

Economic Impact Analysis



Los Angeles County Economic Development Corporation

LAX Airfield and Terminal Construction Projects



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This report was prepared by the Economic and Policy Consulting Practice of the Los Angeles County Economic Development Corporation (LAEDC).

As the Southern California region's premier economic development organization, the mission of the LAEDC is to attract, retain and grow businesses and jobs in the regions of Los Angeles County.

The LAEDC Consulting Practice offers unbiased, fee-based custom economic and policy research for public agencies and private firms. The Consulting Practice focuses on economic impact studies, regional industry analyses, economic forecasts and issue studies, particularly in water, transportation, infrastructure and environmental policy. Projects are selected based on their relevance to the *L.A. County Strategic Plan for Economic Development* and the potential for the research to shape policy that supports the LAEDC mission.

Executive Summary

Economic Impact of LAX Airfield and Terminal Construction Projects

Initial Spending

\$ 4.11 billion

Total Output

\$ 6.89 billion

Total Employment

39,900 jobs

Total Labor Income

\$ 2.62 billion

- We used spending estimates for both Bradley West & Related Projects and Central Terminal Area (CTA) programs as direct activity, and estimated the indirect and induced effects using models developed with the IMPLAN system from the Minnesota IMPLAN Group, Inc.
- All dollar figures are quoted in 2010 dollars.
- The total economic output includes direct, indirect and induced business revenues.
- **Direct revenues** are captured by construction, architecture and engineering firms hired by LAX.
- **Indirect and induced revenues** stem from the purchases made by LAX and its contractors and those generated by the spending of employees whose wages are sustained by both direct and indirect spending.
- Total employment includes direct, indirect, and induced jobs.
- **Direct employment** includes the construction workers and other employees hired to complete all of the capital improvement projects at LAX.
- **Indirect and induced workers** are those whose jobs are sustained by purchases for these projects and household purchases funded by project-related wages.
- Total labor income includes compensation and benefits of direct, indirect and induced workers.
- Our estimates for labor income are expressed in 2010 dollars.

Job creation estimates are measured on a job-count basis for both wage-earners and proprietors regardless of the number of hours worked. Following convention, we have estimated employment as if the projects take place in a single year. The jobs will be created over approximately 7 years during construction.

Industry Sector Impacts

The economic impact of the Bradley West & Related Projects and CTA construction programs at LAX spills across industries in Los Angeles County through indirect and induced effects. The exhibit below shows impacts by industry sector due to initial construction spending.

Bradley West & Related Projects and CTA Programs Total Economic Impact by Industry (\$ millions)			
Industry	Output	Jobs	Labor Income
Agriculture	\$ 0.9	10	\$ 0.3
Mining	40.8	60	9.6
Utilities	24.7	30	4.7
Construction	4,107.5	24,570	1,731.4
Manufacturing	573.9	970	73.1
Wholesale trade	154.2	840	60.2
Retail trade	199.5	2,280	84.0
Transportation and warehousing	76.9	520	31.2
Information	148.6	290	32.0
Finance and insurance	210.9	770	73.4
Real estate	335.6	660	29.9
Professional, scientific & technical services	444.4	2,690	230.0
Management of companies	28.8	110	12.7
Administrative and waste management	67.5	1,000	34.6
Education services	30.2	440	16.1
Health care and social assistance	179.4	1,750	97.9
Arts, entertainment and recreation	33.8	310	12.7
Accommodations and food services	74.4	1,080	26.6
Other services	121.9	1,350	46.4
Households	36.3	160	15.0
Total *	\$ 6,890.0	39,900	\$ 2,620.0

* May not sum due to rounding
Source: LAEDC

Much of the impact will occur in the construction industry, which accounts for about 60 percent of the total (direct, indirect and induced) output and employment generated by construction projects at the LAX and over two-thirds of the total labor income. However, other industries are also significantly impacted, including: manufacturing, professional and scientific services; real estate, finance and insurance services, as well as retail trade.

The values in the exhibit should be interpreted as illustrative of the industry effects rather than precise given model and data limitations. A description of these industries is provided in the Appendix.

