

STRATEGY DEVELOPMENT

4.1 Introduction

The Phase I objectives of the strategy development element in this *Port Everglades Master Plan* (Plan) were:

- Develop with the Port Everglades senior management team a business strategy that will drive the Port's future growth and development.
- Develop with the senior management team an asset utilization strategy that optimizes benefits to the Port and the County through:
 - Financial return.
 - Market opportunities.
 - Competitive advantage.
 - Economic benefits.
- Develop a market-driven vision plan that provides a roadmap for meeting the future needs of the Port's existing customers, developing new business, and sustaining the Port's significant economic contributions to Broward County, the South Florida region, and Florida.

The Phase II objectives were:

- Develop with the senior management team, a financial strategy that will both meet the Port's "financial sufficiency mandate" and fund the recommendations of the Plan.
- Utilize the results of the site-specific economic impact model to evaluate the various capital infrastructure projects identified in the market-driven Vision Plan.
- Encourage the use of public-private partnerships and other funding sources as appropriate to achieve value-added infrastructure improvements.

This narrative summarizes the Phase I workshop the Consultant Team and the Port's senior management staff (the Team) held to develop the initial framework for the Port's business strategy. To highlight the input of the Port's staff, their comments are italicized in this narrative.

Defining Port Success. In developing this business strategy collaboratively, the Team consistently referred to the Port Everglades Mission Statement:

The mission of Port Everglades is to manage the County's port-related assets to maximize the economic benefits to the citizens and businesses of Broward County and the State of Florida. The Port will manage the County's assets in a financially responsible, environmentally sound manner, consistent with the local, state, and federal rules and regulations which govern international and domestic trade, transportation and the Port industry.

In other words:

Consistently maintain, develop, expand, and modify the Port to meet service area needs, strengthen Broward County's economy, and enhance the region's multi-modal transportation network.

As another point of reference, the Consultant Team also put forward the measures of success the Broward County Board of County Commissioners (Board) identified in the Industry/Economic Action Plan from the Port's 2005-2010 Business Plan.

Commission Goal: Clearly identify industry/economic targets that are most promising to our stakeholders and in context with our goals.

- Market Measure 1: Amount of new capital investment made in Broward County.
- Market Measure 2: Number of jobs for Broward County.
- Objective 1: Increase the amount of new capital investment made in Broward County by 5 percent over 5 years.
- Objective 2: Increase the number jobs in the Port sector by 5 percent over 5 years.

4.2 Business and Asset Utilization Strategies

Types of Port-Generated Economic Benefits. There are several ways to calculate the Port's economic benefit. These include:

- Satisfying the needs of consumers and business for fuel, consumables, construction materials, and other commodities at a comparatively lower cost than if the goods were imported elsewhere.
- Capturing revenue and value-added opportunities from passenger traffic.
- Spending by cruise passengers in Broward County in hotels, restaurants and stores and spending by the crew for electronics and other goods.
- Spending by the cruise industry for fuel, provisions, and administrative expenses
- Cross benefits and synergies between the Port and Fort Lauderdale-Hollywood International Airport (FLL) from cruise passengers who fly in and out of that Airport.
- Reductions in highway congestion by using direct water service for foreign imports to reach South Florida consumers rather than trucking from northern ports
- Jobs and income-earning opportunities
- Taxes

Critical Success Factors Identified from the Port Business Plan The Port's 2005-2010 Business Plan identifies the following success factors:

- Revenue must be sufficient to maintain and cover bond requirements and fund capital projects.
- Tariff and lease rates must remain competitive in regional, state, and national markets.
- Security must be a priority.

- Port infrastructure must keep pace with global market changes to remain competitive.
- Leasable real estate in the Port must be renovated.
- Substantially larger cruise ships and passenger volumes must be accommodated.
- Harbor facilities must be expanded and deepened to meet the demands of larger vessels.
- Ancillary landside assets (e.g., drainage, road resurfacing) must be upgraded.
- Parking capacity must be increased.
- High customer service levels to varied tenant mix must be enhanced.
- Foreign-Trade Zone non-contiguous sites must be expanded and facilitated.
- Environmental stewardship and principles must not be compromised.
- Responsible and responsive corporate citizenship must remain a focus.
- High vehicle traffic solutions must be designed and implemented.

Current Port-Supported Objectives. The current Port-supported objectives are:

- Provide new container and other marine terminals, including planning for an intermodal container transfer facility (ICTF).
- Improve intermodal connections (road and rail) to facilitate the transportation of cargo and provide competitive service.
- Expand cruise operations and construct new facilities.
- Expand roadway systems and parking facilities to support increased cruise growth.
- Expand Foreign-Trade Zone operations (including noncontiguous zones).
- Expand role as a transshipment center for worldwide markets.
- Improve petroleum-receiving facilities and operations.
- Pursue new trading opportunities and strengthen existing ties.

As shown in Element 3, many of these objectives are reflected in the Phase I 20-year Vision Plan and have been incorporated, as feasible, into the Final Plan.

Financial Objectives. The following financial objectives influence the Port's business and asset management strategies.

- Increasing revenues and, more important, net revenues.
- Return on investment.
- Stability of income.
- Achieving growth targets.
- Protecting value for the County and bondholders.

- Self-sufficiency.
- Diversification of commodities handled.

These objectives will be incorporated into the Goals, Objectives, and Policies section of the Deepwater Port Component of the Coastal Management Element in Broward County's Comprehensive Plan in Phase III.

