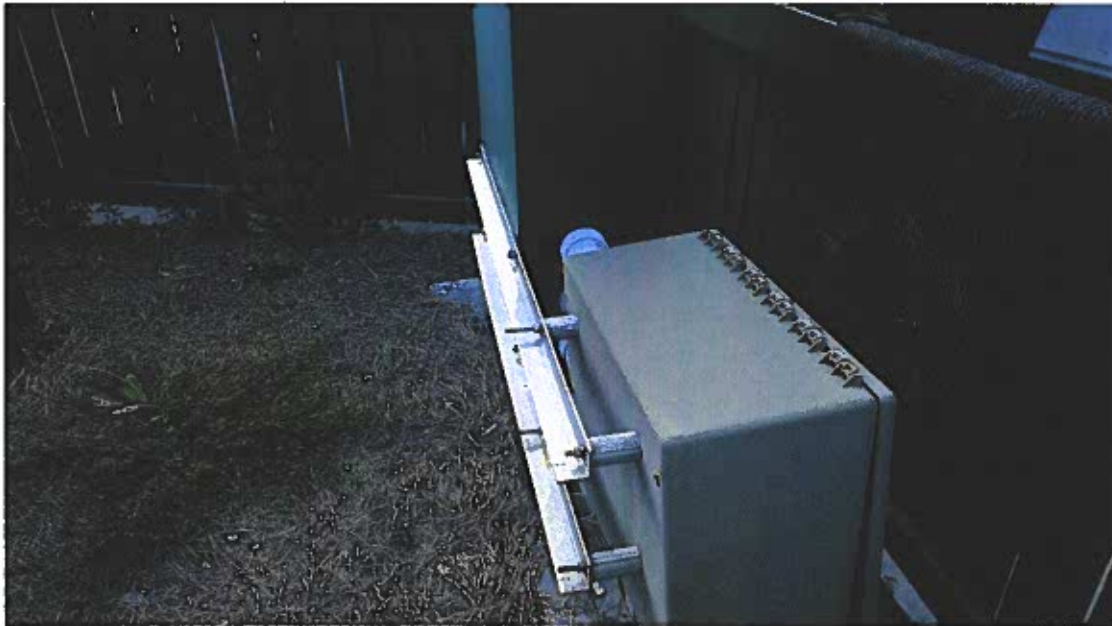
(Photo 7) Flexible conduit is burdened with shells and pulled free.



(Photo 8) The transformers are not level and the electrical panel does not have code required clearance.



(Photo 9) The door to the panel is not able to open due to a fence and does not have code required clearances.



(Photo 10) There are holes in the panel that are not sealed.



(Photo 11) Broken light fixture.



(Photo 12) Improperly sealed junction within 25 feet of fuel pumps needs explosion proof enclosure.



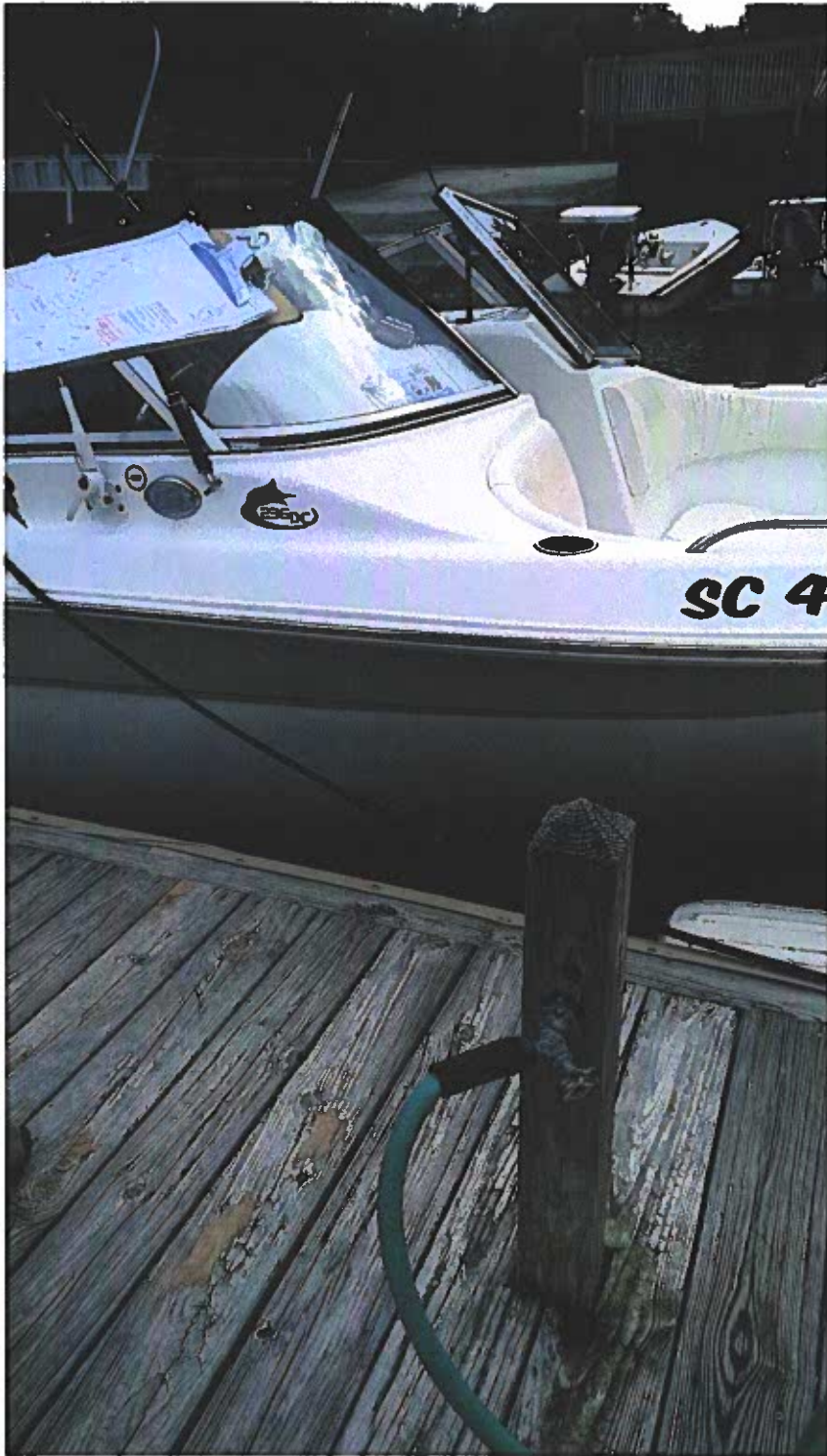
(Photo 13) The piping not properly supported and is subject to U.V. degradation.



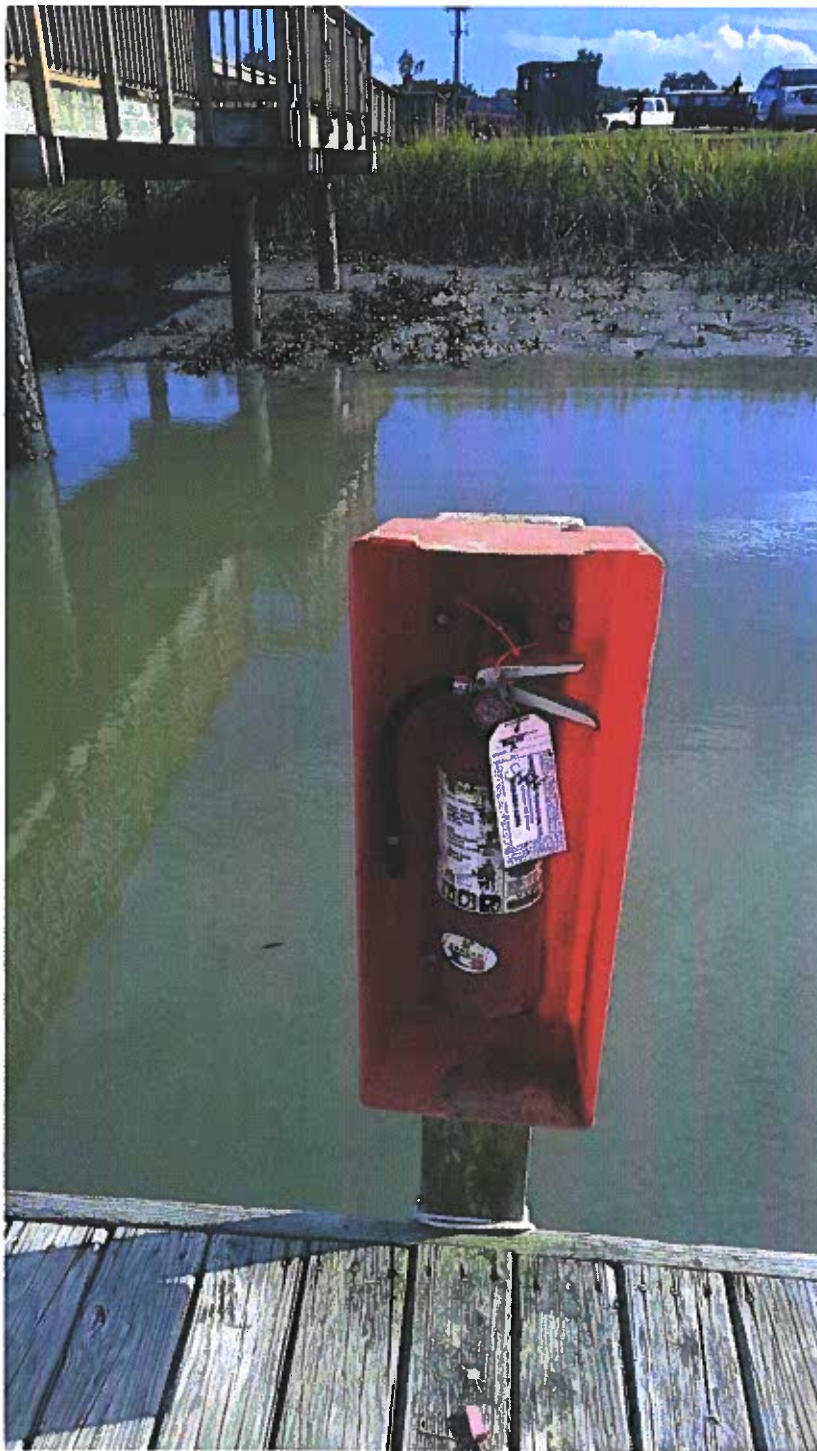
(Photo 14) Different types of piping and different sizes connected together.



(Photo 15) None of the hose bibs are freeze protected nor are there any vacuum breakers on the hose bibs.



(Photo 16) Hose bib not properly secured.



(Photo 17) The extinguishers are in broken or damage housing with no covers throughout the facility.



(Photo 18) Damaged fire extinguisher cover.



(Photo 19) Corroded fuel dispenser beyond repair.



(Photo 20) Corroded fuel dispenser beyond repair.



(Photo 21) Corroded fuel dispenser beyond repair.

4

Existing Parking and Traffic Condition Assessment

For the Isle of Palms Marina

Isle of Palms, South Carolina

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Appendix A Existing Parking and Traffic Flow Figure

Executive Summary

As part of a broad scope of services related to redevelopment master planning for the Isle of Palms Marina, Applied Technology and Management, Inc. (ATM) conducted a parking and traffic assessment for the subject site.

While ATM is generally familiar with the parking and traffic situation at the site through past staff experience and interviews with the marina operator, the team conducted onsite observations of the traffic and parking situation during Labor Day weekend in September 2015. Key observations during this weekend included:

- No clear circulation path for vehicles through facility
- Safety of traffic flow through boat ramp area is a concern
 - Vehicles, including a tour bus, belonging to non-ramp users were traversing the ramp area
 - No clear drop off point for ramp users (families and children)
 - No clear tie down area for boats leaving ramp
- Pedestrians walking through facility in roadway areas
- Some trailer parking spaces within marina site available
- Several automobile spaces within marina site available
- Several golf carts parked onsite
- One truck/trailer and several cars noted on the shoulder of 41st Avenue

In addition, ATM is aware of several other parking and traffic issues that affect the site, including:

- Congestion at the launch ramp during weekends and holidays
 - Congestion is exacerbated by presence of fuel pumps and tight ramp approach area
- Street and shoulder parking along 41st Avenue and Waterway Boulevard, particularly boat trailers
- Kayak congestion at the boat ramp
- Limited parking onsite for multiple site uses

Numerous uses or activities on the project site require parking or create traffic flow, including:

- Marina wetslips
- Marina dry storage
- 3-lane boat ramp
- Restaurant
- Tidal Wave Watersports
- Coastal Expeditions kayak rentals/tours
- Marina store
- Fuel station
- Various charter vessels moored at the marina, including Barrier Island Eco Tours

Each of these uses has specific parking requirements per the Isle of Palms Code of Ordinances or other codes/guidelines. The total parking requirements on the site include 60-150 trailer parking spaces to properly serve the three lane boat ramp and 228 car parking spaces to serve the other site uses.

Currently the site offers 44 trailer parking spaces and 161 car parking spaces. This represents an apparent deficiency of spaces. ATM feels this is misleading, however, as multiple shared use parking areas on the site exist and certain aspects of the calculation of required parking spaces are conservative.

It is our opinion, however, that the current traffic flow and parking arrangement result in physical parking and traffic inefficiencies that lead to overflow onto nearby streets (41st Avenue and Waterway Boulevard). In any case, it is our opinion that not enough boat trailer parking spaces exist on the site to properly accommodate the three lane boat ramp.

In addition to creating a master-planned traffic and parking arrangement on the site, ATM has identified several potential alternatives to increase parking capacity at and for the Isle of Palms Marina, including:

- Shared use parking
- "Park Under" drystack parking
- Improved/managed shoulder parking
- Designated golf cart parking
- Offsite parking arrangements
- Shuttle service
- Structured parking
- Reduction in the number of site uses

ATM does not recommend structured parking or a reduction in site uses at this time, but a combination of the other alternatives to achieve improved parking capacity and safe traffic flow through the site.

Pedestrian access to all site uses must be carefully considered in any site redevelopment plan to ensure visitor safety and to help eliminate congestion. Further, stormwater management, ADA access, and appropriate parking control/enforcement considerations must be made in any redevelopment plans for the site.

It is ATM's opinion that a clean and clear traffic and parking plan for the site will improve site efficiency substantially. Specific solutions for parking and traffic flow will be presented/included with redevelopment master plan alternatives.

Introduction

As part of a broad scope of services related to redevelopment master planning for the Isle of Palms Marina, Applied Technology and Management, Inc. (ATM) conducted a parking and traffic assessment for the subject site. Parking conflicts and difficult traffic flow are well known challenges at the site. As the popularity of the marina site (and businesses located there) has grown, the parking and traffic situations at the site have deteriorated. This assessment aims to identify the various uses onsite, review the traffic and parking situation, and identify potential solutions for integration into site redevelopment planning efforts.

Site Observations

While ATM is generally familiar with the parking and traffic situation at the site through past staff experience and interviews with the marina operator, the team conducted onsite observations of the traffic and parking situation during Labor Day weekend in September 2015. Key observations during this weekend included:

- No clear circulation path for vehicles through facility
- Safety of traffic flow through boat ramp area is a concern
 - Vehicles, including a tour bus, belonging to non-ramp users were traversing the ramp area
 - No clear drop off point for ramp users (families and children)
 - No clear tie down area for boats leaving ramp
- Pedestrians walking through facility in roadway areas
- Some trailer parking spaces within marina site available
- Several automobile spaces within marina site available
- Several golf carts parked onsite
- One truck/trailer and several cars noted on the shoulder of 41st Avenue

Several of these observations and concerns were noted during project stakeholder meetings and from input received through the project website. In addition, ATM is aware of several other parking and traffic issues that affect the site, including:

- Congestion at the launch ramp during weekends and holidays
 - Congestion is exacerbated by presence of fuel pumps and tight ramp approach area
- Street and shoulder parking along 41st Avenue and Waterway Boulevard, particularly boat trailers
- Kayak congestion at the boat ramp
- Limited parking onsite for multiple site uses

The following photos were taken over the July 4th weekend of 2015 and depict some of the parking and traffic congestion at the subject site. Note the multiple uses in congested areas, including ramp approach, kayak/paddleboard usage, golf cart parking, and pedestrians in the high-traffic boat ramp area. In addition, the weekend fuel delivery occurred during prime operations hours (mid-day).



Congestion at Ramp Approach



Fuel Pump Congestion



Shoulder Parking Along 41st Avenue

Parking Demand Components

Numerous uses or activities on the project site require parking or create traffic flow, including:

- Marina wetslips
- Marina dry storage
- 3-lane boat ramp
- Restaurant
- Tidal Wave Watersports
- Coastal Expeditions kayak rentals/tours
- Marina store
- Fuel station
- Various charter vessels moored at the marina, including Barrier Island Eco Tours

The marina site and all of these uses are accessed via 41st Avenue, an improved/paved 2-lane road.

Activity at the subject site peaks during the summer boating season (Memorial Day through Labor Day), but can affect weekends throughout the year if the weather is suitable for boating activity.

Specific parking requirements for each of these uses are examined in a subsequent section of this report.

Traffic Components

The various activities on the subject site not only create demand for parking, but also influence traffic flow to and within the property. The following is a brief summary of the various traffic components on the site that the ATM team identified.

- Boat ramp traffic is filtered through the site and passes immediately adjacent to the marina store and upland fuel pumps. A 2-lane ramp approach is provided, separated by a small island and electric transformer. This arrangement causes congestion at the launch ramp area. Boat ramp parking is located generally in the center of the site.
- Regular car traffic is routed into the site in a similar fashion to boat ramp traffic. Some parking is provided adjacent to the marina store and on the south side of the property. Traffic circulation to the restaurant and watersports dock is unclear and many cars visiting the site end up traversing through the boat ramp area. This causes added congestion at the site.
- Tour and charter boat traffic is generally routed directly toward the marina store and the waterfront along Morgan Creek. The current traffic flow produces generally swift and easy access to this area of the site.
- A variety of large trucks service the various businesses on the subject site. These include provisioning trucks that service the marina store and restaurant, fuel tankers that supply gas and diesel fuel to the underground storage tanks, and garbage and recycling trucks that service the marina and restaurant.
 - The provisioning trucks that service the marina store have generally easy access to the store, but no clear parking or staging area. This does not seem to present substantial conflicts because there is a fair amount of drive space and turnaround area adjacent to the marina store.
 - The fuel delivery trucks access the underground storage tanks immediately adjacent to the upland fuel pump. Access to these tanks is adequate for small tanker trucks, except when providing deliveries during weekends or other busy periods, when boat ramp congestion can hamper traffic flow in this area of the site.
 - Garbage and recycling trucks access dumpsters immediately behind Morgan Creek Grill and on the south side of the site adjacent to the upland boat storage area. Access to these areas for garbage vehicles is good, although the screening of both dumpster areas is poor, particularly that of Morgan Creek Grill.
- Golf cart traffic has increased substantially in recent years. Many golf carts visit the marina facility. This traffic is generally confined to daylight hours and includes marina store patrons, restaurant patrons, and the local public who enjoy watching marina and boat ramp operations in the afternoon and evening. Recently, the Morgan Creek Grill established a more formal area for golf carts to park, relocating a traditional golf cart parking area on the north side of the boat ramp. Overall, however, very few designated golf cart parking spaces are provided on the site and the carts tend to park in vehicle spaces or in smaller, undesignated areas.
- Pedestrian traffic to the site occurs frequently. Cyclists and exercise walkers frequently include the marina site as a waypoint, but there is virtually no sidewalk or designated walking area within

the facility. This generally does not present a problem on weekdays and during off-peak use times, but can add to facility congestion and create safety issues during busier periods.

In addition, pedestrian access from parking areas to the waterfront is critical. Currently, there are few defined walking lanes from parking areas to the marina store, the docks, the boat ramp, and the restaurant. This causes pedestrians to cross over vehicle transit lanes and contributes to overall site congestion. Specifically, pedestrian access to the boat ramp staging docks can become somewhat dangerous during busy weekends and other periods of high boat ramp use. Kayak launching and the operations of the Coastal Expeditions at the boat ramp also can contribute to pedestrian gathering/congestion at the boat ramp.

Parking Requirements

Each of the main site components have specific or recommended parking requirements to help ensure functional and efficient operation. A summary of these requirements is presented in the following table.

Feature	Size	Required/Recommended Parking Spaces	Code/Guideline
Boat Ramp	3 Lane	60-150 (trailer)	SOBA/SCDNR
Marina	~55 slips	19	OCRM
Restaurant	325 Seats	82	IOP
	60 Employees	20	IOP
Marina Store	3856 SF	16	IOP
	7 Employees	7	IOP
Tidal Wave Watersports	200 SF Dock Hut	3	IOP
	20 Employees	20	IOP
Barrier Island Eco Tours	2 40-ft. Boats	3	IOP
	8 Employees	8	IOP
Coastal Expeditions	225 SF Hut	3	IOP
	2 Employees	2	IOP
Charter Vessels	11 Boats	33	IOP
	12 Employees	12	IOP
Total "Requirements"			
	Trailer Spaces	60-150	
	Standard Spaces	228	

Table 1 – Site Parking "Requirements"

The required or recommended parking spaces for each site component come from a variety of sources, including the States Organization for Boating Access (SOBA), South Carolina Department of Natural Resources (SCDNR), the South Carolina Department of Health and Environmental Control (SCDHEC), Ocean and Coastal Resource Management (OCRM), and the Isle of Palms Code of Ordinances. It is noted, however, that some of the uses on the subject site are unique and may not specifically fit into a well-defined use or use category with regard to parking. This makes the determination of the appropriate number of parking spaces to adequately serve the site somewhat subjective. Further, parking management techniques are often applied to waterfront developments that can reduce the overall need for dedicated parking spaces through shared use and other management strategies.

A brief examination of each site use, applicable parking standard, and calculation of required/recommended parking spaces is provided below.

- Boat Ramp – SOBA provides guidelines for the design of boat ramps and boat launching facilities. SCDNR also has published guidelines for the design of boat launching facilities. Both entities

recommend 20 to 30 trailer parking spaces per boat ramp lane for ramps with high turnover and 30 to 50 parking spaces per boat ramp lane for ramps with low turnover.

Therefore, the need for 60 (minimum for high turnover boat ramp site) to 150 (maximum for low turnover site) is suggested by these guidelines.

The classification of the turnover at the site is certainly subjective, but no fewer than 60 trailer spaces should be provided to properly accommodate the existing 3-lane boat ramp.

- The marina facility at the subject site provides berthing for approximately 55 vessels. OCRM requires at least one parking space for every three boat slips and generally analyzes parking during marina permit application reviews. OCRM parking requirements for the subject marina would total approximately 19 car parking spaces.
- The Morgan Creek Grill offers up to 325 seats, according to restaurant management and has up to 60 staff working onsite during the peak summer season. The Isle of Palms Code of Ordinances indicates that one parking space must be provided for every four restaurant seats, and one space for every three employees must also be provided. This equates to 82 patron parking spaces and 20 employee spaces.
- ATM interprets that the marina store may be classified as a "Retail business not otherwise specifically mentioned" as per the Isle of Palms Code of Ordinances. Parking requirements for this type of business include one space for each 250 square feet of gross retail floorspace not used for storage, three spaces minimum. In addition, one space per employee must be provided. The store has approximately 3,856 such square feet of space. This equates to 16 spaces for the structure and seven parking spaces for employees (number of employees provided by B. Berrigan).
- Tidal Wave Watersports, Barrier Island Eco Tours, Coastal Expeditions, and fishing charter vessels businesses operate on the subject site and are difficult to classify. No clear classification of these businesses is found in the Isle of Palms' Code of Ordinances, therefore, ATM calculated the total parking requirements for each business using the same use category as the marina store. No traditional retail space exists for these businesses. The number of employees was provided during interviews with the operators: one captain for each inshore charter vessel and one captain plus one mate for a single larger charter vessel.

Site redevelopment will consider the above-described parking requirements and guidelines. The addition of vertical drystack storage at the site will add another factor to the overall traffic parking program at the site. OCRM requires one parking space for every three dry storage spaces to properly accommodate drystack storage. Drystack storage may well curtail the demand for trailer parking, however, as additional boat storage opportunities will be provided for trailer-sized vessels. Parking for other amenities such as parks and other public amenities will need to be considered as well.

Current Parking Availability and Usage

ATM analyzed existing parking at the subject site using visual observations, aerial imagery, and other information provided by the City (including tenant lease data). The following is a summary of ATM's visual observations.

Parking Type	Number	Comments
Dedicated Trailer	32	Full size trailer parking
Shared Use Trailer	11	Compact trailer parking/shared with restaurant
DNR Trailer	1	For Law Enforcement Use
Standard Car	68	
Dedicated Restaurant Car	43	Lease terms suggest 33 dedicated car parking spaces
Watersports Car	15	Lease terms suggest 10 car parking spaces (8 parton, 2 empl.)
Shared Use Cars	35	Shared at discretion of marina manager
Boat Parking (Dry Storage)	31-32	Dedicated lot for boat/trailer storage
Total	Trailer Spaces	44
	Standard Spaces	161
	Boat Dry Storage	31-32

Table 2 – Site Parking Availability

In addition to information provided in the table, please refer to the Appendix for a figure depicting the existing parking areas and traffic flow at the subject site.

When compared to the totals presented in Table 1, Site Parking "Requirements," there appears to be a deficient number of both trailer and car parking spaces on the subject site. Specifically, there appears to be a lack of at least 16 trailer parking spaces to serve the 3-lane boat ramp at a minimum level and 67 fewer car parking spaces than recommended or required to serve the remainder of the activities on the subject site.

ATM believes this direct calculation and comparison is conservative, however. This is especially the case with regard to the standard car parking spaces:

- The restaurant is primarily an evening/dinner time attraction at the site. This is typically when marina and boat ramp traffic decrease significantly. As such, there are 11 boat trailer parking spaces on the site that are designated for restaurant parking after 5 pm. This provides up to 22 additional parking spaces for restaurant patrons. Additionally, there are 35 "Shared Use" car parking spaces that are also available to restaurant patrons and staff, especially in the evenings. These additional parking spaces and shared use spaces decrease the need for full-time dedicated parking on the site by up to 57 spaces.

- Per discussions with restaurant operators, daytime use/staffing is approximately 50% of peak evening levels.
- Tidal Wave Watersports' lease indicates that they shall be provided eight parking spaces for patron parking and two employee parking spaces. This is less than what ATM calculated using an interpretation of the City's Parking Code (13 spaces).
- Using the City's Parking Code to calculate the number of required spaces for the charter vessels that call the subject site their home port, ATM determined the "need" for 45 parking spaces to accommodate this use. Marina industry design guidelines, including the popular *Layout and Design Guidelines for Marina Berthing Facilities* published by the California State Parks Division of Boating and Waterways, suggest two car parking spaces per commercial vessel. ATM believes that this is a more practical method to calculate required charter spaces at the subject marina.

Further, the charter slips are included in the overall slip total for the marina. Utilizing the aforementioned OCRM requirement for parking spaces compared to slips (1:3), this equates to about four marina parking spaces.

By applying both of these factors to the charter slip parking need, this reduces the "requirement" for 21 car parking spaces.

This analysis suggests a *surplus* of standard car parking on the subject site (about 145 car parking spaces required; 161 car parking spaces provided). This represents somewhat of an idealized scenario and, while the shared use parking arrangements at the subject site certainly are effective, the poor layout and circulation patterns on the site and frequent on-shoulder parking along 41st Avenue suggest that physical parking at the site is not as efficient as it potentially could be.

Regarding boat ramp trailer parking, it is ATM's opinion that the amount and arrangement of provided parking is inadequate. This certainly contributes to the trailer parking on 41st Avenue and Waterway Boulevard and general congestion on the site during summertime weekends and holidays. Both standard car parking and trailer parking should be given high priority in any site redevelopment plan.

Alternatives to Increase Parking Capacity

Redevelopment of the project site to include a master-planned traffic flow and parking arrangement will certainly aid in increasing the actual and practical parking capacity at the site. However, the addition of drystack storage, park/open space, etc., may impact the available area for parking. With this in mind a few potential alternatives for increasing parking capacity are suggested.

Shared Use

The concept of shared use parking spaces has been discussed previously and is currently used as a parking management tool at the subject site. In addition, shared use parking is a common concept on other urban marina and waterfront developments. In downtown Charleston, for instance, the Seabreeze Marina shares a parking area with an onsite office building. Marina usage and parking demands peak during the weekends while the offices are closed. Shared use of parking areas results in a functional parking plan for this site.

If it becomes necessary based on final redevelopment plan concepts, shared use parking should be considered at the subject site, particularly to properly accommodate restaurant staff and patrons.

Drystack

The development of vertical drystack storage will require the demonstration of one parking space for every three racks. A 150-rack structure will require 50 parking spaces. The footprint of a 150-rack drystack facility will be large and the addition of 50 parking spaces to properly service this facility could present a challenge at the subject site.

With this in mind, the concept of drystack storage with the first level reserved for vehicular parking should be considered. This "park-under" area would be accessed from the outside edge of the drystack building and would require access, but could reduce the overall parking footprint required on the site.