Table of Contents

Introduction

Bradley West & Related Projects	1
CTA Program	2
Report Layout	2

Methodology

Findings

Total Economic Impact of Bradley West & Related Projects	4
Output Impact of Bradley West & Related Projects	5
Employment Impact of Bradley West & Related Projects	6
Labor Income Impact of Bradley West & Related Projects	7
Total Economic Impact of Current CTA Program	8
Output Impact of CTA Projects	9
Employment Impact of CTA Projects	9
Labor Income Impact of CTA Projects	9

Implications

Unemployment in Los Angeles County and Southern California	10
Construction Industry in Los Angeles County	11
The Importance of Modernizing LAX	12

Appendix

Description of Industry Sectors	A-1
Bradley West & Related Projects (Economic Impact of Individual Projects)	B-1
Construction Support Facilities	B-1
Crossfield Taxiway Project	B-2
LAX Aircraft Rescue & Fire Fighting Facility	B-3
Bradley-Aprons	B-4
Taxiline "S"	B-5
Taxiline "T"	B-6
Demolition of Existing Concourses	B-7
Pavement Mgt Program-VNY Taxiline A2 Rehabilitation and RSA Improvements	B-8
Bradley West Gates	B-9
Bradley West Core Improvements	B-10
Construction Traffic Mitigations	B-11
Art in Public Places	B-12
Central Utility Plant Replacement	B-13
Airport Response Coordination Center	B-14
AOA Perimeter Fence (World Way West) Phase 3	B-15
Theme Building Restoration	B-16
Aircraft & Noise Monitoring & Management System	B-17
Noise Mitigation/Soundproofing (City of LA)	B-18
Elevators & Escalators Replacement	B-19
TBIT Interior Improvements and Baggage Screening Facilities	B-20
Passenger Boarding Bridges Replacement & Extensions	B-21
Interim Taxiway Safety Improvement Project	B-22
CTA Program (Economic Impact of Current Projects)	C-1
Economic Impact of Terminal 4, 5 and 6 Improvements	C-1

Introduction

Los Angeles World Airports (LAWA) is in the midst of a multiyear, \$4.11 billion dollar renovation and improvement program at Los Angeles International Airport (LAX). There are two components to the construction effort: the \$3.48 billion Bradley West & Related Projects and the \$636 million Central Terminal Area (CTA) program. In this report, the Consulting Practice of the LAEDC estimates the total economic impact, including direct, indirect and induced jobs, labor income and business revenues generated in Los Angeles County due to the construction spending.



Bradley West & Related Projects

The Bradley West & Related Projects component consists of 22 separate projects, including aircraft taxilanes, replacement of the airport's central plant, airport gates, perimeter fencing, noise mitigation and monitoring, and baggage screening facilities. The projects are grouped into the 9 program elements shown in the exhibit below.

Bradley West & Related Projects by Element (\$ millions)	
Elements	Estimated Cost
Airside Element	\$ 611.3
Bradley West Element	1,404.9
CUP Replacement Element	372.8
Utilities & Infrastructure Element	13.7
Landside Element	26.6
Residential/Soundproofing Element	163.2
Terminal Element	140.7
TBIT Renovation Element	738.4
Work in Progress Element	6.8
Total *	\$ 3,478.0

* May not sum due to rounding
Sources: LAWA

CTA Program

The CTA program, covering improvements and renovations to the existing LAX terminals, includes both basic infrastructure upgrades and cosmetic improvements such as inline and checkpoint improvements, new escalators, new concession facilities, and remodeled baggage claim areas. The program consists of LAWA projects, airline projects, and concessions projects at Terminals 4, 5 and 6. Plans for projects at the other terminals are in the works, but have not yet been finalized. Their impact is not included here.

The CTA Program (\$ millions)	
Elements	Estimated Cost
Improvements at Terminals 4, 5 and 6	\$ 636.0
Total	\$ 636.0

Source: LAWA

Report Layout

The **methodology** used in our analysis is described in the next section.

