

APPENDIX N

Feasibility Study for the Proposed Development of the San Juan Waterfront Project



**Feasibility Study for the Proposed
Development of the San Juan
Waterfront Project**

Final Document

**Submitted to:
CSA Group**

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TABLE OF CONTENTS

EXECUTIVE SUMMARY.....	i
I. SOCIO – ECONOMIC ANALYSIS.....	1
II. COMMERCIAL SPACE.....	9
III. HOTELS.....	20
IV. MARINA.....	24
V. RESIDENTIAL SECTOR.....	26
VI. CIVIC SPACE.....	30
VII. ECONOMIC IMPACT ANALYSIS.....	31

EXECUTIVE SUMMARY

The Ports Authority (PA) is proposing a development project along the San Antonio Channel, in Puerta de Tierra, known as the San Juan Waterfront Project. This project will provide a pedestrian-friendly, mixed use waterfront area that will entail: commercial space, hotels, marina, housing, and office space. It also will provide public green spaces that build on the existing parks and open spaces of the Isleta. The proposed project will not only provide opportunities for employment and economic growth but an opportunity for restoration of this area of the Isleta into a walkable area of the city, creating a remarkable and vibrant urban waterfront. There is demand for all of these projects which are mutually reinforcing and will bring one sector of Old San Juan in line with the rest of the Old City.

There are three target groups for the commercial development. One is the residential population of Old San Juan. A second group is Puerto Ricans who visit Old San Juan for either business or pleasure. The third is tourists.

According to Urban Land Institute (ULI), “downtown and well-positioned suburban markets are being targeted for the largest and most ambitious retail entertainment centers. ULI sees these locations as having the identity, image, access, and (in most cases) related cultural activities that are the key requirements for successful large-scale retail entertainment developments.”¹

Given the composition of the target markets, the largest allocation of space would likely be rented by entertainment establishments, perhaps 40%. The proposed project would potentially include restaurants, pubs and night clubs. Potential tenants could include Rainforest Café, ESPNZone, GameWorks, PonteFresco and/or Jillian’s.

¹ Urban Land Institute, *Developing Retail Entertainment Destinations*, Second Edition, pg. 10

Approximately 35% of total available commercial area could be assigned to retail. Some potential tenants would add to the lifestyle ambiance such as Crate & Barrel, Williams-Sonoma, or NikeTown. Other stores could service the residential community or the government offices that operate in the Old City, such as a grocery store or an office supply store.

The remaining 25% of the available commercial area could be designated to services. These could be banks and financial services, beauty parlors, tanning salons, weight loss centers, dry cleaners, mailing and packaging service, among others. Depending on the building design, the square foot for common areas for each concept (retail, services and entertainment) is estimated to be from 10% to 25%.

Assuming a 5% long term growth rate in hotel registrations based on data collected over the last 15 years, approximately 350 new rooms would be required in San Juan every year over the next several years. The San Juan Waterfront by itself could increase this figure by improving the quality of Old San Juan as destination. Considering that the San Juan Waterfront is proposing construction of 940 new rooms between 2008 and 2017, the estimated demand will exceed the available hotel rooms within a few years.

The proposed marina would entail 70 spaces for yachts of less than 80 feet and 21 spaces for yachts longer than 80 feet. In Puerto Rico there were 61,456 boats registered at the Administration of Natural Resources in 2006. Of that total, 1,300 were yachts of 40 feet and over. Since the majority of high income households are located in the San Juan metropolitan area, it is reasonably to state that many of these boats are owned by residents of the San Juan metropolitan area. Efforts to attract yachts from non-residents have been buttressed by actions of the Tourism Company. They would add to the local demand. San Juan only has 237 slips.

As of 2008, the residential market in the Island is experiencing a difficult period. Surge in commodity prices has pushed construction costs to very high levels, and there is little to suggest that they might abate soon. In addition, the yield curve has been inverted for months, implying a significant rise in long rates sometime in the future. This situation is cyclical; it is affecting the whole Island and is parallel to similar conditions in the United States. These conditions are magnified by the slowdown on the puertorrican economy. The high-end units (\$300,000 or more) will be the most affected. The same holds true for office space.

The market for the San Juan Waterfront office and housing units looks positive. Old San Juan is considered a prime real estate area. San Juan Waterfront units will have more demand than similar units in other areas of the city or Puerto Rico. The development is in line with the public policy of densification necessary to improve quality of life in Puerto Rico through the preservation of green areas. All projects in the San Juan Waterfront are multi-family housing, hotels and mixed-use developments.

The estimated economic impact of the San Juan Waterfront Developments, including all its phases, is:

Economic Impact Summary: Phases: Construction & Operation (15 Years)		
<u>Concept</u>	<u>15 Years Period Construction Phase</u>	<u>Annual* Operational Phase</u>
Production (Aggregated Economic Activity) :		
Direct	\$1,005.2 million	\$103.5 million
Direct and Indirect	\$1,708.8 million	\$152.4 million
Employments:		
Direct	8,049.1	1,482.1
Direct and Indirect	14,287.2	1,969.7
Direct, Indirect and Induced	16,400.1	3,312.2
Salary:		
Direct	\$146.8 million	\$24.2 million
Direct and Indirect	\$251.3 million	\$29.5 million
Direct, Indirect and Induced	\$452.3 million	\$45.6 million

* After the 15 years period construction phase is finish.

** Puerto Rico Planning Board Input-Output Matrix 1991-1992; March 2002

I. SOCIO-ECONOMIC ANALYSIS

Population

San Juan is the socio-economic and cultural center of the Island. Even though its population declined over the last two decades, San Juan is still the most populous municipality in the Island. Bayamón is the second most populated municipality in Puerto Rico and has only half of the population of San Juan.

The population decline responds to sprawling urban growth in the surrounding municipalities. Nonetheless, there is a government policy to offset this process by favoring densification of the urban areas of the Island. The physical expression of the new policy is the numerous apartment housing buildings that are being developed around San Juan.

Population Trends (1960-2008)						
	<u>1960</u>	<u>1970</u>	<u>1980</u>	<u>1990</u>	<u>2000</u>	<u>2008*</u>
San Juan	451,658	463,242	434,849	437,745	434,374	431,696
% Growth		2.6%	-6.1%	0.7%	-0.8%	-0.6%
Puerto Rico	2,349,544	2,712,033	3,196,520	3,522,037	3,808,610	3,984,888
% Growth		15.4%	17.9%	10.2%	8.1%	4.6%
SJ as % of PR	19%	17%	14%	12%	11%	11%

Source: US Census Bureau 1960 - 2000

*Projected by the Puerto Rico Planning Board

San Juan Waterfront will be developed in the port area of Old San Juan. It will be facing the San Antonio Channel in the San Juan bay. The project will provide a waterfront public space and revitalization of a currently depressed urban area.

The San Juan Waterfront will have five development areas that consist of a residential housing units, hotel developments, commercial space (retail, office & entertainment), civic space and a marina. The project will provide services not only to the people that live in Old San Juan but also to a floating population of workers, tourists and people from a 5 mile radius of the proposed site.

Income Indicators

San Juan has one of the best socio-economic conditions compared to the average of Puerto Rico. San Juan per-capita income is 53% higher than the rest of the Island. The gap between San Juan and Puerto Rico has widened during the last decade. It also has less people under poverty level and higher salaries.

Per Capita Income / San Juan Municipality					
<u>Municipality</u>	<u>2000</u>	<u>% of P.R.</u>	<u>1990</u>	<u>% of P.R.</u>	<u>% Change 90-00</u>
San Juan	\$12,495	153%	\$6,152	147%	103%
Puerto Rico	\$8,185	100%	\$4,177	100%	96%

Source: US Census Bureau 2000

Additional Socio-Economic Data / San Juan Municipality				
<u>Municipality</u>	<u>Population Under Poverty Level</u>	<u>Popu. Under Poverty Level/ Total Population</u>	<u>Median Household Income</u>	<u>Median Family Income</u>
San Juan	173,528	40%	\$17,367	\$20,640
Puerto Rico	1,818,687	48%	\$14,412	\$16,543

Source: US Census Bureau 2000

Average Salary Analysis / San Juan Municipality (1995-2006)						
<u>Municipalities</u>	<u>1995</u>	<u>2006</u>	<u>Difference (2006-95)</u>	<u>% Change (95-2006)</u>	<u>% of PR 1995</u>	<u>% of PR 2006</u>
San Juan	\$ 17,442	\$ 27,017	\$ 9,575	54.9%	111.7%	115.2%
Puerto Rico	\$ 15,621	\$ 23,456	\$ 7,835	50.2%	100.0%	100.0%

Source: Puerto Rico Department of Labor and Human Resources; Municipal Industrial Composition 1995 and 2006.

Labor Analysis

San Juan has 11% of the total population of Puerto Rico. It also holds 30% of all jobs.

Average Jobs Analysis in San Juan Municipality (1995-2006)						
<u>Municipality</u>	<u>1995</u>	<u>2006</u>	<u>Diference (2006-95)</u>	<u>% Change (95-2006)</u>	<u>% of PR 1995</u>	<u>% of PR 2006</u>
San Juan	294,133	312,179	18,046	6.1%	31.4%	29.8%
Puerto Rico	936,702	1,048,573	111,871	11.9%	100.0%	100.0%

Source: Puerto Rico Department of Labor and Human Resources; Municipal Industrial Composition 1995 and 2006.

The labor mobility rate by place of destination states that for every 100 workers residing in the municipality of San Juan, another 153 arrive from other municipalities. Between 1990 and 2006, 55% more workers commuted into San Juan.

The labor mobility rate by destination is the number of workers that arrive from a municipality other than the municipality in which they work, divided by the total number of employees that are residents of that municipality including the armed forces personnel. Approximately 187,000 workers travel from other municipalities to work in San Juan.

Labor Mobility Rate by Destination		
San Juan	<u>Years</u>	<u>%</u>
	1990*	99.0%
	2000**	153.0%

* Puerto Rico Planning Board, Economic Study for the Governor (1999)

** Created by ABC with the Information of the 2000 Population Census

The services sector is the most strongest job sector in San Juan and is growing strongly (28.3% growth over the last 10 years), albeit at a lower rate than the Island as a whole (50% growth over the last 10 years). Public administration is large, but declining.

