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Appendix C. The Economic Impact of Long Beach Airport (Federal Inspection Service Facility)

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The Economic Impact of Long Beach Airport

Federal Inspection Service Facility

Feasibility Study
9/26/2016

This study provides estimates of the economic impact of Long Beach Airport and a proposed Federal Inspection Service Facility upon the City of Long Beach. Total output of Long Beach Airport is 45,000 jobs and an output valued in excess of $10.3 billion.

Prepared by LaCosta Consulting Group, Inc.

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Executive Summary

The Long Beach Airport (LGB) is an expansive asset of 1,166 acres established in 1923 and is located in the center of the City of Long Beach (City) supporting air services for residents and businesses. Adjacent to Interstate 405, LGB offers ease of access to both Los Angeles and Orange County. The businesses at LGB include flight operations, manufacturing facilities, business services and business parks. Flight operations consist of commercial, cargo, general, corporate and supporting aviation services as well as flight schools.

This Economic Impact Analysis (EIA) report was commissioned by the City as part of a Federal Inspection Service (FIS) Facility Feasibility Study at LGB. The EIA is produced to quantify the economic impact of LGB, aviation dependent activity associated with LGB and the additional impact of building and operating a Federal Inspection Service Facility at LGB. The EIA offers a quantitative method to estimate the financial and employment benefits of LGB to the region. Using the results of a 2016 tenant survey, business list analysis, interviews, LGB expenditures and forecast data analyzed with the IMPLAN[1] model's latest database this EIA identifies the economic impacts of LGB and the potential contribution of a FIS Facility.

The output of the analysis yields the following findings for LGB:

- The annual economic contribution of LGB and their tenants is approximately 45,000 jobs and $10.3 billion in output
- Direct business and government employment of approximately 9,000 individuals representing 6.4% of the employment in the City
- 28% of current employment in the tenant survey are residents of the City
- The annual economic contribution to the region of LGB's expenditures produces approximately 170 jobs and almost $50 million of annual output in the region
- $130 million in additional economic output is generated by LGB's capital investment plan over the five year period 2015-2019 generating 771 jobs
- Employment by LGB, airlines, government and businesses supporting the operation of the international flights and the FIS Facility would have a total economic impact of more than 350 employees and over $36.4 million of additional output in the region annually
- The potential additional economic expenditures from the international travelers over the first five years ranges from $57 million to $104 million
- Business and tourist travel impacts are estimated to result in an increase of approximately 1,400 jobs with a total economic value of $185.6 million by year five following the opening of a potential FIS Facility
- The construction of the FIS facility would generate financial output valued between $31 million and $38 million depending on the option chosen generating between 203 and 253 jobs
- The tax impacts from existing operations by LGB and their tenants are approximately $360 million in state and local revenues and $790 million in federal tax revenues
- LGB is a key determinate for businesses' weighing a decision to consolidate facilities or relocate to the City, and international utility would add to that amenity
- LGB revenue base to expand by $4.3 million annum by year four after opening the FIS Facility

[1] IMPLAN Pro4 Economic Modeling Software, IMPLAN MIG, Huntersville, NC

Introduction

The Economic Impact Analysis using the IMPLAN modeling software provides a quantitative method to estimate the benefits of economic activity and investment projects in a region. That business activity being analyzed is expressed in terms of the level of investment with the model then estimating the jobs, earnings and the value of output generated by that activity. The EIA considered here focuses on the contribution made by LGB and adjacent air transport business activities to the regional economy. The regional economy, for the purposes of this study, is defined more broadly to include the counties of Los Angeles and Orange. LGB is the 80th largest airport in the U.S. based on enplaned passengers. This report has two specific objectives: estimate the economic activity generated by LGB and estimate the additional impact of three potential citing options produced by Jacobs for the construction and operations of a FIS Facility at LGB.

A self-supporting enterprise of the City, LGB does not receive financial support through the City's general fund. LGB generates revenues through a variety of tenant, passenger and aviation activity user fees and charges. Total revenue for the last full calendar year (2015) was $34.1 million while serving 2.4 million total passengers. Approximately 33% of these revenues are used to purchase services from the City including police, fire, public works, fleet services, city attorney and other services. The level of operations at LGB is dependent on noise budgets as specified in Long Beach Municipal Code Chapter 16.43 *Long Beach Airport Noise Compatibility Ordinance* (Noise Ordinance). The Noise Ordinance specifies five airport user categories. Noise budgets for each of these categories are reviewed annually. As aircraft are constrained by this budget, this report measures the economic activity at a moment in time and does not attempt to measure activity in unconstrained conditions outside of the Noise Ordinance.

As with all large infrastructure enterprises managing capital improvement programs (CIP) that support projects, it is essential to respond to increasing demand, fulfilling federal mandates and passenger expectations at LGB. In 2010 LGB funded a major CIP for the construction of the award winning passenger concourse, an on-site parking structure, as well as the modernization and rehabilitation of its iconic and historic streamline modern terminal. As the facility supporting the passenger activity has been addressed the bulk of the CIP over the next several years will be allocated to airfield related improvements, customer experience and rental car programs projected for fiscal years 2017 - 2019. The projection is for these expenditures to exceed $42 million over the next three years.

LGB has a number of unique characteristics including the size and makeup of the businesses on and around the property. The business composition includes not just commercial, cargo and general aviation but manufacturing, business and passenger services, multiple business parks, warehousing and hospitality. This diversity creates significant economic activity directly and indirectly throughout Long Beach stimulating economic activity throughout the region.

There are four primary categories that make up the employment base and economic output at LGB.

- **On-Airport Activity** – This category includes airport tenants, such as airlines, rental car agencies, general aviation, fix based operators, flight schools, concessionaires, support businesses and governmental agencies. Governmental agencies include the Transportation Security Administration (TSA), police, fire and rescue, air traffic controllers, other Federal Aviation Administration (FAA) lines of business, as well as various other state and federal agencies.
- **Capital Improvement Programs** – Capital improvements, such as runway rehabilitation or terminal improvements are ongoing activities. In addition, businesses and other agencies

undertake capital improvement projects. These projects employ people in jobs such as construction, architecture, engineering, and consulting.