Summary of Business Strategy Considerations. In summary, the Port's business strategies must consider:

- The Port's most probable trade/cruise markets.
- The Port's 10- and 20-year Vision Plans.
- The Convention Center "carve-out" and impact on day and other cruises.
- Lease opportunities.
- The U.S. Army Corps of Engineers (ACOE) study findings.
- Potential air-draft and crane-height restrictions from aviation flight surfaces.
- Status and incorporation of on-going projects.
- Diversification to increase berth utilization.
- Higher density terminal operations.
- Greater operational efficiencies.
- Phasing of proposed infrastructure improvements to balance available funding with construction cost need.
- Design parameters to increase operational savings.
- A balance between commerce and security.

Strategic Workshop Questions and Responses. The following questions raised during the workshop and the Team's responses are summarized below:

Question: Can the Port be a true container hub for Asian cargo or should it focus on its diversified niche cargo markets?

Response: *Port Everglades will be an international hub for trade, increasing European and Asian cargo while strengthening its base of trade with Central and South America and the Caribbean. Competition from off-shore load center growth (Panama, Bahamas, Dominican Republic, Jamaica) and increased intra-regional trade may reduce transshipment options. All-water shipments through the Suez Canal will probably focus on the Mid-Atlantic ports. The South Florida consumer market will bring some of the larger container ships to Port Everglades, but not the largest because of physical and geographic constraints. Security is also a constraining factor to transshipment cargo.*

Question: Can the Port provide facilities for all commodity types or should it promote only the highest revenue producers?

Response: *Although the market for bulk shipments is erratic, bulk cargo provides 2.5 jobs per 1,000 tons of cargo and is an important community benefit. To retain important flexibility, the Port cannot dedicate specific a berth or yard to some neo-bulk commodities, but needs to retain them for interim uses.*

Question: Does the economic benefit to the community of the lower value cargo (bulk/neo-bulk) outweigh any lost opportunity costs to the Port of enhancing its dedicated container/cruise/petroleum infrastructure?

Response: *Much of the bulk/neo-bulk products serve the construction industry and, therefore, provide significant economic impact. Individual commodities have different arrival patterns and the Port will consider these patterns as well as certain dwell time policies as the Plan and future operational policies are developed.*

Question: How large does the ICTF need to be?

Response: *The Florida East Coast Railway has projected that ICTF rail traffic would transport 145,000 20-foot equivalent container units (TEUs) in 10 to 15 years.*

Question: Can the Port provide sufficient infrastructure (berths/ terminals/ traffic circulation) to capture and retain the planned larger cruise ships?

Response: *Not planning for the larger cruise ships would not accommodate the industry's future fleet. Providing sufficient infrastructure (berths/ terminals/ intermodal zone area) is needed to maintain tenant needs and customer satisfaction.*

Question: Is there room on the Port for additional non-cargo/cruise revenue generators? What are they?

Response: *The Port needs to provide small (500 square feet) offices for as many as 25 to 30 Port-related businesses – about 30,000 square feet in total. The potential area could be on private property, or perhaps associated with new Foreign Trade Zone facilities.*

Question: Does the Port need to develop additional Southport land now, or require more efficient land uses of its tenants before expanding?

Response: *There are several alternatives: 1. The Port can develop Phase VIII now and use the land as a temporary terminal so that tenants wishing to convert their yards to rubber-tire gantry cranes (RTGs) and implement land use/density efficiencies can still achieve their guarantees. 2. The Port can issue Request for Letters of Interest for the land. 3. The Port itself can develop the land, purchase RTGs, and use the site as a common terminal.*

Question: How deep do Port channels and berths need to be, based on other choices?

Response: *Dock capacity and channel/berth depths should be consistent with the ACOE dredging program.*

Question: What about the opportunity for synergies between the Port and FLL in using excess dredge material? The Port will have 7 million cubic yards from construction dredging and needs only about 1 million.

Response: *The Vision Plan recommends continuing coordination with FLL's fill needs for runway expansion in identifying spoil sites for the dredged material.*

Question: Can vacant Southport land be used as a temporary dredge disposal site from time to time (when maintenance dredging is performed)?

Response: *A site off the Dania Cut-off Canal has been identified in the Vision Plan for the disposal of dredged material.*

Question: In addition to looking at revenue generators, business strategies should consider ways to decrease expenditures. Are there ways to reduce security, fire, and fire rescue costs? Together these costs approximate the Port's annual capital improvement budget.

Response: *With the "carve out" of the Convention Center and adjustments to the boundary of the Port's restricted area, the final Plan recommendations should be cognizant of maintaining security with reduced operational costs.*

Lease Opportunities

- Many Southport leases extend for more than 10 years, with renewal options.
- Several cargo tenants have preferential berth and crane usage assignments.
- Several tenants in Southport have "grid" assignments for flexibility and functionality.
- Midport tenants primarily have up to 5-year leases and "grid" assignments. Key central areas have 5- to 10-year lease periods remaining.
- The cold storage warehouse in Midport has a 50-year lease, which started in 1982.
- Northport tank farm area is primarily privately held land area.
- Cruise lines have some preferential berth assignments; cruise terminals are used by all lines.
- Overall leasing practices provide for short-term leases with flexible opportunities.

"How Much Will Fit into the Jar?"

The Consultant Team, in developing multiple vision plans, used a land-use allocation process to establish planning priorities: In this process, the big rocks are placed in the jar first, followed by the small rocks and pebbles, and finally the sand fills the jar to maximum capacity.

- Cruise/container/petroleum land use areas are identified first (the big rocks or targeted assets).
- Dry bulk/general cargo land use areas are identified next (the smaller rocks).
- Areas for ancillary and other support services are identified subsequently (the pebbles)

- The need and opportunity for optional land uses are explored (the sand)
- A transportation framework is developed to move goods and passengers efficiently.

