HUDSON HOLDINGS

Economic Impact Analysis of the Redevelopment of 925 Euclid Avenue

Prepared by:

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Table of Contents

About this Report

Silverlode Consulting Corp. was engaged by Hudson Holdings ("Hudson" or the "Company") to analyze the economic and fiscal impacts of the Company's proposed redevelopment of the former Huntington Bank building (the "Project"), which is located at 925 Euclid Avenue in the heart of downtown Cleveland. This analysis was prepared to support the Company's application as a Catalytic Project for Ohio Historic Preservation Tax Credits ("OHPTC") in Round 15 of the OHPTC Program.

The proposed Project is the redevelopment of the over 1.3 million square foot historic building as a mix of residential, retail, office, hotel, and other uses. The Project is anticipated to involve an investment of nearly $280 million in acquisition, construction and other development costs. The Project is described more fully within the OHPTC application.

Economic and fiscal impacts ("Impacts"), measured in terms of employment, labor income, output, and taxes were estimated primarily using the IMPLAN input-output model using 2013 data, which is the most current data available. All impacts were adjusted to 2015 dollars. Given that the OHPTC program is a state-level program, impacts are presented at the level of the State of Ohio economy. Please see the final section of this report for detailed information about the IMPLAN methodology.

This report considers the one-time economic and fiscal impacts resulting from the construction of the Project ("Construction Period Impacts of the Project"), as well as the permanent economic and fiscal impacts resulting from the ongoing activities associated with the Project ("Permanent Impacts of the Project"). Since the Catalytic Project track of the OHPTC Program requires analysis of how the Project will foster economic development within a 2,500 foot radius of the Project building, the impacts of construction ("Construction Period Impacts of Catalyzed Projects") and ongoing activities ("Permanent Impacts of Catalyzed Projects") associated with the redevelopment of properties within the 2,500 foot radius were analyzed as well.

The impacts of the four components that are analyzed -- Construction Period Impacts of the Project, Permanent Impacts of the Project, Construction Period Impacts of Catalyzed Projects, and Permanent Impacts of Catalyzed Projects are presented individually and separately. Because the development timeframes for catalyzed projects is uncertain, it is impossible to predict with any accuracy, how impacts would fall into specific years. Therefore, no attempt was made to do so. While permanent impacts of both the Project and Catalyzed Projects are presented in annual terms, the construction period impacts of both are presented in total, meaning that output, labor income, and taxes represent the total generated over the entire construction period. For this reason, Permanent and Construction impacts cannot simply be summed to reach a total impact for the four components.

Silverlode Consulting collaborated with Project Management Consultants, Sandvick Architects, Newmark Grubb Knight Frank, and representatives of the Company to gather necessary data for both the Project and the Catalyzed Projects and to establish assumptions where needed.

The table below provides a quick reference of definitions for the items included in the economic impact summary tables that follow. Additional information about terms and the methodology used in this study can be found in the Glossary and Methodology section near the end of the report.

	Direct	Indirect/Induced
Jobs	Individuals directly involved in the redevelopment Project or working at the building upon completion of the redevelopment.	Multiplier-effect jobs at the industry level, such as suppliers, service providers, etc. (indirect) and household activity level such as direct and indirect jobs purchasing goods and/or services for personal or household consumption (induced).
Earnings or Labor Income	Wages and benefits paid to direct jobs.	Total wages and benefits associated with the indirect/induced jobs.
Taxes	An estimate of all taxes and fees collected by federal, state, county, municipal or other government entities, including, but not limited to property taxes, income taxes, sales, taxes, license and registration fees, and other fees.	
Output	The total value of goods and services produced directly in support of the Project's redevelopment or generated by permanent operations.	The total value of goods and services produced by all other entities due to the presence and activities of the Project.

Economic Impacts of the Project

Construction Period Impacts of the Project

The Project is anticipated to involve an investment of approximately $277 million in construction and other costs and be completed over a multi-year Construction Period. During the Construction Period, the Project is anticipated to create a total of approximately 3,400 jobs, $179 million of total labor income, $536 million of total economic activity (output), and $56 million of taxes and other government fees. These estimates are summarized in the figure to the right and detailed in the table below. Please note that these estimates represent totals for the Construction Period, not annual impacts.