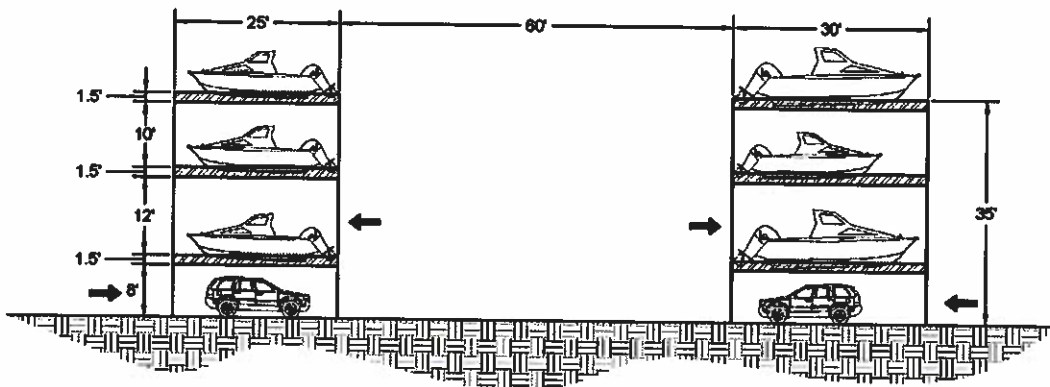


Image 1 – Potential "park-under" drystack arrangement.

Shoulder

Shoulder parking currently occurs on 41st Avenue and Waterway Boulevard near the marina during busy weekends each spring and summer. Further, ATM understands that the restaurant employees frequently park along the shoulder of 41st Avenue during their shifts. While shoulder parking along 41st and Waterway provides additional parking for the site, there are numerous detrimental effects that accompany this practice, including congestion along the roadways (particularly when trailers are not pulled all the way off the road) and damage to the unimproved/unstabilized shoulder areas (tire ruts, etc.). The practice is also aesthetically displeasing and jeopardizes the safety of the pedestrians who park along the shoulder and walk in the roadway to and from the site.

It is ATM's opinion that shoulder parking be curtailed to the extent practical, particularly along Waterway Boulevard. Some overflow shoulder parking should be considered immediately adjacent to the subject site, however. This should be carefully planned and the shoulder area properly improved and stabilized to ensure safe parking and pedestrian travel routes to the site.

Golf Cart

With the rise in the popularity of golf carts, increased golf cart parking should be implemented onsite. These vehicles, properly licensed to operate on public roads, provide an efficient and fun transportation alternative that require less space to park. Consideration of including golf cart parking spaces in the overall parking scheme for the subject site should be given careful consideration.

Offsite

Two facilities with large parking areas are immediately adjacent to the subject site: Dewees Marina and the Wild Dunes Yacht Harbor. It was observed that often the parking spaces at these facilities are minimally occupied. Therefore, the potential to acquire access to one or both of these facilities to increase parking capacity at the Isle of Palms Marina is apparent.

ATM contacted Mr. Kim Knight of the Dewees Property Owners Association (POA) to broach the possibility of this subject. An offsite parking use scenario was suggested, perhaps just for Isle of Palms Marina employees or other employees working at the Isle of Palms Marina site. There would be no free, open public access.

Mr. Knight indicated that he discussed the issue with the Dewees POA board and mentioned that parking is a major issue at the Dewees Marina site as well. However, the board is open to discussing the issue further with the City once redevelopment plans for the Isle of Palms Marina site become more refined and actual parking needs become clear.

Through conversations with the City of Isle of Palms, ATM understands that the parking spaces observed in the Wild Dunes Yacht Harbor lot are actually owned and controlled by the individual slip holders of the Wild Dunes Yacht Harbor. Considering this, it is ATM's opinion that the development of a shared parking arrangement for this parking area would be difficult. This, however, may be researched further once specific parking needs for the subject site become clear.

Other Solutions

Other solutions to increasing the actual or effective parking at the site may include shuttle service, structured parking, or a reduction in the number of uses on the site.

Shuttle service may provide effective transport for visitors to the site from the Front Beach area or Wild Dunes and may help reduce the overall amount of vehicular traffic to the subject site. The marina, the City, or a third party may operate the shuttle. Careful consideration of economics and effective promotion of this service would be essential to success.

Structured parking could certainly help to alleviate the need for vehicular parking at the subject site. While this would not be compatible with trailer parking, it is likely that a parking garage could be located on the subject site. The costs for such a solution would be high and the aesthetic impact could be substantial. Shielding has become a common practice to hide parking garages, however, and has been recently implemented in Mount Pleasant at The Boulevard apartment complex on Coleman Boulevard and at The Standard apartment complex on James Island.

Another solution to resolving concerns about parking capacity at the subject site may be to reduce the number of uses on the site. As highlighted previously, there are numerous businesses operating on this relatively small site. Eliminating one or more of these businesses would reduce vehicular traffic to each by patrons and employees.

ATM does not suggest a reduction in uses on the subject site, however. Based on the study thus far, the mix and diversity of businesses on the site help define the site and all add something to the overall appeal of the marina. Certain aspects of certain businesses may need to be adjusted to properly accommodate site redevelopment, however. This may include, for instance, removal of the upland boat trailer storage area if vertical drystack storage is developed.

Long-Term Traffic Flows to the Site

The Isle of Palms Marina site is accessed via 41st Avenue, a paved 2-lane road that is in good condition, but runs through a residential area. This road provides adequate access to the site currently and should continue to do so since it is not anticipated that the visitation to the site will increase substantially or will require service by more or larger trucks or other vehicles.

In fact, the redevelopment of the marina should help reduce traffic on 41st Avenue as well as on Waterway Boulevard. Specifically, if vertical drystack storage is developed, it will provide an extremely attractive alternative for many trailer boaters on Isle of Palms and beyond. Coupled with the necessary reduction in trailer parking spaces (due to overall site spatial constraints and car parking needs), the amount of trailer boaters visiting the site will be reduced.

Similarly, in a redevelopment scenario where vertical drystack storage is not implemented, it is anticipated that new and carefully planned onsite trailer parking will be developed. It is ATM's strong recommendation this trailer parking be much more closely monitored and controlled to eliminate overflow onto 41st Avenue and Waterway Boulevard. Such parking monitoring and enforcement on and adjacent to the site by the City of Isle of Palms will help alleviate traffic to the marina over the long run.

Pedestrian Access Considerations

Pedestrian access to the various uses and businesses at the subject site is critical to maintain a safe and effective traffic flow and a positive experience for site visitors. Key areas of pedestrian access include:

- Restaurant – Include safe access from parking area to the restaurant
- Marina – Include safe access for marina users (slip holders, charter clients, tour groups, transient boaters, and Tidal Wave Watersports clients). This should include safe and easy drop-off and loading areas adjacent to each main dock access point.
- Boat Ramp – Safe access for boaters to and from staging docks, including safe vessel make-ready (unloading) and tie-down area to ensure boaters and their families (children) are not in an active roadway.
- Store – Adequate and proximate access for store patrons, including short-term parking and direct access. Also, direct access for walkers and cyclists from offsite to the store.
- Drystack – If the drystack is implemented, a safe and convenient patron drop-off area will be essential. Routing ALL pedestrian access around drystack launch/retrieval/forklift operation areas is critical.

Providing an improved, safer, and more enjoyable experience for pedestrians at the subject site whether they are users of onsite facilities or merely passing through in an effort to approach and experience the waterfront is a key consideration in site redevelopment planning. Enhancing shoreline treatments (e.g. boardwalks and greenspace) will enhance the experience for pedestrians and all marina site visitors.

Regulatory/Engineering Feasibility

The proposed improvements at the Isle of Palms Marina site will have to comply with local regulatory standards. These may include parking requirements as per the Isle of Palms Code of Ordinances and parking requirements set forth by OCRM with regard to marina and drystack development. These factors and requirements have been discussed in previous sections of this report and will help guide site redevelopment planning.

Shoulder parking improvements will need to be coordinated with the South Carolina Department of Transportation and, if any impacts to the ditch along 41st Avenue are contemplated, OCRM as well.

Additionally, OCRM will require a thorough stormwater management plan for any major marina redevelopment. This plan should be developed in conjunction with final site planning to support the required regulatory permit application(s) for marina redevelopment or drystack construction.

The proposed redevelopment must also fully comply with the American's with Disabilities Act (ADA). Appropriate accessible routes from parking areas to the various site uses must be considered, appropriate location and number of handicapped parking spaces provided, and other factors must be contemplated. Accessible routes to each different marina use must also be provided (e.g., boat ramp, fuel dock, Intracoastal Dock, etc.). The boat slips (docks) themselves must also comply with ADA guidelines for clearance and maneuverability. ADA compliance will be considered in site redevelopment planning and should be studied more closely during final site planning and engineering design.

Parking control on the site is a key topic that has not been covered in this report, but relates to both regulatory and engineering factors. Parking control and enforcement is a major issue that has been brought forth by the current marina manager. The lack of viable monitoring and enforcement regarding parking on the subject site adds to the congestion on the property. A redeveloped site must carefully consider parking control and implement an effective strategy to ensure proper use of site parking.

While a gate system would certainly facilitate control of parking on the subject site, numerous stakeholders also said public access to the site is a key area of concern with regard to site redevelopment. Considering this and input from City representatives regarding the negative aspects of gate control, ATM recommends that a pay-and-display system be considered for the subject site.

Utilizing a remote/bollard pay-and-display system will also help remedy the current parking pass sales and collection method. Currently, users are required to buy daily parking passes for the boat ramp or other parking spaces at the marina store or at the fuel hut on the marina docks. Utilizing a pay-and-display system also reduces labor costs related to parking pass sales. Bollards may be located in each parking area, including the trailer parking area.

A sticker system may be used to identify marina tenants, employees, etc. Selected spaces may be designated for short-term use (e.g. marina store, drop-off areas, etc.). The restaurant may also have an

area of designated spaces and all or some parking onsite may be designated as free after a certain time (e.g. 5 or 6 p.m.).

Under this scenario, careful and consistent enforcement must be included to ensure compliance and to deter misuse. The onus of enforcement would likely fall on the City, but could provide the City tangible financial benefits in terms of citation revenue.

Summary/Conclusions

Parking at the subject site was noted to be the foremost area of concern among project stakeholders. With this in mind, reviewing parking and associated traffic flow problems at the site is one of the key thrusts of this redevelopment study. The information presented in this assessment is intended to provide an objective review of existing parking and traffic conditions at and adjacent to the site as well as to outline considerations to include in site redevelopment planning efforts.

The multiple site uses and businesses, including: marina wet slips, boat ramp, restaurant, watersports dock, and numerous tour and charter businesses, create substantial demand for parking from a variety of user groups. Properly accommodating these groups presents a challenge on this small site. The addition of drystack storage increases this challenge.

Each user group must not only be properly accommodated by design guideline, but vehicular traffic flow and user (pedestrian) safety and access must also be considered. Drop-off areas for selected user groups and truck access must be taken into account in redevelopment plans to ensure functionality and efficiency at the project site. The concept of shared use parking and offsite solutions may be necessary to properly accommodate all users.

In addition, ADA access, stormwater management, and parking control solutions will have to be considered before implementing any improvements to the parking and traffic flow pattern at the site.

All of these areas will be considered during the creation of redevelopment master plan concepts. Additional analysis of parking and traffic within and immediately adjacent to the site will be included with each master plan concept that will be developed under a separate task of ATM's overall study.

It is ATM's opinion that a clean and clear traffic and parking plan for the site will improve site efficiency substantially. Further, this will enable the variety of users who visit the Isle of Palms Marina site greater enjoyment and an enhanced visitation experience.

Appendix A
Existing Parking and Traffic Flow Figure



ATM
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 Certificate of Authorization #00359

**ISLE OF PALMS MARINA
 EXISTING PARKING AND TRAFFIC FLOW**

REVISIONS

JOB NO: 15-2843	CHECKED BY: KGM
DATE: 01-22-2016	DRAWN BY: WFH
SCALE: 1"=100'	SHEET NO: 1

5

Marina and Drystack Market Assessment

For the Isle of Palms Marina

Isle of Palms, South Carolina

Prepared by: Applied Technology & Management, Inc.
941 Houston Northcutt Boulevard, Suite 201
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Executive Summary

The City of Isle of Palms has retained Applied Technology and Management, Inc. (ATM) to provide consulting services related to the potential redevelopment of the City's marina site on the Atlantic Intracoastal Waterway (AIWW) and Morgan Creek.

In an effort to gauge current and projected market demand for marina storage at the subject site, this Marina and Drystack Market Assessment has been conducted as part of a broader site redevelopment planning effort. This market analysis work was conducted from September to November 2015 and included research of existing marina facilities in the greater Charleston area. Boating statistics were reviewed, and demographics for appropriate areas were researched. Targeted interviews were conducted with marine industry personnel.

The goal of these efforts was to determine the competitive position of the Isle of Palms Marina in the local market and to identify the primary demand components at the site. Specifically, this work was aimed at identification of current and projected demand for boat storage at the site, the determination of appropriate slip sizes, analysis of the potential demand for drystack storage, and review of appropriate slip/rack storage rate(s) for a redeveloped marina facility.

This information and analysis will provide critical information for facility planning and redevelopment efforts and help determine project viability from functional and economic standpoints.

Key findings and recommendations include:

- Boat registrations have increased steadily in South Carolina since 2010 and though they dipped slightly in 2014, they still exceed pre-recession levels.
- Regional boat registrations have increased steadily as well. Charleston County registrations have climbed at a steady rate since 2010.
- Boat registration data and ATM interviews have indicated a slight shift in the size of registered vessels and popular boat types along the coast. A slight downsizing trend has enabled many boaters to stay in boating during the recession. The largest, recent growth segment of registered boats has been in the 20- to 40-ft range.
- National expenditures on recreational boating have increased steadily since 2010.
- Statewide (South Carolina) purchases of new powerboats, engines, trailers, and accessories have risen dramatically since 2010, with a sharp increase noted between 2013 and 2014.
- Population growth for the state and Tri-County area of Charleston is strong, particularly for Berkeley and Dorchester Counties, where much of the sprawl of Charleston is occurring.
- The age distribution of Isle of Palms residents indicates a slightly more mature residency than neighboring areas, with a median age of 52.6 years. The median age in neighboring Mt. Pleasant

is 38.1 years. According to the NMMA, the largest segment of boat owners is between 31 and 49 years of age.

- Boating popularity in the Charleston area is strong, particularly among Berkeley and Charleston County residents. This reinforces the ingrained culture of boating in the Charleston area.
 - While localized data are not available, it is assumed that the popularity of boating on the relatively affluent barrier island of Isle of Palms exceeds the noted county figures.
- Median household income among Berkeley, Charleston, and Dorchester Counties is relatively high. This is indicative of strong industry along the coast and the level of affluence necessary to support boat ownership.
- The level of affluence on the Isle of Palms and neighboring Mt. Pleasant is substantially higher than county and statewide averages.
- Charleston is, of course, a premier tourist and transient boating destination. In recent seasons, transient boating has improved, according to local sources.
- Megayacht visitation potential at the site will be limited due to water depths in the AIWW and spatial constraints at the marina and Morgan Creek. Limited accommodations to support these vessels are recommended.
- ATM profiled over 20 marinas throughout the greater Charleston area. These included marinas on the Isle of Palms, around Charleston Harbor, North Charleston, and other outlying areas.
 - Overall occupancy approached 85 percent, which is strong and includes a wide range of facilities.
 - Occupancy of drystack storage in the subject area is very high. All drystack racks east of the Cooper are 100 percent occupied.
- There are several components of marina/boat storage demand at the subject site:
 - Long-term dockage
 - Transient dockage
 - Restaurant dockage
 - Charter dockage
 - Dry storage
 - Boat ramp
 - Non-motorized vessel launch
 - Watersports dock
- Based on observed trends and projections, the following table represents a summary of storage/usage demand for the subject site

Isle of Palms Marina Demand Summary		
<i>Marina Storage Element</i>	<i>Recommended Number</i>	<i>Specific Needs</i>
Wetslips	Maximization within site constraints	10 inshore charter spaces 10 boat rental spaces 2 spaces for Barrier Island Eco Tours 1 or 2 larger charter slips
Drystack Storage	Maximization within site constraints	Assume maximum boat size in the 35- to 40-ft range Assume average boat size in the 23-ft range
Boat Ramp	Maintain current ramp	Assume 20 to 30 parking spaces/lane required
Kayak Launch	Provide separate kayak launch facility	Segregate from heavy motorized vessel activity
Watersports Dock	Maintain Watersports Dock	Carefully examine parking needs/assignment

- Demand from Island residents is expected to be strong and should increase as the benefits of a redeveloped site and, particularly, if drystack storage is developed. Preliminary residential demand estimates range from 75-100 slips/racks.
- Phasing is not indicated from a market perspective, as current demand trends are strong. Phasing may be necessary from a financial standpoint, however.
- The proposed slip mix for redeveloped marina at the subject site includes flexible side-tie dockage, specifically sized dockage for charter vessels, smaller (25-ft slips) for rental boats, reconfigured dockage for the restaurant/AIWW dock, and vertical drystack storage capable of storing vessels up to the 35-40-ft range.
- Basic, recommended rates for redeveloped marina facilities are as follows (in 2015 dollars):
 - Annual Wetslips – about \$15/ft/month
 - Transient Wetslips -- \$2.10 to \$2.25/ft/night
 - Drystack Storage -- \$19 to \$20/ft/night
 - Additional fee recommendations and commentary has been provided in the body of this report.
 - An initial 5 to 10 percent discount on boat storage for island residents is suggested.
 - Slip/rack reservation priority should be afforded to residents of Isle of Palms.
- ATM has presented a list of suggested amenities that will enhance marina redevelopment and help ensure project success. These are presented in detail in the body of the report. Key amenities include:
 - High-quality dockage and reliable utilities
 - Adequate, controlled parking for all marina and site users

- Enhanced pedestrian access
- Maintain onsite amenities, including the marina office/store, marina-only restrooms, restaurant
- ATM suggests that the proposed marina redevelopment may utilize basic timber floating docks and open, uncovered drystack racks to meet market expectations. Upgraded docks or drystack storage architecture may be desirable and help the facility integrate with the fabric of the site and community.

Introduction and Background

Project Background

The City of Isle of Palms has retained Applied Technology and Management, Inc. (ATM) to provide consulting services related to the potential redevelopment of the City's marina site on the Atlantic Intracoastal Waterway (AIWW) and Morgan Creek.

Currently, the marina offers approximately 60 berthing spaces for a variety of vessels, including long-term sliptakers, transient boaters, charter/tour boats, and restaurant visitors. A watersports dock on the AIWW provides personal watercraft rentals, parasailing trips, and other water-related adventures to marina visitors. In addition, the facility is home to a popular boat ramp that provides water access for a variety of trailer boaters.

The upland portion of the site includes a large ship's/convenience store, a popular seafood restaurant (Morgan Creek Grill), a fuel pump, and an array of parking for marina users/visitors.



Isle of Palms Marina Site

The City purchased the marina in 1999 with the primary objective of preserving water access for City residents. Since that time, the marina has grown in popularity, and visitation/usage has increased

substantially. The City has invested in some important refurbishment projects at the site, however, much of the onsite infrastructure is aging and is unable to effectively accommodate current usage demands.

In an effort to gauge current and projected market demand for marina storage at the subject site, this Marina and Drystack Market Assessment has been conducted as part of a broader site redevelopment planning effort. This market analysis work was conducted from September to November 2015 and included research of existing marina facilities in the greater Charleston area. Boating statistics were reviewed, and demographics for appropriate areas were researched. Targeted interviews were conducted with marine industry personnel.

The goal of these efforts was to determine the competitive position of the Isle of Palms Marina in the local market and to identify the primary demand components at the site. Specifically, this work was aimed at identification of current and projected demand for boat storage at the site, the determination of appropriate slip sizes, analysis of the potential demand for drystack storage, and review of appropriate slip/rack storage rate(s) for a redeveloped marina facility.

This information and analysis will provide critical information for facility planning and redevelopment efforts and help determine project viability from functional and economic standpoints.

Methodology

To gain a general understanding of current marina trends and offerings in the greater Charleston area, ATM first conducted a “desktop” research effort. This initial effort included review of available boating publications, City-provided information, previous reports and other data sources to review the locations of marina facilities in the area as well as the characteristics and offerings of each. Available historical statewide boat registration data was reviewed to gauge general trends.

At the conclusion of this preliminary desktop effort, ATM professionals visited Charleston area marinas to profile marina facility offerings. The field investigation included visits to more than 20 marinas and provided additional, current understanding of facility offerings, condition, marina user characteristics, amenities, boat types, occupancy levels, slip rates, and boating trends.

ATM’s field investigation included not only physical observation of the facilities but also targeted interviews with marina operators and industry personnel to gain anecdotal information about boating and marina trends in the region.

At the conclusion of this field investigation, ATM conducted a second desktop data compilation effort aimed at filling in gaps in field-collected data and identifying current and projected demand for boat storage at the proposed marina site. Specific efforts included:

- Compilation and analysis of existing marina offerings and characteristics, dock/drystack types, amenity offerings, rate structures, etc.
- Procurement and analysis of current boat registration data for South Carolina
- Procurement and analysis of demographic data and projections

- Evaluation of transient boating market

ATM compiled and analyzed the information gathered during these efforts and developed an opinion of future demand for marina storage at the subject site. Recommendations for marina offerings, characteristics (e.g., dock types, rack types, utility offerings, etc.), rates, and amenities were developed and are provided in this report.

Research information sources included, but were not limited to, the following:

- South Carolina Department of Natural Resources (SCDNR) – Boat registration data
- National Marine Manufacturer’s Association (NMMA) – Demographic and Boat Registration Data
- 2015 Special Report on Paddlesports – Non-motorized vessel statistics
- U.S. Census Bureau – Demographic Information
- State of South Carolina, Budget and Control Board – Population projections
- U.S. Army Corps of Engineers (USACE) – Water level data
- Waterway Guide, Southern
- Various Internet sites
- ATM in-house databases

Market Demand Potential

Area Positioning

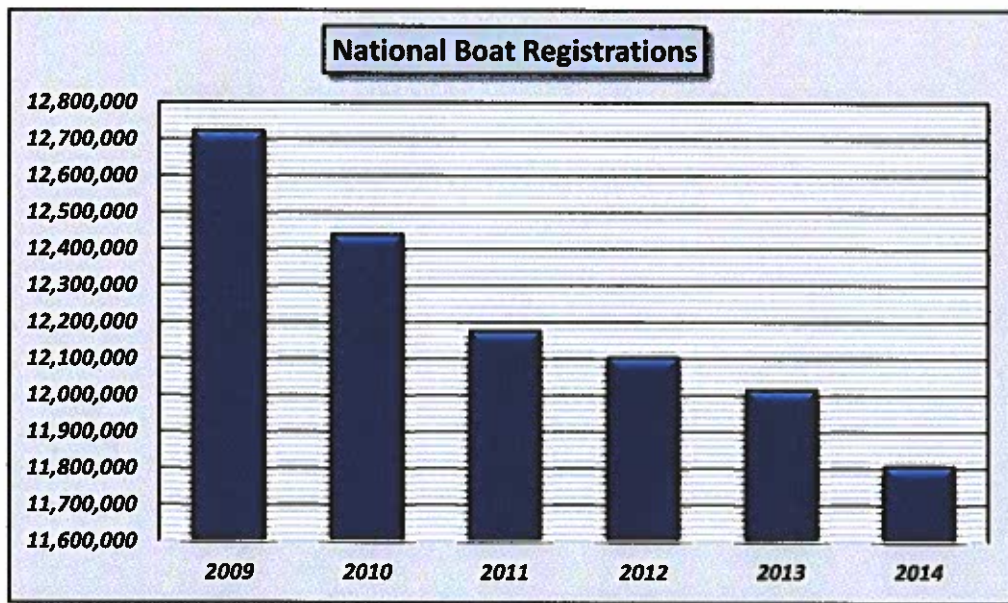
The Isle of Palms, South Carolina, is a small coastal city that comprises just 5.4 square miles of area outside the popular southern city of Charleston. Bordered by the Atlantic Ocean and the AIWW, the Isle of Palms is a barrier island that is a year-round residential community and home to a popular coastal resort (Wild Dunes). Many vacation homes are also available for rental throughout the year on the island.

The Isle of Palms has a strong boating and maritime culture. With miles of beachfront, direct access to the AIWW, expansive marshes, and two inlets leading to the Atlantic Ocean, the Isle of Palms provides a variety of water-based recreation opportunities. The subject marina provides access to the water and berthing for island residents, regional residents, and visitors from around the country. These visitors include resort guests, vacation home renters, and boaters traversing the AIWW and the east coast of the United States.

Boat Registration Data

National

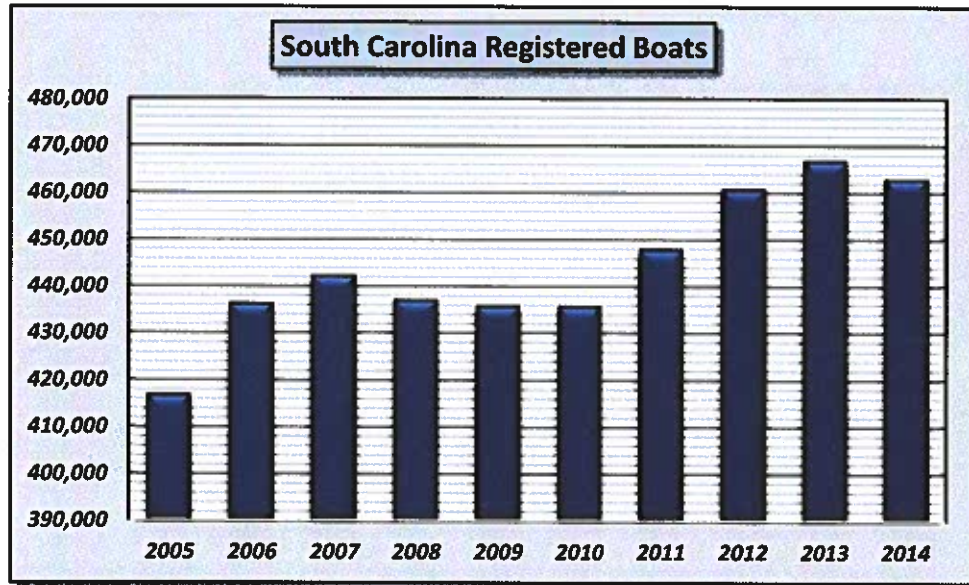
In 2014, there were 11,804,002 registered recreational boats in the United States, according to the U.S. Coast Guard. This is down slightly from the 2013 level of 12,013,296 and has been decreasing modestly since the economic recession that started in 2008-2009. National boat registrations in 2009 totaled 12,721,541, according to NMMA.



Source: USCG, NMMA

South Carolina

According to the NMMA, 462,680 recreational vessels were registered in South Carolina in 2014. This number is down 0.8 percent from the 2013 total of 466,589, but far exceeds the pre-recession high of 442,040 registered vessels in 2007.



Source: NMMA

Regional

Regionally, boat registrations have improved substantially from 2007 to 2015 and are now slightly above the historical highs of 2007. The following table depicts boat registrations for Charleston County and neighboring Berkeley and Dorchester Counties.

County	2007	2010	2013	2015	% Change from 2013-2015
Berkeley	16,124	14,680	15,425	17,885	15.95%
Charleston	32,409	28,752	31,534	34,986	10.95%
Dorchester	9,410	8,331	8,758	9,773	11.59%
Total	57,943	51,763	55,717	62,644	12.43%

Source: SCDNR

The increase in boat registrations in the areas of South Carolina identified in the table (areas adjacent to the subject site) indicate stability and improvement in the local, recreational boating market.

Vessel Size Distribution

Not all vessels in the project region will require wetslip marina storage. Specifically, smaller vessels are generally trailerable or may be kept in dry storage. Therefore, it is important to analyze boat size distribution to further evaluate the potential for wetslip and drystack storage (re)development, as is being contemplated at the subject site.

The following table reflects registered recreational vessel sizes in Charleston County for 2015. The percent change in each size category from 2013 is presented so trends in vessel size popularity may be reviewed.

2015 Registered Vessel Size Distribution		
Charleston County		
Vessel Size	# Vessels	% Change from 2013
Less than 16 ft	16,210	1.71%
16 ft to less than 20 ft	14,249	2.06%
20 ft to less than 40 ft	10,019	8.62%
40 ft and over	104	-0.95%

Source: SCDNR Coast Guard Report

Generally, there has been a steady increase in the number of mid-size vessels in the 20- to 40-ft range. Many of these are trailerable vessels, while some may be candidates for either wetslip or drystack storage. The number of larger vessels (over 40 ft) has stayed steady, as has the number of smaller vessels (less than 20 ft).

