

# AYCO/STARLITE PROJECT: ECONOMIC AND FISCAL IMPACT ANALYSIS

April 2018

Prepared for:

Town of Colonie Industrial Development Agency  
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Prepared by:



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## About Camoin Associates

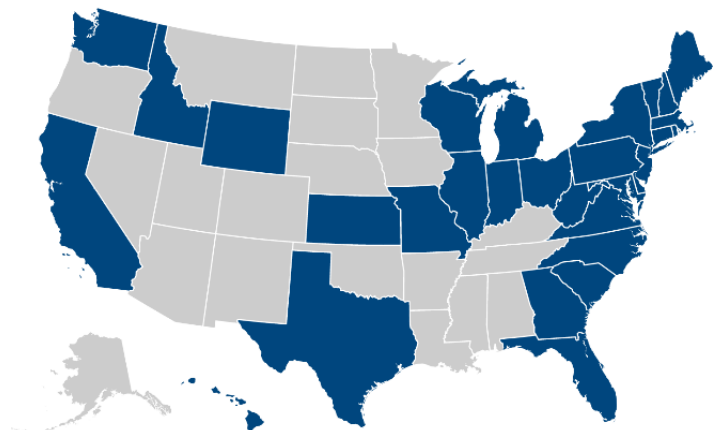
Camoin Associates has provided economic development consulting services to municipalities, economic development agencies, and private enterprises since 1999. We specialize in real estate market analysis to evaluate the feasibility and impacts of proposed projects. Through the services offered, Camoin Associates has had the opportunity to serve EDOs and local and state governments from Maine to Texas; corporations and organizations that include Lowes Home Improvement, FedEx, Volvo (Nova Bus) and the New York Islanders; as well as private developers proposing projects in excess of \$600 million. Our reputation for detailed, place-specific, and accurate analysis has led to projects in thirty states and garnered attention from national media outlets including *Marketplace (NPR)*, *Forbes* magazine, and *The Wall Street Journal*. Additionally, our marketing strategies have helped our clients gain both national and local media coverage for their projects in order to build public support and leverage additional funding. The firm has offices in New York, Maine, Vermont, Massachusetts, and Virginia. To learn more about our experience and projects in all of our service lines, please visit our website at [www.camoinassociates.com](http://www.camoinassociates.com). You can also find us on Twitter @camoinassociate and on Facebook.

## The Project Team

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*Principal*

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*Project Manager*

Anna Winslow  
*Analyst*



# Summary

The Town of Colonie Industrial Development Agency (the "Agency") received applications for financial assistance from Starlite Associates, LLC ("Starlite") and The Ayco Company, L.P. ("Ayco"), (collectively, the "Applicant") for a construction project (the "Project") located at 629 Columbia Street Extension, Town of Colonie, New York (the "Site"). The Project being proposed by the Applicant is to construct a 149,005-square-foot LEED certified office building on the 20-acre Site to be used for a new Ayco corporate headquarters. The Project also involves the acquisition of furniture, fixtures, machinery and equipment necessary to fit-up and operate the office space. The Agency commissioned Camoin Associates to conduct an economic and limited fiscal impact analysis of the Project on the Town of Colonie (the "Town").

This study analyzes the impact that the Project will have on the Town of Colonie economy and on local municipal revenues, net of any economic activity that would occur if the Project were not completed. By 2021, Ayco expects to add 160 new positions within the Town in addition to its existing employment base of 626 jobs. We treat all 786 of these positions as "net new" jobs to the Town resulting from the Project. This study analyzes the impact that the new jobs, retained jobs, and related construction jobs would have on the Town economy and on municipal revenue sources.

The following is a summary of our findings from this study, with details below.

