

The Economic Impact of Apartment Development Projects at Port Jefferson:
The Hills and Shipyard Projects

A report prepared by:

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EXECUTIVE SUMMARY

Background. This study estimates the economic impact of two apartment projects in Port Jefferson—The Hills Project and the Shipyard Project. The impacts of these programs are assessed in terms of

- Economic output
- Earnings
- Jobs

The study also estimates the costs of educating school-age children who move into these apartments.

Input-output analysis is used to estimate the direct, indirect, and induced impacts of these projects.

Results. The economic impacts of these projects are substantial.

Economic output. These projects increase the value of output by more than \$122 million. Of that amount, nearly \$81 million is due to the Shipyard project and more than \$37 million to the Hills Project. Discretionary spending by new apartment occupants contributes an additional 4.2 million to output.

Earnings. These projects also have substantial effects on earnings, which are estimated to grow by more than \$37 million. The Shipyard Project accounts for almost \$25 million of this earnings growth, while the Hill Project adds nearly \$11 million. Discretionary spending by new apartment occupants contributes another \$1.2 million to earnings.

Jobs. The projects will add a total of 757 new jobs. The Shipyard Project adds 499 of these jobs, while the Hills Project adds 228 jobs. Discretionary spending by new apartment occupants leads to a further increase of 30 jobs.

Education costs. Because these apartments are mostly one bedroom structures, the number of school age children and associated costs of educating these children are relatively modest. These costs are estimated to be \$441,969 annually.

Summary. Apartment space on Long Island is scarce. Vacancy rates are among the lowest for metropolitan areas nationally. The Hills and Shipyard Projects fill an acute need for apartment space and will serve to promote more jobs and greater economic growth on Long Island.

INTRODUCTION

This study performs an Economic Impact Analysis for Upper Port and Downtown Residential Development Projects (Rail Realty and TriTec).

The analysis will assess the economic impacts of each of these two projects in terms of the following outcomes:

- overall economic impact (e.g., value of output growth in Port Jefferson)
- effects on total earnings
- number of jobs generated
- effects on education costs of school-age children living in these apartments

The analysis will employ multipliers from RIMS II available from the Bureau of Economic Analysis to translate expenditures on each of these projects into overall economic impacts, earnings effects, and impacts on jobs. In addition, information on the size and configuration of the apartments will be combined with demographic data specific to the region to impute the numbers of additional school age children residing in Port Jefferson as the result of these projects.

The two projects to be evaluated are the *Hills Project* and the *Shipyards Project*. These are described briefly as follows.

Hills Project. This project consists of two apartment complexes built in upper Port Jefferson on Texaco Ave built under the auspices of Rail Realty. The total square footage of the two buildings combined is 106,516 square feet, which includes 24,771 square feet of garage spaces

below these buildings. One building includes 38 apartments (3 studio, 31 one bedroom, and 4 two bedroom units). A second building includes 36 apartments (30 one bedroom and 6 two bedroom units). The project also includes a central lobby, lounge, fitness center, and outdoor courtyard.

Shipyard Project. This project involves the demolition of an existing motel facility and construction, in its place, of a three-story, 112-unit apartment complex, (including 40 one-bedroom units and 72 two bedroom units. The project is conducted under the auspices of TriTec Realty. It is to be built on the south side of West Broadway between Barnum Ave and Brook Road.

METHODS AND DATA

Methods

The economic impact of these two projects will be assessed using input-output (I-O) models. An input-output model quantifies the flows of economic activity within a region. The model captures what each business or sector must purchase from every other sector in order to produce a dollar's worth of goods or services. The economic impact of spending on a project consist of three components: direct, indirect, and induced effects. Direct effects are quantified as the spending for the project itself; for example, building a resort motel. In this example, indirect effects are the changes in sales, income or jobs in sectors within the region that supply goods and services to the tourism sector. The increased sales in linen supply firms resulting from more motel sales is an indirect effect of visitor spending. Induced effects are the increased

sales within the region from household spending of the income earned in the tourism and other sectors that support the resort motel. Motel employees and workers on the project spend the income they earn on housing, utilities, groceries, etc. These represent induced effects. Since the apartments will be adding residents who will also spend, we quantify their effects on economic activity as well.

