

Opportunity | Growth | Stewardship



# Master Plan Update 2022

December 2022



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# EXECUTIVE SUMMARY

The SeaPort Manatee Master Plan Update provides the roadmap to deliver up to 20 million tons of annual operating capacity through targeted strategic investments, enable continued growth across all existing port business lines, position the port to respond to new and unique market opportunities, and further cement SeaPort Manatee's role as Southwest Florida's Gateway.





SeaPort Manatee has experienced significant growth in cargo operations since the completion of the SeaPort's 2016 Master Plan Update. In 2021, the port handled a total of 10,156,703 tons, including 5.9 million tons of waterborne cargo. The Port's waterborne cargo has increased 61.8% over the past 5 years, driven by substantial growth in the container, citrus juice, and breakbulk / general cargo markets. Going forward, SeaPort Manatee is projected to see continued growth across all business lines, resulting in the need to double the existing operating capacity of its facilities.

This document presents the 2022 SeaPort Manatee Master Plan Update and is the result of extensive study of market trends, customer interviews, facilities analyses, stakeholder engagement, and assessment of development options. This plan describes the future vision for SeaPort Manatee, the strategic direction and underlying goals for both near- and longer-terms, and identifies the capital improvements necessary to deliver the capacity needed to meet future demands. The plan's development utilized a five-step market-driven approach in coordination with facility stakeholders to align investments with volume demands and strategic objectives.

# Waterborne Cargo Market Assessment

SeaPort Manatee's waterborne cargo volume alone is projected to almost double, reaching nearly 11 million tons over the next 20-years. Key observations of the market forecast projections include:

- Container business will grow up to three times current volumes, approaching 375K - 400K TEUs, annually by the year 2041
- Breakbulk / general cargo business will grow more than two times current volumes, approaching 1.2 million tons, annually by the year 2041
- Citrus juice volumes will grow at least 2.5 times current volumes, approaching 630K tons, annually by the year 2041
- Dry bulk materials will see at least a 50% increase in annual volumes. approaching 4 million tons, annually by the year 2041
- Liquid bulk petroleum will also see a 50% increase in annual volumes, approaching 2 million tons, annually by the year 2041

# **Facility Capacity and Needs**

SeaPort Manatee's overall operating capacity is constrained by infrastructure that must be modernized and expanded, and operating conflicts that were manageable in years past. Capacity constraints in the container, breakbulk, and citrus juice business lines are critical in the near-term, and capacity constraints in the dry and liquid bulk markets will be encountered over the medium- to longer-terms.

Over the 20-year planning horizon, SeaPort Manatee will require:

- Expanded container storage areas with stacked storage for both dry and refrigerated container, utilizing electrical supply plugs
- Introduction of a new intermodal rail service with the development of near-dock intermodal container transfer facility
- Expansion of warehouse facilities, doubling existing covered warehouse storage space
- Expansion of open storage space adjacent to dock facilities to optimize cargo handling and operations
- Provision of a dedicated citrus juice storage and processing facility on port property
- Upgrades to existing docks to unlock hidden capacity and optimize berth utilization and capacity
- Construction of new dock facilities to accommodate more frequent vessel calls and larger vessels
- Organization of the port facilities to reduce operational conflicts and further unlock hidden capacity
- Realignment of the existing TWIC boundary to optimize over-theroad truck movements and eliminate unnecessary gate moves.
- Expansion of the South Gate for dedicated containerized cargo movements

# **20-Year Vision Plan**

A 20-year vision for SeaPort Manatee was prepared to set the roadmap for development of 5-year and 10-year interim development plans. The 20-year plan includes the following key features:

- Development of up to 80 acres of container yard, located to the south
- Construction of a near-dock intermodal container transfer facility to increase SeaPort Manatee's market reach for consumer goods
- Construction of a new citrus juice storage and processing facility on port property to maximize capture of this growing market opportunity
- Extension of Berth 4, and construction of new berths 1, 2 and 3 to increase berth utilization and capacity for breakbulk and dry bulk cargos
- Expansion of the North Pier to optimize cargo handling
- Upgrades to Berth 6, enabling increased utilization for multiple cargo types
- Realignment of berths 10 and 11 to increase berth capacity and utilizations
- Expansion of the container berths by extending Berth 14, providing up to 3,000 feet of marginal wharf for container operations
- Construction of up to 750,000 square feet of additional warehouse space, with adjacent open storage space
- Relocation of truck-drayed dry bulk storage from Zones B and C to the north
- Realignment of the TWIC zone to minimize unnecessary truck gate movements, and facilitate over-the-road truck access
- Reserved space for expansion of petroleum products storage as required

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#### Legend

- 1) Berth 10 / 11 Corner Alignment
- 2 Berth 4 Extension (600-Feet)
- 3 Berth 2 & 3 (2,000-Feet)
- 4 Berth 1 (1,000-Feet)
- 5 Drop Trailer Parking
- 6 Open Cargo Handling Area
- 7 Open Cargo Handling Area
- 8 Berth 6 Fill-In
- 9 Container Terminal
- (10) Berth 14 Extension
- (11) Maintenance Yard
- (12) Warehouse 12 (150,000 SF)
- (13) New Warehouse (200,000 SF)
- (14) Open Storage Area
- 15 Bulk Juice Faciilty
- 16 Relocated Dry Buk Storage
- 17 New Petroleum Access Road
- (18) Intermodal Container Transfer Facility
- (19) Expanded Rail Marshalling Yard
- 20 Zone C Access Improvements
- North Warehouse / Open Storage Complex
- 22 Reeder Rd. Ext.
- South Gate Expansion
- 24 Drainage Ditch Realignment
- 25 Office Building
  26 TWIC Zone Realignment (Not Shown)

The 20-Year Vision plan, shown to the left, is primarily expansion-based, with selected retro-fit projects that unlock hidden capacity. Much of the development plan expands operations into unused or underutilized areas of the port property and seeks to limit impacts to existing facilities and operations.

# **Capital Projects**

A total of 26 capital projects have been identified to make up the 20-year vision plan. The projects are described within the study and are organized to allow for phased development over time. A preliminary timeline for project execution is provided, delivering requisite operating capacity for each addressable cargo type. The timelines are captured in 5-year and 10-year capital plans.

The 5-year plan focuses on projects that can respond to immediate capacity needs and be implemented within the available timeframe. The focus areas include container yard capacity expansion, responding to the opportunity to extend SeaPort Manatee's market reach with intermodal rail service, selected berth expansions and upgrades to unlock hidden capacity, developing an on-site Bulk Juice Storage Facility, and development of needed breakbulk warehouse storage capacity.

The 10-Year plan focuses on projects that expand berth capacity for breakbulk and dry bulk cargos, respond to continued growth in the container business, add to operational efficiency of the intermodal business, and optimize the operations of SeaPort Manatee's northern area.

# **Results**

The SeaPort Manatee Master Plan Update 2022 results in a development strategy that will double the operating throughput capacity of the port. The facility will be organized to reduce operating conflicts, optimize operations, and positioned to capture the addressable market opportunities that are available. At full buildout, SeaPort Manatee would see a 100% increase in annual throughput capacity, delivering between 18 and 20 million tons in maximum capacity.

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# **SECTION 1. INTRODUCTION**

SeaPort Manatee has seen significant growth in its business following completion of the 2016 Master Plan Update. The growth across its cargo business lines is revealing operational conflicts that were manageable over previous years. Today, SeaPort Manatee has the opportunity to organize the facility to optimize operations, provide the capacity necessary to meet growing market demands, and deliver a benchmark of stewardship for the industry.



SeaPort Manatee has observed significant growth in its business and demands for its services and facilities over recent years. At the close of fiscal year 2021, SeaPort Manatee handled 10.16 million tons of cargo, accommodated over 652 vessel calls, and generated over \$22.75 million in revenue. These volumes represent a 47.42% percent increase in business and trade since publication of SeaPort Manatee's most recent 2016 Master Plan Update.

The most recent master plan was completed in 2016 and considered areas of facility expansion that would position the port facilities for growth. This document provides an update to the 2016 Master Plan for SeaPort Manatee, considers the impact of recent cargo trends at the port, recognizes generational shifts in global supply chains, identifies the key strategies for continued growth, and further details the nature of specific projects necessary to realize the SeaPort's future Vision and Goals.

A strategic Master Plan provides a roadmap for setting policies and supporting investment decisions that align with the Vision and Goals identified by a port. It is strategic in nature, identifying commercial opportunities and aligning activities in an organized and flexible manner to best position the port for opportunity capture. At the same time, a Master Plan communicates the Port's intentions for the future with the State, local communities, and the mix of stakeholders and customers that utilize or otherwise rely on the port. The plan is a benchmark used to assess opportunities and ensure alignment with the strategic goals that have been established.

Within this Master Plan document, the key drivers for investment at SeaPort Manatee are identified, quantified, and described and then utilized to establish the strategic direction for SeaPort Manatee. The strategic direction encapsulates three pillars of success that were identified at the outset of this Master Plan Update:

- **Opportunity** SeaPort Manatee has the opportunity to solidify its role along Florida's Gulf Coast as an economic engine, job creator, and facilitator of international trade. With this Master Plan, SeaPort Manatee will establish an approach to deliver against the promise of its mission as a vital public asset for the community.
- Growth SeaPort Manatee is poised for growth in its business, its services offered, and its facilities. With this Master Plan, SeaPort Manatee will identify strategies to grow the port's value and contribution to Southwest Florida's economy.
- Stewardship SeaPort Manatee has a responsibility to regional communities, its stakeholders, its customers, and to the environment. With this Master Plan, SeaPort Manatee will embrace its responsibilities as the steward of this important public asset that is entrusted to Manatee County Port Authority.

SeaPort Manatee's approach to this Master Plan is market-driven, proposing policies and investments that are responsive to commercial market opportunities and demands. With this approach, the resultant master plan, and the investments associated with identified development projects, are aligned with the incremental facility needs of the markets served by SeaPort Manatee over time. To the extent possible, proposed investments are assessed in financial terms along with the capabilities and capacity improvements that are realized following implementation. This approach encapsulates the three pillars of **Opportunity | Growth | Stewardship** by measuring and right-sizing proposed improvements to meet customer needs in terms of level of service and capacity, enable implementation on a time scale that aligns with volume demands, and provide for flexible and responsible investment by the port and its public stakeholders.

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#### SeaPort Manatee Master Plan Update 2022

A successful master plan captures the input and feedback from a facility's actual users. SeaPort Manatee engaged with key stakeholders and facility users throughout the development of this Master Plan Update. The SeaPort Manatee Master Plan Update commenced in December 2021 with a stakeholder meeting and was followed with individual interviews conducted by the study team. Two additional stakeholder meetings were scheduled at strategic points in the Master Plan's evolution to gather comments and feedback. The overall result is a strategic Master Plan that captures the concerns, needs, and imaginations of SeaPort Manatee's community of stakeholders, and positions Manatee County Port Authority to initiate its growth strategies from a common point of departure and a footing of support.

In addition to focused stakeholder outreach, the draft Master Plan was also publicly presented to the Manatee County Port Authority Board on October 20, 2022. The draft Master Plan was published for public review and comment on the SeaPort's website from October 14, 2022 to December 6, 2022.

SeaPort Manatee has seen significant growth in cargo operations since completion of the 2016 Master Plan Update. Comparing aerial photographs from 2016 and 2022, the dramatic increase in cargo activities demonstrate that facilities are experiencing high demand and are approaching operating capacity limitations.

> Figure 1-1. Aerial Photo from 2016 Figure 1-2. Aerial Photo from 2022



# 1.1 Background

The 2016 Master Plan Update positioned SeaPort Manatee to prepare for growth in perishables, containerization of refrigerated cargos, growth in container traffic, and growth in the breakbulk business. The plan introduced SeaPort Manatee's role as Southwest Florida's Gateway and developed strategies for the port to facilitate growth of business within the Planned Development Encouragement Zone (PDEZ), which Manatee County created to facilitate preapproval of a variety of land uses for properties located in the zone. The 2022 plan builds on this theme by recognizing generational supply chain shifts, and SeaPort Manatee's role as Southwest Florida's seaport and supply chain gateway for the eastern seaboard of the United States.

The 2016 Master Plan Update focused on providing alternative development scenarios for land development opportunities to grow and diversify the port's business. The plan contemplated and explored options for expansion both to the north, and to the south, as well as potential expansion off port property for energy products.

The 2016 Master Plan Update set the stage for discussion on potential expansion areas and is used as a common point of departure for the development of this 2022 Master Plan Update. The 2016 Master Plan Update provides details on the Port's six key Goals and supporting objectives, all of which are still applicable to this 2022 Master Plan Update. The goals and objectives that continue to underly the basis of this 2022 Master Plan Update are shown in Table 1-1.

Because much of the history, guiding principles, data, and figures presented in the 2016 Master Plan are still relevant, rather than regurgitating information, readers should use the 2016 Master Plan as a foundational document and complementary resource.

#### Table 1-1. SeaPort Manatee Goals and Objectives

Goal	Objectives
Economic Development	<ul> <li>Infrastructure Development</li> <li>Cargo diversification and expansion</li> <li>Land development and expansion regulation</li> <li>Port and PDEZ synergies</li> </ul>
Transportation Efficien- cies	<ul><li>Deepwater access</li><li>On-port road and rail network</li><li>Off-port access and connectivity</li></ul>
Environmental Steward- ship and Sustainability	<ul> <li>Natural resource preservation and protection</li> <li>Estuarine quality</li> <li>Shoreline uses</li> <li>Coastal High Hazard Areas</li> <li>Plan execution</li> <li>Energy conservation</li> </ul>
Safety and Security	<ul> <li>Protection from natural hazards</li> <li>Hazardous materials</li> <li>Safe operating environment</li> <li>Port security</li> <li>Emergency Management</li> <li>Post-disaster redevelopment</li> </ul>
Intergovernmental Coordination	<ul><li>Coordination with Manatee County</li><li>Other agency and stakeholder coordination</li></ul>
Financial Stability	<ul><li>Budgetary process</li><li>Funding opportunities</li></ul>

With this 2022 Master Plan Update, SeaPort Manatee focuses on the growth opportunities that are addressable through actionable investment in capacity improvements and identifies the specific projects that are necessary to position the port as Southwest Florida's seaport and supply chain gateway for the eastern seaboard of the United States.

SeaPort Manatee further expands on its foundational goals and objectives with a 20-Year Vision for the Port, further detailing the Port's roadmap for investment, and establishing strategically focused goals for the near- and mid-term.

Significant detail on port facilities, transportation connectivity, history, state and local policies, and trade trends are presented within the 2016 Master Plan Update and will not be repeated within this Update. Rather, this document focuses on providing further detail on the key drivers, growth strategies, and the specific development plans to be implemented over the planning horizon.

# **1.3 Report Organization**

This document is prepared to succinctly highlight and describe the pathway forward in an impactful and digestible manner. This document augments the 2016 Master Plan Update by focusing discussion on the following key topics:

- Vision and Goals
- Planning Approach
- Stakeholder Engagement
- Market Assessment
- Facility Characteristics
- Opportunities and Constraints
- Facility Capacity Analysis
- Facility Needs
- Strategic Direction
- 20-Year Vision Plan
- Capital Projects
- Environmental Resources
- 5-Year and 10-Year Plans
- Financial Analyses
- Economic Impacts
- Conclusions

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# SECTION 2. VISION AND GOALS

SeaPort Manatee's role as Southwest Florida's Gateway, the economic engine and job creator for Southwest Florida, represent the core principles for the Master Plan's Vision. Key goals include optimizing facility operations, unlocking and expanding capacity, and enabling SeaPort Manatee customers to realize continued success.



SeaPort Manatee's slogan as the "Right Turn on Tampa Bay" not only represents its geographic location from the Sunshine Skyway Bridge and the Gulf of Mexico, but also the guiding principles of guality customer service and value. SeaPort Manatee's growth is a result of a focused business approach that offers customized services and facilities that meet the unique needs of its customers. This responsiveness to customer service remains at the core of SeaPort Manatee's Vision for the future.

Combined with the soaring growth in cargo volumes at SeaPort Manatee and the business growth prospects for the foreseeable future, the next stage of the port's development creates an opportunity to selectively unlock legacy constraints while building capacity that is responsive to market needs. With a clear Vision and a well-defined set of goals, a tactical development plan that responds to near-term needs and prepares for longer-term opportunities can be developed.

The Vision for the SeaPort Manatee Master Plan Update is to continue to position the port as the preferred gateway for its existing customers, enhance operational efficiency to better serve its customers, add new services and facilities to promote competitiveness, attract new cargos and customers, prepare for diversified opportunities, and develop the port in a manner that unlocks capacity, optimizes operations and delivers measurable value while minimizing the need for reinvestment in existing infrastructure and assets.

This Vision considers the port's existing assets and supporting infrastructure to be integral to the future. The Vision seeks to leverage and improve the utility and operational readiness of existing assets and then expand the port's stock of infrastructure to align with market demands. The Vision recognizes the intrinsic operational value of each asset and the critical role each component plays for its customers. As such, the Vision emphasizes optimizing the utility of existing assets, modernizing and modifying in lieu of total replacement, making use of underutilized areas within the existing footprint, and then expanding the port's footprint with new assets at strategic points in time.

In support of this Vision, several key goals for this Master Plan Update have been identified. SeaPort Manatee's Master Plan roadmap for the future includes strategies to achieve the following goals:

- Grow SeaPort Manatee's role as an economic engine and job creator for Southwest Florida and supply chain gateway for the eastern seaboard of the United States.
- Encourage complementary commercial investment opportunities in the surrounding areas of the port, maximizing regional job creation and public sector revenue opportunities.
- Strategically organize SeaPort Manatee to maximize cargo flow while minimizing bottlenecks and operational conflicts.
- Optimize on-port vehicular traffic volumes by prioritizing cargo storage locations and reducing unnecessary truck transactions at existing security gates.
- Unlock hidden capacity by modifying and modernizing selected existing assets to meet the needs of the future.
- Provide opportunity for investment in purpose-built facilities to meet the unique operational needs of discrete beneficial cargo owners who have made SeaPort Manatee their gateway port of choice.
- Enable capture of the future addressable market opportunities by investing in new infrastructure, providing capacity and operational efficiency for SeaPort Manatee's mix of customers.
- · Increase market reach by adding services and supporting infrastructure that extends SeaPort Manatee's penetration into the hinterlands.
- · Position SeaPort Manatee as an attractive cruise homeport alternative for the growing Caribbean and Gulf of Mexico cruise and leisure travel industry.
- Position SeaPort Manatee as the gateway of choice for potential trade and passenger ferry services with Cuba.

Opportunity Growth

To achieve these goals, this Master Plan Update identifies and defines a set of realistic capital improvement projects to be executed over time. The projects form the basis for a tactical and flexible capital plan, responding to market demand and incremental volume growth, aligning with strategic business objectives, potentially qualify for grant funding or investments through public-private-partnership, and be actionable and implementable. In short, this plan describes the investment roadmap for SeaPort Manatee.

> SeaPort Manatee generates more than \$5.1 billion dollars annually in positive economic impacts for Florida's economy. SeaPort Manatee is a public seaport that develops and maintains infrastructure. SeaPort Manatee generates revenues from the use of infrastructure. This Plan describes how SeaPort Manatee will reinvest revenues to build infrastructure and maximize multi-generational positive economic impacts for Florida.



SeaPort Manatee – Refrigerated Perishables

# SECTION 3. PLANNING APPROACH

The SeaPort Manatee Master Plan Update employed a five-step planning approach. This strategic market-driven approach aligns econometric cargo forecasts with operational capacity to determine future facility needs. The approach incorporates financial performance metrics to right-size investments over time, enabling phased development of the port.



The planning efforts for development of this Master Plan Update utilize a market-driven approach. A market-driven approach aligns econometric volume forecasts for the mix of cargos handled at the port with an assessment of available operational capacity to determine facility needs. With this approach, decisions on future facility investments are informed by the future demand potential identified through econometric forecasts. The future facility needs, expressed in terms of throughput capacity per year, are then translated into individual project options that deliver the requisite capacity and assessed for effectiveness, efficiency, and ability to be implemented.

The planning approach involved a five-step process, which is summarized in Figure 3-1. A brief description of each of the steps employed is presented in the ensuing paragraphs.

# 3.1 Step 1: Commercial Assessment

The commercial assessment phase focuses on developing addressable cargo volume forecasts for a twenty-year period. Each of the major cargo groups handled at the port were assessed independently and analyzed through four key subtasks:

- Assessment of historical and current markets served by the port
- Development of competitive logistics hinterland for the port
- Identification of potential new markets
- Development of cargo forecast projections and independent forecast curves



#### Figure 3-1. Five-Step Planning Approach

Section 3. Planning Approach

# 3.2 Step 2: Facility Assessment

The facility assessment provides a current baseline perspective on the state of readiness of the port's various facilities. The assessment provides an overview of the port's existing stock of infrastructure, deployed equipment, operational capacity, traffic patterns, available expansion areas and potential constraints. Historical cargo throughput and facility utilization data was analyzed to develop a current understanding of intensity of operations.

Key to the facility assessment is development of cargo throughput capacity models. The throughput capacity models utilize data from current operations, and measure the available capacity delivered at the port on an annual basis. The throughput capacity models utilized the theory of constraints methodology to segment cargo handling operations into up to six components, providing capacity estimates for each of the discrete operations conducted at the port:

- Vessel arrival and departure
- Ship to shore cargo transfer
- Apron to storage transfer
- Storage capacity
- Inland rail and intermodal
- Truck gate operations

With each discrete assessment of capacity by operational component, and by cargo type, the analysis assists in pinpointing the constraining components that would need to be addressed in order to add capacity over time.

## 3.2.1. Needs Assessment

By comparing the market forecast curves for each cargo type to the throughput capacity estimates, the capacity gaps and timing for capacity improvements were identified. The specific needs for capacity increases and associated infrastructure improvements, such as berths, warehouses, open storage, etc., were then identified and scaled to provide the overall picture of facility infrastructure to be addressed in the planning effort.

# 3.2.2. Strategic Direction

Utilizing the data from the Commercial Assessment, the Facility Assessment, and the Needs Assessment, the strategic direction for the port and focus areas of infrastructure improvements can be determined. Key to the strategic planning effort is identifying the priority goals to be accomplished over the planning horizon. For this effort, goals to accommodate existing customers while capturing the addressable volumes of new cargos were established.

Opportunity Growth Stewardship

# 3.3 Step 3: Infrastructure Planning

With the strategic direction established, and capacity requirements determined, the future infrastructure development plan was prepared. A 20-year time horizon was selected, and the requisite facilities and infrastructure improvements were incorporated into the port's footprint. Each of the requisite facilities were initially prepared as individual planning modules, drawn to scale, and arranged on a scale drawing of the port's footprint. By iteratively arranging the various modules on the port map, the preferred locations for each of the port's facilities were identified and captured at a high-level. This effort was conducted during a stakeholder meeting, which was designed to engage stakeholders in the planning exercise.

The various arrangements of planning modules were utilized to prepare sketches of future alternatives for SeaPort Manatee, and assessed for effectiveness, efficiency and ability to be implemented. Being an iterative process, the strengths and weaknesses of each alternative were assessed, and a resultant 20-year facility development plan was finalized.

The major improvements that are included in the 20-year capital plan were segmented and identified as individual capital projects. Each of the capital projects that make up the 20-year facility plan are characterized and described. Cost estimates for each of the proposed capital projects are also prepared.

The 20-year site utilization plan provides the longer-term direction for infrastructure development, identifying the scope, scale, and preferred locations for new facilities to be implemented over time. From this picture, a 5-year and 10-year site utilization plan is developed to depict the phased development strategy for implementation of the master plan.

The final step of the Infrastructure Planning component is preparation of a capital plan. The capital plan identifies the estimated cost and the preferred timing, based on volume triggers, for each of the capital projects considered in the final site utilization plan.

### 3.3.1. Pro Forma Planning Model

Integral to the planning effort was development of a pro forma planning model. The model is a comprehensive spreadsheet that incorporates the market forecast projections, the facility capacity assessment, each of the various capital projects and resultant capacity improvements, and resultant computations for future port financials; revenues, costs, net revenue, capital expenditures, and return on investment indices.

The pro forma planning model organizes the discrete capital improvements to be implemented over time, and computes the resultant capacity improvement, the resultant cargo volume that may be captured, and the resultant impacts on the port's annual financial condition. Significant impacts to the estimated port's annual financials because of a major investment are further analyzed to right-size and phase the capital projects over time to produce a more favorable result. The tool further identifies the potential financial benefits of alternative funding sources, such as grant applications and public private partnerships.

## 3.3.2. Economic Impact Assessment

The economic contribution of SeaPort Manatee's growth and implementation of its master plan is analyzed and summarized in an economic impact report. The economic impacts are measured in terms of direct, indirect, and induced impacts, and are summarized within the study.

# 3.4 Step 4: Compliance and Mitigation

While efforts are made to avoid environmental impacts, in any master planning effort, proposed capital projects may have environmental implications to be addressed. The 20-year plan is assessed to identify and quantify the potential for environmental impacts that may need to be mitigated over the plan's execution. The master plan includes a high-level assessment of potential environmental strategies and the steps to be taken over time.

# 3.5 Step 5: Finalize Plan

The final step of the master plan development is preparation of a master plan report. This document represents the presentation of the master planning effort, the key findings of the study, and the recommended path forward.



# Section 4. Stakeholder Engagement

Stakeholder engagement included structured group meetings, individual interviews, and an online survey. The process was designed to facilitate conversation, understand operational needs, obtain critical feedback, and build consensus.



The SeaPort Manatee Master Plan Update was developed with the cooperation of the port's stakeholder community. The process was designed to integrate stakeholder input throughout the plan's development. Four key strategies were utilized for stakeholder engagement:

- Appointment of a Master Plan Steering Committee
- Stakeholder engagement meetings
- Stakeholder surveys
- Customer Interviews

# 4.1 Master Plan Steering Committee

To facilitate discussion, information sharing, and decision-making, SeaPort Manatee appointed selected representatives from the Port Executive Team and Port Staff to a Master Plan Steering Committee. The steering committee met bi-weekly via video conference to drive the key elements of the master plan's development.

## **4.2 Stakeholder Engagement Meetings**

Members of SeaPort Manatee's user community were invited to participate in three structured stakeholder meetings. The meetings were designed to share information on the master plan that was developed to date, pose questions on operational preferences, and to solicit input and feedback on each element of the master plan, including: preliminary analyses, the results of the market and facility assessments, the strategic direction, the resultant 20-year facility utilization plan, and the capital projects identified to formulate the master plan. Each of the three meetings were structured to focus on specific elements.