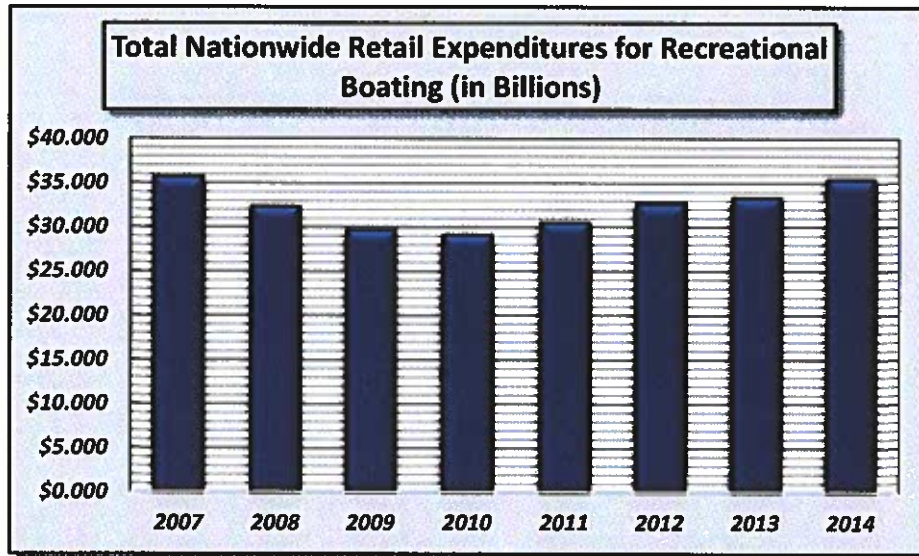
This trend was corroborated through ATM's field observations. In particular, a marked increase in the number of small to mid-size vessels berthed in area marinas and drystack (vessels in the 20- to 25-ft range) was observed. Specifically, many of these size vessels were observed in larger marina wetslips on drive-on floating boat lifts commonly known as "JetDocks," a brand name. In addition, occupancy of area drystack storage facilities has spiked in recent years.



Drive-On Floating Boat Lift

Boat Sales Trends

Other factors that provide insight into the general health of the boating market are boat sales and retail expenditures on boating-related purchases. The following figures present general information on national retail expenditures on recreational boating and state-level boat sales data.

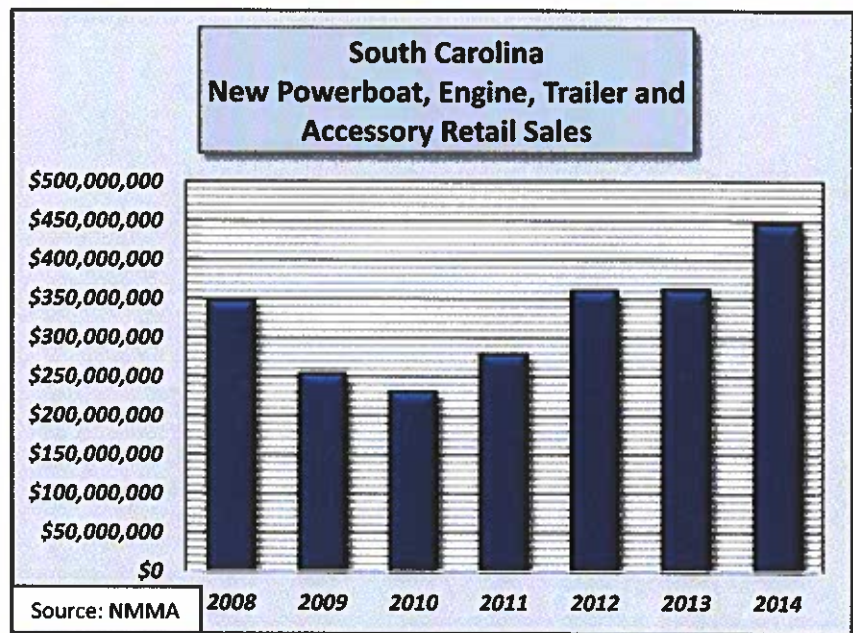


Source: NMMA

Various components comprise these national retail expenditures. Key component categories include new boats, pre-owned boats, new outboard engines, new boat trailers, and other expenditures. "Other" expenditures include fuel, finance, insurance, docking, maintenance, etc.

Overall, it is clear that retail expenditures have increased steadily since 2010. In fact, 2014 expenditures nearly equal those of the pre-recession year of 2007. Expenditures in all component categories have increased similarly since 2010 and indicate stabilization and growth of the industry.

In South Carolina, the picture is very positive as well. The following chart presents new powerboat, engine, trailer, and accessory retail sales figures from 2008-2014. As is evident, new powerboat, engine, trailer, and accessory retail sales have increased dramatically since 2010, when they totaled \$230 million. This total has grown to more than \$445 million in 2014, posting a 23.4 percent increase over 2013 numbers. This increase is among the highest growth rates in the United States from 2013 to 2014 and is



Source: NMMA

evidence of the popularity of boating in South Carolina, as well as the health of the boating market in the state.

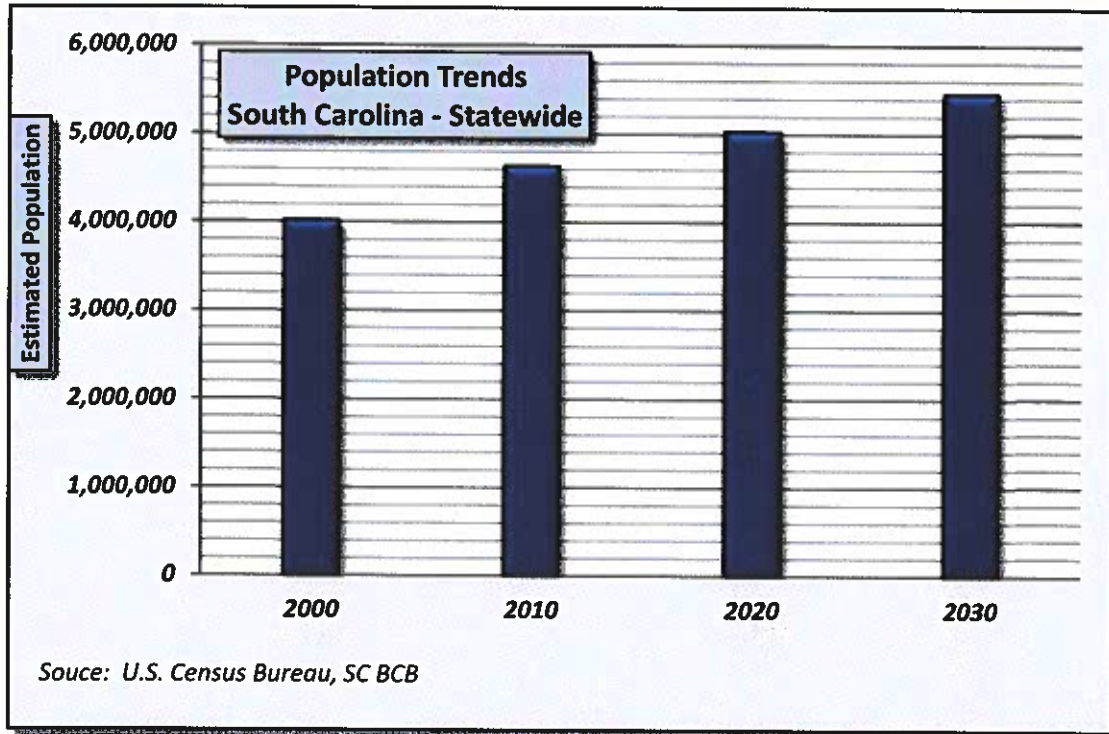
Demographics

ATM has reviewed relevant demographic data for South Carolina, Charleston County, and the surrounding areas as they relate to potential customer bases for boat slips at the subject site. Key demographic trends are highlighted in the following sections.

Population

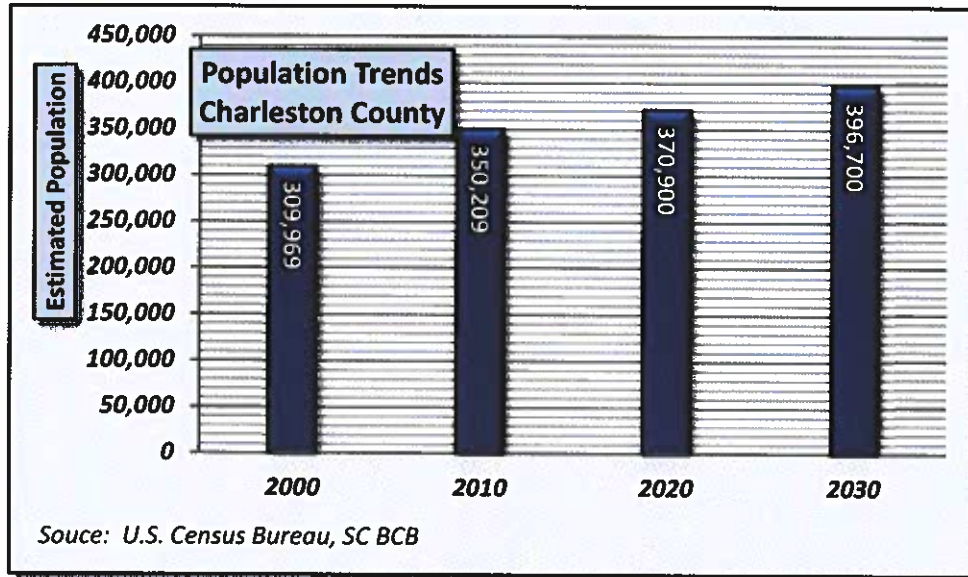
South Carolina

From 2000 to 2010, the population of South Carolina rose from 4,012,012 to 4,625,364, an increase of 15.3 percent. The state's population is expected to continue to rise through 2030, reaching 5.45 million. This projection translates to an 18 percent increase in population from 2010 to 2030 and is a testament to South Carolina's climate, economy, lifestyle opportunities, and overall appeal.

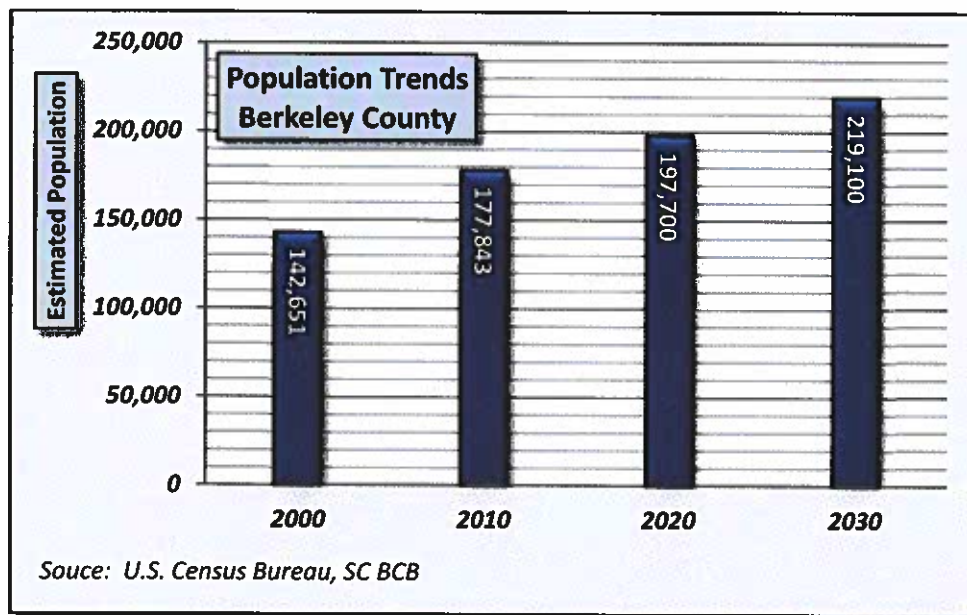


Regional Population Growth

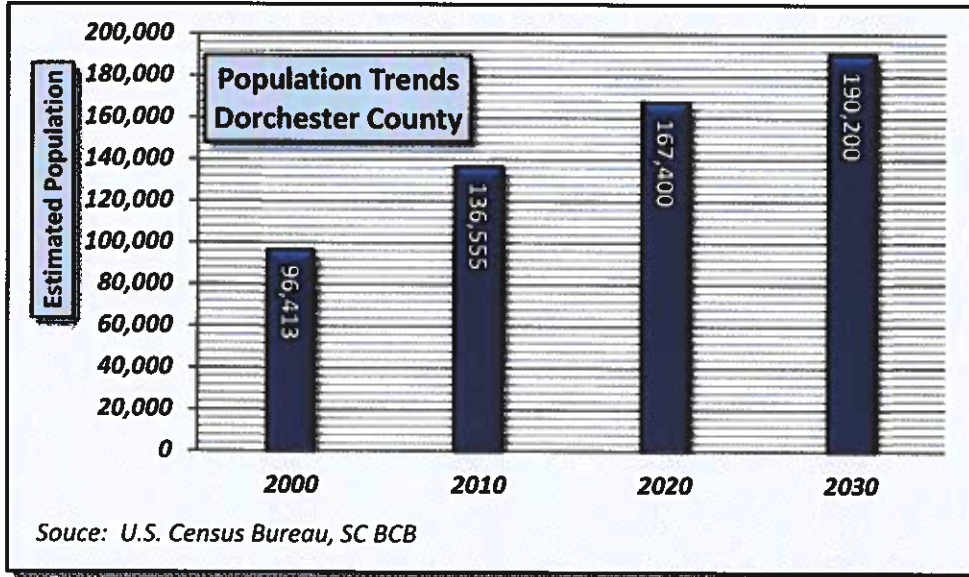
The population in Charleston County (which includes the subject site) as well as neighboring Berkeley and Dorchester Counties is expected to rise as well in the coming years. Charleston County has enjoyed strong growth from 2000 to 2010 (13 percent). This growth is projected to continue at a similar pace through 2030.



Berkeley County experienced a growth rate of 25 percent from 2000 to 2010. This rapid increase is expected to continue through 2030.



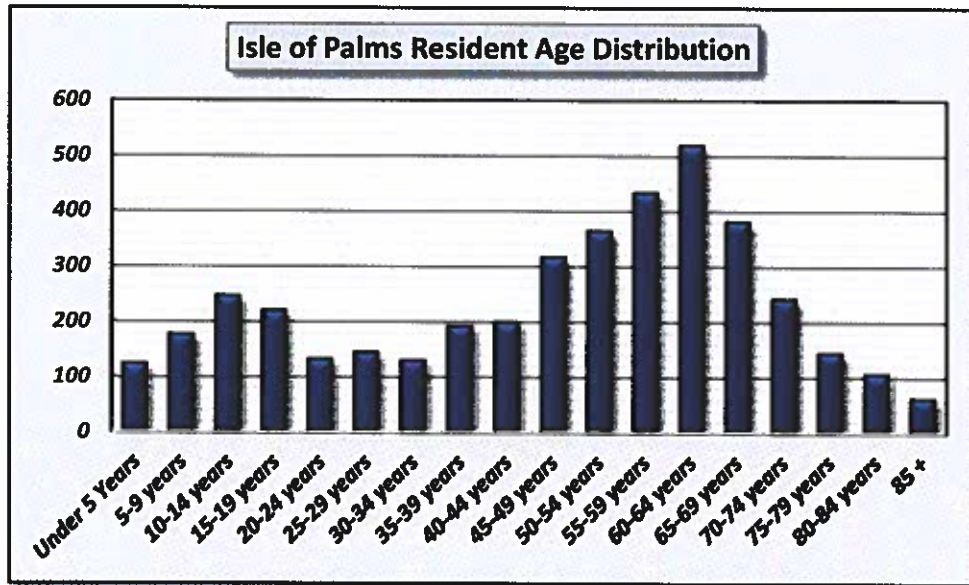
The population in Dorchester County grew rapidly from 2000 to 2010, rising a substantial 42 percent. While the overall population level in Dorchester is smaller (compared with Charleston and Berkeley Counties), this is still significant. By 2030, the population in Dorchester County is expected to reach 190,200 people, an increase of 39 percent from 2010 levels.



Local Population Trends

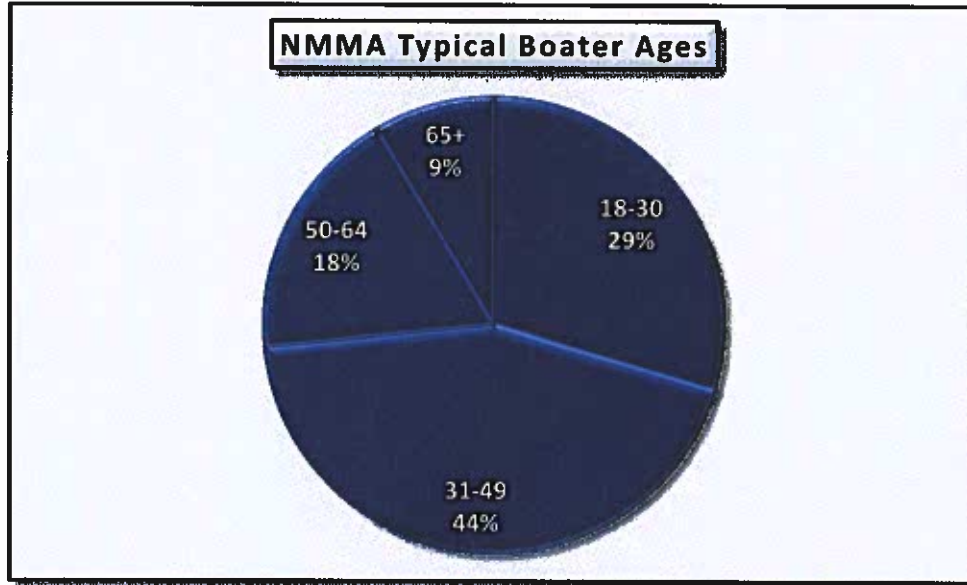
Isle of Palms

In 2000, the U.S. Census reported that the City of Isle of Palms included 4,583 residents. This number dropped in the 2010 census to 4,133, a decrease of 450 people or 10 percent of the total population. Current estimates indicate a population in the range of 4,300. Age distribution of Isle of Palms residents is presented in the following graph. As shown, nearly half of the population of the Isle of Palms is between 45 and 70 years of age. The median age of the population of the Isle of Palms is 52.6 years.



Source: U.S. Census, 2010

NMMA tracks typical recreational boater ages. These statistics for 2014 are shown in the following graph. As is evident in this figure, 73 percent of active boaters are between the ages of 18-49. As such, the Isle of Palms has a slightly more mature population than what is indicated as the most prevalent age for current boating participants.



Source: NMMA

Mt. Pleasant

The Town of Mt. Pleasant is located immediately west of the City of Isle of Palms. Mt. Pleasant is the fourth largest municipality in the state of South Carolina, with an estimated 2014 population of 77,796. This is up nearly 10,000 from just 2010, making Mt. Pleasant one of the fastest growing communities in the state. The Isle of Palms provides a gateway for Mt. Pleasant residents to access the beach and boating opportunities on the AIWW. Therefore, the growth of Mt. Pleasant may have a direct impact on the demand for boat storage and water access at the subject facility.

The median age for Mt. Pleasant residents is 38.1 years, according to the U.S. Census. This is within the largest age segment for active boaters according to the NMMA (31 to 49 years).

Overall, the population trends and projections for South Carolina and the subject area are positive. As the population in the project area continues to grow and the economy continues to stabilize and improve, the potential need for more boat storage space is evident.

Boating Popularity

Comparing the number of registered boats to population levels can yield additional insight about the level of popularity of boating in a given area. The following table presents this information for the Charleston Tri-County area in 2010.

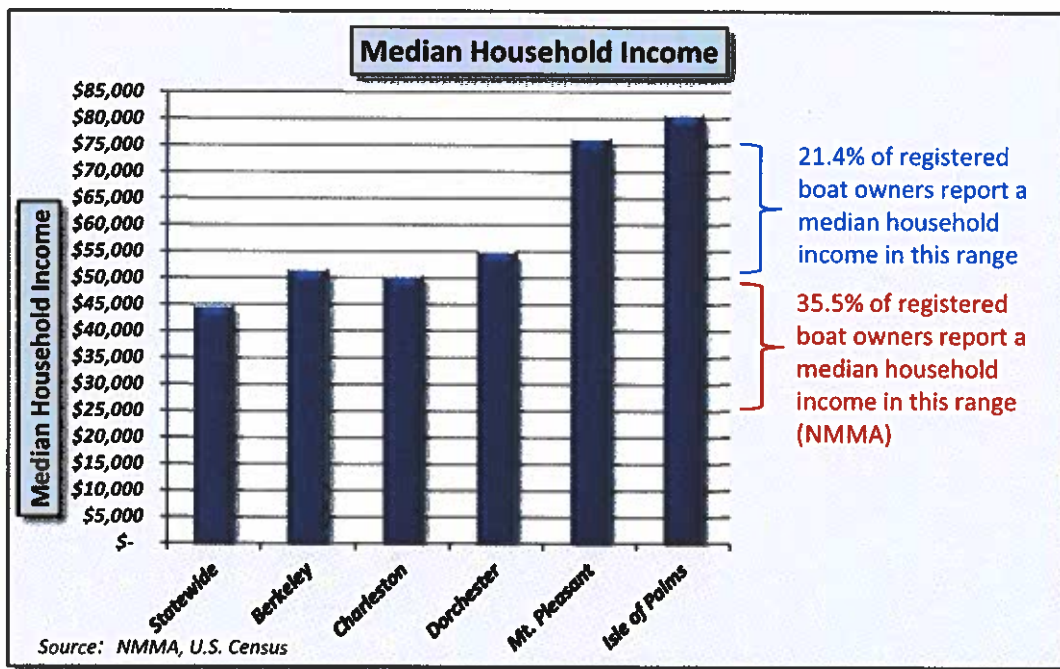
BOATING POPULARITY 2010			
<i>Area</i>	<i>Population</i>	<i>Registered Boats</i>	<i>% Reg. Boats/Population</i>
Berkeley	177,843	14,680	8.25%
Charleston	350,209	28,752	8.21%
Dorchester	136,555	8,331	6.10%
Total	664,607	51,763	7.79%

Source: U.S. Census and SCDNR

Statewide, the percentage of boat owners to population has been near 7 to 7.5 percent in recent years. Therefore, it is noted that the popularity of boating increases nearer the coast. More boating opportunities are available in the coastal region of Charleston and, generally, the level of affluence is higher.

Median Household Income

The NMMA tracks the typical household income ranges among boat owners. In 2012, the largest percentage of boat owners had a household income of between \$25,000 and \$49,999 (35.5 percent). Boaters earning between \$50,000 and \$74,999 comprised the second largest segment of boat owners (21.4 percent). These statistics compare well with Berkeley, Charleston, and Dorchester Counties and indicate good potential for boat ownership. The relative affluence of residents in Mt. Pleasant and the Isle of Palms is a strong indicator of potential boat ownership.



Transient Boaters

Established Cruising Ground and Appealing Destination

The greater Charleston area is an exceptionally popular tourism destination. Charleston has been ranked the Number 1 Small City in the United States by Condé Nast magazine for 5 straight years and has also been awarded the Number 1 City in the United States and Canada by Travel+Leisure magazine in 2014 and 2015. Area tourism brings more than 4.5 million visitors per year and generates more than \$3 billion in economic impacts. Charleston's coastal influences are a key part of the overall allure of the area. Featured in a full-length article in the November 2015 issue of *Yachting* magazine, Charleston has a strong appeal to boaters.

Isle of Palms is situated directly on the AIWW, a transit route that provides protected passage via natural bays, rivers, sounds, and excavated canals from Key West, Florida, to Manasquan Inlet, New Jersey. It is a highly popular route for seasonal transient boaters who keep their vessels in southerly climates during cold winters in the northeastern United States and for those boaters in the Southeast who enjoy temperate summertime cruising and a respite from the threat of tropical weather by visiting the Northeast in the summer.

Although there are numerous areas in the region on the AIWW that offer berthing, the Isle of Palms Marina is the northernmost facility in the greater Charleston area. This provides an outstanding opportunity to capture southbound transient boaters as they approach Charleston.

While other marina stopping points are available in Charleston, the Isle of Palms Marina provides easy access to beautiful beaches, golf, waterfront dining, and other amenities that appeal to transient boaters (e.g., ship's store/provisioning, showers, marine fuel). Further, the facility provides the only fully staffed marina access for the nearby Wild Dunes resort.

Transient Boating Trends

To further examine the potential for transient visitation at the subject site, ATM interviewed several marina staff members at facilities around the Charleston area to gauge current transient demand trends. Key notes are presented below.

- Mr. Kelley Poe at the Charleston Harbor Resort and Marina in Mt. Pleasant indicates that they experienced a 33 percent gain in transient boating visitation from 2013 to 2014.
- Officials at the Charleston City Marina, home to the 1,530-ft-long transient "Megadock," reports an outstanding transient boating season where they have been forced to turn away boaters on occasion due to lack of slip space.
- Matt Driscoll at the Cooper River Marina in North Charleston also has had to turn away transients this season due to lack of slip space. He has seen a particular increase in larger transient vessels (boats in excess of 45 ft) seeking slips.
- Kevin at Toler's Cove Marina reports an increase in transient visitation for fueling, to the extent that they have applied for federal grant funding assistance to improve their fueling infrastructure.

- Mr. Brian Berrigan at the subject marina endeavors to maintain about six docking spaces for transient vessels, but indicates that more space is needed. He feels that he could utilize “a couple hundred more feet” of transient dockage, particularly after the AIWW is dredged in the area of the site.

Megayacht Potential

Megayacht is a term that is commonly used to refer to large, private, recreational vessels that are 80 ft long and greater. These vessels typically have professional crews and specialized needs in terms of berthing and services. Further, the crew and owners of megayachts are generally very discerning and often require a high level of services and accommodation.

A number of megayachts visit the Charleston area currently, docking primarily at the Charleston City Marina. Charleston offers some undeniably popular attractions for megayacht owners and crew and is along the prime route that provides the vessels refuge from summer heat and storms.

The potential to berth megayachts at the subject facility is limited based on a number of factors, most prominently, lack of water depth in the AIWW. While the AIWW is authorized to be dredged/maintained at a depth of -12-ft mean low water (MLW), federal funding available to conduct maintenance dredging has decreased in recent years. As such, the consistency of water depths in the AIWW is a concern to many megayacht operators. These vessels often bypass the AIWW and enter the Charleston area through the maintained federal channels in Charleston Harbor. Mr. Berrigan at the subject marina confirmed that the marina rarely sees 80-ft vessels, and that the typical transient boat is no larger than 60 ft.

Currently, two AIWW dredging projects have been authorized in Charleston County that will improve water depths in selected areas of the AIWW. These areas include the “reaches” or specific areas between Dewees Inlet to Breach Inlet and the area near Jeremy Creek in McClellanville (which is north of the project site). It is ATM’s opinion that this will improve access through the AIWW in northern Charleston County significantly, but with controlling water depths in other reaches of the waterway that are not scheduled to be dredged, it is not anticipated that the waterway or marina will attract a significant number of megayachts as a result of the dredging project. Large transient vessel traffic (less than 80 ft), however, (including sailboats) will undoubtedly increase in the AIWW.

Spatial constraints of the AIWW and Morgan Creek at the marina also preclude berthing for larger megayachts. Specifically, the clear width of Morgan Creek (considering the presence of the *current* marina docks and private docks) is about 215 ft. The clear width of the AIWW is approximately 245 ft. The bridge clearance of the Isle of Palms Connector also presents mast clearance constraints for large sailing vessels. It is anticipated that most large megayachts visiting the Charleston area will not seek dockage at the subject site. Some smaller to mid-size megayachts may transit the AIWW and seek dockage at the marina, particularly if visiting the Wild Dunes Resort or other attractions on the island.

With this in mind, it is suggested that some minimal consideration be given to providing flexible side-tie dockage that can accommodate a variety of vessels, including transient megayachts up to about 120 ft. ATM megayacht data files indicate that vessels in the 120-ft range typically draft about 6.5 ft. These vessels also require keel clearance for safety and effective navigation. Suggested minimum water depths

for these vessels is about 10 ft. The AIWW throughout Charleston County will not provide these water depths at low tide levels on a consistent basis. The current dredging projects will not change this. However, not all megayachts have the same draft/clearance requirements and some will elect to transit the AIWW.

Supply Evaluation

The greater Charleston area is home to numerous marina and drystack facilities catering to a wide range of vessel sizes and types, from small runabouts and center consoles to some of the world's largest luxury megayachts. To facilitate the market investigation for the proposed redevelopment of the Isle of Palms Marina, ATM catalogued area marinas and drystack storage facilities and collated key information about facility capacity, offerings, etc. In addition, ATM visited area marinas and conducted interviews with marina managers, personnel and other industry contacts to gather current information on the facilities, their performance, slip rates, and the general regional market for marinas. The gathered information has been summarized in comparative matrix format (see Appendix A) and is discussed qualitatively in the following sections.

Isle of Palms

There are three marinas located on Morgan's Creek in Isle of Palms: Isle of Palms Marina, Wild Dunes Yacht Harbor, and Dewees Marina. ATM also identified two other marina facilities on the Isle of Palms near Breach Inlet. These include a marina located directly behind Carroll Realty and another facility located immediately behind The Boathouse restaurant, Two Island Marina.