Estimated Construction Period Impacts of the Project

- 3,400 jobs
- $179 million of labor income
- Nearly $56 million in total taxes ($21 million State & Local and $35 million federal)
- $536 million in total economic output

During the Construction Period, most of the new employment, and thus earnings, would be in the construction industry sector. Other industries likely to be significantly impacted include Retail Trade, Accommodation and Food Service, and Professional, Scientific, and Technical Services.

925 Euclid Estimated Construction Period Impacts

Impact Type	Employment	Labor Income	Output	Taxes
Direct Effect	1,500	$93,860,000	$277,321,000	$20,167,000
Indirect Effect	1,000	$43,575,000	$135,842,000	$19,442,000
Induced Effect	900	$41,695,000	$123,133,000	$16,369,000
Total Effect	3,400	$179,130,000	$536,296,000	$55,978,000

Permanent Impacts of the Project

Estimated Permanent Impacts of the Project

- 4,000 jobs
- $219 million of labor income
- $80 million in total taxes ($30 million State & Local and $50 million federal)
- $661 million in total economic output

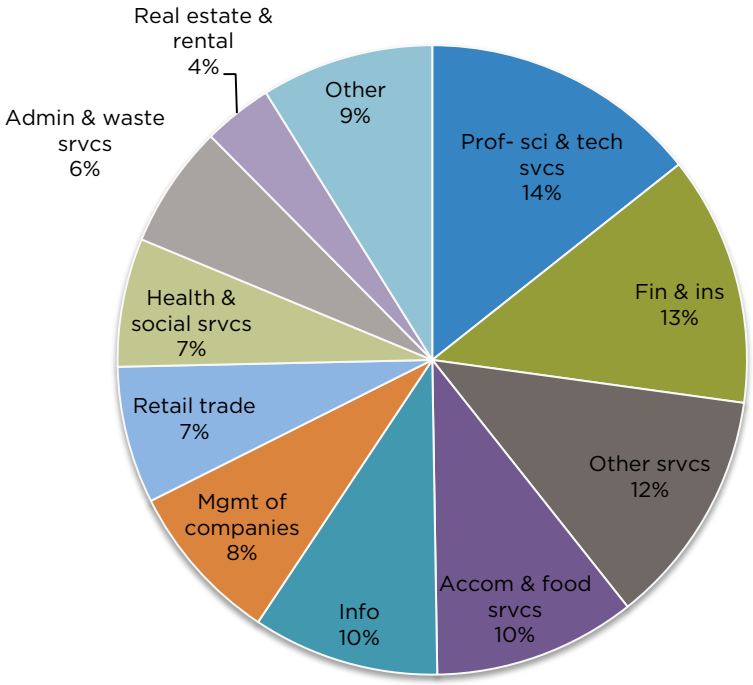
Upon completion of the redevelopment project, the building will continue to have a significant impact on the State's economy. This impact will come in the form of activities to support the maintenance and operation of the building itself, as well as from businesses that will locate operations in the building. Once the building reaches full occupancy, these ongoing activities are anticipated to support approximately 4,000 total jobs, and generate $219 million of total labor income, $661 million of total economic activity, and $80 million of total taxes and other government fees in the State of Ohio annually. These estimates are summarized in the figure to the left and detailed in the table below.

Estimated Annual Permanent Impacts

Impact Type	Employment	Labor Income	Output	Taxes
Direct Effect	1,800	$116,704,000	$348,739,000	$40,730,000
Indirect Effect	1,000	$51,639,000	$161,149,000	$18,760,000
Induced Effect	1,200	$51,111,000	$150,986,000	$20,069,000
Total Effect	4,000	$219,454,000	$660,874,000	$79,559,000

The chart that follows provides a detailed breakdown of estimated total permanent jobs by industry sector, including direct, indirect and induced jobs.

