THE ECONOMIC IMPACT OF ALLERGAN'S OPERATIONS IN NEW JERSEY

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ECONSULT SOLUTIONS

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EXECUTIVE SUMMARY

As a leading pharmaceutical company that enhances people's wellbeing through innovative and cutting-edge treatments, Allergan is an important economic player in the State of New Jersey. Allergan currently employs more than 1,200 people in New Jersey and generates significant positive economic and fiscal impacts to the area's economy. These benefits are reaped not only by the individual municipalities where Allergan facilities are located, but also across the entire state.

Econsult Solutions, Inc. (ESI) has estimated the economic, employment, tax revenue, and other gains currently generated by Allergan's five major facilities in New Jersey. From a purely economic standpoint, Allergan's current operating expenditures generate significant indirect and induced impacts (see Table ES.1):

- Operations at the five facilities generate an estimated economic impact of **$732 million** each year in New Jersey and support **2,900** direct, indirect, and induced jobs with **$289 million** in annual employee compensation.
- It is estimated that Allergan's operations support **$31 million** in annual tax revenues to the state of New Jersey.
- In **2017**, Allergan will be combining four of its existing New Jersey facilities into a new **431,500 square foot** U.S. Administrative Headquarters in Madison, New Jersey. In addition to relocating **1,019** existing New Jersey employees, Allergan will hire **300** new employees at the facility.
- Operations after the relocation to the new facility will generate a total estimated economic impact of **$894 million** each year and support **3,700** direct, indirect, and induced jobs with **$360 million** in annual employee compensation.
- It is estimated that Allergan's future operations will support **$39 million** in tax revenues to the state of New Jersey annually.

TABLE ES.1 ESTIMATED TOTAL ANNUAL ECONOMIC IMPACT FROM ALLERGAN OPERATIONS IN NEW JERSEY ($ MILLION)

IMPACT TYPES (Direct, Induced, and Indirect)	CURRENT OPERATIONS	FUTURE OPERATIONS
Economic Impact	$732	$894
Employment Supported (FTE)	2,900	3,700
Employee Compensation	$289	$360
Tax Revenues	$31	$39

The Madison consolidation project will involve 400 direct construction jobs and $106.5 million of non-recurring expenditures, which will have a one-time economic impact in the State of New Jersey. The capital spending and other costs associated with the Madison consolidation project will potentially generate $176 million in total economic impact and support 750 direct, indirect, and induced jobs.

Further, the community and social impact of Allergan goes well beyond its direct and indirect economic footprint. Since 2012, the Allergan Foundation has contributed nearly $900,000 in cash contributions to a wide range of nonprofit organizations in New Jersey, with more than $720,000 in contributions in the past two years.

1.0 INTRODUCTION

1.1 PURPOSE OF REPORT

The purpose of this report is to quantify the economic impact of certain U.S. operations of Allergan within New Jersey, on expenditures, employment, earnings produced, as well as the fiscal impact of the company in the form of tax revenues generated to the state government. Throughout the report, these economic and fiscal impacts include both Allergan's direct contribution and the additional spillover effects generated throughout New Jersey's economy.

Section 2 of the report will describe the direct spending, the number of jobs supported, and the total (direct and indirect) impacts of Allergan's current operations in New Jersey. This section will also report on the tax revenues generated by Allergan (sales and use tax, business tax) and the income tax provided by Allergan employees.

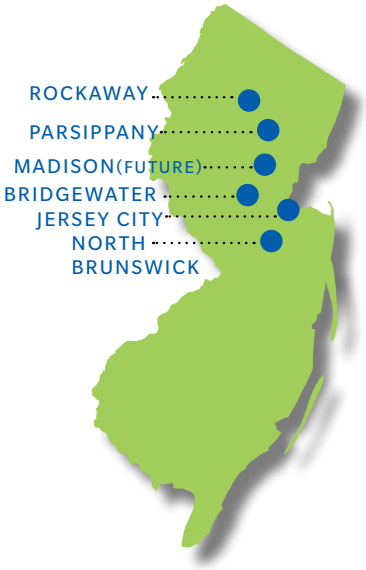
Section 3 of the report will quantify the overall impact of the expansion to Allergan's new U.S. Administrative Headquarters in Madison, New Jersey. The relocation to Madison will generate one-time economic impacts from construction and will increase Allergan's annual economic impact in New Jersey through its expanded operations and adding 300 new employees.