Sectorial Employment Analysis / San Juan Municipality (95-2006)				
<u>Sectores</u>	<u>1995</u>	<u>2006*</u>	<u>Cambio Abs. (95-06)</u>	<u>Cambio % (95-06)</u>
Construction	16,417	22,277	5,860	35.7%
Manufacture	8,504	5,785	-2,719	-32.0%
Transportation, Communication & Utilities	20,802	36,275	15,473	74.4%
Comerce	59,144	43,092	-16,052	-27.1%
Finance, Inssurance & Real State	26,726	21,759	-4,967	-18.6%
Services	86,979	114,623	27,644	31.8%
Public Administration	74,474	69,270	-5,204	-7.0%
Others	1,087	4,883	3,796	349.2%
Total Sectors	294,133	312,179	18,046	6.1%

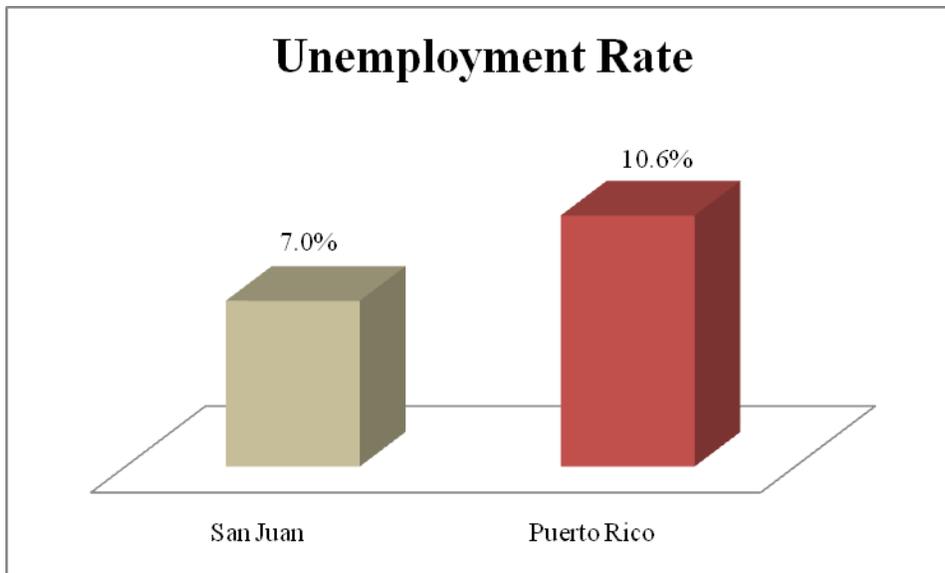
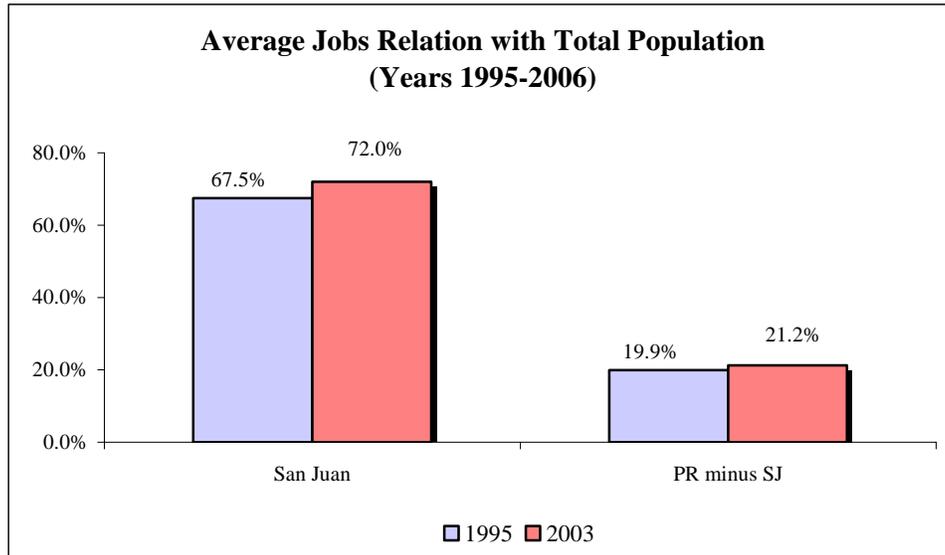
Source: Puerto Rico Department of Labor and Human Resources; Municipal Industrial Composition 1995 and 2006.

* Others means data not reported due to identification.

Service Sector Employment / San Juan (1995-2006)				
<u>Municipalities</u>	<u>1995</u>	<u>2006</u>	<u>Difference (2006-95)</u>	<u>% Change (95-2006)</u>
San Juan	86,979	111,622	24,643	28.3%
Puerto Rico	241,292	361,861	120,569	50.0%
SJ % of PR	36%	31%	-	-

Source: Puerto Rico Department of Labor and Human Resources; Municipal Industrial Composition Report: 1995 and 2006

There are approximately 72 jobs for every 100 residents in San Juan including children and retired persons.² Also, San Juan has a lower unemployment rate compared to the Puerto Rico average.³



² This is a result of total jobs / total population. This means that there are more jobs available in San Juan than people from San Juan capable to work. It means that San Juan is the jobs hub in the Island.

³ The unemployment rate is total jobs / non-institutional population (on the military, jail or mental institution) of 16 years or more willingly available to work (total job / workforce).

Housing Analysis

The number of housing units has been decreasing over the past decade, which is consistent with the population trend of -0.8% over the same time period. The trend would likely reverse itself as densification of urban areas increases.

Housing Units Growth Analysis / San Juan Municipality (1990-2008)							
	Housing 1990	Housing 2000	Housing* 2005	Housing* 2008	% Growth 1990 / 2000	% Growth 2000 / 2005	% Growth 2005 / 2008
San Juan	167,979	163,462	161,249	159,936	(2.7)%	(1.4)%	(0.8)%
Puerto Rico	1,188,985	1,418,476	1,522,230	1,633,573	19.3%	7.3%	7.3%

Source: Puerto Rico Department of Labor and Human Resources; Municipal Industrial Composition 1995 and 2006.

* Estimated by Advantage Business Consulting

The median home value for San Juan is significantly higher (23%) than the median home value for the rest of the Island. In 2008, the median home value for San Juan was estimated at around \$167 thousand. It is important to highlight that the data used is based on the US Census Bureau and the values could be underestimated. Nonetheless, they are good indicators to compare against other geographic areas.

Median Home Value						
	Median Value 1990	Median Value 2000	Median Value 2005*	Median Value 2008*	Growth % 1990 / 2000	Growth % 2005 / 2008
San Juan	\$63,026	\$108,434	\$142,229	\$167,372	72.0%	17.7%
Puerto Rico	\$35,900	\$75,100	\$100,892	\$135,543	109.2%	34.3%

Source: US Census Bureau, Housing & Population Census 1990 y 2000

* Estimated by Advantage Business Consulting

Retail Analysis

The next table shows the retail sales from the Metropolitan Region. It includes 9 municipalities in which San Juan leads in total retail sales each year. The information is not available at municipal level.

Retail sales in the metropolitan area account for half the sales in Puerto Rico. In the last three years, retail sales in the metropolitan area grew 22% versus 16% in Puerto Rico.

Retail Sales in the Metropolitan Area (in thousand of \$)						
<u>Region</u>	<u>Sales</u> <u>1993</u>	<u>Sales</u> <u>1995</u>	<u>Sales</u> <u>1998</u>	<u>Sales</u> <u>2000</u>	<u>Sales</u> <u>2003</u>	<u>Sales</u> <u>2007**</u>
Metropolitan*	\$ 5,202,882	\$ 5,542,343	\$ 6,682,046	\$ 7,007,308	\$ 8,572,704	\$ 10,468,088
<i>% Growth</i>		6.5%	20.6%	4.9%	22.3%	22.1%
<i>As % of PR</i>	48.8%	48.8%	50.1%	48.8%	51.5%	52.6%
Puerto Rico	\$ 10,667,209	\$ 11,355,642	\$ 13,348,283	\$ 14,354,570	\$ 16,659,456	\$ 19,911,539
<i>% Growth</i>		6.5%	17.5%	7.5%	16.1%	19.5%

Source: Administration of Commerce & Exports, Commercial & Economic Planning Office; Statistics Division

* Metropolitan Region includes 9 municipalities. The data is not available by municipality.

** Estimated by Advantage Business Consulting

II. COMMERCIAL SPACE

There are more than 5 million of square feet available for commercial purpose in the San Juan Municipality. Around 41% of that total corresponds to a major shopping center (Plaza Las Americas) and 98% of all available space is currently rented. There is no new major commercial project in San Juan under review by the Puerto Rico Planning Board or ARPE. The proposed project will add 286,613 square feet of retail, services, office and entertainment space. From that, only 100,315 will be dedicated to retail space. This is equivalent to a Sub-regional Shopping Center under Planning Board definition⁴. This will be equivalent to just 2% of additional commercial space.

Commercial Centers of the Metropolitan Area of San Juan				
<u>Commercial Centers</u>	<u>Address</u>	<u>Total s.f.</u>	<u>Available s.f.</u>	<u>% Available</u>
Plaza Las Americas	F.D. Roosevelt Ave. Hato Rey 00918	2,100,000	17,320	0.8%
Montehiedra Town Center	9410 Los Romeros Ave. Rio Piedras 00926	546,000	6,772	1.2%
Reperto Metropolitano Shopping Center	San Juan	126,462	4,800	3.8%
Comercial 18	San Juan	70,211	0	0.0%
El Señorial Plaza	Ave. Winston Churchill San Juan Barbosa	219,107	3,937	1.8%
65 Inf Shopping Center	Rio Piedras	139,000	12,771	9.2%
Centro Comercial Galería Paseos*	Avenida Los Paseos San Juan	800,000	17,000	2.1%
Centro Comercial San Francisco*	Avenida De Diego Rio Piedras, 00926	150,000	2,000	1.3%
San Patricio Plaza	F.D. Roosevelt Ave. Guaynabo 00965	743,767	14,127	1.9%
Plaza Caparra	Ave. Roosvelt	161,867	5497	3.4%
Total		5,056,414	84,224	1.7%

Source: Caribbean Business, Book of Lists, Fully Updated 2007 Edition

* Estimated numbers, there were no official data available

⁴ Puerto Rico Planning Board defines a Sub-regional Shopping Center as a retail center with a gross leasable area (GLA) with a range of 100,000 to 249,999.

There are three target groups for the commercial development. One is the residential population of Old San Juan. A second group is Puerto Ricans who visit Old San Juan for either business or pleasure. The third is tourists typically visiting Old San Juan as part of cruise ship voyages.

Given the composition of the target markets, the largest allocation of space would probably be attributed to entertainment, perhaps 40%. According to the Urban Land Institute (ULI), “downtown and well-positioned suburban markets are being targeted for the largest and most ambitious retail entertainment centers. ULI sees these locations as having the identity, image, access, and (in most cases) related cultural activities that are the key requirements for successful large-scale retail entertainment developments.”⁵

The proposed project would include restaurants, pubs and night clubs. Potential tenants could include Rainforest Café, ESPNZone, GameWorks, PonteFresco and/or Jillian’s.

Advantage estimates that 35% of total commercial area will be designated to retail. Some potential tenants would add to the lifestyle ambiance such as Crate & Barrel, Williams-Sonoma, or NikeTown. Other stores could service the residential community or the government offices that operate in the Old City, such as a grocery store or an office supply store.

Another 20% of the total commercial area could be designated to services. These could be hair stylists, tanning salons, weight loss centers, dry cleaners, mailing and packaging service, among others. Also, banks and other financial services could be good tenants.

⁵ Urban Land Institute, *Developing Retail Entertainment Destinations*, Second Edition, pg. 10

The remaining 5% could be designated to specialized office tenants. Specialized office tenants are largely found in small and median shopping centers, where they may occupy about 4% to 5% of the space.⁶ Some of the alternatives are legal services, accounting, employment (Kelly, Manpower, Carriers Inc., Executive Search, etc.), veterinary, medical and dental.

Depending on the building design, the square foot for common areas for each concept (retail, services and entertainment) is estimated to be from 10% to 25%.

Total Square Feet Distribution		
Retail	100,315	35%
Services	57,323	20%
Office Space	14,331	5%
Entertainment	114,645	40%
Total	286,613	100%

The Urban Land Institute indicates that to support this kind of commercial center the project would need a population of 40 to 150 thousand people. The population within a 5 mile radius of the proposed site represents the market area for the commercial development. This is a typical distance of potential customers for a commercial center of gross leasable area (GLA) of 100,000 to 450,000.⁷

In the 5 miles radius the population for the year 2000 was over 272 thousand. Based on the population decreasing trend of the San Juan municipality, the population for the year 2008 was estimated at 271 thousand people.⁸ This exceeds the population required to support such a development.