Strategic Business, Financial, and Asset Management Challenges. Among the strategic challenges addressed in the planning process are the following:

- Developing management strategies that help close the gap between the unconstrained forecasts from the Consultant Team’s market assessments and the realities of Port business opportunities.
- Managing traffic circulation and parking.
- Updating security plans (Port and tenants)
- Fitting everything into the jar.

Asset Utilization Strategy

The purpose of an asset utilization strategy is to assure that appropriate actions are taken to preserve the longevity, functionality, and economic return of the Port’s capital investments. Asset utilization is a systematic process for keeping infrastructure in what is generally called a “State of Good Repair.”

A good asset management program has two components:

- A computerized database that contains basic information about every asset.
- An optimization tool or set of rules to determine the best sequence for spending the funds that are available for maintenance, replacements, and new capital improvements.

The Port’s real assets can be categorized into three major physical groups:

- Land.
- Buildings, equipment, and site Improvements.
- Transportation infrastructure.

Land, buildings, equipment, and site improvements can be a source of direct revenue; however, in general, transportation infrastructure is needed to service the other two groups and does not generate revenue directly.

Improving economic return can be accomplished by:

- Adding to capital improvements with an increased rate of return.
- Improving existing utilization rates without capital enhancement.
- Reducing operating costs

The Vision Plan identifies the maximum practical utilization rate and /or capacity for the multiple assets at the Port. Increased utilization rates for the Port’s infrastructure can be accomplished in the following areas:

- Using berths for cargo operations on non-cruise days to maximize berth use.
- Scheduling of ship calls to increase berth utilization, with day cruises to be accommodated at non-dedicated berths
- Providing longer, straight, continuous berths to increase berthing flexibility and accommodate the maximum number of ships of various lengths.
- Increasing the rate of use for cranes to increase throughput
- Using higher-density stacking technologies to increase yard utilization

Reducing the operating costs of services will improve the economic return of the Port's capital investments. If the cost of such services can be reduced without detrimentally affecting service and an equal value of service is rendered, the asset will be better utilized. Operating costs that should be evaluated are in the following areas:

- Preventative maintenance program.- evaluation and funding of a program to maintain assets in good repair.
- Energy usage – evaluation of a central chilled water generator for the enlarged cruise facilities for reduction of the cost of electricity.
- Weather protection of building facilities – evaluation of building roofs and implementation of needed repairs quickly; protecting building and equipment with advanced corrosion-resistant painting/coating systems.
- Corrosion resistance of marine structures– installation of cathodic protection at bulkheads.
- Reduction of security costs by consolidation of security gates.

Port Everglades has taken several major steps in improving asset utilization.

First, conservation of energy will reduce one of the Port's largest bills, FPL's billing for electrical usage. The Port has entered into a guaranteed energy-performance-savings contract with FPL for energy conservation measures. The project includes the following energy conservation measures:

- Lighting retrofit.
- Lighting controls.
- Energy management system.
- Air conditioning upgrades.
- Window solar film.
- Chiller plant upgrades.
- Fiber optic network for emergency medical services.

The project scope includes work in the following facilities:

- Cruise Terminals:
 - Northport - 1, 2, and 4.
 - Midport - 18, 19, 21, 22/24, 25, and 26.
 - Southport - 29.
- Support Buildings:
 - Public Safety.
 - Public Works.
 - Northport parking.
 - Midport parking.
- Administration
 - Eller Administration Building.
 - Amman Building.

Second, operating cost reductions can be accomplished by establishing a preventive maintenance management system. The Port has acquired a “real time” software system to organize the maintenance program further. This system, MP2, is a completely integrated asset management system that enables the Port to:

- Organize and track inventory.
- Manage equipment costs.
- Track equipment history.
- Schedule preventive maintenance tasks.
- Maintain labor records.
- Allocate resources.
- Generate and track work orders.
- Requisition and purchase parts.
- Project equipment failure and maintenance needs.

For Public Works, this tracking will lead to:

- Information re: equipment downtime.
- Identification of hot maintenance spots in a facility.
- Justification for additional resources and personnel.
- Support for new equipment purchases.

For Finance, this information can be used as the base for cost accounting.

For Property Management, this information allows the Port to be proactive and responsive to the facility needs of its tenants.

In summary, asset utilization strategies, when performed by public entities demonstrate that they operate in a businesslike manner. With an asset utilization system in place, Port Everglades will be able to manage, maintain, utilize, and obtain peak performance of its assets.

4.3 Summary of Ten Key Business and Asset Utilization Strategy Concepts.

Finally, the ten key concepts the Team identified for the initial Port's Business Strategy Plan, which are needed to meet the growth objectives and maintain sustainability, are:

1. Port Everglades will be an international hub for trade, increasing European and Asian cargo while strengthening its base of trade with Central and South America and the Caribbean.
2. Port revenues need to cover bond requirements and fund capital improvements.
3. Capital improvements should enhance flexibility and multi-use of infrastructure assets.
4. Diversification of commodity throughput should be maintained.
5. Operational efficiencies (i.e. mitigate traffic congestion, increase petroleum receiving system efficiencies) should be developed
6. Tenant land use efficiencies should be encouraged.
7. Operating costs should be reduced (i.e. security/electricity) to increase net revenues
8. The Port should utilize a benefit/cost matrix of return on investment, economic benefit to the community, and environmental impact to make go-no go decisions on proposed infrastructure projects
9. The Port should investigate and establish procedures for implementing alternative funding sources; i.e., public-private partnerships
10. Synthesizing the synergies among Broward County's many assets -- the Port, the Airport, the Convention Center, the marine industry, and the environment -- is a win for all

4.4 Financial Strategies

The 5-Year Plan and the 10- and 20-Year Vision Plans are the road maps to identify the infrastructure that is projected to meet market demand at those respective milestones. The Vision Plans answer the question: “If Port Everglades is to meet the expected market demand at a milestone year, what infrastructure will be needed? The 5-year Plan has been further refined by establishing estimated design and construction costs and schedules for project construction, within the 5- Year fiscal period.