Annual Economic Impact - New Jobs			
	Direct	Indirect	Total Net New
Jobs	160	97	257
Earnings	\$ 17,667,200	\$ 5,496,480	\$ 23,163,680
Sales	\$ 30,070,351	\$ 15,358,473	\$ 45,428,824
Annual Economic Impact - Retained Jobs			
	Direct	Indirect	Total
Jobs	626	379	1,005
Earnings	\$ 55,132,800	\$ 21,504,979	\$ 76,637,779
Sales	\$ 117,650,249	\$ 60,090,024	\$ 177,740,273
Combined Annual Economic Impact			
	Direct	Indirect	Total
Jobs	786	476	1,262
Earnings	\$ 72,800,000	\$ 27,001,459	\$ 99,801,459
Sales	\$ 147,720,600	\$ 75,448,496	\$ 223,169,096

Source: EMSI, Camoin Associates

As shown above, there would be 1,262 ongoing net new jobs in the Town as a result of completion of the Project, including 160 new direct on-site jobs, 626 retained jobs, and 476 indirect jobs. The new annual direct earnings associated with the Project equal nearly \$17.7 million on-site, plus \$55.1 million in earnings from retained jobs, and \$27.0 million in indirect earnings.

Summary of Benefits to Town - Construction Phase	
Construction Phase Jobs	61
Construction Phase On-Site Jobs	43
Construction Phase Earnings	\$ 5,509,712
Construction Phase On-Site Earnings	\$ 4,630,010
One-Time Sales Tax Revenue to County	\$ 27,549
One-Time Sales Tax Revenue to Town	\$ 2,975

The construction of the building would result in approximately 43 net new direct construction jobs, generating over \$4.6 million in direct new earnings on-site and an additional \$880,000 in indirect earnings.

Summary of Benefits to Town - Fiscal Impacts	
Average Annual Sales Tax Revenue to County	\$ 499,007
Of Which, Average Annual Sales Tax Revenue to Town	\$ 53,893
Average Annual Total PILOT Payment	\$ 649,703
Of Which, Average Annual Town PILOT Payment	\$ 68,572
Of Which, Average Annual School District PILOT Payment	\$ 478,091
Of Which, Average Annual County PILOT Payment	\$ 103,040

The Agency is considering the Applicant’s request that the Agency enter into a 10-year PILOT agreement, after which the Applicant would make full payments of taxes. Under this proposed PILOT, the Applicant would pay nearly \$6.5 million over the 10-year PILOT term, of which approximately \$686,000 would go to the Town, approximately \$4,781,000 would go to the school district, and approximately \$1,030,000 would go to the county.

Summary of Costs to Taxing Jurisdictions	
Sales Tax Exemption (State & County)	\$ 2,340,000
Of which, cost to Town*	\$ 126,360
Mortgage Tax Exemption*	\$ 350,000
Loss (Gain) of Property Tax Revenue (Town)	\$ (653,048)
Loss (Gain) of Property Tax Revenue (School District)	\$ (4,557,446)
Loss (Gain) of Property Tax Revenue (County)	\$ (982,301)

Source: Applicant IDA Application, Camoin Associates

\*The IDA may not consider this a "cost."

Through negotiations with the Agency, the Applicant could receive a Mortgage Recording Tax Exemption and a Sales Tax Exemption, both of which are collected by the County. The Town does not receive any proceeds from the Mortgage Tax but does receive a portion of sales tax collected by the County. The Town’s portion of the sales tax exemption would be valued at \$126,360. If we assume that the Project would not occur absent IDA benefits, neither the sales tax exemption nor the mortgage tax exemption is actually a “cost”, since no future revenue stream would exist without the exemptions.