### 4.2.1. First Stakeholder Meeting

The first stakeholder meeting was held on December 16, 2021 and focused on kicking off the master plan project. The meeting agenda included a presentation by the master plan team to share the purpose of the master plan, the approach that would be employed for the master plan's development, the timeline for the project, and how each stakeholder can and would be engaged.

# 4.2.2. Second Stakeholder Meeting

The second Stakeholder Meeting was held on April 6, 2022. At this stakeholder meeting, the master plan study team presented the findings of the commercial assessment, the facility assessment and capacity analysis, the preliminary strategic direction, and the resultant facility needs to meet future capacity requirements. The stakeholders were introduced to the planning module concept tool and were segmented into four groups. Each group was provided with a site map and the requisite number of scaled planning modules, color-coded to represent various terminals and facilities to be accommodated within the port's footprint. The stakeholder groups were asked to creatively think about how the facility should be laid out, given the constraint that all the modules were to be used and with the goals of optimizing operations and minimizing conflicts.

#### Figure 4-1. Group 1 Recommendations



Figure 4-3. Group 3 Recommendations



#### Figure 4-2. Group 2 Recommendations



Figure 4-4. Group 4 Recommendations



At the second stakeholder meeting, participants were given a set of terminal planning modules and asked to arrange the modules on a scaled map of the port. There were four groups, each producing their own recommendations (shown above) for a 20-year vision for SeaPort Manatee. The recommendations resulted in several common themes: separation of cargo types, relocation of dry bulk storage, expansion of multi-purpose operations to the north, breakbulk operations in the middle, and container operations to the south side.

Figure 4-5. Group Discussion Figure 4-6. Group Discussion





4-3

The four stakeholder groups were allowed 45 minutes to discuss options and organize the planning modules within a large-scale map of the port footprint. Following the planning activity, each group was asked to present their thoughts to the larger stakeholder group. Snapshots of the group layout plans are shown on the facing page. The key themes of the second stakeholder meeting planning exercise were assessed by the study team, and include:

- Grow the existing container business at its current location toward the south side of the port
- Move Dry Bulk Storage from its current locations remote if possible
- Multi-purpose berth expansions should be to the north
- Move liquid bulk berth operations toward the north if possible
- Breakbulk operations should be located in the middle
- Remote warehouse locations are acceptable
- Ideally, a dedicated cruise terminal location should be identified and placed away from cargo operations
- Yacht Maintenance, Repair and Overhaul (MRO) is not adaptable nor is good space available

To summarize, all four stakeholder groups identified that non-compatible uses need to be separated to maximize port operations and optimize traffic flow.

## 4.2.3. Third Stakeholder Meeting

The third stakeholder meeting was held on July 21, 2022, and focused on presenting the 20-year facility utilization plan and the key features and attributes inherent in the plan. The agenda included a presentation by the master plan study team and provided a brief recap from the second stakeholder meeting, the key themes that were captured from the planning exercise during the second stakeholder meeting, and presentation of the 20-year plan. The meeting agenda included time for comment and feedback from the stakeholder community on the plan.

Following the first stakeholder meeting, stakeholders were asked to respond to an anonymous online survey. Three key questions focused on SeaPort Manatee's current level of service, future facility needs, and future business growth opportunities. The results show strong needs for vessel berth space, storage space, roadway improvements, and interchange gate improvements. Respondents see strong growth opportunities in containerized cargo and breakbulk cargo, and moderate growth in dry bulk and liquid bulk cargo.

While the number of responses were modest, the data was generally confirmed through discussions during the interview process and at the following stakeholder meetings.

# Stakeholder Survey



#### Section 4. Stakeholder Engagement



#### Figure 4-7. Excerpts from SeaPort Manatee Master Plan Stakeholder Survey

(This page and on left)

Question 5: Which of the following statements best describes your experience with the SeaPort's services and facilities?

They are always available on demand and exceed my expectations. They are generally reliable with limited constraints.

- They meet my current needs; however, my business growth is limited without targeted improvements.
- There are predictable timeframes where services and facilities are constrained.
- Availability of services and facilites are adequate for my business but unpredictable or unreliable.
- Substantial improvements are required in services and facilities.

## Question 7: The SeaPort should focus on improving and/or expanding the following facilities:



# 4.3 Stakeholder Survey

An online survey form was published to solicit anonymous feedback from the SeaPort Manatee stakeholder community. The survey consisted of 10 questions designed to gather high-level information on the respondent's relationship with the port, the respondent's impressions and experience with the port's services and facilities, the respondent's thoughts on focus areas for improving and / or expanding port facilities, and the respondent's thoughts on business growth opportunities for SeaPort Manatee. The survey responses were modest, however the results of some of the key questions are presented in Figure 4-7.

# 4.4 Customer Interviews

The master plan study team conducted one-on-one interviews with SeaPort Manatee's primary cargo customers. The interviews were generally conducted via teleconference and focused on identifying factors driving cargo levels, competitive issues vis-à-vis regional ports; strengths and weaknesses of the port with respect to key commodities; the identification of previous tenants / carriers and understanding of why they are no longer with the port; future potential markets; and current capacity metrics.

A total of 12 interviews were conducted with SeaPort Manatee customers.



SeaPort Manatee – Breakbulk Lumber Discharge Operations
# SECTION 5. MARKET ASSESSMENT

SeaPort Manatee is forecasted to see growth across all its existing business lines. Over the next 20 years: Container volumes will triple; Citrus Juice cargo will increase at least 2.5 times; Breakbulk cargo will more than double; Dry Bulk cargo will increase by 50%; Liquid Bulk Petroleum will increase by 50%. SeaPort Manatee also has the opportunity to position itself in the cruise passenger and ferry markets.



A detailed waterborne cargo market assessment was performed to examine the historical and current market in which SeaPort Manatee competes, identify growth of these markets, identify potential new markets, quantify the near-term and long-term potential, and provide preliminary implications regarding near-term and long-term facilities needs. The results of the waterborne cargo market assessment are summarized below.

## **5.1 Overview of Waterborne Cargo Markets**

SeaPort Manatee's waterborne import and export business addresses a diverse cargo base, consisting of:

- Containerized cargo consisting of dry and refrigerated perishables, including ISO liquid bulk tanks and 53' containers
- Breakbulk / general cargo consisting of steel, aluminum, forest products (including lumber, plywood, and pulp), and super sacks (including fertilizer products, white cement, and salt)
- Liquid bulk petroleum products
- Citrus juice products in liquid bulk form
- Dry bulk including aggregates, stone, phosphate rock, salt, magnetite, fly ash, fertilizer, etc.

Due to the nature of large shipments that take advantage of economies of scale, dry and liquid bulk cargos have historically accounted for much of SeaPort Manatee's tonnage. For example, in 2021 dry and liquid bulk cargos accounted for 43% and 32% of total waterborne cargo tonnage, respectively.

Since 2017, inbound and outbound waterborne tonnage moved via SeaPort Manatee has displayed significant growth. Despite downside effects of global pandemic on demand, starting in 2020, and further exacerbated supply chain issues in 2020 and 2021, total waterborne tonnage increased by an average of 12.8% annually over the five-year period, growing from 3.6 million tons to 5.9 million tons in 2021. This growth represents a 61.8% increase for waterborne tonnage.

Key observations of the historical cargo trends over the period 2017 through 2021 include:

- Dry bulk tonnage, driven by granite, limestone and phosphate rock reached 2.7 million tons, representing an 11.9% annual growth over the period.
- Liquid bulks primarily petroleum products and bulk citrus juice grew by an average of 11.2% per annum and rebounded to 1.6 million tons in 2021.
- Containerized cargo demonstrated the most dramatic growth, reaching 1.1 million tons (31.8% annual growth), reflecting both the shift and growth in Del Monte's refrigerated containers and the continued development of World Direct Shipping's Mexican service.
- Despite the containerization of breakbulk perishables, the general cargo market was offset and buoyed by dramatic increases in lumber and wood pulp tonnage over 2020 and 2021, resulting in slight growth over the period.

Opportunity Growth Stewardship

Stewardship



Figure 5-1. Historical Waterborne Cargo Handled at SeaPort Manatee (Tonnage)

#### Table 5-1. Historical Waterborne Cargo Handled at SeaPort Manatee (Tonnage)

Opportunity

Cargo Type	2017	2018	2019	2020	2021	2017-2021 CAGR
Dry Bulk	1,699,681	1,863,050	2,250,475	1,758,216	2,668,432	11.9%
Liquid Bulk	1,028,104	1,946,906	1,795,299	1,371,427	1,570,325	11.2%
Container	372,981	392,657	571,052	723,629	1,124,641	31.8%
General Cargo	574,359	559,752	476,811	527,244	582,555	0.4%
Grand Total	3,675,126	4,762,364	5,093,636	4,380,516	5,945,952	12.8%

Growth

Source: SeaPort Manatee

#### SeaPort Manatee Master Plan Update 2022

5-3

## 5.2 Future Waterborne Cargo Growth Projections

Based on commodity-specific market analyses, which includes review of historical data, current market trends, and confidential information gathered through interviews with SeaPort Manatee tenants and marine cargo stakeholders, SeaPort Manatee's waterborne cargo volume is projected to reach nearly 11 million tons over the 20-year planning horizon, by the year 2041. This represents almost double the volume handled by SeaPort Manatee in 2021 and is driven by growth to varying degrees across all cargos handled at SeaPort Manatee.

Key observations of the market forecast projections include:

- Container business will grow up to three times current volumes, approaching 375K 400K TEUs, annually by the year 2041
- Breakbulk / general cargo business will grow more than two times current volumes, approaching 1.2 million tons, annually by the year 2041
- Citrus juice volumes will grow at least 2.5 times current volumes, approaching 630K tons, annually by the year 2041
- Dry bulk materials will see at least a 50% increase in annual volumes, approaching 4 million tons, annually by the year 2041
- Liquid bulk petroleum will also see a 50% increase in annual volumes, approaching 2 million tons, annually by the year 2041

The forecast projections for each cargo type are shown in Table 5-2 and represent an optimistic econometric perspective that is unconstrained by infrastructure capacity limitations. With this perspective, the set of addressable target cargo volumes form the basis for infrastructure planning and investment.

The growth trajectory for each cargo is unique to the underlying market drivers and SeaPort Manatee's competitive position. This is particularly true for the container, breakbulk and citrus juice cargos, which are each forecast to see significant growth in the near-term (over the next five years), and then stabilize at growth rates commensurate with future drivers. The unique characteristics of each of the cargo types are discussed in the following sections.

Opportunity | Growth | Stewardship

Category	2021	2022	2023	2024	2025	2026	2031	2041
Containers								
TEUs	135,660	165,678	198,057	242,263	296,985	293,527	324,735	377,025
Tons	1,125,108	1,242,584	1,485,431	1,816,971	2,024,885	2,201,450	2,435,511	2,827,688
Breakbulk								
Lumber / Plywood	208,513	210,598	297,704	385,681	389,538	393,433	413,502	453,763
Aluminum	70,431	87,917	89,675	91,469	93,298	95,164	104,039	114,924
Steel Products	11,714	11,948	43,086	43,948	44,607	45,276	48,535	53,613
Salt	105,570	107,681	164,634	207,927	210,006	212,106	222,926	246,249
Pulp	159,950	164,748	209,691	255,981	258,541	261,126	274,447	303,160
Tons	556,177	582,892	804,790	985,005	995,990	1,007,106	1,063,448	1,174,708
Liquid Bulk Juice								
Tons	250,468	500,000	507,500	515,113	522,839	530,682	568,879	628,396
Dry Bulk								
Construction Bulk	1,298,092	1,427,902	1,670,692	1,837,761	1,983,705	2,033,298	2,271,313	2,559,069
Fertilizer Products	1,183,349	1,195,182	1,207,134	1,219,205	1,231,398	1,243,712	1,294,211	1,294,211
Tons	2,481,441	2,623,084	2,877,826	3,056,967	3,215,103	3,277,009	3,565,524	3,853,281
Petroleum Products								
Tons	1,300,119	1,326,121	1,352,644	1,379,696	1,554,531	1,582,513	1,723,361	1,980,413
TOTAL TONNAGE	5,713,313	6,274,681	7,028,190	7,753,752	8,313,347	8,598,759	9,356,722	10,464,486

#### Table 5-2. Projected Total Tonnage by Product Type

Opportunity | Growth | Stewardship

The key drivers associated with the growth projections are summarized in the following table.

Cargo	Drivers	Conclusions
Containers	<ul> <li>Consumer Goods</li> <li>Mexico Trade</li> <li>Proximity to distribution and fulfillment centers</li> <li>Perishables</li> </ul>	Strong growth opportunity in consumer goods imports, driving container traffic growth Steady organic growth in perishables market, aligning with population consump- tion
General Cargo	<ul> <li>Pulp</li> <li>Lumber / Plywood</li> <li>Aluminum</li> <li>Steel Products</li> <li>Salt</li> </ul>	Strong sustained growth in forest products, more than doubling current volumes Strong growth in the near-term for metals, and bagged salt, with steady organic growth over the longer-term
Petroleum Products	Population	Steady organic growth over the planning horizon, with potential for alternative energy initiatives to impose downward pressure
Liquid Bulk Juice	<ul> <li>Declining State production</li> <li>South American Imports</li> </ul>	Strong growth over the near- to mid-term, with steady organic growth in the longer- term Potential to increase opportunity with dedicated on-port storage and processing facility
Dry Bulk	<ul><li>Construction</li><li>Fertilizers</li></ul>	Steady organic growth over the planning horizon
Cruise / Ferry	<ul><li>Niche offerings</li><li>Cuba</li></ul>	Potential for cruise passenger and ferry services exists – to be further explored

 Table 5-3.
 Key Drivers Associated with Growth Projections

#### Figure 5-2. Market Forecast for Containers



## **CONTAINER GROWTH**

With accelerated growth over the near-term, SeaPort Manatee's container business will double in the next five years and then stretch to near 400,000 TEUs over the course of the planning horizon.

Opportunity

Growth

Stewardship

Section 5. Market Assessment

#### Figure 5-3. Market Forecast for Breakbulk / General Cargo

Figure 5-4. Market Forecast for Liquid Bulk Petroleum Products





## **BREAKBULK / GENERAL CARGO GROWTH**

Breakbulk MTon

SeaPort Manatee's breakbulk / general cargo business will exceed 1 million tons in the near-term and will more than double over the course of the planning horizon.

LIQUID BULK PETROLEUM GROWTH

SeaPort Manatee's liquid bulk petroleum products business will see steady growth, increasing by 50% of current volumes over the course of the planning horizon.

Opportunity Growth

Stewardship



Figure 5-6. Market Forecast for Dry Bulk





## **BULK CITRUS JUICE GROWTH**

Juice Bulk MTon

SeaPort Manatee's bulk citrus juice business is experiencing accelerated growth and will increase by more than 2.5 times over the planning horizon.

## **DRY BULK GROWTH**

SeaPort Manatee's dry bulk business will see steady growth, increasing by 50% of current volumes over the course of the planning horizon.

Growth

Stewardship

#### Section 5. Market Assessment

- Dry Bulk MTon

## **5.3 Container Market**

In 2021, SeaPort Manatee handled a record 1.1 million tons of containerized cargo, steadily growing three-fold since 2017, representing a 31.8% annual growth as shown in Table 5-4.

SeaPort Manatee's import container business is driven by import perishables, finished goods, tiles, appliances, and consumer goods. SeaPort Manatee's export container business is driven by backhauls of containerized pulp exports. SeaPort Manatee's primary container customers are World Direct Shipping (WDS) and Del Monte.

SeaPort Manatee has carved out a distinct niche market serving Mexican imports and perishables from Central America. As more production facilities root in Mexico, the existing SeaPort Manatee linkage and existing relationships will foster the potential to maintain organic growth in existing markets as well as capture new opportunities and market share. Furthermore, the relationship with Del Monte may bring the opportunity to handle additional third-party cargo on Del Monte vessels as the Central American market in Honduras and, Guatemala continues to grow.

The container forecasts include the near-term growth expectations of the current operators, WDS and Del Monte, historical growth patterns, and projected growth rates of key trading partners of current markets. In addition, the container forecast assumes the introduction of an additional service of 350,000 tons within three years, reflecting continuance of the recent significant growth trend at SeaPort Manatee for containerized cargo. Ultimately, over the twenty-year planning horizon, the high forecast grows from 1.1 million tons (135,600 TEUs) in 2021 to 2.8 million tons in 2041 (377,025 TEUs). Beyond the 20-year planning horizon, containerized cargo is projected to continue its trendline, surpassing 400,000 TEUs.

#### Table 5-4. SeaPort Manatee Container Tonnage

Cargo Type / Direction	2017	2018	2019	2020	2021	2017-2021 CAGR
Container	372,981	392,657	571,052	723,629	1,124,641	31.8%
Import	299,315	308,827	476,043	563,560	773,014	26.8%
Export	73,667	83,830	95,009	160,069	351,627	47.8%
Source: SeaPort Manatee						
	Opportur	nity	Growth	Stewa	rdship	



## 5.3.1. Consumer Goods

A key driver of recent container growth, World Direct Shipping (WDS) operations at SeaPort Manatee have grown from 165,000 tons to 720,000 tons in the last five years, boasting a 44.5% annual growth rate. In addition to import activity, WDS backhauls containerized pulp exports which are initially imported on breakbulk G2 Ocean vessels into SeaPort Manatee. The pulp is used in packaging manufacturing in Mexico. As more manufacturing occurs in Mexico, this market is anticipated to remain robust in the near-term.

WDS calls SeaPort Manatee three times weekly with the following services to / from Mexico:

- Tampico, Mexico with a 700 TEU vessel moving finished goods, tiles, appliances
- Coatzacoalcos, Mexico with a 700 TEU vessel, carrying mostly produce
- Tuxpan, Mexico with an 1,800 TEU vessel moving appliances, finished goods, and consumer goods

The Mexican market represents strong growth potential for SeaPort Manatee, based on data published by the U.S. Department of Transportation, Bureau of Transportation Statistics. The data indicates that currently, about 1 million tons of cargo are trucked into Florida from Mexico, representing about 185,000 loaded and empty TEUs, and a robust opportunity for potential shifts to waterborne traffic.

SeaPort Manatee has the potential to reach distribution centers (DCs) and fulfillment centers (FCs) in Florida and the Southeast, as shown in Figure 5-7, which presents the current locations of DC / FC operations in the Southeast. The presence of DC / FC operations is notable in high population / consumption regions, with a heavy DC presence along the Interstate 4 (I-4) Corridor and the East Coast of Florida. Orlando, South Florida, Atlanta, and Charlotte clusters are prominent areas for southeast regional Best Buy, Costco, Sam's Club and WalMart DCs. These are key areas in the hinterland where SeaPort Manatee needs to compete for future growth in the appliance and consumer electronics market. SeaPort Manatee is competitive in reaching the I-4 hinterland by truck and, with rail connection through CSX, can reach further to the north, specifically key markets in Georgia and along the eastern seaboard of the United States.

#### Figure 5-7. Location of Distribution Centers in Florida and Southeast U.S.



Source: Chain Store Guide. Martin Associate's in-house data base

Opportunity Growth Stewardship

## 5.3.2. Perishables

Historically, Del Monte used both container and non-container vessels to import perishables from Central America into SeaPort Manatee for local and regional distribution. In 2021, Del Monte completed its transition to operate a fully cellular vessel fleet. Despite the growth in container tons, the total perishable imports into SeaPort Manatee container and breakbulk, has been flat.

The reason for this stagnant performance is the fact that the import perishables market – primarily bananas, pineapples, and melons, is driven by population growth of the hinterland and per capita perishables consumption. According to the USDA, the historical long-term trend of per capita consumption of bananas, which comprises the majority of the SeaPort Manatee import perishable commodities, has varied little. In fact, pounds per capita consumed in 2000 was 28.45 compared to 27.22 in 2020. It is anticipated that this trend will continue, therefore forecasting that the perishable market in SeaPort Manatee remain stable for the long-term, with trade growth limited by population growth.





Source: USA Trade Online

## **5.4 Breakbulk / General Cargo Market**

SeaPort Manatee's breakbulk / general cargo business is projected to grow by more than 100% over the next 20-years, more than doubling current volumes. Breakbulk / general cargo includes:

- Forest products pulp, lumber & plywood
- Metals aluminum, steel / rebar, scrap
- Salt import bagged super sacks

In terms of tonnage, the breakbulk / general cargo market maintains the smallest share of the total cargo tonnage handled at SeaPort Manatee. However, it is currently an extremely dynamic market, specifically with respect to forest products, not only at SeaPort Manatee but at most ports along the Gulf of Mexico and Southeastern United States. This is evidenced by the dramatic increases over the past five years in wood pulp (28.2%) and lumber / plywood (30.5%) as shown in Table 5-5.

## 5.4.1. Forest Products

Forest products, including pulp, lumber & plywood has been the fastest growing cargo segment for SeaPort Manatee's breakbulk / general cargo business.

#### <u>Pulp</u>

Pulp tonnage handled in 2021 reached nearly 160,000 tons, growing four-fold from 2020. SeaPort Manatee's breakbulk pulp imports serve two distinct markets. Most of the pulp is discharged at the port, stuffed into containers, and transshipped on WDS service as backhaul cargo to Mexico to be used in packaging operations. The balance of the breakbulk pulp import tonnage is discharged and shipped to regional domestic end users.

Stewardship

Commodity	2017	2018	2019	2020	2021	2017-2021 CAGR
Pulp	59,160	87,418	46,105	39,270	159,950	28.2%
Lumber / Plywood	71,848	94,144	82,067	142,916	208,513	30.5%
Aluminum	113,073	87,039	83,620	85,422	70,431	-11.2%
Steel / Rebar	10,284	23,086	3,201	9,541	11,714	3.3%
Scrap	56,574	35,963	28,253	67,901	97,998	14.7%
Salt	83,983	91,461	95,284	164,634	105,570	5.9%

#### Table 5-5. SeaPort Manatee Breakbulk Tonnage by Key Commodity Group

Source: SeaPort Manatee, Refrigerated perishable tonnage through 2020 not shown.

#### Section 5. Market Assessment

Figure 5-9 shows that the North Atlantic Port Range leads in terms of pulp imports follow by the South Atlantic and Gulf Coast port ranges. Philadelphia and Baltimore handle the majority of the pulp imports on the North Atlantic, while Jacksonville and Savannah are the key pulp import ports in the South Atlantic. Mobile, Beaumont and Port Arthur are the key pulp import ports on the Gulf Coast. Overall, pulp imports have shown an increasing trend, driven primarily by population growth, as the imports are used in paper products and sanitary products, which are typically recession-proof consumer goods. The rapid growth in pulp imports at SeaPort Manatee reflects the overall growth of pulp imports nationwide as well as via the Gulf Coast and South Atlantic ports.

## Lumber and Plywood

In 2021, SeaPort Manatee handled over 200,000 tons of lumber and plywood imports – this represents a 30.5% annual growth over the past five years. Similarly, the U.S. Gulf and South Atlantic ports have been experiencing a surge in lumber and plywood imports due to post-pandemic (COVID-19) supply chain disruptions as well as increased housing and construction activity, as shown in Figure 5-10.

Lumber and plywood markets are driven by regional construction activity and regional wholesale / retail distribution locations. The Florida market is anticipated to continue to grow over the near-term, however being tempered with potential economic conditions related to housing market cooling. The potential to use SeaPort Manatee will depend on availability of warehouse / covered storage, efficient on-dock labor and efficient truck operations on terminal and access to end user locations - as inland transportation has become paramount in serving regional hinterlands.



Source: U.S. Census Bureau, USA Trade Online





#### Figure 5-9. Pulp Imports by US Port Range

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The lumber / plywood market also presents a continued strong opportunity for SeaPort Manatee as demonstrated by its current success in growing lumber / plywood business. With the lumber / plywood business nearly tripling over the past 5 years, and accelerating since 2020, warehouse capacity at current ports handling the lumber and plywood is very constrained. Key destinations for this lumber / plywood are the large home improvement distribution centers located in Tampa, FL and Locust Grove, GA for Home Depot and Kissimmee, FL and Valdosta, GA for Lowes.

The pulp and plywood imports require covered storage, and warehouse space is at a premium at literally all ports in the United States, especially along the Gulf Coast. Interviews and data analysis suggest that pulp and lumber / plywood demand will remain strong through the near-term and see potential increase of 200,000 tons. It is estimated this volume increase will require about 200,000-300,000 square feet of additional on-dock warehouse capacity.

## Aluminum, Steel / Rebar, and Scrap

Aluminum, steel, and scrap cargoes accounted for approximately 180,000 tons in 2021. Inbound aluminum is discharged and shipped to specific user in Florida, while the steel is used in construction and manufacturing industries. Historically, the aluminum market has demonstrated some stability, however, the throughput has been stagnant, partially due to pandemic (COVID-19) related supply chain issues but has not surpassed its 5-year high of 113,000 tons achieved in 2017. Given the existing relationship with the end user, it is likely that SeaPort Manatee will remain the port of choice for imports and throughput will fluctuate as market demands dictate.

The steel import market in Florida has not been a historically strong performer compared to other Gulf ports such as Mobile and New Orleans. In 2021, USA Trade Online indicates that Florida regional ports of SeaPort Manatee, Tampa, Jacksonville, Canaveral, Panama City and Pensacola handled 313,000 metric tons of imported iron and steel products, of which nearly 90% was handled in Tampa, FL. The lack of manufacturing in Florida has been a key issue in using Florida ports for this cargo. The Gulf coast port connections to dual Class I rail, the availability of midstreaming operations on the Mississippi River, and access to key production markets in the Southeast and Midwest are generally served more efficiently from the Gulf coast ports.

The outlook for SeaPort Manatee is to maintain its current base and under an optimistic scenario attract new customers resulting in a modest 20,000-ton increase to current market volumes.

### Scrap

Scrap tonnage exported via SeaPort Manatee has been increasing since 2017 reaching nearly 100,000 tons in 2021, accounting for nearly 15% per annum growth over the period. Exports are tied directly to a shredding facility outside port property. Steel is sourced from the region and transported by truck from locations within approximately 50 miles of SeaPort Manatee. The export market is driven by steel pricing, and according to stakeholder interviews, the market is currently anticipated to grow in the near-term, with 30%-50% year-over-year growth anticipated for 2022 and 2023. Longer-term growth would stem from the ability to draw heavier material – structural pieces, etc., by rail. The facility does have rail access and rail cars, although some repair and refurbishment are necessary. Under an optimistic forecast scenario, access to rail markets could double volume exported via SeaPort Manatee.