⁶ Shopping Center Development Handbook, Urban Lan Istitute, third edition.

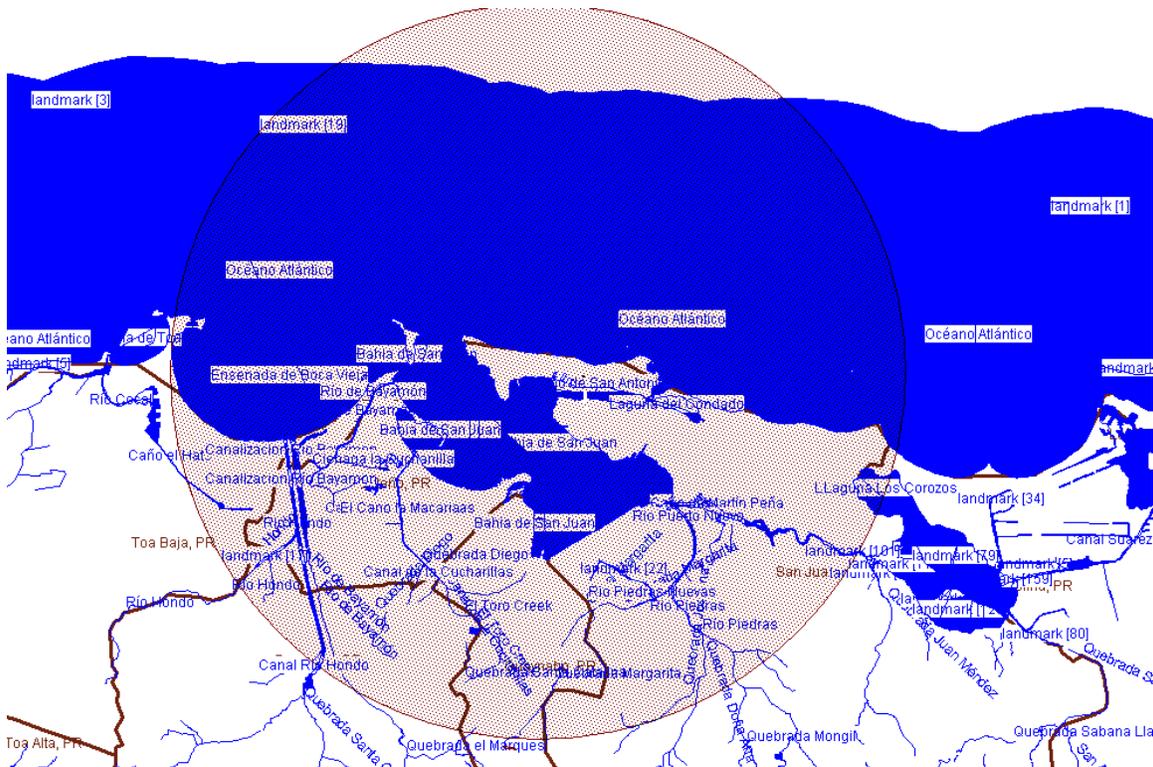
⁷ Shopping Center Development Handbook, Urban Lan Istitute, third edition.

⁸ Even though the 5 radial miles capture part of the municipalities of Toa Baja, Cataño, Guaynabo, San Juan, and Carolina, the estimation for the population of 2008 was calculated using only the San Juan percentage growth. This was to be conservative in the estimations.

Population of the 5 Radial Miles from the Proposed Site	
<u>Concept</u>	<u>#</u>
5 Radial Miles Population 2000	272,419
SJ Population % Growth 1990-2000	-0.8%
5 Radial Miles Population 2008*	270,739

Source: Land View 2000 & US Census Bureau 2000

* Population Estimate by Advantage



Floating Population

As part of the population analysis, it is important to include the floating population. More than 63,000 people commute to Old San Juan daily throughout PR-25 and PR-1. Considering that Old San Juan only has 7,000 residents, the floating population is estimated at 57 thousand people daily.⁹

Floating Population Proposed Site	
Traffic in one direction PR-25 2001	30,100
Traffic in two direction PR-1 2006	25,434
Traffic PR-1 divided by 2	12,717
Total Traffic (PR-25 plus PR-1 divided by2)	42,817
Multiply by 1.7 people per auto	72,789
Population Estimation from Traffic 2008*	63,552
Population of San Juan Antiguo 2000	7,963
Population of San Juan Antiguo 2008*	6,802
Floating Population Estimation 2008*	56,750

Source: Department of Transportation and Public Work
and the Puerto Rico Highways Authority

*Estimated by Advantage Business Consulting

In addition, cruise ships bring over 1 million visitors to Old San Juan each year. Land-based tourists are counted in the previous floating population estimate.

⁹ The information was obtained from the annual average daily traffic (AADT) published by the Puerto Rico Highway Authority in PR-25 (Ponce de León Ave.) in front of Normandie Hotel by the year 2001 and PR-1 (Fernandez Juncos Ave.) to the west of PR-25 by the year 2006. These are the closer measurements point to the proposed site and the most recent years available.

Potential Retail Demand

The personal income available in Puerto Rico adds to around \$38 billion for the year 1999. This is after adding to the aggregated personal income the contributions of workers to the Social Security. Comparing the indicated value to the income published by the US Census, a factor of 1.23 is obtained.¹⁰ With this factor the household income distribution for the year 2000 is obtained.

Personal Income (millions of \$ - 1999)	
Personal Income	\$36,506
Workers Social Security Contributions	\$1,567
Planning Board Income	\$38,073
US Census Income	\$30,947
Adjust Factor	1.23

To forecast the personal income growth, the growth of the previous decade is used as it is published by the Puerto Rico Planning Board.

¹⁰ Even though the incomes data from Puerto Rico provided by the Planning Board can be obtained from recent years, the year 1999 is used to be consistent with the last data provided by the US Census Office (1999). In this case the margin error it is minimized.

Change in Personal Income		
	<u>Billions</u>	<u>Annual Change</u>
1989	\$19,198	6.14%
1999	\$34,840	

To forecast the growth of households the annual growth data from the previous decade is used as it was published by the US Census in the year 2000.

Change in the Number of Households		
	<u>Total Households</u>	<u>Annual Change</u>
1989	1,057,357	1.78%
1999	1,261,816	

Because of the trend of less households' formation, the period of 2000 to 2012 was estimated using an annual growth of 1.6%. The personal income growth is a combination of a growth in the total number of households and a 4.5% growth in the per capita income of those households.

Adjusting the brackets of each year to the year 2000, the household numbers and its income distribution were forecasted for the years 2002, 2008 and 2012. The total number of households for the year 2008 will be 185,556. These numbers will growth up to 197,720 for the year 2012.

Income Distribution / San Juan Municipality		<u>Households 2000</u>	<u>Households 2002</u>	<u>Households2008</u>	<u>Households2012</u>
Income Brackets					
\$0 – \$9,999		44,696	42,217	35,576	31,739
\$10,000 – \$14,999		18,538	19,034	17,790	15,871
\$15,000 – \$24,999		25,254	25,168	27,200	27,687
\$25,000 – \$34,999		18,872	20,096	18,722	19,655
\$35,000 – \$49,999		17,546	18,474	22,692	23,913
\$50,000 – \$74,999		16,257	17,845	22,471	25,744
\$75,000 – \$99,999		9,068	10,342	13,390	15,968
\$100,000 – \$149,999		6,734	7,757	13,873	17,116
\$150,000 – \$199,999		3,223	3,926	5,579	8,166
\$200,000 or more		3,242	3,840	8,264	11,861
Total		163,428	168,700	185,556	197,720

Source: Advantage Business Consulting

Based on the average income (the sum of the average income from each brackets x the number of households per each bracket), the households in San Juan will have a gross income of \$12.6 billion by the year 2012. Considering a 40% of retail expenditure per household the amount of retail expenditure in San Juan is estimated in \$5 billion. The 40% factor correspond to the “average propensity to consume” of each household in retail related activities.¹¹

¹¹ The average propensity to consume is define as: $APC = C/AHI$. In which C, is the expenditure related to retail activity and AHI, is the average household income.

Estimated Retail Expenditure in San Juan 2012	
Concept	<u>Expenditure</u>
San Juan Households 2012*	197,720
San Juan Aggregated Households Income	\$12,649,626,712
% of Retail Expenditure per Household**	40%
Total Amount of Retail Expenditure SJ Households	\$5,059,850,685

Estimated by Advantage Business Consulting and data from Puerto Rico Planning Board

* Projected by Advantage Business Consulting for 2008

** Based on the data reported by the Puerto Rico Planning Board, Appendix Tables, Governor Economic Report

Advantage estimates an average sales income of \$214 per square foot for shopping centers. Outside the shopping center the average sale income should be 20% less (\$171).

Estimated Retail Sales per Square Foot	
Source	<u>Sales per S.F.</u>
Newspaper Association of America 2000*	\$169
Urban Land Institute 2004**	\$254
Retail Industry Benchmarks 2003***	\$195
The Score 2002****	\$236
Average Sales	\$214

*Sales per Square Foot of Stores in U.S. Shopping Centers (2000).

** Dollars & Cents of Shopping Centers (2004).

*** Average Sales per Foot-US Shopping Malls (2003)

**** The Score Shopping Center Operations, Revenues and Expenses (2002)

According to the Economic Census of 2002, San Juan generates \$5.3 billion in retail sales. The amount includes retail by shopping centers and outside shopping centers. This is around \$300 million more sales than the estimated retail expenditure capacity of San Juan households.

Retail Trade by Kind of Business (Sales per \$1,000)				
San Juan	<u>1997</u>	<u>2002</u>	<u>% of Total 2002</u>	<u>Change 1997-2002</u>
<u>All Establishments</u>	\$6,728,374	\$5,294,108	100.0%	-21.3%
In a mall or shopping center	1,870,291	1,009,067	19.1%	-46.0%
Not in a mall or shopping center	2,462,511	1,804,182	34.1%	-26.7%
Not reported	2,395,572	2,480,859	46.9%	3.6%
Puerto Rico	<u>1997</u>	<u>2002</u>	<u>% of Total 2002</u>	<u>Change 1997-2002</u>
<u>All Establishments</u>	\$17,087,950	\$20,422,975	100.0%	19.5%
In a mall or shopping center	4,565,643	4,395,596	21.5%	-3.7%
Not in a mall or shopping center	7,199,547	7,167,719	35.1%	-0.4%
Not reported	5,322,760	8,859,660	43.4%	66.4%

Source: US Economic Census 1997, 2002.

Considering that San Juan is the economic, political and cultural center of Puerto Rico the extra expenditure is explained by floating population. San Juan has¹²:

- ✓ 11% of total population
- ✓ 30% of total jobs
- ✓ 34% of total lodging
- ✓ 52% of total lodging rooms
- ✓ More than 95% of all cruise ships

¹² The sources of the statistics in bullets are: *US Census Bureau, Department of Labor and Human Resources, and the Tourism Company*. Total lodging and lodging rooms include hotels in Isla Verde.