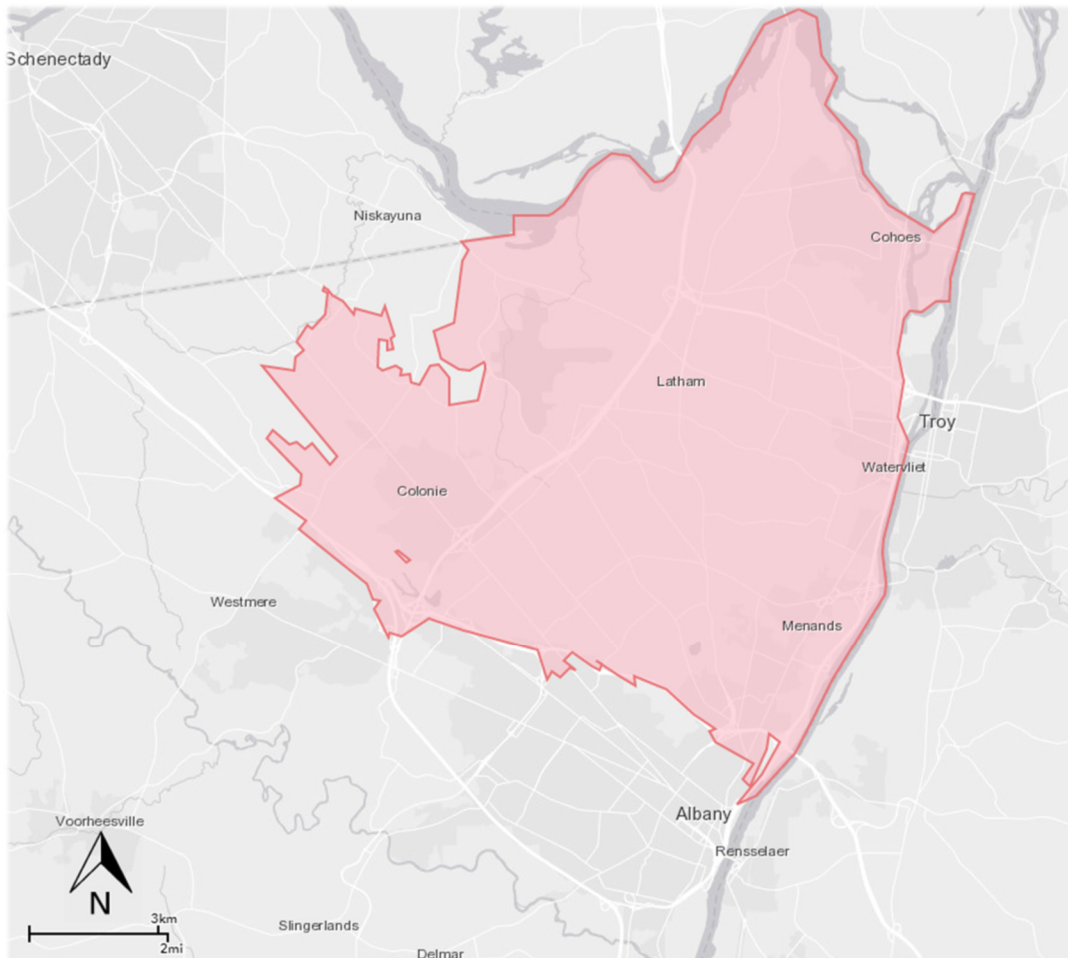
The schedule of payments to be made by the Applicant to the Town under the draft PILOT agreement would be \$653,000 more than the property tax payments generated by the Site for the Town if the Project were not to occur. In other words, the PILOT represents a benefit to the Town averaging \$65,305 per year.

# Economic Impact Analysis

The estimates of direct economic activity generated during the construction phase and building occupation as provided by the Applicant were used as the direct inputs for the economic impact model. Camoin Associates used the input-output model designed by Economic Modeling Specialist, International (EMSI) to calculate total economic impacts. EMSI allows the analyst to input the amount of new direct economic activity (earnings, spending, or jobs) occurring within the Town and uses the direct inputs to estimate the spillover effects that the net new spending or jobs have as these new dollars circulate through the Town of Colonie economy. This is captured in the indirect impacts and is commonly referred to as the “multiplier effect.” See Attachment A for more information on economic impact analysis.

## Study Area

EMSI reports data at the ZIP code, county, Metropolitan Statistical Area (MSA), state, and national levels. Thus, Camoin Associates employed the ZIP code region that most closely resembles the Town of Colonie county subdivision area to conduct the following analysis. The region utilized includes six zip codes: 12047 (Cohoes), 12110 (Latham), 12189 (Watervliet), 12204 (Albany), 12205 (Albany), and 12211 (Albany). See the map below for more detail on the study area.