Estimated Distribution of Total Permanent Jobs, by Industry Sector



Economic Impacts of Catalyzed Projects

Catalyzed Projects

The Project is located on the corner of East 9th Street and Euclid Avenue, which is one of the most prominent and central intersections in downtown Cleveland. As a result, much of Cleveland's central business district lies within a 2,500 foot radius of the property, which is the study area designated by the OHPTC Program. Based on the Project's location, prominence, size and scope, the Project will likely have a tremendous positive impact on the redevelopment of other properties within the 2,500 foot radius. Just as recent development projects in the immediate area, which include transit improvements along Euclid Avenue, significant redevelopment of properties along Euclid Avenue, and the Cuyahoga County Headquarters/9 Project have been impacted and enabled both by one another and by prior developments, this project will similarly foster additional development in the immediate and wider areas.

The following map and accompanying table identify properties positioned for additional development that would likely be directly and positively affected by the Project. The potential catalytic impacts of the Project are dramatic, including more than 3 million square feet of total new and/or renovated office and retail space, over 2,500 apartment units, more than 3,500 parking spaces, and hundreds of hotel rooms.

Silverlode Consulting collaborated with Project Management Consultants, Sandvick Architects, Newmark Grubb Knight Frank, and representatives of the Company to identify properties that would be catalyzed by the Project and to gather necessary data and to establish assumptions where needed.

To estimate the direct construction and permanent impacts associated with the Catalyzed Projects, the team described above carefully reviewed data about all of the parcels within the 2500 foot radius to identify those buildings and/or sites likely to be positively affected by the Project. For each such property, likely development parameters were established, including type of use, number of square feet of new or renovated buildings, number of hotel rooms, residential units, and/or parking spaces.

Using accepted industry benchmarks, we then estimated direct impacts such as the number of jobs and development costs. For office space, we assumed a mix of office uses consistent with the area today including industry sectors such as Finance and Insurance, Information Services, Management of Companies, etc. For hotel space, industry benchmarks of jobs per unit were applied. For parking facilities, projections of revenue were used to estimate direct jobs based on industry output per worker. These direct impacts were then modeled using IMPLAN to calculate the related indirect and induced impacts of both construction and permanent activity.

Properties Anticipated to have Development Catalyzed by the Project

Map Label	Property	Address	Project Type	Estimated Development Cost
1	Greyhound Station/Parking Lot	1465 Chester Ave	Mixed use	$110,000,000
2	Halle Building	1228 Euclid Ave	Mixed use	$80,000,000
3	Zaremba parking lots	1435 Superior Ave	Mixed use	$25,000,000
4	Chester|SE Corner lot	1815 E 13th ST	Mixed use	$90,000,000
5	Reserve Square	1701 E 12th St	Mixed use	$5,000,000
6	Asher Lots	1417 St Clair Ave NE	Mixed use	$200,000,000
7	Charter One	1215 Superior Ave E	Office	$1,000,000
8	Land on Payne Ave	1506 Superior Ave	Mixed use	$40,000,000
9	Tower at Erieview	1301 E 9th St	Office	$175,000,000
10	Sterling Building	1255 Euclid Ave	Mixed use	$14,000,000
11	55-65-75 Erieview	65 Bethel Ct	Mixed use	$15,000,000
12	Superior Title Building	1261 Superior Ave	Mixed use	$5,000,000
13	45 Erieview	45 Bethel Ct	Mixed use	$25,000,000
14	Land on St. Clair Ave	1325 Saint Clair Ave	Office	$87,500,000
15	John Hartness Brown Building	1001 Euclid Ave	Mixed use	$75,000,000
16	Coyne Parking Lots – A	1535 St Clair Ave	Mixed use	$2,000,000
18	Coyne Parking Lots – G	1436 E 14th St	Mixed use	$2,000,000
19	Coyne Parking Lots – H	1524 Lakeside Ave	Mixed use	$2,000,000
20	Coyne Parking Lots – I	1600 Hamilton Ave	Mixed use	$2,000,000
21	Coyne Parking Lots – J	1438 St Clair Ave	Mixed use	$2,000,000
22	Cleveland Athletic Club	1148 Euclid Ave	Mixed use	$60,000,000
23	New York Spaghetti House	2173 E 9th St	Mixed use	$8,000,000
24	Halle Garage	1212 Huron Rd E	Mixed use	$9,000,000
25	1020 Bolivar Road	1020 Bolivar Rd	Mixed use	$6,000,000
26	Playhouse Square Parking lot	1604 Euclid Ave	Retail/Residential	$85,000,000
27	Land on East 9th Street	2172 E 9th St	Mixed use	$15,000,000
28	515 Euclid Ave	515 Euclid Ave	Residential	$47,500,000
29	NuCleus	501 High Ave	Mixed use	$510,000,000
30	Radisson Building	651 Huron Rd E	Mixed use	$19,000,000
31	Jacobs land	See Map	Office	$150,000,000
32	Gateway cluster	413 Huron Rd	Mixed use	$20,000,000
33	May Company	158 Euclid Ave	Residential	$145,000,000
34	75 Public Square	75 Public Square	Residential	$40,000,000