Isle of Palms Marina

Isle of Palms Marina (subject facility) is a relatively small (about 50-slip) wet slip marina. Upland amenities include a well-stocked general store and gift shop, waterfront dining, and standard offerings such as laundry, restrooms, and showers. Many of the floating timber docks onsite are in generally poor condition and at the end of their useful life. According to marina staff, the marina generally stays full and currently is 100 percent occupied. The marina is a popular stop for transient boaters and offers an upscale waterfront restaurant, Morgan Creek Grill.

Additional offerings and amenities at the marina include a popular 3-lane boat ramp, upland trailer/boat storage (ground-level only), charter fishing opportunities, eco tour opportunities, kayak/paddleboard rental operations, upland gas station, and a watersports rental operation.

Wild Dunes Yacht Harbor

Wild Dunes Yacht Harbor is a larger facility (about 190 slips), situated in the natural cove of Morgan's Creek. The slips are privately owned and a homeowner's association and third-party property management firm manages the facility. Slips are not available commercially for lease. However, it is common for slip owners to rent slips on an informal, month-to-month (or similar) basis. No slips were currently advertised for rent during ATM's field investigation. Observed occupancy was approximately 85 percent.



Typical Docks at Wild Dunes Yacht Harbor

Dewees Marina

This is a small, private marina that provides the mainland access point for residents and visitors of Dewees Island. The facility on Morgan Creek includes approximately 29 floating wet slips, a boat ramp, and an active ferry dock. The facility is located immediately adjacent to the Isle of Palms Marina and includes floating timber wet slips, most of which appear to be in fair/poor condition.

Carroll Marina

Located immediately behind the Carroll Realty building near Breach Inlet and the City's boat ramp on Palm Boulevard, the Carroll Marina provides approximately 700 linear ft of side-tie dockage. This affords berthing space for roughly 25 vessels in the 25- to 30-ft range.

At the time of the field investigation the marina facility appeared to be approximately 80 percent occupied. Dockage at the marina consists of floating timber docks that appear to be in fair condition, with limited utilities (e.g., for smaller vessels).



Carroll Marina

Two Island Marina

The Two Island Marina consists of approximately 23 to 25 slips immediately behind The Boathouse restaurant on Palm Boulevard and Hamlin Creek. The docks are reportedly not affiliated with the restaurant and are in generally poor condition. Observed occupancy was just 20 percent. Very limited power and water were provided to the slips.



Two Island Marina

Mt. Pleasant

Mt. Pleasant, located just to the west of the Isle of Palms, is home to several marina facilities.

Toler's Cove

Toler's Cove Marina is located near Sullivan's Island directly off the AIWW. The facility is known to cater almost exclusively to sportfishing vessels, although a few larger cruisers were observed at the marina. The docks are floating concrete in fair condition. The facility offers basic amenities such as restrooms, showers, and limited supplies and bait. The majority of the marina's 140 slips are privately owned, although some are available in a rental pool. Occupancy is 100 percent, with a waiting list. Marina management has recently added several JetDocks and filled these immediately. They indicated they are actively looking for ways to add more JetDock storage.



Typical Conditions and Sportfishers at Toler's Cove

Shem Creek Marina

Shem Creek Marina is a drystack facility in Mt. Pleasant with 192 total racks that can accommodate vessels up to about 29 ft in length. The racks are open and some, but not all, are covered.

Racks are available for purchase but are also rented or leased via a third-party marina management firm. Management indicates that the racks are currently 100 percent occupied.



Shem Creek Marina Drystack Facility

Magwood Marina

Magwood Marina is a small (80-rack) drystack facility located on Shem Creek in the Old Village area of Mt. Pleasant. The facility was constructed in about 2007 and is currently 100 percent occupied and has a waiting list. Magwood Marina offers open racks with roof cover and architectural side panel treatments.



Magwood Marina Drystack

Charleston Harbor Resort and Marina

The Charleston Harbor Resort and Marina is the largest wet slip marina in the area, with approximately 450 total slips. The marina features a wide range of amenities including an adjacent resort, restaurants, lounge, bar, pool, restrooms, showers, Internet, fitness facility, meeting space, etc.

Although the marina is located in Mt. Pleasant, across the harbor from downtown, it offers shuttles and water taxis to key destinations on the peninsula.

The main portions of the marina include slightly older, floating concrete docks that are in relatively good condition. Of particular note, the marina includes a series of boat lifts that allow smaller vessels (up to 25 ft) to be stored “in the dry.” The boat lifts have been very popular and remain fully occupied at most times. Overall, the marina is currently about 85 percent occupied.



Typical Conditions at Charleston Harbor Resort and Marina

Wando River Marina

The Wando River Marina is located at Highway 41 and the upper Wando River in Mt. Pleasant. The marina offers approximately 50 wet slip berthing spaces for vessels of various sizes. Observed occupancy at the marina was 20 percent during ATM’s field visit. The appeal of the marina is limited based on the presence and water clearance of the Highway 41 bridge and the location in the upper Wando.

It is anticipated that marina occupancy will improve as the bridge is replaced with a fixed span structure that has a clearance of 55 ft. In addition, the growth of Mt. Pleasant and nearby Berkeley County neighborhoods should spur interest in the facility.

Charleston

Ripley Light Yacht Club

The marina at Ripley Light Yacht Club consists of approximately 86 wetslips. The marina was completed in about 2007 and consists of floating concrete (Bellingham) docks that are in excellent condition. While upland amenities are currently minimal, including a small bathhouse and marina office, the marina features a large ipe hardwood deck overlooking the marina as well as numerous fish cleaning stations located directly on the docks. Marina tenants also have access to the pool facility at the adjacent hotel.



Typical Dock Conditions and Vessel Types at Ripley Light Yacht Club

The marina caters primarily to sportfishing vessels, although several larger cruisers were noted as well. Marina staff indicates that the cruisers are generally transient vessels.

According to marina staff, most of their annual sliptakers are local residents, but not all vessels are registered in South Carolina. Several vessels are registered out-of-state for tax and other reasons. Marina staff also identified an observed shift in vessel trends in Charleston from sheer growth in vessel size to stabilization on 50- to 60-ft sportfishing vessels that are highly amenitized. The shift to these size vessels eliminates the need for a professional crew and captain and helps reduce maintenance costs. The marina is currently at full capacity with a waiting list.

Ripley Light Marina & Drystack



Open, Uncovered Racks at Ripley Light Marina & Drystack

Ripley Light Marina & Drystack consists of 223 open, uncovered racks and approximately 70 wetslips. The drystack caters primarily to center consoles and cruisers up to 40 ft, whereas the wetslips cater almost exclusively to sportfishing vessels.

An aging, enclosed drystack building was replaced in about 2010 by larger open racks. The wetslip marina consists of aging concrete docks that are in fair condition. The marina offers limited amenities, which include bathrooms and showers, fish cleaning station and basic sundries (drinks, ice).

According to marina management personnel, the drystack occupancy has improved significantly in recent years. Available/serviceable racks are 100 percent occupied. Additionally, they note an increased demand for larger racks (up to about 40 ft).

Charleston City Marina

The U.S. Navy constructed the Charleston City Marina facility in the 1960s and Hurricane Hugo effectively destroyed the marina in 1989. The marina was redeveloped in the mid-1990s by the City Marina Company and has since grown to become one of the area's largest marinas, with more than 400 slips. Currently, the marina is almost 100 percent occupied. According to interviews with key marina staff, the facility was only 60 to 65 percent occupied just a few of years ago.



Sportfishers at Ripley Light Marina & Drystack



Megayacht Rising Sun at the Megadock

The marina caters to vessels of all shapes and sizes, but is known as the premier destination in the region for larger megayacht vessels. Specifically, the Megadock, a 1,500-ft-long side-tie floating concrete dock, offers amenities targeted towards larger vessels, such as in-slip high-speed fueling and 100-amp shore power. The marina regularly hosts vessels up to 150 ft, but is known to berth larger vessels on occasion, such as the 453-ft megayacht, *Rising Sun*.

While portions of the marina's docks are aging, overall, the facility is well maintained and offers an array of amenities and excellent service, including a floating bathhouse and marina office,

an upland ship's store, onsite yacht/boating service providers, etc. Additionally, a private shuttle offers transportation to the Market and other key destinations downtown. The wide variety of amenities and high level of service establish the City Marina as a benchmark facility in the regional market.

The City Marina has received local and state approvals for a proposed expansion of the marina and Megadock facilities. This expansion would add approximately 120 dedicated slips and extend the Megadock by approximately 600 linear ft.

The Harborage at the Ashley



Typical Conditions, Ashley Marina

The Harborage at the Ashley, locally known simply as the Ashley Marina, is the second largest marina on peninsular Charleston, with approximately 230 slips. Individual slips are owned privately, and the marina staff, infrastructure, etc. are funded and managed via a homeowner's association. Slips are actively leased or rented via a central rental pool managed by marina staff.

The marina underwent a significant retrofit in 2007 that included installation of new marine utilities and new ipe hardwood decking. The marina is in good condition, is well maintained, and offers professional

customer service. Amenities include a small ship's store, lounge, laundry, restrooms, shower, etc. In contrast to the City Marina, the Ashley Marina focuses primarily on providing a more personalized experience to *smaller* vessels.

The marina is approximately 85 to 90 percent occupied, although several slips are intentionally left available to accommodate transient visitors.

Bristol Marina

The Bristol Marina is located just north of the Highway 17 bridges near Brittlebank Park on the Charleston Peninsula. The Highway 17 bridges have a relatively low clearance and, while they are drawbridges, they are seldom opened. As such, access to the Bristol Marina is effectively limited to powerboats. This is obvious in the mix of vessels at the facility, which consists primarily of cruisers and center consoles.



Typical Conditions and Boat Types, Bristol Marina



JetDocks at Bristol Marina

Of particular note, the marina includes a series of JetDocks for smaller vessels (up to about 24 ft). These allow the boats to be drawn out of the water and stored "in the dry." Staff interviews and experience at the facility indicate that these have been a very successful and popular component of the marina's offerings.

The recent addition of new JetDocks inside the dedicated double-loaded slips (three JetDocks in the space designed for two larger vessels) at the marina has contributed to a spike in occupancy, which is now approaching 100 percent.

Seabreeze Marina and Drystack

Seabreeze Marina and Drystack is a relatively small (130-rack) drystack facility located on Town Creek (the east side of the peninsula). The facility is approximately 85 percent occupied currently, up from a reported 70 percent in 2013.



Seabreeze Marina Open, Covered Drystack Racks

Seabreeze Marina Open, Covered Drystack Racks



Forklift and Office/Lounge Building at Seabreeze Marina & Drystack

Upland amenities include a small but well-appointed ship's store, lounge, marina office, and restrooms and limited provisioning (ice, drinks, and snacks).

The floating concrete docks at the marina are used currently only as staging area for the marina and are

not available for lease. However, the marina received federal and state approvals in 2012 to construct 52 new floating wet slips.

North Charleston

ATM visited three marinas in North Charleston as part of this Marina and Drystack Market Assessment.

Cooper River Marina

Cooper River Marina is owned and operated by the county and catering primarily to sailboats. The facility is relatively isolated by both land and water, but offers slips at a low rate (relative to other area marinas). The facility consists of a combination of newer and older floating concrete docks and offers basic amenities including restrooms, showers, laundry and a small ship's store. Despite the isolated location and lack of high-end amenities, the marina enjoys a 100 percent occupancy rate.

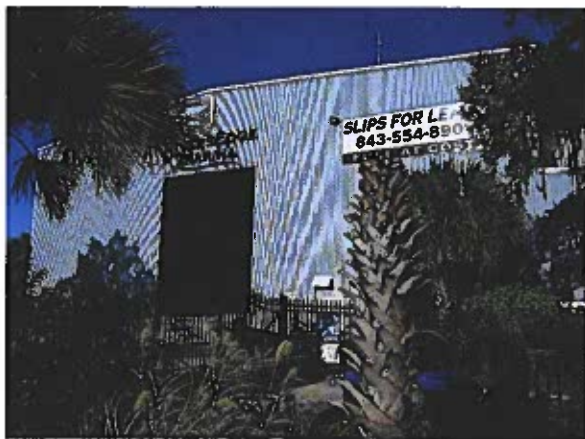
Dolphin Cove Marina

Dolphin Cove Marina is located on the Ashley River approximately 5 miles (by water) from the mouth of the river to the Charleston Harbor. The facility includes approximately 125 wetslips and a large (350-rack) enclosed drystack building. Dolphin Cove Marina is located in an undesirable industrial zone of North Charleston and is in poor condition. It appears that portions of the floating timber docks have been replaced in a piecemeal fashion throughout the years, but the docks remain in an overall state of disrepair. Similarly, the drystack building is aging but appears to be generally serviceable. The facility offers limited amenities, including a small café/lounge. Despite conditions at and location of the facility, observed occupancy was approximately 85 percent.



Typical Dock Conditions at Dolphin Cove Marina

River's Edge Marina



River's Edge Marina

River's Edge Marina is a large drystack facility located on the upper portions of the Ashley River. The facility was expanded in about 2007 to its current capacity of 472 racks. Despite a slow initial absorption due to the recession, occupancy at the facility has increased over the past couple of years and is currently at 86 percent.

In addition to the drystack racks, the marina includes approximately 50 wetslips, although these are reserved primarily as staging docks for the drystack. Some dock space will be leased on a limited basis, however. Amenities include a large dockmaster's office and ship's store, captains' lounge, picnic/grill areas, restrooms, showers, and fish cleaning stations. A boat dealer, Duncan's Boats, is also onsite.

Outlying Areas

In addition to the marinas located directly in Charleston and the immediately surrounding areas, ATM identified, visited, and catalogued a few other marinas in the region that comprise part of the local marina market. These include:

- Bohicket Marina (Seabrook Island)
- St. Johns Yacht Harbor (Johns Island)
- Daniel Island Marina (Daniel Island)

Bohicket Marina

Bohicket Marina is a 200-slip wetslip marina located near Seabrook Island with an additional drystack facility that recently added 42 new open, uncovered racks to augment the previously existing 90-rack enclosed drystack building. The marina features single-loaded floating timber docks and exceptional upland amenities, including several restaurants, bars, shops, etc. The facility is the closest marina to the resort areas of Kiawah and Seabrook Islands and enjoys strong seasonal visitation. Overall marina occupancy was observed to be about 85 percent.



Wetslips at Bohicket Marina



Boardwalk and upland restaurants at Bohicket Marina

St. Johns Yacht Harbor

St. Johns Yacht Harbor on Johns Island was redeveloped in about 2007. The facility offers approximately 200 wetslips on the Stono River, an upland restaurant (with another planned), pool, bar, ship's store, restrooms, etc. Additionally, a courtesy car is offered to guests to allow them to visit surrounding attractions or downtown Charleston.

The marina is currently 100 percent occupied and has regular transient visitation since it is located immediately adjacent to the AIWW. Of particular note are the boat lifts offered at the marina. These lifts can hoist vessels to about 42 ft and have proven exceptionally popular since they were installed.



Boat Lifts at St. Johns Yacht Harbor

Daniel Island Marina

Daniel Island Marina is a large (425-rack) drystack facility located on Daniel Island. The facility features enclosed drystack storage as well as limited wet slip dockage. Amenities include a ship's store and outdoor deck bar. Current occupancy is 100 percent, with an average vessel size in the drystack of 24 ft.



Daniel Island Marina Drystack (three-sided storage)

Refer to Appendix A for summary information on all profiled marina facilities, including slip rates.

Other Boat Storage

In addition to traditional marina storage, ATM also investigated alternate boat storage facilities including mini-storage facilities and purpose-designed boat storage facilities. These businesses allow boat owners to store their vessels on trailers in (typically) secure upland locations. This offers trailer boaters who are not able or do not elect to keep their vessels at their residences a boat storage solution.

Subject Site

The Isle of Palms Marina currently offers 31 or 32 boat/trailer parking spaces onsite for long-term and short-term storage. Costs for this onsite storage range based on length of stay and season (refer to the following table).

ON SITE TRAILER STORAGE			
	High Season April-Sept.	Off Season October-March	Launch Pass Included (Yes/No)
Daily	\$10	\$20	No
3-Day	\$100	\$60	Yes
Weekly	\$150	\$70	Yes
Monthly	\$12/foot	\$10/foot	No

The onsite trailer storage at the Isle of Palms Marina provides a very convenient storage location for boaters who prefer to launch at the site. In addition, this amenity is very attractive to vacationers at Wild Dunes and other locations on the Island that do not allow boat/trailer storage.

Mini Storage

ATM profiled three mini storage facilities in Mount Pleasant. Key information collected at these facilities includes:

- Mount Pleasant Mini Storage on Von Kolnitz Road
 - Can accommodate up to a 30-ft boat
 - Cost is \$80/month
 - Boat storage nearly 100 percent occupied

- Uncle Bob's Self Storage on Mathis Ferry Road
 - Offers covered storage for boats
 - 25-ft maximum boat size
 - Cost is \$169/month for covered boat storage

- Extra Space Storage
 - Open, outdoor boat parking for vessels to 40 ft
 - \$126/month for 10-ft x 25-ft parking space
 - \$164/mo. for 10-ft x 40-ft parking space

Boat Storage

ATM profiled three dedicated boat storage facilities in the East Cooper area. Key information collected at these facilities includes:

- Carolina Boatyard on Highway 41 (at the Wando River)
 - Storage is full with a waiting list
 - Cost is \$3.00/ft/month with a \$75/month minimum
 - Some Isle of Palms clients were noted, although most are from Mount Pleasant

- Sewee Outpost in Awendaw, South Carolina
 - All boat storage is full with a waiting list
 - All boat storage is covered
 - Price is \$100/month

- Mount Pleasant Boat and RV Storage
 - Occupancy is near 100 percent
 - All boat storage is open
 - Price is \$90/month for 25-ft space; \$100/month for a 30-ft space

As is evident, trailer storage for boats is a popular and cost-effective manner of storing vessels. Storage costs at the subject facility are substantially higher than other identified offsite locations, primarily due to the location/convenience of the storage opportunity.

Based on the occupancy levels of the onsite and offsite trailer storage facilities profiled and the occupancy of all drystack storage facilities east of the Cooper (100 percent), it is likely that some current tenants of local upland storage would prefer drystack storage at the subject site. This certainly includes a number of Isle of Palms residents who reportedly store their vessels/trailers at storage facilities onsite and in Mount Pleasant.

Demand Forecast

Area Demand Overview

Local Occupancy Trends

In addition to a growing base of registered boats in the Lowcountry area of Charleston, the supply of marina slips is limited. Several marinas are at or approaching full occupancy. The demand for transient boat slips is also increasing.

Wetslips

The demand for wetslips has increased steadily in recent years. Many marina facilities, including that at the subject site, exhibit strong demand for wetslip marina storage. Several other large wetslip marina facilities are enjoying exceptional occupancy levels. These facilities include the Charleston City Marina, Ripley Light Yacht Club, St. Johns Yacht Harbor, the Cooper River Marina, and Toler's Cove Marina.

Boat Lifts/JetDocks

A key trend in recent years is the prevalence and popularity of in-water boat lifts and JetDocks. Several marina facilities throughout the Charleston area offer either boat lift storage alternatives or JetDock storage. In almost every instance, the occupancy levels on this type of boat storage are exceptionally high or at 100 percent occupancy. The Bristol Marina has recently installed three JetDocks inside the space of larger, double-loaded marina wetslips that were designed for two larger vessels. This has helped increase marina occupancy. Other facilities such as Toler's Cove are actively looking to add JetDocks. Private facilities such as the Carolina Yacht Club in downtown Charleston have added a number of JetDocks in a response to patron demand and in an effort to reduce onsite boat trailer parking and ramp usage.

The advantages of boat lifts and JetDocks include the ability to store a boat so that the hull is out of the water. This precludes marine growth on the hull, which decreases vessel performance and increases maintenance requirements for the vessel. In addition, boat lifts and JetDocks reduce the need for trailering/launching, making the boating experience simpler.

Drystack Storage

ATM profiled eight drystack storage facilities in the greater Charleston area as part of this effort. Three of these facilities were at 100 percent occupancy; none exhibited an occupancy rate below 85 percent. The drystack storage facilities in Mt. Pleasant are 100 percent occupied with waiting lists. Bohicket Marina recently added 40 new racks to its facility in response to strong demand for this vessel storage type.

Drystack storage is popular for many of the same reasons that boat lift/JetDock storage is popular, but offers other benefits as well. Obviously, drystack storage keeps vessels out of the water where marine growth or harmful saltwater corrosion may occur. Drystack also generally offers increased vessel security and even more boater convenience.

Typical drystack storage provides on-demand launch and retrieval of a boater's vessel and includes washdown service after use as well. Concierge-level service such as fueling, stocking the vessel with ice and refreshments, routine cleaning, and vessel maintenance may also be included.

Site Demand Overview

There are several components of marina/boat storage demand at the existing Isle of Palms Marina site. These components are discussed in the following sections.

Wetslips

As mentioned, the existing marina facility at the Isle of Palms provides wetslip berthing for approximately 50 vessels. This includes a variety of uses such as long-term slips, transient slips, restaurant dockage, charter boat dockage, etc. Specifics of each use is described as follows.

Long-Term Dockage – According to Mr. Berrigan, the marina offers 30 to 40 wetslips for long-term lease. There is a waiting list for this dockage space as well.

Transient Dockage – As mentioned previously, Mr. Berrigan strives to maintain six transient vessel dockage spaces at the marina. These are generally well utilized. Additionally, the fuel dock provides overflow transient berthing space for short-term vessels arriving after hours or late afternoon and departing in the morning.

Restaurant Dockage – Approximately six dedicated wetslips and 118 linear ft of side-tie berthing area are reserved for restaurant usage. This enables boaters to tie up at this dock to enjoy dining and entertainment opportunities at the Morgan Creek Grill. In addition, the dock is intended to provide a base for restaurant-sponsored boat cruises.

Charter Dockage – The Isle of Palms Marina is a popular embarkation point for fishing charters, eco tours, and boat rental excursions. At the time of the Limited Conditions Assessment, ATM observed approximately five rental boats moored at the marina and approximately 13 inshore fishing charter vessels (flats or bay boats to about 23 ft). Many of these inshore charter vessels also utilize JetDocks for in-slip vessel storage. Other observations include two large pontoon tour boats (Barrier Island Eco Tours) and one multi-purpose charter vessel (the Osprey).

Dry Storage

Upland dry storage is provided at the marina site for boats that are situated on trailers. A special lot is designated within the marina site to accommodate these trailers/vessels. ATM's observations indicate that the lot provides for approximately 31 or 32 trailer parking spaces. While the majority of these were occupied during ATM's observations, Mr. Berrigan indicates that he specifically maintains some level of vacancy in this lot to accommodate Isle of Palms visitors who may wish to store their boat at the marina while they are vacationing on or visiting the island. Mr. Berrigan also stated that approximately 10 percent of the boats stored in the dry storage area at the marina belong to island residents. There is a wide range of dry storage fees, depending on length of stay.

Boat Ramp

The marina site is also home to a popular, 3-lane concrete boat ramp. The ramp provides excellent access to Morgan Creek and the AIWW for residents and visitors. The convenience of boat ramp access to the water, coupled with the onsite fueling opportunities, convenience store, and bait/tackle sales, contributes to the high popularity of the boat ramp.

There are modest fees charged by the marina operator for boat ramp usage. For singular launches, these fees range from \$5.00 for Isle of Palms residents to \$15.00 for non-residents. Annual launch passes are also available for \$100 for residents and \$300 for non-residents.

It is evident that demand for the boat ramp, particularly during weekends and holidays of the summer boating season, outstrips available parking onsite for trucks and trailers.

Kayak Launch

In addition to traditional vessel launching, the boat ramp at the Isle of Palms marina is also popular among non-motorized vessel users (e.g., paddleboarders and kayakers). Further, the marina is home to a kayak and paddleboard rental/tour operation, Coastal Expeditions.

According to The Outdoor Foundation and The Coleman Company, Inc., 21.7 million Americans participated in paddlesports in 2014. This represents 7.4 percent of the overall population and signifies an increase of more than 3 million participants since 2010. Participation in stand-up paddling has grown by over 150 percent since 2010 and included 2.8 million people in 2014.

It is evident through these statistics and the observed prevalence of non-motorized vessels at the subject marina and on area waterways that there is a high level of demand for non-motorized vessel access.

Watersports

Tidal Wave Watersports operates a dedicated watersports rental and excursion dock at the marina facility. This dock provides personal watercraft rentals, parasailing adventures, and other opportunities during the summer boating season. Currently this dock, located on the AIWW, provides approximately 13 personal watercraft docking places (on JetDocks) and one or two larger vessel docking spaces.

Overall, the marina site enjoys exceptional popularity from a variety of user groups. The variety of opportunities, visitors, and users is also part of what adds to the special appeal of the site. Physical constraints at the site, including available upland area and waterside development limits (e.g., AIWW channel offsets, etc.) do present a challenge in accommodating current and projected demand for water access and boat storage.

Marina Demand Projections

Boat Registrations

As presented previously, the number of registered boats in the Charleston area has grown over the past several years. In addition, the population of the area is projected to increase into 2020, 2030, and beyond.

Utilizing the information gathered and presented in this study, the following table depicts ATM's projection of the estimated number of additional vessels of appropriate size for marina storage that may be present in the Charleston Tri-County area by 2030.

MARINA DEMAND PROJECTION				
	Berkeley	Charleston	Dorchester	Total
2014 Population Estimate	198,205	381,015	148,469	
2030 Projected Population Increase	20,895	15,685	41,731	
Estimated Current Boating Popularity Index	9.00%	9.10%	6.50%	
Projected Additional Registered Boats 2030	1,881	1,427	2,713	
Percentage of Appropriate Size for Marina Storage*	11%	13%	9%	
Add'l Boats Appropriately Sized for Marina Storage 2030	207	186	244	637

*Assume 50% of registered vessels between 20-40-ft. and all registered vessels over 40-ft.

Clearly not all of these vessels will require a slip or drystack rack at the subject marina, but the location and appeal of the project site is clear. In addition, ATM believes that these boat registration projections are conservative, since State Budget and Control Board projected population increases for 2020 have already been exceeded in 2015.

Local Demand

Demand from Isle of Palms residents is an important component in the overall demand for slips and marina storage at the subject site. Since detailed boat registration data for the Isle of Palms is not readily available, ATM calculated an estimate of potential marina demand using the information and factors presented in the following table.

RESIDENTIAL DEMAND ESTIMATE				
				Notes
A	Number of Dwellings on Isle of Palms	4,274		Number of overall dwellings on the Island per the 2010 Census
B	Number of Vacation Rentals	1,550		Number of registered vacation rentals per the City of IOP
C	Dwellings Less Vacation Rentals	2,724		
D	Number of Residents/Dwelling	2.26		Per the 2010 Census
E	Total Ownership Population	6,156		Dwellings x # Residents/Dwelling
F	Assumption of Boat Ownership/Population	10%	12%	Assumption per previous calculation; higher than CHS Co. Avg.
G	Boats Owned By Ownership Population	616	739	Row E x Row F
H	Less Private Docks	150	150	Per aerial imagery; assume all docks accommodate a single vessel
I	Less other marina storage on IOP	206	206	Per ATM occupancy observations at other IOP marinas
J	Total Potential Pool	260	383	Row G-Row H-Row I
K	% Preferring Storage at IOP Marina	20%	20%	Estimate per ATM experience
L	Baseline Residential Demand	52	77	Demand from IOP Residents for marina storage at site

Using readily available statistics and relying on ATM's experience on similar projects in the southeast United States, the potential demand from Isle of Palms residents for marina storage at the subject site has been estimated. After review of the rudimentary calculations presented above, ATM believes the demand estimate is conservative for a number of reasons:

- The percentage of boat owner/population has been presented as ranging from 10 to 12 percent. This is based on a Charleston County average of 9.10 percent. Given the coastal nature of the Isle of Palms and relative affluence of the community, this percentage may range even higher.
- Not all private docks on the Island can accommodate boat storage, and some private dock owners may prefer the security and convenience of marina storage for their vessels.
- ATM is certain that the redevelopment of the Isle of Palms marina and, in particular, the construction of vertical drystack storage opportunities, will attract boaters from other marinas on the Island, since no such storage is available currently. It is certain that some boaters, particularly those with smaller power boats (about 17- to 30-ft) would prefer to store their boats in a drystack as opposed to in a wet slip. Drystack simply offers greater protection from the elements.
- The marina is the only full-service facility on the Island. A redeveloped site will be more welcoming and attractive to boaters.

With these reasons in mind, ATM estimates that the initial demand for redeveloped marina storage at the subject site from residents may range up to 75 to 100 slips/racks. ATM's experience also suggests that as

drystack comes on line, the demand for this type of storage will likely increase as boaters discover the convenience and security that drystack offers.

Site-Specific Needs

As discussed previously, there are several site-specific berthing and access needs at the marina.

- **Wetslip Dockage** –There is a current use and need for several types of wetslip dockage at the facility, including long-term dockage, transient dockage, restaurant dockage, and charter dockage.