Source: Esri

## Construction Phase Impacts

The Applicant anticipates that the private-sector investment in the construction phase of the Project (excluding land acquisition) would cost approximately \$55,900,000. All of this cost represents private sector investment generated by the Project. If we assume that 25%<sup>1</sup> of the construction spending would be sourced from within the Town, we can project that there will be \$13,975,000 in net new spending in the Town associated with the construction phase.

Construction Phase Spending	
	Total Construction Costs
Total Construction Cost	\$ 55,900,000
Percent Sourced from Town	25%
Net New Construction Spending	\$ 13,975,000

Source: Applicant, Camoin Associates

Based on \$13,975,000 worth of net new direct spending associated with the construction phase of the Project, we determined that there would be over \$16.9 million in total one-time construction-related spending supporting 61 jobs over the construction period and \$5.5 million in total earnings.

Economic Impact - Construction Phase			
	Direct	Indirect	Total
Jobs	43	18	61
Earnings	\$ 4,630,010	\$ 879,702	\$ 5,509,712
Sales	\$ 13,975,000	\$ 2,974,780	\$ 16,949,780

Source: EMSI, Camoin Associates

## Building Occupation and Operation Impacts

The table below outlines the impact that the jobs associated with the Project would have on the Town of Colonie in terms of direct, indirect, and total employment and wages. At its current locations in the Town of Colonie, Ayco has approximately 626 full-time positions. The Applicant estimates that Ayco will add another 160 full-time positions on-site within three years.

Taking into account the additional indirect and induced economic impacts on the Town of Colonie from just these 160 new positions, total new employment created is estimated at 257 jobs and \$23.2 million in annual earnings. About \$45.4 million in total sales would be generated as a result of the new positions.<sup>2</sup>

Annual Economic Impact - New Jobs			
	Direct	Indirect	Total Net New
Jobs	160	97	257
Earnings*	\$ 17,667,200	\$ 5,496,480	\$ 23,163,680
Sales	\$ 30,070,351	\$ 15,358,473	\$ 45,428,824

Source: EMSI, Camoin Associates

\*2021 Earnings According to Applicant's estimates

<sup>1</sup> Percent of construction and labor costs to be sourced in-town, as estimated by Camoin Associates based on the small nature of the Town's population compared to the Capital District.

<sup>2</sup> The term 'Sales' in this instance is the industry's economic output as measured in gross receipts, both to other industries and to consumers.

The Applicant states that without the Project, 626 existing jobs would be relocated to a facility outside of the Town. Thus, the table below analyzes the negative impact that the potential loss of 626 jobs could have on the Town economy. Taking into account the additional indirect and induced economic impacts on the Town of Colonie from the retained jobs, total employment created by the retained jobs is estimated at 1,005 jobs, about \$76.6 million in annual earnings, and approximately \$177.7 million in total sales.<sup>3</sup>

Annual Economic Impact - Retained Jobs			
	Direct	Indirect	Total
Jobs	626	379	1,005
Earnings*	\$ 55,132,800	\$ 21,504,979	\$ 76,637,779
Sales	\$ 117,650,249	\$ 60,090,024	\$ 177,740,273

Source: EMSI, Camoin Associates

\*Derived from Applicant's estimate of 2021 earnings

The combined economic impact of both new jobs and retained jobs for the Ayco corporate headquarters project is displayed in the table below.

Annual Economic Impact - New Jobs			
	Direct	Indirect	Total Net New
Jobs	160	97	257
Earnings	\$ 17,667,200	\$ 5,496,480	\$ 23,163,680
Sales	\$ 30,070,351	\$ 15,358,473	\$ 45,428,824

Annual Economic Impact - Retained Jobs			
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Combined Annual Economic Impact			
	Direct	Indirect	Total
Jobs	786	476	1,262
Earnings	\$ 72,800,000	\$ 27,001,459	\$ 99,801,459
Sales	\$ 147,720,600	\$ 75,448,496	\$ 223,169,096

Source: EMSI, Camoin Associates

The total annual economic impact would include 1,262 jobs with \$99.8 million in earnings, and \$223 million in sales.