## **Bagged Salt**

Inbound bagged salt product tonnage through SeaPort Manatee has been stable since 2017 hovering around 90,000-105,000 tons aside from a spike in 2020 of 165,000 tons. Product is discharged and stored in on-dock warehouses. Primarily the salt is used in animal feeds in the southeast, as well as other domestic uses. Warehouse space is critical for future growth. According to interviews with key stakeholders, with adequate space available, the operator indicates that additional product can be imported in the near-term. The optimistic high forecast scenario assumes a 40,000-ton increase in the near-term.

# 5.5 Liquid Bulk Market

Liquid bulk operations at SeaPort Manatee consist of refined petroleum products including gasoline, diesel, and bunker 6 oil as well as bulk orange juice used in regional processing plants. Table 5-6 demonstrates most liquid bulk operations are attributed to petroleum products. In 2021, SeaPort Manatee handled over 1.5 million tons of liquid bulk accounting for 27% of the total tonnage.

#### Table 5-6. SeaPort Manatee Liquid Bulk Tons

Commodity Group	2017	2018	2019	2020	2021	2017-2021 CAGR
Petroleum Products	860,336	1,616,678	1,527,362	1,236,118	1,300,119	10.9%
Liquid Bulk Juice	171,918	338,196	294,855	133,806	250,468	9.9%
Source: SeaPort Manatee		tu situ I	<u>Orowth</u>			
	Opport	tunity	Growth	Stewa	irdship	

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## 5.5.1. Petroleum

SeaPort Manatee's inbound petroleum cargo consists primarily of domestic refined gasoline for consumption in local markets as well as a small percentage of bunker C / 6 oil used in the refueling of vessels. After peaking in 2018 (1.6 million tons), tonnage declined in 2019 and remained suppressed in 2020 and 2021 due to pandemic (COVID-19) related impacts on travel, tourism, and overall demand for gasoline.

Growth over the past decade has occurred with increased demand and acquiring new retail accounts. SeaPort Manatee's customers serve the market by truck – which encompasses Southwest Florida south to Naples, east to Lake Okeechobee / Arcadia / I-27 (essentially overlapping a majority of FDOT District 1). Competitive hinterland is bound by competition and sister facilities at other ports in Florida.

Future growth will be driven by population, tourism, and gasoline consumption. Although in its infancy, electronic vehicle (EV) technology may curb demand in the long-term, most likely past the planning horizon. Ultimately the growth for SeaPort Manatee's refined product cargo segment is the ability to serve the Southwest Florida market. From 2021 through 2040, FDOT District 1 County Population is estimated to have a mid-growth scenario of 1.2% per year (or 2.1% high scenario).

The high forecast scenario for this Master Plan assumes organic growth of current business as well as an additional 300,000 tons of product resulting in 1.98 million tons by 2041.

## 5.5.2. Bulk Juice

SeaPort Manatee's bulk juice throughput has fluctuated in recent years, however in 2021 the port handled 250,000 tons. The inbound bulk juice (with some volume handled with tank containers from Mexico) product is destined for processing and packaging in Central Florida. Growth has occurred in the not-from concentrate (NFC) juice products.

Growth in imports is supplementing Florida's declining citrus production, which is the result of bacterial threats and other diseases that have been impacting the State's orange groves since the 1998-1999 growing season. In the 2018 to 2019 season, orange production grew from 44.95 million to 71.75 million, but again declined by the end of the next season in 2020. The production decreases continued each year, up to and including the current decline forecasted for the 2021 to 2022 season by the USDA.

Brazilian producers have increased capacity to keep up with demand, especially for NFC product. Louis Dreyfus Company (LDC) is currently investing in new infrastructure in Matão, Brazil, to expand orange juice production. LDC is constructing new tanks in Matão, located in Brazil's largest citrus producing region, in the state of São Paulo, aiming to increase the company's production and storage capacity for NFC orange juice. This project is the second phase in LDC's plans to expand commercialization of NFC in Europe, North America, and Asia.

Proximity to processing and packaging is a key advantage for SeaPort Manatee, and therefore long-term market share will remain with and continue to grow at SeaPort Manatee. Given the market conditions, the high forecast incorporates a near-term increase of an additional 250,000 tons and organic growth of existing throughput resulting in 628,000 tons. In the longer-term, if on-terminal pipe / storage / distribution facility were to be constructed, more efficient discharge and distribution could further increase capacity and throughput.

## 5.6 Dry Bulk Market

Historically, dry bulks comprise the largest commodity group of SeaPort Manatee's tonnage. In 2021 dry bulk tonnage reached 2.7 million tons, accounting for 46% of the port's total. Key commodities include aggregates, stone, cement, fly ash used in construction materials and phosrock, sulphur and fertilizer products related to raw material inputs and finished product of the regional phosphatic fertilizer production industry.

Since 2017, dry bulk cargos have demonstrated 11.2% annual growth, driven by construction materials (granite and limestone) and fertilizer products, as shown in Table 5-7.

## 5.6.1. Construction Materials

Construction materials are comprised of aggregates, limestone, granite, cement, and fly ash used in commercial construction projects. SeaPort Manatee's market has been increasing despite market contraction due to a global pandemic (COVID-19). Looking forward, the return of construction and infrastructure projects will bolster tonnage throughput in the near-term. The federal position on addressing infrastructure needs will benefit the import market as well. SeaPort Manatee maintains a competitive advantage to serve FDOT District 1 transportation infrastructure projects, however, competition from sister facilities and regional ports may limit hinterland reach. This is especially the case for markets to the north where Tampa offers better truck rates and access rather than SeaPort Manatee.

Future throughput will be a function of maintaining competitive hinterland reach as well as the potential to handle new product lines and specialty products. Furthermore, the Lake Belt Mine region, located along the western border of Miami-Dade County, which has historically supplied much of the limestone for the state also impacts available market supply, and SeaPort Manatee import levels.

The high forecast scenario incorporates a return to pre-pandemic (COVID-19) volumes and growth with population. Additionally, 200,000 tons of new product lines are assumed in the near-term. The high forecast scenario estimates that construction materials at SeaPort Manatee will reach 2.6 million tons per year in 2041.

#### Table 5-7. SeaPort Manatee Dry Bulk Tons

Commodity Group	2017	2018	2019	2020	2021	2017-2021 CAGR
Bulk Construction Materials	765,045	639,258	968,767	928,056	1,298,092	14.1%
Fertilizer Products	852,496	1,076,143	905,787	722,179	1,183,349	8.5%
Source: SeaPort Manatee						
	Opport	unity	Growth	Stewa	ırdship	

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## 5.6.2. Fertilizer Products

Central Florida's Bone Valley has been the source for fertilizer production for decades and has used the facilities at SeaPort Manatee and Port Tampa Bay for inbound receipt of raw materials and outbound shipment of finished product. Recent fertilizer products throughput at SeaPort Manatee have fluctuated between 725,000 and 1,200,000 tons. Throughput at the port is directly tied to the production and demand for phosrock. Demand can fluctuate based on several factors including overseas market conditions, global pricing, weather-related issues, competition from imports serving the U.S. market.

Fertilizer imports have exhibited strong growth at U.S. ports since 2009, as well as at Gulf Coast ports, with a drop in tonnage in 2020. Africa is the emerging source of fertilizer imports and has shown strong growth particularly in mineral and organic chemical fertilizer since 2015, and nearly all African fertilizer is imported via Gulf Coast ports.

Given these market fluctuations, the high scenario forecast incorporates the most recent 5-year high volume and modest organic growth over the near-term and remaining flat over the longer-term to result in 1.29 million tons in 2041.

## 5.7 Cruise Market

As part of the master plan update, SeaPort Manatee commissioned a separate market study to explore cruise and ferry passenger opportunities. The study was performed independent of the master plan by Bermello Ajamil & Partners. The relevant findings of the study as they relate to SeaPort Manatee are presented in the following sections.

## 5.7.1. Cruise SWOT Assessment

Based on an analysis of the global cruise industry, the Caribbean region, and SeaPort Manatee's key competitive ports presented, Table 5-8 provides a SWOT analysis for SeaPort Manatee regarding the future of cruise tourism opportunities. Strengths and weaknesses are internal to SeaPort Manatee, while opportunities and threats are external. Not all the issues identified are of equal importance; thus, critical items have been weighed and prioritized accordingly.

From a logistics point of view, the East Coast of Florida has cruise ports in Cape Canaveral, Fort Lauderdale, Jacksonville, Miami, and Palm Beach. The West Coast of Florida has Tampa. This is an opportunity for SeaPort Manatee to become a West Coast homeport, with a closer proximity to certain Western Caribbean destinations. However, competition then arises from other Gulf homeports such as Galveston, Mobile and New Orleans.

#### Table 5-8. SeaPort Manatee Cruise SWOT Analysis

Weaknesses
<ul> <li>Existing cruise terminal infrastructure</li> <li>Channel / navigation issues (i.e., fog)</li> <li>Sunshine Skyway Bridge height limitation</li> <li>Lack of existing cruise traffic</li> <li>Marketing efforts required for startup</li> </ul>
Constraints
<ul> <li>COVID-19 recovery length / issues</li> <li>Regional cruise Port Tampa Bay competition</li> </ul>

SeaPort Manatee would also have to consider the Sunshine Skyway Bridge height limitations (180 ft / 55 m) and channel issues that Tampa encounters today. However, the port is closer to the bay entry and could provide relief for vessels not wanting to use the ship channel for a long, and sometimes one-way transit to Port Tampa Bay which could save overall time and money on fuel and potential delays due to fog. Thus, besides the Sunshine Skyway Bridge air draft limitation two of the major channel issues facing Tampa Bay are that the main channel is too narrow for safe two-way cruise traffic and there is a 965-foot limitation on cruise vessel length due to the Sparkman channel and turning basin. There are also other related issues in channels closer to the Tampa downtown core.

Relocating a cruise channel / berth(s) to SeaPort Manatee may allow the Tampa Bay region to accommodate larger vessels. This would provide for transportation cost savings for cruise vessels (eliminating most of the channel for them to transit reducing overall fuel costs). The delays in the channel may be from 1 to 12 hours on occasion. SeaPort Manatee, being closer to the open ocean, allows a cruise vessel more itinerary options.

SeaPort Manatee likely has opportunities to develop a small niche / transitory large vessel cruise business capturing ships that may not have facilities in Port Tampa Bay and those choosing to distance themselves from the contemporary brands already present, either due to lack of berths, brand imaging or desire to be closer to international waters.

Opportunity Growth Stewardship

## 5.7.2. Ro / Pax Ferry and Cruise Operations to Yucatan and Cuba

North American cruise operators have had success in understanding how to market and develop cruise products that appeal to the tastes of many diverse consumer groups. These operators suggest there are still opportunities within the Caribbean region for additional cruise patterns to be offered that include services from key Florida ports to Cuba. Ro / Pax and Pax ferry operators have had less success over the past 20 years in providing services to the Yucatan, Mexico and setting up operations for potential moves to Cuba. Ro / Pax ferry services to the Yucatan Peninsula have been previously offered from Port Tampa Bay via the Yucatan Express, but it was limited in success and has not operated in some time (since early 2000s). However, there is some market precedence for this service option into the future if there is the cargo movement to off-set passenger fares / volumes and the overall logistics of the service makes sense. Today, there is a direct car ferry service for new automobiles to Tampa from Mexico allowing for more direct routings via sea over rail to the US consumer market. While this is an opportunity for SeaPort Manatee, there must be the right mix of partnership, market, vessel, and possibly incentives to make this happen and ensure success.

On the cruise side, several brands sailed to Cuba from 2016 – June 2019. The so called "Cuba travel bubble" was short-lived, but the cruise lines' bet paid off: The four companies (Carnival Cruise Line, NCL, RCI and MSC) made at least \$1.1 billion in revenue from these cruises. The cruise business benefited the Cuban government with ~ \$138 million in revenues.

It is anticipated that there would be an opportunity in the short-term, when the Cuba opens for ferry Ro / Pax services and Ro / Ro services to move people, vehicles and supplies to the island. This window would be on a limited basis as foreign cargo operations would provide the bulk of traffic for island supplies as they already have on-going operations in Cuba.

For SeaPort Manatee to provide a Ro / Pax ferry service to the Yucatan or Cuba, the port will need to have the infrastructure in place (prepare for a 6 to 12-month build out) for a ferry facility capable of handling a vessel alongside and providing for vehicular and passenger traffic along with full U.S. Customs & Border Protection requirements. Additionally, a ferry operator and target market must be identified and become a key partner of the port through a possible public / private partnership (PPP) venture into the above facilities; or be a part of some type of incentive program to provide for the development of the necessary facilities as well as future revenues for the port. This is an opportunity, albeit currently there is limited information to provide for long-term projections.

Opportunity | Growth | Stewardship

## 5.7.3. SeaPort Manatee Cruise Projections

Cruise passenger and vessel call projections were estimated utilizing two scenarios:

- Percentage of Capture scenario based upon the Caribbean region growth over the planning horizon
- Cruise Brand Growth scenario based on SeaPort Manatee's ability to grow a new business that responds to alternative homeport and niche offerings.

For the Percentage of Capture scenario, a rate of .10% in 2024 and growing over the period to 1.00% in 2040 of the total regional market was used. The capture was based upon the Caribbean projection model - low to high range. Based upon this approach, the data suggests growth for revenue homeport passengers grows to between 432,024 and 571,580 in 2040. By 2040, cruise vessel calls grow to between 118 and 155. CAGR over the period is more than 20%.

For the Cruise Brand Growth scenario, which focuses on a niche service utilizing SeaPort Manatee as an alternative homeport, volume starts from a lower overall homeport cruise capacity but is projected to grow at a higher rate of 22.8% CAGR. Thus, in 2040 the revenue passenger projections range from 186,566 to 228,026 on ~104 cruise calls.

Opportunity

Growth

### 2040 650,000 600,000 550,000 500,000 450,000 400,000 350,000 300,000 250,000 200,000 150,000 100,000 50,000 Market Capture High **Cruise Brand Growth Mid** Source: BA

Stewardship

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#### Figure 5-11. SeaPort Manatee Revenue Passenger Projection Range, 2024-



- Market Capture Mid
- Cruise Brand Growth Low
- Cruise Brand Growth High

Figure 5-12 shows the cruise calls for each of the projection's models. The Cruise brand growth model uses a single call scenario based upon assumptions of targeted cruise brand growth, while the market capture varies, as the actual capacity per vessel is set based upon an assumption of vessel types that could berthed at SeaPort Manatee.

The likely scenario for SeaPort Manatee cruise growth will fall somewhere in the midpoint range between the two approaches unless there are unforeseen circumstances, such as a brand looking specifically for a homeport option outside that of Port Tampa Bay in which case significant growth would occur immediately. The actual success of the cruise business for SeaPort Manatee depends on a carefully crafted cruise development strategy taking advantage of Caribbean growth and development; expanding markets; new brand development and newly contemplated terminal infrastructure and access to a strong U.S. consumer market.





Source: BA

#### Section 5. Market Assessment

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# SECTION 6. FACILITY CHARACTERISTICS

SeaPort Manatee's navigation channel and ten berth facilities provide waterborne access to 1,100 acres of property. The facility's stock of infrastructure serves the container, breakbulk, petroleum, citrus juice, and dry bulk markets. The port enjoys adjacent highway access and rail service for inland connections.



SeaPort Manatee, the closest deep-water port to the Panama Canal, is located "Where Tampa Bay Meets the Gulf of Mexico", along the South shore of Tampa Bay in Manatee County, Florida. The port-owned property consists of approximately 1,100 acres and is a combination of natural and created lands. The facility is connected to the surrounding land area by both road and rail. By road, SeaPort Manatee has efficient access to both Interstate I-75 and Interstate I-275 via U.S. Highway 41. By rail, the port is directly connected to a CSX Corporation mainline located along U.S. 41, less than a mile from SeaPort Manatee's North Gate.

## 6.1 Berth and Cargo Facilities

The following paragraphs present a high-level description of SeaPort Manatee's berth and cargo facilities.

## 6.1.1. Navigation Facilities

SeaPort Manatee is located approximately 2.95 miles from the Tampa Bay Channel and 12 miles from the Pilot Station on Egmont Key. Access to the Tampa Bay Channel is through Tampa Harbor Zone 10 also known as Manatee Harbor Cut B. Both channels are maintained to a design depth of 40 feet below mean water. The channel width is 400 feet at the toe. Draft restrictions are 38 feet plus tide to a maximum of 41 feet. The turning basin at SeaPort Manatee has a diameter of 1,300 feet and is currently capable of accommodating Panamax Vessels. The Sunshine Skyway Bridge spans the Tampa Bay Channel, with a vertical clearance of 180 feet, but currently does not interfere with most vessels calling SeaPort Manatee.

## 6.1.2. Berth Facilities

SeaPort Manatee is equipped with 10 berths, currently providing 7,104 feet of berthing length. Each of the berth facilities are maintained to a depth 40-feet and may be utilized for a variety of cargo types. Table 6-1 provides high-level specifications for each of SeaPort Manatee's berth facilities.

#### Table 6-1. Berth Facilities

Berth	Length (feet)	
4 and 5	1,200	Bulk Non-
6	645	Dr
7	840	Dry b
8	670	Bu Bi
9	808	
10	780	
11	581	
12	790	
14	790	

Stewardship

Opportunity | Growth

#### Section 6. Facility Characteristics

#### Principle Uses

v Juice, Dry bulk, Project Cargo, Cargo, Containers, Scrap Metal, Breakbulk

ry bulk, Non-Cargo, Breakbulk

oulk, Liquid Bulk, Non-Cargo, Bulk Juice

Ilk Juice, Non Cargo, Dry Bulk, reakbulk, Liquid Bulk, Ro / Ro

Breakbulk, Liquid Bulk

Liquid Bulk

Breakbulk

Containers, Breakbulk

Containers, Breakbulk



- 1. 6.5 acres, 0.45 mile from the dock
- 2. 24 acres, 130 feet from the dock ■ 3. 52 acres, 1 mile from the dock (located off port)
- 4. 10 acres, 1.7 miles from the dock
- 5. 2 acres (located off port)

## 6.1.3. Covered Storage Facilities

The port is equipped with 11 transit shed / warehouses, providing approximately 865,000 square feet of covered storage for breakbulk and general cargos. The facilities are outlined in Table 6-2 below.

#### Table 6-2. Breakbulk Availability

Shed	Cargo	Area (square feet)
1	Dry	30,000
2	Dry	60,000
3	Chill	30,000
4	Chill	15,000
5	Dry	5,000
6	Chill	50,000
7	Dry	120,000
8	Chill	60,000
9	Dry	175,000
10	Dry	145,000
11	Dry	175,000
	Total	865,000

## 6.1.4. Dry Bulk Storage Facilities

SeaPort Manatee's dry bulk facilities consist of covered commodity storage sheds, cement silos, and open storage areas. Commodity storage sheds, utilized by specific customers, are located on the North Pier. Open storage areas are located in Zone's B and C, as well as the North Pier area. Dry bulk facilities include fixed conveyance systems and rail access to the north pier, parallel to North Dock Street.

## 6.1.5. Gate Facilities

SeaPort Manatee is equipped with two truck gate access facilities, identified as the North Gate and the South Gate. The North Gate, located along Piney Point Road, is a split gate facility, proving 8 truck lanes, 4 inbound and 4 outbound lanes. The South Gate, located along South Dock Street, provides 3 vehicle lanes, 1 inbound, 1 outbound and 1 reversible lane.

## 6.1.6. Roadway Facilities

SeaPort Manatee is accessible from U.S. 41 along two entry points. Along the north, SeaPort Manatee is accessed by Piney Point Road, through the North Gate. Along the south, it is accessed by South Dock Street, through the South Gate. Within SeaPort Manatee's footprint, a network of roads provides direct access to the North Pier, from North Dock Street, each of the berths within the port's main basin, and to the container terminal from South Dock Street. Both North Dock Street and South Dock Street are connected with roadway access east of berth 8 via Eastern Avenue and between Zones B and C along Reeder Road.

Opportunity | Growth | Stewardship

## 6.1.7. Rail Facilities

SeaPort Manatee is equipped with rail access facilities within the port's footprint. Rail access is provided from the CSX mainline parallel to North Dock Street, with direct access to the North Pier with parallel staging tracks, and a spur line along Zone B to Transit Shed 9.

# 6.2 SeaPort Manatee Land Use

SeaPort Manatee is separated into 7 zones, identified as A through G. Zone A is generally the location toward the shoreline, adjacent to the berths and to the north. Zone B is the area east of Zone A, and generally makes up the middle of the port. Zone C is stacked east of Zone B. Spread amongst these areas the port typically has more than 100 acres of lots available for lease and / or utilization at any given time. The currently identified available lots are shown in Table 6-3.

#### Table 6-3. SeaPort Manatee Available Lots

Designation	Designation Number	Area (acres)
Boneyard	1	10
Triangle	2	6.5
Zone C	3	26
Zone B	4	21
Zone B	5	6.5
Zone A	6	5
Zone A	7	21
Zone A	8	24
Off Port	9	52
Off Port	10	15
	Total	187

## 6.2.1. SeaPort Manatee Facilities by Zone

A high-level description of activities associated with each zone is provided in the following paragraphs.

## Zone A

Zone A, forming the western edge of the port and located closest to Tampa Bay, encompasses the bulk of existing port operations. The zone includes all of SeaPort Manatee's berthing facilities, the majority warehouses, the container storage yard, open bulk storage, cement silo storage, and liquid bulk petroleum storage. For purposes of discussion, Zone A is further segmented into three regions, and described below.

### Zone A - North Region

The north land mass of Zone A is enclosed by Berth 4, 5, 6 and 7, and includes the North Pier, principally used for dry bulk and general cargo handling. The area is equipped with transit sheds, commodity storage sheds, rail access, and overhead dry bulk conveyance systems. The Zone A – North Region includes leases for various tenants engaged in dry bulk and liquid bulk cargo operations.

## Zone A - Middle Region

The Zone A – Middle Region includes berths 8, 9, 10, and 11, and is equipped with a mix of transit sheds, both dry and chilled, a cross dock facility, a roll-on / roll-off (Ro / Ro) berth, a cruise terminal, cement silos, and several administrative facilities. Also included are a row of reefer plugs for wheeled reefer storage, a scrap metal staging location, U.S. Customs & Border Control Facility, US Department of Agriculture Facility, the SeaPort Manatee Administration Offices, Del Monte Fresh Produce Offices, and a truck and trailer wash. The southern boundary of this zone is identified by the existing drainage channel.

#### Zone A - South Region

The southern land mass of Zone A is bounded to the west by Berths 12 and 14 and is the principal container terminal operations area. This area includes a transit shed, and open areas for future container yard expansion.

#### Zone B

Zone B is bounded by the eastern edge of Zone A and Reeder Road. This zone currently accommodates the Martin Marietta Materials Aggregate Yard, an overhead conveyor system and stacker equipment, providing overhead material conveyance from the North Pier. There is also a warehouse that is the SeaPort Manatee Forestry Terminal – Arrow Terminals. Zone B includes open areas for dry bulk and general cargo, as well as truck trailer staging. Undeveloped parcels, located north of North Dock Street are included within Zone B.

#### Zone C

Zone C is currently the site for the Intermodal Building, MCPA Chambers International Trade Hub at SeaPort Manatee, AME Salt and DMT. To the north of these facilities is an Operations & Maintenance Building. East of these facilities resides the Logistec Gulf Coast Cargo Pad and Manatee Ship Repair and Fabrication Facility. The zone is utilized for dry bulk and scrap metal storage, and is bounded by Reeder Road, North and South Dock Streets, and the existing CSX mainline to the east.

## Zone D

Zone D is off-site and is currently used generally for storage. This zone is not easily accessed from the waterside facilities.

## <u>Zone E</u>

Zone E, located south of Piney Point Road and adjacent to Zone B is largely undeveloped and is currently used for open storage of retired equipment.

## Zone F

Zone F, located along North Dock Street and east of Reeder Road includes the North Gate Complex and truck queueing areas, The SeaPort Manatee Access Control Center, a scale house and supplemental trailer parking. In the northernmost portion of Zone F, adjacent to County Line Road, the zone includes a developable 52 acre parcel. The bulk of the land area within Zone F is utilized for upland dredged material storage and is improved with an elevated impoundment and containment dike system.

## <u>Zone G</u>

Zone G comprises approximately 260 acres of undeveloped land near the south of the port.

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# SECTION 7. OPPORTUNITIES AND CONSTRAINTS

SeaPort Manatee has the opportunity to improve targeted existing assets to unlock hidden capacity, expand facilities to increase capacity and operational throughput, and increase its market reach with the development of infrastructure that delivers new services for port customers.



SeaPort Manatee owns approximately 1,106 acres of property, consisting of waterfront, cargo operating areas, transportation facilities, undeveloped parcels, environmentally sensitive areas, and other potentially usable areas such as abandoned or decommissioned facilities. The characteristics of the site represent both opportunities for expansion and improvement or constraints that may limit options or have imposed restrictions or other requirements. Within this section, the opportunities and constraints at SeaPort Manatee are presented and discussed.

## 7.1 **Opportunities**

Facility improvement opportunities include capital investments, operational improvements, and policy changes. Below, the key facility opportunities are briefly described and are shown in Figure 7-1.

## 7.1.1. Berth 6

Berth 6, located at the northwest corner of the main basin, represents an opportunity to upgrade a berth asset for multipurpose operations. Berth 6 is currently configured with a minimalist apron that was designed to accommodate discharge of bulk vessels. The apron is limited to approximately 412 feet in length, and approximately 50 feet in width. The apron can be extended east approximately 216 feet to connect with Berth 7 and extended another 100 feet toward the west to align with the southwest corner of Berth 5.

## 7.1.2. Berths 10 / 11 Corner

Berths 10 and 11, located at the southwest corner of the main basin, represent another opportunity to upgrade berth assets to improve operations. The corner is currently "unfinished", however by extending Berth 10 to the west and reconfiguring Berth 11 to align with Berths 12 and 14, up to 410 feet of berth length can be added to Berth 10. This opportunity would create over 1,500 feet of multipurpose berth space alongside the south side of the main basin, and enable increased utilization of Berth 8, by removing vessel conflicts at the basin's southeast corner.

## 7.1.3. North Pier Expansion

The North Pier, home to berths 4, 5, 6 and 7, can be expanded to add new berths and land area for cargo handling, increasing operational capacity. The ability to add length to the berth line making up Berths 4 and 5, constructing new berths along the currently undeveloped north edge of the Pier, and expanding the Pier's usable acreage with limited land reclamation, presents the opportunity to increase usable capacity and focus operations for specific cargo types.