Multipliers are used to quantify all three effects—direct, indirect, and induced. These multipliers are developed from input-output tables produced by the Bureau of Economic Analysis (BEA). Since the 1970s, the BEA has produced regional I-O multipliers that quantify inter-industry purchases resulting from changes in final demand. The multipliers produced by the model are customized to account for the economic activity in any set of contiguous U.S. counties. Multipliers show the total effect on economic activity resulting from a project. For example, a project costing \$1 million might generate economic output of \$1.8 million once direct and induced effects are added to the cost of the project itself. There are several measures of changes in total economic activity that one may estimate—gross output, earnings, and employment.

Gross output is equal to the sum of the intermediate inputs and value added⁵. It can also be measured as the sum of the intermediate inputs and final use. Gross output is a duplicative total in that goods and services will be counted multiple times if they are used in the production of other goods and services.

Earnings consist of wages and salaries and proprietors' income.⁶ Employer contributions for health insurance are also included. Personal contributions to social insurance and employee

pension plans are excluded because the model must account for only the portion of personal income that is currently available for households to spend.

Employment consists of a count of jobs that include both full-time and part-time workers. An excel spreadsheet analysis is provided together with this report that shows the calculations used to estimate these economic impacts.

Education costs of school-age children are calculated by estimating the numbers of school-age children who will live in these apartments multiplied by the cost per pupil.

Data

The data used in the analysis come from several sources. Project expenditure data were provided by Rail Realty an TriTec. The numbers of adults in each apartment unit was estimated based upon information provided in reports by P.W. Grosser—DEIS Report (2014) and a Rutgers (2006) study of new housing occupants. Per pupil expenditures were obtained from the P.W. Grosser report (2914). Multipliers were obtained from the Bureau of Economic Analysis.

RESULTS

Table 1 shows expenditures for Hills and Shipyard Projects. Expenditures were aggregated into three main components: land, professional & Technical services, and construction expenditures. Table 1 also shows the cost share of each cost component. Construction accounted for 77.3 percent of expenditures on the Hills Project and 71.0 percent of expenditures on the Shipyard Project.

TABLE 1. Apartment Project Analysis— Project Expenditures by Category

VARIABLE	HILLS PROJECT	SHIPYARD PROJECT
Expenditures		
Land	\$3,000,000	\$3,900,000
Professional & Technical Services (P&T)	\$1,700,000	\$9,047,475
Construction Expenditures	\$16,000,000	\$31,752,525
Total	\$20,700,000	\$44,700,000
Project Input Expenditure Shares		
Share of land expenditures	14.5%	8.7%
Share of P&T expenditures	8.2%	20.2%
Share of construction expenditures	77.3%	71.0%

Multipliers used in this study are shown in Table 2. Each of the expenditure components has a unique multiplier for output, earnings, and jobs.

TABLE 2. Apartment Project Analysis— Project Multipliers by Category

CATEGORY	MULTIPLIER VALUE
Land	
Output multiplier	1.56
Earnings multiplier	0.29
Jobs multiplier	9.14
P&T Services	
Output multiplier	1.87
Earnings multiplier	0.65
Jobs multiplier	11.68
Construction	
Output multiplier	1.83
Earnings multiplier	0.56
Jobs multiplier	11.27

Table 3 shows estimated discretionary spending by new occupants of these apartment projects. Multipliers that convert this spending into output, earnings, and jobs are also provided in Table 3.

TABLE 3. Apartment Project Analysis—Discretionary Spending

CATEGORY	VALUE
Discretionary Spending	\$3,965,299
Multipliers	
Output multiplier	1.06
Earnings multiplier	0.30
Jobs multiplier	7.61

Tables 4-6 show the estimated economics impacts of these projects on output, earnings, and jobs, respectively. Turning first to output, one can see that the total estimated effect exceeds \$122 million. Of that amount, nearly \$81 million is due to the Shipyard project and more than \$37 million to the Hills Project. Discretionary spending by new apartment occupants contributes and additional 4.2 million to output.

