

MARTIN ASSOCIATES
ECONOMIC & TRANSPORTATION CONSULTANTS

941 Wheatland Ave. • Suite 203 • Lancaster, PA 17603
Lancaster, PA: (717) 295-2428 • FAX: (717) 295-7089
Avon, CO: (970) 748-1095 • FAX (970) 748-1097
www.martinassoc.net

January 18, 2019

Ms. Beth McCague
Chief Financial Officer
JAXPORT
2831 Talleyrand Avenue
Jacksonville, Florida 32206

Dear Beth:

Thank you for your interest in the Martin Associates' economic impact of cruise and cargo activity at JAXPORT. As you know, we have developed the economic impact studies for the Port for the past 20 years and we look forward to working with the Port again for this update. In addition to the economic impact of cargo activity, these impact studies assess the economic impacts of cargo and cruise activity at JAXPORT. The resulting cargo impact models are used to assess the impacts of alternative master plan development recommendation, the impact of changing tonnage levels, annual updates, the impact of new cargoes/services, and the justification of capital development projects, as well as channel deepening. The cruise model is used to evaluate the impact of new services, changes in passenger demographics and spending, vessel itineraries, and capital projects for cruise terminal development.

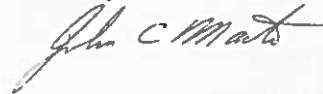
These port impact studies have become integral as planning tools, in addition to the traditional public relations use of impact studies. The major reason that these impact models have become planning tools is the fact that the underlying analysis is based on a detailed assessment of each port's operations, and no macro port impact models are used. Each port is unique and our models reflect the uniqueness of each port for which we conduct these studies. Hence, the results of the models are highly defensible and the direct economic impacts estimated can be traced to the individual firm level of detail. Furthermore, since we use a consistent methodology over time, changes in economic impacts can be explained in detail, and can be traced to specific changes at the firm level of detail or due to changes in service levels or gains in productivity.

In addition, we have been using portions of the economic impact studies to assist in TIGER Grant Applications as well as the new Build Grants. In fact, Ports America Chesapeake and the Maryland Port Administration were just awarded a grant for berth deepening, and Martin Associates prepared the benefits analysis used in the award application.

The results of this study will also be used in the state of Florida Maritime Economic Impact Analysis that Martin Associates prepares for the Florida Ports Council. We are currently updating the individual port impact studies for the Port of Tampa and Miami.

I have prepared a work scope for JAXPORT that includes both an economic impact study of cargo activity, as well as an economic impact study of cruise operations. Please feel free to call me at (717) 295-2428 with any questions and thanks for your interest in Martin Associates.

Sincerely,



John C. Martin, Ph.D.
Manager, John C. Martin Associates, LLC

II. PROJECT SCHEDULE, MILESTONES AND FEE

The cost for the economic impact study is \$68,500, excluding the passenger survey. The cost of the passenger survey would be \$15,000 and includes direct expenses for the survey team, which will be conducted by a qualified research group under the supervision of Martin Associates. The length of time to complete the project is three months. We will bill in three equal amounts, the first invoice will be at the initiation of the study, and the following will be at the end of the second month, and third upon acceptance of the study. We would request payment within 30 days of invoice receipt by the Port.

It is to be emphasized that the direct jobs and income generated by directly dependent port users, as identified in Task 3, Subtask 3.3, are then subtracted from the port user impacts identified in this task in order to avoid double counting.

Cruise Impact Analysis Methodology

TASK 10: Estimate the Economic Impacts of Cruise Operations

Martin Associates will develop a cruise impact model that will be calibrated for the type of cruise activity at the Port, and will be specific to size of ship, vessel itinerary, home port vs. port of call, mix of drive vs. fly passengers and length of pre- and post-cruise stay in the Jacksonville area. The analysis will also be specific to multi-day vs. one-day cruises.

Passenger activity at JAXPORT affects two sectors of the local and regional economy. These sectors are the Maritime Service Sector and the Visitor Industry Sector.

The maritime service sector includes those firms that provide services to the cruise vessels while in port, while the visitor industry sector consists of firms providing services to the passengers and crew of the current and potential cruise and passenger services. Included in this category are hotels and motels, restaurants/bars, retail outlets, rental cars/cabs, etc.

Subtask 10.1: Estimate Maritime Service Sector Direct Impacts

Telephone interviews will be conducted with the cruise lines now calling the Port. The purpose of these interviews will be to determine the amount of purchases, by type of service, made or potentially made by each vessel call and type of service. The results of these interviews are used to develop a typical ship disbursement account profile. Associated with each vessel expenditure category will be jobs to sales ratios, as developed from the interviews with the local firms supplying the goods and services to the vessels. The total annual expenditures, by type of service, will then be multiplied by the corresponding jobs to sales ratios to estimate the total direct job impacts in the maritime service sector. The revenue impacts are estimated directly from the expenditure profiles. Direct income is estimated from the average annual salaries developed by type of firm, from the interviews.

Subtask 10.2: Estimate Direct Visitor Industry Impacts

The jobs generated in the Visitor Industry /Tourism Sector (for example, hotels, restaurants, etc.) will be estimated using typical passenger expenditure profiles. The passenger expenditure profiles are identified from interviews with potential cruise operators, and can be supplemented with a passenger survey and a survey of vessel crew. Of particular interest are the total number of passengers per vessel call, and the estimated percent of those passengers that stay in local hotels prior to or after the cruise. The average expenditures on hotel lodging and nights stayed pre- and post-cruise, as well as food and in-town cabs, (from the surveys) are entered into the visitor industry model that will be developed. The visitor industry model indicates the direct jobs that would be supported only by the revenue from the cruise passengers' purchases of local services.