## 7.1.4. Northward and Eastward Expansion

Waterfront property located between existing port facilities at the North Pier and Piney Point Road represent another opportunity for development. Approximately 11.48 acres of undeveloped and underutilized property is available, with 1,000 feet of existing shoreline. This opportunity could add additional berthing space and adjacent land for cargo handling, allowing SeaPort Manatee to further separate cargo types and de-conflict operations. For the purpose of leveraging the Port Manatee Encouragement Zone, including the Planned Development Encouragement Zone (PDEZ) and Florida International Gateway Overlay District, the port should work with state and local agencies, and other entities, to evaluate opportunities to acquire property and expand northward and eastward.

Opportunity | Growth



## **OPPORTUNITIES**

- 1 BERTH 6
- 2 BERTHS 10 / 11 CORNER
- 3 NORTH PIER EXPANSION
- 4 NORTHWARD EXPANSION
- 5 TRIANGLE AREA
- 6 SOUTHWARD EXPANSION
- **(7)** ZONE B UTILIZATION
- 8 ZONE C UTILIZATION
- 9 RAIL ACCESS
- 10 RAIL INTERCHANGE YARD EXPANSION
- 11 ZONE F RECTANGULAR TRACT
- 12 PINEY POINT ROAD WIDENING PLAN
- 13 ADJACENT UNDEVELOPED PROPERTY
- (14) CRUISE / FERRY OPERATION
- 15 MARKETABLE SPOIL MATERIAL

## CONSTRAINTS



AREA

FEDERAL-PROJECT DESIGNATION OF DREDGE AREAS

WETLANDS AREAS

DRY BULK CONVEYANCE SYSTEMS

- SOUTH DOCK STREET ACCESS
- A SOUTH GATE CONSTRAINTS

## LEGEND



WETLANDS

## 7.1.5. Triangle Area

A subset of northward expansion areas, located east of the existing tank farm and adjacent to North Dock Street is a land parcel known as the triangle area. The parcel is approximately 11.42 acres and represents an opportunity for potential development as a support facility, storage area, or other targeted business opportunity. The site's advantages include access to North Dock Street, and close proximity to the North Gate Facility.

## 7.1.6. Southward Expansion

SeaPort Manatee owns a sizable area of property toward the south and east of the existing container terminal. This space could be developed for cargo handling and has been planned for phased expansion of the container yard. The opportunity also includes the potential to extend available berth space further south from existing Berth 14. Due to encroachment by other land uses and declining amounts of available waterfront industrial property in Florida, the port should work with state and local agencies, and other entities, to evaluate opportunities to maximize seaport-related use of these port-owned lands.

## 7.1.7. Zone B Utilization

Located within the middle of the port, Zone B has been utilized for a variety of different cargo types. The area is currently utilized for a mix of dry bulk and breakbulk storage, and tractor trailer staging. Zone B's advantages include proximity to the main basin, access from two roadway corridors, and the availability of up to 20 acres that could be developed. The opportunity exists to maximize utility of this land parcel with high-turnover cargo and provision of value-added services.

## 7.1.8. Zone C Utilization

Located between Highway U.S. 41 and Reeder Road, Zone C is currently utilized for dry bulk and scrap metal storage. With its proximity to both rail and highway access, the area represents an opportunity to expand and optimize inland transportation services for cargos. More than 10 acres are potentially available for re-purposing from a pure storage focus to a transportation focus, increasing SeaPort Manatee's competitiveness for high-value, and time sensitive cargos.

## 7.1.9. Rail Access

SeaPort Manatee is located adjacent to the CSX mainline and is provisioned with a staging yard siding and direct rail access onto port property. The opportunity exists to leverage the existing rail access to expand inland transportation services for intermodal containers, bulk cargos, and specialized project cargos.

# 7.1.10. Rail Interchange Yard Expansion

The interchange yard, located adjacent to U.S. 41 provides for staging of rail cars and building train segments. The existing interchange facility consists of four parallel tracks, adjacent to the CSX mainline. The facility has the opportunity for expansion with up to two additional parallel rail tracks, increasing the facility's static capacity by up to 50%.

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#### 7.1.11. Zone F Rectangular Tract

Located adjacent to County Line Road, and north of the existing Dredged Material Management Area (DMMA), approximately 51 acres of property is available for redevelopment. The property's location away from daily port operations and access to U.S. 41 from County Line Road represents an opportunity for unimpeded off-site cargo transportation staging and support operations, such as distribution and / or consolidation.

#### 7.1.12. Piney Point Road Widening Plan

Piney Point Road is under consideration for expansion due to the number of trucks that use the road for access to SeaPort Manatee. A study has been recommended to determine the expansion requirements over the near-term, with initiation of the planning, design, permitting, and construction to follow.

#### 7.1.13. Adjacent Undeveloped Property

In addition to the property available within the existing port's footprint, SeaPort Manatee is surrounded by large tracts of developable property. The availability of this property represents a strategic advantage and opportunity for development of complementary industrial operations that increase demand for port services. The Planned Development Encouragement Zone (PDEZ) strategy for SeaPort Manatee and Manatee County facilitates development of adjacent parcels to capture synergistic benefits for the parties involved.

#### 7.1.14. Cruise / Ferry Operation

SeaPort Manatee likely has opportunities to develop a small niche / transitory large vessel cruise business capturing vessels that may not have facilities in Port Tampa Bay and those choosing to distance themselves from the contemporary brands already present, either due to lack of berths, brand imaging or desire to be closer to international waters.

#### 7.1.15. Marketable Spoil Material

SeaPort Manatee's dredge spoil materials, stored within the onsite DMMA, are marketable as upland fill material. This represents a potential commercial opportunity for the port, as well as a DMMA lifecycle management strategy.

#### 7.2 Constraints

While SeaPort Manatee has several potential opportunities for consideration, there are also a few constraints that must be accommodated as part of the master plan. These constraints include the following.

#### 7.2.1. Berth 8

Berth 8, located at the toe of the horseshoe basin is constrained by vessel activities at both berths 7 and 9. The berth provides 427 feet of accessible wharf length, however Berth 8 is bounded by the berth pocket for berth 7 to the north, a Roll-on / Roll-off ramp to the south, and vessel activities at Berth 9. The berth is attractive for breakbulk general cargo vessels due to its proximity to adjacent warehouse space. However, opportunities for further improvements are limited.

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#### 7.2.2. Dredged Material Management Area

The dredged material management area, located northeast of Piney Point Road encompasses approximately 117 acres. The facility is an elevated impoundment for receiving and storing maintenance dredge material. While the facility may be considered for potential development in the future, for the purposes of this master plan, the impoundment dykes and DMMA will remain as it is.

#### 7.2.3. Federal-Project Designation of Dredge Areas

Federal navigation facilities require a federal-project designation to qualify for federal funding for the purposes of maintenance dredging. Not all of the SeaPort Manatee's dredged navigation facilities are currently designated as a federal-project. Specifically, the port's interior basin and the turning basin adjacent to Berth 4 are not currently designated as federal projects. As such, SeaPort Manatee is financially responsible for the periodic maintenance dredging that is required to ensure navigable depth is available.

#### 7.2.4. Wetlands Areas

As with any coastal environment, SeaPort Manatee's property includes areas of wetlands within its boundary as shown in Figure 7-2. Estuarine and marine as well as freshwater forested / shrub wetlands are located south of the port's current operational footprint and are within areas that may be contemplated for expansion. Similarly, wetlands are also present to the north of the existing operational footprint, and within areas that may be contemplated for expansion. For unavoidable impacts, compensatory mitigation (example: mitigation banking) will be required to replace any loss of wetlands.

Figure 7-2. Wetlands Areas



#### 7.2.5. Dry Bulk Conveyance Systems

Within the confines of the North Pier, and positioned parallel to North Dock Street, SeaPort Manatee is equipped with an array of elevated dry bulk conveyors. Additional commodity storage sheds also exist on the North Pier, providing covered storage for bulk commodities. The study team considered the potential for relocation of these facilities; however, it was determined that the investments in these assets were significant, and the potential benefits of any re-investment in these facilities would be counter-productive.

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#### Section 7. Opportunities and Constraints

#### 7.2.6. Petroleum Tank Farm

The existing petroleum tank farm, located adjacent to North Dock Street represents a significant investment in petroleum conveyance pipelines, storage facilities, containment facilities, and distribution truck loading facilities.

#### 7.2.7. South Dock Street Access

The location and alignment of South Dock Street provides unencumbered access for project cargos produced and shipped from the Air Products & Chemicals, Inc. SeaPort Manatee Facility, located just east of U.S. 41. This 32-acre facility produces cryogenic heat exchangers, cold boxes, distillation columns, pressure vessels, and other equipment serving the LNG market. The manufacturing facility requires an unencumbered, direct route with adequate turning radiuses to SeaPort Manatee's berths to ship these cargos.

In addition to the project cargo requirements, an additional access point to the adjacent Vecenergy must be maintained at the intersection of South Dock Street and Reeder Road. The current configuration utilizes temporary traffic channelization structures to direct traffic to the Vecenergy property while securing the port property at the intersection.

#### 7.2.8. South Gate Constraints

The South gate, located along South Dock Street, is constrained to the north by the adjacent drainage ditch. Any additional lanes must be added to the north of the existing gate in order to maintain the South Dock Street Access requirements described above. The South Gate is planned for expansion, however its proximity to the drainage ditch may impact the number of lanes that could be developed without requiring reconfiguration of the drainage ditch.



## SECTION 8. FACILITY CAPACITY ANALYSIS

SeaPort Manatee is currently operating at capacity for storage of container and breakbulk cargos and is experiencing berth constraints across all its business lines. Overall, SeaPort Manatee delivers approximately 8-10 million tons in annual operating throughput capacity, however operational conflicts and an inventory of purpose-built facilities are limiting full realization of available capacity.



A key attribute of any master planning exercise is measurement of the existing facility's annual throughput capacity. Throughput capacity is measured as the annual cargo handling potential a marine facility has available with existing infrastructure, equipment, and operating practices. The measure is provided in terms of potential cargo units handled per year where the cargo units may be tons, metric tons, twenty-foot equivalent units (TEU), barrels, or some other applicable metric. The output provides an estimate of the cargo volume that can be accommodated at the port under normal operating conditions and forms the basis for planning future infrastructure improvements.

#### Figure 8-1. Theory of Constraints Analysis



Opportunity

#### 8.1 Capacity Models

A static throughput capacity model was developed for each of the cargo types handled at SeaPort Manatee. The throughput capacity model is a computer simulation that employs a methodology based on a systems approach and employing a theory of constraints to identify existing bottlenecks in the system. The methodology computes throughput capacity for up to six operational components of the system, each working as part of a series of operations. The methodology is described in further detail in the sidebar.

The methodology estimates the operating capacity of each discrete component in terms of two values: maximum capacity and sustainable capacity.

- Maximum Capacity represents the annual throughput capacity that is achievable when operating at peak operating levels, similar to the redline on a vehicle tachometer.
- Sustainable Capacity represents the realistic annual throughput capacity that can be sustained on a continuous basis. Sustainable capacity ranges from 75% to 85% of maximum capacity depending on cargo type.

Each model was populated with the key facility characteristics and the unique operating practices observed at the port. Where site-specific data was not available, the model utilizes metrics that are commonly observed in the industry.

Throughput capacity model estimates were developed for the following cargo types handled at SeaPort Manatee:

Stewardship

- Containerized Cargo
- Breakbulk Cargo
- Dry bulk Cargo

Growth

Liquid bulk petroleum cargo

#### 8.2 Capacity Estimates

The results of each capacity model are presented in Figure 8-2. The data is shown for each component that was analyzed, by cargo type, and is presented in terms of maximum throughput capacity. The portwide sustainable annual throughput capacity is estimated at between 8-10 million tons.

Comparing the various components, the analysis identifies storage space as the current limiting component for containerized cargo, breakbulk cargo, and liquid bulk petroleum cargo. The data also shows that berth capacity generally represents the next constraining component. At a high-level, the results indicate that SeaPort Manatee would require investments in both storage and berth capacity as part of its future capital improvement program.

The analysis for each cargo type is discussed in further detail in the following paragraphs.



Sustainable Capacity – 8 to 10 Million Tons

#### Figure 8-2. Facility Capacity Estimates

## **THROUGHPUT CAPACITY ANALYSIS METHODOLOGY**

Annual Throughput Capacity is the measure of annual operating potential provided by the operating practices and stock of assets deployed at a port facility. The Theory of Constraints employs a systems approach to estimate the operating capacity of each major operation of a cargo's transit through the port facility. The Theory of Constraints concludes that the overall system capacity is limited to the component delivering the smallest capacity value – the constraining component. There are typically six key components that are analyzed as part of a port cargo handling system.

- Vessel and berth operations
- Vessel loading and unloading operations
- Cargo transfer to / from storage
- Storage operations
- Rail operations (if applicable)
- Gate operations

Utilizing existing facility characteristics, historical operating data, and observed industry benchmarks, the discrete annual throughput capacity for each component is simulated by computer model, and capacity estimates are calculated. The model incorporates month-to-month statistics to identify usage requirements for storage and retrieval systems typical of modern port operations. Seasonal, monthly, daily, or hourly peaks in utilization intensity, typical of maritime-related businesses, are incorporated into the model. Peaking characteristics drive the need for standby capacity that remains idle during normal operations and can overstate normal operating (sustainable) capacity if not accounted for.

The model outputs for each component are expressed in terms of maximum annual throughput capacity, which accommodates the peak operating condition, and assumes the port facility operates at that peak level continuously. Similar to the redline on a vehicle's tachometer, continuous operation at this peak operating level is not practical nor sustainable. While the maximum capacity is available when required to accommodate peak demand, its contribution must be discounted for estimates of normal operating levels that can be used for long-term planning.

Sustainable annual throughput capacity is the measure that discounts peaking characteristics and provides the throughput capacity estimate under normal, sustainable operating conditions. Sustainable capacity is typically expressed as a percentage of maximum capacity and varies by cargo type. The value typically ranges from 75% to 85% of maximum capacity, depending on the cargo. For longterm planning, the sustainable capacity represents the metric where capacity improvements are required when volume demands exceed this value.

#### 8.2.1. Containerized Cargo Throughput Capacity

Container capacity is typically measured in terms of TEUs per year, which can be converted to tons per year with an appropriate factor. The capacity estimate indicates that, at the time of this analysis, SeaPort Manatee has a maximum capacity of 175,000 TEUs per year (148,000 sustainable), which is limited by available storage space. The key drivers for storage capacity are available acreage, stacking density, and cargo dwell times. For this analysis, the current available storage space of 14 acres for grounded storage and 10 acres of combined wheeled / reefer and grounded storage was utilized. The average industry cargo dwell time of 7 days was assumed.

With improvements to storage space, maximum capacity can be increased to approximately 343,000 TEUs per year, which would then be limited by available berth capacity. The key drivers of berth capacity include the number and length of dedicated available berths, average vessel size, and typical cargo transfer rates. For this analysis, two dedicated container berths were identified (berths 12 and 14), each with an average length of 800 feet, providing service to average vessels of 600 feet LOA, with an average productivity of 18 moves per hour.

The results indicate that initial improvements should focus on storage space expansion to align with available berth capacity. The available berth capacity would provide sufficient capacity for a number of years; however, it would also require expansion over the planning horizon.

#### 8.2.2. General Cargo / Breakbulk Throughput Capacity

Breakbulk capacity is typically measured in terms of metric tons per year, which can be converted to short tons with the application of the appropriate factor. The capacity estimate indicates that, at the time of this analysis. SeaPort Manatee has a maximum operational capacity of 857,000 metric tons per year, which is also limited by available storage space. Storage capacity is driven by available acres of open storage and available square footage of covered storage, average cargo storage density, and average cargo turnover per year. For this analysis, 865,000 square feet of covered storage space and 10 acres of open storage space was utilized. The average cargo density was estimated at 1,800 metric tons per acre for open storage, and 0.07 tons per square foot for covered storage. An average cargo turnover of 12 times per year was utilized, representing 100% cargo turnover every month.

With improvements to storage space, capacity can be increased to approximately 1.44 million metric tons per year, which is limited by berth capacity.

The results indicate that initial investments in storage space, both covered and open storage, are required. As with the container business, the breakbulk operations would also require future expansion of berth facilities to increase operational capacity for this cargo type.

#### 8.2.3. Dry Bulk Throughput Capacity

Dry bulk capacity is measured in terms of metric tons per year and is largely dependent on the average density and storage configuration of the cargo. The analysis shows that dry bulk capacity may be limited by cargo transfer operations, however this component is largely a function of cargo unloading productivity and the number and capacity of trucks that are utilized during the operation. Truck deployments are scalable to meet discharge productivity rates during vessel operations. As such, the operational capacity of this component is variable and can be adjusted to meet requirements through deployment of trucks and equipment by the operator.

In terms of the fixed infrastructure capacity related to berths and storage, SeaPort Manatee's estimated maximum throughput capacity for dry bulk is approximately 6 - 6.5 million tons and is ultimately limited by berth operations. The analysis indicates that sufficient storage space can be accommodated within SeaPort Manatee's footprint, however expansion of this business line would require future investment in berths.

#### 8.2.4. Liquid Bulk Petroleum Throughput Capacity

Liquid bulk petroleum is typically measured in terms of barrels per year, however, can be converted to metric tons per year with an appropriate factor. Analysis of SeaPort Manatee's liquid bulk petroleum products indicates the existing system is generally balanced. The limiting component is related to tank storage capacity, which is controlled by the tank farm operator. The overall throughput capacity for liquid bulk petroleum is estimated at approximately 16.6 million barrels per year, of which approximately 14.1 million barrels is sustainable.

#### 8.2.5. Liquid Bulk Juice Throughput Capacity

SeaPort Manatee's liquid bulk juice capacity was not measured in terms of the individual components, because no onsite storage facility is available. For purposes of this analysis, the liquid bulk juice capacity that is required is accommodated by the available breakbulk / general cargo berth capacity and is not calculated separately.

## SEAPORT MANATEE'S CONTAINER PRODUCTIVITY

SeaPort Manatee has responded to the sharp increase in container traffic through active management of storage space. The facility's productivity, in terms of TEUs per acre per year, currently measures at the high-end operating range among peer Florida ports. For the year 2021, SeaPort Manatee delivered 135,000 TEU's on approximately 24 acres, resulting in a throughput productivity level of 5,625 TEUs per acre per year. For the year 2022, SeaPort Manatee is forecast to handle 160,000 TEU on the same footprint, resulting in a throughput productivity level of almost 6,700 TEUs per acre per year. When compared to other Florida ports, SeaPort Manatee's container productivity levels ranged from 24% to 71% higher than other ports during 2021. SeaPort Manatee's container productivity values are even higher for 2022, ranging from 47% to over 100% higher than those at competing Florida ports in 2021. These values punctuate SeaPort Manatee's ability to adapt to market demands and deliver a high-level of customer service.

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#### 8.3 Berth Occupancy Analysis

Another key metric for understanding the performance of an existing port facility is maximum berth occupancy. Recognizing that all capacity is not created equal, this metric provides a measure of potential berth availability for future growth and is based on comparing historical data to observed industry trends. The results of the analysis provide an indication on the existing levels of berth utilization, to what extent existing demand is approaching maximum practical berth occupancy levels.

Maximum berth occupancy is a function of several factors, including cargo type, berth geometry, dedicated vs. multipurpose operations, vessel characteristics to name a few. Industry observations show that dedicated berth facilities for a specific cargo type have higher potential occupancy levels than multi-purpose terminals, handling a variety of cargo types. In addition, port facilities equipped with long, multiple-berth, marginal wharfs provide the greatest opportunity for vessel berthing flexibility and ability to maximize occupancy. For such facilities, the maximum berth occupancy can be as high as 80% - meaning a vessel is occupying the berth 80% of the time. For multi-purpose facilities with multiple smaller berths, such as SeaPort Manatee, the maximum theoretical occupancy can be much lower, ranging from 55% to 70% depending on the characteristics of the trade lanes served by the facility.

Being a multi-purpose port, SeaPort Manatee's berths are utilized for a variety of different cargos, depending on geometry and availability. Table 8-1 provides the current mix of cargos that are principally handled at each of SeaPort Manatee's berths. The data shows that, while some cargos are limited to specific berths due to infrastructure requirements (i.e., petroleum pipelines), many other cargos can be handled at a number of berths, depending on availability. These observations are indicative of a true multi-purpose port environment, where maximum berth occupancy levels would be at the lower end of the scale.

#### Table 8-1. Berth Cargo Utilization

Berth Cargo Utilization							
Berth	Break Bulk	Containers	Dry Bulk	Juice Tanker	Liquid Bulk	Non Cargo	Project
4	7%	5%	43%	0%	1%	40%	4%
5	4%	10%	61%	18%	0%	7%	0%
6	9%	0%	65%	0%	1%	24%	1%
7	4%	0%	53%	3%	19%	21%	0%
8	14%	4%	15%	28%	7%	30%	1%
9	71%	6%	1%	5%	11%	4%	2%
10	0%	0%	0%	0%	94%	5%	0%
11	0%	0%	0%	0%	0%	100%	0%
12	13%	78%	0%	6%	0%	2%	1%
14	13%	52%	0%	24%	0%	10%	0%

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Over the past five years, since 2017, SeaPort Manatee has seen a steady increase in overall berth occupancy throughout the port. In 2021, SeaPort Manatee's documented berth occupancy, recorded as actual time of vessels across all berths, grew to 47% occupancy. While this value is approaching the bottom range of maximum occupancy levels, this value does not consider the time required for vessel maneuvering (arrivals and departures). Inclusion of vessel maneuvering adds to the actual occupancy time because the berth remains unavailable while a vessel is maneuvering in the channel. When accounting for vessel maneuvering time, SeaPort Manatee's average berth occupancy is actually approaching 60%, which is clearly within the theoretical threshold for maximum berth occupancy for a multipurpose port.



#### Section 8. Facility Capacity Analysis

The average ratio of berth length to vessel length overall (LOA) is another important consideration. Simply put, as deployed vessels get larger, the suitability and attractiveness of a berth asset is decreased. This is particularly the case for multipurpose ports with no or only limited marginal wharfs. Port facilities with long, continuous marginal wharfs that are segmented into multiple berths provide the greatest flexibility in accommodating a wide range of vessel lengths. With a long marginal wharf, berth constraints and vessel conflicts are essentially eliminated. SeaPort Manatee's berth facilities, their arrangement and geometries are unable to mitigate the conflicts that are presented by the industry growth in vessel size.

At SeaPort Manatee, this vessel size conflict is common at Berths 4 and 5, and at Berth 8 due to vessel's that are moored at Berths 9 and 10. While technically a marginal wharf, the combined length of Berths 4 and 5 is 1,200 feet, producing two berths of 600 feet in length. Longer vessels at either berth prohibit availability at the neighboring berth, ultimately reducing occupancy, utility, and capacity, reduces occupancy. The recent berth occupancy data for Berths 4 and 5 show a disparity in occupancy rates, which reflects this fact. Similarly, the occupancy data for berths 7, 8, and 9 show that other vessel conflicts existing, further putting downward pressure on the port's ability to maximize occupancy and realize full utilization of its throughput capacity.

In summary, the berth occupancy data indicates that SeaPort Manatee is quickly approaching a berth shortage, driven by the combination increasing vessel calls, changes in the fleet shape, and the geometric limitations of the port's existing berths. With this combination of factors, it can be concluded that the port's actual throughput capacity for the berth component may be somewhat less than the values calculated as part of the throughput capacity analysis.

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SeaPort Manatee – Main Basin



## SECTION 9. FACILITY NEEDS

SeaPort Manatee's facility needs include expansion of container storage space, expansion of warehouse space, development of a citrus juice storage facility on the property, upgrades to existing and expansion of berth facilities, relocation of long-dwell cargo, the introduction of intermodal rail service, and strategies to eliminate operational conflicts and reduce unnecessary truck gate moves.



By comparing the market forecast projections with existing capacity estimates for each cargo type, a high-level picture of facility needs, in terms of capacity, can be developed. The future facility needs consider the high-case market forecasts at the end of the 20-year planning horizon. Within this section, the framework of requisite facilities and infrastructure is quantified from a capacity perspective.

#### **9.1 Capacity Requirements**

The graphs shown with the following subsections provide a comparison of the unrestricted high-case market forecast projections to existing capacity and resultant revenue potential. The market forecast projections are represented by the orange curve, capacity is represented by the horizontal blue line, and annual revenue potential is represented by the vertical blue bars. The data shows that significant capacity constraints are present today at SeaPort Manatee for containerized and breakbulk cargos.

#### 9.1.1. Container Capacity Needs

Containerized cargo is projected to grow as high as 430,000 TEUs per year over the planning horizon. This represents an approximate threefold increase over 2021 volume levels. The port is projected to see a near-term surge in container traffic over the next several years, and then return to a more manageable annual growth rate over the longer term. Current sustainable and maximum capacity are estimated at 125,000 TEUs per year, and 148,0000 TEUs per year, which is constrained by available storage space. The data shows that SeaPort Manatee is currently operating at a peak condition and requires an increase in storage capacity in the near term. As of this writing, SeaPort Manatee is in the midst of a container storage area expansion that will contribute to the immediate capacity needs.

Over the long-term planning horizon, SeaPort Manatee's container business will require an increase in sustainable capacity of at least 300,000 TEUs, which would primarily be met by expansion of storage space and berth improvements.



#### Figure 9-1. Container Capacity and Unrestricted Forecast

Breakbulk / General cargo is projected to reach as much as 1.2 million tons per year, doubling current volumes. Similar to the container business, the market forecast projections indicate a near-term surge in breakbulk business that would exceed the port's existing sustainable capacity of 685,000 metric tons per year. SeaPort Manatee's breakbulk business requires a sustainable capacity increase of at least 300,000 metric tons in the immediate term, and then another 300,000 metric tons over the longer term.

The near-term capacity shortfall is driven by available storage capacity, requiring investment in approximately 350,000 square feet in covered storage space. An additional 400,000 square feet will be required after the initial investment, with adjacent open storage of approximately 25 acres to facilitate operations. In addition, the port's berth utilization levels for this cargo type will need to increase by shifting cargos and expanding berth facilities.

#### 9.1.3. Liquid Bulk Petroleum Capacity Needs

SeaPort Manatee's petroleum products business will see an approximate 50% increase in volume over the planning horizon. Over the near-term it is projected that the port's existing facilities provide sufficient capacity to accommodate the market demands. However, tank storage capacity will need to be increased by approximately 25% in about 10 years from the date of this master plan's publication. Space will need to be reserved for additional tank construction adjacent to the existing tank farm. Approximately 10 acres of additional space should be reserved for tank farm expansion.

The port's existing liquid bulk petroleum berths provide sufficient capacity to meet demand over the near term. However, utilization of piped petroleum berths for tanker vessels will need to be increased by re-positioning other cargos to new berths.