- **Commercial Service Visitors** – This category includes estimated non-local passengers (business and leisure visitors) arriving via commercial airlines. The direct output of this group includes spending on hotel, parking fees, food and beverage, transportation, convention, retail and entertainment expenses during their trip. This spending supports jobs primarily in the hospitality industry.
- **Tenants –** LGB manages significant property and administers the collection of rents and fees to a diverse set of tenants.

The IMPLAN economic model provides estimates of the direct, indirect and induced impacts for each of these categories. The definitions of these categories are:

- **Direct impacts** result from expenditures to suppliers, employees associated with LGB and the businesses at LGB, and transportation related businesses in the area
- **Indirect impacts** result from the suppliers purchasing goods and services and hiring workers to meet demand
- **Induced impacts** results from the employees of LGB purchasing goods and services at a household level.

LGB is a large geographical area (Figure 1) north of Interstate 405 and south of Carson Street. The methodology used to capture this economic activity included surveys, phone banks, business lists, government data and the IMPLAN model which is specifically built for calculating economic impacts. The full methodology used in this analysis is discussed in more detail in the following section.

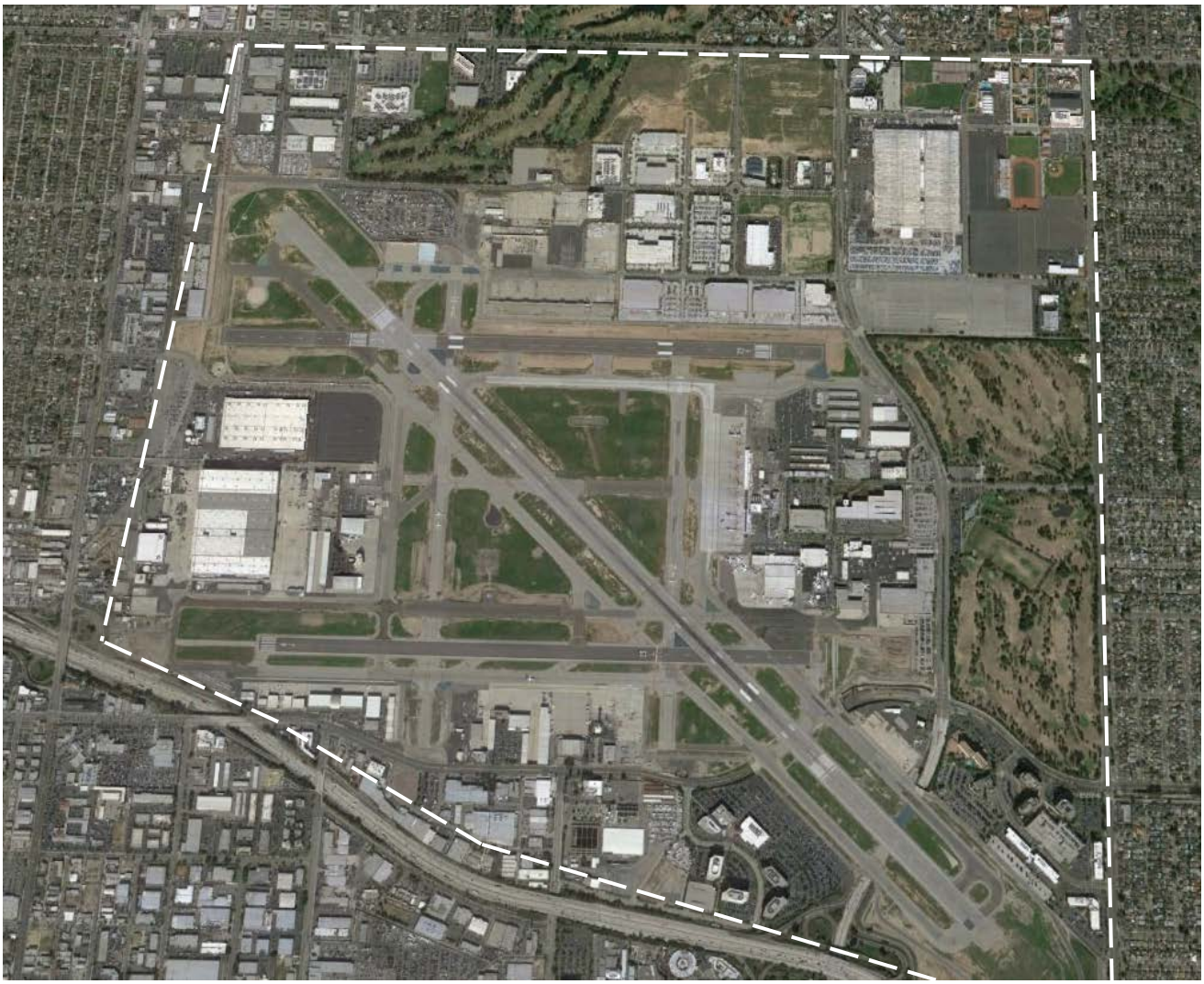

Figure 1 Aerial View of LGB, Google Earth February 2014

Approach and Methodology of Economic Impact Study

The EIA provides a structured approach that is built on a system that measures the economic implications at a particular point in time for a particular region. The economic variables of interest such as the value of output generated, the "value-added" created, and the employment impacts of a particular project are determined for a given economic project such as establishing a FIS Facility at LGB. Economic impact analysis provides a quantitative method to estimate the economic benefits that a particular industry or project brings to a city's economy and surrounding communities where the specific industry is located. In this EIA the industry is the transportation systems that make up LGB and an associate project, the feasibility study of constructing and operating a FIS Facility. The FIS Facility would house international customs and immigration inspection allowing for international flights to operate at LGB.