It is important to note that the economic impact of Allergan's operations can be expressed in the number of jobs supported and taxes generated, and also in terms of charitable contributions and community programs. Section 4 discusses the additional benefits to New Jersey from Allergan's philanthropic efforts and health education programs.

1.2 OVERVIEW OF ALLERGAN IN NEW JERSEY

Allergan manufacturers, develops, and markets branded pharmaceutical products in seven key therapeutic areas that include the central nervous system, eye care, medical aesthetics and dermatology, gastroenterology, women's health, urology, and anti-infectives. After acquiring Allergan, Inc. in 2015, Actavis plc established the combined company under the new name of Allergan plc. In August 2016, Allergan completed the sale of its generics business to Teva. Allergan has operations across 100 countries, including 11 manufacturing sites and five research and development (R&D) centers around the world.

Allergan's global headquarters are in Dublin, Ireland, with its U.S. Administrative Headquarters in Parsippany, New Jersey since 2011. In New Jersey, Allergan is a valued corporate citizen that provides numerous benefits to the state and its residents. Allergan currently provides jobs for more than 1,200 people in five different facilities throughout the state.



In 2017, Allergan plans to reconstruct an existing 431,500 square foot facility in Madison, New Jersey, which will serve as its new U.S. Administrative Headquarters. New Jersey, which will serve as its new U.S. Administrative Headquarters. The Madison consolidation project will call for 400 construction jobs, involve $106.5 million in capital investment, and will create a one-time economic impact both locally and across the state.

In addition, the one-time construction impact of the new facility will generate further economic impact annually for the region. The new facility will house over 1,000 of their current New Jersey employees and Allergan will expand by hiring 300 additional employees. This expansion of operations in New Jersey will generate an ongoing economic impact above current annual impacts. Following consolidation of four existing facilities and hiring 300 additional employees at a new facility in Madison, New Jersey, Allergan will be providing jobs for more than 1,500 people throughout the state.

2.0 CURRENT ECONOMIC IMPACT

2.1 INPUT-OUTPUT MODELING

The following economic impact estimates for Allergan's operations in New Jersey are generated using IMPLAN, an input/output modeling software. IMPLAN is an industry standard approach to assessing the economic and job creation impacts of economic development projects, the creation of new businesses, and public policy changes. IMPLAN translates an initial amount of direct economic activity into the total amount of economic activity that it supports, which includes multiple waves of spillover impacts generated by spending on goods and services and by spending of labor income by employees. Direct economic activity generated by Allergan's operations translates into additional economic activity within New Jersey:

- First, some proportion of Allergan's direct expenditures that goes to the purchase of goods and services is circulated back into an economy when those goods and services are purchased from local vendors. This represents the "indirect effect," and reflects that local purchases of goods and services support local vendors, who in turn require additional purchasing with their own set of vendors.

- Second, the salaries Allergan pays get circulated back into an economy when its employees spend their earnings on various goods and services. This represents the "induced effect," and reflects that some of those goods and services will be purchased from local vendors, further stimulating a local economy.

The total economic impact is the sum of its own direct economic footprint and the indirect and induced effects generated by that direct footprint.



Future Madison Office

2.2 DIRECT OPERATION EXPENDITURES

In evaluating Allergan's current New Jersey economic impact, the scope of this report focuses on five current New Jersey Allergan sites of importance. ESI relied on the employment and operating details of these five sites provided by Allergan to determine the economic impact of Allergan's operations in New Jersey. In aggregate, these facilities directly employ over 1,200 people with a total annual payroll of nearly $194 million.

2.3 ANNUAL ECONOMIC IMPACT

Allergan's current direct output is approximately $408 million each year. This includes salaries paid to its employees as well as other direct operating expenditures such as lease payments, which are approximately $19 million for 2016. The total economic impact includes the direct spending made for each site, the ripple effect of indirect spending from the purchase of goods and services from vendors in New Jersey, and induced spending by the employees in the local economy. The operations of Allergan's facilities in New Jersey currently generate an estimated economic impact $732 million each year and support approximately 2,900 total jobs and $289 million in employee compensation in New Jersey (see Table 2.1).