Martin Associates recommends a sample size of 900 passengers and 200 crew. We recommend conducting a stratified sample of the cruise operations at JAXPORT. We would stratify by vessel size as well as potential itinerary, and further by class of ship (the type of market that the cruise attracts – high end vs. low end of the cruise market). The survey would be an intercept survey administered prior to boarding the cruise ship.

Subtask 10.3: Develop a Computer Framework for Cruise Service Sensitivity Analysis

Martin Associates will develop a separate cruise impact model which can be used to assess the impacts of changes in such factors as:

- . Number of cruise vessel calls;
- . Passenger levels;
- . Passenger characteristics:
 - Local expenditures;
 - Local residents versus tourists;
 - Length of time and where stayed after disembarking;
- . Different types of cruise service, including;
- . Number of crew; and
- . Size of vessel.

TASK 11: Prepare Final Economic Impact Report and Develop Computer Model

A separate report will be prepared, highlighting results rather than methodology. The final report will be directed to a wide, diversified audience, and will not be couched in maritime technicalities. The report will present the impacts by major commodity and for individual categories within the four economic sectors. Impacts will be discussed for the total port activity, as well as separately for cargo handled at public versus private terminals (i.e., petroleum/petrochemical terminals).

The main intent of the report will be to educate the general population as to the importance of Port to the community, to provide a tool for port planning and to provide the benefits information required for capital spending decisions and the widening and deepening projects.

The Martin Associates' Port Economic Impact Model (EIM) will be calibrated during the project. The EIM, which is based on EXCEL, will allow for the update of the port specific impacts periodically, and to test the sensitivity of the impacts to changes in specific investments – cranes, warehouses, land, highway, rail tonnage levels, new facilities, dredging, development, commodity mix, vessel calls, labor productivity, labor work rules, vessel mix, vessel load factors, and inland transportation modal mix (i.e., increased use of rail versus truck for a particular commodity).

The port-specific Economic Impact Models will allow the assessment of the impacts of alternative land use, i.e., new breakbulk terminal versus a dry bulk facility. The models can similarly be used to evaluate the impacts of alternative marketing strategies and to assess the impacts associated with various strategies developed as part of a master plan.

due to national security issues. As part of the 2014-2015 labor contract negotiations, Martin Associates provided the economic impact assessment of potential port shutdowns and slowdowns. Martin Associates has developed the economic impact analysis and model for the Great Lakes/St. Lawrence Seaway Transportation System, which demonstrates the economic impacts of the system by state and province and for 36 individual U.S. and Canadian ports. Martin Associates also completed the economic impact study of the U.S. Coastal Seaports, 2014, for the American Association of Port Authorities.

Cruise/Passenger Impact Analysis

Martin Associates has developed cruise economic impact models for several ports throughout the U.S. The impact analysis includes a detailed survey of embarking passengers and crew from several of the key cruise services as well as the development of detailed disbursement accounts for specific type of cruise ship calling at the ports. These expenditure profiles are developed for home port cruises as well as ports of call cruises.

The cruise impact model can be used to test the sensitivity of the impacts due to vessel size, routing, percent of fly-in passengers, and the number of nights stayed pre and post cruise, etc. Cruise models are also used with cargo models to evaluate alternative uses of waterfront land for cargo or cruise terminal development. This methodology is used to estimate the impact of cruise business at the Ports of Miami, Port Everglades, Tampa, Port Canaveral, Jacksonville, Baltimore, Boston, Los Angeles, Seattle, San Francisco, Norfolk, Galveston, Houston, and Philadelphia. Martin Associates also provides the economic impact consulting for Disney Cruises.

We also use a derivation of this model to assess the impacts of ferry operations, including the Washington State Ferry operations, as well as San Francisco Bay ferry operations and the impact of potential ferry operations on the Great Lakes, and Connecticut to New York ferry operations.

Fishing Impacts

Martin Associates has developed a detailed model of commercial fishing activity at the Port of Seattle's Fisherman's Terminal and Elliott Bay and the Maritime Industrial Center, and a similar commercial fishing and fish processing economic impact model for the Port of San Francisco. Martin Associates has also developed such commercial fishing models for the Port of Los Angeles, the Port of Galveston, Port LaVaca/Port Comfort, the Port of Brownsville, Port of Bellingham, Grays Harbor, Port of Victoria, New Bedford (MA) and the Port of Boston. These models are used to assess the impacts of changes in the composition of the commercial fishing fleet as well as the impact of changes in commercial fishing regulations and the impact of changes in alternative uses for commercial fishing fleet slips and berths.

Recreational Boating Impact Analysis

Martin Associates has developed a model to measure the impacts of recreational boating. The model not only addresses the local employment at marinas and support services at the marinas, but also the impact of local purchases to support the recreational boating operations. These include repairs and supplies, retail purchases as well as storage. We have developed economic impact studies for the marinas owned by the Port of San Francisco, the Port of Tacoma, the Port of Seattle, the Port of Everett, the Port of Olympia, Port of Los Angeles and Port of Bellingham.