Economic impact studies use financial and economic data to generate estimates of output, employment, and labor income and tax revenues associated with changes in the level of economic activity resulting

from the project or industry being analyzed. This EIA provides a robust analysis to inform the decision making process on the matter of constructing a FIS Facility at LGB.

Methodology & Data

Conducting an economic impact analysis requires an accurate assessment of the financial and employment data associated with the activity considered. The EIA focuses on the contribution made by LGB, commercial, manufacturing, general aviation and support services to the regional economy. For the purposes of this EIA the regional economy is defined by the counties of Los Angeles and Orange. The justification of limiting the analysis to these two counties is it's consistency with a past study [2] that estimated that 95% of the activity at LGB is captured within these two counties. This analysis focuses on the impact of business and government expenditures that are directly related to airport dependent activities. Once those enterprises are identified a survey was developed to collect employment, wage, expenditures, description of business and qualitative elements to add insights to the analysis.

The EIA required the identification of relevant data from businesses and government sectors at and around the airport, relying on multiple sources for data and inputs to identify the target population of enterprises associated in airport-dependent economic activity. The primary sources are: LGB tenant list; City business licenses in the area of LGB (see Figure 1); a commercially available business list InfoUSA captured from the 2011 study; interviews with LGB, regional developers and community business partners. Considering information from all sources facilitated the identification of the target data for impact analysis.

LGB's most relevant and current source of data for creating a survey distribution list is the 2013 LGB tenant list. This was the core source used to distribute an online survey to all tenants. The survey list used identifies 162 businesses and government agencies that are operating or leasing space at LGB. This list also included government agencies at LGB, an input missing from the last impact study, making for a more comprehensive analysis in identifying the enterprise systems actively engaged in airport-dependent activities. LGB is also a landlord for much of the property that surrounds LGB itself. However, the tenant list has limitation when considering an economic impact analysis as not all tenants are engaged in aviation or airport-dependent business; Sky Links Golf Course would be an example. As the tenant list's last update is 2013 some of the enterprises are no longer at LGB and new ones have entered the space. It also does not include all sub-leased space.

To supplement for these limitations other sources where acquired to identify businesses located at and around LGB including the City's Business License list. Interviews with community business partners and LGB leaders offered additional inputs. According to the City Business License list, there are 517 businesses licensed to operate within the boundaries identified in Figure 1.

The approach used for this analysis begins with the tenant list from LGB as the foundation for a survey list and associated economic analysis. The other two sources of business lists were then used to help calibrate and enrich the tenant list provided by LGB. First, the Business License list obtained from the City was compared to the tenant list provided by LGB. Next, the current tenant list from LGB was compared to a 2011 InfoUSA list of businesses as provided. Overall, that comparison resulted in approximately a 30% overlap between the lists. The firms that were on the tenant list but not included

[2] Grobar and Magaddino. *The Economic Impact of the Long Beach Airport*. 2011

in the other two lists were evaluated to determine whether or not they were airport-dependent and should remain in the list to be surveyed and coded appropriately for IMPLAN modeling.

To provide an accurate measure of the economic impact a survey was created and emailed to the organizations on the list for their input. The survey was designed to obtain quantitative information about the employment, financial and grow plans of business and government categorized as airport-dependent enterprises. The results of the analysis provided a lower bound or conservative estimate of the economic impact versus previous studies. The impact of organizations not included in the survey population will be discussed qualitatively to provide a better understanding of the data limitations of the analysis.

Survey

A survey was administered to the expanded tenant list as discussed above and introduced to the enterprises via email with a link to an online survey. A phone bank was set up to conduct the survey via phone if an email address was unavailable, to follow up on incomplete responses to the survey or for contacts at businesses that were acquired late in the process. The survey instrument focused on determining the measureable economic data for each firm. The primary data collected centered around gross sales, part-time/full-time employment, total wage bill, business expectations for their respective firm over the next two years, as well as data on employees of sub-tenants. The survey was designed to be completed by a respondent that is familiar with business planning as well as data on employees and the total wage bill, including benefits.

The initial survey was emailed to 200 contacts at organizations the week of June 26, 2016 with follow-up telephone contacts beginning the week of July 11 and continuing through the last week of August. A total of 45 organizations provided useable responses for a response rate of 28%. This response rate is consistent with online response rates for similar surveys.

Measurements of Economic Activity at Long Beach Airport

Economic impact analysis using IMPLAN is based upon supply and demand relationships. To estimate the economic impact of LGB dependent activities, the modeling software IMPLAN was used. IMPLAN is a regional economic input-output model that provides results on employment, labor income, value added, and the value of output. Each of these categories will be reported as direct, indirect and induced impacts using multipliers to determine the total impacts. The strength of this type of analysis is that it considers the entire supply-chain effects of an economic activity by considering the direct and indirect effects as well as estimating the induced effects resulting from additional employment.

The economy of Long Beach is a diverse economy that supports employment in all sectors. Table 1 provides aggregate employment for the City for March 2016.

Employment by Industry Sector

Sector	Long Beach	YOY (%)
Health Care	24,450	1.9
Leisure and Hospitality	20,225	2.6
Government	14,175	3
Transport/Warehouse	13,675	3.6
Retail Trade	13,275	0.6
Professional, Science, Technical	11,675	5.6
Local	10,100	3.6
Admin Support	8,625	-1
Manufacturing	7,825	1.6
Other Services	6,550	1.6
Construction	6,100	0.7
Wholesale Trade	5,800	0.5
State and Federal	4,075	1.6
Real Estate	3,500	4.4
Finance and Insurance	3,175	-2.3
Information	1,525	-3
Educational Services	1,125	0.4
Total All Industries	141,725	2

Table 1 Long Beach Employment by Sector (March 2016) Source: EDD and Beacon Economics

Determining the sector distribution of employment for the LGB Impact Area is not possible due to data confidentiality at the California Employment Development Department (EDD) to protect firm identity. However, comparisons can be made regarding total contribution of the LGB Impact Area to the Long Beach economy using the results of the tenant survey discussed above. Extrapolating from the survey results to the target population, total employment is approximately 9,000 resulting in a contribution of approximately 6.4% of the total jobs in Long Beach. This result is similar to the findings of Grobar and Magaddino (2012) who found that the LGB complex, more broadly defined using the InfoUSA data, to be approximately 9%.