TABLE 2.1 ESTIMATED ANNUAL ECONOMIC IMPACT FROM ALLERGAN OPERATIONS IN NEW JERSEY($ MILLION)

IMPACT TYPES	STATE OF NEW JERSEY
Direct Output	$408
Indirect & Induced Output	$324
Total Impact	$732
Employment Supported (FTE)	2,900
Employee Compensation	$289

Source: Allergan (2016), IMPLAN (2013), Econsult Solutions (2016)

2.4 FISCAL IMPACT FROM OPERATIONS

Annually, Allergan's operations generate state taxes both directly through their own spending and indirectly via spending by vendors and employees. Each year, it is estimated that Allergan generates $30.9 million in tax revenues to the state, the majority of which is direct income taxes paid by Allergan employees (approximately $18 million annually). The remainder is a combination of indirect and induced income taxes, sales and use tax, and business taxes (see Table 2.2). These sites also pay $1.6 million in real estate taxes each year, which generates revenue for local governments, public schools, and the State of New Jersey.

TABLE 2.2 POTENTIAL FISCAL IMPACT FROM THE OPERATIONS OF ALLERGAN FACILITIES IN NEW JERSEY ($MILLION)

TAX TYPE	STATE OF NEW JERSEY
Personal Income	$21.5
Sales & Use	$7.4
Business	$2.0
Total	**$30.9**

Source: Econsult Solutions (2016), IMPLAN (2014), New Jersey State CAFR (2013), Federal Reserve Bank of St. Louis (2011)



3.0 FUTURE ECONOMIC IMPACT

3.1 MADISON, NEW JERSEY CONSOLIDATION

In 2017, Allergan will be combining four of its existing New Jersey facilities into a new 431,500 square foot facility in Madison, New Jersey. The Madison consolidation project will involve 400 construction jobs and $106.5 million of non-recurring expenditures, the majority of which will benefit the New Jersey economy.

3.2 ONE-TIME ECONOMIC IMPACT FROM CONSTRUCTION

Capital spending creates a one-time economic impact on the local economy when local contractors and additional vendors are procured. This local direct effect of capital spending results in additional indirect and induced spending that increases its total economic impact on the New Jersey economy. There can be additional one-time economic impacts when local engineering, architectural, technology, network, and security services are used, and from local purchases of fixtures and equipment. It is estimated that the construction project will generate $176 million in economic impact and support 750 jobs with $52 million in earnings in New Jersey (see Table 3.1).

TABLE 3.1 ONE-TIME ECONOMIC IMPACT FROM CAPITAL INVESTMENT IN NEW JERSEY ($MILLION)

IMPACT TYPES	STATE OF NEW JERSEY
Direct Output	$107
Indirect & Induced Output	$69
Total Impact	$176
Employment Supported (FTE)	750
Employee Compensation	$52

Source: Allergan (2016), ESI (2016), IMPLAN (2013)

The New Jersey Economic Development Authority (NJEDA) on August 9, 2016, agreed to provide Allergan Grow NJ tax credits of up to $58.2 million over 10 years based on the expected creation of 300 new, high-paying jobs, the retention of more than 1,000 jobs at risk of leaving the state, and private investment of more than $106.5 million.



3.3 DIRECT FUTURE OPERATION'S EXPENDITURES

After construction is complete in Madison, New Jersey, 300 new employees will join the relocated employees from the Jersey City, Bridgewater, Parsippany, and Rockaway facilities. The new facility in Madison will have more than 1,500 employees (see Table 3.2).

TABLE 3.2 FUTURE ANNUAL OPERATIONS OF ALLERGAN FACILITIES IN NEW JERSEY ($ MILLION)

LOCATION OF FACILITY	EMPLOYMENT	AGGREGATE ANNUAL PAYROLL ($M)
Madison, NJ	1,319	$206.0
North Brunswick, NJ	22	$2.6
Additional Employees	4	$0.3
Field Employees	178	$17.4
New Jersey Total	**1,523**	**$226.3**

Source: Allergan (2016)

3.4 FUTURE ANNUAL ECONOMIC IMPACT

Following the 2017 consolidation in Madison, New Jersey, and the hiring of 300 additional employees, Allergan's direct output will be approximately $536 million each year. This includes salaries paid to its employees as well as other direct operating expenditures. The total economic impact includes the direct spending, the ripple effect of indirect spending from the purchase of goods and services from vendors in New Jersey, and induced spending by the employees in the local economy. The operations of Allergan's facilities in New Jersey will generate an estimated economic impact of $894 million each year and support approximately 3,700 jobs with $360 million in employee compensation in New Jersey (see Table 3.3).