The projects in the 5-Year Plan were incorporated with the Port’s continuing general infrastructure, maintenance, and renewal programs to create the 5-Year Capital Improvement Program (CIP). This CIP, which covers Fiscal Year 2007/2008 to 2011/2012, (October 2007 to September 2012 per Broward County’s fiscal period), needs to be a program that can be implemented within identified project budgets and have the funding available at the time needed. The 5-Year CIP presented in this Plan has been developed with County staff and represents a program that is capable of being implemented within the established time frame. Projects in the 5-Year CIP were selected because of their added value to the Port in the near term.

4.4.1 The Project-Decision Matrix

The 5-Year Plan is differentiated from the 10- and 20-Year Vision Plans with further investigation and documentation to support the placement of those projects in the CIP. The Port’s senior staff and the Consultant Team developed “tools for the toolbox” to assist and guide future Master Plan decision-making. A critical tool in the toolbox is the Project-Decision Matrix, which is a set of sensitivities to be utilized when market demand indicates that a project would be needed in the near term. At that time, accurate information can be entered into the Project-Decision Matrix.

The Project-Decision Matrix was utilized to make Go-No-Go decisions in placing Master Plan projects into the 5-Year CIP. Some projects in the 5-Year CIP do not produce revenue directly, but, as in the case of road improvement projects, are needed to mitigate existing traffic congestion. These projects are essential to maintain Port tenant and user satisfaction and meet regulatory requirements. Other projects, such as new cruise facilities, rank high using the Project-Decision Matrix tool and, therefore, several cruise facility projects have been included in the 5-Year CIP.

The Project-Decision Matrix comprises six sensitivities:

- Project Cost.
- Return on Incremental Investment (ROI).
- Net Present Value (NPV).
- Economic Impact.
- Environmental Impact.
- Customer/Regulatory Need.

These six sensitivities, or indicators, are described below.

Project Cost. The cost of a project includes professional design and inspection services during construction. It is recommended that in appropriate projects, value-engineering services should be added to the design process depending on the nature of the project. Initial capital costs must be evaluated against long-term operating costs (see the previous asset utilization discussion). Construction costs within the 5-Year CIP incorporate a three percent inflationary increase per year. Construction costs for projects in the 10- and 20-Year Vision Plans use present dollars in the order-of-magnitude cost estimates to avoid discrepancies in projected escalation factors.

Return on Incremental Investment. The Port's investment may be the value of land or the cost of capital improvements by the Port for the project. In addition to revenue received from wharfage charges, dockage fees, land lease, or passenger throughput, the Port may also be reimbursed for the cost of new cruise facility and cargo projects in the form of a capital cost recovery charge.

Net Present Value. NPV is the dollar amount by which the future net revenues, discounted at 8.50 percent per year, would exceed the initial investment by the Port on a project.

Economic Impact. Economic impact is quantified in terms of income, jobs, and taxes, and can be an indicator of the sustainability of a project.

Environmental Impact. Environmental impact is not only evaluated in terms of the additional cost to a project, but must acknowledge acceptance of the project from both the regulatory agencies and the public.

Customer/Regulatory Need. Some infrastructure projects do not directly generate revenue, but need to be implemented. For example, without traffic and security improvements, the needs of the tenants/stakeholders, regulatory agencies, and the public cannot be met.

Project Cost, Return on Investment, Net Present Value, and Economic Impact can be quantified and evaluated analytically. Environmental Impact and Customer/Regulatory Need do have quantifiable impacts, but also may have specific issues such as permits or other mandatory regulations that influence the Go-No-Go decision.

The financial strategy used in the development of the 5-Year CIP is to incorporate sustainable, high added-value projects. This strategy is recommended for future capital improvement programs throughout the 20-year planning horizon. In other words, revenue from a project should not be the only indicator, but other indicators should be evaluated. The key terms are "sustainable" and "added value."

4.4.2 Examples of Return on Investment and Net Present Value Calculations in the Project-Decision Matrix

The financial strategy used in developing the 5-Year CIP applied the above sensitivities or key indicators to analyze key projects. Two such projects are the crushed rock aggregate facility and Cruise Terminal 18.

Crushed Rock Aggregate Facility. The crushed rock aggregate facility is an example of a bulk cargo facility being added to the Port's infrastructure. In this particular project, a new berth

is added and, therefore, no other cargo operation is negatively affected. The new berth does, however, have an environmental impact. For example, the Plan recommends extending the Turning Notch to the west to add berth capacity. Extending the Turning Notch requires release of 8.7 acres of the Conservation Easement. The cost of extending the Turning Notch should be distributed not only to the crushed rock aggregate facility, but also to the added new berths further west and the expanded Berth 30. It has been assumed that the Port's investment in the crushed rock facility is the land to be occupied by the facility (27 acres or 1,176,120 square feet) and one quarter of the mitigation cost of vacating 8.7 acres of the Conservation Easement (1/4 of \$28 million). All other project costs are to be by the user of the facility. For analyzing the key parameters in the Project-Decision Matrix, the Port's investment is assumed to be \$20 million.

The financial analysis of the 4,000,000 tons per year crushed rock facility assumes a \$20 million investment to handle crushed rock aggregate imported in weekly calls by Super Panamax bulk carriers carrying 76,923 tons of crushed rock per ship.