Economic Activity at Long Beach Airport

This EIA provides a quantitative method to estimate the economic benefits that a particular industry and project brings to the regional economy where the specific project is located. The scope of this EIA is to measure the economic impact of the transportation systems that make up LGB and the impact of construction and operation of a FIS Facility. This FIS Facility would house international customs and immigration inspection permitting for international flights to operate at LGB.

This EIA uses financial and economic data to generate estimates of output, employment and tax revenues associated with changes in the level of economic activity at the airport complex and the addition of the FIS. This EIA provides a robust analysis to aid in the decision making process for

determining economic benefits to the City and the regional economy from the construction of a potential FIS Facility.

Using information provided by LGB, the economic impact on the regional economy from direct operations of LGB was estimated. The economic impact of LGB and the tenant survey results are then estimated using IMPLAN. These results include both the direct operations of LGB as well as the tenants on the regional economy.

Tables 2 and 3 provide data on the impact of expenditures by LGB only, not including the impact of the complete list of firms from the LGB tenant list. Table 2 provides a summary of the economic impact of Non Capital expenditures by LGB for the calendar year 2015. Airport expenditures generated approximately 65 direct jobs and 54 indirect jobs. These jobs resulted in another 52 induced jobs for the regional economy from those employees spending their paychecks. The overall economic contribution of LGB as measured by the value of the output generated is almost $50 million.

Impact Type	Employment	Labor Income	Output
Direct Effect	64.4	$6,336,095	$26,804,876
Indirect Effect	54.3	$4,085,192	$14,323,459
Induced Effect	52.4	$2,819,099	$8,253,272
Total Effect	171.1	$13,240,386	$49,381,607

Table 2 Economic Impacts of LGB Expenditures (2015) Non Capital Expenditures

Table 3 provides estimates of the regional economic impacts from the planned capital expenditures by LGB starting with the actual levels in 2015 and estimated levels for 2016 through 2019.

Year	Expenditures	Total Employment	Labor Income	Value of Output
2015	$16,914,460	184	$10,873,743	$ 30,894,450
2016	$11,100,994	121	$7,136,459	$ 20,276,089
2017	$11,207,563	122	$7,204,969	$ 20,470,739
2018	$23,582,479	256	$15,160,390	$ 43,073,661
2019	$8,059,329	88	$5,181,074	$ 14,720,454
Total Expenditures	$70,864,825	771	$45,556,635	$ 129,435,393

Table 3 Economic Impact of Capital Expenditures over Time

The following Tables expand the analysis to include the data collected from the survey from LGB and tenants. One important finding in this analysis is the difference between the average wage levels measured at the airport enterprises versus Los Angeles County average annual wage level. Table 4

shows that the average wage for the LGB tenant list is approximately $9,000 more per year than the average wage of Los Angeles County.

Location	Average Wages
LGB & LGB Tenants	$67,590
Los Angeles County *	$58,565

* Source: Los Angeles County data from the Employment Development Department, State of California

Table 4 Average Wage Comparison

Table 5 provides the results of the IMPLAN model for total economic impacts using the survey results. Based upon the economic activity reported by the firms that responded to the survey the impact to the regional economy indicates that over 45,000 jobs are generated by LGB and the firms and government operations of the tenants located near LGB. The results reported in Table 5 include the impact of LGB expenditures as reported in Table 2 as well as the capital expenditures for 2015.

	Direct	Indirect	Induced	Total
Employment	19,144	12,548	13,435	45,127
Labor Income	$1,761,215,496	$909,858,169	$723,221,193	$3,367,294,857
Output	$5,810,861,129	$2,413,089,155	$2,117,491,398	$10,341,441,683

Table 5 Total Economic Impact of LGB and LGB Tenant List Businesses

In addition to the quantifiable findings supported from the survey results and modeled in IMPLAN, other significant insights from the survey and interviews were gathered. There is a large area surrounding LGB that is under significant development at this time. While quantifiable details are not attainable in this EIA, interview responses clearly identified LGB as a key reason for business relocation, consolidation and expansion in this area. Some of the businesses have been relocated here as they are directly associated with aviation while others are attracted by the first class facilities being created as part of the redevelopment. Douglas Park is one such development; it is a highly desirable location adjacent to LGB as well as the freeway and the Ports of Long Beach and Los Angeles. Sares-Regis, the developer of Douglas Park, referred to LGB as the key amenity for those companies looking for Class A facilities offered at Douglas Park. While Mercedes-Benz needs were expansive space, their requirement for access to affordable nonstop air service to support training for their 14 western states is also paramount to their firm.

Other expansion more directly associated with LGB but not captured in this EIA are the expansion and construction of new hotel rooms. The Hilton brand has two new hotels under development, a Hampton Inn and a Homewood Suites at the southeast corner of Cover Street and Lakewood Boulevard. Holiday Inn is in the middle of a three year remodeling and expansion including an all-new 125 room executive suites Staybridge Hotel at their current location.

Proposed FIS Facility

The definition of the FIS Facility is based in large part on the requirements contained in the U.S. Customs and Border Protection Airport Technical Design Standard. A FIS Facility is a single processing complex that evolved from the consolidation and integration of US customs, immigration, and agriculture operations, offices, and support functions. The FIS Facility unifies both passenger processing and baggage/cargo processing for safe and efficient flow of passengers and goods into and out of the United States. Based on the findings (Table 17) contained in the Market Analysis section of the Feasibility Study for a Federal Inspection Service Facility three alternative locations were evaluated for the FIS Facility. All three options have unique qualities, attributes, and come with different cost of construction. As such three options were modeled to estimate the economic impacts for each option. The finding in the Market Analysis estimates eight flights a day using the facility. The facility options are designed to accommodate two flights simultaneously using two gate positions. Following the analysis of the three construction options, ongoing economic impacts benefiting the region from additional employment and visitor spending are analyzed.