TABLE 3.3 ESTIMATED FUTURE ANNUAL ECONOMIC IMPACT FROM ALLERGAN OPERATIONS IN NEW JERSEY ($ MILLION)

IMPACT TYPES	STATE OF NEW JERSEY
Direct Output	$536
Indirect & Induced Output	$358
Total Impact	$894
Employment Supported (FTE)	3,700
Employee Compensation	$360

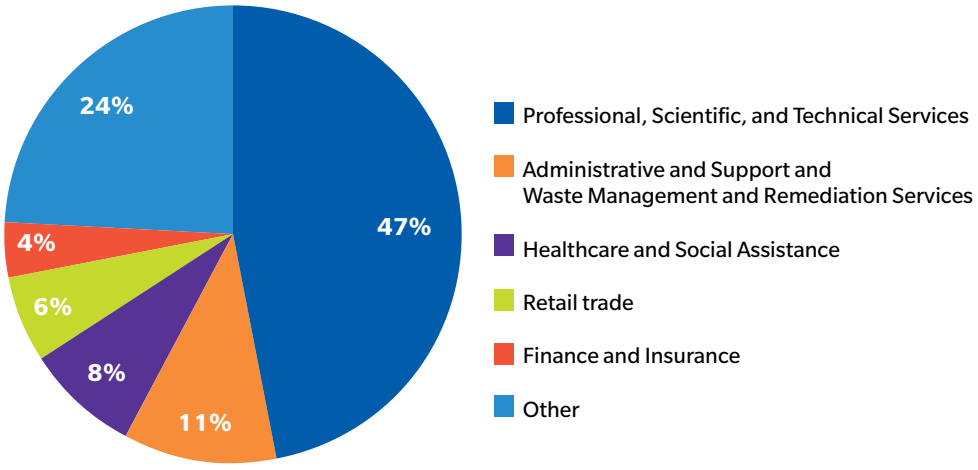
Source: Allergan (2016), IMPLAN (2013), Econsult Solutions (2016)

3.5 DISTRIBUTION OF JOB IMPACTS FROM FUTURE OPERATIONS

IMPLAN estimates jobs as total jobs, accounting for both full- and part-time jobs. As such, the employment totals generated by IMPLAN were converted to full-time equivalent jobs, specific to each industry. The jobs estimated from IMPLAN include both direct employees who work at Allergan, and indirect/induced supported jobs. The latter are the local businesses from which Allergan purchases materials or services or local businesses where the employees spend their wages.

As previously mentioned, Allergan's future operations will support approximately 3,700 direct, indirect, and induced jobs in several industries across the region following the Madison, New Jersey consolidation. Although professional, scientific, and technical service jobs account for 47 percent of all jobs supported by Allergan, many other industries are impacted as well, such as the administrative and support industry, the waste management and remediation service industry, and the health care service industry (see Figure 3.1).

FIGURE 3.1 POTENTIAL EMPLOYMENT IMPACT FROM OPERATIONS IN NEW JERSEY



Source: Allergan (2016), IMPLAN (2013), Econsult Solutions (2016)

3.6 FISCAL IMPACT FROM FUTURE OPERATIONS

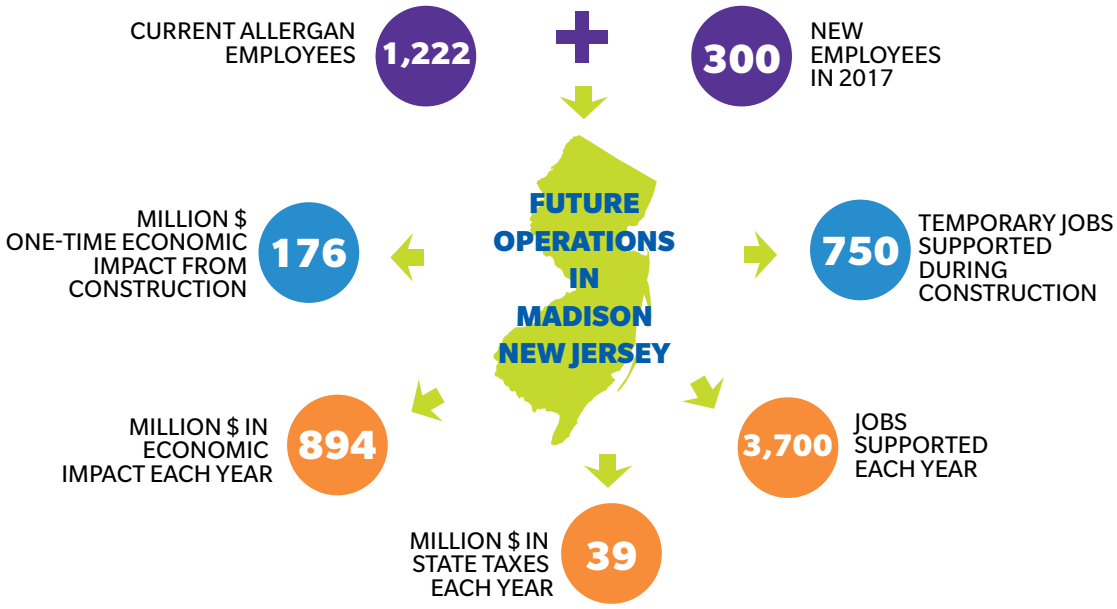
After Allergan's facilities consolidation in Madison, New Jersey, the fiscal impacts generated by Allergan will be even greater. Each year, it is estimated that Allergan will generate $39 million in tax revenues to the state, the majority of which is direct income taxes paid by Allergan employees (approximately $22 million annually). Approximately 57 percent is generated from the personal income tax of Allergan employees, while the rest is a combination of indirect and induced income taxes, sales and use tax, and business taxes (see Table 3.4, Figure 3.2).