According to the percentage previously presented it is reasonable to estimate that the floating population will add another 20% of retail expenditure in San Juan. This represents an excess of retail expenditure of \$789 million. The proposed project will add 110,447 new square footage of retail.¹³ Even with that increase San Juan reflects an excess of retail expenditure of \$755 million. This amount includes shopping centers and outside shopping centers (including San Juan Antiguo urban center retail trade).

Estimated Total Retail Expenditure in San Juan	
Concept	<u>Expenditure</u>
Amount of Retail Expenditure SJ Households	\$5,059,850,685
% of Retail Expenditure of Floating Population	20%
Total Amount of Retail Expenditure in San Juan	\$6,071,820,822

Estimated by Advantage Business Consulting and data from Puerto Rico Planning Board

Retail Trade Supply and Demand Relationship	
Concept	<u>Expenditure</u>
Total Amount of Retail Expenditure in San Juan*	\$6,083,238,678
Retail Expenditure in San Juan According to Economic Census**	\$5,294,108,000
Estimated Proposed Retail Sales***	<u>\$34,335,658</u>
<i>Excess not covered yet</i>	<u><u>\$754,795,020</u></u>

Source: Advantage Business Consulting

* Includes Retail Expenditure of Residents and Floating Population

** US Census Bureau, Economic Census 2002

*** Based on 110,447 s.f. (Waterfront) plus 50,000 (others) per \$214 average sales per s.f.

¹³ There is no new major commercial project in San Juan under review by the Puerto Rico Planning Board or ARPE except for individual business like hardware store or sportswear store which could not add to more than 50,000 sf. of new retail space in the Municipality. The retail trade supply and demand relationship is estimated including the 110,447 sf from the proposed Waterfront project and an estimated 50,000 extra sf from individual retailers previously described.

III. HOTELS

The Metropolitan area has 41 hotels operating within its limits. This includes 28 hotels in San Juan and 13 in Isla Verde, which is in Carolina but close enough to San Juan and can be considered as part of the same hotel cluster. Total available rooms are almost 6,600, with an occupancy rate of 80%. The average number of people per room is 2.5 and the average room price is \$197 per night. The Metropolitan area has almost the 60% of total hotel registration on the Island. The market share reflects the importance of San Juan as the capital city of the Island.

Summary Supply / Hotels Room / San Juan	
<u>Concept</u>	<u># Buildings</u>
Total Hotels	41
Total Available Rooms	6,555
Metropolitan Occupancy Rate	80.3%
Average People per Room	2.5
Weighted Average Price (\$)	\$ 196.53

Assuming a 5% long term growth rate in hotel registrations, approximately 350 new rooms would be required in San Juan every year over the next several years. The San Juan Waterfront by itself could increase this figure by improving the quality of Old San Juan as destination. Considering that the San Juan Waterfront is proposing 970 new rooms, the estimated demand will exceed the number of existing and proposed rooms.

Hotel registrations reflect a 5% growth average during the last 15 years.¹⁴ It is reasonable to expect that if Puerto Rico offers the right product, the long term 5% growth would hold. The new Puerto Rico Convention Center currently requires additional rooms for its activities. The San Juan Waterfront would be ideally located to service this market.

¹⁴ Most recent data available. Year 2007 not published yet.

Total Hotel Registration in Puerto Rico

<u>Years</u>	<u>Total Registration</u>	<u>% Change</u>	<u>Average Growth Rate</u>
1990	1,007,544		
1991	971,774	-3.6%	
1992	1,046,236	7.7%	
1993	1,132,647	8.3%	
1994	1,211,127	6.9%	
1995	1,382,320	14.1%	
1996	1,412,137	2.2%	
1997	1,507,009	6.7%	
1998	1,582,851	5.0%	5.1%
1999	1,661,409	5.0%	
2000	1,748,176	5.2%	
2001	1,810,573	3.6%	
2002	1,934,548	6.8%	
2003	1,977,765	2.2%	
2004	2,061,826	4.3%	
2005	2,104,046	2.0%	
2006*	2,149,344	2.2%	2.2%

Source: Tourism Company

* Estimated by Advantage using the average growth rate of the first 8 month.

Hotel Lists in San Juan Municipality

Hotel	Address	Number of Rooms	Average Price (\$)
Atlantic Beach	calle Vending 1 Condado, San Juan	38	\$ 99.00
Best Western Pierre	105 calle De Diego, San Juan	184	\$ 200.00
Budget Host El Centro			\$ 79.00
Canario by the Lagoon	4 Clemenceau St., Condado, San Juan	44	\$ 72.00
Holiday Inn San Juan	8020 Tartak St. Carolina	222	\$ 197.00
Caribe Hilton	Los Rosales St., San Gerónimo Gronds, San Juan	814	\$ 255.00
Casa de Playa	4851 Isla Verde Ave., San Juan	21	\$ 80.00
Casa Mathiensen	14 calle 1 East San Juan	29	\$ 89.00
Comfort Inn San Juan	Clemenceau, 6 San Juan	50	\$ 129.00
Consulado	1110 Ashford Avenue, San Juan	29	\$ 127.00
Courtyard by Marriott	801 Ave. Ponce de León	260	\$ 199.00
Diamond Palace	55 Condado Ave. San Juan	144	\$ 87.00
El Portal	76 Condado Ave., San Juan	47	\$ 85.00
Embassy Suites	8000 Tartak Street, San Juan	299	\$ 200.00
Empress Ocean Front	2 Amapola, Carolina	30	\$ 118.00
Excelsior	801 Ponce de León Ave., San Juan	136	\$ 75.00
Hampton Inn	6530 Isla Verde Ave., Carolina	200	\$ 191.00
Holiday Inn Express San Juan	1 Mario Ramirez Bages, San Juan	115	\$ 123.00
Hostal El Convento	100 Cristo St., Viejo San Juan	68	\$ 260.00
Hotel Milano	Calle Fortaleza 307, Viejo San Juan	30	\$ 145.00
Howard Johnson Isla Verde	4820 Isla Verde Ave., Rt. # 26 W Exit 37, Carolina	115	\$ 115.00

Continue from previous table ...

Hotel	Address	Number of Rooms	Average Price (\$)
Howard Johnson Plaza de Armas	calle 202 San José, San Juan	51	\$ 115.00
Iberia	1464 Wilson Street, San Juan	28	\$ 80.00
Intercontinental San Juan	5961 Isla Verde Ave., San Juan	400	\$ 279.00
Best Western San Juan Aripport	Luis Muñoz Marin International Airport, San Juan	125	\$ 131.00
La Playa	calle Amapola # 6 Isla Verde, San Juan	15	\$ 85.00
Coral by the Seas	calle Rosa 2, San Juan	63	\$ 98.00
Miramar	606 Ponce de León Ave., Miramar, San Juan	50	\$ 182.00
Olimpo Court	603 Miramar Ave., San Juan	45	\$ 77.00
Park Plaza Normandie	499 West Muñoz Rivera Ave., San Juan	175	\$ 182.00
Radisson Ambassador Plaza	1369 Ashford Ave., San Juan	233	\$ 169.00
Regency	1005 Ashford Ave. San Juan	127	\$ 173.00
Ritz Carlton	6961 Avenue of the Governors, Isla Verde, Carolina	414	\$ 369.00
San Juan Beach	1045 Ashford Ave. San Juan	95	\$ 82.00
San Juan Marriott	1369 Ashford Ave. San Juan	525	\$ 229.00
SJ Suites	Fortaleza St.# 253 Old San Juan	15	\$ 188.00
Villas del Sol	calle Rosa 4, Isla Verde, San Juan	24	\$ 150.00
Water Club	2 Tartak St. Isla Verde, San Juan	84	\$ 155.00
Wyndham Condado Plaza	999 Ashford Ave., San Juan	589	\$ 139.00
Wyndham El San Juan	6063, Isla Verde Ave., San Juan	382	\$ 199.00
Wyndham Old San Juan	calle Brumbangh 100, Viejo San Juan	240	\$ 175.00

Source: Tourism Company Selected Statistics of the Tourism Activity in Puerto Rico 2005-2006 Edition

IV. MARINA

The proposed marina includes 70 spaces for yachts of less than 80 feet and 26 spaces for yachts of more than 80 feet.

In Puerto Rico there were 61,456 boats registered at the Administration of Natural Resources in 2006. From that total, 1,300 were yachts of 40 feet and over. Since the majority of high income households are located in the San Juan metropolitan area, it is reasonable to state that, many of these boats are owned by residents of the San Juan metropolitan area.

Efforts to attract yachts from non-residents have been supported by actions of the Tourism Company. San Juan only has 237 slips.

Puerto Rico has more than 5,700 spaces to storage boats and yachts around the whole Island. From that total, around 2,800 are wet-slips, which have the capacity to accommodate yachts of 20 up to 100 feet long. San Juan only has two marinas: San Juan Bay Marina and Club Náutico. These two marinas account for only 6% of the total capacity, 8% of the total wet-slips and 14% of the mega-yacht spaces. The existing marinas have an 84% of occupancy rate in spite of the on-going recession.

Marinas Supply in the Metropolitan Area of San Juan				
<u>Marinas</u>	<u>Address</u>	<u>Total wet-slips</u>	<u>Available wet-slips</u>	<u>% Available</u>
San Juan Bay Marina	San Juan	120	19	16%
Club Náutico	San Juan	117	18	15%
Total		237	37	16%

Puerto Rico's Largest Marinas						
	<u>Address</u>	<u>Total Capacity</u>	<u>Number of Wet Slip</u>	<u>Number of Dry Stack</u>	<u>Number of Land Spaces</u>	<u>Number of Megayacht Spaces</u>
Puerto del Rey	Fajardo	1,900	930	500	400	70
Villa Marina Yacht Harbour	Fajardo	970	270	700	-	-
Marina Puerto Chico	Fajardo	636	266	370	-	-
Club Náutico de Guayama	Guayama	450	50	-	400	-
Cangrejos Yacht Club	Carolina	368	218	-	150	-
Ponce Yacht & Fishing Club	Ponce	264	169	-	90	5
Isleta Marina	Fajardo	252	247	-	-	5
San Juan Bay Marina	San Juan	218	120	90	-	8
Club Deportivo del Oeste	Cabo Rojo	135	60	-	75	-
Marina de Salinas	Salinas	129	103	-	26	-
Club Náutico de San Juan	San Juan	122	117	-	-	5
Club Náutico de Arecibo	Arecibo	108	92	-	20	-
Club Náutico de Boquerón	Boquerón	108	108	-	-	-
Club Náutico La Parguera	Lajas	50	50	-	-	-

Source: Caribbean Business, Book of Lists, Fully Updated 2007 Edition

V. RESIDENTIAL SECTOR

As of 2008, the residential market in the Island is experiencing a difficult period. This situation is cyclical; it is affecting the whole Island and is parallel to similar conditions in the United States.

The San Juan Waterfront will add a total of 1,529 additional housing units to the market. These units will be developed throughout the different phases of the 15 year project. Some of the units will be purchased as second homes.

The development is in line with the public policy of densification necessary to improve quality of life in Puerto Rico through the preservation of green areas.

The market for the San Juan Waterfront units appears positive. Old San Juan is considered a prime real estate area. It is reasonably to state that San Juan Waterfront units will be in higher demand than similar units in other areas of the city or Puerto Rico.