Stewardship



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Figure 9-2. Breakbulk Capacity and Unrestricted Forecast

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#### Figure 9-3. Liquid Bulk Petroleum Capacity and Unrestricted Forecast

#### 9.1.4. Bulk Juice Capacity Needs

SeaPort Manatee's bulk juice business is projected to grow between 2.5 and 3 times in volume from 2021 levels, growing from 250,000 tons in 2021 to 630,000 tons in 2041. At present, bulk juice vessels discharge product into tanker trucks which dray the product out of the gate and off-site. The vessel discharge process takes multiple days, up to 10 days in many cases, and is limited by tanker truck availability and the long dray that is involved. The bulk juice business requires a process that shortens the truck dray, maximizing the productivity of tanker trucks, and reducing the vessel time at berth.

The bulk juice discharge operation would be improved significantly with the development of an onsite juice storage and processing facility. The facility should likely be sized to accommodate 750,000 metric tons in annual throughput and located on the port property to reduce tanker truck turnaround times. In addition, the bulk juice business would need allocation of an appropriate berth providing a minimum dray distance, and potentially future installation of pipelines.

#### 9.1.5. Dry Bulk Capacity Needs

SeaPort Manatee's dry bulk facilities are projected to provide adequate capacity over the near-term, however will require investments in capacity before the end of the planning horizon. Specifically, dry bulk cargo will require a combination of berth space and cargo transfer improvements to optimize the system. Today, SeaPort Manatee's dry bulk business utilizes a mix of conveyance systems and truck drayage for the movement of dry bulk cargo from the vessel to various storage locations located as far as Zones B and C. To facilitate discharge operations and commodity drayage, SeaPort Manatee would benefit by relocating truck-drayed dry bulk operations further to the north and providing dedicated berths to accommodate future operations.



#### Figure 9-4. Dry Bulk Capacity and Unrestricted Forecast

### **9.2 Facility Requirements**

For a multipurpose port, where existing facilities are utilized for multiple cargo types, it can be a challenge to understand the aggregate stock of infrastructure that is required. At the master planning level, facilities requirements are best understood by using unitized planning modules as a tool to assist in visualizing the number of facilities and their preferred locations on the port property. The planning module tools are scaled representations of idealized facilities that are required to serve a specific cargo type and include the major infrastructure components necessary to deliver a fixed capacity. When aggregated together, a clearer picture of the nature and number of facilities that are necessary to meet the longer-term capacity needs comes into view. When placed on a scaled map of the port, the inventory of various planning modules can be organized to quickly envision a wide range of potential development scenarios.

#### 9.2.1. Planning Modules

The master plan team developed planning module tools for each of the major cargos and facilities to be accommodated within the master plan. The key characteristics and estimated throughput capacity for each module is show in Table 9-1.

Opportunity

Table 9-1.	Planning	Module	Key	Character
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Planning Module	Characteristics	Throughput Capa
Container Module	<ul> <li>2,200 Foot Berth Length</li> <li>2 Berths</li> <li>Grounded storage</li> <li>65 Storage Acres</li> </ul>	340,000 TEU – Be 325,000 TEU – Sto
Breakbulk Module	<ul> <li>1 Berth (800 Feet)</li> <li>11 Acres</li> <li>75,000 SF Transit Shed</li> <li>6 acres open storage</li> <li>Rail access option</li> </ul>	300,000 Tons – Be 170,000 Tons – Sto
Dry Bulk Module	<ul><li> Open Storage</li><li> 12 Acres</li><li> Remote Berth Access</li></ul>	1 million tons – Be
Liquid Bulk Petroleum	<ul> <li>1 Berth (800 feet)</li> <li>6 storage tanks</li> <li>800,000 Bbls storage</li> <li>18 Acres</li> </ul>	1 million Tons
Liquid Bulk Juice Module	<ul><li>1 Berth</li><li>6 Acres</li><li>Remote Berth Access</li></ul>	750,000 Tons
Warehouse Module	<ul><li> 14 Acres</li><li> 150,000 sf warehouse</li></ul>	120,000 Tons
Intermodal Module	<ul> <li>1,200-foot loading tracks</li> <li>4 loading tracks</li> <li>Grounded and wheeled storage</li> <li>18 Acres</li> </ul>	67,600 Lifts per ye
Cruise Module	<ul> <li>1 Berth (1,000 feet)</li> <li>90,000 SF Terminal</li> <li>Onsite parking garage and intermodal center</li> <li>7 Acres</li> </ul>	N / A
Yacht MRO Module	<ul> <li>800 Linear Feet of Shoreline</li> <li>Dry dock slip and synchro lift</li> <li>Buildings</li> <li>15 Acres</li> </ul>	N / A

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By aggregating the capacity delivered by each of the various modules, the number of modules for each cargo type can be determined. This simple process provides a high-level understanding of the stock of infrastructure that will be necessary to meet the future market forecast projections for each cargo type.

The requisite numbers of modules for each cargo type are shown in Table 9-2. From a berth perspective, the analysis indicates that a minimum of 14 dedicated berth facilities, sized appropriately to accommodate growing vessel lengths and maximize utilization, are required to meet the 20-year demand.

 Table 9-2.
 Requisite Numbers of Modules for Each Cargo Type

Module	Capacity	20-Year Capacity Required	Number of Modules	
Containers	325,000 TEU	430,000 TEU	1.5 modules	
	300,000 Tons Storage capacity		4-5 modules (berths only)	
Breakbulk	is addressed under the ware- house modules	1.3 million tons		
Dry Bulk	1.2 million tons	4.1 million tons	4 modules	
Liquid Bulk Petro- leum	1 million tons	2.4 million tons	3 modules	
Liquid Bulk Juice	750,000 tons	630,000 tons	1 module	
Warehouse Space	120,000 tons	1.3 million tons	11 modules (covered storage)	
Intermodal	67,600 Lifts	Future Service	1 Module	
Cruise	Future Service	Future Service	1 Module	

#### 9.3 Summary Facility Needs

With the use of the planning modules as a tool, the nature and guantity of specific infrastructure components that make up the key module characteristics can be determined and translated into future facility improvements. Nominally, the resultant infrastructure and space required to meet the 20-year volume demands associated with SeaPort Manatee's market forecasts are shown in the following table. From a capacity perspective, with a stock of these basic infrastructure components, SeaPort Manatee would deliver between 18 and 20 million tons of annual throughput capacity, meeting the market demands associated with the high-case forecast projections for each cargo.

Currently, SeaPort Manatee's existing stock of infrastructure partially meets the future capacity requirements. However, as noted in the Opportunities and Constraints section, opportunities exist to make strategic improvements to selected facilities, unlocking hidden capacity associated with underutilized assets, and expand facilities to grow capacity in line with market demands over time. Strategies to achieve these improvements are discussed in the next section and presented as part of the 20-year vision plan.

	Cargo	Berths	Storage	Notes	
	Containers	<ul> <li>3 berths</li> <li>1,000 feet each</li> <li>Marginal wharf preferred</li> </ul>	• Up to 85-acre facility, with mix of stacked and wheeled storage	<ul> <li>Emphasis on refrigerated cargo storage</li> </ul>	
	Breakbulk	<ul> <li>4 berths</li> <li>900 feet each</li> <li>Available working area behind berths for staging</li> </ul>	<ul> <li>Up to 1.6 million square feet of warehouse space</li> <li>Up to 25 acres open storage and staging space</li> </ul>	<ul> <li>Mix of cold storage and dry covered storage as required</li> <li>Open areas for staging and first point of rest</li> </ul>	
	Dry Bulk	<ul> <li>4 berths</li> <li>800 – 1,000 feet each</li> <li>Available working area behind berths for staging</li> </ul>	<ul> <li>Retainage of existing storage for conveyor systems and silos</li> <li>Up to 25 acres of truck-drayed open storage</li> </ul>	<ul> <li>Assumes existing conveyor systems and storage remain</li> </ul>	
	Liquid Bulk Petroleum	<ul> <li>2 Berths dedicated for piped liquid bulk commodities</li> </ul>	<ul> <li>Static storage capacity for up to 1.8 million barrels.</li> <li>Between 30 – 35 acres for storage</li> </ul>	<ul> <li>Assumes capacity improvements would be deter- mined by the operator</li> </ul>	
	Bulk Juice	• 1 Berth	<ul> <li>New storage facility, providing up to 750,000 tons of annual throughput capacity</li> <li>7-10 Acres</li> </ul>		
	Cruise / Ferry	<ul> <li>1 Berth, preferably up to 1,000 feet</li> </ul>	<ul> <li>Terminal building and parking facil- ities</li> </ul>	<ul> <li>Retain opportunity for potential cruise / ferry operations in the future</li> </ul>	

Opportunity Growth Stewardship

Planning modules were used as a tool to assist in visualizing the footprint requirements and organization of the 20-year vision plan. Scaled planning modules were prepared for each of the various seaport operations, providing the facilities necessary to deliver a known annual throughput capacity. The number of modules required to meet the future facility needs were aggregated together and organized on a scaled map of the seaport to assess various development alternatives.

#### Figure 9-6. Dry Bulk Module



Figure 9-5. Container Module



#### Section 9. Facility Needs











Figure 9-11. Cruise Module













SeaPort Manatee – Bagged Salt Super Sacks

# SECTION 10. STRATEGIC DIRECTION

SeaPort Manatee will continue to invest in each of the cargo classes utilizing the port. The port will facilitate growth through strategic infrastructure investments, including strategies to organize and optimize port operations, upgrades to existing facilities to unlock hidden capacity and maximize utility, expansion of covered and open storage areas for containers and breakbulk cargo, development of a dedicated citrus juice facility, development of an intermodal rail terminal, expansion of berth facilities for all cargos, and optimization of port security zones.





SeaPort Manatee's growth trajectories across its mix of cargos form the basis for the port's overall strategic direction.

#### **10.1 Container Terminal Expansion**

The container business is expected to grow up to three times current volumes over the planning horizon and can be expected to continue growth in the ensuing years. SeaPort Manatee plans to expand the operational footprint of its container business with a dedicated container terminal, phased in over time, and providing the requisite operational capacity to delivering uninterrupted service as expansions are implemented.

#### **10.2 Intermodal Rail Service**

As part of its container strategy, SeaPort Manatee plans to expand its hinterland and reach into new markets with by developing intermodal rail service in cooperation with CSX. Intermodal rail service will enable customers to capture the cost advantages offered by rail to reach inland destinations that are less competitive by truck. It is anticipated that a daily service would be developed with the development of an intermodal rail yard on port property, with supporting arrival and departure tracks developed alongside the existing sidings approaching SeaPort Manatee. The intermodal rail yard would accommodate trains up to 2,400 feet, providing up to 67,600 Lifts in annual throughput capacity after 2032.

#### **10.3 Unlock Hidden Capacity**

SeaPort Manatee's facilities were built to meet the forecasted needs of time, and have served the port and its customers well for many years. However, several facilities are unable to deliver full capacity for the demands of today's vessels. With targeted investments, these facilities can be improved to unlock underutilized capacity while expanding available capacity at the same time. Specifically, Berths 4, 6, 8, 10, and 11 can be improved to maximize utilization and unlock hidden capacity.

- Berth 4 The available berth length provided by berths 4 and 5, combined, is currently 1,200 Feet. This length is insufficient to berth two vessels simultaneously, driving down current utilization levels. An extension of up to 600 feet, northward from Berth 4, and 50 feet southward from Berth 5, would provide two berths of 925 length each, enabling capability to berth two 820 LOA vessels simultaneously.
- Berth 6 This berth currently provides a limited apron alongside a vessel, restricting the berth's utility to bulk cargo vessels. By increasing the length and square footage of the apron alongside, Berth 6 could be utilized for a wider range of vessels, increasing the facility's utility and contribution to operational capacity.
- Berth 8 This berth is constrained by vessel operations at adjacent berths 7 and 9. With vessels at these adjacent berths, the effective length of Berth 8 is limited. Unlocking the hidden capacity at Berth 8 is linked to improvements at Berths 10 & 11.
- Berths 10 & 11 Corner The southwest corner of SeaPort Manatee's basin is currently "incomplete." By extending Berth 10 westward, and reconfiguring Berth 11 along the same alignment as Berths 12 and 14, several utilization and capacity benefits would be realized. Specifically, vessels alongside Berth 10 can be positioned further westward, allowing vessels at Berth 9 to position vessels further westward, and unlocking restrictions at Berth 8. Additionally, with the realignment of Berth 11, the utility of combined Berths 11, 12, and 14 improves as 2,160 feet of marginal wharf would be created.

Opportunity Growth

#### **10.4 Segment and De-Conflict Operations**

SeaPort Manatee's growth across its cargo business lines is revealing operational conflicts that were manageable over previous years. With future forecast projections indicating continued growth along all business lines, and with the availability of land for expansion, there is an opportunity to streamline and de-conflict operations for improved efficiency going forward. SeaPort Manatee has the opportunity to create distinct zones for cargo operations, minimizing existing confluences of traffic and operational conflicts.

Strategically, and over time, SeaPort Manatee would create cargo flow zones that are unique for each of the port's major business lines, and align with the following themes:

- **Container Business** concentrating container operations to the south, expanding the container terminal footprint as required, and utilizing the south gate for truck moves.
- **Breakbulk Business** concentrating breakbulk operations within the middle of the port, expanding open and covered storage in Zone B, and utilizing the existing north gate for truck movements
- **Dry Bulk Business** concentrating dry bulk operations to the north and seeking opportunities to minimize unnecessary interchange gate truck moves.
- Liquid Bulk Juice concentrating liquid bulk juice as a hybrid breakbulk operation with onsite juice storage and non-TWIC tanker truck distribution moves.
- Liquid Bulk Petroleum Retain berth operations and liquid bulk petroleum storage at their current locations, and seek opportunities to reduce interchange gate truck moves for inland cargo distribution.

In combination, execution of these strategies would create distinct cargo zones, allowing cargo flows to / from the dock, to / from storage, and to / from gate facilities that avoid conflicts with other cargo classes.

## **10.5 Breakbulk Business Strategy**

SeaPort Manatee's general cargo / breakbulk business line is forecasted to see steady growth over the planning horizon. The business line will require dedicated berths with sufficient space and capacity for truck movements during loading and unloading operations. Storage facilities, including both covered (refrigerated and dry) and open, will be required to meet cargo volume demands.

### **10.6 Onsite Bulk Juice Storage Facility**

SeaPort Manatee's bulk juice business line will see significant growth over the planning horizon. Today, bulk juice imports are directly loaded onto trucks and taken off-site to a remote distribution facility. The vessel discharge operation can take 10-12 days, with the bulk juice vessel occupying a berth over the entire time period. Liquid bulk juice trucks interchange at the North Gate linking gate operations directly with vessel discharge operations, creating inefficiencies. The business lines' current volumes and growth trajectory suggests the time is right for investment in an onsite facility for receiving, storing, and processing bulk juice cargos. A suitable onsite location would provide a buffer for both vessel and inland distribution operations and provide sufficient cargo storage capacity to reduce vessel berth occupancy to a few days. The preferred location would allow for short tanker truck drays during vessel discharge and the potential for installation of future pipelines from the dock to the onsite storage facility.

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#### **10.7 Bulk Cargo Storage Strategy**

Bulk cargos that are currently drayed by truck to storage locations in Zones B and C occupy valuable space for extended periods of time. These spaces could be better utilized for cargos with higher turnovers and outfitted with facilities tailored to meet the specific needs of those cargos. As part of the strategy to concentrate bulk cargos to the north, a suitable location that positions bulk cargos away from more frequent operations will be identified toward the north.

#### 10.8 Minimize Unnecessary Interchange Gate Truck Moves

Today, SeaPort Manatee's security protocols require all trucks and vehicles entering and exiting the port to be processed through interchange gate facilities. All personnel are required to possess a Transportation Worker Identification Card (TWIC) for unescorted access to the facility. As cargo volumes continue to grow, gate traffic will also grow, increasing the need for additional gate lanes, queuing space, and processing personnel.

Strategically, SeaPort Manatee plans to seek opportunities to minimize and eliminate gate moves that are considered unnecessary. Of particular interest are truck moves required for dry bulk cargos, liquid bulk petroleum cargos, and liquid bulk juice cargos. As part of this master plan's strategy to segment and de-conflict operations, the facility location and access points for distribution truck traffic are also considered in terms of reducing interchange gate truck moves.

#### **10.9 Prepare for Cruise / Ferry Operations**

As noted in the market assessment, SeaPort Manatee has a potential opportunity to enter the cruise / ferry market, providing homeport services for cruise vessels and ferry services to and from Cuba. Strategically, SeaPort Manatee will continue to explore these opportunities, consider a mix of alternative approaches, and prepare for the future opportunities. At present, the existing cruise terminal facility, located along berth 9 will be retained as a potential option. However, multiple options will be considered that best meet the needs of the industry in the future.

#### **10.10 Climate Change**

SeaPort Manatee is monitoring the ongoing research on climate change and its potential effects on coastal environments. Recent findings on the topic are presented separately on the next page. From an infrastructure perspective, the common agreement is that ports and coastal communities will need to adopt an adaptive and resiliency-centered approach to future facilities management and development. SeaPort Manatee will use available online tools to consider the potential effects of climate change as part of each project that is developed and address identifiable issues within the contexts of risk-based analysis, adaptive response, and rapid recovery / resiliency. From an operations perspective, SeaPort Manatee will continue to proactively work with partners to identify and implement infrastructure and procedures for mitigating local emissions and risk to coastal hazards. SeaPort Manatee will use available industry research, information from vendors and other ports to identify and implement best practices. For example, the SeaPort is actively working with tenants and utility providers to incrementally test and develop plans for phasing in electric cargo handling equipment and will continue to include required infrastructure in related project development plans.

Stewardship

Opportunity | Growth |

## **CLIMATE CHANGE AND SEA LEVEL RISE STRATEGY**

When addressing climate change in coastal zones the discussion refers primarily to the increase in frequency and intensity of storms, sea level rise (SLR), and changes in intensity and distribution of rainfall events. In early 2022, the National Oceanic and Atmospheric Administration (NOAA) published an updated SLR technical report. The report concluded with four key points:

- Sea level along US coastlines is projected to rise, on average, 1 foot in the next 30 years, which will be as much as the measured rise over the last 100 years.
- SLR will create a shift in coastal flooding over the next 20 years by causing tide and storm surge heights to increase and reach further inland. By 2050, moderate flooding is expected to occur, on average, more than 10 times as often as it does today and can be further intensified by local factors.
- Third, current and future emissions matter. About 2 feet of SLR along the US coastline is increasingly likely between 2020 and 2100 because of emissions to date. Failing to curb future emissions could cause an additional 1.5-5 ft of rise for a total of 3.5-7 ft by the end of this century.
- And finally, continuously tracking how and why sea level is changing is an important part of informing plans for adaptation. The ability to monitor and understand the individual factors that contribute to SLR will allow for tracking sea level changes in a way that has never before been possible. Ongoing and expanded monitoring will be critical as sea levels continue to rise.

In the coastal zone, the impacts of climate change include increased damage from coastal storms, stormwater drainage no longer works during routine high tides (in Florida this is routinely termed "sunny day flooding"), there is an increased frequency of nuisance flooding (i.e., road inundation for routine weather), as well as saltwater intrusion. In addition to these physical impacts, there are societal and financial impacts such as influence on insurance rates and municipal bond ratings, and the funding needed to upgrade critical infrastructure. Private and public entities may face legal burdens and liability if they choose to do nothing or too little to address the risks of climate change.

Part of the challenge is that the science of SLR and climate change is continuously evolving. Historically, projects have been engineered to withstand events with a given probability of occurrence at their time of construction, and with the expectation of failure under more severe conditions. What is observed now is that the extremes in the climate system of the past, can no longer be considered the outer limits of what the current and future climate system can expect. The future requires a resilient approach – one that prepares for the unknown and designs for adaptability.

This is where the principles of resiliency and adaptation come into play. Resilience can be defined as the capacity of individuals, communities, institutions, businesses, and systems to survive, adapt, and grow in response to chronic stresses (e.g. sea level rise) and acute shocks (e.g. hurricanes). This is a continuous feedback look in which adaptation is key to addressing large unknowns. A multi-layered approach to coastal resiliency is required. There is generally no single solution, but rather multiple lines of defense that can reduce risks within the coastal zone, including shorelines, upland facilities, inland coastal waters, roadways, drainage systems, and other coastal infrastructure.

Opportunity Growth Stewardship



# SECTION 11. 20-YEAR VISION PLAN

SeaPort Manatee's vision plan for the next 20 years will double existing operational capacity, capture market opportunities with the introduction of new services and facilities, optimize existing facilities and operations, reduce operational conflicts and unnecessary truck gate moves, and position the port to respond to opportunities, including the potential for cruise and ferry services.



A 20-year vision for SeaPort Manatee was prepared to set the roadmap for development of 5-year and 10-year interim development plans. The benefits of a 20-year outlook include:

- · Capturing the longer-term perspectives on cargo growth opportunities, allowing for potential variability in successful cargo capture over time
- Ensuring planned facilities to be executed in the early years are positioned in preferred locations and do not conflict with the execution of future development in later years
- Maximizing the utilization of infrastructure components serving multiple cargo types, with phased development for dedicated facilities as required
- Providing for flexibility in project execution, responding to market opportunities as they are presented

The proposed 20-Year Vision Plan is presented in Figure 11-2. The 20-Year Vision focuses on growth in the following major cargo types in order of priority projects.

- Containerized Cargo with Intermodal capabilities
- Breakbulk / General Cargo
- Liquid Bulk Juice Cargo
- Dry Bulk Cargo
- Liquid Bulk Petroleum Cargo

The 20-Year Vision plan is primarily expansion-based, with selected retro-fit projects that unlock hidden capacity. Much of the development plan expands operations into unused or underutilized areas of the port property and seeks to limit impacts to existing facilities and operations. Figure 11-1 provides an illustration of the project focus areas as the plan is executed over time.



facility expansion, adding capacity through optimization and investment, and upgrading only selected infrastructure components to unlock hidden capacity.



Figure 11-1. Project Focus Areas Over Time

#### Improvements

Opportunity Growth Stewardship Section 11. 20-Year Vision Plan







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- 1 Berth 10 / 11 Corner Alignment
- 2 Berth 4 Extension (600-Feet)
- (3) Berth 2 & 3 (2,000-Feet)
- 4 Berth 1 (1,000-Feet)
- 5 Drop Trailer Parking
- 6 Open Cargo Handling Area
- 7 Open Cargo Handling Area
- 8 Berth 6 Fill-In
- 9 Container Terminal
- (10) Berth 14 Extension
- Maintenance Yard
- (12) Warehouse 12 (150,000 SF)
- 13 New Warehouse (200,000 SF)
- (14) Open Storage Area
- (15) Bulk Juice Faciilty
- 16 Relocated Dry Buk Storage
- 17 New Petroleum Access Road
- (18) Intermodal Container Transfer Facility
- Expanded Rail Marshalling Yard
- 20 Zone C Access Improvements
- 21 North Warehouse / Open Storage Complex
- 22 Reeder Rd. Ext.
- 23 South Gate Expansion
- 24 Drainage Ditch Realignment
- 25 Office Building
  26 TWIC Zone Realignment (Not Shown)

The 20-Year Vision Plan delivers a number of key benefits for SeaPort Manatee.

- Provides the projected capacity requirements for vessel berthing, cargo handling operations, and cargo storage.
- Segments cargo types and enables the creation of discrete cargo zones, reducing operational conflicts between the port's various cargo types.
- Makes use of existing assets as much as possible, and limits re-investment to select assets to improve utility and unlock capacity.
- Enables deployment of new services to increase SeaPort Manatee's market reach for containerized cargo.
- · Provides onsite storage and processing of bulk juice cargos, reducing vessel discharge timeframes, while increasing berth utilization for other cargos and available capacity.
- · Provides the opportunity for efficient drayage of bulk cargos to adjacent storage locations that are away from other operations.
- · Provides the opportunity to reduce the number of unnecessary interchange gate truck moves.
- Provides for remote cargo staging and warehousing / distribution adjacent to the port.
- Enables phased development that is responsive to market demands and cargo volume growth.
- · Positions SeaPort Manatee to explore the potential of cruise / ferry services and design an approach to meet the unique characteristics of these market opportunities.

Among the benefits listed, a key advantage of the 20-Year Vision is the evolution of delineated cargo zones at SeaPort Manatee. The Vision captures the goals of de-conflicting operations and reducing unnecessary interchange gate moves by taking advantage of expanding the port's footprint. This results in four major improvement features:

- Container Zone Container operations and traffic flows are concentrated toward the south.
- Breakbulk / General Cargo Zone Breakbulk / general cargo operations are concentrated within the middle of the port.
- Bulk Cargo Zone Dry bulk and liquid bulk facilities are concentrated toward the north.
- Reduced Bulk Cargo Gate Moves Non-TWIC access to bulk cargo areas for over-the-road trucks, reducing unnecessary interchange gate moves as shown in Figure 11-3.

The following sections provide an overview of the key features incorporated in the 20-Year Vision Plan.

Section 11. 20-Year Vision Plan

Figure 11-3. Future Delineated Cargo Moves



#### 11.1 South Area

The South Area focuses on serving SeaPort Manatee's containerized cargo business. The Vision builds off of existing road, gate, berth, and cargo storage infrastructure, provides for upgrades to selected berth assets, and expands storage and berth capacity to meet forecast projections.

The South Area will retain existing warehouse and cargo handling facilities and will focus on expansion of three key features.

- Container Terminal
- Intermodal Container Transfer Facility
- South Gate Expansion

#### 11.1.1. Container Terminal

The 20-Year Vision Plan provides for significant expansion of container operations at SeaPort Manatee. The plan calls for development of an 80+ acre grounded storage container terminal, located toward the south of SeaPort Manatee's footprint. The facility is envisioned to be fitted with 3,000 feet of marginal wharf, equipped with electrified mobile harbor cranes for container handling operations, as shown in Figure 11-4.

The full 3,000-foot length of berth would be realized by reconfiguring Berth 11 to align with existing Berths 12 and 14, and then building an extension at the south, which would be identified as Berth 14 Extension. The Berth 11 re-alignment would provide up to 548 feet of berth along the alignment, and the Berth 14 Extension would provide up to 850 feet. When fully complete, the marginal wharf serving the container terminal would provide 3,000 feet of linear berth, maximizing vessel berthing flexibility and promoting increasing berth occupancy and utilization levels.

#### Figure 11-4. Container Terminal



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#### Section 11. 20-Year Vision Plan
The storage area is envisioned as a reach stacker, grounded storage, operation, and outfitted with a mix of reefer racks and dry container storage areas. The concept plan shown in Figure 11-5 shows that reefer racks could be developed throughout the container terminal storage area, with pre-planned electrical supply conduits as the refrigerated container business requires. As required, phases of the terminal would accommodate storage of dry containers in the interim, and then converted to reefer racks in the future.