TABLE 3.4 POTENTIAL FUTURE FISCAL IMPACT FROM THE OPERATIONS OF ALLERGAN FACILITIES IN NEW JERSEY ($MILLION)

TAX TYPES	STATE OF NEW JERSEY
Personal Income	$26.8
Sales & Use	$9.6
Business	$2.6
Total	**$39.0**

Source: Econsult Solutions (2016), IMPLAN (2014), New Jersey State CAFR (2013), Federal Reserve Bank of St. Louis (2011)

FIGURE 3.2 TOTAL ESTIMATED FUTURE ECONOMIC IMPACT OF ALLERGAN'S NEW JERSEY OPERATIONS



Source: Piktochart (2016), Econsult Solutions (2016), Allergan (2016)

4.0 LOCAL IMPACT

Allergan is an integral corporate citizen that contributes to the health and wellness of New Jersey residents. To reach a wide audience, Allergan has supported a number of community and educational programs. Additionally, Allergan has national employee participation in four walks to benefit the American Foundation for Suicide Prevention; the Cystic Fibrosis Foundation; the Foundation Fighting Blindness, and the National Alliance on Mental Illness.

4.1 CIVIC LEADERSHIP PROVIDED BY EXECUTIVE TEAM

An important and often overlooked, benefit of having a corporation located within a jurisdiction is the availability of the firm and its team members to contribute to various civic and charitable causes. In this regard, Allergan is a positive contributor to communities throughout New Jersey.





Allergan has an extensive grant management system, which focuses on four areas of financial support: 1) medical education grants, 2) awareness and advocacy for related healthcare issues, 3) event sponsorship, and 4) support for general nonprofit causes by the corporation and The Allergan Foundation.[1] Since 2012, the Allergan Foundation has contributed nearly $900,000 in cash contributions to a wide range of non-profit organizations in New Jersey; more than $720,000 of that going out in just the past two years. Below are only some of the organizations that have received support from The Allergan Foundation:

- Alzheimer's Disease and Related Disorders - NJ
- CASA of Morris and Sussex Counties
- Community Hope, Inc.
- Drew University - Governor's School of the Sciences
- Hudson County Court Appointed Special Advocates
- Jersey Battered Women's Service
- Jersey City Summer Internship Program
- Liberty Science Center
- Mental Health Assn. of Morris County
- Metro YMCA of the Oranges
- Printmaking Center of New Jersey
- Somerset County Business Partnership Foundation
- Somerset Health Care Foundation
- The Seeing Eye
- United Way - Hudson County Chapter
- United Way - Northern New Jersey

5.0 CONCLUSION

Allergan's direct contribution to the economy and the additional spillover effects generated throughout New Jersey's economy are both quantitative and qualitative. Currently, its operations within the state directly support more than 1,200 personnel with a total annual payroll of nearly $194 million. Altogether, Allergan's current annual economic impact is an estimated $732 million in expenditures, supporting 2,900 total jobs and $31 million in taxes from the corporation, its employees, and the additional spillover impacts.

Following the Madison, New Jersey consolidation project and the hiring of 300 additional employees, Allergan's presence within the state will directly support more than 1,500 personnel with a total annual payroll of $226 million. Allergan's potential total economic impact after the Madison consolidation project is $894 million in expenditures, supporting 3,700 jobs and $39 million in taxes from the corporation, its employees, and the additional spillover impacts.

Allergan's presence in New Jersey is characterized by more than its economic activity. It is a company that prioritizes its corporate social responsibilities and one that has deep connections within the state of New Jersey. Through philanthropic giving as well as community and education programs, Allergan has become a part of the fabric of the community.