The following revenues were assumed:

- Wharfage charges of \$0.88 per short ton.
- Dockage fee of \$0.19 per gross registered ton (GRT) per day with a GRT of 50,972 for the ship and 2 days per call.
- Land lease of \$1.50 per square foot per year on 27 acres.
- Line handling charge of \$842 per call.

The analysis assumes that no existing business would be displaced by the project, that is, all other revenues would be the same as if the project were not built.

The revenues include \$1.8 million per year from land lease, \$3.5 million from wharfage charges, \$1.0 million from dockage, and approximately \$43,000 from line handling, for a total of \$6.3 million per year. Operating costs are assumed to be 50 percent of the revenues, resulting in net operating revenues of \$3.2 million per year.

Based on these assumptions, the crushed rock facility would provide a NPV of \$8.4 million, the amount by which the future net revenues discounted at 8.50 percent per year would exceed the initial investment of \$20 million. The project would provide a ROI of 13.70 percent per year.

Cruise Terminal 18 Expansion. Cruise Terminal 18 is an example of adding additional cruise facilities to the Port's cruise infrastructure. The project has a very high ROI of 26.6 percent and NPV of \$44.9 million. The reason these key indicators are high is the capital cost is recovered by a capital cost recovery charge in 5 years and the future net revenues remain high thereafter. The capital cost recovery charge is a result of Port policy, having the user cruise line reimburse the Port the capital cost, plus debt service charge, of the project over 5 years. The environmental impact of added cruise facilities is low and the customer need is high since the user agrees to reimburse the Port for project costs. The other cruise facility projects in the 5-Year CIP would have similar key indicators.

The financial analysis of the Cruise Terminal 18 expansion considers a \$37.4 million investment in the terminal to accommodate the planned Royal Caribbean International (RCI) Genesis-class vessels with a capacity of 5,616 passengers. The analysis also considers initial use of the facility by Navigator-class vessels with a capacity of 3,114 passengers.

Based on 100 percent occupancy, the number of revenue passengers would be double these numbers (embarking and disembarking passengers). While a 90 percent load factor is an average for the cruise industry, the experience of Port Everglades with RCI is 100 percent. (Occupancy often exceeds 100 percent in the cruise industry, due calculating capacity on the basis of twin berths.)

The analysis assumes that, in the first year after construction, the facility would serve one Navigator vessel per week, in the second year, one Navigator and one Genesis vessel per week and, in the third year and thereafter, two Genesis vessels per week. It is assumed that no existing business would be displaced by Project Genesis, that is, the Port would continue to serve the same other business as if the Cruise Terminal 18 expansion were not built. This does not imply any assumption about whether the other business increases, decreases, or remains about the same, only that it is not affected by this expansion.

The revenues are assumed to include a \$10 per passenger permanent charge and an additional \$5 per passenger capital cost recovery charge for the first five years. The \$5 capital cost recovery charge is assumed to apply to all RCI passengers, including but not limited to the Genesis and Navigator passengers. The total passengers are approximately 1.9 million. The resulting revenues would increase from \$12.7 million per year in Year 1 to \$21.2 million in Year 3, when both Genesis vessels would be calling, declining in Year 6 to \$11.7 million, after conclusion of the capital cost recovery charge.

Operating costs are assumed at 50 percent of the regular \$10 per passenger charge. Based on this assumption, the resulting operating costs would average \$5.8 million once the Genesis-class vessels were calling at the Port.

The resulting net operating revenues would increase from \$11.1 million in Year 1 to \$15.3 million in Year 3, when both Genesis vessels would be calling; declining to \$5.8 million in Year 5 when the capital cost recovery charge was ended.

Based on these assumptions, Project Genesis would provide a NPV of \$44.9 million, the amount by which the future net revenues discounted at 8.50 percent per year would exceed the initial investment of \$37.4 million. The project would provide a ROI (or Internal Rate of Return) of 26.6 percent per year.

The Appendix contains the ROI and NPV calculations for these and other projects.

4.5.2 Examples of Economic Impact Calculations in the Project-Decision Matrix

The Project-Decision Matrix also requires identification of the economic impact of the project as a key indicator in determining a Go-No Go decision. Economic impact is quantified by income, jobs, and taxes. The estimated economic impacts for the crushed rock facility and Cruise Terminal 18 expansion are shown in Tables 4.4-1 through 4.4-5.

Table 4.4-1

ECONOMIC IMPACT ANALYSIS	
Crushed Rock Facility	
IMPACT CATEGORY	INCREMENTAL CHANGE
JOBS	
DIRECT	301
INDUCED	364
INDIRECT	236
RELATED USER JOBS	314
TOTAL JOBS	1,215
PERSONAL INCOME (1,000)	
DIRECT	\$14,015
INDUCED	\$41,202
INDIRECT	\$10,524
RELATED USER JOBS	\$10,294
TOTAL INCOME	\$76,035
VALUE OF ECONOMIC ACTIVITY (1,000)	
BUSINESS SERVICES REVENUE	\$52,020
RELATED USER OUTPUT	\$42,974
TOTAL VALUE OF ECONOMIC ACTIVITY	\$94,994
LOCAL PURCHASES (1,000)	
	\$19,758
STATE & LOCAL TAXES (1,000)	
DIRECT, INDUCED AND INDIRECT	\$6,048
RELATED USER TAXES	\$947
TOTAL STATE AND LOCAL TAXES	\$6,995