The container terminal would be accessed by truck over the existing drainage ditch at two locations from South Dock Street. A shoreside access point would be located at the west end of warehouse 11, and a landside access point would be provided at the east end of the same warehouse. It is envisioned that arriving and departing truck traffic would utilize the landside access point, and intra-port container movements would utilize the shoreside access point. Radiation Portal Monitors would be placed at the landside access point, southeast of warehouse 11.

#### Figure 11-5. Container Terminal Cross Section

The container terminal is fitted with a dedicated maintenance facility at the southeast corner and would be accessible by a perimeter road located along the easternmost edge of the terminal. Approximately 1.6 acres of property could be reserved for development of the maintenance facility.

At full buildout, the container terminal is estimated to deliver in excess of 450,000 TEUs in sustainable annual throughput capacity. The facility would be phased in over time, as volume grows.

### **CONTAINER TERMINAL**

At full build-out, SeaPort Manatee's container terminal will encompass up to 80 acres, provide 3,000 feet of marginal wharf, and deliver over 450,000 TEUs in sustainable throughput capacity.



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#### 11.1.2. Intermodal Container Transfer Facility

Responding to container market opportunities and increasing SeaPort Manatee's hinterland, the 20-Year Vision contemplates development of a near-dock intermodal rail terminal. The intermodal rail terminal would provide rail service for inbound and outbound container traffic utilizing rail transportation.

The proposed intermodal rail terminal is planned for development in Zone C, an open area that is currently utilized for truck-draved dry bulk storage. The facility would encompass roughly 19 acres of property, and oriented to accommodate loading tracks of 1,200 feet in length, turnouts, and an approach track. Two pairs of nominal 1,200-foot loading tracks are contemplated, providing service for trainsets up to 2,400 feet in length. It is envisioned that trainset arrivals and departures would be accommodated simultaneously - one pair of loading tracks would be available for spotting arriving rail cars, while the second pair of loading tracks would provide for departing rail cars as shown in Figure 11-6.

The terminal would provide both grounded and wheeled storage options for containers up to 53-foot in length. Grounded containers are positioned in 4-wide stacks parallel to the loading track bundles, and wheeled containers are positioned alongside the terminal's perimeter in a herringbone parking arrangement. The facility provides up to 1,330 TEUs in static storage capacity as shown in Figure 11-7.

Two new arrival and departure tracks would be provided alongside the existing rail sidings, parallel to the CSX mainline that is located adjacent to U.S. 41. The tracks would be utilized for receiving arriving trainsets, breaking the rail cars into nominal 1,200-foot segments, spotting the rail cars onto the loading tracks, and reassembling trainsets for departures.

Figure 11-6. Intermodal Rail Terminal



#### **INTERMODAL CONTAINER TRANSFER FACILITY**

Stewardship

A near-dock ICTF will extend SeaPort Manatee's market reach, providing up to 67,600 intermodal lifts per year. The ICTF will also reduce average container dwell times and interchange gate moves, adding to SeaPort Manatee's capacity.

Opportunity Growth

#### Section 11. 20-Year Vision Plan

It is envisioned that the intermodal terminal would operate as a neardock facility, meaning inbound and outbound containers would be processed at interchange gates upon exit and entry to the container terminal. Truck access to the intermodal terminal would be provided at two locations. Containers that are moved between the container terminal and the intermodal yard would be provided with access from Reeder Road, north of the existing SeaPort Manatee Intermodal Center. A second access point would be provided east of the intermodal terminal, enabling trucks to enter and exit the facility from South Dock Street, and either depart to US 41, or enter the port through the Port's South Gate, located along South Dock Street as shown in Figure 11-8.

The Intermodal Rail Terminal is planned to provide daily service for arriving and departing trains. With the potential for up to 80 lifts per train (both inbound and outbound), the facility is estimated to provide up to 67,600 intermodal lifts per year.

Opportunity

#### Figure 11-8. Intermodal Rail Terminal Access Points



Stewardship



Growth

#### Figure 11-7. Intermodal Rail Terminal Cross Section

#### 11.1.3. South Gate Expansion

The existing South Gate would become the principle point of entry and exit for containerized cargos.

As the container business grows, the South Gate would require expansion to accommodate increasing interchange gate transactions to the terminal. The expansion would involve the development of additional truck lanes and queueing space. It is estimated that up to five lanes may be required to accommodate future traffic flows, configured with at least two reversible lanes for peak flows. The expansion would be toward the north side of the existing gate complex, allowing for unencumbered access for project cargos that utilize South Dock Street.

### **11.2 North Area - Bulk Cargos**

SeaPort Manatee's north area, consisting of the North Pier, the tank farm area, and undeveloped properties between North Dock Street and Piney Point Road will become the port's primary bulk cargo handling area. Cargos that will be stored include truck-drayed dry bulk commodities, liquid bulk petroleum, and liquid bulk juice. The vision includes a strategy to reduce unnecessary interchange gate moves by providing non-TWIC access points for over-the-road trucks for bulk cargos. The vision includes an expansion of the North Pier that will improve existing berth lengths, add new berths, and ultimately provide up to 3,600 feet of expanded berthing capacity.

#### 11.2.1. North Pier Expansion

SeaPort Manatee's North Pier will undergo a renaissance of sorts to maximize the future utility and operational capacity of the landmass. The North Pier, currently home to mixed operations supporting bulk, breakbulk, and liquid bulk cargos will be expanded to increase operational space, be upgraded with improvements to existing berths, and be provided with new berths to efficiently serve growing breakbulk and dry bulk cargos. The North Pier Expansion will include the following:

- Berth 6 upgrades to increase the operational length of the apron • 600-foot extension to Berth 4 to the north
- Expansion of the North Pier's operational footprint to the north
- 2,000 feet of new berth along the Pier's realigned north edge
- Future development of 1,000 feet of new berth adjoining the Pier's new north edge.

The North Pier is envisioned to provide a true multi-purpose facility, sized to enable separation and staging of both bulk and breakbulk cargos, and provided with multiple access points to efficiently move cargo to adjacent storage facilities. When complete, this multipurpose facility will have more than 20 acres of flexible open area, be surrounded on three sides with full length / fully operational multipurpose vessel berths, have multiple access points for efficient drayage to adjacent storage areas, and retain its existing stock of bulk handling conveyance systems and covered storage facilities as shown in Figure 11-9.





Figure 11-10. North Bulk Operations Direct Access to Berth



# 11.2.2. North Bulk Operations Area

Adjacent to the North Pier and located between North Dock Street and Piney Point Road, will be SeaPort Manatee's primary bulk cargo operations area. Truck-drayed bulk cargos, liquid bulk petroleum, and bulk juice will be accommodated within this area, encompassing approximately 90 acres.

Over time, this area will operate in conjunction with the expanded North Pier. The North Bulk Operations Area includes multiple features that are designed to increase operational efficiencies, while adding capacity. The key features include:

- Relocated Bulk Storage Area
- A new Bulk Juice Storage and Processing Facility
- Reserved space for Liquid Bulk Petroleum Storage
- New access roads for other-the-road trucks, serving the various bulk cargos
- Temporary gated berth access when required for vessel operations

Initially, truck-drayed dry bulk commodities will be relocated towards the north, adjacent to Piney Point Road, freeing up space in Zones B and C for general cargo and intermodal operations. This area provides approximately 25-acres of open storage for extended-dwell bulk commodities and is positioned away from other port operations. In the future, this area would have direct access to the expanded berth facilities to be developed at and adjacent to the North Pier, minimizing drayage during vessel operations as shown in Figure 11-10.

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#### 11.2.3. Relocated Bulk Storage

Dry bulk commodities that are currently stored in open areas within Zones B and C will be relocated to the north, along Piney Point Road. The area provides approximately 25 acres of open storage potential and would have close proximity to the expanded North Pier, and future new Berth 1. It is envisioned that the storage area would be outside of the TWIC zone for over-the-road truck access, and accessible to the North Pier through a temporary guarded gate during vessel operations.

#### 11.2.4. New Bulk Juice Facility

A new bulk juice storage and processing facility will be located within the triangular parcel adjacent to North Dock Street, and east of the existing petroleum tank farm. This facility is envisioned to be accessible by tanker truck from North Dock Street during vessel operations, and accessible by over-the-road tanker trucks from a new access road. The facility would provide up to 750,000 metric tons of annual throughput capacity. It is envisioned that the facility would be built to suit by a future tenant, with SeaPort Manatee providing site preparation and utilities stub outs.

### 11.2.5. Existing Petroleum Tank Farm

The existing petroleum tank farm will remain at its current location, however additional space will be retained for construction of new tanks as required by the operator. Approximately 35 acres of property will be reserved for the potential full build-out of the tank farm, much of which can be accommodated within the existing lease footprint.

A new access road from Piney Point Road will be reserved for future over-the-road trucks. It is envisioned that a non-TWIC corridor can be provided for over-the-road tanker trucks to access the facility. The details of the plan would require further study and coordination with the tank farm operator and port security as part of a TWIC zone realignment study.

# 11.2.6. North Bulk Area Access Roads

Given the nature of the bulk cargos that will be handled in this area, it is envisioned that much of the area will be accessible by over-the-road trucks though a new roadway network that bypasses the North Gate and is accessed from Piney Point Road. The access road network shown in Figure 11-11 would reduce the burden of interchange gate transactions by a significant number, reducing the need for expansions at the North Gate. It is envisioned that truck-drayed dry bulk cargo, liquid bulk petroleum, and liquid bulk juice tanker trucks would have unrestricted access to loading facilities that are designed outside of the TWIC zone. The details of the roadway network and resultant non-TWIC access opportunity will be studied as part of a TWIC Realignment Strategy, discussed further below.

# 11.2.7. Temporary Gated Berth Access – North Pier

Operational efficiency of truck-drayed dry bulk cargos discharged at the North Pier, and stored at the Relocated Bulk Storage area would be accommodated by installation of a temporary truck gate facility. The facility is envisioned as a swing gate that is staffed by security during vessel discharge operations. The facility would be located north of the existing tank farm, and behind the future Berth 1 operations area, and enable efficient drayage of bulk commodities as required. Incorporation of this temporary gate concept will be studied as part of a TWIC Zone Realignment study.





#### **11.3 Middle Area – Breakbulk Operations**

The middle area of SeaPort Manatee will become the core breakbulk / general cargo handling area. Breakbulk cargos would make use of the existing berths within the port's basin, including improvements at Berth 6, and the expanded western edge of the North Pier, making use of Berth's 4 and 5 as available.

#### 11.3.1. Zone B Warehouse Expansion

Zone B, as shown in Figure 11-12, will be developed to include both covered and open storage facilities. The Vision Plan contemplates two new warehouses, providing up to 350,000 square feet of covered storage space between them. Approximately 18 acres of open storage and staging areas will be provided adjacent to the warehouse facilities. The covered storage facilities may be developed as combined dry cargo and cold storage. Alternatively, a cross dock processing facility may be considered as part of the warehouse development.

The middle area will be improved with a roadway network for efficient vehicle access from South Dock Street, utilities and lighting as required.

#### 11.3.2. New North Warehouse Area

Breakbulk storage operations will be augmented with off-site covered and open storage at the former fish hatchery, located adjacent to County Line Road. The area, as shown in Figure 11-13, can provide up to 400,000 square feet of covered storage for warehousing and distribution operations, and an additional 15 acres of open storage and truck staging. The proposed facility is located outside the TWIC Zone, and would be accessible from U.S. 41 along County Line Road and from the port with an extension of Reeder Road to the north.







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#### Figure 11-14. Warehouse Cross Sections



### WAREHOUSES

Warehouse facilities are planned as scalable units with elevated fin-ished floors, multiple truck bay doors, and drive-through access. Warehouse facilities may be refrigerated or dry.



## **11.4 TWIC Zone Realignment**

The Vision Plan contemplates a number of future operations that provide benefits to the port when security requirements are reconsidered to enable over-the-road trucks and personnel unencumbered access to the facilities. Specifically, the following operations would benefit by placing facilities outside the TWIC zone.

- Intermodal Rail operations
- Dry bulk storage operations
- Scrap metal storage operations
- Liquid Bulk Petroleum tanker truck loading operations
- Liquid Bulk Juice tanker truck loading operations

The Vision Plan organizes these operations and facilities to take advantage of a TWIC Zone Realignment Strategy. The strategy proposes moving the TWIC Zone to align with Reeder Road and North Dock Street. The graphic below provides a preliminary schematic of a proposed TWIC line. The benefits include a significant reduction in unnecessary interchange gate moves, a reduction in the secured area's perimeter, and increased efficiency in over-the-road truck loading.

A number of alternative TWIC Zone perimeter lines may be considered, and will be studied in cooperation with SeaPort Manatee's security as part of a TWIC Zone Realignment Study.

The port will continue to proactively identify the TWIC zone alignment to maximize efficient operations.

## **11.5 Intergovernmental Coordination**

A critical part of implementing SeaPort Manatee's plan and maximizing positive economic impacts for the United States economy is through coordinated implementation of the Master Plan's vision and strategies with federal, state and local agency partners. The primary modes for coordination are through individual briefings, courtesy reviews of draft plans and policies, applying for required permits, applying for grant funds to implement synergistic strategies included in local, state and federal plans.

#### **TWIC ZONE REALIGNMENT**

Realignment of the TWIC zone will optimize near-dock intermodal rail operations, reduce unnecessary interchange gate moves for bulk cargos, and enable access to currently restricted areas.

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#### Figure 11-15. Proposed TWIC Zone Perimeter



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# SECTION 12. CAPITAL PROJECTS

SeaPort Manatee's master plan update identifies more than 20 overarching capital projects to be executed over time. Together, the identified capital projects will deliver the operational improvements, capacity improvements, and new services to enable capture of the addressable market opportunities.





The SeaPort Manatee Master Plan considers a holistic vision for future port facilities, encompassing 20 years. The Vision provides the strategic roadmap and direction for incremental capital development projects to be executed over the planning horizon. A total of 26 capital projects have been identified which are summarized in the following table.

#### Table 12-1. Summary of Capital Projects

No.	Project Title	Purpose and Benefits
1	Berth 10 / 11 Corner – Align- ment	<ul> <li>Unlock capacity at Berth 8</li> <li>Improve traffic flow and operational area behind berth 11</li> <li>Marginal wharf expansion, aligning with berths 12 and 14</li> </ul>
2	Berth 4 Exten- sion (600-Feet)	<ul> <li>Unlock capacity at both berth's 4 and 5</li> <li>Provide 1,800 feet of flexible marginal wharf along berths 4 and 5</li> <li>Maximize utility for breakbulk and bulk cargos</li> </ul>
3	Berths 2 & 3 (2000-Feet)	<ul> <li>Provide dedicated berths for bulk cargos</li> <li>Provide needed additional berth capacity for full 20-year cargo demands</li> </ul>
4	Berth 1 (1000- Feet)	<ul> <li>Provide future flexible multipurpose berth operations</li> <li>Potential for future cruise / ferry operations</li> </ul>
5	Drop Trailer Parking	<ul> <li>Provide for needed space to accommodate trailer staging outside of the interchange gate</li> </ul>
6	North Pier Open Cargo Area	<ul> <li>Provide space for cargo staging and first point of rest</li> <li>Enable separation of bulk and breakbulk cargo operations</li> </ul>
7	Berth 1 Open Cargo Area	<ul> <li>Provide space for cargo staging and first point of rest</li> </ul>
8	Berth 6 Fill-In	<ul> <li>Enable utilization of berth for full breakbulk operations</li> <li>Unlock hidden capacity of existing asset.</li> </ul>

No.	Project Title	Purp
9	Container Terminal Expan- sion	<ul> <li>Provides needed operations</li> </ul>
10	Berth 14 Exten- sion	<ul> <li>Provides future be ations</li> <li>Enables three 1,0 marginal wharf</li> </ul>
11	Maintenance Facility	• Provides for the s of the expanded of
12	Warehouse 12 (150,000 SF)	Provide needed c
13	New Zone B Warehouse (200,000 SF)	Provide needed c
14	Zone B Open Storage Area	Provide needed c
15	Bulk Juice Facility	<ul> <li>Provide onsite storiute product</li> <li>Reduces truck dravitation</li> <li>Increases overall proposition of Search</li> </ul>
16	Relocated Dry Bulk Storage	<ul> <li>Frees up storage</li> <li>Captures operation Area</li> <li>Reduces interchal</li> </ul>
17	New Petroleum Access Road	Reduces intercha
18	Intermodal Container Transfer Facility	<ul> <li>Expands SeaPort market reach for o</li> <li>Reduces cargo do</li> <li>Reduces intercha</li> </ul>
19	Expanded Rail Marshalling Yard	<ul> <li>Provides for stagi modal trains</li> </ul>

Opportunity

Growth

#### Section 12. Capital Projects

#### pose and Benefits

- storage space for container
- erth capacity for container oper-
- 000 foot berths along a 3,000-foot
- specialized maintenance needs container terminal operations
- covered storage capacity
- covered storage capacity
- covered storage capacity
- orage and processing of bulk
- ayage and vessel servicing time operational efficiency and value aPort Manatee for this cargo
- space within Zones B and C onal efficiency with North Pier
- ange gate truck moves
- ange gate truck moves
- t Manatee's hinterland and container traffic
- well times
- ange gate truck moves
- ing, making, and breaking inter-

No.	Project Title	Purpose and Benefits
20	Zone C Access Improvements	<ul> <li>Provides access for Intermodal moves from container yard</li> <li>Provides public access to SeaPort Manatee Inter- modal Center outside of the TWIC Zone</li> </ul>
21	North Ware- house / Open Storage Complex	<ul> <li>Provides needed covered and open breakbulk cargo storage space</li> <li>Enables over-the-road truck access outside of the TWIC Zone</li> </ul>
22	Reeder Road Extension	<ul> <li>Provides port access to the New North Ware- house / Open Storage Complex</li> </ul>
23	South Gate Expansion	<ul> <li>Provides dedicated container truck access</li> <li>Minimizes gate moves at the North Gate</li> <li>Minimizes traffic conflicts within the port</li> </ul>
24	Drainage Ditch Realignment	<ul> <li>Frees up space for development of additional gate lanes</li> <li>Enables development of Zone C Access Improve- ments</li> </ul>
25	Office Building	<ul> <li>Provides for additional office space as required for tenants and port operations</li> <li>Frees up near-dock space currently used for office facilities</li> </ul>
26	TWIC Zone Realignment	<ul> <li>Reduces perimeter of secured area</li> <li>Reduces unnecessary interchange truck gate moves</li> <li>Enables unencumbered access to facilities that do not need to be inside the TWIC Zone</li> </ul>

# **12.1 Project Descriptions**

Within the following sections, each of the major projects to be executed are described. The descriptions provide an overview of the project, the intended goals, objectives, and expected outcomes in terms of performance or operational enhancement.

# 12.1.1. Berth 10 Extension and Berth 11 Realignment / **Corner Improvement**

The unfinished corner of Berths 10 & 11 represents an opportunity to accomplish several objectives, including increasing workable berth lengths, expanding apron areas, and maximizing the marginal berth line for container operations at berths 12 and 14. The project involves removing the existing "kink" between berths 11 and 12, moving the Berth 11 edge to align with berths 12 and 14, and then extend toward the north for approximately 548 feet. As part of the project, Berth 10 would be extended toward the west to terminate at newly aligned Berth 11. The project would involve construction of marine structures to improve both Berths 10 and 11 and backfill of material. When complete, Berth 10 would be extended approximately 408-feet to the west. The Berth 11 alignment would be rotated counterclockwise approximately 14-degrees at the existing Berth 11 and Berth 12 intersection and extended to intersect the Berth 10 Extension. The Berth 11 Realignment would provide approximately 562-feet contiguous berth.

Combined, the project involves approximately 970 feet of berth-line development, and creation of approximately 1-acre of new working area behind the berth-line.

When complete, the Berth 11 Realignment would provide SeaPort Manatee with approximately 2,150-feet of marginal wharf along Berths 11, 12, and 14, and shift vessel positioning along berths 9 and 10 to reduce impacts at Berth 8.

#### 12.1.2. Berth 4 Extension

Berth 4 currently serves as a mixed-use berth, handling dry bulk, breakbulk, project cargos, and providing temporary lay berth services. The berth is currently approximately 600 feet in length, and when combined with Berth 5, which is also 600 feet in length, completes a marginal wharf of 1,200 feet in length.

The Berth 4 Extension Project would provide an additional 600-feet of berth length toward the North, and along the same alignment as the current Berth 4 and 5 alignments. When complete, the Berth 4 Extension would provide 1,800 feet of marginal wharf, maximizing the utility of both Berths 4 and 5 for a wide range of cargo vessels.

#### 12.1.3. New Berths 2 and 3

Following completion of the Berth 4 Extension, the opportunity exists to furnish the north edge of the existing Bulk Handling Pier with New Berths 2 & 3. The berth alignment would commence at an approximate 90-degree angle from the northward terminus of the Berth 4 Extension and extend Eastward for 2,000 feet toward the existing shoreline, providing two new berths of 1,000 feet each. The project would involve construction of the wharf structure, assumed to provide a 100-foot apron, land reclamation of approximately 13.3 acres behind the wharf apron, and dredging to 40-feet for the berth.

Completion of this project would expand the operational area of the North Pier for cargo staging and temporary point of rest, and provide an additional 2,000 feet of multi-purpose berth length for dry bulk and breakbulk operations.

#### 12.1.4. New Berth 1

Following completion of New Berths 2 & 3, New Berth 1 is planned along an alignment commencing from the eastern terminus of New Berth 2, and generally running along a northeastern alignment for 1,000 feet toward Piney Point, and the northwestern end of Piney Point Road. The project would include construction of the wharf structure, excavation and dredging to 40 feet, and surface treatments to provide up 250 feet of working area behind the berthing line.

Completion of the project would provide SeaPort Manatee with a multi-purpose berth which would principally be used for bulk cargos.

#### 12.1.5. Expanded Drop Trailer Lot

The Expanded Drop Trailer Lot would add approximately 5 acres of paved parking space for over-the-road tractor trailers. The Expanded Drop Trailer Lot would be located east of the Reeder Road Extension and adjoin with the existing Drop Trailer Lot to provide a contiguous surface area. A single access point from the Reeder Road Extension will be provided.

Completion of the drop trailer lot will provide SeaPort Manatee with operational space needed to accommodate cargo consolidation and cross dock operations.

## 12.1.6. Open Cargo Handling Area - Berths 2 and 3

Behind the New 100-foot-wide berth apron for New Berths 2 & 3, the area between the existing shoreline and the new berth apron would be filled as part of the Berth 2 & 3 construction project. The Open Cargo Area would be upgraded to provide flexible cargo handling service for a mix of cargo types. The area may be fully paved, partially paved, fitted with bulk cargo conveyance systems, built up with covered storage facilities, and fitted with underground utilities as required. The specifics of the full build-out would be retained for future definition. For this master plan, we assume the area is 50% paved for the purpose of open storage and flexible cargo handling.

When complete, this area will expand SeaPort Manatee's North Berth surface area, allowing for pre-staging and first point of rest operations for various cargo types.

### 12.1.7. Open Cargo Handling Area - Berth 1

Behind the 100-foot-wide berth Apron for New Berth 1, approximately 15 acres of open flexible work area will be retained. For purposes of this master plan, we assume approximately 50% would be paved. The area could be used for mixed cargo handling, including neo-bulk, breakbulk, and dry bulk, providing additional operating capacity for SeaPort Manatee.

### 12.1.8. Berth 6 Fill-in

Berth 6 will be converted to a flexible multipurpose berth by expanding the length of the berths apron both towards berth 7 and the southern terminus of berth 5. The project would add 250 feet of length to the berth's apron and expand the usable surface area by 12,500 square feet.

When complete, this project will capture hidden operational capacity that is offered by the berth's presence and location. The multipurpose berth facility would be usable for a variety of cargo types.

#### 12.1.9. Container Terminal

Containerized cargo is anticipated to see significant growth over the course of the planning horizon. The master plan provides for approximately 80 acres of container storage space to be developed in phases as required. The planned operating arrangement is with reach stacker, providing stacked storage arrangements for both refrigerated and dry containers. The facility is planned in a uniform grid layout to maximize flexibility in infrastructure to be developed. The grid pattern provides for a combination of stacked refrigerated containers and stacked dry containers within the same pattern throughout the storage yard. The overall mix of dry versus refrigerated container storage areas would be determined over time. For purposes of this master plan, the following key features are included as part of the planned container yard development.

- Heavy duty pavements for reach stacker operations
- Stormwater management facilities
- Underground utilities for power and fire water
- 4-wide by 3-high reefer storage racks, and associated power supply
- High mast lighting

For cost and capital planning purposes, the container terminal is programmed in 10-acre phases. Development costs will vary per acre due to the potential need for environmental mitigation within a portion of the planned footprint. In addition, development costs may vary depending on the intensity of refrigerated container storage racks vs. dry storage areas that may be developed.

At full completion, the container terminal storage area will provide in excess of 450,000 TEU of sustainable annual throughput capacity.

#### 12.1.10. Berth 14 Extension

As the container business continues to grow, additional container berth length will be required to balance the throughput capacity that can be accommodated within the available future container terminal footprint. The Berth 14 Extension is planned to extend the existing container berth alignments southward, ultimately delivering 3,000 feet of contiguous marginal wharf along the three berths (realigned Berth 11, Berth 12, and Berth 14). Approximately 850-feet of container berth extension will be required, with associated dredging to extend the navigable access channel and adjacent berth pockets. Key features would include:

- Approximately 850-Foot Berth Extension with 100-foot apron
- Loading capability to support mobile harbor crane loads
- Approximately 340,000 square feet (approximately 8 acres) of dredging to -40 feet
- Removal / relocation of existing shoreline protection
- Potential wetlands / environmental mitigation requirement

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#### 12.1.11. Maintenance Yard

As the container business and associated infrastructure assets grow, a dedicated maintenance facility will be required to support container operations. The maintenance facility would be located at the southeast end of the planned container terminal footprint and encompass between 3-5 acres. The facility would be paved with heavy pavement, outfitted with clear span steel buildings providing between 5,000 and 10,000 square feet of covered workspace as required, provisioned with necessary utilities, including environmental controls (such as an oil water separator), open maneuvering space, and supervisor office space. The facility would be accessed by a dedicated roadway located at the eastern boundary of the planned container terminal. The roadway may be constructed in advance of the completed container terminal footprint, and ultimately incorporated as a dedicated lane within the container terminal.