Impact of the Federal Inspection Service Facility

There are currently three options being considered for the FIS Facility. Table 6 provides the construction estimates for each option Jacobs produced.

Option	Estimate
North FIS Facility – Option 1	$21,558,000
South FIS Facility – Option 2	$17,335,000
South FIS Facility – Option 3	$20,353,000

Table 6 Total Construction cost for Feasibility Options

The resulting output from the IMPLAN model for each option is presented in Tables 7 through 12. As Table 7 shows the total employment impact of Option 1 indicates that over 250 jobs and almost $39 million in added output would be created with the construction of the facility. The top ten industries impacted by the project are shown in Table 8.

Impact Type	Employment	Labor Income	Output
Direct Effect	154.4	$10,199,615	$21,558,001
Indirect Effect	34.8	$2,489,892	$7,244,388
Induced Effect	63.7	$3,429,152	$10,038,055
Total Effect	252.9	$16,118,658	$38,840,444

Table 7 Total Impacts for North FIS Option 1

Industry sector impacts from the North FIS Option, as presented in Table 8, will have the greatest influence on the construction, administrative and architectural services sectors (direct impacts). These

expenditures will then further support economic activity related to the purchase of inputs into the construction of the facility and the support services as employees spend their income in the local economy (indirect impacts) and the income that those businesses receive is spent (induced effects) will also contribute to the regional economy.

Sector	Total Employment	Total Labor Income	Total Output
Construction-commercial structure	113.5	$6,731,776	$17,012,001
Office administrative services	33	$2,537,993	$3,050,131
Architectural and engineering	11.7	$1,344,457	$2,135,812
Wholesale trade	6.3	$531,184	$1,586,688
Real estate	4.3	$151,192	$1,080,316
Full-service restaurants	4.3	$116,598	$216,635
Limited-service restaurants	3.4	$79,884	$313,151
Employment services	3.2	$120,567	$219,986
Hospitals	2.7	$245,234	$470,740
Individual and family services	2.4	$41,238	$68,015

Table 8 Top Ten Sector Impacts from the North FIS Option 1

Similar results for the other two options are provided in Tables 9 through 12.

Impact Type	Employment	Labor Income	Output
Direct Effect	124.2	$8,201,752	$17,335,000
Indirect Effect	28	$2,002,182	$5,825,311
Induced Effect	51.2	$2,757,463	$8,071,839
Total Effect	203.4	$12,961,397	$31,232,151

Table 9 Total Impacts from South FIS Option 2

Sector	Total Employment	Total Labor Income	Total Output
Construction-commercial structure	91.3	$5,412,883	$13,679,001
Office administrative services	26.6	$2,040,915	$2,452,748
Architectural and engineering	9.4	$1,081,356	$1,717,849
Wholesale trade	5	$427,124	$1,275,851
Real estate	3.5	$121,578	$868,713
Full-service restaurants	3.5	$93,761	$174,204
Limited-service restaurants	2.7	$64,237	$251,814
Employment services	2.5	$96,958	$176,909
Hospitals	2.2	$197,198	$378,533
Individual and family services	1.9	$33,161	$54,693

Table 10 Top Ten Sector Impacts from South FIS Option 2

Impact Type	Employment	Labor Income	Output
Direct Effect	145.8	$9,629,806	$20,353,001
Indirect Effect	32.8	$2,350,791	$6,839,510
Induced Effect	60.2	$3,237,580	$9,477,272
Total Effect	238.8	$15,218,177	$36,669,782

Table 11 Total Impact of South FIS Option 3

Sector	Total Employment	Total Labor Income	Total Output
Construction-commercial structure	107.2	$6,355,063	$16,060,001
Office administrative services	31.2	$2,396,338	$2,879,891
Architectural and engineering	11	$1,269,860	$2,017,307
Wholesale trade	5.9	$501,479	$1,497,955
Real estate	4.1	$142,747	$1,019,974
Full-service restaurants	4.1	$110,087	$204,538
Limited-service restaurants	3.2	$75,422	$295,661
Employment services	3	$113,846	$207,723
Hospitals	2.6	$231,534	$444,442
Individual and family services	2.3	$38,934	$64,216

Table 12 Top Ten Sectors Impacts from South FIS Option 3

Ongoing Economic Impacts

The results reported above capture the economic impacts of constructing the three FIS Facilities options but not the impacts of ongoing operation and maintenance (O&M). The total impact from ongoing O&M costs will be approximately $435,000 per year for the next 20 years, as shown in Tables 13 through 15.

Impact Type	Employment	Labor Income	Output
Direct Effect	2.3	$190,796	$434,339
Indirect Effect	1.3	$85,628	$213,974
Induced Effect	1.4	$74,753	$218,840
Total Effect	5	$351,176	$867,153

Table 13 Economic Impacts for Ongoing O&M for FIS-Option1

Impact Type	Employment	Labor Income	Output
Direct Effect	2	$164,217	$373,833
Indirect Effect	1.1	$73,699	$184,167
Induced Effect	1.2	$64,339	$188,354
Total Effect	4.3	$302,255	$746,354

Table 14 Economic Impacts for Ongoing O&M for FIS-Option2

Impact Type	Employment	Labor Income	Output
Direct Effect	2	$166,666	$379,410
Indirect Effect	1.2	$74,799	$186,914
Induced Effect	1.2	$65,299	$191,164
Total Effect	4.4	$306,764	$757,488

Table 15 Economic Impacts for Ongoing O&M FIS-Option3

Regardless of the construction option chosen, additional ongoing economic impacts will occur from operations at the FIS Facility. These will include additional staffing expenditures to the airlines for operations and government agencies to staff the facility. Table 16 provides the details of the additional employee requirements for the international flights and the estimated total wage bill for both the airlines and government to operate the facility.