<sup>3</sup> The term 'Sales' in this instance is the industry's economic output as measured in gross receipts, both to other industries and to consumers.

# Fiscal Impact Analysis

In addition to the economic impact of the Project on the local economy (outlined above), there would also be a fiscal impact in terms of annual property tax and sales tax generation. The following section of the analysis outlines the impact of the completion of the Project on the local taxing jurisdictions in terms of the cost and/or benefit to municipal budgets.

## Payment in Lieu of Taxes (PILOT)

The Applicant has applied to the Agency for a Payment In Lieu of Taxes (PILOT) agreement. The Applicant has proposed a 10-year payment schedule based on the current tax rate, taxable value, and assessed value of the Project. Based on the terms of the PILOT as proposed, Camoin Associates calculated the potential payments associated with the PILOT agreement:

Tax Payments With PILOT				
Year	Total PILOT Payment	Town PILOT Payment	School District PILOT Payment	County PILOT Payment
1	\$ 106,509	\$ 11,241	\$ 78,376	\$ 16,892
2	\$ 213,017	\$ 22,483	\$ 156,751	\$ 33,783
3	\$ 319,526	\$ 33,724	\$ 235,127	\$ 50,675
4	\$ 426,035	\$ 44,965	\$ 313,502	\$ 67,567
5	\$ 585,798	\$ 61,827	\$ 431,066	\$ 92,905
6	\$ 745,561	\$ 78,689	\$ 548,629	\$ 118,242
7	\$ 905,323	\$ 95,551	\$ 666,192	\$ 143,580
8	\$ 1,065,086	\$ 112,413	\$ 783,756	\$ 168,917
9	\$ 1,065,086	\$ 112,413	\$ 783,756	\$ 168,917
10	\$ 1,065,086	\$ 112,413	\$ 783,756	\$ 168,917
<b>Total</b>	<b>\$ 6,497,027</b>	<b>\$ 685,719</b>	<b>\$ 4,780,911</b>	<b>\$ 1,030,395</b>
<b>Average</b>	<b>\$ 649,703</b>	<b>\$ 68,572</b>	<b>\$ 478,091</b>	<b>\$ 103,040</b>

Source: Town of Colonie IDA, Camoin Associates



## Tax Policy Comparison

Without financial assistance from the Agency, Camoin Associates assumes that the Applicant would not undertake the Project. Based on the current taxable value of the Site and an assumed annual increase to the tax rate of 2.00%<sup>4</sup> (holding taxable value constant), the following table outlines the estimated tax payments made by the Site owner without the Project.

Tax Payment Without Project				
Year	Total Property Tax Payment Without Project*	Town Payment Without Project*	School District Payment Without Project*	County Payment Without Project*
1	\$ 27,784	\$ 2,984	\$ 20,408	\$ 4,392
2	\$ 28,340	\$ 3,043	\$ 20,816	\$ 4,480
3	\$ 28,907	\$ 3,104	\$ 21,233	\$ 4,570
4	\$ 29,485	\$ 3,166	\$ 21,657	\$ 4,661
5	\$ 30,075	\$ 3,230	\$ 22,091	\$ 4,754
6	\$ 30,676	\$ 3,294	\$ 22,532	\$ 4,849
7	\$ 31,290	\$ 3,360	\$ 22,983	\$ 4,946
8	\$ 31,915	\$ 3,427	\$ 23,443	\$ 5,045
9	\$ 32,554	\$ 3,496	\$ 23,912	\$ 5,146
10	\$ 33,205	\$ 3,566	\$ 24,390	\$ 5,249
<b>Total</b>	<b>\$ 304,230</b>	<b>\$ 32,671</b>	<b>\$ 223,465</b>	<b>\$ 48,094</b>
<b>Average</b>	<b>\$ 30,423</b>	<b>\$ 3,267</b>	<b>\$ 22,347</b>	<b>\$ 4,809</b>

Source: Town of Colonie IDA, Camoin Associates

\* Assumes 2.00% annual increase

<sup>4</sup> The tax rate is increased by 2.00% annually, the maximum inflation factor that can be reasonably anticipated into the future. New York State property tax cap legislation limits tax levy growth to an inflation factor set by the State or 2.00%, whichever is less, the amount by which a government entity may increase its annual tax levy (certain exceptions apply). Although in recent years the inflation factor has been less than 2.00%, using 2.00% for the purposes of comparing future otherwise applicable property tax payments without the Project to the proposed PILOT schedule provides a conservative estimate of the Project's benefit/cost to the Town.