APPENDIX A INPUT-OUTPUT METHODOLOGY

A.1 Overview

Economic impact estimates are generated by utilizing input-output models to translate an initial amount of direct economic activity into the total amount of economic activity that it supports, which includes multiple waves of spillover impacts generated by spending on goods and services and by spending of labor income by employees. This section summarizes the methodologies and tools used to construct, use, and interpret the input-output models needed to estimate this project's economic impact.

A.2 Input-Output Model Theory

In an inter-connected economy, every dollar spent generates two spillover impacts:

- First, some amount of the proportion of that expenditure that goes to the purchase of goods and services gets circulated back into an economy when those goods and services are purchased from local vendors. This represents what is called the "indirect effect," and reflects the fact that local purchases of goods and services support local vendors, who in turn require additional purchasing with their own set of vendors.

- Second, some amount of the proportion of that expenditure that goes to labor income gets circulated back into the economy when those employees spend some of their earnings on various goods and services. This represents what is called the "induced effect," and reflects the fact that some of those goods and services will be purchased from local vendors, further stimulating a local economy.

The role of input-output models is to determine the linkages across industries in order to model out the magnitude and composition of spillover impact to all industries of a dollar spent in any one industry. Thus, the total economic impact is the sum of its own direct economic footprint and the indirect and induced effects generated by that direct footprint.

A.3 Input-Output Model Mechanics

To model the impacts resulting from the direct expenditures Econsult Solutions, Inc. developed a customized economic impact model using the IMPLAN input/output modeling system. IMPLAN represents an industry standard approach to assessing the economic and job creation impacts of economic development projects, the creation of new businesses, and public policy changes.

IMPLAN is one of several popular choices for regional input-output modeling. Each system has its own nuances in establishing proper location coefficients. IMPLAN uses a location quotient to determine its regional purchase coefficient (RPC). This represents the proportion of demand for a good that is filled locally; this assessment helps determine the multiplier for the localized region. Additionally, IMPLAN also accounts for inter-institutional transfers (e.g., firms to households, households to the government) through its Social Account Matrix (SAM) multipliers. IMPLAN takes the multipliers and divides them into 440 industry categories in accordance with the North American Industrial Classification System (NAICS) codes.

These economic impacts in turn produce one-time or ongoing increases in various tax bases, which yield temporary or permanent increases in various tax revenues. To estimate these increases, Econsult Solutions, Inc. created a fiscal impact model to translate total economic impacts into their commensurate tax revenue gains.

A.4 Employment and Wages Supported

IMPLAN estimates the direct jobs employed by the project or activity being modeled. These estimated direct jobs will be displayed in the report unless the number of jobs is known beforehand by the project's owner, and if provided, will be noted in the body of the report. The project/activity expenditures also support induced and indirect jobs. These are jobs not directly employed by the project, but instead are employees who work for the project's vendors and employees who work at businesses frequented by those employees directly employed by the project. We report the total jobs supported by the project, therefore all direct, indirect, and induced jobs. These jobs are a mix of full-time and part-time jobs.

IMPLAN generates job estimates based on the term job-years, or how many jobs will be supported each year. For instance, if a construction project takes two years, and IMPLAN estimates there are 100 employees, or more correctly "job-years" supported, over two years, that represents 50 jobs each year. The 50 jobs represent the annualized number of jobs supported by the construction project. The job can be the same each year such as the coffee barista serving the directly employed construction workers or different if in the first year of the project a welder is needed and in the second year of the project an electrician is required.

The total income is for all direct, indirect and induced jobs. It includes proprietor income, wages, and all benefits. Since many projects/events require the employment sourced from multiple industries, the average wages paid will be different per industry. Therefore, it is not correct to divide the total labor income and divide it by the total job-years to derive an average employee compensation estimate.

APPENDIX B ABOUT ECONSULT SOLUTIONS, INC.

This report was produced by Econsult Solutions, Inc. ("ESI"). ESI is a Philadelphia-based economic consulting firm that provides businesses and public policy makers with economic consulting services in urban economics, real estate economics, transportation, public infrastructure, development, public policy and finance, community and neighborhood development and planning, as well as expert witness services for litigation support. Its principals are nationally recognized experts in urban development, real estate, government and public policy, planning, transportation, non-profit management, business strategy and administration, as well as litigation and commercial damages. Staff members have outstanding professional and academic credentials, including active positions at the collegiate level, vast experience at the highest levels of the public policy process and extensive consulting experience.