FEASIBILITY STUDY – SAN JUAN WATERFRONT DEVELOPMENTS

List of New Housing Units in the San Juan Municipality / Available Today

Project Name	Type of Project	Localization	Price (\$)	Total Project Units	Available Units
Capitolio Plaza	Apartments	100 Calle del Muelle San Juan	\$530,000	238	23
College Park	Apartments	200 Calle Alcalá San Juan	\$160,500	132	18
Hacienda Las Ceibas	Villas	Cerca de Montehiedra Town Center Calle Tulip (Cerca Ave. Las	\$495,000	39	27
Monte Verde Real	Single House	Cumbres)	\$725,000	95	3
Senderos en Montehiedra	Single House	Montehiedra Oeste	\$800,000	132	74
Caminos del Bosque - Las Haciendas	Single House	Carr. 842 (Caimito)	\$649,000	10	6
Caminos del Bosque - Miradores del Bosque	Apartments	Carr. 842 (Caimito)	\$235,000	50	10
Casa Magna	Apartments	Ave. San Patricio y JT Píñero	\$674,000	48	25
DreamStar Villas	Apartments	Ave. Roberto Sanchez Vilella int. Ave. 65 Infantería	\$193,000	72	30
Torre Mayor	Apartments	Ave. Ponce de Leon Int. Ave. Roosevelt	\$404,000	153	53
Gallery Plaza	Apartments	Ponce de Leon 701	\$451,500	218	14
The Residence at The Park	Apartments	Calle De Diego, esquina Misronia Condado	\$1,300,000	14	14
Mirsonia	Apartments	Carr 176 esquina ave. Victor Labios a Cupey	\$1,559,000	7	4
Portales Arcobaleno	Apartments	Detrás de la Torre BBV - Hato Rey	\$180,000	52	30
Quantum Metrocenter	Apartments	Ave. Ponce de Leon y Expreso Baldorioty de Castro	\$640,800	160	100
Miramar Cosmopolitan Condominium	Apartments	Calle Luchetti # 1211 Condado	\$1,000,000	62	62
Luchetti Imperial	Apartments	Ave. Fernandez Juncos - Sagrado Corazón	\$1,000,000	192	192
The City	Apartments	Ave. Muñoz Rivera #54 Hato Rey	N/D	54	N/D
Aquabule	Apartments	1315 Ashford Ave. Condado	\$600,000	250	75
Aquamarina	Apartments	Calle Dos Hermanos #271 Santurce	\$1,000,000	47	5
Urbano 271	Apartments	Ave. Ponce de Leon Pda. 22	\$200,000	19	10
Ciudadela	Apartments	Ave. Prudencio Rivera Martínez Ave. # 12	No esta decidido	513	150
Coliseum Tower	Apartments	Ave. Ponce de Leon 1403	\$300,000	169	32
Metro Plaza	Apartments	Hato Rey - Calle Cesar Gonzalez	\$450,000	168	84
Torre del Cardenal	Apartments	Frente Portuano Viejo San Juan	\$418,800	144	45
Capitolio Plaza	Apartments	Calle Luchetti # 1212 Condado	\$583,000	238	95
Luchetti 1212	Apartments	Calle Santiago Iglesias # 62 Condado	\$1,190,000	19	9
Six Two	Apartments	Wilson 1351 Condado	\$1,125,000	10	2
Wilson y Cervantes	Apartments	Trastalleres	\$1,500,000	10	5
Puerta de la Bahía	Apartments		\$110,000	224	12
		Total / Weighted Average	\$5,255,066	3,539	1,195

FEASIBILITY STUDY – SAN JUAN WATERFRONT DEVELOPMENTS

List of New Housing Units in San Juan Municipality / Not Yet Available

Project Name	Type of Project	Price (\$)	Total Project Units	Available Units
Alturas del Bosque I-II	Apartments	\$194,000	220	68
Cordova Park	Apartments	\$185,000	132	31
Estancias Chalet	Apartments	\$168,000	84	4
Portales de Altamesa	Apartments	\$174,990	108	33
Parque de la Vista II	Apartments	\$146,995	126	69
Villa del Sol	Apartments	N/D	56	1
Plaza de Diego	Apartments	\$325,000	55	2
Condominio el Taíno	Apartments	\$70,000	60	15
San Juan Tower	Apartments	\$333,000	48	3
San Ildefonso Condominium	Apartments	\$145,000	39	7
Condado Lee Cours	Apartments	\$333,600	41	25
Portales II	Apartments	\$124,500	18	3
Vistas del San Juan	Apartments	\$230,000	20	9
Chalets Paseo Real	Apartments	\$162,500	36	27
Vistas de la Laguna	Apartments	\$505,000	22	15
El Vedado Court	Apartments	\$210,000	8	2
Escorial Altos	Apartments	\$160,000	36	32
Caribe Plaza at Caribe Paseo	Apartments	\$1,300,000	47	47
Condominio Paraiso	Apartments	\$103,000	8	5
Paradise Court	Apartments	\$149,000	8	3
Concordia 714	Apartments	\$395,000	4	3
Plaza Gardens	Apartments	\$69,500	76	76
Puerta de la Bahía	Apartments	\$110,000	224	224
El Virrey	Apartments	\$135,000	63	63
Campiña Court	Apartments	\$150,000	N/D	N/D
Alturas de Altamesa	Apartments	\$179,990	30	30
Paseo del Monte	Apartments	\$180,000	144	144
Mediterranium	Apartments	\$182,000	7	7
Harbor Plaza	Apartments	\$225,000	35	35
Saldaña 364	Apartments	\$225,000	4	4
Elmaría	Apartments	\$229,500	64	64
Plaza 844	Apartments	\$247,000	44	44
Caminos Verdes II	Apartments	\$250,000	70	70
Buena Vista (Phase I)	Apartments	\$280,000	100	100
Portales de Arcobaleno	Apartments	\$290,000	52	52
Metrópolis	Apartments	\$295,000	185	185
The Luxum	Apartments	\$300,000	70	70
Torre Mayor	Apartments	\$300,000	152	152
San Sebastian 279 Condo	Apartments	\$340,000	6	6
Cedenis at Bouret 408	Apartments	\$350,000	4	4
Mirador del Parque	Apartments	\$375,000	121	121
Las Mansiones	Apartments	\$380,000	39	39
Hacienda Don Jacinto	Apartments	\$380,000	14	14
Zoed del Condado	Apartments	\$395,000	10	10
The Village	Apartments	\$400,000	72	72
Cupey Park	Apartments	\$449,000	23	23
Santa María	Apartments	\$450,000	68	68
Wilson Street Building	Apartments	\$560,000	12	12
Wilson Lofts at Condado	Apartments	\$580,000	12	12
Hollywood Estates	Apartments	\$865,000	19	19
Portal del Condado	Apartments	\$899,000	14	14
Tiffany Plaza	Apartments	\$ 970,000	74	74
Casa Cervantes	Apartments	\$1,200,000	6	6
The Plaza at Condado	Apartments	\$1,300,000	16	16
Grand Bay	Apartments	\$1,300,000	18	18
Playa Almendro	Apartments	\$1,500,000	8	8
Ocean Bay	Apartments	\$1,500,000	5	5
Ocean Court	Apartments	\$1,800,000	2	2
Britannia	Apartments	\$1,850,000	34	34
Venetian Tower	Apartments	\$1,890,000	10	10
Oceanica	Apartments	\$2,000,000	13	13

Continue from previous table ...

Panorama Plaza	Apartments	N/D	N/D	N/D
Wilcon Plaza Apartments	Apartments	N/D	24	24
The Forest Condominium	Apartments	N/D	450	450
Conservatory Tower	Apartments	N/D	27	27
Condominio Rolán	Apartments	N/D	10	10
Luchetti 1403	Apartments	N/D	N/D	N/D
Miramar Condado	Apartments	N/D	N/D	N/D
Portal del Miramar	Apartments	N/D	N/D	N/D
Wilson 1361	Apartments	N/D	N/D	N/D
Aqualuna	Apartments	N/D	N/D	N/D
Central Plaza	Apartments	N/D	N/D	N/D
Waterfront Plaza	Apartments	N/D	N/D	N/D
Tres Ríos Development	Apartments	N/D	250	250
1110 Condominium	Apartments	N/D	N/D	N/D
Convention District Apartments	Apartments	N/D	3,000	3,000
Ashford 1051 Condominium	Apartments	N/D	N/D	N/D
Delta Dental Plan Site	Apartments	N/D	N/D	N/D
Building at Madelena Avenue	Apartments	N/D	N/D	N/D
Club Manor	Apartments	N/D	N/D	N/D
Condominio Mosaico	Apartments	N/D	N/D	N/D
Condominio El Virrey II	Apartments	N/D	N/D	N/D
Coral Laguna Condominium	Apartments	N/D	N/D	N/D
Delcasse 14	Apartments	N/D	N/D	N/D
Development by the Radisson Am	Apartments	N/D	125	125
Galería Chardón	Apartments	N/D	N/D	N/D
Harbour Club	Apartments	N/D	N/D	N/D
Hato Rey Tower	Apartments	N/D	N/D	N/D
Infinity Tower	Apartments	N/D	N/D	N/D
Laguna del Mar Plaza	Apartments	N/D	65	65
Stop 22	Apartments	N/D	N/D	N/D
Cervantes # 8	Apartments	N/D	N/D	N/D
Plaza Gran Victoria	Apartments	N/D	N/D	N/D
San Juan Bayside	Apartments	N/D	531	531
The Lofts at Floral Park	Apartments	N/D	N/D	N/D
Atlantis	Apartments	N/D	N/D	N/D
Total / Weighted Average		\$328,448	7,578	6,806

Source: www.guiadeproyectos.com, www.vivesanjuan.com and the Puerto Rico Planning Board Consultas de Ubicación.

VI. CIVIC SPACE

The civic space will be of 120,093 sf of development on 1.8 acres. The development will add 366 structured parking spaces to the area. The use of this area is yet to be determined, but is potentially intended for a police station, fire department or other public/civic use. This space could be used to re-locate current governmental operations, bring new governmental services to the area and could have a space available for public/civic use like birthdays, weddings, proms and others.

VII ECONOMIC IMPACT ANALYSIS

The San Juan Waterfront project would generate an aggregated economic impact of more than \$1,700 million in the construction phase (15 years) and over \$150 million in the operational phase (yearly estimated). Construction of the project is estimated to be completed in approximately 15 years. The *aggregated* economic impact for this phase (construction) represents the total value over the 15 year construction period.

Impact

This section presents the estimated value that the proposed project would have on the *aggregated* economic activity for San Juan Municipality and for the rest of the Island. The economic impact is based on investment, direct jobs, indirect and induced jobs, aggregated economic activity and government income revenue. The analysis presents the commercial interaction between the different economic sectors.

The Input-Output method was used to make the economic impact estimations. The Input-Output is an economic empirical study that presents the relationships between all the different sectors of the economy. It is a wide economic system because it intertwines all economic sectors of a country in terms of production and consumption. The industries produce and consume at the same time (intermediary demand) and also supply the products that are used as final consumption (final demand).¹⁵

Intermediate demand represents the buy-sales transactions that the industries make during their own production process. These transactions are reflected, in the structure of Input-Output, in where the goods and services that are consumed come from. This is in terms of the sector that produces it and if it was consumed by locals or imported.

¹⁵ Input-Output Matrix 1991-1992; March 2002. Puerto Rico Planning Board. Social Analysis Program, Forecasts and Models.

Final demand is the value that represents the part of goods and services that was consumed by the four groups of final consumers: the people, the enterprises, the government, and the rest of the world.