# 12.1.12. New Warehouse 12 (150,000 SF)

Project 12 commits an approximate 13-acre parcel within Zone B and adjacent to existing warehouse 10 for development of a 150,000 SF warehouse with adjoining paved truck staging, maneuvering and temporary storage. The project further includes the construction of a rail spur along the west side of the new warehouse structure, providing approximately 300 feet of spur line from a new turnout to be installed. Key features of the project include:

- 150,000 Square foot warehouse
  - □ Predominately dry storage (75%)
  - $\square$  Partial cold storage (25%)
  - Elevated warehouse floor, truck loading doors
- 300-350 feet of rail spur, with turnout
- Rail loading dock
- 8.5 9.0 Acres of paved truck parking, staging, and storage

When complete, the project will contribute to the breakbulk / general cargo storage capacity needed at SeaPort Manatee.

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#### 12.1.13. New Warehouse (200,000 SF)

A new warehouse structure, and surrounding vehicle maneuvering, parking, and truck loading doors will be provided adjacent to and east of the new Warehouse 12. The facility may be of various sizes, and may be configured as a cold storage, dry or combination warehouse, or a cross-dock / transload facility. For the purposes of this master plan, a steel structure that is 800 feet by 250 feet in footprint, providing 200,000 square feet of covered storage is assumed. The conceptual warehouse would have an elevated floor, be accessed by ramps at both ends, and would be fitted with truck loading doors spaced at maximum 30-foot intervals along both sides of the warehouse's length. The final design features and specifications will be determined in the future. The total area of development is approximately 12 acres.

When complete, this facility would further contribute to the breakbulk / general cargo storage capacity needed at SeaPort Manatee.

#### 12.1.14. Open Storage Area

The existing open storage area located within Zone B will be retained as open storage. The area is approximately 12 acres, and the majority of the area is currently paved. For this master plan, no significant upgrade projects are considered. However, the area may be considered for potential upgrades in the future. Such upgrades may include surface grading and paving, drainage utilities and lighting.

### 12.1.15. Bulk Juice Storage Facility

A new bulk juice storage facility is proposed to support discharge, processing, and handling of bulk citrus juice. The facility is likely to be located on the nirth side of the port. It is assumed that the land parcel would be leased to a private operator for development of the facility. For the purposes of this master plan, it is assumed most of the facility would be developed by the private sector tenant to suit the tenant's needs.

The costs to prepare the area for tenant development would include:

- Clearing and Grubbing
- Site Grading
- Utilities Stubs
- Perimeter Fencing and road access points

When complete, this project will provide onsite storage operational improvements for bulk concentrated juice cargos. The project will enable reduced time at dock for bulk juice vessels, increasing berth availability and operational capacity at the dock.

# 12.1.16. Relocated Dry Bulk Storage

Dry Bulk Storage that is currently taking up space within Zone B and C would be relocated in the future alongside Piney Point Road. The dedicated dry bulk storage area is approximately 24 acres in area and is currently wooded. The project would involve clearing and grubbing, construction of a perimeter fence, a swing-gate access point to the North Pier for cargo drayage and could potentially allow for future deployment of dry bulk conveyance systems from New Berths 1, 2 or 3. The project would also consider deployment of temporary guarded gate facilities to access berths 1, 2 and 3 during periods of vessel discharge.

When complete, the project will free up open storage space in Zones B and C for breakbulk open and covered storage facilities, and development of intermodal rail services.

#### 12.1.17. New Petroleum Access Road Network

A new access road network will be constructed to support non-TWIC vehicle access to facilities that do not require TWIC card access. The contemplated roadway network envisions a new intersection point along Piney Point Road, providing access to the existing petroleum tank farm from the north and east, and from outside the TWIC area. In addition, the roadway network would provide non-TWIC access to the new concentrated juice facility, and potentially access to the new Berth 1 open cargo handling area, which would be provided with a temporary guarded gate access point.

The roadway network assumes a standard two-lane road cross section with a 50-foot right-of-way clearance. The length of roadway to be built is estimated at between 0.75 miles and up to 1.5 miles depending on various operating arrangements that have been considered. For purposes of this Master Plan, approximately 1 mile of roadway and intersection construction is assumed.

# 12.1.18. Intermodal Container Transfer Facility

SeaPort Manatee's container growth strategy includes provision of inland transportation by intermodal rail service. To facilitate this new service, a near-dock intermodal container transfer facility (ICTF) is planned for construction in Zone C. The ICTF will consist of four loading tracks, container staging areas, an approach track, turnouts, and support facilities. The planned ICTF has the following key characteristics

- 1 new turnout with 5-degree inclination from an existing spur line
- Approximately 780 feet of approach track from the existing spur
- 3 turnouts with 5-degree inclination within the yard ladder
- 4 loading tracks with minimum parallel length of 1,200 feet each
- Minimum track radius of 420-feet
- Approximately 12 acres of heavy pavement
- High Mast Lighting
- Perimeter fencing

The project will require development of truck access points from Reeder Road and South Dock Street. An interchange gate for intermodal traffic transferred to / from the container terminal will be required. The interchange gate for inbound cargo is currently contemplated to be positioned along the new access point from Reeder Road.

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#### 12.1.19. Expanded Rail Marshalling Yard

Management of arrival and departure intermodal trains will be accommodated by the construction of two new parallel tracks at the existing rail yard located parallel to Highway 41. The two new tracks would be positioned to the north and west of the existing yard tracks and provide at a minimum, 2,400 feet of clear staging track, each. The new yard tracks would be spaced 15-feet on-center and include turnouts at each end to enable positioning of rail cars.

When complete, this project would enable staging of intermodal trainsets, breaking and spotting arriving rail cars on the intermodal terminal loading tracks and assembling rail cars for departures.

#### 12.1.20. Zone C Access Improvements

With the development of the Intermodal Container Transfer Facility within Zone C, vehicle access improvements will be required. The access improvements include roadway connections to Reeder Road, South Dock Street, and North Dock Street. The existing Reeder Road access point to the SeaPort Manatee Intermodal Center would be extended to the new Intermodal Container Transfer Facility, and fitted with an interchange gate complex for import container moves. Additional access points to the Intermodal Container Transfer Facility will be provided from both North Dock Street and South Dock Street. Finally, a new access point to the SeaPort Manatee Intermodal Center will be provided from South Dock Street to enable access from outside the TWIC zone.

#### 12.1.21. North Warehouse Complex

A new warehouse and remote cargo storage facility will be located at the former fish hatchery facility. Located at the end of the Reeder Road Extension, and alongside County Line Road, the complex is initially conceived as a combination warehouse and open storage area. For planning purposes, a 412,500 square foot warehouse structure is shown on the project site, encompassing 12 acres. The facility may be developed as a single warehouse or a multiple warehouse complex. In addition, a 15-acre open paved parking area is provided as part of the project.

The project would involve:

- Construction of a 412,500 square foot warehouse
- Elevated warehouse floor
- Truck loading doors at maximum 30-foot intervals, center-on-center
- Office space
- Employee parking
- 15-acre paved open storage lot
- Site utilities
- Demolition and site closure of former fish hatchery.

### 12.1.22. Reeder Road Extension

Reeder Road would be extended to the north from the existing intersection at Piney Point Road. The extension would provide access to a New North General Cargo / Warehouse Area to be built at the abandoned fish hatchery. The road is envisioned as a standard 2-lane road within a 50-foot right-of-way, providing space for lanes, shoulders, and drainage ditches. The Reeder Road Extension would commence from its intersection at Piney Point Road north for approximately 1,750 feet, and then turn east for another 1,750 feet, with a total length of approximately 0.75 miles.

#### 12.1.23. South Gate Expansion

The South Gate, located along South Dock Street is planned for expansion to serve the growing container market, and traffic accessing the south areas of the port. The expansion would provide additional inbound and outbound lanes. It is estimated that up to five lanes may be required to accommodate future traffic flows, configured with at least two reversible lanes for peak flows. The expansion would be toward the north side of the existing gate complex, allowing for unencumbered access for project cargos that utilize South Dock Street.

### 12.1.24. Drainage Ditch Realignment

The drainage ditch located along the north side of South Dock Street would be realigned to go under South Dock Street and run along the south side of the road. Completion of this project will increase available area for expansion of the South Gate, and provide for development of the Zone C Access Improvements.

# 12.1.25. Office Building

Office space is in high demand at the SeaPort. Space located east of the existing parking lot that is associated with the SeaPort Manatee Intermodal Center is reserved for development of additional office space. When complete, the additional office space will also allow the port to free up near-dock space in the future.

# 12.1.26. TWIC Boundary Realignment

The TWIC Boundary Realignment project would initially consist of a study to optimize the concept for future implementation. The project would relocate the existing boundary to Reeder Road and provide improvements within the North Bulk Operations Area to enable access for over-the-road trucks. The project would involve installation of fencing along the new boundary, provide temporary gate facilities at target locations to facilitate bulk vessel operations, and encapsulate recommendations from SeaPort Manatee's Security.



# **SECTION 13.** ENVIRONMENTAL RESOURCES

SeaPort Manatee fully embraces the goals of protecting human health and the environment. The port's unique aquatic habitats and sensitive environmental resources will be studied, protected and mitigated in accordance with environmental permits.





#### **13.1 Permitting Overview**

Environmental permitting is a key instrument used to reduce an industry's environmental impacts, facilitate compliance with environmental requirements, and promote technological innovation. The overall goal of environmental permitting is to protect human health and the environment. Environmental permits cover a variety of activities at all levels of government (federal, state, local) including, but not limited to, those that potentially impact wetlands, marine navigation, water and quality, air quality during construction (port) and operations (tenant), and protected species.

### **13.2 Existing Conditions**

The marine environment in the vicinity of SeaPort Manatee is a unique system consisting of seagrass beds and aquatic preserves. Both protected and non-protected marine species utilize seagrass beds through all, or portions, of their life cycle. Seagrass beds are important nursery habitats for commercially and recreationally important fish species. Protected species that may use seagrass habitat within the vicinity of the SeaPort Manatee include the endangered West Indian manatee (Trichechus manatus), the endangered hawksbill (Eretmochelys imbricate) and green (Chelonia mydas) sea turtles, and the threatened loggerhead (Caretta caretta) sea turtle.

Two aquatic preserves exist just north and south of lands owned by the SeaPort Manatee. To the north is the Cockroach Bay Aquatic Preserve and to the south is the Terra Ceia Aquatic Preserve. As aquatic preserves, these areas are designated as Outstanding Florida Waters (OFW) by the state of Florida. This designation provides additional regulatory protection for activities that could degrade water guality.

The port-owned property consists of approximately 1,100 acres and is a combination of natural and created lands. As stated previously, SeaPort Manatee is separated into 7 zones with Zone A being closest to the shoreline and Zone G, located near the south of the port, comprising 260 acres of undeveloped lands.

The terrestrial environment of port-owned lands includes a combination of coastal uplands, coastal wetlands, and freshwater emergent and forested / shrub wetlands. Impacts to wetlands are subject to federal, state, regional, and local permitting, as discussed below, and consistency with the Manatee County Comprehensive Plan.

# **13.3 Construction Activities**

Construction of the following Master Plan projects include activities such as excavation, dredging, fill, pile driving, and / or installation of permanent in-water structures, which may result in impacts to the environment, thus requiring federal, state and local permits to maintain regulatory compliance.

- Berth 10 Extension & Berth 11 Realignment / Corner Improvement
  - □ Construction of marine structures to improve both Berths 10 and 11
  - □ Backfill of material
- Berth 4 Extension
  - <sup>II</sup> Construction of marine structures to provide an additional 600-feet of berth length
- New Berths 2 & 3
  - □ Construction of the wharf structure
  - □ Land reclamation of approximately 13.3 acres behind the wharf apron
  - □ Dredging to 40-feet for the berth
- New Berth 1
  - □ Construction of the wharf structure
  - □ Excavation and dredging to 40 feet
  - □ Surface treatments to provide up 250 feet of working area behind the berthing line
- Berth 6 Fill-in
  - <sup>II</sup> Construction of marine structures to expand the length of the berth's apron toward berth 7 and southern terminus of berth 5

- Container Terminal
  - <sup>II</sup> Construction of an 80-acre grounded storage container terminal located south of SeaPort Manatee's footprint
- Berth 14 Extension
  - □ Construction of 850-feet of berth extension
  - Approximately 340,000 square feet (approximately 8 acres) of dredging to -40 feet to extend the navigable access channel and adjacent berth pockets
  - $\blacksquare$  Removal / relocation of existing shoreline protection
  - Potential wetlands / environmental mitigation requirement

The projects proposed are to be phased over a 20-year timeframe as market conditions warrant.

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# **13.4 Regulatory Compliance**

The proposed construction activities may result in impacts to various resources including, but not limited to, Hazardous Materials and Wastes, Marine Navigation, Air Quality and Greenhouse Gases, Climate Change and Sea Level Rise, Water Resources, Cultural Resources, Biological Resources, Land Use, and Utilities.

Figure 13-1. Endangered Sea Turtle



An overview of some of the federal and state environmental laws and regulations applicable to Florida port-related projects is provided next.

#### Table 13-1. Federal and State Environmental Laws Applicable to SeaPort

Agency	Federal or State Law / Regulation Relevance to Project Activities	Relevant Resources	
	NEPA; CEQ NEPA		
CEQ / USACE	Regulations applicable to, and binding on all federal agencies for implementation of the procedural provisions of NEPA.	All Resources	
	CWA Section 401; Chapter 62-302, F.A.C.	Riological	
EPA, FDEP	Any federally authorized activity resulting in discharge into navigable waters requires a Water Quality Certification.	& Water Resources	
	CWA Section 402, NPDES Program; FDEP's NPDES Program		
EPA, FDEP	Regulates discharges of pollutants from a point source to navigable waters of the U.S.; NPDES permits authorize discharges of stormwater associated with large and small construction and industrial activities.	Hazardous Materials, Water Resources	
EPA, USACE	CWA Section 404(b)(1) Guidelines for Spec- ification of Disposal Sites for Dredged or Fill Material; Chapter 62-330 F.A.C.	Water and Biological Resources	
NMFS &	ESA; State of Florida Listed Species Laws	Biological Resources	
USFWS, FWC	Potential impacts to federally and state listed species.		
	Rivers and Harbors Act, Section 10	Marine Navi-	
USACE	Requires a permit for work (e.g., dredging) or construction of structures in or over navi- gable waters of the U.S.	gation, Biolog- ical & Water Resources	

The types of permits or approvals and mitigation that may be required to carry out the proposed Master Plan projects will be determined during project planning and design. It is recommended that the environmental permitting and the mitigation design process get underway during the short-term planning horizon.

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# **13.5 Mitigation Program**

The development of a conceptual permitting and proactive mitigation program in the early years of the 20-Year planning vision is necessary to frame a total mitigation program that will also address expansion in both the south and north areas of the port's footprint, so as to achieve mitigation success prior to berth construction. The benefits of securing the necessary mitigation credits prior to the impact occurring will help avoid the cost of increased mitigation ratios associated with lag time, increase the viability of mitigation, and help reduce the mitigation risk overall.

#### 13.5.1. Seagrass Beds

With the projects proposed, there could be upwards to 40+ acres of seagrass impacts for the new and realigned berths which will require mitigation offsets or credits. Potential mitigation options for anticipated seagrass impacts as identified in both the 2009 Master Plan and 2016 Master Plan update are still viable options today and include:

- Restoration of propeller (prop)-scarred seagrass
- Restoration of dredged holes or borrow areas in proximity to the port within the Lower Tampa Bay
- Funding of water quality improvement projects for estuaries where excess nutrients and / or algae prevent seagrass recovery. [Atkins scientists and engineers have experience with this, including a national award-winning project in Tampa Bay, and can further explore this option with the port.]

#### 13.5.2. Wetlands

Certain Master Plan projects will also have the potential to impact or disturb wetlands. Both federal and state agencies have a goal of no net loss of wetlands. Manatee County's policies and regulations require preservation of wetlands wherever possible, and protection of wetlands is preferred to destruction and mitigation due to the temporal loss of ecological value and uncertainty regarding the ability to recreate certain functions associated with wetlands.

For unavoidable impacts, compensatory mitigation (permittee-responsible, mitigation banking, and in-lieu fee) is required to replace the loss of wetland and aquatic resource functions in the watershed. On-site options are limited for the port, therefore, developing a mitigation program to secure credits from existing mitigation banks or for improvements on county-owned conservation lands would provide the greatest overall benefit. There are currently three (3) state (Big Bullfrog Creek, Mangrove Point, and Tampa Bay) and five (5) federal banks (Big Bullfrog Creek, Nature Coast, Northshore Seagrass, Mangrove Point, and Tampa Bay) that service the SeaPort Manatee area.

#### 13.5.3. Environmental Justice

The SeaPort will continue to use online tools to evaluate data, trends, opportunities, and investments for improving community health and the environment. As an example, the Climate and Economic Justice Screening Tool (CEJST) provides community level statistics by census tracts. Relevant census level statistics have included: Unemployment, Proximity to National Priorities List (NPL) sites, Income levels, Health burdens, High School degree non-attainment, or Higher education non-enrollment. The SeaPort has used such data to plan career fairs, collaborate across agencies, and update policies that are likely to reduce barriers to opportunity.

Opportunity Growth Stewardship

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These mitigation pathways will require more thorough analysis for actual application and implementation. In general, the purchase of mitigation bank credits is the top priority with regulatory agencies. However, in the event credits are not available, off-site mitigation is best accomplished when located within the same watershed or region. Other off-site mitigation options may include acquiring properties for mitigation projects and partnering with federal, state, and local agencies working on restoration projects in the Tampa Bay and / or Sarasota Bay areas.

The 20-Year Vision Plan aligns with the port's environmental goals and objectives in the 2016 Port Master Plan, maintaining environmental stewardship and sustainability through natural resource preservation and protection. Considering a proactive environmental mitigation program is key to addressing the impacts of the port's expansion.



# SECTION 14. 5-YEAR AND 10-YEAR PLANS

SeaPort Manatee's capital projects are organized to unlock hidden capacity constraints and deliver needed storage and inland transportation services in the near-term, and expand on those gains with future capacity improvements in the longerterm. The project implementation schedule is flexible, allowing projects to be developed as market opportunities warrant.



14-1

With the 20-Year Vision Plan as the roadmap for the future, and with the ability to implement projects with flexibility as market conditions warrant, the 5-year near-term and mid-term 10-year project implementation plans can be identified. Within this section, each of the projects making up the 20-Year Vision are prioritized.

# 14.1 5-Year Plan

The 5-year plan focuses on projects that can respond to immediate capacity needs and be implemented within the available timeframe. The focus areas include container yard capacity expansion, responding to the opportunity to extend SeaPort Manatee's market reach with intermodal rail service, selected berth expansions and upgrades to unlock hidden capacity, developing the on-dock Bulk Juice Storage Facility, and development of needed breakbulk storage capacity.

The target projects for the next 5-year planning horizon include:

Table 14-1. Target Projects for Next Five Years

No.	Project	Focus Area	Capaci Increas
1	Berth 10 / 11 Corner Realignment	Extend Berth 10 and realign Berth 11 to gain berth utilization improvements at Berths 8, 9, 12 and 14.	Breakbulk Berth Capacity of 200,000 MT ments.
		Future capture of marginal wharf utilization benefits for containers.	Future optimization of container berth ope
2	Berth 4 Extension	600 Foot Berth Extension, adding capacity for breakbulk and dry bulk cargo. Also frees up utilization of the berth line to maximize occupancy and capture full capacity of the 1,800 feet.	154,000 MT Breakbulk at 50% allocation
			307,000 MT Breakbulk at 100% allocation
			500,000 MT Dry Bulk if 50% allocation to
			1M MT Dry Bulk of 100% allocation to DB
5	Drop Trailer Parking	Parking and staging for trucks and trailers outside of North Gate.	Operational enhancements for truck posit
	Container Terminal	Adds 30 acres of additional storage capacity, mix of dry and reefer as required.	Provides approximately 180,000 TEUs of bringing total to more than 333,000 TEUs
9	Expansion	When complete, berth capacity will need to be increased through a combination of benefits of berth 11 realignment, or future Berth 14 extension.	
	Warehouse 12 (150,000 SF)	Adds 150,000 SF mix of dry and cold storage space for breakbulk cargo, plus 8 acres of open storage space.	120,000 MT BB Covered
12			140,000 MT BB Open
			Total = 260,000 MT
13	New Zone B Ware- house (200,000 SF)	Adds 200,000 SF mix of dry and cold storage space for breakbulk cargo.	160,000 MT BB
15	Bulk Juice Facility	Construction of new bulk juice storage and processing facility.	Up to 750K MT of Bulk Juice Storage Cap
16	Relocated Dry Bulk Storage	Move Dry Bulk Storage from Zones B and C.	No new storage capacity, however frees u Intermodal Yard.
18	Intermodal Container Transfer Facility	Construction of a new intermodal container transfer facility within Zone C.	Provides ability to accommodate up to 67 average dwell time in container storage ya container storage capacity.
20	Zone C Access Improvements	Roadway access for intermodal yard and for the intermodal center building.	A component of the ICTF Improvement, re South Gates.
24	Drainage Ditch Realignment	Enables development of Zone C Access Improvements and provides for future expansion of the South Gate.	Not attributable to capacity increase.
26	TWIC Zone Realignment	Realignment of TWIC to unencumber Zone C, allowing construction of the ICTF.	Not directly attributable to capacity increa

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7,600 lifts per year, reducing vard, resulting in a positive impact on

reducing gate moves at North or

ises.

Within the next five years, SeaPort Manatee would unlock hidden capacity at existing berths with upgrades to berths 10 & 11, expand berth 4 to maximize utilization and increase capacity, add targeted operational improvements, and add much needed capacity for containers, breakbulk, and bulk juice cargos. In addition, SeaPort Manatee would initiate the capture of inland markets with the implementation of an intermodal rail strategy.

The 2nd phase of the container terminal expansion is currently underway, which will provide more than 18 acres of total capacity in the near-term. Incremental expansion of container storage space can be planned and executed as required to meet volume needs. In total, an estimated 16.5 acres of additional storage capacity would be developed over the next 5 years, adding better than 30 acres of new capacity to SeaPort Manatee's existing container storage areas, and delivering over 300,000 TEUs in sustainable throughput capacity.

Expansion of warehouse facilities are needed as early as possible. Currently warehouse 12, consisting of 150,000 square feet, is in the planning stages, which would be followed by a new warehouse adding up to an additional 200,000 square feet of storage space. The sharp growth in breakbulk market opportunities is pointing to a focus on expansion of these storage facilities.

The Bulk Juice Facility is a critical asset that will significantly reduce berth occupancy of the bulk juice vessel, unlocking berth capacity of existing assets. Together with the juice facility, the berth expansion / rehabilitation projects are necessary to increase the utility of the existing berths, and ultimately near-term capacity. SeaPort Manatee is approaching berth occupancy constraints, however, can be managed with the combination of the planned upgrades and berth operational efficiencies gained with these improvements over the near-term. The intermodal rail strategy would be a trigger for initiating the bulk storage relocation and the TWIC Zone realignment strategies. Recognizing that intermodal operations, planned for Zone C, would be best served with a near-dock operating mode, the existing TWIC Zone would need to move to exclude Zone C, and align with Reeder Road. This also triggers the need for access improvements within Zone C for drayage of intermodal container traffic, and public access to the SeaPort Manatee Intermodal Center building. At the same time, the beginning phases of the interchange gate truck move reduction strategy would be implemented as part of the TWIC Zone Realignment. This would focus on the dry bulk trucks serving the North Bulk Operations Area, and the liquid bulk juice tanker trucks that would be serving the new bulk juice facility.

While the South Gate Expansion Improvements are planned for the next phase of development, SeaPort Manatee would be prepared to implement a phased expansion of the South Gate within the next 5-years if a reduction in interchange gate moves is not realized and if volume demands make expansion necessary.

The net increases in capacity resulting from execution of the five-year capital projects are summarized in Table 14-2.

When complete, the 5-Year Plan will position SeaPort Manatee with a 20% increase in capacity, delivering between 12 and 14 million tons per year in maximum annual throughput capacity, and 10 to 12 million tons per year in sustainable capacity.
Cargo	Existing Capacity (Maximum / Sustainable)	Added Capacity (Maximum / Sustainable)	()
		240.000 / 180.000	3 ( 4
Container (TELI)	150,000 / 126,000 (Storage)	(Added Storage Capacity)	()
	340,000 / 255,000 (Berths)	50,000 / 40,000 (with some Berth 11 utilization)	390,0
			400,000 / 300,0
Breakbulk (MT)		300K / 240K MT from Berth 4 Extension	1.94N
	1.44M MT / 1.15M MT (Berth)	200K / 160K MT from Berth 10 / 11 Corner and impact on Berth 8	1.27M N
	oook / oook (Storage)	420K / 350K MT from two new warehouses and open storage areas	1.27M N
Liquid Bulk (MT)	2.167 MT / 1.842 MT	None	2.
Dry Bulk	4.446 MT / 3.779 MT	Relocate Storage – No New Capacity captured	4.4
Juice (MT)	Capacity is limited to berth availability	With expansion of berths shown for BB, assume berth capacity is available.	750K I
	-	Build New Juice Facility	

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### Total Capacity Maximum / Sustainable)

390,000 / 306,000 (storage – No IM)

440,000 / 340,000 (storage – with IM)

000 / 300,000 (Berths)

Net Estimate

000 (with Intermodal - Limited by Berth)

M MT / 1.55M MT Berth

MT / 1.03M MT (Storage)

Net Estimate

MT / 1.03M MT (Storage)

.167MT / 1.842 MT

.446 MT / 3.779 MT

MT scaled up over time

### 14.2 10-Year Plan

The 10-Year plan focuses on projects that expand berth capacity for breakbulk and dry bulk cargos, respond to continued growth in the container business, add to operational efficiency of the intermodal business, and optimize the operations of the North Bulk Area.