TABLE 4. Apartment Project Analysis—Effects on Output

CATEGORY	VALUE
Hills Project	\$37,063,080
Shipyard Project	\$80,987,355
Discretionary Spending	\$4,184,976
Total output effect	\$122,235,411

Table 5 reveals that the effects of these projects on earnings are also substantial: earnings increase by more than \$37 million. The Shipyard Project accounts for almost \$25 million of this earnings growth, while the Hill Project add nearly \$11 million. Discretionary spending by new apartment occupants contributes another \$1.2 million to earnings.

TABLE 5. Apartment Project Analysis—Effects on Earnings

CATEGORY	VALUE
Hills Project	\$10,997,120
Shipyard Project	\$24,933,692
Discretionary Spending	\$1,180,866
Total output effect	\$37,111,678

Turning to jobs growth, Table 6 shows that these apartment projects add 757 new jobs. The Shipyard Project adds nearly 500 jobs, while the Hills Project adds 228 jobs. Discretionary spending by new apartment occupants leads to a further increase of 30 jobs.

TABLE 6. Apartment Project Analysis—Effects on Jobs

CATEGORY	VALUE
Hills Project	228
Shipyard Project	499
Discretionary Spending	30
Total output effect	757

Finally, Table 7 shows the effects on the number so of additional school-age children and associated costs. As the table indicates, the additional number of school-age children is modest. This reflects that the strong majority of these apartments are one bedroom units and studios which are unlikely to be suitable for families.

TABLE 7. Apartment Project Analysis— Numbers of Additional School-Age Children and Costs

VARIABLE	VALUE
Numbers of School Age Children	17
Total Student Expenditures	\$441,969

DISCUSSION

Apartment space is scarce on Long Island. The average vacancy rate was just 3.4 percent as of October, 2016 (Reis Reports 2016). Increasing apartment space is important, not only for stimulating economic growth, but for attracting and retaining younger workers on Long Island. Many if not most new tenants in these apartments may be associated with Stony Brook University, either as graduate students, physicians, professors, nurses, or other young professionals.

Demand for the apartment space created by these two projects is strong. The first completed apartments of 38 units constructed by the Hills Project has already been fully leased. Demand is strong for the second 36-unit apartment building as well.

The new apartment space should also facilitate further growth in terms of Port Jefferson's uptown Main Street corridor, an area between North Country/Sheep Pasture Road and the Long Island Rail Road tracks.

In summary, the Hills and Shipyard Projects offer substantial increases in economic output, earnings, and jobs. Beyond that, they help serve the objectives of retaining young professionals on Long Island and developing Port Jefferson's uptown district.

REFERENCES

Bureau of Economic Analysis. RIMS II Regional Multipliers for Long Island. Washington, DC, 2015

PW Grosser Consulting. Environmental Impact Statement: Port Jefferson Residencies. Bohemia, New York, 2014.

Reis Reports. Apartment Space: Metropolitan Analysis for Long Island. Manhattan, New York, 2016.

Rutgers University, Center for Urban Policy Research. Rutgers Demographic Multipliers – Estimates of the Occupants of New Housing Study. New Brunswick, NJ, 2006.

DISCRETIONARY SPENDING ANALYSIS

Shipyard Project

Unit Size	Avg # of adults	# Units	Total number of adults
1 BR	1.67	40	66.8
2 BR	2.31	72	166.32

Hills Group Project

Unit Size	Avg # of adults	# Units	Total number of adults
Studio	1	3	3
1 BR	1.67	61	101.87
2 BR	2.31	10	23.1

Discretionary income generated per adult 13726.84

Discretionary income generated per adult spent within 10 miles of PJV 10981.47

Total discretionary income spent within 10 miles of PJV 3965299

Discretionary spending multiplier-- output 1.0554
 Discretionary spending multiplier-- earnings 0.2978
 Discretionary spending multiplier-- jobs 7.613

Total discretionary income effects-- output 4184976
 Total discretionary income effects-- earnings 1180866
 Total discretionary income effects-- jobs 30.18782