Table 4.4-2

**ONE-TIME IMPACT OF CONSTRUCTION
FOR CRUSHED ROCK FACILITY**

CONSTRUCTION IMPACTS	
TOTAL JOBS	1,317
TOTAL INCOME	\$42,950,530
TOTAL STATE AND LOCAL TAXES	\$3,951,449
AVERAGE SALARY	\$32,612

Table 4.4-3

ECONOMIC IMPACT ANALYSIS
Cruise Terminal 18 Expansion

CATEGORY	CRUISE	AIRPORT	TOTAL
JOBS			
DIRECT INDUCED	1,435	182	1,618
INDUCED	990	53	1,043
INDIRECT	732	452	1,184
TOTAL	3,157	687	3,844
PERSONAL INCOME (1,000)			
DIRECT	\$ 36,746	\$ 3,968	\$ 40,714
INDUCED	\$ 89,860	\$ 4,007	\$ 93,867
INDIRECT	\$ 24,140	\$ 13,406	\$ 37,546
TOTAL INCOME	\$ 150,746	\$ 21,381	\$ 172,127
BUSINESS REVENUE (1,000)	\$ 272,199	\$ 190,857	\$ 463,056
LOCAL PURCHASES (1,000)	\$ 27,814	\$ 24,625	\$ 52,439
STATE & LOCAL TAXES (1,000)	\$ 13,869	\$ 1,988	\$ 15,857

Table 4.4-4

ONE-TIME IMPACT OF CONSTRUCTION FOR Cruise Terminal 18 EXPANSION	
CONSTRUCTION IMPACT	
TOTAL JOBS	858
PERSONAL INCOME	\$27,975,200
INDIRECT PURCHASES	\$47,082,860
AVERAGE SALARY	\$32,612

The Project-Decision Matrix reflecting all six sensitivities for the crushed rock facility and Cruise Terminal 18 expansion projects is shown in Table 4.4-5. The Appendix contains Project-Decision Matrices for other projects in the 5-Year Plan.

Table 4.4-5

PROJECT DECISION MATRIX											
CRUSHED ROCK FACILITY											
Total Construction Cost	ROI	Net Present Value	Economic Impact			Environmental Impact			Customer / Regulatory Need		
			Total Income (\$1,000)	Jobs	Taxes	High	Mid	Low	Permit Required	High	Mid
\$63.4 M	13.7%	\$8.4 M	76,035	1,215	6,995	X			X	X	
CRUISE TERMINAL 18 EXPANSION											
Total Construction Cost	ROI	Net Present Value	Economic Impact			Environmental Impact			Customer / Regulatory Need		
			Total Income (\$1,000)	Jobs	Taxes (\$1,000)	High	Mid	Low	Permit Required	High	Mid
\$37.4 M	26.6%	\$44.9 M	172,127	3,844	15,857			X	X		

In summary, the financial strategy used in the development of the 5-Year CIP is to incorporate sustainable and high added value projects within the capital programs. This strategy is recommended for future capital improvement programs throughout the 20-Year planning horizon. In other words, revenue from a project should not be the only indicator in the financial strategy, but other indicators should be evaluated. The other key terms that should be included in the financial strategy are “sustainable” and “added value.” “Sustainable” references social

factors (i.e., economic impacts identified in the Plan) and environmental factors in addition to the traditional return on investment dollars.

4.5 Economic Impacts

Economic impact -- consisting of income, jobs, and taxes -- is one of the six key indicators in the Project-Decision Matrix. Martin Associates, a member of the Consultant Team, prepared a report entitled "The Local and Regional Economic Impacts of Port Everglades, dated September 13, 2007. The report, which is contained in the Appendix, measures the local, regional, and state economic impacts generated by maritime activity at the container, break bulk, liquid bulk, and dry bulk cargo terminals as well as at the cruise terminals at Port Everglades. Economic impacts generated at the cargo facilities include the impacts generated by containerized cargo (both dry and reefer), petroleum, steel products, cement, lumber and plywood, RO/RO cargo such as privately owned vehicles (POVs) and yachts, and other dry bulk cargo such as aggregates. In addition to the economic impacts generated by the cargo activity at the seaport terminals, the report also quantifies the economic impacts of the cruise industry at Port Everglades.