Construction Period Impacts of Catalyzed Projects

As a result of its size, scope, and location at the corner of one of the most prominent and central crossroads in the City of Cleveland, the Project will have a significant positive impact on the redevelopment of other properties within the 2,500 foot radius study area established by the OHPTC Program.

Redevelopment of these properties is expected to require direct investments of more than $2 billion. The timeframes for these redevelopment projects are impossible to estimate, so the Construction Period impacts are presented in total, not in annual terms.

Estimated Construction Period Impacts of Catalyzed Projects

- 26,800 jobs
- $1.4 billion of labor income
- $444 million in total taxes ($154 million State & Local and $290 million federal)
- $4.1 billion in total economic output

In total, the redevelopment of these catalyzed properties is estimated to create 26,800 jobs, $1.4 billion of total labor income, $4.1 billion of total economic activity, and $444 million of total taxes and fees. These estimates are summarized in the figure to the right and detailed in the table below.

During the period of the redevelopment, most of the new employment will be in the construction industry sector. Other industries to be significantly impacted include Retail Trade Accommodation and Food Service, and Professional, Scientific, and Technical Services.

Estimated Construction Period Impacts

Impact Type	Employment	Labor Income	Output	Taxes
Direct Effect	13,500	$818,837,000	$2,112,000,000	$194,085,000
Indirect Effect	5,700	$293,849,000	$957,894,000	$116,848,000
Induced Effect	7,600	$326,573,000	$1,009,800,000	$132,838,000
Total Effect	26,800	$1,439,259,000	$4,079,694,000	$443,771,000

Permanent Impacts of Catalyzed Projects

Upon completion of the redevelopment of the Catalyzed Properties, the properties will continue to have a significant impact on the State's economy. This impact will come in the form of activities to support the maintenance and operation of the buildings themselves, as well as from businesses that will locate operations in the building. In total, these activities are estimated to create 26,800 jobs, and generate $1.5 billion of total labor income, $4.6 billion of total economic activity, and $540 million of total taxes and fees in the State of Ohio annually. These estimates are summarized in the figure to the right and detailed in the table below. The pie chart that follows provides a detailed breakdown of total permanent jobs by industry sector.

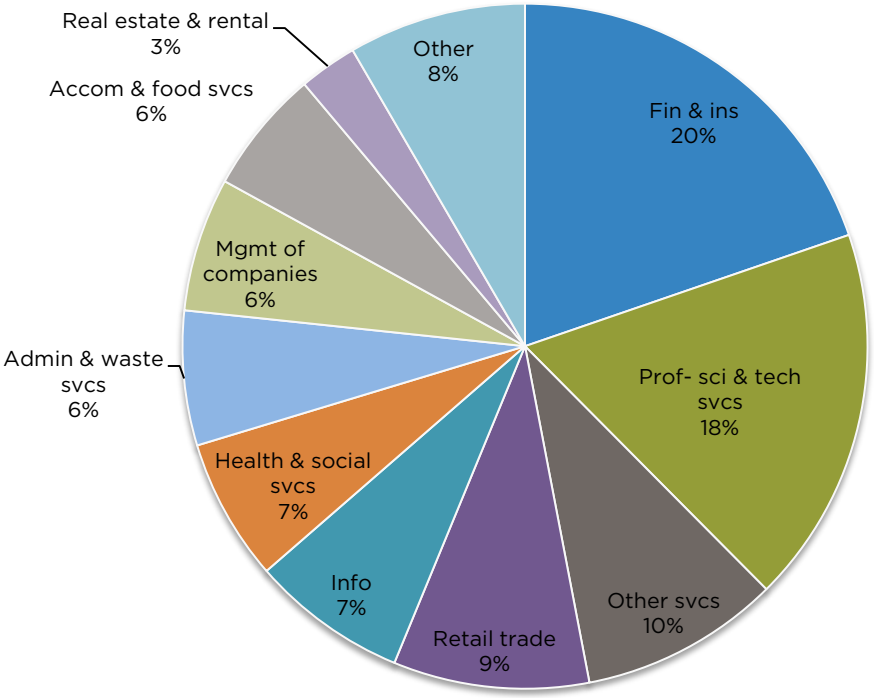
Estimated Permanent Impacts of Catalyzed Projects