The table below calculates the benefit (or cost) to the Town as the difference between the PILOT payments associated with the Project and the property tax payments without the Project. Over the course of the proposed PILOT term, the average annual collections by the Town would be approximately \$65,305 more in PILOT revenue than property taxes without the Project. The total benefit to the Town of the PILOT agreement over 10 years would be \$653,048. Likewise, the School District and County would benefit by \$4,557,446 and \$982,301, over the 10 years.

Tax Policy Comparison						
Year	A Total Property Tax Payment Without Project	B Total PILOT Payment	C Total Benefit (Cost) of Project (Col. B - Col. A)	D Property Tax Payment to Town Without Project	E PILOT Payment to Town	F Benefit (Cost) To Town of Project (Col. E - Col. D)
1	\$ 27,784	\$ 106,509	\$ 78,725	\$ 2,984	\$ 11,241	\$ 8,257
2	\$ 28,340	\$ 213,017	\$ 184,677	\$ 3,043	\$ 22,483	\$ 19,440
3	\$ 28,907	\$ 319,526	\$ 290,619	\$ 3,104	\$ 33,724	\$ 30,620
4	\$ 29,485	\$ 426,035	\$ 396,550	\$ 3,166	\$ 44,965	\$ 41,799
5	\$ 30,075	\$ 585,798	\$ 555,723	\$ 3,230	\$ 61,827	\$ 58,597
6	\$ 30,676	\$ 745,561	\$ 714,885	\$ 3,294	\$ 78,689	\$ 75,395
7	\$ 31,290	\$ 905,323	\$ 874,033	\$ 3,360	\$ 95,551	\$ 92,191
8	\$ 31,915	\$ 1,065,086	\$ 1,033,171	\$ 3,427	\$ 112,413	\$ 108,986
9	\$ 32,554	\$ 1,065,086	\$ 1,032,532	\$ 3,496	\$ 112,413	\$ 108,917
10	\$ 33,205	\$ 1,065,086	\$ 1,031,881	\$ 3,566	\$ 112,413	\$ 108,847
Total	\$ 304,230	\$ 6,497,027	\$ 6,192,797	\$ 32,671	\$ 685,719	\$ 653,048
Average	\$ 30,423	\$ 649,703	\$ 619,280	\$ 3,267	\$ 68,572	\$ 65,305

Source: Town of Colonie IDA, Camoin Associates

Tax Policy Comparison						
Year	A School District Payment Without Project	B School District PILOT Payment	C Benefit (Cost) of Project to School District (Col. B - Col. A)	D County Payment Without Project	E County PILOT Payment	F Benefit (Cost) of Project To County (Col. E - Col. D)
1	\$ 20,408	\$ 78,376	\$ 57,968	\$ 4,392	\$ 16,892	\$ 12,500
2	\$ 20,816	\$ 156,751	\$ 135,935	\$ 4,480	\$ 33,783	\$ 29,303
3	\$ 21,233	\$ 235,127	\$ 213,894	\$ 4,570	\$ 50,675	\$ 46,105
4	\$ 21,657	\$ 313,502	\$ 291,845	\$ 4,661	\$ 67,567	\$ 62,906
5	\$ 22,091	\$ 431,066	\$ 408,975	\$ 4,754	\$ 92,905	\$ 88,151
6	\$ 22,532	\$ 548,629	\$ 526,097	\$ 4,849	\$ 118,242	\$ 113,393
7	\$ 22,983	\$ 666,192	\$ 643,209	\$ 4,946	\$ 143,580	\$ 138,634
8	\$ 23,443	\$ 783,756	\$ 760,313	\$ 5,045	\$ 168,917	\$ 163,872
9	\$ 23,912	\$ 783,756	\$ 759,844	\$ 5,146	\$ 168,917	\$ 163,771
10	\$ 24,390	\$ 783,756	\$ 759,366	\$ 5,249	\$ 168,917	\$ 163,668
Total	\$ 223,465	\$ 4,780,911	\$ 4,557,446	\$ 48,094	\$ 1,030,395	\$ 982,301
Average	\$ 22,347	\$ 478,091	\$ 455,745	\$ 4,809	\$ 103,040	\$ 98,230