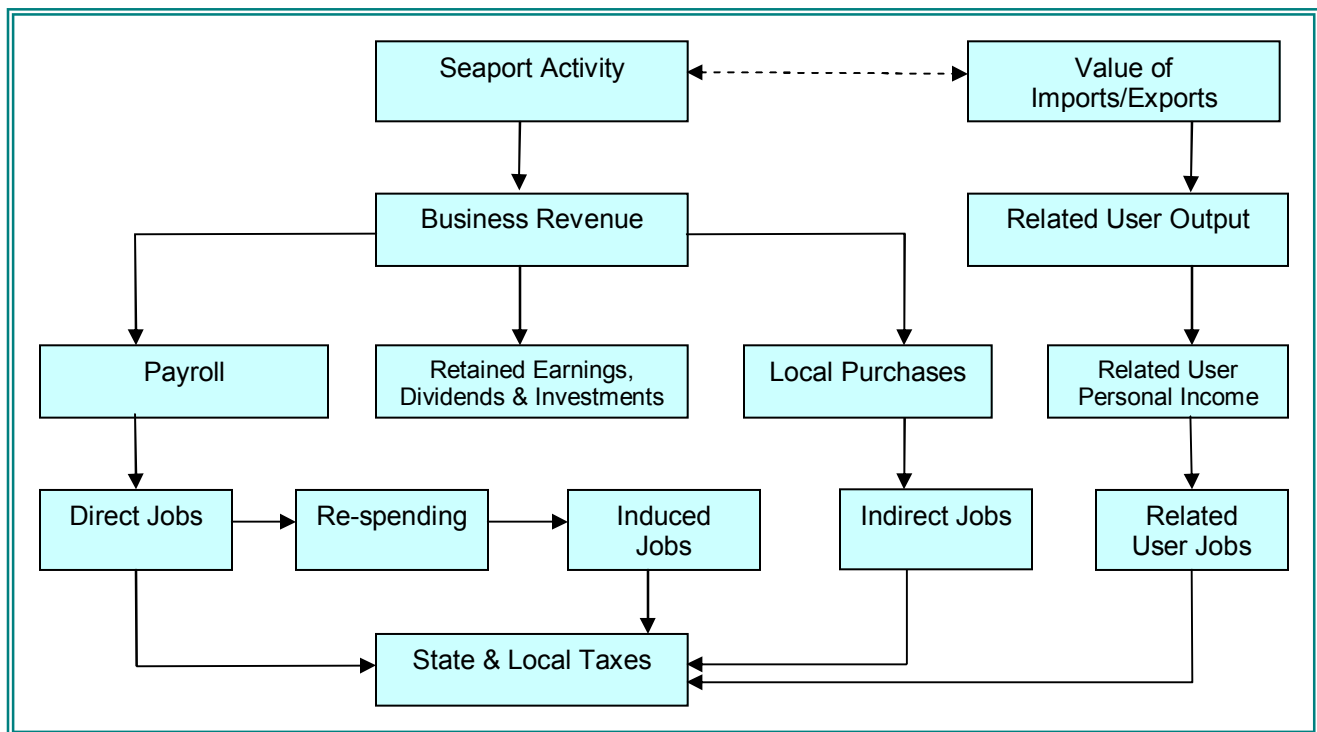
4.5.1 Economic Impact Components

The study focuses on impacts generated in Fiscal Year 2006. Impacts are estimated in terms of jobs, personal earnings, business revenue, and state and local taxes. In addition to the baseline, impact estimates, computer models specific to each terminal operation have been prepared that can be used in evaluating the sensitivity of impacts to changes in tonnage, labor productivity, labor work rules, commodity mix, inland origins/destinations of commodities, and vessel size.

Figure 4.5-1 graphically demonstrates how seaport activity impacts the local and regional economies. As this figure indicates, the ocean cargo and vessel activity initially generate business revenue to the firms supplying maritime services. This revenue is used to purchase employment (direct jobs) to provide the services, to pay stockholders and for retained earnings, and to purchase goods and services from local firms, as well as national and international firms (creating indirect jobs with these firms). Businesses also pay taxes from the business revenue.

The employees hired by the firms receive wages and salaries (personal income), a portion of which is saved, while another portion is used to buy goods and services such as food, housing, clothing, health care, etc. These purchases create a re-spending impact throughout the economy, known as the personal income multiplier. Because of these local purchases, additional jobs (known as induced jobs) are created in the local economy. Finally, taxes are paid by individuals employed with the firms providing the services to the seaport terminals.

Figure 4.5-1
Flow of Economic Impacts of Seaport Activity through the Economy



As demonstrated by this figure, four categories of impacts are measured:

- Jobs.
- Employee earnings.
- Business revenue.
- State and local taxes.

Jobs. With respect to jobs, four types of job impacts are measured. These are direct, induced, indirect, and related jobs. The job impacts are defined as follows:

- Direct jobs are those jobs with local firms providing support services to the seaport. These jobs are dependent upon this activity and would suffer immediate dislocation if the seaport activity were to cease. Seaport direct jobs include jobs with railroads and trucking companies moving cargo to and from Port Everglades' maritime terminals, members of the International Longshoremen's Association (ILA) and Teamster's Union, steamship agents, freight forwarders, ship chandlers, warehouse operators, bankers, lawyers, terminal operators, stevedores, etc.
- Induced jobs are jobs created locally and throughout the regional economy due to purchases of goods and services by those directly employed. These jobs are with grocery stores, the local construction industry, retail stores, health care providers, local

transportation services, etc., and would also be discontinued if seaport activity were to cease.

- Indirect jobs are those jobs generated in the local economy as the result of local purchases by the firms directly dependent upon seaport activity. These jobs include jobs in local office supply firms, equipment and parts suppliers, maintenance and repair services, etc.
- Related user jobs are with manufacturing and distribution firms -- such as steel fabrication firms using the steel imported through the seaport terminals. Related jobs are not dependent upon the seaport marine terminals to the same extent as are the direct, induced, and indirect jobs. For example, these firms can and do use other ports. It is the demand for the final product, i.e. steel products, which creates the demand for the employment with these shippers/consignees, not the use of a particular seaport or maritime terminal.

Employee Earnings. The employee earnings consist of wages and salaries and include a re-spending effect (local purchases of goods and services by those directly employed).

Business Revenue. Business revenue consists of total business receipts by firms providing services in support of the seaport activity.

State and local taxes. These include taxes paid by individuals dependent upon the seaport activity.

4.5.2 Analytical Findings

The economic impact findings resulting from the analysis prepared during the master planning process are based on interviews with 235 firms providing services to the cargo, passengers, and vessels handled at the Port's cargo and cruise terminals. These 235 firms represent 99 percent of the firms in the Port Everglades seaport community, underscoring the defensibility of the study. Furthermore, the impacts can be traced back to the individual firm. The data collected from the interviews were then used to develop operational models of the terminals located at Port Everglades.

The economic impacts generated by the cargo and cruise terminals are summarized in Table 4.5-1.