	Employment	Labor Income
Airline Operations	154	$ 6,468,000
Government Operation	48	$ 5,062,400
Total	202	$ 11,530,400

Table 16 Employment Impacts of FIS Operations

The economic impact generated by the additional flights adds 72.2 workers by suppliers (direct effect) as shown in Table 17.

Impact Type	Employment	Labor Income	Value of Output
Direct Effect	72.2	$3,234,062	$11,740,400
Indirect Effect	47.4	$2,970,295	$7,487,780
Induced Effect	31.1	$1,672,810	$4,895,479
Total Effect	150.6	$7,877,167	$24,123,659

Table 17 Economic Impacts of FIS Operations

Secondary Economic Impacts

If LGB begins offering international flights there will be additional economic impacts from increases in international visitors to the region. Table 18 is the international forecast from the Market Analysis. The Market Analysis estimated that 30% of the annual international passengers are visitors that originate outside the U.S. The economic impact of additional international visitors is estimated based upon average expenditure per visitor[3] to the region.

International Forecast

Year	1	2	3	4	5
Seats	246,375	333,975	333,975	446,213	446,213
Enplanements	209,419	283,879	283,879	379,281	379,281
Departures	1,643	2,227	2,227	2,975	2,975

Table 18 International Forecast Flight Operations per Year After the Facility is Opened

[3] LA Tourism & Convention Bureau 2013

Table 19 provides the estimated economic impact from additional international visitors to the region. Of the international passengers to the region, 70% of those remain in the area for leisure reasons and 30% for business. Leisure visitors have an average expenditure per visit of $900. The contribution to the regional economy for the business travelers is based upon the estimated expenditures of $949 per trip.

Estimate of Visitor Spending

Year	1	2	3	4	5
Enplanements	209,419	283,879	283,879	379,281	379,281
Leisure	43,978	59,615	59,615	79,649	79,649
Business	18,848	25,549	25,549	34,135	34,135
Leisure Expenditures	$39,580,200	$53,653,131	$53,653,131	$71,684,109	$71,684,109
Business Expenditures	$17,886,752	$24,246,105	$24,246,105	$32,394,390	$32,394,390
Total Expenditures	$57,466,952	$77,899,236	$77,899,236	$104,078,499	$104,078,499

Table 19 Regional Economic Impact of International Tourist Year per Year After the Facility is Opened

Therefore, the combined expenditures of the passengers remaining in the region will generate additional economic activity for the leisure and hospitality sector of the economy. The multiplier effect is reported in Table 20.

Year	Expenditures	Total Employment*	Labor Income*	Value of Output*
1	$57,466,952	771	$37,055,151	$102,484,840
2	$77,899,236	1045	$50,230,052	$138,923,163
3	$77,899,236	1045	$50,230,052	$138,923,163
4	$104,078,499	1396	$67,110,651	$185,610,476
5	$104,078,499	1396	$67,110,651	$185,610,476

*Includes direct, indirect and induced effects

Table 20 Regional Economic Impact Multiplier Effects per Year After the Facility is Opened

This section tabulated quantifiable elements of adding a FIS Facility to LGB identifying and modeling additional economic impacts for employment and total value. The qualitative analysis collected in the surveys with local business partners indicated an international facility would have multiple economic benefits. Their insights included supporting local businesses expanding their markets to international locations, creating greater efficiencies for current business travel, giving greater access for foreign executives and a tool to attract new businesses that can leverage quick access to international locations. For example, the General Aviation (GA) community now must stop at other airports to clear customs and then reposition to LGB, creating a negative environmental and economic impact because of the extra flight. The cruise and port business could benefit from having nonstop flights return directly to LGB from Mexico and Central America. The hospitality industry values the incremental business the FIS Facility would bring to their current business mix. During interviews with the GA community, real estate holding groups, hospitality industry and business partners noted that a FIS Facility would be a value added asset to LGB at this time and long term. Based on these interviews, a FIS Facility would create an asset of strategic relevance for multiple enterprises in the City.

The Business of LGB

In today's interconnected, interdependent economies, access to vital commercial pathways and the other hallmarks of connectivity are core to regional and local economic wellbeing. Aviation is a critical part of that activity and the U.S. economy with the U.S. Airline Industry driving $1.5 trillion in economic activity creating 11 million jobs[4]. Long Beach Airport is part of the most extensive airport system in the world (19,299 U.S. airports) linking passengers and businesses in the Long Beach area and the rest of the world. Managing a range of services, airports link airlines to families and businesses fostering economic activities by supporting tourism, domestic and international commerce generating employment. Airports are also a vital national asset supporting disaster relief, emergency services and the military as well as state and national needs.

LGB's primary business is managing the infrastructure to support commercial, general aviation, cargo, charter, flight schools and military aviation. But its business influence is much broader than that as these core operations spawn numerous aviation service businesses. Covering 1,166 acres, LGB has evolved into a highly diversified aviation complex with more than 150 business at or adjacent to LGB that are directly related to or support the aviation activity at LGB. LGB manages a real estate and a tenant enterprise portfolio as well as the administration of government services.

LGB balances the demands of diverse business activities ensuring economic vitality and responsible governance ensuring quality of life standards. In 1995 the Federal District Court approved a noise ordinance settlement at LGB. This settlement is known as the Airport Noise Compatibility Ordinance governing the operational levels at LGB through the administration of a cumulative noise budget using slots. Today LGB still operates under that decision. Noise levels are continuously monitored and reviewed annually to allocate daily levels of operations for the following year. This governance of noise is allocated into annual noise budget levels that regulate the commercial, commuter, industrial, charter and general aviation slot for usage. Military and government operations are monitored but are not part of the annual noise budget. GA's noise budget is not allocated to any specific company. GA is currently operating at approximately 63% of the allotted noise budget. As of July 2016 Long Beach Airport allocated 50 air carrier flight slots. During this period there were approximately 37 average daily commercial departures recorded.