The target projects for the 10-year planning horizon include:

	No.	Project	Focus Area	
				4M MT Berth 100% allocati
3	Berths 2 & 3 (2,000-	Add 2,000 Feet of additional berth to	770K MT Ber allocation to E	
	_	Feet)	includes significant dredging	50% Allocatio
				2M MT DB
				384K MT BB
	6	North Pier Open	Adding open operations space -approx- imately 15 acres - behind Berths 2 & 3.	280K MT Breat to BB cargo
6		Cargo Area	rary storage of BB of DB cargo – Adds to storage capacity	2M MT Dry B Dry Bulk Carg
	8	Berth 6 Fill-in	Expansion to improve multipurpose oper- ations. Aligning capacity increases with breakbulk cargo	154K MT of B Similar to Ber
	9	Container Terminal Expansion	Adds 20 acres of additional storage capacity, mix of dry and reefer as required	Provides approvides approvides approvide automatic approximation approximation approximation approximate a storage.
	11	Maintenance Facility	Add maintenance facility for container operations	Not attributab
	17	New Petroleum Access Road	Adds new access road to petroleum terminal	Increases Ga unnecessary Gate to accor volumes at ca storage
	19	Expanded Rail Marshalling Yard	Provides for marshalling and staging operations for intermodal trains.	Capacity impr part of the inte facility project
	23	South Gate Expan- sion	Upgrades and adds lanes to match capacity requirements of intermodal and container yard	Matches capa delivered as p capacity impr
	26	TWIC Zone Realign- ment	Realignment of TWIC Zone to accommo- date North Bulk Storage operations	Not directly at increases

### Table 14-3. Target Projects for Next Ten Years

Capacity Increases
Berth Capacity for Dry Bulk at llocation to DB

1T Berth Capacity for BB at 100% on to BB

locations

IT Breakbulk at 100% allocation argo

Dry Bulk at 100% allocation to k Cargo

T of BB Capacity improvement – to Berth 4 Extension

es approximately 120,000 TEU of able additional capacity, bringing approximately 445,000 TEU for

ibutable to capacity increase

es Gate capacity by reducing ssary moves. Allows North accommodate growth in cargo s at capacity gains at berths and

y improvements are captured as he intermodal container transfer project

s capacity and levels of service ed as part of berth and storage y improvements

ectly attributable to capacity increases

Within the ensuing 5-10 year time horizon, SeaPort Manatee would see an expansion of its North Pier, with the completion of major berth and dredging projects to significantly increase operational capacity for breakbulk and bulk cargo operations. These are major projects that are capital intensive and would require an appropriate amount of time for planning and securing potential sources of funds. However, when complete, SeaPort Manatee would see a significant increase in operational capacity, and a near-revolutionary reduction in operational conflicts.

As the protocols for the TWIC Zone Realignment Strategy grow in maturity, the opportunity to extend over-the-road petroleum tanker trucks as non-TWIC Traffic is an attractive goal to achieve. Within the 5-10 year horizon, the new petroleum access road would be developed and complete the North Bulk Cargo operations strategy for over-theroad trucks.

It is anticipated that the initial stages of the Intermodal Container Transfer Facility would operate with existing port rail infrastructure for rail car staging, train-breaking, and train-making. As intermodal container traffic grows, the expansion of the rail marshalling yard would be required to accommodate the daily train service. Therefore, consideration of the rail marshalling yard is planned for the 5-10 year time horizon. However, should intermodal traffic growth exceed operational capacity of the existing facilities, the rail marshalling yard expansion may be implemented earlier.

The container operations would continue to be expanded within the planned footprint with incremental yard area added as required. Within the 5-10 year timeframe, it is expected that up to 120,000 TEUs of annual throughput capacity would be added to the container yard, translating to approximately 20 acres of new storage space. As container operations continue to grow, and equipment is added to the container handling fleet, the planned maintenance facility would be required.

Similarly, as container operations continue to grow, it is expected that expansion of the South Gate would be required within the 5-10 year time horizon. While currently contemplated during this period, this project, or an early phase of this project may be executed within the first five years.

The net increases in capacity resulting from execution of the ten-year capital projects are summarized in Table 14-4.

When complete, the 10-Year Plan will position SeaPort Manatee with a net 50% increase in capacity from current levels, delivering between 15 and 17 million tons per year in maximum annual throughput capacity, and 12 to 15 million tons per year in sustainable capacity.

### Table 14-4. Ten Year Capacity Results

Cargo	Existing Capacity (Maximum / Sustainable)	Added Capacity (Maximum / Sustainable)	(	
	390,000 / 306,000 (storage – No IM)	160,000 / 120,000 (Added Storage Capacity)		
	440,000 / 340,000 (storage – with IM)	Assume Berth Capacity to match requirements	560K / 420I Berth) – Eas	
Container (TEU)	390,000 / 300,000 (Berths)	can be made up with expansions at other facili- ties. until Berth 14 is extended		
	Net Estimate	At this point - 65- 70 acres of the terminal have		
	400,000 / 300,000 (with Intermodal - Limited by Berth)	been built out @ 6,000 TEU / Acre = 420K Sustainable		
	1.94M MT / 1.55M MT Berth			
Prookbulk (MT)	1.27M MT / 1.03M MT (Storage)	280K / 240K MT from Open Storage Area	1.55	
	Net Estimate	behind new berths		
	1.27M MT / 1.03M MT (Storage)			
Liquid Bulk (MT)	2.167 MT / 1.842 MT	Berth Availability would increase – adding to capacity for berth operations. Storage controlled by the tenant	2	
Dry Bulk 4.446 MT / 3.779 MT		Between 2M and 4M of extra berth capacity	6	
Juice (MT)	Capacity is limited to berth availability	With expansion of berths shown for BB, assume berth capacity is available.	750K	
		Build New Juice Facility		

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Section 14. 5-Year and 10-Year Plans

**Total Capacity** (Maximum / Sustainable)

Net Estimate

K (with Intermodal - Limited by sily achievable with extension of Berth 14

Net Estimate MT / 1.27 MT (Storage)

2.167MT / 1.842 MT

6.446 MT / 5.779 MT

K MT scaled up over time

### **14.3 Longer Term Projects**

The remaining projects that make up the 20-Year Vision Plan would be delayed until after the initial 10-year of development. However, these projects could be implemented earlier or later as market conditions warrant, or as potential substitutes for targeted projects. At full buildout, SeaPort Manatee would see a 100% increase in annual throughput capacity, delivering between 18 and 20 million tons in maximum capacity, and 15 to 17 million tons in sustainable capacity.



# SECTION 15. FINANCIAL ANALYSES

SeaPort Manatee's capital projects are implementable and achievable by leveraging a mix of funding sources, including grants, compensatory lease structures, public-private-partnerships, and other commercial agreements in addition to traditional project finance. A comprehensive financial model has been developed to assist SeaPort Manatee in assessing future project implementation options.





Development of the master plan update includes analysis of potential financial scenarios and identification of potential financing options. A preliminary cost estimate was prepared for each project, including estimates for planning, permitting, engineering and construction. These data are combined with the market forecast projections and baseline operating data for SeaPort Manatee to develop a preliminary analysis of the potential financial picture for the port as the master plan is implemented.

### 15.1 Pro Forma Model

A comprehensive financial model was developed to inform on potential financial scenarios and project implementation scenarios. The financial model consists of hundreds of variables and calculations, where an unlimited of potential financial scenarios may be explored. Some of the key features of the financial model include:

- Existing capacity calculations forming the baseline for existing facility performance capability.
- Itemized list of identified projects, incremental capacity gains, and preliminary cost estimates.
- Independent project return on investment calculation tool to assist in right-sizing an initial project's investment.
- Time-scaled project implementation periods, with options to adjust start dates.
- Results of incremental capacity gains on a per project basis, and potential impacts on both revenues and operating costs.
- Market projections for each cargo type, with options to increase or decrease projections over time, based on actual performance or changing market conditions.
- Projected Financial Statements, including a calculated Profit & Loss Statement a Cash Flow Statement.

- Multiple options to adjust key input variables, such as base tariff rates, escalations, operating costs, contingencies.
- Debt financing options, with adjustments to target equity ratio, interest rates, issuance costs, and loan maturity period.
- Options to distribute capital expenditures and revenues through public-private-partnerships on a per project basis.
- Options to include grant funding as percentage of project cost on a per project basis.

The outputs of the pro forma model include summations of resultant capital expenditures, capacities, revenues, costs, and preliminary return on investment calculations. Some of the key outputs include:

- Market capture curves aligning cargo volumes with incremental capacity improvements and resultant revenues on an annual basis.
- Preliminary capital improvement calendar, which is adjustable to defer or advance projects as market demands warrant.
- Preliminary capital outlays attributed to the account of the port, less contributions from grant funding or private equity associated with a potential public-private-partnership
- Preliminary cumulative cash flows, projected on an annual basis over the course of the planning horizon.
- Computations for key return on investment metrics, including Internal Rate of Return (IRR), Net Present Value (NPV), and project payback period.
- Computations for key financial engineering data, including equity, long term debt, debt service coverage ratios (DSCR), and Earnings Before Interest Taxes Depreciation and Amortization (EBITDA) / Revenue Ratio.

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### **15.2 Preliminary Observations**

The pro forma model enables analysis of any number of potential implementation scenarios, which SeaPort Manatee may use as a tool to assess future opportunities. Preliminary observations from multiple model runs for capital projects identified over the 5-year and 10-year planning horizons indicate the following:

- SeaPort Manatee will require grant support and / or leverage public private partnerships over time to execute the master plan.
- Positive return-on-investment metrics are achievable with a mix of CPI-indexed annual rate increases, successful grant funding contributions, and the use of selected public-private-partnerships.
- An aggregate mix of approximately 40-45% grant funding, 10-15% private partnership funding, 40-45% port funding through debt and equity, and a CPI-indexed annual rate increase of approximately 2.5%-3% produces positive ROI metrics with a reasonable payback period.
- Further analysis of project costs and financing alternatives on a per project basis at the time of project execution will be required to determine financial viability and fit with SeaPort Manatee's financial condition at that time.

### **15.3 Financing Options**

Based on the market assessment, the master plan identifies numerous capital projects to be completed over the 5-, 10-, and 10+-year planning horizons. Given the range of cost estimates of the projects, SeaPort Manatee must evaluate various financing options to determine the most beneficial method to the port.

The following identifies key financing options that SeaPort Manatee may consider:

### 15.3.1. Grant Monies

Currently there are numerous federal USDOT grant programs designed to assist in large infrastructure projects including INFRA, PIDP, RAISE, MEGA and CRISI. Specific project requirements vary and are listed in the NOFO for each grant available. In addition to federal grants, the state of Florida offers annual FDOT grants for capital port projects. The advantage of grant monies is the essentially free funds available with only the port or other party responsible for a matching contribution (of which percentages can vary). The disadvantages of the grant process include the application process, which for federal programs, can be lengthy and detailed requiring consulting assistance, and the high level of competition vying for the grants, which results in lower level of successful submissions. With respect to federal grants, the port and its partner (if applicable) must match the federal grants received and typically the port must follow a timeline for the completion of the project.

### 15.3.2. Municipal Bonds

Port-issued, tax-exempt interest offers low-cost development funds.



### 15.3.3. Compensatory Lease Structures

Restructured leases with tenants that directly benefit from the capital project would include ensuring revenue streams can cover operating costs as well as debt service resulting from the capital project financed. Leases terms can vary and can be modified for revenue to include land lease charges, throughput fees, minimum annual guarantees (MAGs), wharfage & dockage, etc. Also, the lease can specify which party is responsible for certain costs including maintenance, berth maintenance dredging, equipment, etc.

### 15.3.4. Public-Private Partnerships (P3s)

Focuses on joint Port and tenant / private investment. The critical advantage of this option is that private entity puts "skin in the game" which ultimately reduces risk to Port Authority. This is most advantageous where there is a potential tenant that is involved in a specific line of business that requires specialized terminal, storage or handling equipment such as a wood pellet export facility.

### 15.3.5. Concession Agreement

Involves development of a long-term lease with possible capital commitments by tenant. Concessions typically require transfer of property / terminal to private party for a lengthy concession period. The concession agreement can be for a specific terminal, or the entire public port operations as is the case for the Diamond State Port Corporation which recently entered into a concession agreement for the entire public port operations with Gulftainer USA. Under the concession, the Port receives an up-front payment from the concessionaire representing a portion of the present value of expected future profits.

Advantages of a concession agreement include bringing private sector investment to terminal without impact on the public port bonding capacity; tying concession required investment to a specific terminal project; simple to monitor revenue reporting – up front cash payment combined with annual land lease or throughput charge and Port will receive property at end of concession, which will reflect value added by concessionaire over long-term lease. The upfront payment as part of the concession agreement, as well as the length of the concession (40-50 years), incentivize the tenant to make long term capital improvements to the terminal, and further to maximize the annual throughput of the terminal in order to minimize average through-put costs per ton or unit. Disadvantages of a concession agreement include Port loses control of land usage except for explicit investment requirements stipulated in agreement; land / terminal under concession is no longer available for multiple users, in turn reducing acreage / berths that can be marketed by Port; concession agreement may limit Port from competing in that cargo market for a specified time period. The Port has no control of the use of the land under the concession. There may be employment impacts in the public port, as the concessionaire, depending on the extent of the concession, may eliminate the use of public port employees with a reduced staff. The more a concession agreement has port-specific requirements from the tenants, lower the concession payout to the port. The concession may require assumption of leases already on land / terminal under agreement, which could cause disruption with current tenants and their operating relationships with stevedores other than the concessionaire.



# SECTION 16. ECONOMIC IMPACTS

SeaPort Manatee is an economic engine for Southwest Florida, contributing to tens of thousands of jobs and billions of dollars in personal income and economic activity. Execution of the master plan will continue to drive increasing economic impacts for the foreseeable future.





Implementation of the future improvements will produce increasing local and regional economic impacts generated by maritime activity at SeaPort Manatee. Economic impacts generated at the cargo facilities include the impacts generated by containerized cargo (both dry and reefer), breakbulk (steel, aluminum, forest, super sacks salt, cement, fertilizer) liquid bulk (petroleum and citrus juice), dry bulk, (aggregates, stones, salt, magnetite, fertilizer products) and project cargo.

Martin Associates has historically been retained by the Manatee County Port Authority to provide economic impact measurements, employing a methodology and definitions that have been used by Martin Associates to measure the economic impacts of seaport activity at more than 300 ports in the United States and Canada, and at the leading airports in the United States. Martin Associates' approach to economic impact analysis is based on data developed through an extensive interview and telephone survey program of the firms participating in each of the lines of business operated by the port. Specific re-spending models have been developed for the Manatee area to reflect the unique economic and consumer profiles of the regional economy. The resulting impacts reflect the uniqueness of the individual port operations, as well as the surrounding regional economy.

### **16.1 Impact Definitions**

The impacts are measured in terms of:

- Jobs (direct, induced indirect and related users)
- Personal income
- · Business revenue; and
- State and local taxes

Each impact measurement is described below:

- Direct jobs are those that would not exist if activity at MCPA facilities were to cease. Direct jobs created by marine cargo activity at SeaPort Manatee's terminals are those jobs with the firms directly providing cargo handling and vessel services, including trucking companies, terminal operators and stevedores, members of the International Longshoremen's Association (ILA), non-union dockworkers, stevedores and customshouse brokers, vessel agents, pilots and tug assist companies, and shippers directly dependent upon the use of SeaPort Manatee, specifically the Florida phosphate and fertilizer industry.
- **Induced jobs** are jobs created in the Manatee / Tampa Bay area by the purchases of goods and services by those individuals directly employed by each of the SeaPort's lines of business. These jobs are based on the local purchase patterns of Manatee / Tampa Bay area residents. The induced jobs are jobs with grocery stores, restaurants, health care providers, retail stores, local housing / construction industry, and transportation services, as well as with wholesalers providing the goods to the retailers.
- Indirect jobs are created throughout the Manatee / Tampa Bay area as the result of purchases for goods and services by the firms directly impacted by SeaPort Manatee activity, including the ship repair facilities, and the firms providing services to cargo operations. The indirect jobs are measured based on actual local purchase patterns of the directly dependent firms, and occur with such industries as utilities, office supplies, contract service providers, maintenance and repair, and construction.
- Related shipper / consignee (related user) jobs include jobs with shippers and consignees (exporters and importers) using the marine terminals for shipment and receipt of cargo. The MCPA's shippers and consignees are concentrated with the state's phosphate mining and fertilizer manufacturing industries.

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- · Personal income impact consists of wages and salaries received by those directly employed by port activity and includes a re-spending impact which measures the personal consumption activity in the Manatee / Tampa Bay area of those directly employed as the result of SeaPort Manatee. Indirect personal income measures the wages and salaries received by those indirectly employed.
- Business revenue consists of total business receipts by firms providing services in support of the marine cargo activity and miscellaneous activity at MCPA facilities, film / television activity on SeaPort property, private construction investment on SeaPort property, and the MCPA administrative operations. Local purchases for goods and services made by the directly impacted firms are also measured. These local purchases by the dependent firms create the indirect impacts.
- State and local taxes include taxes paid by individuals as well as firms dependent upon SeaPort Manatee cargo activity.

### **16.2 Economic Impact Model**

The impacts are measured for the MCPA's fiscal year 2021, and computer model has been developed to test the sensitivity of the impacts to changes in economic conditions and facility utilization. It is to be emphasized that this study is designed to provide a framework which the MCPA can use in formulating and guiding the future development of SeaPort facilities.

The cargo impact model is designed to test the sensitivity of impacts to changes in such factors as marine tonnage levels, seaport productivity and work rules, new marine facilities development, inland distribution patterns of marine cargo, number of vessel calls and the introduction of new ocean carrier service. The cargo impact model can also be used to assess the impact of developing a parcel of land as a marine terminal versus other non-cargo land uses. Finally, the marine cargo impact

model can be used to assess the economic benefits of increased maritime activity due to infrastructure development and the opportunity cost of not undertaking specific maritime investments such as dredging, new terminal development or warehouse development.

### **16.3 Summary Results**

Table 16-1 summarizes the results of the economic impacts of SeaPort Manatee for Fiscal Year 2021.

### Table 16-1. Economic Impacts for FY 2021

Category
Jobs
Direct
Induced
Indirect
Related User Jobs
Tot
Personal Income (1,000)
Direct
Induced
Indirect
Related User Income
Total Personal
Value of Economic Activity (1,000)
Business Services Revenue
Related User Output
Total Value of Economic
Local Purchases (1,000)
State and Local Taxes (1,000)
Direct, Induced, and Indirect
Related User Taxes
Total State and Loca

Opportunity Growth

Stewardship

### SeaPort Manatee Master Plan Update 2022

Cargo
4,171
4,417
2,708
25,990
37,287
\$231,850
\$552,660
\$156,990
\$732,218
\$1,673,718
\$1,082,753
\$4,051,870
\$5,134,623
\$344,294
\$93,081
\$107,699
\$200,780

16-3

In fiscal year 2021, SeaPort Manatee created 37,287 jobs in the state of Florida. Of these jobs, 4,171 jobs were directly created, while another 4,417 induced jobs were supported in the Manatee / Tampa Bay area as the result of local purchases by those directly employed by SeaPort Manatee activity. In addition, there are 2,708 indirect jobs supported in the Manatee / Tampa Bay area as the result of \$344.3 million of local purchases. In addition, the cargo moving via SeaPort Manatee supported nearly 25,990 jobs throughout the state of Florida. The majority of these jobs are associated with the movement of container-ized cargo – including produce, fertilizer products, liquid bulk, including, juice concentrate, not from concentrate juice and petroleum products through SeaPort Manatee.

The 4,171 direct jobs received \$231.9 million of direct wage and salary income, for average earnings of about \$55,586 per direct employee. As the result of local purchases with this \$231.9 million of direct wages and salaries, an additional \$552.7 million of income and local consumption expenditures were created in the Manatee / Tampa Bay area. It is this re-spending impact that supported the 4,417 induced jobs. Furthermore, indirect jobholders were paid an annual income of \$157.0 million. Throughout the state, related users generated \$732.2 million in wages. In total, nearly \$1.7 billion of personal income was created as the result of SeaPort Manatee operations.

Local businesses received \$1.08 billion of sales revenue from providing services to the marine cargo activity at the marine terminals (this does not include the value of the cargo moving via the SeaPort). The cargo activity at the SeaPort created an additional \$4.05 billion of total economic output in the state, the majority of which is created in the state's containerized cargo, fertilizer products, breakbulk commodities, liquid bulk juice concentrate and not from concentrate and the in-state industries supporting this industry. It is to be emphasized that only the economic activity associated with the raw materials and finished products that moved via the SeaPort is included. As a result of the activity at SeaPort Manatee, a total of \$200.8 million of state and local tax revenue was generated with nearly \$93.1 million generated by direct, induced, and indirect activity with the remaining \$107.7 million supported by related users throughout the state.

### **16.4 Projected Economic Impacts**

Table 16-2 summarizes the results of the potential additional economic impacts of SeaPort Manatee over the next 5-years, 10-years, and post 10-year timeframes as the SeaPort Manatee Master Plan is implemented, capturing the high case market opportunities.

The values shown in Table 16-2 are additive to the economic impacts that were measured for Fiscal Year 2021.

In addition to the economic impacts associated with cargo operations, the one-time impacts associated with construction activity related to the master plan projects were also estimated. Table 16-3 provides a summary of the estimated economic impacts associated with implementation of the capital projects as outlined within this master plan update.

 Table 16-2. Additional Impacts Generated by 5-Year and 10-Year Projects

Category	5-Year Container	5-Year Break Bulk	5-Year Juice	10-Year Container	10-Year Break Bulk	10-Year Dry Bulk	10-Year Juice	Post 10-Year Container	Post 10-Year Break Bulk	Post 10-Year Dry Bulk
Jobs										
Direct	1,039	519	143	692	153	484	143	462	384	484
Induced	1,045	562	152	697	168	529	152	465	420	529
Indirect	770	179	676	513	57	290	676	342	143	290
Total Jobs	2,854	1,261	971	1,903	379	1,303	971	1,268	947	1,303
Personal Income (1,000)										
Direct	\$54,041	\$29,698	\$7,988	\$\$36,027	\$8,903	\$27,989	\$7,988	\$24,018	\$22,257	\$27,989
Induced	\$128,817	\$70,792	\$19,041	\$85,878	\$21,222	\$66,716	\$19,041	\$57,252	\$53,054	\$66,716
Indirect	\$44,624	\$10,389	\$39,203	\$29,749	\$3,324	\$16,810	\$39,203	\$19,833	\$8,311	\$16,810
Total Personal Income	\$227,482	\$110,879	\$66,232	\$151,655	\$33,449	\$111,515	\$66,232	\$101,103	\$83,622	\$111,515
Value of Economic Activity (1,000)										
Total Business Services Revenue	\$307,769	\$71,651	\$270,385	\$205,180	\$22,928	\$115,939	\$270,385	\$136,786	\$57,321	\$115,939
State and Local Taxes (1,000)										
Total State and Local Taxes	\$22,998	\$10,348	\$8,684	\$15,322	\$3,136	\$10,890	\$8,684	\$10,221	\$7,840	\$10,890

Project No.	Project Description	Construction Jobs	Construction Man Hours	Personal Income	State & Local Taxes
1	Berth 10 / 11 Corner Realignment	319.2	638,326	\$13,804	\$1,39
2	Berth 4 Extension	718.1	1,436,326	\$31,059	\$3,13
5	Drop Trailer Parking	17.6	35,108	\$759	\$7
9	Container Terminal Expansion	1,340.5	2,680,967	\$57,977	\$5,85
12	Warehouse 12 (150,000 SF)	542.6	1,085,153	\$23,467	\$2,36
13	New Zone B Warehouse	494.7	989,405	\$21,396	\$2,15
16	Relocated Dry Bulk Storage	19.1	38,300	\$828	\$8
18	ICTF	287.2	574,493	\$12,424	\$1,25
20	Zone C Access Improvements	63.8	127,665	\$2,761	\$27
26	TWIC Zone Realignment	16.0	31,916	\$690	\$7
	Five-Year Subtotal		7,637,565	\$165,164.9	\$16,665.
3	Berths 2 & 3 (2,000 LF)	1,915.0	3,829,953	\$82,824	\$8,35
6	North Pier Open Cargo Area	79.8	159,581	\$3,451	\$34
8	Berth 6 Fill-in	111.7	223,414	\$4,831	\$48
9	Container Terminal Expansion	893.7	1,787,311	\$38,651	\$3,90
11	Maintenance Facility	95.7	191,498	\$4,141	\$41
17	New Petroleum Access Road	55.9	111,707	\$2,416	\$24
19	Expanded Rail Marshalling Yard	111.7	223,414	\$4,831	\$48
23	South Gate Expansion	63.8	127,665	\$2,761	\$27
26	TWIC Zone Realignment	16.0	31,916	\$690	\$7
	Ten-Year Subtotal		6,686,460	\$144,596.9	\$14,589.

### Table 16-3. Additional Impacts Generated by Capital Projects

Opportunity | Growth | Stewardship

### Section 16. Economic Impacts



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## SECTION 17. CONCLUSIONS

SeaPort Manatee is poised for substantial growth, doubling its cargo operations over the next 20 years. With this Master Plan, SeaPort Manatee will be positioned to capture the addressable cargo market opportunities that are available, introduce new services for SeaPort Manatee's customers, and remain prepared to compete for new business lines.





SeaPort Manatee's growth since completion of the 2016 Master Plan has positioned the port as Southwest Florida's supply chain gateway of choice. With continued strong growth in the container market, the breakbulk / general cargo market, the citrus juice market, and continued growth in the port's mainstay dry bulk and liquid bulk petroleum cargos, SeaPort Manatee is poised to double its annual throughput volumes over the next 20 years. This SeaPort Manatee Master Plan Update 2022 provides the roadmap to capture these opportunities, and to continue to grow as the economic engine for Southwest Florida.

This Master Plan Update identifies a set of strategies to unlock existing hidden capacity, minimize and remove existing operational conflicts to optimize existing infrastructure, and expand the port to match operational capacity with future market demands over time. With expansive available adjacent land, SeaPort Manatee is well-positioned to grow its footprint and operational base with limited impact to ongoing operations. With the full execution of this master plan, SeaPort Manatee will ultimately be able to increase its maximum annual throughput capacity to between 18 million and 20 million tons. Operationally, SeaPort Manatee will be able to increase its sustainable capacity to between 15 million and 17 million tons.

This Master Plan has identified 26 projects that will position and enable SeaPort Manatee to realize its future potential. The projects include:

- Upgrades to selected berth facilities
- Expansion of new berth facilities
- Expansion of container handling facilities
- Introduction of new inland rail transportation facilities
- Construction of a new special-purpose citrus juice facility
- Construction of new warehouse and open storage facilities
- Reconfiguration of secured access areas
- Preparation for potential new cruise / ferry operations

The scopes of the projects are described at a planning-level and will require further detailed planning, engineering, and financial evaluation prior to implementation. However, as a roadmap for the future, the overall plan, individual projects, and relative implementation timeframes provide SeaPort Manatee with a common point of departure for strategic decision-making and investment for the future.

As the stewards of SeaPort Manatee, Manatee County Port Authority is positioned to capture the opportunities that will benefit the community and SeaPort Manatee's customers and continue to grow SeaPort Manatee's contributions to the community.

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## SEAPERT Manatee The right turn on Tampa Bay

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