Table 4.5-1
Summary of the Local and Regional Economic Impacts Generated by Port Everglades*

	CARGO	CRUISE	TOTAL
JOBS			
DIRECT	5,984	4,997	10,982
INDUCED	6,742	3,278	10,021
INDIRECT	3,362	3,163	6,525
RELATED USER JOBS	<u>160,676</u>	<u>NA</u>	<u>160,676</u>
TOTAL JOBS	176,765	11,438	188,203
PERSONAL INCOME (1,000)			
DIRECT	\$265,247	\$129,108	\$394,355
INDUCED	\$779,799	\$298,100	\$1,077,899
INDIRECT	\$149,811	\$99,697	\$249,507
RELATED USER INCOME	<u>\$4,680,533</u>	<u>NA</u>	<u>\$4,680,533</u>
TOTAL PERSONAL INCOME	\$5,875,389	\$526,905	\$6,402,294
VALUE OF ECONOMIC ACTIVITY (1,000)			
BUSINESS SERVICES REVENUE	\$740,498	\$1,264,665	\$2,005,163
RELATED USER OUTPUT	<u>\$14,845,943</u>	<u>NA</u>	<u>\$14,845,943</u>
TOTAL VALUE OF ECONOMIC ACTIVITY	\$15,586,441	\$1,264,665	\$16,851,106
LOCAL PURCHASES (1,000)			
	\$281,252	\$139,282	\$420,534
STATE & LOCAL TAXES (1,000)			
DIRECT, INDUCED AND INDIRECT	\$109,927	\$48,541	\$158,468
RELATED USER TAXES	<u>\$430,609</u>	<u>NA</u>	<u>\$430,609</u>
TOTAL STATE AND LOCAL TAXES	\$540,536	\$48,541	\$589,077

* Totals may not add due to rounding.

The vessel, cargo, and passenger activity at the cargo and cruise facilities at Port Everglades generated the following impacts in the regional economy in FY 2006:

- **188,203 jobs in Florida are in some way related to the cargo and cruise activity at Port Everglades. Of the 188,203 total jobs:**
 - 10,982 direct jobs are generated by the ocean cargo and cruise activity.
 - Local and regional purchases by those 10,982 individuals holding the direct jobs support an additional **10,021 induced jobs** in the regional economy.
 - **6,525 indirect jobs** are supported by \$420.5 million of local purchases by businesses supplying services at the cargo and cruise terminals and by businesses dependent upon the Port for the shipment and receipt of cargo.
 - The cargo moving via Port Everglades supports **160,676 related user jobs** with exporters and importers located throughout the State of Florida. The majority of these jobs with exporters and importers are associated with the movement of containerized commodities.
- **Approximately \$6.4 billion of wages and salaries were generated by Port Everglades' cargo and cruise activity in FY 2006.**
 - **\$394.4 million of direct wages and salaries** were received by those 10,982 directly employed.
 - As the result of re-spending, this direct jobholder income, an **additional \$1.078 billion of income and consumption expenditures, was created** and supported the 10,021 induced jobs.
 - The 6,525 indirect jobholders received **\$249.5 million of indirect wages and salaries.**
 - The 160,676 related user jobholders generated **\$4.681 billion in personal income.**
- **The FY 2006 cargo and cruise activity at Port Everglades generated \$16.85 billion in economic value to the State of Florida.**
 - Businesses providing services to the cargo and cruise terminals received **\$2.0 billion of revenue.**
 - In addition, the cargo activity at the Port created an additional **\$14.8 billion of total economic output** in the state, the majority of which is created by the movement of containers and the in-state industries supporting these industries.
- Local businesses and suppliers to the cargo and cruise industries at Port Everglades made **\$420.5 million of local purchases.**
- **\$589.1 million of state and local taxes** were generated by activity at the cargo and cruise terminals, including **\$430.6 million generated by the related users** throughout the state.

Estimated Economic Impacts Resulting from Plan Implementation

The Consultant Team prepared an analysis of the projected economic impacts resulting from implementation of the 5-Year Plan and the 10- and 20-Year Vision Plans. The following summarizes the impacts at the end of each Plan year projected to be added to the impacts in the 2006 base year.

5-Year Plan (at year 2012)

- **Total jobs of 115,928** to the 188,203 jobs in the 2006 base year.
- **Total personal income of \$3.7 billion** to the \$6.4 billion in the 2006 base year.
- **Total economic activity of \$10.6 billion** to the \$16.9 billion in the 2006 base year.
- **Total state and local taxes of \$338 million** to the \$589.1 million in the 2006 base year.

10-Year Vision Plan (at year 2016)

- **Total jobs of 173,603** to the 188,203 jobs in the 2006 base year.
- **Total personal income of \$5.5 billion** to the \$6.4 billion in the 2006 base year.
- **Total economic activity of \$15.9 billion** to the \$16.9 billion in the 2006 base year.
- **Total state and local taxes of \$505 million** to the \$589.1 million in the 2006 base year.

20-Year Vision Plan (at year 2026)

- **Total jobs of 346,461** to the 188,203 jobs in the 2006 base year.
- **Total personal income of \$10.9 billion** to the \$6.4 billion in the 2006 base year.
- **Total economic activity of \$31.5 billion** to the \$16.9 billion in the 2006 base year.
- **Total state and local taxes of \$1.0 billion** to the \$589.1 million in the 2006 base year.

Refer to Table ES-1 for 2006 base year economic impacts. Refer to Appendix D for “Projected Incremental Change in Economic Impacts Associated with Implementation of the 5-Year and 10- Year and 20- Year Vision Plans” for additional information.

In the analysis, total jobs include direct, induced, indirect, and related user jobs. The incremental increases in economic impact shown above are heavily driven by the projected containerized cargo throughput impact on induced jobs.