Source: Town of Colonie IDA, Camoin Associates

## Other Exemptions

Through negotiations with the Agency, the Applicant could have access to a total Sales Tax Exemption of up to \$2,340,000 and a Mortgage Recording Tax Exemption of \$350,000.<sup>5</sup> The cost to the Town of the Sales Tax Exemption would be \$126,360.<sup>6</sup>

<sup>5</sup> This Mortgage Tax Exemption will have no impact on the Town as it is collected and retained by the County and State.

<sup>6</sup> As shown below, the Town receives 27% of 40% of the total amount collected by the County.

Summary of Costs to Taxing Jurisdictions	
Sales Tax Exemption (State & County)	\$ 2,340,000
Of which, cost to Town*	\$ 126,360
Mortgage Tax Exemption*	\$ 350,000
Loss (Gain) of Property Tax Revenue (Town)	\$ (653,048)
Loss (Gain) of Property Tax Revenue (School District)	\$ (4,557,446)
Loss (Gain) of Property Tax Revenue (County)	\$ (982,301)

Source: Applicant IDA Application, Camoin Associates

\*The IDA may not consider this a "cost."

## Sales Tax Revenue - Construction Phase

The one-time construction phase earnings described by the total economic impact of the construction work (described in above section) would lead to additional sales tax revenue for Albany County and in turn, sales tax revenue for the Town. It is assumed that 50%<sup>7</sup> of the construction phase earnings would be spent within Albany County and that 25% of those purchases would be taxable. Based on a predetermined formula, 40% of Albany County sales tax revenues are distributed to towns and cities within the County, determined by population. Approximately 27% of these sales tax revenues are assumed to be distributed to the Town of Colonie.<sup>8</sup>

One Time Town Sales Tax Revenue Construction Phase	
Total New Earnings	\$ 5,509,712
Amount Spent in County (50%)	\$ 2,754,856
Amount Taxable (25%)	\$ 688,714
County Sales Tax Rate	4.00%
New County Tax Revenue	\$ 27,549
County Tax Revenue Distributed to Towns (40%)	\$ 11,019
County Sales Tax Distributed to Town (27%)	\$ 2,975

Source: Albany County, Camoin Associates

As a result of the construction phase employment, the Town would receive approximately \$3,000 in new sales tax revenue from the economic impacts of construction.

<sup>7</sup> Analyses conducted in similar geographies suggests that a vast majority of the goods and services that employees would be purchasing are available within the county (food, clothing, vehicles, computers, etc.), but there still will be some outside spending on travel and through purchases made online and in neighboring counties. Based on third-party proprietary retail spending data, 50% is a reasonable assumption for the amount of in-county spending.

(Source: Esri Business Analysis Online Retail Market Profile)

<sup>8</sup> Based on the Town's proportion of the County's population.

## Sales Tax Revenue - Ongoing Building Occupation

The additional earnings described by the total economic impact of the ongoing occupation (see the previous section) would lead to additional sales tax revenue for Albany County. It is assumed that 50% of the earnings would be spent within Albany County and that 25% of those purchases would be taxable. Based on a predetermined formula, 40% of Albany County sales tax revenues is distributed to towns and cities within the County, determined by population. Approximately 27% of these sales tax revenues are assumed to be distributed to the Town of Colonie.