It is evident based on the occupancy levels at the existing marina, boating trends in the Charleston region, improving conditions in the AIWW, lease stipulations for the restaurant, and site spatial constraints that maximization of wetslip dockage at the site is indicated.

Mr. Berrigan suggests the need for 10 inshore charter spaces, 10 boat rental spaces, 2 spaces for the Barrier Island Eco Tour boats, and 1 or 2 larger charter slips. Additional dockage to accommodate an increased number of long-term and transient boaters is indicated also. Restaurant dockage will remain constant per the terms of the restaurateur's lease and anticipated usage.

Reconfiguration of the wetslip dockage is indicated per discussions with the marina operator and restaurateur to make the docks more useful (especially the Intracoastal Dock) and accessible. Incorporating side-tie dockage where possible will allow for berthing of a variety of vessel sizes, including larger yachts. Lastly, dock uses should be segregated to the extent practical (transient, long-term, charters, etc.).

- **Dry Storage** – The site currently provides dry trailer storage parking for up to about 32 trailers/vessels. Based on observed occupancy at area drystack marina facilities, particularly those east of the Cooper, the popularity of vertical drystack storage is clear. Further, the projected increase in area population growth, the stabilization and improvement of the economy and the recreational boating industry, and the steady growth in drystack-sized vessel registrations (20 to 40 ft) indicate the need for additional drystack storage opportunities. Additionally, the location (near highly desirable boating and fishing grounds) and popularity of the Isle of Palms Marina site make it an exceptionally well-suited location for the development of drystack storage. Drystack storage also presents an extremely convenient form of boat storage and water access for a mature and affluent waterfront community such as the Isle of Palms.

The maximization of vertical drystack storage development on the site is indicated from a market perspective. However, this must be carefully evaluated in conjunction with other site uses, site parking needs, zoning restrictions (e.g. eave height limitations), potential operational concerns (aesthetics, noise, etc.), and economics.

- **Boat Ramp** – The boat ramp is an integral part of the existing marina facility. The ramp provides water access for a wide variety of boaters, from inshore anglers to commercial crabbers to kayak enthusiasts. As with the demand for marina storage, the demand for ramp facilities is increasing and will continue to increase into the foreseeable future. Therefore, improving the existing boat ramp facilities to better accommodate existing and projected demand levels should be a primary part of site redevelopment plans. The following key improvements are necessary:
 - Improved approach lane(s)
 - Improved tie down area(s)
 - Improved staging docks
 - Appropriate parking area/spaces
 - Access compliant with the Americans with Disabilities Act (ADA)
 - Thoughtful integration of non-motorized vessel launch

- **Kayak Launch** – As mentioned previously, the popularity of paddlesports in the United States is increasing rapidly. The high level of activity of the onsite kayak/paddleboard business is a testament to this. Non-motorized vessels enable a wider variety of users to access the water. However, conflicts can occur between motorized vessels and non-motorized kayakers/paddleboarders, particularly in confined spaces such as Morgan Creek.

It is ATM's opinion that separate or designated launch facilities should be provided at the subject site for non-motorized vessels. This should include appropriate space for the existing commercial tour/rental operation as well as public access. Key elements for public access include appropriate parking/launch area.

- **Watersports Dock** – The Watersports Dock provides visitors to the Isle of Palms with a fun and easy way to access water recreation. It draws visitors to the marina and contributes to the overall energy of the site. The existing Watersports Dock is tucked away on a relatively remote corner of the site and, while it does not directly impact marina access or operations, the operation does have an effect on the overall parking situation at the subject site. It is ATM's opinion that this must be carefully managed to ensure the successful, long-term integration of this business into overall site operations.

Demand Estimate Summary

A summary of identified marina storage/usage demand components is presented in the following table.

<i>Isle of Palms Marina Demand Summary</i>		
<i>Marina Storage Element</i>	<i>Recommended Number</i>	<i>Specific Needs</i>
Wetslips	Maximization within site constraints	10 inshore charter spaces 10 boat rental spaces 2 spaces for Barrier Island Eco Tours 1 or 2 larger charter slips
Drystack Storage	Maximization within site constraints	Assume maximum boat size in the 35- to 40-ft range Assume average boat size in the 23-ft range
Boat Ramp	Maintain current ramp	Assume 20 to 30 parking spaces/lane required
Kayak Launch	Provide separate kayak launch facility	Segregate from heavy motorized vessel activity
Watersports Dock	Maintain Watersports Dock	Carefully examine parking needs/assignment

Potential mitigating factors for marina usage/storage demand at the subject site include:

- Prevalence of private docks on the Isle of Palms
 - Other marina facilities in the Charleston area with expansion plans*, including:
 - Seabreeze Marina – 52 wetslips
 - Charleston City Marina – 120 dedicated slips and 1,200 linear ft of side-tie berthing (Megadock expansion)
 - St. Johns Yacht Harbor – 125 boat lifts and 62 traditional wetslips
 - Governor’s Harbor Marina (Daniel Island) – 341 wetslips and 208 drystack racks
- *Note: These expansions are currently permitted by state and federal agencies.
- Continued siltation/maintenance issues related to the AIWW

It is ATM’s opinion that these factors will not adversely impact the overall demand for marina usage/storage at the subject facility on the Isle of Palms. However, site and regulatory constraints will limit the variety and scale of offerings that can be appropriately integrated at the marina. These constraints will be evaluated in greater detail in subsequent investigation and planning efforts that are part of ATM’s overall study.

From a strict demand perspective, no phasing of marina improvements is suggested. It is ATM’s opinion that sufficient demand exists currently to warrant immediate redevelopment of wetslip marina storage at the site. Further, the condition of most of the floating docks at the site indicates near-term replacement. Boat ramp improvements (staging docks, etc.) are also necessary from a physical perspective and will immediately benefit users. Kayak demand is strong and the need for drystack marina storage is readily apparent in Charleston, particularly in the East Cooper area. Estimated absorption for a moderately sized drystack storage facility (150 to 250) at the subject site is one to three seasons.

The financial cost of the proposed improvements will not be insignificant, however. These costs may govern phasing and will be examined in greater detail during site planning and financial analysis efforts.

Recommended Slip Mix

The recommended slip mix for a redeveloped marina facility at the Isle of Palms marina should consider existing market conditions and provide as much flexibility as possible to accommodate future demand components. Side-tie berthing, as is provided at the existing marina, provides exceptional flexibility to accommodate a wide variety of vessels. As such, ATM recommends that side-tie berthing areas are well integrated into a redeveloped marina.

As discussed previously, several charter vessels call the Isle of Palms Marina their homeport and add to the overall appeal of the site. The 10 inshore charter slips recommended should be sized to properly accommodate up to a 25-ft vessel, although many will be in the 17- to 20-ft size range. JetDocks or boat lifts should also be provided to accommodate these vessels. One or two larger charter slips should be provided in the 50- to 65-ft range. Barrier Island Eco Tours will require two slips in the 40- to 45-ft range to properly accommodate its tour vessels.

The 10 rental boat spaces should be sized in the 25-ft range and oriented to ensure easy access and navigation for rental customers who may be inexperienced boat operators.

The marina operator and restaurateur have expressed that the current configuration of the Intracoastal Dock is not ideal (e.g., short fingers with mooring piles, limited access to shore-side area, etc.). This dock should be evaluated for reconfiguration to provide longer finger piers and improved access to side-tie areas. Additionally, this area may be considered as a potential kayak launch point.

Drystack storage facility operators in Charleston indicated that the typical vessel size accommodated is in the 22- to 25-ft range. A drystack facility at the subject site should be designed to accommodate these size vessels, but also larger craft up to 35 to 40 ft. Space for T-tops, antennae, and larger cruising vessels should be considered in terms of vertical height planning. Smaller vessels, including flats boats and small center consoles, should also be considered.

Recommended Rates

The current long-term lease rates at the Isle of Palms Marina are generally consistent with those of other marinas in the Charleston area, trending toward the upper end of the observed range. It is recommended that annual slip rates at a redeveloped marina remain in this range (about \$15/ft/month), but increase regularly as slips are absorbed.

Transient slip rates at the marina range from \$1.50 to \$2.00/ft/night, depending on season. This is generally in line with other rates observed in the greater Charleston area. However, given the prime location of the marina along the AIWW, presence of amenities onsite (including the restaurant, convenience store, fuel service, etc.), ATM believes that these rates may be increased slightly to the \$2.10 to \$2.25 range in a redeveloped marina facility. Electrical rates may also be increased in a redeveloped marina. ATM suggests a 35 to 50 percent increase.

Drystack storage rates in Charleston range from \$11.00 to \$18.65/ft/month. Large vessels, those with T-tops, or special storage needs are often charged an additional fee. If a drystack facility is developed at the subject site, ATM recommends that the annual rate be set at the very top of the area market (in the \$19.00 to \$20.00/ft/month range). The overall appeal of the site, positive trends in the marina/drystack market and scarcity of quality drystack storage should enable the facility to easily command these rates.

Boat ramp fees are not inexpensive for non-residents, but appear to be set at fair levels, given the amenities provided at the site and the appealing location of the boat ramp. Setting higher rates for non-residents may act as a deterrent to non-resident use, which helps alleviate congestion at this already very popular ramp site.

Given the infrastructure investment that will likely be required to facilitate the development of a separate non-motorized vessel launch, ATM recommends that fees should be charged for this type of vessel launch as well.

The City and/or the Marina Operator should carefully evaluate and set other fees such as rental fees for Coastal Expeditions, charter pickup fees, etc., since they have more intimate knowledge of these operations. Such fees should also consider lease fees (for space, boatslips, etc.) paid by the charter operator.

Based on the historical purpose of the facility, ATM suggests that a discount be applied for all island residents/property owners in terms of slip and rack rates. An initial 5 to 10 percent discount is suggested. Residents should also be afforded the opportunity to reserve a wet slip or drystack rack prior to non-residents in a redeveloped marina facility.

User Profile

The proposed redevelopment of the Isle of Palms Marina will bring the marina forward from what was originally developed as a “mom and pop” enterprise to a 21st century marina facility. The marina enjoys a wonderful location along the AIWW. However, to compete effectively in the local and regional marketplace, a redeveloped marina will have to provide the appropriate facilities and amenities to attract and retain patrons. Further, the marina will have to correct current deficiencies in terms of aged infrastructure, parking congestion, and improve ADA access. Additionally, the marina redevelopment will have to fit into the fabric of the local community in terms of architectural features and comply with regulatory requirements (stormwater, fuel distribution, etc.).

Amenities/Features

ATM suggests the following amenities be included at a redeveloped Isle of Palms Marina.

- High-quality floating docks and gangways
 - Adequate staging docks for boat ramps and drystack storage
- Dependable marina utilities, including:
 - Shore power (30, 50, limited inclusion of 100A; 3-phase may also be considered)
 - Potable water
 - Marine pumpout
 - WiFi
 - Satellite TV
 - Appropriate fire protection
 - New marine fuel (gas and diesel); consider high-speed distribution for larger yachts
- A focused charter vessel area with patron drop-off
- JetDocks for all smaller charter vessels (inshore)
- Adequate, controlled parking for all marina users
 - Appropriately surfaced and landscaped parking lots will enhance the appeal of the site and the experience for all users. The marina is a gateway for boaters to the Isle of Palms. The site should reflect the overall allure and character of the island.
 - Appropriate, enhanced stormwater collection/treatment system
 - Clear signage and traffic flow
 - Improved and integrated golf cart parking area(s)
- Easy access to transportation
 - Taxi/Uber availability
 - Bike loan program
 - These will enable marina visitors to have access to the beaches and other attractions on the Isle of Palms
- Available and regularly serviced waste (trash) disposal and recycling
 - Ensure easy access to waste and recycling facilities for remote slips

- Screen all waste and recycling dumpsters from view and ensure easy truck access over paved roads to reduce maintenance on gravel
- Relocated upland fuel pump, including updated tank storage equipment
 - Integrate tank storage with marina distribution system
- Pet walking area and cleanup facilities
- Provisioning availability for transient boaters (with local provider such as Sysco, Trader Joe's, etc.)
- Partnership with marine service provider
 - Remote service available for smaller repairs; offsite provider for larger repair needs
- Alongshore boardwalk and fishing area
- Enhanced pedestrian access for walkers and cyclists
 - Bike rack
- Additional restrooms for boaters and other marina users (e.g., boat ramp users).
- Maintain existing amenities onsite, including:
 - Marina office facility
 - Marina-only restroom and comfort facilities
 - Including shower and laundry facilities to accommodate transient boaters
 - Ship's/convenience store
 - Restaurant

Dock and Drystack Types

Dock Types

The docks at the existing marina are older timber frame floating docks, many of which are nearing the end of their useful lives. A wide variety of floating dock systems are commercially available, including timber framed systems with polytub flotation, aluminum-framed systems with polytub flotation, and monolithic concrete systems. Examples of each of these systems are in use in the Charleston area and are presented in the following photographs.

Timber framed systems tend to be the least expensive, whereas concrete tends to cost the most. The anticipated useful life of the systems range from 20 to 35 years, with timber framed systems at the lower end of the range and concrete at the higher end. All the systems require regular maintenance to ensure proper performance and longevity.

From a market perspective, there is no specific advantage of one dock type over the other in the Charleston area and at the subject facility. Final selection of dock type at a redeveloped Isle of Palms Marina facility should be based on owner/operator preferences and financial constraints. However, the floating dock system (and associated anchorage) should be designed to meet site-specific environmental conditions, anticipated loading characteristics, and required utility services.



Floating Timber Docks with Southern Yellow Pine Decking



Timber Frame Floating Dock with Ipe Hardwood Decking



Aluminum Frame Floating Docks with Ipe Decking



Monolithic Concrete Docks

Drystack Rack Types

Historically, the term “drystack storage” has conjured up images of drab, industrial-looking metal buildings that efficiently house boats, but present a visual eyesore. In fact, several types of drystack storage structures are employed today around the world. These include the basic industrial-building (barn) style structures, architecturally-enhanced metal buildings, three-sided structures that include end walls and a roof over the boats, open/covered structures that integrate a protective roof structure, and open/uncovered structures that simply provide steel racks on which to stack vessels vertically. Examples of each of these popular drystack storage types are presented in the following photographs.



Traditional Barn-Style Drystack Storage Building



Barn-Style Building with Architectural Enhancements



Barn-Style Drystack with Architectural Enhancements and Tropical Landscaping



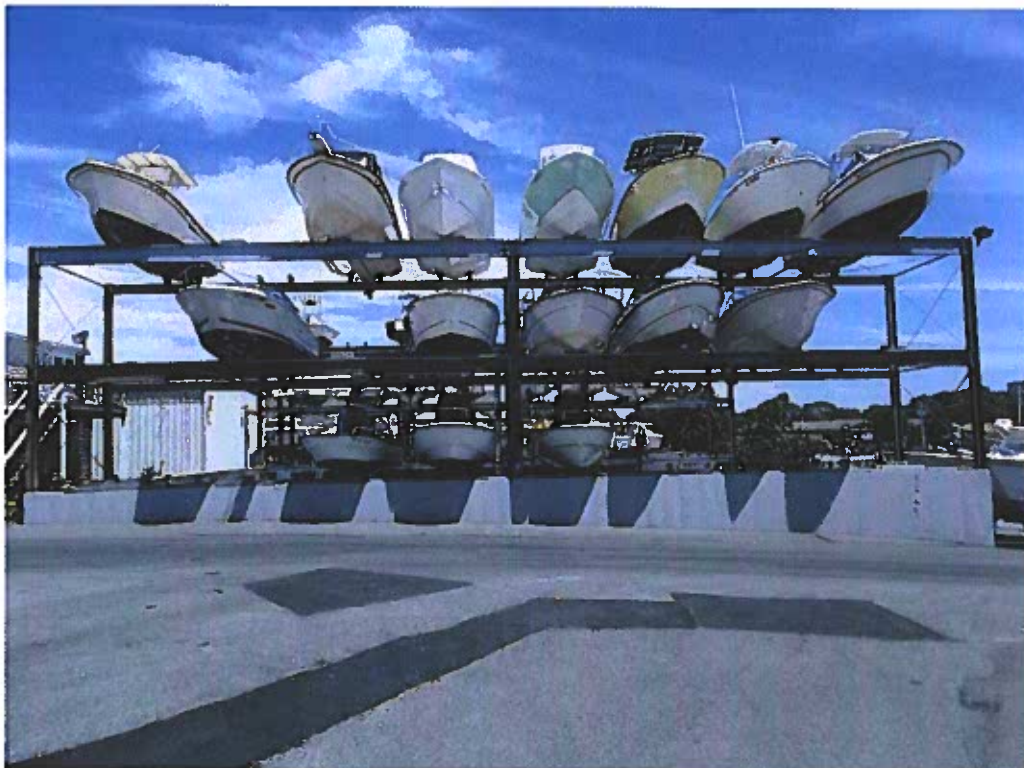
Three-Sided Drystack Storage Building (Magwood Marina, Old Village, Mt. Pleasant)



Three-Sided Drystack Building (Palmetto Bluff, Bluffton, South Carolina)



Open, Covered Drystack Racks



Open, Uncovered Drystack Racks



Open, Uncovered Drystack Racks

From a strict market perspective, it is ATM's opinion that the type of drystack rack storage is not important to prospective rack takers at the Isle of Palms Marina site. While a roof may help protect the stored vessels from rain and harmful UV rays, the scarcity of rack storage in the immediate project area does not dictate the need for protected storage. A trend toward open, uncovered racks is prevalent throughout the Charleston area and was observed at Shem Creek Marina, Ripley Light Marina & Drystack, and Bohicket Marina. Open, uncovered racks are also the least expensive type of drystack storage to construct and still allow the opportunity to command premium storage rates.

However, ATM recognizes that a drystack development at the project site must appropriately integrate into the fabric of the site and neighborhood. Some level of cover/walls/architectural features/screening/landscaping around the structure may be preferred or required. It is ATM's opinion that a tastefully developed drystack presents an excellent opportunity to re-purpose the existing ground-level trailer storage at the subject site in a far more efficient manner. Further, since the Isle of Palms enjoys such a strong boating and maritime culture, a well-developed drystack should not present an unsightly feature at the marina.

Drystack storage has been successfully integrated into high profile residential areas such as Cape Cod, Massachusetts, and in the Old Village in Mt. Pleasant. The drystack storage facility at Palmetto Bluff, an exclusive development on the May River in Bluffton, South Carolina, was integrated within the neo-traditional village core and is surrounded by multi-million dollar homes, some less than 120 ft away. This facility is widely recognized as one of the most tasteful, architecturally pleasing drystack storage

structures in the world. It was designed by renowned architectural firm Hart Howerton out of San Francisco, CA.



Drystack at Palmetto Bluff, Bluffton, SC



Integrated Lowcountry architecture and flora at Palmetto Bluff, SC

A well executed drystack structure can become an asset and attractive visual feature at the project site and can improve the aesthetic of the existing trailer storage yard that exists on the property today. The noise that a drystack building may create may be mitigated in a number of ways, including use of a propane-powered forklift, which is substantially quieter than traditional diesel lifts. In addition, it is ATM's understanding that the Occupational Safety and Health Administration (OSHA) does not specifically require back-up alarms on forklift trucks. Therefore, the forklift operation can integrate more seamlessly into the local neighborhood.

Summary and Conclusions

Industry stabilization and improving local market conditions indicate the need for additional marina slips in the subject area over the near term. ATM believes this is especially the case in the immediate area of the project site at the Isle of Palms, where current slip occupancies are high and the appeal of the site is well known.

- Boat registrations have increased steadily in South Carolina since 2010 and, although they dipped slightly in 2014, they still exceed pre-recession levels.
- Regional boat registrations have increased steadily as well. Charleston County registrations have climbed at a steady rate since 2010.
- Boat registration data and ATM interviews have indicated a slight shift in the size of registered vessels and popular boat types along the coast. A slight downsizing trend has enabled many boaters to stay in boating during the recession. The largest, recent growth segment of registered boats has been in the 20- to 40-ft range.
- National expenditures on recreational boating have increased steadily since 2010.
- Statewide (South Carolina) purchases of new powerboats, engines, trailers, and accessories have risen dramatically since 2010, with a sharp increase noted between 2013 and 2014.
- Population growth for the state and Tri-County area of Charleston is strong, particularly for Berkeley and Dorchester Counties, where much of the sprawl of Charleston is occurring.
- The age distribution of Isle of Palms residents indicates a slightly more mature residency than neighboring areas, with a median age of 52.6 years. The median age in neighboring Mt. Pleasant is 38.1 years. According to the NMMA, the largest segment of boat owners is between 31 and 49 years of age.
- Boating popularity in the Charleston area is strong, particularly among Berkeley and Charleston County residents. This reinforces the ingrained culture of boating in the Charleston area.
 - While localized data are not available, it is assumed that the popularity of boating on the relatively affluent barrier island of Isle of Palms exceeds the noted county figures.
- Median household income among Berkeley, Charleston, and Dorchester Counties is relatively high. This is indicative of strong industry along the coast and the level of affluence necessary to support boat ownership.
- The level of affluence on the Isle of Palms and neighboring Mt. Pleasant is substantially higher than county and statewide averages.
- Charleston is, of course, a premier tourist and transient boating destination. In recent seasons, transient boating has improved, according to local sources.

- Megayacht visitation potential at the site will be limited due to water depths in the AIWW and spatial constraints at the marina and Morgan Creek. Limited accommodations to support these vessels are recommended.
- ATM profiled more than 20 marinas throughout the greater Charleston area. These included marinas on the Isle of Palms, around Charleston Harbor, North Charleston, and other outlying areas.
 - Overall occupancy approached 85 percent, which is strong and includes a wide range of facilities.
 - Occupancy of drystack storage in the subject area is very high. All drystack racks east of the Cooper are 100 percent occupied.
- There are several components of marina/boat storage demand at the subject site:
 - Long-term dockage
 - Transient dockage
 - Restaurant dockage
 - Charter dockage
 - Dry storage
 - Boat ramp
 - Non-motorized vessel launch
 - Watersports dock
- Based on observed trends and projections, the following table represents a summary of storage/usage demand for the subject site

Isle of Palms Marina Demand Summary		
<i>Marina Storage Element</i>	<i>Recommended Number</i>	<i>Specific Needs</i>
Wetslips	Maximization within site constraints	10 inshore charter spaces 10 boat rental spaces 2 spaces for Barrier Island Eco Tours 1 or 2 larger charter slips
Drystack Storage	Maximization within site constraints	Assume maximum boat size in the 35- to 40-ft range Assume average boat size in the 23-ft range
Boat Ramp	Maintain current ramp	Assume 20 to 30 parking spaces/lane required
Kayak Launch	Provide separate kayak launch facility	Segregate from heavy motorized vessel activity
Watersports Dock	Maintain Watersports Dock	Carefully examine parking needs/assignment

- Demand from Island residents is expected to be strong and should increase as the benefits of a redeveloped site and, particularly, if drystack storage is developed. Preliminary residential demand estimates range from 75 to 100 slips/racks.
- Phasing is not indicated from a market perspective, since current demand trends are strong. Phasing may be necessary from a financial standpoint, however.
- The proposed slip mix for redeveloped marina at the subject site includes flexible side-tie dockage, specifically sized dockage for charter vessels, smaller (25-ft slips) for rental boats, reconfigured dockage for the restaurant/AIWW dock, and vertical drystack storage capable of storing vessels up to the 35- to 40-ft range.
- Basic, recommended rates for redeveloped marina facilities are as follows (in 2015 dollars):
 - Annual Wetslips – about \$15/ft/month
 - Transient Wetslips -- \$2.10 to \$2.25/ft/night
 - Drystack Storage -- \$19 to \$20/ft/night
 - Additional fee recommendations and commentary has been provided in the body of this report.
 - An initial 5 to 10 percent discount on boat storage for island residents is suggested.
 - Slip/rack reservation priority should be afforded to residents of Isle of Palms.
- ATM has presented a list of suggested amenities that will enhance marina redevelopment and help ensure project success. These are presented in detail in the body of the report. Key amenities include:
 - High-quality dockage and reliable utilities
 - Adequate, controlled parking for all marina and site users
 - Enhanced pedestrian access
 - Maintain onsite amenities, including the marina office/store, marina-only restrooms, restaurant
- ATM suggests that the proposed marina redevelopment may utilize basic timber floating docks and open, uncovered drystack racks to meet market expectations. Upgraded docks or drystack storage architecture may be desirable and help the facility integrate with the fabric of the site and community.

A redeveloped marina facility at the Isle of Palms Marina has the potential to establish the facility as one of the premier marinas in Charleston. Further, general site improvements for patron access, vehicular flow, parking, landscaping, etc., will enable the marina to become a source of pride and a key attraction for Isle of Palms *residents*. This will require thorough planning and tactful execution to ultimately ensure success.

Appendix A
Comparative Matrix

CHARLESTON AREA MARINAS - SUMMARY MATRIX

ID	Facility Name	Water body	Approx. No. Westlips	Approx. No. Drystack Racks	Dock/Rack Type/ Condition	Utilities	Rates			Observed Occupancy
							Annual Westlip Rate (\$/ft./month)	Annual Drystack Rate (\$/ft./month)	Transient Rate (\$/ft./day)	
Isle of Palms										
1	Isle of Palms Marina	Morgan Creek	50	0	Floating timber; poor condition; JetDocks	30 A to 50 A; G/D	\$12-\$18	N/A	\$1.50-\$2.00	100%
2	Wild Dunes Yacht Harbor	Morgan Creek	191	0	Floating Timber; fair condition	30 A to 50 A	N/A	N/A	N/A	85%
3	Deweese Marina	Morgan Creek	29	0	Floating timber; poor condition	30A & 50A	N/A	N/A	N/A	65%
4	Carroll Marina	Breach Inlet	25	0	Floating Timber; fair condition	Limited/Water	\$15	N/A	N/A	80%
5	Two Island Marina	Breach Inlet	23	0	Floating timber; poor condition	Limited Power/Water	\$12.50	N/A	\$1.00	20%
Mount Pleasant										
6	Toler's Cove Marina	AIWW	140	0	Floating concrete; fair to good condition; JetDocks	30 A & 50 A; G/D	\$15.00	N/A	\$1.50	100%
7	Shem Creek Marina	Shem Creek	0	192	Covered and uncovered open racks	Gas	N/A	\$18.65	N/A	100%
8	Magwood Marina	Shem Creek	0	80	Covered, open rack drystack	Gas	N/A	\$17.95	N/A	100%
9	Charleston Harbor Resort	Charleston Harbor	450	0	Floating concrete; older but well maintained	30 A & 50 A; G/D	\$14 to \$18	N/A	\$2.15	85%
10	Wando River Marina	Upper Wando River	50	0	Floating timber with composite decking	30A & 50A	\$14.00	N/A	N/A	20%
Charleston										
11	Ripley Light Yacht Club	Ashley River	97	0	Floating concrete (Bellingham); good condition	50 A	\$14	N/A	\$1.75	100%
12	Ripley Light Marina & Drystack	Ashley River	70	223	Floating concrete; good condition - new open/uncovered drystack	50 A; G/D	N/A	\$17.85	N/A	95%
13	Charleston City Marina	Ashley River	415	0	Floating timber, aluminum & concrete (Bellingham Megadock); generally good condition, aging in some locations	up to 100 A; D (hi speed)	\$14.25 to \$16	N/A	\$2.10-\$3.00	95%
14	The Harborage at the Ashley	Ashley River	230	0	Floating timber; IPE hardwood decking; fair/good condition	up to 100 A; G/D	\$10 and up	N/A	\$2.00-2.20	85%
15	Bristol Marina	Ashley River	148	0	Floating aluminum, IPE hardwood decking; good condition; jet docks	30 A & 50 A	\$10-\$11.75	N/A	\$1.80	90%
16	Seabreeze Marina & Drystack	Charleston Harbor	0	130	Covered open racks	Gas	N/A	~\$14 to \$17	N/A	85%
North Charleston										
17	Cooper River Marina	Cooper River	185	0	Floating Concrete, (Bellingham); well maintained; some older, some new (transient docks)	30 A	\$8.92-\$11.15	N/A	\$1.65	100%
18	Dolphin Cove Marina	Upper Ashley River	125	350	Floating timber, sections being replaced in good condition; older sections in poor condition; fully enclosed drystack	30 A; G/D	\$10-\$11	\$11-\$12	\$1.00	85%
19	River's Edge Marina	Upper Ashley River	50	472	Floating timber; good condition - recently expanded drystack (~2008) Covered and 3 sided	30 A to 50 A; Gas	\$10.50	\$13-\$13.50	N/A	85%
Outlying Areas										
20	Bohicket Marina	Bohicket Creek	200	132	Floating timber with IPE hardwood decking; single-loaded; good condition; Enclosed and open/uncovered racks	30 A & 50 A; G/D	\$11.50	\$13.86	\$2.50	85%
21	St. Johns Yacht Harbor	Stono River	200	0	Floating timber with IPE hardwood decking; good condition	30 A & 50 A; G/D	\$13.50	N/A	\$1.75	100%
22	Daniel Island Marina	Clouter Creek	50	425	Floating Timber; good condition; Covered 3 sided racks	Limited power on staging docks; Gas	\$14.50	\$14.50	\$40/night	100%
Total			2,728	2,004						



Appendix B
Interview Summaries

Interview Summaries

Interviewee

Contact: Mr. Brian Berrigan, Manager/Operator – Isle of Palms Marina

Date: September/November 2015

Key Discussion Points

- Receives frequent inquiries for dry storage
- Existing dry storage is full with some spaces left available for weekly users/visitors
- In a redeveloped marina would see the need for:
 - 10 inshore charter spaces
 - 10 boat rental spaces
 - 2 spaces for Barrier Island Eco Tours
 - 1-2 spaces for larger charter vessels (e.g. The Osprey and/or offshore sport fishing vessels)
- Transient vessels are no longer than 60-ft., rarely up to 80-ft.
- Transient business not as good since 2008.
- Current AIWW maintenance project presents an opportunity to attract additional transient boaters to the marina
- Currently maintain 30-40 long term slips; wait list is 30-40 deep for these slips
- Currently maintain ~6 transient spaces; utilize fuel dock for additional overnight berthing (after hours)
- More transient space is needed and a BIG grant could help offset development costs for transient infrastructure

Interview Summaries

Interviewee

Contact: Logan Reidenbach, Duncan's Boats
Date: November 2015

Key Discussion Points

- Sales are great
- Business is trending positively
- Boeing has brought many more customers in; expect Volvo to do the same
- 20-21-ft. center consoles/runabouts most popular

Interview Summaries

Interviewee

Contact: Shane Marler, Dockmaster - Shem Creek Marina

Date: October 2015

Key Discussion Points

- 100% occupied
- 75% of clientele from Mount Pleasant
- Drystack is a "good idea at the Isle of Palms Marina. No reason it wouldn't work."
- The prime location of Shem Creek Marina and the Isle of Palms Marina would enable charging higher rates.