Different kind of multipliers can be obtained throughout the application of the Input-Output matrix, combined with employment data, final demand, income, and production. In general, these are classified as: Production, Income, and Employment multipliers.

Both the employment and income multipliers can be subdivided in two different classes:

- the ones that only consider the direct and indirect effects generated by the changes in the final demand of any sector (Type I multiplier) and
- the ones that also include the effects on the induced income and employment by changes in the consumption of people (Type II multipliers).

In other words, Type II multipliers indicate which will be the direct, indirect, and induced impact over employment and income when there is a change in the final demand (excluding the personal consumption as part of the final demand) for whichever industry included in the Input-Output matrix.¹⁶

In this section the economic impact will be estimated for each of the different proposed land use programs.¹⁷ These are:

- Residential Housing
- Hotels
- Commercial Areas
- Public Areas
- Civic Space
- Marine

¹⁶ To be able to estimate the induced impact for the consumption by people, they must be eliminated from the equation.

¹⁷ The data used to estimate the economic impact were provided by CBT Architects and the Ports Authority.

The following section presents the economic impact analysis for both the construction and operation phases. All multipliers and coefficients used to estimate the economic impact of each of the proposed projects appear in the tables of each project throughout the chapter.

The summary tables indicate the economic impact of the investment based on direct and indirect impacts and direct, indirect and induced jobs. The direct impact is the amount of money invested in each project. The indirect *aggregated* economic impact is what the initial investment will grow by circulating in the economic system of Puerto Rico. The direct jobs are the jobs needed to construct or operates the proposed project, the indirect jobs are the ones that are created by supplying inputs or services to the proposed project. The induced jobs are the ones created by supplying goods or services to the people employed in account of the project (direct and indirect jobs). The multipliers are published by the Puerto Rico Planning Board.

Residential Housing

The economic impact analysis for the housing units proposed in the San Juan Waterfront development is divided into three phases: construction, sales, and operation.

Economic Impact: *Construction and Sales Phase*

Construction

Approximately 1,498 residential units (Basic House Units, UVB by its acronym in Spanish) are proposed by the project. The total investment for the residential area was estimated as \$578.5 million for a period of 15 years (period in which it is estimated that the project will be finished) based on an estimated construction cost of \$210/sf or approximately \$385,000/unit.¹⁸ This estimate includes the construction costs but do not include the land acquisition. **The direct and indirect impact of the construction phase over the local economy (aggregated production) will be almost \$1 billion.**

¹⁸ Estimates provided by Colliers International.

In general, for each \$1 million invested in the construction sector the economy generates 8 direct jobs, 6.2 indirect jobs, and 2.1 induced jobs for a total of 16.3 jobs.¹⁹ Based on these factors, project would generate more than 9,400 direct, indirect and induced jobs. The inter-industrial multipliers reflect that the salary income generated by the jobs that will be created by the proposed project would be over \$260 million for the 15 years construction period.

The construction cost of development (\$385,000/unit) includes the cost of constructing parking facilities for residential development.

Economic Impact: Construction Phase / Residential Housing		
<u>Concept</u>	<u>Multiplier by: \$1 Million**</u>	<u>Project Total*</u>
Production (Aggregated Economic Activity) :		
Direct	1.0	\$ 578.5
Direct and Indirect	1.7	\$ 983.4
Employments:		
Direct	8	4,627.8
Direct and Indirect	14.2	8,214.3
Direct, Indirect and Induced	16.3	9,429.1
Salary:		
Direct	0.15	\$ 84.5
Direct and Indirect	0.25	\$ 144.6
Direct, Indirect and Induced	0.45	\$ 260.3

*In millions of \$

** The multipliers used were those of construction. Puerto Rico Planning Board Input-Output Matrix 1991-1992; March 2002.

¹⁹ Input-Output Matrix 1991-1992; March 2002. Puerto Rico Planning Board. Social Analysis Program, Forecasts and Models.

Sales

Based on the total sales of the proposed housing units, at an average cost of \$735,000 per unit, the aggregated sales value will be almost \$1.1 billion.²⁰ Unit sales are expected to range from \$300/unit to \$700/unit depending on the layout and location within the buildings (top floor versus bottom floor and view versus no view). The sales price includes the 1.2 parking spaces per 1,000 sf with no monthly parking charge.

Estimated Total Housing Units Sales		
Housing	<u>Concept</u>	
1,498 housing units	x \$735,000	\$ 1,101,030,000
Estimated Aggregated Sales Value		\$ 1,101,030,000

For the aggregated impact estimate, a 1.5 direct employment multiplier was applied per each \$1 million dollar invested.²¹ A \$36,000 average salary was used.²² The multipliers used were those of real estate. In this case only the sales process was examined.

²⁰ The 1,529 housing units indicated in the table were estimated based on a 2,813,093 total square feet proposed for the residential area and assuming an average 1,840 square feet per unit. The total area was provided by CBT Architects.

²¹ The direct jobs generated by this activity respond to real estate salesman and brokers, lawyers, appraisers, loans administrators and other necessary personnel required by the activity. The multipliers used were those of real estate.

²² The average salary was based on data provided by the Bureau of Labor Statistics (BLS) for Puerto Rico year 2006 in the categories of real estate brokers and real estate sales agents.

Economic Impact: Sales Phase / Housing		
<u>Concept</u>	<u>Multiplier by:</u> <u>\$1 Million**</u>	<u>Project Total*</u>
Production (Aggregated Economic Activity) :		
Direct	1.00	\$ 1,101,030,000
Direct and Indirect	1.54	\$ 1,695,586,200
Employments:		
Direct	1.50	1,685.7
Direct and Indirect	3.90	6,574.2
Direct, Indirect and Induced	6.63	11,176.2
Salary:		
Direct	(\$36 thousand x 1)	\$ 60,685,200
Direct and Indirect	3.06	\$ 185,696,712
Direct, Indirect and Induced	4.73	\$ 287,040,996

* The multipliers used were those of real state.

** The multipliers used were those of real state. Puerto Rico Planning Board Input-Output Matrix 1991-1992; March 2002. Direct salary by the Bureau of Labor Statistics (BLS).

Economic Impact: *Operation Phase*

The parameters to estimate the economic impact for the operation of the high income housing units are presented as follows. The direct operational estimate is over \$16.5 million.

Estimated Annual Housing Operation Costs			
<u>Concepts</u>	<u>Monthly* Unit Costs</u>	<u>Annual Unit Costs</u>	<u>Project Total</u>
Basic maintenance and utilities / 1,498 housing units	\$ 500	\$ 6,000	\$ 8,988,000
Communal maintenance 1,498 housing units*	\$ 250	\$ 3,000	\$ 4,494,000
Insurance 1,498 single family housing units	\$ 110	\$ 1,320	\$ 1,977,360
Other Costs**	\$ 60	\$ 720	\$ 1,078,560
Annual Housing Operation Costs***			\$ 16,537,920

Source: Estimated by Advantage Business Consulting

* Include access control

** Other costs may be property tax (CRIM), apportionment purse, between others.

*** Does not include the costs for each house's service maintenance.

The direct and indirect economic activity for the annual operation of the housing units is estimated in approximately \$28 million. For each \$1 million invested in the operation of the housing units there will be 3 direct jobs created.²³

Economic Impact: Operation Phase Residential Housing (Annual)		
<u>Concept</u>	<u>Multiplier by: \$1 Million**</u>	<u>Project Total*</u>
Production (Aggregated Economic Activity) :		
Direct	1.0	\$ 16,537,920
Direct and Indirect	1.7	\$ 28,114,464
Employments:		
Direct	3.00	50.7
Direct and Indirect	3.09	156.7
Direct, Indirect and Induced	5.86	297.1
Salary:		
Direct	(\$14,400 x 1)	\$ 730,080
Direct and Indirect	1.84	\$ 1,343,347
Direct, Indirect and Induced	2.85	\$ 2,080,728

* The multipliers used were those of buildings maintenance and repairs. Puerto Rico Planning Board Input-Output Matrix 1991-1992; March 2002.

²³ The direct salary is based on \$14,400 annually per job. The indirect and induced jobs are based on the buildings maintenance & repairs multipliers publish by the Planning Board Input-Output Matrix 1991-1992, March 2002.

Hotel

Economic Impact: Construction Phase

A total of 940 hotel keys are expected to be constructed over the 15 year construction period of the San Juan Waterfront project. Based on an estimated construction cost of \$430/sf or \$265,000/key, the estimated investment for the proposed hotel in the Waterfront development area is \$241 million.²⁴ Each hotel is expected to have parking contained within the structure and 0.8 parking spaces are planned per 1,000 sf of hotel development. Approximately 455 structured parking spaces are planned for the hotel development. The estimated construction cost of \$265,000/key includes the cost of constructing parking. For each \$1 million invested in construction 8 direct jobs will be generated. The direct salary income coefficient is based on a 0.15 per each million. The direct and indirect economic impact is estimated in almost \$410 million for the 15 year period timeframe.

Economic Impact: Construction Phase / Hotel		
<u>Concept</u>	<u>Multiplier by:</u> <u>\$1 Million**</u>	<u>Project Total*</u>
Production (Aggregated Economic Activity) :		
Direct	1.0	\$ 241.0
Direct and Indirect	1.7	\$ 409.7
Employments:		
Direct	8	1,928.0
Direct and Indirect	14.2	3,422.2
Direct, Indirect and Induced	16.3	3,928.3
Salary:		
Direct	0.15	\$ 35.2
Direct and Indirect	0.25	\$ 60.3
Direct, Indirect and Induced	0.45	\$ 108.5

*In millions of \$

** The multipliers used were those of construction. Puerto Rico Planning Board Input-Output Matrix 1991-1992; March 2002.

²⁴ The amount invested for the Hotel was provided by Colliers International.

Economic Impact: Operation Phase

The average rate for a hotel room has been established to be \$197 per night.²⁵ An average daily rate of \$205 was assumed at the marina hotel on Pier 9 (240 keys) due to the views and location. Occupancy was estimated to be 60% in the first year, 70% in the second year and then stabilizes at 78% in the third year.²⁶ An average of one (1) Full Time Employee (FTE) (full time equivalent) was used for the operation of each room. It was assumed a construction of 940 hotel rooms at an average for each room of 520 sf per room. The total square feet designated to the development of the hotel area is 559,153 million square feet. A 14% of the total square feet were reduced for common space, equipment and circulation. There is an annual adjustment of 5% for both the industry and salary based on inflation.

Jobs Generated during the Operational Phase				
<u>Project</u>	<u>Municipality</u>	<u>Employment</u>	<u>Rooms</u>	<u>Employees per Room</u>
El Conquistador	Fajardo	1,252	905	1.38
Caribe Hilton	San Juan	578	646	0.89
Westin Rio Mar	Rio Grande	1,200	600	2.00
Wyndham Condado Plaza	San Juan	1,007	570	1.77
San Juan Marriot	San Juan	750	525	1.43
ESJ Towers	Carolina	100	450	0.22
The Ritz Carlton	Carolina	925	416	2.22
InterContinental Resort	Carolina	400	402	1.00
Wyndham El San Juan Hotel	Carolina	800	382	2.09
Embassy Suites Hotel	Carolina	400	299	1.34
Hyatt Dorado Beach	Dorado	300	262	1.15
Courtyard by Marriot	Carolina	182	260	0.70
Wyndham Old San Juan Hotel	San Juan	260	240	1.08
Radisson Ambassador Plaza	San Juan	260	233	1.12
Hampton Inn & Suites	Carolina	64	201	0.32
Best Western Hotel	San Juan	75	184	0.41
Total / Average		8,553	6,575	1.19

Source: The Book of List 2004: Caribbean Business

²⁵ Data provided by the Puerto Rico Tourism Company Selected Statistic of the Tourism Activity of Puerto Rico 2005-2006 Edition.