Passenger and Cargo Slots at LGB

Commercial	Slots
JetBlue	35
American	5
Delta	4
Southwest	4
FedEx	1
UPS	1

Commuter	Slots
Delta	3

Table 21 Slot Allocation by Carrier-Note FedEx and UPS are Cargo Operations

[4] Airlines For America http://airlines.org/industry/

Commercial Aviation

As a commercial airport, activity for most of LGB's history was limited prior to JetBlue (now the largest carrier) initiating service in 2001. For the decade prior to JetBlue service, commercial traffic totals averaged less than one million total passengers. However with Long Beach Airport's attractive location for commercial aviation passengers, LGB has grown to over 2.4 million total passengers (YE 2015) and reached over three million as recently as 2012 (Table 22).

Total Commercial Passengers (000) at LGB

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Arriving	1,324	1,399	1,405	1,398	1,430	1,504	1,544	1,430	1,357	1,216
Departing	1,340	1,409	1,408	1,398	1,435	1,508	1,552	1,435	1,365	1,218
Total Passengers	2,664	2,808	2,813	2,796	2,865	3,012	3,096	2,865	2,722	2,434

Table 22 Annual Passenger Levels for the Last Ten Years

Although passenger demand was down in the most recent year LGB still exhibits capacity demand opportunity for both domestic and international growth. In October 2015 during the annual noise budget review, additional slots were identified. That capacity was requested by multiple airlines including a new operator Southwest Airlines (Southwest). Southwest requested access to nine slots, and was awarded four; it commenced service to Oakland in July 2016 with planned service to Las Vegas in the fall of 2016. JetBlue has announced new domestic services to Reno and San Jose. Additionally international passenger demand has also been identified. This is based on the flight activity forecast in the *Traffic Analysis* section in the Market Analysis. While the number of flights at LGB is restricted, the Market Analysis identified pent up demand for many international markets to LGB. The international forecast was constrained to estimate potential markets within the 50 commercial slots available. Table 18 in the *Proposed FIS Facility* section are the estimates for international enplanements from the Market Analysis forecast over the first five years of operations based on the current level of slots allocated by the noise budget.

Passenger enplanements contribute to the economics of LGB in a variety of ways. Point of Origin (POO) demand on flights at LGB is balanced with 53% of the passengers originating in the Long Beach region and 47% of the passengers originating their itinerary at the other airports and arriving on inbound flights. POO traffic has different economic impacts at an airport. Inbound POO traffic is a high generator of economic activity in a region as it drives spending for hotels, car rentals, meals, entertainment and other incidentals into the local economy. A good example of the economic impact of inbound POO traffic can be seen in Tables 19 and 20 in the *Proposed FIS Facility* section. Parking, the largest non-aeronautical revenue contributor to LGB, is driven by POO traffic at LGB making up approximately 27% of LGB's revenue base.

Employment growth associated with enplanement growth is most evident at JetBlue. Since initiating service in 2001 JetBlue's domicile at LGB has grown to 700 people, the second largest employer at LGB.

General Aviation

Another large and important source of economic activity at LGB is General Aviation (GA). LGB is one of the largest GA airports in the US consistently operating in the top 15 in the country as measured by operations. While the long term historic trend is in decline, as of June 2016 GA operations were up 4.5% YTD compare to 2015. Over the last five years, GA level of operations have performed in a narrow range. John Wayne Airport, another Southern California regional airport, is down 2% since 2010 similar to LGB. The FAA classifies GA flights into separate use types - personal, business or other (instruction, aerial application etc.). The GA business composition at LGB is extensive with many types of aircraft flying a variety of missions.

GA Aircraft Operations

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
324,747	361,513	313,750	264,041	277,871	265,018	250,830	249,820	291,327	268,500

Table 23 GA -Operations Trend at LGB

Air Cargo

The demand for air cargo movement has historically been correlated with economic growth, but is also influenced by the types of consignment to be moved and the logistics needs of the associated supply-chain of the enterprises in the area. FedEx and UPS, the world's largest and third largest global cargo carriers respectively, support this local demand with both providing nonstop wide-body aircraft service from LGB. Since the 2008 financial crisis total landing weights are down as landings have been reduced by 74% since its peak in 2008 (Table 24). Cargo landing weights have shown to be stable the last four years.

Cargo at Long Beach Airport

YEAR	LANDINGS	LANDING WEIGHTS (lbs)
2006	1,822	332,026,800
2007	1,875	308,728,570
2008	2,070	307,989,740
2009	1,857	264,064,440
2010	1,750	187,513,620
2011	1,548	181,386,340
2012	746	154,539,360
2013	524	163,013,400
2014	525	159,820,629
2015	532	168,216,540

Table 24 Cargo Landing Weights Trend

Fiscal Impacts

Long Beach Airport operates without support from the City's General Fund. LGB contributes to the City's revenue requirements by generating taxes and fees which are collected by the City or the LGB Enterprise Fund. Additionally, LGB pays approximately 30 % of its $33 million annual budget to the City for public services received. The economic activity generated by LGB and the tenants of LGB as reported in Table 5 above results in a significant contribution to the local tax base. The tax results reported in Table 25 are based upon current economic activity as reported in Table 5. These estimates are based upon the tax structure as it existed in 2014, the most current year for the IMPLAN data.

Tax Impacts From LGB & Tenants

State & Local Taxes	
State & Local Taxes	
Employee Compensation	$8,605,429
Production & Imports	$208,662,735
Households	$124,922,515
Corporations	$16,366,068
Total State & Local	$358,556,747

Federal Taxes	
Employee Compensation	$369,255,769
Proprietor Income	$11,524,604
Production & Imports	$35,207,173
Households	$283,133,555
Corporations	$93,567,239
Total Federal	$792,688,340

Table 25 Federal, State and Local Tax Impacts

The addition of the FIS Facility would further enhance the tax revenues generated from the increased business opportunities and the spending of international visitors to the region. The increased tax base for Los Angeles and Orange Counties will help to strengthen local institutions.

As reported in the Market Analysis, FIS capabilities increase the airports annual passenger enplanement by 379,000 by year four (Table 18). The associated concession and Passenger Facility Charge (PFC) per enplanement would increase LGB's revenue base by approximately $4.3 million annually by year four.