Interview Summaries

Interviewee

Contact: Corey Smith, General Manager - Ripley Light Yacht Club
Date: October, 2015

Key Discussion Points

- 100% occupied
- 30 vessel wait list
- Currently charge ~\$14/ft./month
- Clientele coming from "all over," not just Charleston or West Ashley
- SKA "Fishing for Miracles" host marina. Will cease to host event due to numerous incidents at this year's tournament.

Interview Summaries

Interviewee

Contact: Homer Bauserman, Daniel Island Marina & Boat Club

Date: October 2015

Key Discussion Points

- 100% occupancy
- Economy is improving
- Boeing has influenced demand
- \$14/ft./month
- \$25/month for T-Top
- Adjacent boat dealer, Longshore Marine, posted best sales year in last 10
- Daniel Island continues to grow and with this growth comes demand for water access/storage
- Average vessel 24-ft.
- They are limited by drystack bay widths. Homer recommends at least a 30-ft. clear width.

Interview Summaries

Interviewee

Contact: Kevin Austin, Marina Manager - Toler's Cove Marina
Date: October 2015

Key Discussion Points

- JetDocks are "hot," particularly with charter guides.
- Charge \$350/month for JetDock berthing (16-22-ft.). Could command more, but do not charge guides because they bring traffic to the marina (clients buy soft drinks, beer, ice, etc.)
- They get "2-3 calls per day for JetDocks."
- If they could fit more JetDocks in they would.
- Improved transient traffic, particularly through Internet/Active Captain/Other sites/advertising. This has spurred fuel sales.
- Applied for a 2016 BIG grant to improve fuel distribution system.
- All wetslips privately owned, but marina manager is leasing agent.

Interview Summaries

Interviewee

Contact: Matt Driscoll, Marina Manager - Cooper River Marina
Date: October 2014

Key Discussion Points

- 100% occupied, likely due to low rates and not location
- Port seeking to relocate the marina
- Excellent transient seasons in 2015. Turning vessels away, particularly larger boats over 45-ft.

Interview Summaries

Interviewee

Contact: Josh Carson, Dockmaster - Ripley Light Marina and Drystack
Date: January 2016

Key Discussion Points

- Highly occupied. All available slips filled. Wait list.
- Some slips not usable due to wear/tear/active maintenance (bunk boards)
- Demand for all racks. Phone inquiries on daily basis.
- 19-20-ft. vessels most popular overall; 23-27-ft. boats recent trend in demand.
- Fewer fishermen; more general boating usage.
- Can rack up to 40-ft.
- Most clientele from Charleston; 3 from Isle of Palms; some moving out to IOP
- Raised rack rates by \$1 in January 2016
- Feels that IOP is a "great location" for a drystack.

6

Preliminary Regulatory and Engineering Overview

For the Isle of Palms Marina

Isle of Palms, South Carolina

Prepared by: Applied Technology & Management, Inc.
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Introduction

As part of the comprehensive redevelopment master plan study for the Isle of Palms Marina site, Applied Technology & Management, Inc. (ATM) conducted a cursory overview of regulatory and engineering factors that may impact redevelopment on the site. This report separately addresses the analysis for the upland areas of the site and the waterside areas of the site. The following sections provide a summary of our findings.

Regulatory Factors

Upland

Zoning

The Isle of Palms Code of Ordinances currently zones the subject site as a General Commercial District (GC-1). In general, this zoning designation is consistent with the current and proposed uses of the subject site.

An important factor related to this site zoning designation is a maximum building height of 40 feet. This would impact the potential for drystack development on the site. ATM has considered this height restriction in the planning efforts. The proposed height of the drystack structure is 35 feet.

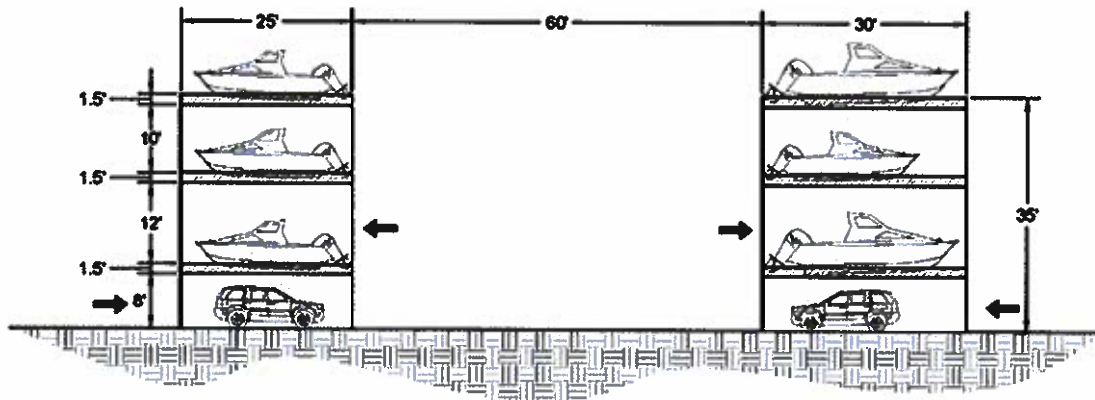


Image 1 – Potential “park-under” drystack arrangement.

Other zoning factors related to site redevelopment include consideration of appropriate buffers and setbacks, including a 20-ft. setback from the OCRM critical line for “all impervious driveway, parking pad, or other paved surface.” Also, appropriate buffers will have to be maintained and will vary based on abutting property use (e.g. residential vs. commercial).

An ancillary, but nevertheless important, requirement of development in GC-1 area is that “refuse containers shall be screened from public view with materials that are compatible with principal structure or landscaping.” Although refuse containers are not screened currently at the onsite restaurant, screening is considered in the redevelopment plans.

Roadway, parking, and turning radii have been generally considered in the development of the conceptual redevelopment plans and can be verified during plan refinement/engineering design efforts. Parking requirements have been discussed extensively in a previous portion of ATM’s overall site study.

Fuel Infrastructure

The upland portion of the site includes the fuel storage tanks that serve not only the upland fuel dispenser, but the marina fuel dispensers as well. ATM's Condition Assessment for the site identified that the existing tanks are older, single-wall units that are reported to frequently accumulate sludge. These tanks are nearing the end of their service lives.

Through our research and information provided by the City, ATM understands that new double-walled tanks or a substantially more robust monitoring program for the existing single-wall tanks will be required by the end of 2018. Since the proposed redevelopment plans indicate that the upland fueling area should be relocated, ATM suggests that this work be conducted prior to the end of 2018 to comply with the forthcoming regulations.

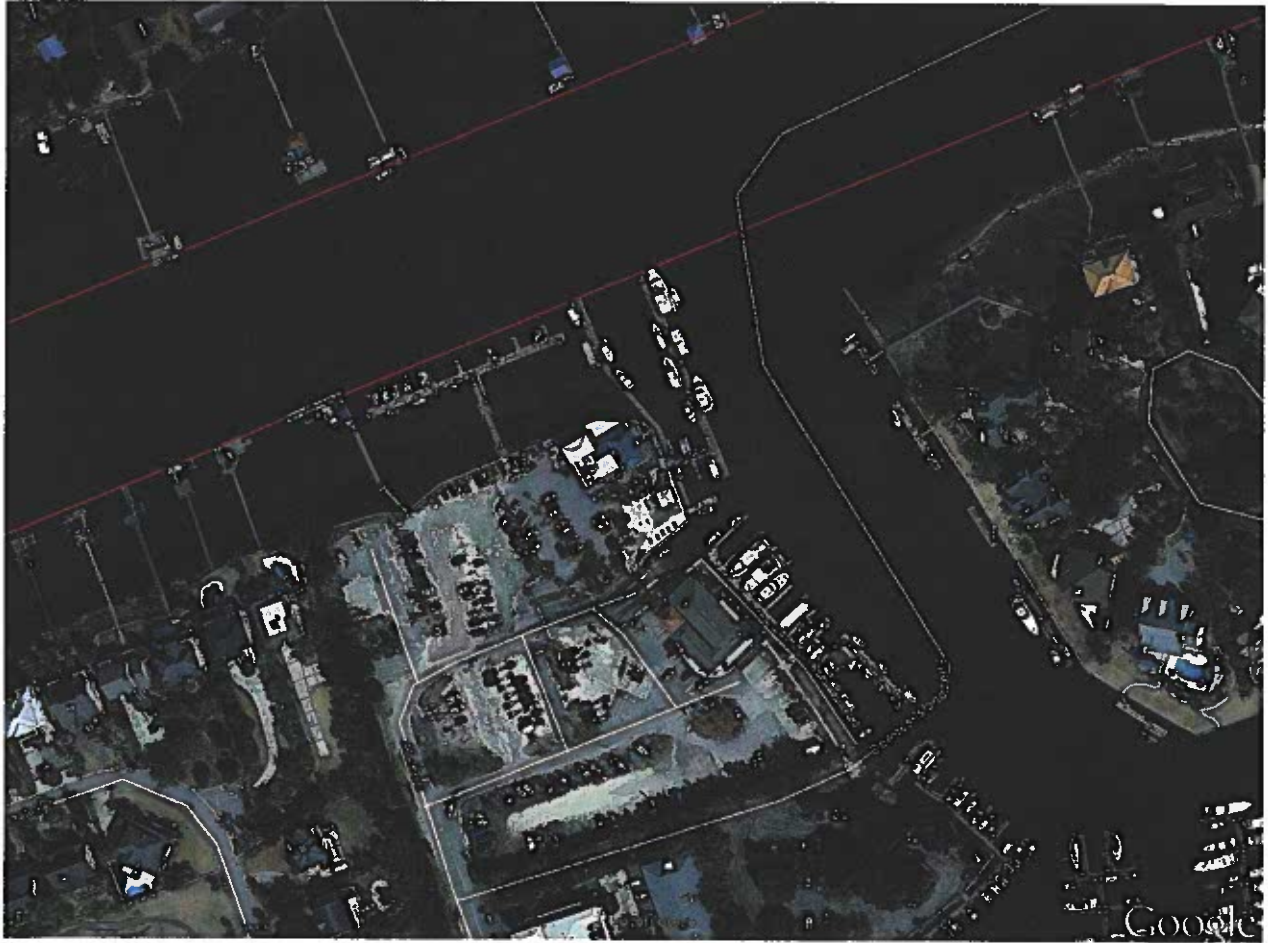
Marine

ATM reviewed the current marine regulatory restrictions at the subject site with representatives from the U.S. Army Corps of Engineers (USACE) and the South Carolina Department of Health and Environmental Control-Ocean and Coastal Resource Management (OCRM). The following sections provide a brief summary of the discussions that focused on key restrictions to marina/dock redevelopment. Intended site (dock/marina) uses are anticipated to remain similar to the existing uses.

Allowable Limits of Dock Extending into Morgan Creek and AIWW

USACE

ATM spoke with Scott Glass, Chief of Navigation at the USACE's Charleston District regarding dock encroachment into the Atlantic Intracoastal Waterway (AIWW). Mr. Glass indicated that USACE is primarily concerned with navigation in the AIWW because it is a federally maintained waterway that is used for commercial transit. In a marina redevelopment permit application, USACE's focus would remain on the AIWW and only secondarily on Morgan Creek [not federally maintained, limited commercial traffic (Dewees Ferry)]. The USACE provided the following Google Earth file showing dock setbacks for AIWW based on the latest information Mr. Glass had available.



Based on ATM's review of the provided file and discussion with Mr. Glass, it appears:

- The mooring piles for the Intracoastal Dock are directly on the setback line
- The marina docks on Morgan Creek that extend out to the AIWW terminate at the setback line
- The Watersports Dock appears to be partially over the line, with piles that come through the center of the floating docks, directly on the setback line
- The JetDocks for the JetSkis at the Watersports Dock appear to encroach into the setback, though it is noted that the provided image is for reference only and does not represent a survey-quality document.

Mr. Glass suggested that any marina or dock redevelopment on the AIWW stay within the indicated setback line, but that variances to extend beyond the line are an option. However, such variances "are very tough and not guaranteed," according to Mr. Glass.

OCRM

ATM spoke with Mr. Bill Eiser of OCRM about potential marina redevelopment at the subject site. Mr. Eiser referred ATM to the South Carolina Code of Regulations that apply to dock and marina development.

Specifically, Mr. Eiser said that no marine or dock development should restrict reasonable navigation or public use of State lands or waters.

This is clearly less specific than the feedback received from the USACE. Mr. Eiser emphasized that there is no defined offset line for dock development on the AIWW or Morgan Creek from OCRM's perspective, but any redevelopment or additional encroachment would have to be justified. He suggested that redevelopment within the existing marina footprint would be "easier" from a regulatory review perspective, but that he felt an argument could be made for extending docks further into Morgan Creek, if necessary.

In addition to speaking with Mr. Eiser about dock development at the subject site, ATM also discussed potential improvements to the drainage ditch adjacent to 41st Avenue at the subject site. Specifically, these discussions revolved around filling, piping, or otherwise impacting the ditch for road or parking improvements.

Mr. Eiser indicated that the foremost concern about potential impacts to this ditch was to determine if it was considered "critical area." This would be determined through a critical area/line determination, which would also be needed for any marina/dock permit applications if no current (less than 5 years old) such survey of the site were available.

Mr. Eiser again referred ATM to the State Code of Regulations and suggested that if the ditch is critical area, then any proposal to impact it would have to argue a legitimate public benefit/interest in the project. Further, some form of mitigation would likely be required.

Lastly, Mr. Eiser indicated that redevelopment of the marina site and a permit application would have to include a stormwater management plan for the subject site.

Engineering Factors

ATM conducted a rudimentary overview of the feasibility of site redevelopment from an engineering perspective. In general, since the proposed site redevelopment uses are largely consistent with the existing uses on the site, it is anticipated that the implementation of the proposed master plan elements will be feasible from an engineering perspective. A detailed engineering analysis is beyond the scope of this contracted assignment, but should be conducted in conjunction with redevelopment design work.

Upland

General upland engineering considerations include:

- The restaurant and marina store buildings are to remain in the current master plan alternatives. Site improvements should consider the placement and potential impacts to these buildings.
- In the current master plan alternatives, the upland fuel dispenser and underground storage tanks are relocated. Due to the age of this infrastructure and pending regulatory requirements for fuel storage and distribution, the relocation of the fuel infrastructure, including lines to the marina system (which shares storage tanks) should be prioritized.
- The interior roadways on the subject site should be paved and appropriately striped to help direct patrons through the site. Appropriate traffic and parking signage should be provided.
- Parking areas should be clearly marked, but may be gravel instead of asphalt to help reduce overall project costs and facilitate stormwater management on the site.
- The development of drystack storage on the subject site should carefully consider geotechnical conditions and the design of the existing seawall at the proposed launch area. A relieving platform or other support to the seawall may be required to properly accommodate forklift/vessel loads.
- Stormwater management must be carefully studied as the project moves forward to ensure functional, sustainable redevelopment at the subject site.
- Impacts to site electrical distribution, sewage/lift station, water distribution and other utilities should be carefully studied and addressed during redevelopment design work.
- Access compliant with the Americans with Disabilities Act (ADA) will have to be carefully implemented throughout the site.

Marine

General marine engineering considerations related to site redevelopment include:

- As contemplated in the Limited Conditions Assessment that ATM previously submitted, full replacement of the floating dock system on Morgan Creek is recommended and included in site redevelopment plans. In general, the larger slips associated with the docks along Morgan Creek

have been shifted out/waterward slightly. This shift may reduce the need for maintenance dredging on the interior/shore-side of the marina.

- The Intracoastal Dock is shown as relocated in redevelopment plans, with finger piers and mooring piles removed in one scenario. To realize this relocation, some dock modification will be required. Pilings will have to be removed and re-driven. Existing piles may be re-used pending condition review, geotechnical, and water depths. The entire Intracoastal Dock should be maintained (bolts tightened, replaced as needed, etc.) during this process.
- The Watersports Dock remains in the proposed redevelopment plans. No improvements are recommended at this time.
- New utilities on the floating docks along Morgan Creek are contemplated as per the Limited Conditions Assessment.
 - New utilities (lighting, shore power, potable water) may also be considered on the Intracoastal Dock if this structure is to be used to accommodate overnight berthing.
- The redevelopment master plan includes an updated boat ramp approach and a reduction in ramp launch lanes from three to two. Along with this reduction is the incorporation of new, larger boat ramp staging docks that will “ground out” along the slope of the ramp. These staging docks will have provided dedicated, ADA access for boat ramp users.
- Shoreline stabilization shall remain, but will be evaluated during engineering design to ensure it can properly accommodate newly proposed loads (gangways, drystack launch/relieving platform, etc.).
- ADA-compliant access will be provided throughout the redeveloped marina facility.



Example of Ground-Out Floating Dock

Summary/Conclusions

Based on the proposed redevelopment master plan concepts and ATM's review of the subject site, no apparent regulatory or engineering red flags exist that will prohibit or substantially hinder redevelopment at the subject site. There are, however, a myriad of factors that will have to be considered during the final planning and design process to ensure compliance with local, state, and federal codes and guidelines.

7

Conceptual Marina redevelopment

City of Isle of Palms

Scenario A

Scale: 1"=60'-0"



DesignWorks





**Conceptual Marina
redevelopment**

City of Isle of Palms

Scenario B

Scale: 1"=60'-0"

DesignWorks



8

Pro Forma Financial Analysis

For the Isle of Palms Marina

Isle of Palms, South Carolina

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Introduction

As part of the comprehensive redevelopment master plan study for the Isle of Palms Marina site, Applied Technology & Management, Inc. (ATM) adapted our proprietary marina pro forma financial model to both site redevelopment scenarios. The goal of this financial analysis was to determine the general financial feasibility of the project. It is assumed that this initial model will provide baseline financial information for discussion. As part of our contracted scope, ATM will apply the iteratively for up to two (2) modifications of the proposed plans/financing approach.

Pro Forma Financial Analysis

Financial Spreadsheets

Schedule of Assumptions

This page represents the basis for the financial analysis. Assumptions for key project elements are shown and carry through the rest of the analysis. These are based upon our previous feasibility and planning efforts, International Marina Institute (IMI) data, and our experience in the industry.

The following discussion details the specifics of the Schedule of Assumptions:

Slips/Racks Available – This information is taken from the proposed marina plan and previous analysis efforts.

- Available slip/rack space is per concept plan
- Occupancy shown at 100% for long-term slips per market analysis findings
- Occupancy for transient boating slips shown at 50%
- Rates and distribution of slip takers is as per market analysis

Upland trailer storages are shown as per plan.

- Zero spaces in Scenario A (with drystack)
- Rates and occupancy as per market research and discussions with current marina operator

Boat Ramp Launching/Parking rates are as per market research. Number of passes estimated based on available trailer parking spaces.

Charter pick up fees are as per market analysis and number of charter slips assumed in plans.

Vehicular Parking assumptions are made as per plans, market research, and anticipated usage.

Fuel Sales assumptions are as per intended use and ATM's experience in the industry, noting our upland fuel sales experience is limited and historic sales data for the subject facility was not available at the time of this analysis.

Operating Expenses are estimated using benchmark data published by the International Marina Institute for Region II (Southeast US) marina facilities.

Capital and Loan details were suggested by the City of Isle of Palms and presented in a simplified manner.

CPI Boost applies to the current marina operator's lease terms.

Conceptual Cost Estimate

This line-item, unit-cost estimate is based on the provided marina site plans and the ATM team's experience in the marina and waterfront development industry.

Schedule of Slip/Rack Revenues

This schedule details anticipated revenues from the various slips and drystack storage racks in each plan. Rates, occupancy, and other information is sourced from the schedule of assumptions and projected over a 10-year period.

Schedule of Other Revenues

This schedule includes projections for a variety of ancillary revenue streams at the subject site, including:

- Boat Ramp Fees
- Charter Pick Up Fees
- Vehicular Parking
- Fuel Sales

Income Statement

This sheet combines revenue and expense projections over a 10-year period to arrive at annual estimates of Net Operating Income (NOI).

Income and Operating Summary

This sheet brings NOI over from the Income Statement and applies the anticipated debt service. Annual funds generated/required for this project is presented on this sheet. Note: This does not include other marina site revenues and obligations (e.g. restaurant lease, marina store, watersports, etc.). This sheet also does not calculate the potential impact to marina lease payments. This will be addressed in the below written analysis.

Note: Potential grant funding sources have been included in this summary for key project elements, including:

- Transient boating infrastructure, including docks, gangways, utilities and marine fuel infrastructure. Assume the outside of the northernmost dock on Morgan Creek is dedicated for transient use.
- Marine Pumpout per the Clean Vessel Act. 75% of pumpout costs are reimbursable through the CVA program.
- Boat Ramp/Kayak Launch infrastructure is eligible for funding under SCDNR's Water Access Grant funding program.

Analysis

Scenario A

The results of the analysis for redevelopment scenario "A" indicate the following:

- A redevelopment cost of \$7.05M
- Potential to generate annual NOI of \$786,576-\$868,866
- Debt service requirements of \$473,967-\$413,028
- Potential to generate annual funds of \$312,609-\$455,837

This is a positive redevelopment scenario in ATM's opinion and one that provides a debt coverage ratio of 1.65.

In addition to the spreadsheet analysis which depicts the baseline financial data for the proposed project, ATM endeavored to estimate the potential lease revenue from each alternative under the current marina lease terms (including marina, store, watersports and restaurant leases). The following table presents a summary of this information.

Marina Site Payment Estimate		
Scenario A - Drystack		
	Year 1	Year 10
Marina Lease Payment Estimation		
Gross Profit Estimate	\$1,320,000	\$1,470,000
Marina Base Lease Payment	\$151,500	\$165,693
15% Gross Profit Over \$450,000	\$130,500	\$153,000
Total Estimated Payment From Marina Lease	\$282,000	\$318,693
Other Lease Payments to City		
2015 Store Lease Payment	\$74,000	\$74,000
2015 Restaurant Lease Payment	\$128,000	\$128,000
2015 Watersports Lease Payment	\$23,000	\$23,000
Total Marina Site Payments	\$507,000	\$543,693

Scenario B

The results of the analysis for redevelopment scenario “B” indicate the following:

- A redevelopment cost of \$4.37M
- Potential to generate annual NOI of \$433,528-\$469,077
- Debt service requirements of \$284,578-\$247,990
- Potential to generate annual funds of \$148,950-\$221,088

This is also a positive redevelopment scenario in ATM’s opinion and one that provides a debt coverage ratio of 1.52 with substantially less capital investment.

The following table presents an estimate of potential lease revenue for Scenario B under the current marina site leases.

Marina Site Payment Estimate		
Scenario B - Without Drystack		
	Year 1	Year 10
Marina Lease Payment Estimation		
Gross Profit Estimate	\$660,000	\$730,000
Marina Base Lease Payment	\$151,500	\$165,693
15% Gross Profit Over \$450,000	\$31,500	\$42,000
Total Estimated Payment From Marina Lease	\$183,000	\$207,693
Other Lease Payments to City		
2015 Store Lease Payment	\$74,000	\$74,000
2015 Restaurant Lease Payment	\$128,000	\$128,000
2015 Watersports Lease Payment	\$23,000	\$23,000
Total Marina Site Payments	\$408,000	\$432,693

Summary/Conclusions

Development of drystack storage at the subject site has the potential to generate additional funds for the City at the subject site. Of course, if the City elects to fund the drystack construction it will require substantially more capital. It is suggested that the City evaluate this preliminary information in conjunction with the provided concept plans and feasibility analysis. As mentioned, ATM will be pleased to adjust our financial model to review alternate project approaches and refined funding scenarios.