- 26,800 Jobs
- $1.5 billion of labor income
- $540 million in total taxes ($196 million State & Local and $344 million federal)
- $4.6 billion in total economic output

Catalytic Projects Estimated Annual Permanent Impacts

Impact Type	Employment	Labor Income	Output	Taxes
Direct Effect	12,200	$800,674,000	$2,377,750,000	$271,667,000
Indirect Effect	6,700	$360,541,000	$1,130,837,000	$130,344,000
Induced Effect	7,900	$352,549,000	$1,041,448,000	$138,427,000
Total Effect	26,800	$1,513,764,000	$4,550,035,000	$540,438,000

Estimated Distribution of Total Permanent Jobs Supported by Catalyzed Projects, by Industry Sector



Summary of Impacts

Total Construction Period Impacts

The table below summarizes the total economic and fiscal impacts generated during the construction periods of both the Project and the Catalyzed Projects:

Impact Type	Employment	Labor Income	Output	Taxes
Direct Effect	15,000	$912,697,000	$2,389,321,000	$214,252,000
Indirect Effect	6,700	$337,424,000	$1,093,736,000	$136,290,000
Induced Effect	8,500	$368,268,000	$1,132,933,000	$149,207,000
Total Effect	30,200	$1,618,389,000	$4,615,990,000	$499,749,000

Total Permanent Impacts

The table below summarizes the total annual economic and fiscal impacts associated with the permanent operations of both the Project and all of the Catalyzed Projects:

Impact Type	Employment	Labor Income	Output	Taxes
Direct Effect	14,000	$917,378,000	$2,726,489,000	$312,397,000
Indirect Effect	7,700	$412,180,000	$1,291,986,000	$149,104,000
Induced Effect	9,100	$403,660,000	$1,192,434,000	$158,496,000
Total Effect	30,800	$1,733,218,000	$5,210,909,000	$619,997,000

Glossary and Methodology

Direct Jobs – Direct jobs comprise those individuals employed in the redevelopment of the building, its future operation, or involved in the operation of a business located at the Project site upon redevelopment.

Direct Earnings/Labor Income – The labor income (wages and benefits) associated with the direct jobs.

Indirect Jobs – Jobs supported by industries purchasing from industries. For example, purchases of construction materials and other supplies from vendors within the study area. Those vendors employ workers to meet the demand of the Project (and other customers). This cycle may have many iterations between different industry sectors, and the coefficients associated with each industry are calculated within the IMPLAN model. See below for more information about IMPLAN.

Indirect Earnings/Labor Income – The earnings associated with the indirect jobs. This amount can include both wages and benefits paid to workers as well as income earned by business owners. Indirect earnings are calculated using the IMPLAN model.

Induced Jobs – Whereas indirect jobs are those positions created by industries purchasing from industries, induced jobs are those positions supported by household level purchasing, or the spending on goods and services by individuals within the region. In this report, induced jobs are calculated using the IMPLAN model.

Induced Earnings /Wages/Labor Income – The earnings associated with the induced jobs. This amount can include both wages and benefits paid to workers as well as income earned by business owners. In this report, induced earnings are calculated using the IMPLAN model.