According to the seventh annual Airport Affordability Index (2016) published by Cheapflights.com, LGB has been awarded the most affordable airport in the U.S., a positive financial impact to the City. John Wayne Airport (SNA) in Orange County and Los Angeles International Airport (LAX) are ranked 31 and32 respectively.

Conclusions

The economic impact of an airport is the sum of primary impacts – both direct and indirect – and induced economic activity that occurs because of the additional income generated by the workers at the facilities, tenant businesses, aviation and transport services. As reported above, LGB and its tenants

generate over $10 billion and 45,000 jobs in total economic activity with an additional $1.1 billion in tax revenues at the federal, state and local levels.

If the FIS Facility were to be built, it would enhance this contribution to economic activity ranging between $31 - $39 million and 203 – 253 jobs, depending on the option chosen. Once the FIS Facility becomes operational, there would be additional economic contributions due to the visitors to the region as reported in Table 20. The magnitude of this contribution begins at $102 million growing to $185 million by Years 4 and 5. There is also the potential to generate additional business activity in the area of LGB given the increased access to international markets due to the FIS Facility. However, it is not possible to estimate this impact given the existing data constraints.

Other Business in the Long Beach Airport Complex

Now approaching its centennial, Long Beach Airport was established in 1923 as the first municipal airport to serve Southern California. It has become a high output generator of jobs and services for the residents and businesses in the City. LGB resides in a larger complex of business enterprises. While many of these businesses are not dependent on aviation assets (runways or terminals) or related transportation services, LGB's presence produces economic activity to a multitude of businesses including restaurants, storage companies, services and other commercial entities. LGB and its location create a magnet for current and future business that supports Long Beach's economy. This report measured the impact of 162 dependent businesses at LGB that are part of the 517 business in the geographical footprint (Figure 1) making this an ideal economic complex for future economic growth.

This EIA shows the multiple award winning Long Beach Airport as a source of substantial economic activity and employment, as well as a leader in maintaining sustainable, environmentally responsible operations.

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June 24, 2016

Subject: Long Beach Airport Economic Impact Analysis

Dear Long Beach Airport Tenants and Surrounding Businesses:

On January 19, 2016, the City of Long Beach (City) commissioned Jacobs to conduct a Feasibility Study (Study) for a Federal Inspection Services (FIS) Facility at the Long Beach Airport (Airport). The scope of work for the Study includes an Economic Impact Analysis of the Airport on the local and surrounding region through employment, wages, and other benefits.

The Jacobs team is coordinating with Airport staff to attain the most comprehensive understanding of the impact that the airport has on the economy. Specifically, the analysis will survey the airport, airport tenants, government agencies, airport-dependent businesses, and aircraft owners for economic data and analyze passenger traffic related spending to determine the impact.

Jacobs is forwarding an online survey to all tenants and surrounding business in the Airport area. Your assistance completing the questionnaire is critical for this analysis. The data inputs collected in the survey (data, material, budgets, capital spending, etc.) will be converted into outputs of the Economic Impact of Long Beach Airport. All information will be kept strictly confidential. The survey consists of 21 questions and needs to be completed by July 1, 2016.

Please visit http://www.surveygizmo.com/s3/2839900/Economic-Impact-Study-for-Long-Beach-Airport to complete the survey.

Should you have any questions please email us at lgbfiscomments@gmail.com. Should you want a call back please call (214) 361-6474.

Thank you,

Steven Peters, RA, LEED AP BD+C
Project Manager

Economic Impact Study for Long Beach Airport

Survey

Responses to this survey will be treated as confidential. Responses from individual businesses will be combined with information from other respondents to preserve confidentiality. No survey data will be released without written permission of tenant, ***only aggregate information will be reported.*** *Attachments with a greater explanation are welcome.*

Copy of **Survey**

Responses to this survey will be treated as confidential. Responses from individual businesses will be combined with information from other respondents to preserve confidentiality. No survey data will be released without written permission of tenant, ***only aggregate information will be reported.*** *Attachments with a greater explanation are welcome.*

1. Establishment Name

2. Years at airport or current location

3. Date of response

4. Name

5. Description of products or services your firm produces:

6. Sales (most recent full fiscal year) in $

7. Market Composition (% of sales):

	% of Total	Expected % Two Years from Now
Industry Markets		
Household Markets		
Governments - Local or State		
Government - Federal		
Enter another option		

8. Market Trends - How do you see your lines of business changing over the next two years?

	% Increase	% Decrease	No Change
Corporate			
General Aviation			
Cargo			
Flight School			
Other if not in Aviation --			

9. How many employees do you have that are:

Full Time

Part Time

10. What was your total level of employee compensation (in $) in your most recent full fiscal year? (e.g. wages & salaries as well as fringe benefits)

11. Please estimate what % of employees working at your firm live in the City of Long Beach.

12. Do you have tenants or subtenants?

- [ ] Yes
- [ ] No

13. If yes, what are the names of the companies?

14. How many people do those companies employ?

- [ ] 0-5
- [ ] 6-10
- [ ] 11-20
- [ ] 21-50
- [ ] Greater than 50

15. Has your 2016 Capital Expenditures budget at the airport changed from the beginning of this year?

- [ ] No Change
- [ ] Has Decreased
- [ ] Has Increased

16. If your Capital Expenditures has changed, by what %? Why has this change occurred?

17. What are the most important issues facing your business activity at Long Beach Airport over the next several years?

18. Are there actions that Long Beach Airport could take that would help your business deal with issues identified in Question 17?

- [ ] Yes
- [ ] No

19. If the answer is yes, please describe these actions.

20. The Long Beach Airport is currently conducting a feasibility study of a potential Federal Inspection Service (FIS) Facility. Would the availability of international flights at Long Beach Airport affect your business?

- [ ] Yes
- [ ] No

21. If so, how will the availability of international flights at Long Beach Airport affect your business?

Submit

0%