Schedule of Assumptions

Isle of Palms Marina Redevelopment

Scenario A - Drystack

Feb-16

Slips/Racks Available					
Wetslips					
<i>Annual</i>				<i>Transient</i>	
Size (ft.)	Number	Occupancy		Size (ft.)	Occupancy
22-ft. Jet Docks	16	100%			
40	8	100%			
50	1	100%			
60	1	100%			
Side Tie	585	100%		275	50%
Drystack Storage					
Seasonal				Occupancy	
Size (ft.)		Number			
24-ft.		151		100%	
Marina Rates					
Annual Wetslips					
\$/ft./mo.				% Takers	Annual Rate Increase
	\$15 Non-Resident			40%	\$0.25
	\$13.50 Resident			60%	\$0.25
Transient Wetslips					
\$/ft./day				Occupancy	Annual Rate Increase
	\$2.25			50%	\$0.05
Drystack Storage					
\$/ft./mo.				% Takers	Annual Rate Increase
	\$20 Non-Resident			50%	\$0.25
	\$18 Resident			50%	\$0.25
Upland Trailer Storage					
	No. Spaces	High Season	Low Season	High Season	Low Season
		Apr-Sep.	Oct-March	Occupancy	Occupancy
Daily	0	\$10	\$20	50%	0%
Weekly	0	\$150	\$70	75%	10%
Monthly	0	\$300	\$250	80%	100%
Boat Ramp Launching/Parking					
<i>Annual Pass</i>				No.	Peak Usage Parking
Resident		\$100		70	30%
Non-Resident		\$300		50	
<i>Daily Pass</i>				No.	
Resident		\$5		250	
Non-Resident		\$15		250	
Charter Pick Up Fees					
Number of Charter and Tour Boats	No. Slips	Fee	Trips/Year		
Inshore	10	\$15	150		
Offshore	1	\$35	30		
Tour	3	\$100	60		
Standard Vehicular Parking					
Number of Spaces	Rate (per 2 hours)	% Non Employee Takers	Estimated Space Turnover/Day	Usage Days/Yr.	
100	\$5	30%	3	180	

Schedule of Assumptions

Isle of Palms Marina Redevelopment

Scenario A - Drystack

Feb-16

Fuel				
Upland				
High Season	Duration (days)	Fill Ups/Day	Average Volume	Fuel Mark Up
	90	20	15	\$0.10
Off Season	270	10	15	\$0.10
Marina				
	Gall./slip/mo.	No. Slips	Fuel Mark Up	
Long Term Wetslips	60	34	\$0.25	
Drystack	25	151	\$0.25	
Transient Boating Sales	gall/mo. 20,000		\$0.30	
Expenses				
Operating Expenses				
Region II IMI				
	% of Revenue			
Labor Expense	17.6%			
Bad Debt Expense	0.3%			
Bank Service Charges	0.0%			
Business Licenses & Permits	0.2%			
Credit Card Discounts	0.7%			
Dues & Subscriptions	0.1%			
Employee Benefits/Taxes	2.5%			
Equipment Rental	0.1%			
Insurance - Business Liability	2.5%			
Professional Services	1.5%			
Marketing & Promotion	1.2%			
Office Supplies	0.7%			
Property Taxes	1.7%			
Repairs & Maintenance	4.4%			
Rent & Lease Expense	4.6%			
Telephone/Communication	0.8%			
Travel & Entertainment	0.5%			
Utilities	4.0%			
Other Expenses	4.3%			
Total	47.7%			
Capital and Loan				
Loan Details				
Municipal Bond	20	Year Term		
Interest Rate	2.00%			
Year Issued	0			
Coupon	Annual			
Annual Call Amount	5%			
CPI Boost				
Expenses				
	% of Revenue	Lease Pmt.	Capital Cost	
		1%	1%	

Conceptual Cost Estimate

Isle of Palms Marina Redevelopment

Scenario A - Drystack

Feb-16

Item	Estimated Quantity	Units	Unit Price	Item Cost	Comments/Assumptions
Preliminaries and Site Work					
Mobilization	1	LS	\$100,000	\$100,000	
Demolition and Grading	1	LS	\$35,000	\$35,000	
Erosion and Sediment Control	1	LS	\$60,000	\$60,000	
Stormwater Management System	1	LS	\$150,000	\$150,000	
Asphalt Paving	7,150	SY	\$25	\$178,750	
Gravel Paving	4,300	SY	\$20	\$86,000	
Concrete Curb and Gutter	3,897	LF	\$10	\$38,970	
Road Parking and Striping	1	LS	\$5,000	\$5,000	
Traffic Signs	1	LS	\$35,000	\$35,000	
Concrete Sidewalk	360	SY	\$60	\$21,600	
Testing Allowance	1	LS	\$10,000	\$10,000	
Surveying	1	LS	\$10,000	\$10,000	
Site Electrical and Lighting	1	LS	\$175,000	\$175,000	
Site Potable Water and Sewer	1	LS	\$175,000	\$175,000	
Landscaping	1	LS	\$275,000	\$275,000	
AJWW Boardwalk	3,150	SF	\$30	\$94,500	Assume timber frame on upland/cantilevered
Dumpster Screening	3	EA	\$2,500	\$7,500	
Shoulder Improvements on 41st Ave					
Revetment Ditch Slope	350	LF	\$300	\$105,000	
Grading	600	SY	\$5	\$3,000	
Gravel Paving	400	SY	\$20	\$8,000	
Parking Meter System	6	EA	\$15,000	\$90,000	
Sub Total				\$1,663,320	
Upland Filling Station					
Fueling Infrastructure	1	EA	\$325,000	\$325,000	
Existing Infrastructure DEMO	1	LS	\$25,000	\$25,000	
Concrete Paving	592	SY	\$60	\$35,520	
Sub-Total				\$385,520	
Marina					
Morgan Creek					
Demolition	1	LS	\$50,000	\$50,000	Assume dispose of existing docks off site
Floating Docks	14,260	SF	\$50	\$713,000	Timber Frame Floating Docks with Anchorage
Jet Docks	0	EA	\$8,000	\$0	Assume relocated from existing marina
Gangways	2	EA	\$40,000	\$80,000	6'x80' ADA Aluminum Gangways
Standard Slip-Utilities	24	Slip	\$7,500	\$180,000	Pedestals, Wire, Piping for Potable and Electrical
Small M/Y Slips - Utilities	2	Slip	\$15,000	\$30,000	Pedestals, Wire, Piping for Potable and Electrical
Jet Docks - Utilities	16	Slip	\$5,000	\$80,000	Pedestals, Wire, Piping for Potable and Electrical
Fuel Hut	225	SF	\$150	\$33,750	Includes Floating Dock and Hut; no interior finishes
Marina Fuel System	0	LS	\$0	\$0	Incl. in previous (upland). Includes service to docks and drystack.
Marina Pumpout System	1	LS	\$40,000	\$40,000	Assume single stanchion at fuel dock
Marina Fire Protection	1	LS	\$50,000	\$50,000	Assumes extinguishers and two hand carts
Sub-Total				\$1,256,750	
AJWW					
Relocate and Modify Intracoastal Dock	1	LS	\$40,000	\$40,000	Re-use pilings; basic refurbishment/maintenance
Kayak Launch Dock	525	SF	\$75	\$39,375	
Kayak Launch Gangway	1	EA	\$45,000	\$45,000	Assume 8'x80' ADA Gangway
Intracoastal Dock Utilities	11	Slips	\$5,000	\$55,000	Incl. refurbishment and relocation of existing utilities
Sub-Total				\$179,375	
Drystack Storage					
Racks	151	Rack	\$12,000	\$1,812,000	Assume arch. treatment on 3 sides; no roof
High Strength Concrete Pad	14,400	SF	\$12	\$172,800	
Relieving Platform	1	LS	\$30,000	\$30,000	
Forklift	1	EA	\$285,000	\$285,000	
Staging Racks	3	EA	\$600	\$1,800	
Sub-Total				\$2,301,600	
Construction Cost Estimate Total				\$5,786,565	
Soft Costs					
Planning, Engineering, Permitting, CA			7%	\$405,060	
Contingency					
Conceptual Level Plan Contingency			15%	\$867,985	
Project Total				\$7,059,609	

Schedule of Slip/Rack Revenue

Isle of Palms Marina
Scenario A - Drystack
Feb-16

Description	0 2017	1 2018	2 2019	3 2020	4 2021	5 2022	6 2023	7 2024	8 2025	9 2026	10 2027
Mooring Space Available											
<i>Seasonal Wetslips</i>											
22 Jet Docks	0	16	16	16	16	16	16	16	16	16	16
40	0	8	8	8	8	8	8	8	8	8	8
50	0	1	1	1	1	1	1	1	1	1	1
60	0	1	1	1	1	1	1	1	1	1	1
Side Tie	0	585	585	585	585	585	585	585	585	585	585
<i>Transient Wetslips</i>											
Side Tie	0	275	275	275	275	275	275	275	275	275	275
<i>Drystack Racks</i>											
Racks	0	151	151	151	151	151	151	151	151	151	151
Rates and Occupancy											
<i>Seasonal Wetslips</i>											
Percent Resident Takers	0	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%
Annual Rate		\$13.50	\$13.75	\$14.00	\$14.25	\$14.50	\$14.75	\$15.00	\$15.25	\$15.50	\$15.75
Occupancy Percentage		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
<i>Transient Wetslips</i>											
Daily Rate	0	\$2.25	\$2.30	\$2.35	\$2.40	\$2.45	\$2.50	\$2.55	\$2.60	\$2.65	\$2.70
Occupancy Percentage	0	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
<i>Drystack Racks</i>											
Percent Resident Takers	0	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Annual Rate	0	\$18	\$18.25	\$18.50	\$18.75	\$19.00	\$19.25	\$19.50	\$19.75	\$20.00	\$20.25
Occupancy Percentage	0	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
<i>Revenues</i>											
<i>Seasonal Wetslips - Residents</i>											
22	\$0	\$34,214	\$34,848	\$35,482	\$36,115	\$36,749	\$37,382	\$38,016	\$38,650	\$39,283	\$39,917
40	\$0	\$31,104	\$31,680	\$32,256	\$32,832	\$33,408	\$33,984	\$34,560	\$35,136	\$35,712	\$36,288
50	\$0	\$4,860	\$4,950	\$5,040	\$5,130	\$5,220	\$5,310	\$5,400	\$5,490	\$5,580	\$5,670
60	\$0	\$5,832	\$5,940	\$6,048	\$6,156	\$6,264	\$6,372	\$6,480	\$6,588	\$6,696	\$6,804
Side Tie	\$0	\$56,862	\$57,915	\$58,968	\$60,021	\$61,074	\$62,127	\$63,180	\$64,233	\$65,286	\$66,339
Sub-Total	\$0	\$132,872	\$135,333	\$137,794	\$140,254	\$142,715	\$145,175	\$147,636	\$150,097	\$152,557	\$155,018
<i>Seasonal Wetslips - Non-Residents</i>											
22	\$0	\$25,344	\$25,766	\$26,189	\$26,611	\$27,034	\$27,456	\$27,878	\$28,301	\$28,723	\$29,146
40	\$0	\$23,040	\$23,424	\$23,808	\$24,192	\$24,576	\$24,960	\$25,344	\$25,728	\$26,112	\$26,496
50	\$0	\$3,600	\$3,660	\$3,720	\$3,780	\$3,840	\$3,900	\$3,960	\$4,020	\$4,080	\$4,140
60	\$0	\$4,320	\$4,392	\$4,464	\$4,536	\$4,608	\$4,680	\$4,752	\$4,824	\$4,896	\$4,968
Side Tie	\$0	\$42,120	\$42,822	\$43,524	\$44,226	\$44,928	\$45,630	\$46,332	\$47,034	\$47,736	\$48,438
Sub-Total		\$98,424	\$100,064	\$101,705	\$103,345	\$104,986	\$106,626	\$108,266	\$109,907	\$111,547	\$113,188
<i>Transient Wetslips</i>											
Side Tie	\$0	\$112,922	\$115,431	\$117,941	\$120,450	\$122,959	\$125,469	\$127,978	\$130,488	\$132,997	\$135,506
Sub-Total		\$112,922	\$115,431	\$117,941	\$120,450	\$122,959	\$125,469	\$127,978	\$130,488	\$132,997	\$135,506
<i>Drystack Storage - Residents</i>											
Average Vessel Size (Ft.)											
24	\$0	\$391,392	\$396,828	\$402,264	\$407,700	\$413,136	\$418,572	\$424,008	\$429,444	\$434,880	\$440,316
Sub-Total		\$391,392	\$396,828	\$402,264	\$407,700	\$413,136	\$418,572	\$424,008	\$429,444	\$434,880	\$440,316
<i>Drystack Storage - Non-Residents</i>											
Average Vessel Size (Ft.)											
24	\$0	\$434,880	\$440,316	\$445,752	\$451,188	\$456,624	\$462,060	\$467,496	\$472,932	\$478,368	\$483,804
Sub-Total		\$434,880	\$440,316	\$445,752	\$451,188	\$456,624	\$462,060	\$467,496	\$472,932	\$478,368	\$483,804
Total Slip/Rack Lease Revenue	\$0	\$1,170,490	\$1,187,973	\$1,205,455	\$1,222,937	\$1,240,420	\$1,257,902	\$1,275,385	\$1,292,867	\$1,310,349	\$1,327,832

Schedule of Other Revenues

Isle of Palms Marina
Scenario A - Drystack
Feb-16

Description	0 2017	1 2018	2 2019	3 2020	4 2021	5 2022	6 2023	7 2024	8 2025	9 2026	10 2027
Boat Ramp Revenues											
<i>Annual Pass Resident</i>											
Sales	\$0	\$7,000	\$7,000	\$7,000	\$7,000	\$7,000	\$7,000	\$7,000	\$7,000	\$7,000	\$7,000
<i>Annual Pass Non-Resident</i>											
Sales	\$0	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
<i>Daily Pass Resident</i>											
Sales	\$0	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250
<i>Daily Pass Non-Resident</i>											
Sales	\$0	\$3,750	\$3,750	\$3,750	\$3,750	\$3,750	\$3,750	\$3,750	\$3,750	\$3,750	\$3,750
Sub-Total	\$0	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000
Charter Pick Up Revenues											
<i>Inshore</i>											
Sales		\$22,500	\$22,500	\$22,500	\$22,500	\$22,500	\$22,500	\$22,500	\$22,500	\$22,500	\$22,500
<i>Offshore</i>											
Sales		\$1,050	\$1,050	\$1,050	\$1,050	\$1,050	\$1,050	\$1,050	\$1,050	\$1,050	\$1,050
<i>Tour</i>											
Sales		\$18,000	\$18,000	\$18,000	\$18,000	\$18,000	\$18,000	\$18,000	\$18,000	\$18,000	\$18,000
Sub-Total		\$41,550	\$41,550	\$41,550	\$41,550	\$41,550	\$41,550	\$41,550	\$41,550	\$41,550	\$41,550
Vehicular Parking Revenues											
Sales		\$81,000	\$81,000	\$81,000	\$81,000	\$81,000	\$81,000	\$81,000	\$81,000	\$81,000	\$81,000
Sub-Total		\$81,000	\$81,000	\$81,000	\$81,000	\$81,000	\$81,000	\$81,000	\$81,000	\$81,000	\$81,000
Other Revenues (NIC Fuels)		\$149,550	\$149,550	\$149,550	\$149,550	\$149,550	\$149,550	\$149,550	\$149,550	\$149,550	\$149,550
Marine Fuel Sales (NET)											
<i>Long Term Wetslips</i>											
Sales		\$6,120	\$6,120	\$6,120	\$6,120	\$6,120	\$6,120	\$6,120	\$6,120	\$6,120	\$6,120
<i>Drystack</i>											
Sales		\$11,325	\$11,325	\$11,325	\$11,325	\$11,325	\$11,325	\$11,325	\$11,325	\$11,325	\$11,325
<i>Transient Boaters</i>											
Sales		\$72,000	\$72,000	\$72,000	\$72,000	\$72,000	\$72,000	\$72,000	\$72,000	\$72,000	\$72,000
Sub-Total		\$89,445	\$89,445	\$89,445	\$89,445	\$89,445	\$89,445	\$89,445	\$89,445	\$89,445	\$89,445
Upland Fuel Sales (NET)											
High Season		\$2,700	\$2,700	\$2,700	\$2,700	\$2,700	\$2,700	\$2,700	\$2,700	\$2,700	\$2,700
Off Season		\$4,050	\$4,050	\$4,050	\$4,050	\$4,050	\$4,050	\$4,050	\$4,050	\$4,050	\$4,050
Sub-Total		\$6,750	\$6,750	\$6,750	\$6,750	\$6,750	\$6,750	\$6,750	\$6,750	\$6,750	\$6,750
Fuel Profit		\$96,195	\$96,195	\$96,195	\$96,195	\$96,195	\$96,195	\$96,195	\$96,195	\$96,195	\$96,195

Income Statement

Isle of Palms Marina
Scenario A - Drystack
Feb-16

Description	0	1	2	3	4	5	6	7	8	9	10
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Revenues											
Slip/Rack Lease Revenues	\$1,170,490	\$1,187,973	\$1,205,455	\$1,222,937	\$1,240,420	\$1,257,902	\$1,275,385	\$1,292,867	\$1,310,349	\$1,327,832	
Other Revenues (NIC Fuel)	\$149,550	\$149,550	\$149,550	\$149,550	\$149,550	\$149,550	\$149,550	\$149,550	\$149,550	\$149,550	\$149,550
Sub-Total	\$1,320,040	\$1,337,523	\$1,355,005	\$1,372,487	\$1,389,970	\$1,407,452	\$1,424,935	\$1,442,417	\$1,459,899	\$1,477,382	
Operating Expenses											
Labor Expense	\$232,327	\$235,404	\$238,481	\$241,558	\$244,635	\$247,712	\$250,788	\$253,865	\$256,942	\$260,019	
Bad Debt Expense	\$3,960	\$4,013	\$4,065	\$4,117	\$4,170	\$4,222	\$4,275	\$4,327	\$4,380	\$4,432	
Bank Service Charges	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Business Licenses & Permits	\$2,640	\$2,675	\$2,710	\$2,745	\$2,780	\$2,815	\$2,850	\$2,885	\$2,920	\$2,955	
Credit Card Discounts	\$9,240	\$9,363	\$9,485	\$9,607	\$9,730	\$9,852	\$9,975	\$10,097	\$10,219	\$10,342	
Dues & Subscriptions	\$1,320	\$1,338	\$1,355	\$1,372	\$1,390	\$1,407	\$1,425	\$1,442	\$1,460	\$1,477	
Employee Benefits/Taxes	\$33,001	\$33,438	\$33,875	\$34,312	\$34,749	\$35,186	\$35,623	\$36,060	\$36,497	\$36,935	
Equipment Rental	\$1,320	\$1,338	\$1,355	\$1,372	\$1,390	\$1,407	\$1,425	\$1,442	\$1,460	\$1,477	
Insurance - Business Liability	\$33,001	\$33,438	\$33,875	\$34,312	\$34,749	\$35,186	\$35,623	\$36,060	\$36,497	\$36,935	
Professional Services	\$19,801	\$20,053	\$20,325	\$20,587	\$20,850	\$21,112	\$21,374	\$21,636	\$21,898	\$22,161	
Marketing & Promotion	\$15,840	\$16,050	\$16,260	\$16,470	\$16,680	\$16,889	\$17,099	\$17,309	\$17,519	\$17,729	
Office Supplies	\$9,240	\$9,363	\$9,485	\$9,607	\$9,730	\$9,852	\$9,975	\$10,097	\$10,219	\$10,342	
Property Taxes	\$22,441	\$22,738	\$23,035	\$23,332	\$23,629	\$23,927	\$24,224	\$24,521	\$24,818	\$25,115	
Repairs & Maintenance	\$58,082	\$58,851	\$59,620	\$60,389	\$61,159	\$61,928	\$62,697	\$63,466	\$64,236	\$65,005	
Rent & Lease Expense	\$60,722	\$61,526	\$62,330	\$63,134	\$63,939	\$64,743	\$65,547	\$66,351	\$67,155	\$67,960	
Telephone/Communication	\$10,560	\$10,700	\$10,840	\$10,980	\$11,120	\$11,260	\$11,399	\$11,539	\$11,679	\$11,819	
Travel & Entertainment	\$6,600	\$6,688	\$6,775	\$6,862	\$6,950	\$7,037	\$7,125	\$7,212	\$7,299	\$7,387	
Utilities	\$52,802	\$53,501	\$54,200	\$54,899	\$55,599	\$56,298	\$56,997	\$57,697	\$58,396	\$59,095	
Other Expenses	\$56,762	\$57,513	\$58,265	\$59,017	\$59,769	\$60,520	\$61,272	\$62,024	\$62,776	\$63,527	
Total Operating Expenses	\$629,659	\$637,998	\$646,337	\$654,676	\$663,016	\$671,355	\$679,694	\$688,033	\$696,372	\$704,711	
NOI Summary											
Total Revenues (NIC Fuel)	\$1,320,040	\$1,337,523	\$1,355,005	\$1,372,487	\$1,389,970	\$1,407,452	\$1,424,935	\$1,442,417	\$1,459,899	\$1,477,382	
Operating Expenses	\$629,659	\$637,998	\$646,337	\$654,676	\$663,016	\$671,355	\$679,694	\$688,033	\$696,372	\$704,711	
Net Operating Income (NIC Fuel)	\$690,381	\$699,524	\$708,668	\$717,811	\$726,954	\$736,097	\$745,241	\$754,384	\$763,527	\$772,671	
Fuel Profit	\$96,195	\$96,195	\$96,195	\$96,195	\$96,195	\$96,195	\$96,195	\$96,195	\$96,195	\$96,195	
Net Operating Income (including fuel profit)	\$786,576	\$795,719	\$804,863	\$814,006	\$823,149	\$832,292	\$841,436	\$850,579	\$859,722	\$868,866	

Income and Operating Summary

Isle of Palms Marina
Scenario A - Drystack
Feb-16

Description	0	1	2	3	4	5	6	7	8	9	10
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Income and Expense Summary											
Gross Revenues	\$1,320,040	\$1,337,523	\$1,355,005	\$1,372,487	\$1,389,970	\$1,407,452	\$1,424,935	\$1,442,417	\$1,459,899	\$1,477,382	
NET Fuel Sales	\$96,195	\$96,195	\$96,195	\$96,195	\$96,195	\$96,195	\$96,195	\$96,195	\$96,195	\$96,195	\$96,195
Operating Expenses	\$629,659	\$637,998	\$646,337	\$654,676	\$663,016	\$671,355	\$679,694	\$688,033	\$696,372	\$704,711	
Net Operating Income	\$786,576	\$795,719	\$804,863	\$814,006	\$823,149	\$832,292	\$841,436	\$850,579	\$859,722	\$868,866	
Capital Costs											
Anticipated Capital Expenditures											
Potential Grant Funding											
Marina - Boating Infrastructure Grant		\$200,000									
Pumpout - Clean Vessel Act		\$30,000									
Boat Ramp/Kayak Launch - SCDNR Water Access		\$80,000									
Development Funds Supplied	\$6,770,959										
Bond Schedule											
Issue Amount		\$6,770,959									
Interest Rate		2.00%									
Year Issued		0									
Amount Outstanding	\$6,770,959	\$6,432,411	\$6,093,863	\$5,755,315	\$5,416,767	\$5,078,219	\$4,739,671	\$4,401,123	\$4,062,575	\$3,724,027	
Interest Payment	\$135,419	\$128,648	\$121,877	\$115,106	\$108,335	\$101,564	\$94,793	\$88,022	\$81,252	\$74,481	
Call Payment	\$338,548	\$338,548	\$338,548	\$338,548	\$338,548	\$338,548	\$338,548	\$338,548	\$338,548	\$338,548	
Total Payment	\$473,967	\$467,196	\$460,425	\$453,654	\$446,883	\$440,112	\$433,341	\$426,570	\$419,799	\$413,028	
Income and Operating Summary											
Net Operating Income	\$786,576	\$795,719	\$804,863	\$814,006	\$823,149	\$832,292	\$841,436	\$850,579	\$859,722	\$868,866	
Debt Service	\$473,967	\$467,196	\$460,425	\$453,654	\$446,883	\$440,112	\$433,341	\$426,570	\$419,799	\$413,028	
Funds Generated/Required	\$312,609	\$328,523	\$344,437	\$360,352	\$376,266	\$392,180	\$408,094	\$424,009	\$439,923	\$455,837	

Schedule of Assumptions

Isle of Palms Marina Redevelopment

Scenario B - Without Drystack

Feb-16

Slips/ Racks Available					
Wetslips					
<i>Annual</i> Size (ft.)	Number	Occupancy	<i>Transient</i> Size (ft.)		Occupancy
22-ft. Jet Docks	18	100%			
40	8	100%			
50	1	100%			
60	1	100%			
Side Tie	855	100%	275	50%	
Drystack Storage					
Seasonal Size (ft.)	Number		Occupancy		
24-ft.	0		0%		
Marina Rates					
Annual Wetslips					
\$/ft./mo.			% Takers	Annual Rate Increase	
\$15 Non-Resident			40%	\$0.25	
\$13.50 Resident			60%	\$0.25	
Transient Wetslips					
\$/ft./day	\$2.25		Occupancy	Annual Rate Increase	
			50%	\$0.05	
Drystack Storage					
\$/ft./mo.			% Takers	Annual Rate Increase	
\$0 Non-Resident			0%	\$0.00	
\$0 Resident			0%	\$0.00	
Upland Trailer Storage					
	Total Spaces	High Season	Low Season	High Season	Low Season
	21	Apri-Sept.	Oct-March	Occupancy	Occupancy
Daily		\$20	\$10	10%	0%
Weekly		\$150	\$70	30%	10%
Monthly		\$300	\$250	35%	90%
Boat Ramp Launching/Parking					
<i>Annual Pass</i>			No.	Peak Usage Parking	
Resident		\$100	90	30%	
Non-Resident		\$300	65		
<i>Daily Pass</i>			No.		
Resident		\$5	325		
Non-Resident		\$15	325		
Charter Pick Up Fees					
Number of Charter and Tour Boats	No. Slips	Fee	Trips/Year		
Inshore	10	\$15	150		
Offshore	1	\$35	30		
Tour	3	\$100	60		
Standard Vehicular Parking					
Number of Spaces	Rate (per 2 hours)	% Non Employee Takers	Estimated Space Turnover/Day	Usage Days/Yr.	
138	\$5	30%	3	180	
Fuel					
Upland					
High Season	Duration (days)	Fill Ups/Day	Average Volume	Fuel Mark Up	
	90	20	15	\$0.10	
Off Season	270	10	15	\$0.10	
Marina					
	Gall./slip/mo.	No. Slips	Fuel Mark Up		
Long Term Wetslips	60	44	\$0.25		
Drystack	25	0	\$0.25		
Transient Boating Sales	gall/mo. 20,000		\$0.30		

Schedule of Assumptions

Isle of Palms Marina Redevelopment

Scenario B - Without Drystack

Feb-16

Expenses			
Operating Expenses			
Region II IMI			
	% of Revenue		
Labor Expense	17.6%		
Bad Debt Expense	0.3%		
Bank Service Charges	0.0%		
Business Licenses & Permits	0.2%		
Credit Card Discounts	0.7%		
Dues & Subscriptions	0.1%		
Employee Benefits/Taxes	2.5%		
Equipment Rental	0.1%		
Insurance - Business Liability	2.5%		
Professional Services	1.5%		
Marketing & Promotion	1.2%		
Office Supplies	0.7%		
Property Taxes	1.7%		
Repairs & Maintenance	4.4%		
Rent & Lease Expense	4.6%		
Telephone/Communication	0.8%		
Travel & Entertainment	0.5%		
Utilities	4.0%		
Other Expenses	4.3%		
Total	47.7%		
Capital and Loan			
Loan Details			
Municipal Bond	20	Year	Term
Interest Rate	2.00%		
Year Issued	0		
Coupon	Annual		
Annual Call Amount	5%		
CPI Boost			
Expenses	Lease Pmt.	Capital Cost	
% of Revenue	1%	1%	

Conceptual Cost Estimate

Isle of Palms Marina Redevelopment

Scenario B - Without Drystack

Feb-16

Item	Estimated Quantity	Units	Unit Price	Item Cost	Comments/Assumptions
Preliminaries and Site Work					
Mobilization	1	LS	\$100,000	\$100,000	
Demolition and Grading	1	LS	\$35,000	\$35,000	
Erosion and Sediment Control	1	LS	\$60,000	\$60,000	
Stormwater Management System	1	LS	\$150,000	\$150,000	
Asphalt Paving	6,980	SY	\$25	\$174,500	
Gravel Paving	5,830	SY	\$20	\$116,600	
Concrete Curb and Gutter	4,930	LF	\$10	\$49,300	
Road Parking and Striping	1	LS	\$5,000	\$5,000	
Traffic Signs	1	LS	\$35,000	\$35,000	
Concrete Sidewalk	200	SY	\$60	\$12,000	
Testing Allowance	1	LS	\$10,000	\$10,000	
Surveying	1	LS	\$10,000	\$10,000	
Site Electrical and Lighting	1	LS	\$175,000	\$175,000	
Site Potable Water and Sewer	1	LS	\$175,000	\$175,000	
Landscaping	1	LS	\$275,000	\$275,000	
AIWW Boardwalk	3,150	SF	\$30	\$94,500	Assume timber frame on upland/cantilevered
Dumpster Screening	3	EA	\$2,500	\$7,500	
Shoulder Improvements on 41st Ave					
Revetment Ditch Slope	350	LF	\$300	\$105,000	
Grading	600	SY	\$5	\$3,000	
Gravel Paving	400	SY	\$20	\$8,000	
Parking Meter System					
	6	EA	\$15,000	\$90,000	
Sub-Total				\$1,690,400	
Upland Filling Station					
Fueling Infrastructure	1	EA	\$250,000	\$250,000	
Existing Infrastructure DEMO	1	LS	\$25,000	\$25,000	
Concrete paving	405	SY	\$60	\$24,300	
Sub-Total				\$299,300	
Marina					
Morgan Creek					
Demolition	1	LS	\$50,000	\$50,000	Assume dispose of existing docks off site
Floating Docks	14,310	SF	\$50	\$715,500	Timber Frame Floating Docks with Anchorage
Jet Docks	0	EA	\$8,000	\$0	Assume relocated from existing marina
Gangways	2	EA	\$40,000	\$80,000	6'x80' ADA Aluminum Gangways
Standard Slip-Utilities	32	Slip	\$7,500	\$240,000	Pedestals, Wire, Piping for Potable and Electrica
Small M/Y Slips - Utilities	2	Slip	\$15,000	\$30,000	Pedestals, Wire, Piping for Potable and Electrica
Jet Docks - Utilities	16	Slip	\$5,000	\$80,000	Pedestals, Wire, Piping for Potable and Electrica
Fuel Hut	225	SF	\$150	\$33,750	Includes Floating Dock and Hut; no interior finishes
Marina Fuel System	0	LS	\$0	\$0	Incl. in previous (upland). Includes service to docks and drystack.
Marina Pumpout System	1	LS	\$40,000	\$40,000	Assume single stanchion at fuel dock
Marina Fire Protection	1	LS	\$50,000	\$50,000	Assumes extinguishers and two hand carts
Sub-Total				\$1,319,250	
AIWW					
Relocate and Modify Intracoastal Dock	1	LS	\$40,000	\$40,000	Re-use pilings; basic refurbishment/maintenance
Finger Pier Modifications/Extensions	240	SF	\$50	\$12,000	
Kayak Launch Dock	525	SF	\$75	\$39,375	
Kayak Launch Gangway	1	EA	\$45,000	\$45,000	Assume 8'x80' ADA Gangway
Intracoastal Dock Utilities	11	Slips	\$5,000	\$55,000	Incl. refurbishment and relocation of existing utilities
Sub-Total				\$191,375	
Drystack Storage					
Racks	0	Rack	\$12,000	\$0	Assume arch. treatment on 3 sides, no roof
High Strength Concrete Pad	0	SF	\$12	\$0	
Relieving Platform	0	LS	\$30,000	\$0	
Forklift	0	EA	\$285,000	\$0	
Staging Racks	0	EA	\$600	\$0	
Sub-Total				\$0	
Construction Cost Estimate Total				\$3,500,325	
Soft Costs					
Planning, Engineering, Permitting, CA			10%	\$350,033	
Contingency					
Conceptual Level Plan Contingency			15%	\$525,049	
Project Total				\$4,375,406	