Taxes – This includes all taxes and fees collected by federal, state, county, municipal, or other government entities, including, but not limited to property taxes, income taxes, sales, taxes, license and registration fees, etc. Many of these taxes occur during

the normal operation of businesses and are determined primarily within the IMPLAN model.

Economic Output – Represents the total value of all goods and services produced by all of the industries within the study region. For this study, we used the IMPLAN model, which provides information for more than 400 distinct industry sectors. By aggregating the changes in each sector associated with the direct activity of the Project, we are able to calculate the total impact on the economy.

About IMPLAN Economic Impact Analysis

Portions of this analysis were completed using the IMPLAN economic impact model. The IMPLAN model is used by more than 1,000 universities and government agencies to estimate the economic and fiscal impacts of investments and/or changes in industry, to forecast tax revenue and employment generation, and to conduct economic comparison studies of two or more geographic locations.

IMPLAN is an input-output model. Input-output accounting describes commodity flows from producers to intermediate and final consumers. The total industry purchases of commodities, services, employment compensation, value added, and imports are equal to the value of the commodities produced.

An IMPLAN impact analysis involves specifying a series of expenditures or other changes and applying them to the region's economic multipliers. The expenditures are identified in terms of the sectoring scheme for the model, in producer prices, and in historical dollars with the current year used as a base year. Only the dollars spent within the region are applied to the model.

The notion of a multiplier rests upon the difference between the initial effect of a change in final demand and the total effects of that change. Total effects can be calculated either as direct and indirect effects, or as direct, indirect, and induced effects. Direct effects are production changes associated with the immediate effects or final demand changes. Indirect effects are production changes in backward-linked industries caused by the changing input needs of directly effected industries (for example, additional purchases to produce additional output). Induced effects are the changes in regional household spending patterns caused by changes in household income generated from the direct and indirect effects.

Purchases for final use (final demand) drive the model. Industries producing goods and services for final demand purchase goods and services from other producers. These other producers, in turn, purchase goods and services. This buying of goods and

services (indirect purchases) continues until leakage from the region (imports and value added) stops the cycle.

These indirect and induced effects (the effects of household spending) can be mathematically derived. The resulting sets of multipliers describe the change of output for each and every regional industry caused by a one-dollar change in final demand for any given industry.

Creating a regional input-output model requires a tremendous amount of data. The costs of surveying industries within each region to derive a list of commodity purchases (production functions) are prohibitive. IMPLAN was developed as a cost-effective means to develop regional input-output models. The IMPLAN accounts closely follow the accounting conventions used in the "Input-Output Study of the U.S. Economy" by the Bureau of Economic Analysis (1980) and the rectangular format recommended by the United Nations.

(Source for much of this description: Olson, Doug and Scott Lindall, "IMPLAN Professional Software, Analysis, and Data Guide"; Minnesota IMPLAN Group, Inc., 1725 Tower Drive West, Suite 140, Stillwater, MN 55082)

About Silverlode Consulting Corp.

Silverlode Consulting Corp. is one of the leading site selection and economic development consulting firms in the US. The firm was founded in 2002 by two leaders of Ernst & Young's and Pricewaterhouse Coopers' location and incentives consulting practices to provide game-changing site selection and economic development solutions for corporations and public sector organizations around the globe.

Silverlode helps companies make informed, data-driven decisions about where to locate new or expanded manufacturing, distribution, headquarters and office facilities. We have also helped hundreds of companies to secure optimal state and local incentives packages, totaling over $1 billion in value.

From a single zip code or census tract, to multi-state regions, to some of the largest development projects in North America, Silverlode has worked with a vast array of entities, each with a unique set of circumstances, needs and goals. Our deep experience with impact modeling and economic development analysis has enabled us to develop highly customized impact reports.

Our studies help organizations to measure their economic and fiscal impact on their communities and to communicate this impact to their stakeholders. By calculating the direct, indirect, and induced jobs, as well as earnings and taxes that will result from a proposed project, our studies have helped many projects gain approval from government entities, secure financing and incentives, and positively shift public opinion.