²⁶ Data provided by Colliers International.

The direct and indirect impact in the operational phase of the hotel program over the local economy (aggregated production) is estimated in more than \$70 million.

Based on the inter-industrial multipliers that provide the Input-Output matrix, it is estimated that the operation of the proposed hotel program will generate more than 830 direct and indirect jobs and around 460 induced jobs. This represents a total employment of almost 1,300 people (direct, indirect and induced).

The generated salaries based on the direct and indirect jobs are estimated in more than \$14.5 million. The induced salary was estimated in \$7.9 million. The total salary sums up to \$22.6 million. This implies that for each \$1 in direct salary the economy generates \$1.24 in indirect salary and \$1.91 in indirect and induced salary.²⁷

Economic Impact: Operation Phase / Hotel (Annual)		
<u>Concept</u>	<u>Multiplier by: \$1 Million**</u>	<u>Project Total*</u>
Production (Aggregated Economic Activity) :		
Direct	1.00	\$47,804,050
Direct and Indirect	1.47	\$ 70,271,954
Employments:		
Direct	(940 x 0.70 x 1)	658.0
Direct and Indirect	1.27	835.7
Direct, Indirect and Induced	1.96	1,289.7
Salary:		
Direct	(\$18,000 x 1)	\$ 11,844,000
Direct and Indirect	1.24	\$ 14,686,560
Direct, Indirect and Induced	1.91	\$ 22,622,040

* The multipliers used were those of tourism hotels. Puerto Rico Planning Board Input-Output Matrix 1991-1992; March 2002.

²⁷ Input-Output Matrix 1991-1992; March 2002. Puerto Rico Planning Board. Social Analysis Program, Forecasts and Models.

Economic Impact: Hotel Parking Operational Phase

Parking income is expected to be \$18.00/day/space with a parking vacancy of 40%. Approximately 455 parking spaces are planned for the hotel development. The parking lot will operate 365 days a year. The income for the operation of the hotel parking is estimated at almost \$1.2 million per year.

Direct and indirect impact of the hotel parking operational phase on the local economy is estimated at \$2 million per year.

The staffing will consist of: 3 tellers and 3 security guards. In addition, 2 administrative employees were considered. The operation will consist of 8 direct jobs, 1.2 indirect and 3.6 induced, for a total of 12.8 jobs. Average salary was estimated at \$7 per hour for a total of \$116 thousand per year.

Economic Impact: Operation Phase / Parking Spaces (Annual)		
<u>Concept</u>	<u>Multiplier by: \$1 Million</u>	<u>Project Total*</u>
Production (Aggregated Economic Activity) :		
Direct	1.00	\$ 1,195,740
Direct and Indirect	1.75	\$ 2,092,545
Employments:		
Direct	1.00	8.0
Direct and Indirect	1.15	9.2
Direct, Indirect and Induced	1.60	12.8
Salary:		
Direct	(\$7 x 2,080 hrs year)	\$ 116,480
Direct and Indirect	1.29	\$ 150,259
Direct, Indirect and Induced	1.99	\$ 231,795

* The multipliers used were those of parking services sector. Puerto Rico Planning Board Input-Output Matrix 1991-1992; March 2002.

Commercial Area

Economic Impact: Construction Phase

The impact is estimated for 286,613 square feet proposed for commercial use. The average cost of the construction phase per square foot is estimated at \$290. Approximately 897 parking spaces are expected to be constructed, the cost of which is included in the unit price of \$290/sf. The remaining required 50 spaces would be on-street parking. The construction cost of the commercial area is \$83 million.²⁸ The economic impact over the aggregated economy is \$141 million. This project will generate approximately 1,400 jobs (direct, indirect and induced). The inter-industrial multipliers reflect that the salaries generated from this component of the Project are \$37 million per year.²⁹

Economic Impact: Construction Phase / Commercial Area		
<u>Concept</u>	<u>Multiplier by:</u> <u>\$1 Million</u>	<u>Project Total*</u>
Production (Aggregated Economic Activity) :		
Direct	1.00	\$ 83.1
Direct and Indirect	1.70	\$ 141.3
Employments:		
Direct	8.00	664.8
Direct and Indirect	14.20	1,180.0
Direct, Indirect and Induced	16.30	1,354.5
Salary:		
Direct	0.15	\$ 12.1
Direct and Indirect	0.25	\$ 20.8
Direct, Indirect and Induced	0.45	\$ 37.4

*In millions of \$

** The multipliers used were those of construction. Puerto Rico Planning Board Input-Output Matrix 1991-1992; March 2002.

²⁸ Data provided by Colliers International.

²⁹ Input-Output Matrix 1991-1992; March 2002. Puerto Rico Planning Board. Social Analysis Program, Forecasts and Models.

Economic Impact: Operational Phase

The sales projections were estimated at \$200 per square feet for the first year of operations. That figure is consistent with the local retail market experience.³⁰ For the operation income, a 35% mark-up was used. Staffing was estimated at 1.2 direct jobs (FTE) for every 1,000 s.f. at an average salary of \$14,400.

Economic Impact: Operation Phase / Commercial Area (Annual)		
<u>Concept</u>	<u>Multiplier by:</u> <u>\$1 Million</u>	<u>Project Total*</u>
Production (Aggregated Economic Activity) :		
Direct	1.00	\$ 20,062,910
Direct and Indirect	1.36	\$ 27,285,558
Employments:		
Direct	1.20	379.2
Direct and Indirect	1.17	443.7
Direct, Indirect and Induced	1.76	667.4
Salary:		
Direct	(\$14,400 x 1 FTE)	\$ 5,460,480
Direct and Indirect	1.23	\$ 6,716,390
Direct, Indirect and Induced	1.91	\$ 10,429,517

* The multipliers used were those of commercial sector. Puerto Rico Planning Board Input-Output Matrix 1991-1992; March 2002.

Economic Impact: Commercial Area Parking Operational Phase

897 structured parking spaces are planned for the commercial development, which are expected to provide income of \$18/day per space with a vacancy rate of 40%. The parking space will operate 365 days a year. The income for the operation of the commercial parking is estimated at \$2.3 million per year.

³⁰The estimation is based on Advantage Business Consulting experience consulting for retailers. The analysis is based on retail sales to cover not only the building administration operation impact (the rent to tenants) but also the impact of the business operating in the facilities.

Direct and indirect impact of the commercial parking operational phase on the local economy is estimated at \$4 million per year.

The staffing will likely consist of: 4 tellers and 4 security guards. In addition, 2 administrative employees were considered. The operation will likely consist of 10 direct jobs, 1.2 indirect and 3.6 induced, for a total of 16 jobs. Average salary was estimated at \$7 per hour for a total of \$146 thousand per year.

Economic Impact: Operation Phase / Parking Spaces (Annual)		
<u>Concept</u>	<u>Multiplier by: \$1 Million</u>	<u>Project Total*</u>
Production (Aggregated Economic Activity) :		
Direct	1.00	\$ 2,357,316
Direct and Indirect	1.75	\$ 4,125,303
Employments:		
Direct	1.00	10.0
Direct and Indirect	1.15	11.5
Direct, Indirect and Induced	1.60	16.0
Salary:		
Direct	(\$7 x 2,080 hrs year)	\$ 145,600
Direct and Indirect	1.29	\$ 187,824
Direct, Indirect and Induced	1.99	\$ 289,744

* The multipliers used were those of parking services sector. Puerto Rico Planning Board Input-Output Matrix 1991-1992; March 2002.

Civic Space

Economic Impact: Construction Phase

The civic space will be of 130,093 sf of development. Advantage estimate a construction cost of \$250 per sf. The use is yet to be determined, but is potentially intended for a police station, museum, fire department or other public/civic use.

Economic Impact: Construction Phase / Civic Space		
<u>Concept</u>	Multiplier by:	
	<u>\$1 Million</u>	<u>Project Total*</u>
Production (Aggregated Economic Activity) :		
Direct	1.0	\$ 32.5
Direct and Indirect	1.7	\$ 55.3
Employments:		
Direct	8.0	\$ 260.2
Direct and Indirect	14.2	\$ 461.8
Direct, Indirect and Induced	16.3	\$ 530.1
Salary:		
Direct	0.15	\$ 4.7
Direct and Indirect	0.25	\$ 8.1
Direct, Indirect and Induced	0.45	\$ 14.6

*In millions of \$

** The multipliers used were those of construction. Puerto Rico Planning Board Input-Output Matrix 1991-1992; March 2002.

Economic Impact: Operational Phase

The annual total cost of the operation of the civic spaces is estimated at \$650 thousand per year. A total of 24 jobs will be generated (direct, indirect and induced). Direct jobs are estimated at a rate of 1 employee for every 10,000 square feet. Average salary was estimated at \$30,000 a year.³¹

Direct and indirect impact of this phase over the local economy is estimated at \$878 thousand in the first year.

³¹ The salary estimation is based on the basic salary of policemen in Puerto Rico.

Economic Impact: Operation Phase / Civic Space (Annual)		
<u>Concept</u>	<u>Multiplier by: \$1 Million</u>	<u>Project Total*</u>
Production (Aggregated Economic Activity) :		
Direct	1.00	\$ 650,465
Direct and Indirect	1.35	\$ 878,128
Employments:		
Direct	1.00	13.0
Direct and Indirect	1.10	14.3
Direct, Indirect and Induced	1.85	24.1
Salary:		
Direct	(\$30,000 x 1 FTE)	\$ 390,279
Direct and Indirect	1.09	\$ 464,432
Direct, Indirect and Induced	1.68	\$ 722,016

* The multipliers used were those of government (ELA). Puerto Rico Planning Board Input-Output Matrix 1991-1992; March 2002. Direct salary estimated by using the basic salary of Policemen in PR.

Public Areas

Economic Impact: Construction Phase

The total cost of the public areas construction, which includes parks, sidewalks and landscaping is estimated at \$51 million. This estimate does not include land cost. **Direct and indirect impact of the construction phase of this Project is \$86.8 million.**

It is estimated that the public areas will consist of 2,854,922 square feet.³² Based on the construction cost of \$51 million, the construction cost of \$17.88 per square foot was derived.

³² Data provided by CBT Architects.

In general, for every \$1 million invested in the construction phase 8 direct jobs, 6.2 indirect jobs and 2.1 induced jobs will be generated for a total of 16.3 jobs. The project will generate a total of 832 jobs (direct, indirect and induced jobs).

The inter-industrial multipliers reflect that salaries generated will reach approximately \$23 million per year.³³

Economic Impact: Construction Phase / Public Areas		
<u>Concept</u>	<u>Multiplier by:</u>	
	<u>\$1 Million</u>	<u>Project Total*</u>
Production (Aggregated Economic Activity) :		
Direct	1.0	\$ 51.0
Direct and Indirect	1.7	\$ 86.8
Employments:		
Direct	8	408.4
Direct and Indirect	14.2	724.9
Direct, Indirect and Induced	16.3	832.0
Salary:		
Direct	0.15	\$ 7.5
Direct and Indirect	0.25	\$ 12.8
Direct, Indirect and Induced	0.45	\$ 23.0

*In millions of \$

** The multipliers used were those of construction. Puerto Rico Planning Board Input-Output Matrix 1991-1992; March 2002.