Schedule of Slip/Rack Revenue

Isle of Palms Marina
Scenario B - Without Drystack
Feb-16

Description	0 2017	1 2018	2 2019	3 2020	4 2021	5 2022	6 2023	7 2024	8 2025	9 2026	10 2027
Mooring Space Available											
<i>Seasonal Wetslips</i>											
22 Jet Docks	0	18	18	18	18	18	18	18	18	18	18
40	0	8	8	8	8	8	8	8	8	8	8
50	0	1	1	1	1	1	1	1	1	1	1
60	0	1	1	1	1	1	1	1	1	1	1
Side Tie	0	855	855	855	855	855	855	855	855	855	855
<i>Transient Wetslips</i>											
Side Tie	0	275	275	275	275	275	275	275	275	275	275
<i>Drystack Racks</i>											
Racks	0	0	0	0	0	0	0	0	0	0	0
Rates and Occupancy											
<i>Seasonal Wetslips</i>											
Percent Resident Takers	0	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%
Annual Rate		\$13.50	\$13.75	\$14.00	\$14.25	\$14.50	\$14.75	\$15.00	\$15.25	\$15.50	\$15.75
Occupancy Percentage		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
<i>Transient Wetslips</i>											
Daily Rate	0	\$2.25	\$2.30	\$2.35	\$2.40	\$2.45	\$2.50	\$2.55	\$2.60	\$2.65	\$2.70
Occupancy Percentage	0	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
<i>Drystack Racks</i>											
Percent Resident Takers	0	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Annual Rate	0	\$0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Occupancy Percentage	0	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<i>Revenues</i>											
<i>Seasonal Wetslips - Residents</i>											
22	\$0	\$38,491	\$39,204	\$39,917	\$40,630	\$41,342	\$42,055	\$42,768	\$43,481	\$44,194	\$44,906
40	\$0	\$31,104	\$31,680	\$32,256	\$32,832	\$33,408	\$33,984	\$34,560	\$35,136	\$35,712	\$36,288
50	\$0	\$4,860	\$4,950	\$5,040	\$5,130	\$5,220	\$5,310	\$5,400	\$5,490	\$5,580	\$5,670
60	\$0	\$5,832	\$5,940	\$6,048	\$6,156	\$6,264	\$6,372	\$6,480	\$6,588	\$6,696	\$6,804
Side Tie	\$0	\$83,106	\$84,645	\$86,184	\$87,723	\$89,262	\$90,801	\$92,340	\$93,879	\$95,418	\$96,957
Sub-Total	\$0	\$163,393	\$166,419	\$169,445	\$172,471	\$175,496	\$178,522	\$181,548	\$184,574	\$187,600	\$190,625
<i>Seasonal Wetslips - Non-Residents</i>											
22	\$0	\$28,512	\$28,987	\$29,462	\$29,938	\$30,413	\$30,888	\$31,363	\$31,838	\$32,314	\$32,789
40	\$0	\$23,040	\$23,424	\$23,808	\$24,192	\$24,576	\$24,960	\$25,344	\$25,728	\$26,112	\$26,496
50	\$0	\$3,600	\$3,660	\$3,720	\$3,780	\$3,840	\$3,900	\$3,960	\$4,020	\$4,080	\$4,140
60	\$0	\$4,320	\$4,392	\$4,464	\$4,536	\$4,608	\$4,680	\$4,752	\$4,824	\$4,896	\$4,968
Side Tie	\$0	\$61,560	\$62,586	\$63,612	\$64,638	\$65,664	\$66,690	\$67,716	\$68,742	\$69,768	\$70,794
Sub-Total		\$121,032	\$123,049	\$125,066	\$127,084	\$129,101	\$131,118	\$133,135	\$135,152	\$137,170	\$139,187
<i>Transient Wetslips</i>											
Side Tie	\$0	\$112,922	\$115,431	\$117,941	\$120,450	\$122,959	\$125,469	\$127,978	\$130,488	\$132,997	\$135,506
Sub-Total		\$112,922	\$115,431	\$117,941	\$120,450	\$122,959	\$125,469	\$127,978	\$130,488	\$132,997	\$135,506
<i>Drystack Storage - Residents</i>											
Average Vessel Size (Ft.)											
24	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sub-Total		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Drystack Storage - Non-Residents</i>											
Average Vessel Size (Ft.)											
24	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sub-Total		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Slip/Rack Lease Revenue	\$0	\$397,347	\$404,899	\$412,452	\$420,004	\$427,557	\$435,109	\$442,661	\$450,214	\$457,766	\$465,318

Schedule of Other Revenues

Isle of Palms Marina
Scenario B - Without Drystack
Feb-16

Description	0 2017	1 2018	2 2019	3 2020	4 2021	5 2022	6 2023	7 2024	8 2025	9 2026	10 2027
Boat Ramp Revenues											
<i>Annual Pass Resident</i>											
Sales	\$0	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000
<i>Annual Pass Non-Resident</i>											
Sales	\$0	\$19,500	\$19,500	\$19,500	\$19,500	\$19,500	\$19,500	\$19,500	\$19,500	\$19,500	\$19,500
<i>Daily Pass Resident</i>											
Sales	\$0	\$1,625	\$1,625	\$1,625	\$1,625	\$1,625	\$1,625	\$1,625	\$1,625	\$1,625	\$1,625
<i>Daily Pass Non-Resident</i>											
Sales	\$0	\$4,875	\$4,875	\$4,875	\$4,875	\$4,875	\$4,875	\$4,875	\$4,875	\$4,875	\$4,875
Sub-Total	\$0	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000
Upland Trailer Storage											
<i>Daily</i>											
High Season	\$0	\$7,560	\$7,560	\$7,560	\$7,560	\$7,560	\$7,560	\$7,560	\$7,560	\$7,560	\$7,560
Off Season	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Weekly</i>											
High Season	\$0	\$24,570	\$24,570	\$24,570	\$24,570	\$24,570	\$24,570	\$24,570	\$24,570	\$24,570	\$24,570
Off Season	\$0	\$3,822	\$3,822	\$3,822	\$3,822	\$3,822	\$3,822	\$3,822	\$3,822	\$3,822	\$3,822
<i>Monthly</i>											
High Season	\$0	\$13,230	\$13,230	\$13,230	\$13,230	\$13,230	\$13,230	\$13,230	\$13,230	\$13,230	\$13,230
Off Season	\$0	\$28,350	\$28,350	\$28,350	\$28,350	\$28,350	\$28,350	\$28,350	\$28,350	\$28,350	\$28,350
Sub-Total	\$0	\$77,532	\$77,532	\$77,532	\$77,532	\$77,532	\$77,532	\$77,532	\$77,532	\$77,532	\$77,532
Charter Pick Up Revenues											
<i>Inshore</i>											
Sales	\$0	\$22,500	\$22,500	\$22,500	\$22,500	\$22,500	\$22,500	\$22,500	\$22,500	\$22,500	\$22,500
<i>Offshore</i>											
Sales	\$0	\$1,050	\$1,050	\$1,050	\$1,050	\$1,050	\$1,050	\$1,050	\$1,050	\$1,050	\$1,050
<i>Tour</i>											
Sales	\$0	\$18,000	\$18,000	\$18,000	\$18,000	\$18,000	\$18,000	\$18,000	\$18,000	\$18,000	\$18,000
Sub-Total	\$0	\$41,550	\$41,550	\$41,550	\$41,550	\$41,550	\$41,550	\$41,550	\$41,550	\$41,550	\$41,550
Vehicular Parking Revenues											
Sales	\$0	\$111,780	\$111,780	\$111,780	\$111,780	\$111,780	\$111,780	\$111,780	\$111,780	\$111,780	\$111,780
Sub-Total	\$0	\$111,780	\$111,780	\$111,780	\$111,780	\$111,780	\$111,780	\$111,780	\$111,780	\$111,780	\$111,780
Other Revenues (NIC Fuel)		\$265,862	\$265,862	\$265,862	\$265,862	\$265,862	\$265,862	\$265,862	\$265,862	\$265,862	\$265,862
Marine Fuel Sales (NET)											
<i>Long Term Wetslips</i>											
Sales	\$0	\$7,920	\$7,920	\$7,920	\$7,920	\$7,920	\$7,920	\$7,920	\$7,920	\$7,920	\$7,920
<i>Drystack</i>											
Sales	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Transient Boaters</i>											
Sales	\$0	\$72,000	\$72,000	\$72,000	\$72,000	\$72,000	\$72,000	\$72,000	\$72,000	\$72,000	\$72,000
Sub-Total	\$0	\$79,920	\$79,920	\$79,920	\$79,920	\$79,920	\$79,920	\$79,920	\$79,920	\$79,920	\$79,920
Upland Fuel Sales (NET)											
High Season	\$0	\$2,700	\$2,700	\$2,700	\$2,700	\$2,700	\$2,700	\$2,700	\$2,700	\$2,700	\$2,700
Off Season	\$0	\$4,050	\$4,050	\$4,050	\$4,050	\$4,050	\$4,050	\$4,050	\$4,050	\$4,050	\$4,050
Sub-Total	\$0	\$6,750	\$6,750	\$6,750	\$6,750	\$6,750	\$6,750	\$6,750	\$6,750	\$6,750	\$6,750
Fuel Profit		\$86,670	\$86,670	\$86,670	\$86,670	\$86,670	\$86,670	\$86,670	\$86,670	\$86,670	\$86,670

Income Statement

Isle of Palms Marina
Scenario B - Without Drystack
Feb-16







Description	0	1	2	3	4	5	6	7	8	9	10
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Revenues											
Slip/Rack Lease Revenues	0	\$397,347	\$404,899	\$412,452	\$420,004	\$427,557	\$435,109	\$442,661	\$450,214	\$457,766	\$465,318
Other Revenues (NIC Fuel)	0	\$265,862	\$265,862	\$265,862	\$265,862	\$265,862	\$265,862	\$265,862	\$265,862	\$265,862	\$265,862
Sub-Total	0	\$663,209	\$670,761	\$678,314	\$685,866	\$693,419	\$700,971	\$708,523	\$716,076	\$723,628	\$731,180
Operating Expenses											
Labor Expense	0	\$116,725	\$118,054	\$119,383	\$120,712	\$122,042	\$123,371	\$124,700	\$126,029	\$127,359	\$128,688
Bad Debt Expense	0	\$1,990	\$2,012	\$2,035	\$2,058	\$2,080	\$2,103	\$2,126	\$2,148	\$2,171	\$2,194
Bank Service Charges	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Business Licenses & Permits	0	\$1,326	\$1,342	\$1,357	\$1,372	\$1,387	\$1,402	\$1,417	\$1,432	\$1,447	\$1,462
Credit Card Discounts	0	\$4,642	\$4,695	\$4,748	\$4,801	\$4,854	\$4,907	\$4,960	\$5,013	\$5,065	\$5,118
Dues & Subscriptions	0	\$663	\$671	\$678	\$686	\$693	\$701	\$709	\$716	\$724	\$731
Employee Benefits/Taxes	0	\$16,580	\$16,769	\$16,958	\$17,147	\$17,335	\$17,524	\$17,713	\$17,902	\$18,091	\$18,280
Equipment Rental	0	\$663	\$671	\$678	\$686	\$693	\$701	\$709	\$716	\$724	\$731
Insurance - Business Liability	0	\$16,580	\$16,769	\$16,958	\$17,147	\$17,335	\$17,524	\$17,713	\$17,902	\$18,091	\$18,280
Professional Services	0	\$9,948	\$10,061	\$10,175	\$10,288	\$10,401	\$10,515	\$10,628	\$10,741	\$10,854	\$10,968
Marketing & Promotion	0	\$7,959	\$8,049	\$8,140	\$8,230	\$8,321	\$8,412	\$8,502	\$8,593	\$8,684	\$8,774
Office Supplies	0	\$4,642	\$4,695	\$4,748	\$4,801	\$4,854	\$4,907	\$4,960	\$5,013	\$5,065	\$5,118
Property Taxes	0	\$11,275	\$11,403	\$11,531	\$11,660	\$11,788	\$11,917	\$12,045	\$12,173	\$12,302	\$12,430
Repairs & Maintenance	0	\$29,181	\$29,514	\$29,846	\$30,178	\$30,510	\$30,843	\$31,175	\$31,507	\$31,840	\$32,172
Rent & Lease Expense	0	\$30,508	\$30,855	\$31,202	\$31,550	\$31,897	\$32,245	\$32,592	\$32,939	\$33,287	\$33,634
Telephone/Communication	0	\$5,306	\$5,366	\$5,427	\$5,487	\$5,547	\$5,608	\$5,668	\$5,729	\$5,789	\$5,849
Travel & Entertainment	0	\$3,316	\$3,354	\$3,392	\$3,429	\$3,467	\$3,505	\$3,543	\$3,580	\$3,618	\$3,656
Utilities	0	\$26,528	\$26,830	\$27,133	\$27,435	\$27,737	\$28,039	\$28,341	\$28,643	\$28,945	\$29,247
Other Expenses	0	\$28,518	\$28,843	\$29,167	\$29,492	\$29,817	\$30,142	\$30,467	\$30,791	\$31,116	\$31,441
Total Operating Expenses	0	\$316,351	\$319,953	\$323,556	\$327,158	\$330,761	\$334,363	\$337,966	\$341,568	\$345,171	\$348,773
NOI Summary											
Total Revenues (NIC Fuel)	0	\$663,209	\$670,761	\$678,314	\$685,866	\$693,419	\$700,971	\$708,523	\$716,076	\$723,628	\$731,180
Operating Expenses	0	\$316,351	\$319,953	\$323,556	\$327,158	\$330,761	\$334,363	\$337,966	\$341,568	\$345,171	\$348,773
Net Operating Income (NIC Fuel)	0	\$346,858	\$350,808	\$354,758	\$358,708	\$362,658	\$366,608	\$370,558	\$374,508	\$378,457	\$382,407
Fuel Profit	0	\$86,670	\$86,670	\$86,670	\$86,670	\$86,670	\$86,670	\$86,670	\$86,670	\$86,670	\$86,670
Net Operating Income (including fuel profit)	\$433,528	\$437,478	\$441,428	\$445,378	\$449,328	\$453,278	\$457,228	\$461,178	\$465,127	\$469,077	\$473,027

Income and Operating Summary

Isle of Palms Marina
Scenario B - Without Drystack
Feb-16

Description	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Income and Expense Summary											
Gross Revenues	0	\$663,209	\$670,761	\$678,314	\$685,866	\$693,419	\$700,971	\$708,523	\$716,076	\$723,628	\$731,180
NET Fuel Sales	0	\$86,670	\$86,670	\$86,670	\$86,670	\$86,670	\$86,670	\$86,670	\$86,670	\$86,670	\$86,670
Operating Expenses	0	\$316,351	\$319,953	\$323,556	\$327,158	\$330,761	\$334,363	\$337,966	\$341,568	\$345,171	\$348,773
Net Operating Income	0	\$433,528	\$437,478	\$441,428	\$445,378	\$449,328	\$453,278	\$457,228	\$461,178	\$465,127	\$469,077
Capital Costs											
Anticipated Capital Expenditures							\$4,375,406				
Potential Grant Funding											
Marina - Boating Infrastructure Grant							\$200,000				
Pumpout - Clean Vessel Act							\$30,000				
Boat Ramp/Kayak Launch - SCDNR Water Access							\$80,000				
Development Funds Supplied							\$4,065,406				
Bond Schedule											
Issue Amount							\$4,065,406				
Interest Rate							2.00%				
Year Issued							0				
Amount Outstanding	0	\$4,065,406	\$3,862,136	\$3,658,866	\$3,455,595	\$3,252,325	\$3,049,055	\$2,845,784	\$2,642,514	\$2,439,244	\$2,235,973
Interest Payment	0	\$81,308	\$77,243	\$73,177	\$69,112	\$65,047	\$60,981	\$56,916	\$52,850	\$48,785	\$44,719
Call Payment	0	\$203,270	\$203,270	\$203,270	\$203,270	\$203,270	\$203,270	\$203,270	\$203,270	\$203,270	\$203,270
Total Payment	0	\$284,578	\$280,513	\$276,448	\$272,382	\$268,317	\$264,251	\$260,186	\$256,121	\$252,055	\$247,990
Income and Operating Summary											
Net Operating Income	0	\$433,528	\$437,478	\$441,428	\$445,378	\$449,328	\$453,278	\$457,228	\$461,178	\$465,127	\$469,077
Debt Service	0	\$284,578	\$280,513	\$276,448	\$272,382	\$268,317	\$264,251	\$260,186	\$256,121	\$252,055	\$247,990
Funds Generated/Required		\$148,950	\$156,965	\$164,981	\$172,996	\$181,011	\$189,026	\$197,042	\$205,057	\$213,072	\$221,088

9



**Comprehensive Redevelopment
Master Plan for
Isle of Palms Marina
City of Isle of Palms, SC**



February 23, 2016

Presented by:
ATM
APPLIED TECHNOLOGY & MANAGEMENT

Applied Technology & Management, Inc.
941 Houston Northcutt Blvd., Suite 201 | Mt. Pleasant, SC 29464
www.appliedtm.com

Presentation Outline

1. Brief Team Introduction
2. Project Kickoff/Stakeholder Meeting #1
3. Project Website
4. Information Gathering and Field Study
 - a) Existing Conditions Assessment
5. Parking and Traffic Assessment
6. Marina and Drystack Market Assessment
7. Preliminary Regulatory and Engineering Overview
8. Conceptual Master Plan(s)
9. Pro Forma Financial Analysis
10. Stakeholder Meeting #2/Presentation



Introductions and Firm Profiles

- ATM
- Design Works
- EPIC Engineering
- CDM Smith
 - Long standing relationships
 - Marina Projects
 - 100% Local



Project Kickoff/Stakeholder Meeting #1

- City Staff
- Planning Commission
- City Council
- Marina Tenants
- Neighbors and Citizens



Stakeholder Comment Summary

1. On-site parking concerns
2. Street parking concerns
3. Provide benefits for residents
4. Community/Open Space
5. Pedestrian Access/Safety
6. Unplanned Site
7. Share Facilities with Dewees/Wild Dunes
8. Separate Launch for Non-Motorized Vessels
9. Limit Non-Resident Ramp Permits
10. Emergency Access



Project Website

- General outline of scope
- General project updates
- **PORTAL FOR PUBLIC COMMENT**
 - 23 Comments
 - Key topics:
 - General Information Inquiries
 - Drystack Concerns
 - Parking and Traffic Concerns
 - Noise Concerns
 - Resident Enjoyment/Use



Other Outreach

- Mr. Brian Berrigan – Isle of Palms Marina
- Mr. Jay Clarke and Ms. Carla Pope – Morgan Creek Grill
- Mr. Michael Fiem – Tidal Wave Watersports
- Mr. Kim Knight – Dewees POA

- Individual Citizens
 - Phone calls
 - Letters



Information Gathering and Field Studies

- Existing leases
- Historic survey data
- Historic workshop notes
- Zoning codes

- Limited Conditions Assessment
 - Floating docks
 - Shoreline stabilization
 - Marina and upland utilities
 - Fueling system
 - Parking areas
 - Buildings (limited)



Limited Conditions Assessment Findings



Limited Conditions Assessment



Limited Conditions Assessment



Limited Conditions Assessment

- Morgan Creek Docks and Utilities at end of useful lives
- Intracoastal Dock in Fair Condition
- Watersports Dock in Good Condition
- Limited fire protection provided
- Boat Ramp and Shoreline Stabilization in generally good condition
- Upland fueling facility aged; tanks in need of replacement
- On-dock fueling infrastructure at end of useful life
- Parking conditions mixed
- Buildings aged, but functional
- Gangways a concern throughout
- Some on-dock electrical concerns



Parking and Traffic Assessment



Parking and Traffic Assessment

City of Isle of Palms Marina		
Parking Type	Number	Comments
Dedicated Trailer	32	Full size trailer parking
Shared Use Trailer	11	Compact trailer parking/shared with restaurant
DNR Trailer	1	For Law Enforcement Use
Standard Car	68	
Dedicated Restaurant Car	43	Lease terms suggest 33 dedicated car parking spaces
Watersports Car	15	Lease terms suggest 10 car parking spaces (8 parton, 2 empl.)
Shared Use Cars	35	Shared at discretion of marina manager
Boat Parking (Dry Storage)	31-32	Dedicated lot for boat/trailer storage
Total	Trailer Spaces	44
	Standard Spaces	161
	Boat Dry Storage	31-32



Parking and Traffic Assessment

City of Isle of Palms Marina			
Feature	Size	Required/Recommended Parking Spaces	Code/Guideline
Boat Ramp	3 Lane	60-150 (trailer)	SOBA/SCDNR
Marina	~55 slips	19	OCRM
Restaurant	325 Seats	82	IOP
	60 Employees	20	IOP
Marina Store	3856 SF	16	IOP
	7 Employees	7	IOP
Tidal Wave Watersports	200 SF Dock Hut	3	IOP
	20 Employees	20	IOP
Barrier Island Eco Tours	2 40-ft. Boats	3	IOP
	8 Employees	8	IOP
Coastal Expeditions	225 SF Hut	3	IOP
	2 Employees	2	IOP
Charter Vessels	11 Boats	33	IOP
	12 Employees	12	IOP
Total "Requirements"			
	Trailer Spaces	60-150	
	Standard Spaces	228	



Parking and Traffic Assessment

- Apparent Delta
 - Short 16 trailer spaces
 - Short 67 car parking spaces
- Mitigating Factors
 - Shared Use/Timing
 - +51 car
 - Charter Vessels
 - +23
 - SURPLUS ?
 - Inefficiencies



Parking and Traffic Assessment

- **Master Planning Considerations**

- Trailer Parking
- Vehicular Parking for all uses
 - Drystack Analysis
- Efficient layout/traffic flow
- Shoulder improvements
- Off site parking prohibitions
- Golf cart access
- Pedestrian/ADA access
- Off site parking
- Parking Control

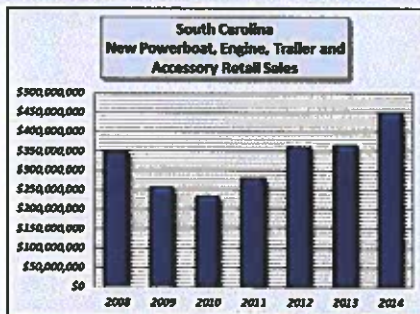


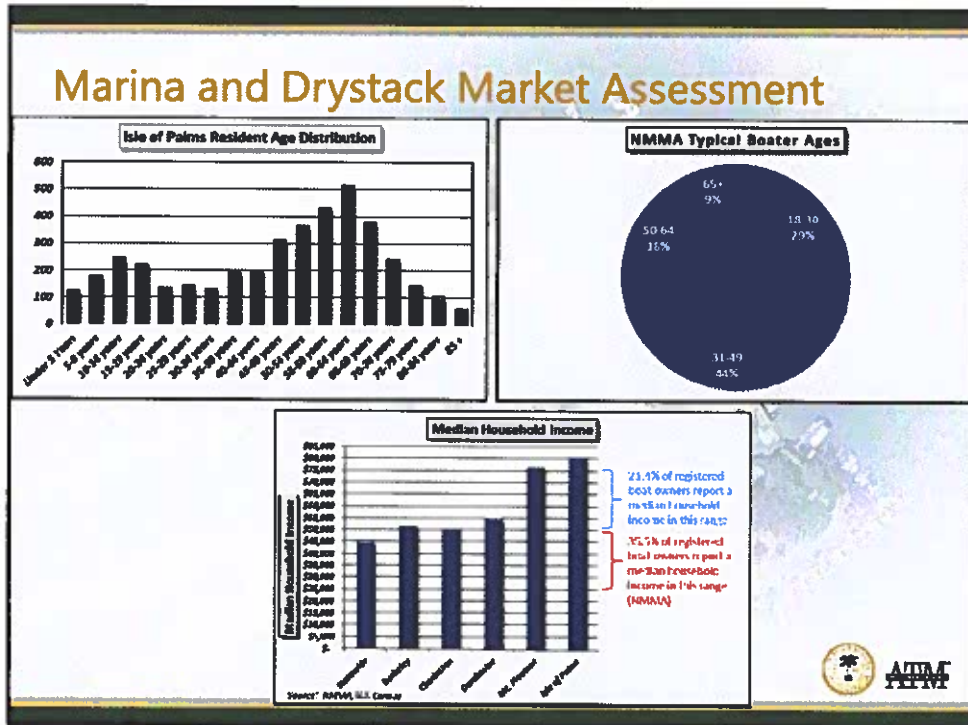
Marina and Drystack Market Assessment

REGIONAL BOAT REGISTRATION COMPARISON 2007-2013

County	2007	2010	2013	2015	% Change from 2013-2015
Berkeley	16,124	14,680	15,425	17,885	15.95%
Charleston	32,409	28,752	31,534	34,986	10.95%
Dorchester	9,410	8,331	8,758	9,773	11.59%
Total	57,943	51,763	55,717	62,644	12.43%

Source: SCDNR





- ## Marina and Drystack Market Assessment
- Transient boaters
 - Demand Forecast
 - Megayachts
 - Slip/Rack Mix
 - Comparable Marinas
 - Ramp
 - IOP
 - Kayak
 - MTP
 - Watersports
 - CHS
 - Population growth
 - N. CHS
 - Local IOP demand
 - Outlying areas
 - Rates
 - Interviews
 - Amenities
 - Dock/Rack Types
-

Marina and Drystack Market Assessment

Isle of Palms Marina Demand Summary

<i>Marina Storage Element</i>	<i>Recommended Number</i>	<i>Specific Needs</i>
Wetslips	Maximization within site constraints	10 inshore charter spaces 10 boat rental spaces 2 spaces for Barrier Island Eco Tours 1 or 2 larger charter slips
Drystack Storage	Maximization within site constraints	Assume maximum boat size in the 35- to 40-ft range Assume average boat size in the 23-ft range
Boat Ramp	Maintain current ramp	Assume 20 to 30 parking spaces/lane required
Kayak Launch	Provide separate kayak launch facility	Segregate from heavy motorized vessel activity
Watersports Dock	Maintain Watersports Dock	Carefully examine parking needs/assignment



Marina and Drystack Market Assessment



Marina and Drystack Market Assessment



Marina and Drystack Market Assessment



Marina and Drystack Market Assessment



Marina and Drystack Market Assessment



Preliminary Regulatory and Engineering Overview

- Regulatory
 - Upland – Zoning
 - Overall zoning GC-1
 - Buffers/Setbacks
 - Building Height
 - Fuel tanks
 - OSHA
 - Beep Beep Beep
 - Marine
 - USACE
 - OCRM



Preliminary Regulatory and Engineering Overview

- Engineering Overview
 - Upland
 - EXISTING SITE
 - Fuel
 - Roadways
 - Parking
 - ADA
 - Marine
 - EXISTING SITE
 - Docks
 - Utilities
 - Ramp
 - ADA
- Refer back to Limited Conditions Assessment



Pro Forma Financial Analysis

- Costs
- Revenue projections
- Income statement
- Income and operating summary
 - Funding
 - Grants
- General impacts to existing leases/revenues



Scenario "A" - Drystack

- \$7.05M
 - ~\$2.5M related to drystack
 - \$310k in grant funding assumed
- \$1.32-\$1.47M in revenues (sans fuel)
- \$786k-\$868k in NOI
- Bond payment
 - \$413k-\$473k
- Cash flow of \$312k-\$455k.



Scenario "A" Drystack

Marina Site Payment Estimate Scenario A - Drystack		
	Year 1	Year 10
Marina Lease Payment Estimation		
Gross Profit Estimate	\$1,320,000	\$1,470,000
Marina Base Lease Payment	\$151,500	\$165,693
15% Gross Profit Over \$450,000	\$130,500	\$153,000
Total Estimated Payment From Marina Lease	\$282,000	\$318,693
Other Lease Payments to City		
2015 Store Lease Payment	\$74,000	\$74,000
2015 Restaurant Lease Payment	\$128,000	\$128,000
2015 Watersports Lease Payment	\$23,000	\$23,000
Total Marina Site Payments	\$507,000	\$543,693



Scenario "B" Without Drystack

- \$4.36M Capital Cost
- Bond Payment \$247-\$284k
- \$663k-\$731k revenues (sans fuel)
- Cash flow \$148k-\$221k
- \$433k-\$469k NOI



Scenario "B" Without Drystack

Marina Site Payment Estimate		
Scenario B - Without Drystack		
	Year 1	Year 10
Marina Lease Payment Estimation		
Gross Profit Estimate	\$660,000	\$730,000
Marina Base Lease Payment	\$151,500	\$165,693
15% Gross Profit Over \$450,000	\$31,500	\$42,000
Total Estimated Payment From Marina Lease	\$183,000	\$207,693
Other Lease Payments to City		
2015 Store Lease Payment	\$74,000	\$74,000
2015 Restaurant Lease Payment	\$128,000	\$128,000
2015 Watersports Lease Payment	\$23,000	\$23,000
Total Marina Site Payments	\$408,000	\$432,693



Conclusions

- Wonderful opportunity to create a defining asset for the City of Isle of Palms!
- This study is intended to help create a roadmap for implementation.
- Additional consideration needed on financials, but the initial review appears very positive!

Thank you for the opportunity to assist!