Annual Town Sales Tax Revenue Occupation Phase	
Earnings from New Jobs	\$ 23,163,680
Earnings from Retained Jobs	\$ 76,637,779
Total New Earnings	\$ 99,801,459
Amount Spent in County (50%)	\$ 49,900,730
Amount Taxable (25%)	\$ 12,475,182
County Sales Tax Rate	4.00%
New County Tax Revenue	\$ 499,007
County Tax Revenue Distributed to Towns (40%)	\$ 199,603
County Sales Tax Distributed to Town (27%)	\$ 53,893

Source: Albany County, Camoin Associates

Under these assumptions, the Town would receive approximately \$54,000 each year in new revenue from the economic impacts of the Project.

# Attachment A

## What is economic impact analysis?

The purpose of conducting an economic impact study is to ascertain the total cumulative changes in employment, earnings and output in a given economy due to some initial “change in final demand”. To understand the meaning of “change in final demand”, consider the installation of a new widget manufacturer in Anytown, USA. The widget manufacturer sells \$1 million worth of its widgets per year exclusively to consumers in Canada. Therefore, the annual change in final demand in the United States is \$1 million because dollars are flowing in from outside the United States and are therefore “new” dollars in the economy.

This change in final demand translates into the first round of buying and selling that occurs in an economy. For example, the widget manufacturer must buy its inputs of production (electricity, steel, etc.), must lease or purchase property and pay its workers. This first round is commonly referred to as the “Direct Effects” of the change in final demand and is the basis of additional rounds of buying and selling described below.

To continue this example, the widget manufacturer’s vendors (the supplier of electricity and the supplier of steel) will enjoy additional output (i.e. sales) that will sustain their businesses and cause them to make additional purchases in the economy. The steel producer will need more pig iron and the electric company will purchase additional power from generation entities. In this second round, some of those additional purchases will be made in the US economy and some will “leak out”. What remains will cause a third round (with leakage) and a fourth (and so on) in ever-diminishing rounds of spending. These sets of industry-to-industry purchases are referred to as the “Indirect Effects” of the change in final demand.

Finally, the widget manufacturer has employees who will naturally spend their wages. As with the Indirect Effects, the wages spent will either be for local goods and services or will “leak” out of the economy. The purchases of local goods and services will then stimulate other local economic activity; such effects are referred to as the “Induced Effects” of the change in final demand.

Therefore, the total economic impact resulting from the new widget manufacturer is the initial \$1 million of new money (i.e. Direct Effects) flowing in the US economy, plus the Indirect Effects and the Induced Effects. The ratio between Direct Effects and Total Effects (the sum of Indirect and Induced Effects) is called the “multiplier effect” and is often reported as a dollar-of-impact per dollar-of-change. Therefore, a multiplier of 2.4 means that for every dollar (\$1) of change in final demand, an additional \$1.40 of indirect and induced economic activity occurs for a total of \$2.40.

Key information for the reader to retain is that this type of analysis requires rigorous and careful consideration of the geography selected (i.e. how the “local economy” is defined) and the implications of the geography on the computation of the change in final demand. If this analysis wanted to consider the impact of the widget manufacturer on the entire North American continent, it would have to conclude that the change in final demand is zero and therefore the economic impact is zero. This is because the \$1 million of widgets being purchased by Canadians is not causing total North American demand to increase by \$1 million. Presumably, those Canadian purchasers will have \$1 million less to spend on other items and the effects of additional widget production will be cancelled out by a commensurate reduction in the purchases of other goods and services.

Changes in final demand, and therefore Direct Effects, can occur in a number of circumstances. The above example is easiest to understand: the effect of a manufacturer producing locally but selling globally. If, however, 100% of domestic demand for a good is being met by foreign suppliers (say, DVD players being imported into the US from Korea and Japan), locating a manufacturer of DVD players in the US will cause a change in final demand because all of those dollars currently leaving the US economy will instead remain. A situation can be envisioned whereby a producer is serving both local and foreign demand, and an impact analysis would have to be careful in calculating how many “new” dollars the producer would be causing to occur domestically.

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