³³ Input-Output Matrix 1991-1992; March 2002. Puerto Rico Planning Board. Social Analysis Program, Forecasts and Models.

Economic Impact: Operational Phase

The annual total cost of the operation of the public spaces is estimated at \$11.4 million per year. Approximately 2,854,922 sf will be dedicated to public areas. Maintenance and operational cost are estimated at \$4 per square foot.³⁴ A total of 528 jobs are expected to be generated. Direct jobs are estimated at a rate of 1 employee for every 10,000 square feet. Average salary was estimated at \$7 per hour.³⁵

Direct and indirect impact of this phase over the local economy is estimated at \$15 million in the first year.

Based on the inter-industrial multipliers it is estimated that the operation of the public areas will generate a total of 528 direct, indirect and induced jobs from which 286 are direct jobs.

Salaries for direct jobs are estimated at \$4.2 million per year. Indirect jobs will generate \$374 thousands and the induced jobs almost \$2.5 million. Total salaries are estimated at \$6.9 million per year.

³⁴ Estimated by Advantage Business Consulting.

³⁵ Salary estimate take into account the rise in the minimum wage.

Economic Impact: Operation Phase / Public Areas (Annual)		
<u>Concept</u>	<u>Multiplier by:</u> <u>\$1 Million</u>	<u>Project Total*</u>
Production (Aggregated Economic Activity) :		
Direct	1.00	\$ 11,419,688
Direct and Indirect	1.32	\$ 15,073,988
Employments:		
Direct	1.0	285.5
Direct and Indirect	1.1	314.0
Direct, Indirect and Induced	1.85	528.2
Salary:		
Direct	(\$7 x 2,080 hrs year)	\$ 4,156,766
Direct and Indirect	1.09	\$ 4,530,875
Direct, Indirect and Induced	1.68	\$ 6,983,368

* The multipliers used were those of government (ELA). Puerto Rico Planning Board Input-Output Matrix 1991-1992; March 2002.

Marina

Economic Impact: Direct Investment and Construction Phase

Direct investment includes the construction of 91 slips, an information center and the administration building. 70 slips will be for boats less than 80 feet long and 21 slips will be for boats longer than 80 feet. The estimated construction cost per slip is expected to average \$195,000. Since the slips will be of different sizes, it may be more appropriate to account for the cost of the slips on a linear foot basis. A total of 7,121 linear feet of slip length is proposed for the marina to be constructed at an estimated cost of \$2,671/lf. The administrative building is estimated to be 9,000 square feet.³⁶

The construction cost of this project is estimated at \$19 million. The direct and indirect impact of the construction phase is \$32 million over the local economy.

The marina portion of the project is expected to generate 160 direct jobs, 124 indirect and 42 induced. The total employment generated by the project is estimated at 326 jobs.

³⁶ Data provided by Colliers International.

Economic Impact: Marina Construction Phase		
<u>Concept</u>	<u>Multiplier by:</u> <u>\$1 Million</u>	<u>Project Total</u>
Production (Aggregated Economic Activity) :		
Direct	1.0	\$ 19,020,725
Direct and Indirect	1.7	\$ 32,335,233
Employments:		
Direct	8	160.0
Direct and Indirect	14.2	284.0
Direct, Indirect and Induced	16.3	326.0
Salary:		
Direct	0.15	\$ 2,777,026
Direct and Indirect	0.25	\$ 4,755,181
Direct, Indirect and Induced	0.45	\$ 8,559,326

** The multipliers used were those of construction. Puerto Rico Planning Board Input-Output Matrix 1991-1992; March 2002.

Economic Impact: Operational Phase of the Marina

It is important to note that the significant impact on the economic activity of the marina is in attracting boats to the area, not on the marina operation per-se. To estimate the economic impact of the marina, both the administration and the operation of boats were considered.

The marina management cost was estimated at \$1.2 million per year.³⁷ The boats operation costs were estimated at \$68 thousand yearly per boat. Vacancy was considered according to the number of boats in the marina. In the first year, 64% of the slips were assumed to be vacant, considering 33 boats docked at a cost estimated to be \$2.2 million. In the second year the vacancy rate was assumed to be 51%, considering 45 boats docked at a cost of \$3 million. Vacancy in the third year was assumed to be 38% considering 57 boats docked at a cost of \$3.9 million. From the fifth year on the staffing will consist of 12 FTEs.³⁸

³⁷ The estimate is based on data provided by Colliers International. Average rent of \$37,500 by 35 boats.

³⁸ Estimated by Advantage Business Consulting based on previous experience.

Economic Impact: Direct Rent Marina Facility	
<u>Concepts</u>	<u>Project Total</u>
<u>Number of wet-slips: 91</u>	
Estimated Cost per wet-slips	\$25,000 to \$50,000
Total Costs / Renting wet-slips*	\$821.3 thousand to \$1.6 million
Marina Total Costs SJ Waterfront	\$821.3 thousand to \$1.6 million

* Based on an average rent of \$37,500 and assuming a general vacancy of 63.9% first year.
50.9% second year and 37.8% third year.

Estimated Annual Boats Operation Costs*				
<u>Concepts</u>	<u>Unitary Costs</u>	<u>Project Total</u>	<u>Project Total</u>	<u>Project Total</u>
Average Boats 40 to 80 feet		<u>33 Boats</u>	<u>45 Boats</u>	<u>57 Boats</u>
<u>Number of wet-slips: 91</u>				
Average Boats Rent	\$ 1,650	\$ 54,204	\$ 73,724	\$ 93,393
Average Maintenance	\$ 13,000	\$ 427,063	\$ 580,853	\$ 735,826
Direct Employees (2 FTE: Mechanic and Maintenance)	\$ 38,000	\$ 1,248,338	\$ 1,697,878	\$ 2,150,876
Diesel	\$ 6,000	\$ 197,106	\$ 268,086	\$ 339,612
Licenses and Registrations	\$ 1,800	\$ 59,132	\$ 80,426	\$ 101,884
Other Costs	\$ 8,000	\$ 262,808	\$ 357,448	\$ 452,816
Annual Boats Operations	\$ 68,450	\$ 2,248,651	\$ 3,058,414	\$ 3,874,407

*It does not include adjustment by inflation, it only represent average unit base costs.

The economic impact of the operation of the marina and the boats that will use it is presented in the following table.

Economic Impact: Operation Phase / Marina & Boats		
<u>Concept</u>	<u>Multiplier by:</u> <u>\$1 Million</u>	<u>Year 1</u> <u>Project Total*</u>
<i>Marine</i>		
Production (Aggregated Economic Activity) :		
Direct	1.0	\$ 1,231,913
Direct and Indirect	1.32	\$ 1,626,125
Employments:		
Direct	1.0	12
Salary:		
Direct	(\$18,000 x 12 FTE)	\$ 216,000
<i>Boats</i>		
Production (Aggregated Economic Activity) :		
Direct	1.0	\$ 2,248,651
Direct and Indirect	1.32	\$ 2,968,219
Employments:		
Direct	(2 FTE x 35 boats)	66
Direct and Indirect	2.81	184.6
Direct, Indirect and Induced	7.26	477.0
Salary:		
Direct	(\$18,000 x 1 FTE)	\$ 1,182,636
Direct and Indirect	1.23	\$ 1,454,642
Direct, Indirect and Induced	1.91	\$ 2,258,835

* The multipliers used were those of maritime transportation

The following table presents a summary of the economic impact the San Juan Waterfront project including the construction and operation phases. The summary presents the aggregate impact after the culmination of the project in a fifteen year period.

Economic Impact Summary: Phases: Construction & Operation (15 Years)		
<u>Concept</u>	<u>15 Years Period Construction Phase</u>	<u>Annual* Operational Phase</u>
Production (Aggregated Economic Activity) :		
Direct	\$1,005.2 million	\$103.5 million
Direct and Indirect	\$1,708.8 million	\$152.4 million
Employments:		
Direct	8,049.1	1,482.1
Direct and Indirect	14,287.2	1,969.7
Direct, Indirect and Induced	16,400.1	3,312.2
Salary:		
Direct	\$146.8 million	\$24.2 million
Direct and Indirect	\$251.3 million	\$29.5 million
Direct, Indirect and Induced	\$452.3 million	\$45.6 million

* After the 15 years period construction phase is finish.

** Puerto Rico Planning Board Input-Output Matrix 1991-1992; March 2002

The costs discussed thus far are related to the actual development, but prior to sale of parcels, roadway, utility, and pier improvements are required. There will be significant job creation as a result of the required construction projects and maintenance of the roadways and utilities may require additional jobs (AMEC’s Construction Cost Estimate based on Conceptual Design, January 2008).

Fiscal Impact

Fiscal analysis of this project considered many variables such as income on its various phases at state and municipal level. The variables considered were: construction taxes, municipal taxes, Internal Revenue taxes, stamps from the College of Engineers, income and property taxes.

The construction tax was estimated at 5% on the excess of \$20 thousand and \$300 over the first \$20 thousand. The municipal tax was estimated at a rate of 0.5%. Internal revenue taxes were estimated at \$5.00 for every \$1,000 and the stamps from the College of Engineers at \$1.00 for every \$1,000. Municipal Tax Revenue Center (CRIM) payments were estimated at a rate of 8.33% over the property valued at 1954 prices.³⁹

During the construction phase, income taxes were estimated at over the average salary for the construction sector that is \$13,370 per year. The income taxes for the indirect and induced jobs were estimated at a rate of \$ 22,070 at a rate of 7.5%.⁴⁰

Fiscal income during the construction phase is estimated at almost \$63 million in a period of 15 years. On the other side, fiscal income related to the Project operation was estimated at \$19 million per year for the same period.

³⁹ The property value for the Municipal Tax Revenue Center (CRIM) is based in 1954 prices. Puerto Rican government have not yet up date its base year for the cadastral properties pricing.

⁴⁰ Data obtained from “State Occupational Employment and Wage Estimates” publish by U.S. Department of Labor (Bureau of Labor Statistics).

Government Income Revenue / After the 15 years Development	
<u>Concept</u>	<u>\$</u>
Construction Phase:	
Construction Taxes	\$ 30,153,125
Operating Municipal Taxes "Patente"	\$ 5,025,821
<i>Total Municipal Construction</i>	<i>\$ 35,178,946</i>
Internal Revenue	\$ 5,025,821
Engineer Collage Stamp	\$ 1,005,164
Income Tax	\$ 21,476,207
<i>Total State Construction</i>	<i>\$ 27,507,192</i>
Government Revenue - Construction Phase	\$ 62,686,138
Operational Phase:	
CRIM*	\$ 13,818,394
Income Tax (State)	\$ 5,333,467
Total Operational Phase	\$ 19,151,861
Government Revenue - Operational Phase**	\$ 19,151,861

* Estimated based in construction value as property value.

** After the 15 years period construction phase is finish.

The San Juan Waterfront is an ambitious revitalization project that will provide a mixed-use waterfront area along a recreational contemplative public space throughout the San Antonio Channel in the San Juan harbor. The project will contribute to develop the socioeconomic conditions of San Juan Antiguo creating more than 8 thousand direct jobs during the construction phase and around 1,500 direct jobs during the operational phase (after the 15 years period construction phase is finished). The aggregated economic impact will be significant for San Juan Antiguo, the rest of the municipality and for the entire Island.