Sources:

Avg # adults	DEIS report at p. 4-25 and Rutgers 2006 Report. Assumed 1 adult in studio and 1 BR apts an
# Units	Provided by each project
Discretionary income generated per adult	Used Forbes report of 3.2 million dollars for Shipyard Project divided by number of adults at
Discretionary spend within 10 miles of PJV	Used Forbes report-- 80% spend within 10 mile radius-- provided by Shipyard Project
Total discretionary income within 10 miles of PJV	Computed from data
Discretionary spending multiplier--output	RIMS II multipliers
Discretionary spending multiplier-- earnings	RIMS II multipliers
Discretionary spending multiplier-- jobs	RIMS II multipliers

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Shipyard Project

2 adults in 2 BR apts

APARTMENT PROJECT SPENDING ANALYSIS

Hills Project

Expenditure

Land costs

3000000

Professional and technical services

1700000

Construction costs

16000000

Total expenditure

20700000

Shipyards Project

Land costs

Professional and technical services

Construction costs

Total expenditure

Project input shares

Share land

0.144928

Share prof and tech svcs

0.082126

Share construction

0.772947

Project input shares

Share land

Share prof and tech svcs

Share construction

Multipliers

Land

Output multiplier

1.5557

Earnings multiplier

0.2916

Jobs multiplier

9.1416

Multipliers

Land

Output multiplier

Earnings multiplier

Jobs multiplier

Professional and technical services

Output multiplier

1.8734

Earnings multiplier

0.6536

Jobs multiplier

11.6766

Professional and technical services

Output multiplier

Earnings multiplier

Jobs multiplier

Construction

Output multiplier

1.8257

Construction

Output multiplier

Earnings multiplier 0.5632
Jobs multiplier 11.2671

Earnings multiplier
Jobs multiplier

TOTAL OUTPUT INCREASE

37063080

TOTAL OUTPUT INCREASE

TOTAL EARNINGS INCREASE

10997120

TOTAL EARNINGS INCREASE

TOTAL JOBS INCREASE

227.5486

TOTAL JOBS INCREASE

Sources

Project expenditures
Project input shares
Land Multipliers
Professional and technical multipliers
Construction multipliers

Data provided by Hills Project and Shipyard Project
Calculated
RIMS II multipliers
RIMS II multipliers
RIMS II multipliers

Expenditure

3900000

9047475

31752525

44700000

0.087248

0.202404

0.710347

1.5557

0.2916

9.1416

1.8734

0.6536

11.6766

1.8257

0.5632
11.2671

TOTALS BOTH PROJECTS

EFFECTS FROM DISCRETIONARY SPENDING

80987355

118050434.6

4184976

249333692

35930811.74

1180866

499.0549

726.603481

30.18782

GRAND TOTALS

122235410.6

37111677.74

756.791301

NUMBERS OF SCHOOL AGE CHILDREN AND COSTS

Shipyard Project

Unit Size	Avg # of persons	Avg # children	Avg # school age children	# Units
1 BR	1.67	0	0	40
2 BR	2.31	0.31	0.206667	72

Hills Project

Unit Size	Avg # of persons	Avg # children	Avg # school age children	# Units
Studio	1	0	0	3
1 BR	1.67	0	0	61
2 BR	2.31	0.31	0.206667	10

Per pupil expenditure 26080

Total number of school age children

Total pupil expenditures per annum

Sources:

- Avg # persons
- Avg # children
- Avg # school age children
- # Units
- Per pupil expenditure
- Number of school age children
- Total pupil expenditure per annum

- DEIS Report at p. 4-25 and Rutgers Demographic Multipliers – Estimates of the Occupants of Assumed 1 adult for studio/ 1 BR apts and 2 adults for 2 BR apts
- Assumed uniform distribution of children aged 0-18 yrs, so 2/3 of children would be sc
- Provided by each project
- DEIS Report at p. 4-23
- Computed from data
- Computed from data

school age children

0

14.88

0

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2.066667

16.94667

441969.1

F New Housing study (Rutgers University, 2006).

hool age