The **findings** section provides summary tables describing the direct, indirect and induced economic impact of the Bradley West & Related Projects and CTA programs. The summary tables include results for individual projects in the Bradley West & Related Projects component and program elements in the CTA program.

The **implications** section provides context in the form of unemployment data, including a snapshot for the five counties of Southern California, time series data for unemployment in L.A. County, and specific information on unemployment in the construction industry in the county since the cyclical peak in December 2007. The section also touches briefly on the importance of the renovations to maintaining the airport's competitiveness.

The **Appendix** contains a description of the industry sectors that appear in tables throughout the report and, for all Bradley West & Related Projects and CTA program elements, tables showing the economic impact by industry.

Methodology

The total estimated economic impact includes output, employment, and labor income, which includes wages, salaries and benefits. The total impact includes *direct*, *indirect* and *induced effects*. *Direct* output is the revenue captured by construction, architecture and engineering firms hired by LAWA, and by the firms supplying the materials purchased by the airport and its contractors during the construction period. *Direct* employment includes workers and other employees hired by the LAWA and its contractors to complete the LAX airfield and terminal improvement projects. *Indirect effects* are those which stem from the employment and business revenues motivated by the purchases made by the transportation authorities and their contractors. For example, indirect jobs are sustained by the suppliers of the office supplies and insurance purchased by the construction contractors. *Induced effects* are those generated by the household spending of employees whose wages are sustained by both direct and indirect spending.



We used data supplied by LAWA for spending on construction and improvements. In all cases, we have used the latest available estimates for project cost at completion. As is typical in large construction projects, the final cost may vary from these estimates, in which case our estimates would be commensurately higher or lower depending on the direction of the variance.

We excluded spending for purchases from firms located outside Los Angeles County (since they will not add to the local economic impact), notably \$83 million allocated for purchases of elevators and escalators from vendors outside the state.

Indirect and induced effects generated by the initial spending were estimated using models developed with data and software from the Minnesota IMPLAN Group, Inc. We have proceeded as if the spending will take place within a single year, as is customary in this type of impact analysis. For long-term projects such as multi-year capital projects, we caution that the modeling system does not account for changes in prices and wages over time. Our estimates for labor income and output are reported in 2010 dollars.

Job creation estimates are measured on a job-count basis for both wage-and-salary workers and proprietors regardless of the number of hours worked, and are measured on an annual basis, i.e., the number of full and part time jobs created in one year.

Findings

Total Economic Impact of the Bradley West & Related Projects

Bradley West & Related Projects Economic Impact Summary (\$ millions)			
Impact	Output	Jobs	Labor Income
Direct	\$ 3,478	20,770	\$ 1,465
Indirect	1,227	5,690	395
Induced	1,121	7,270	357
Total *	\$ 5,826	33,730	\$ 2,217

* May not sum due to rounding
Source: LAWA, LAEDC

Bradley West & Related Projects Economic Impact by Industry (\$ millions)			
Industry	Output	Jobs	Labor Income
Agriculture	\$ 0.7	7	\$ 0.3
Mining	34.5	54	8.1
Utilities	20.9	22	4.0
Construction	3,469.7	20,752	1,462.5
Manufacturing	484.9	821	61.7
Wholesale trade	132.8	723	51.9
Retail trade	168.6	1,928	71.0
Transportation and warehousing	65.0	440	26.3
Information	125.7	243	27.0
Finance and insurance	178.3	650	62.0
Real estate	283.6	558	25.2
Professional, scientific & technical services	375.6	2,274	194.3
Management of companies	24.4	94	10.7
Administrative and waste management	57.1	848	29.2
Education services	25.6	369	13.6
Health care and social assistance	151.6	1,476	82.8
Arts, entertainment and recreation	25.8	249	9.3
Accommodations and food services	62.9	916	22.5
Other services	103.0	1,143	39.2
Households	30.7	136	12.7
Total *	\$ 5,826.0	33,730	\$ 2,217.0

* May not sum due to rounding
Source: LAEDC

Output Impact of Bradley West & Related Projects

Bradley West & Related Projects Output Impact by Project (\$millions)					
Project #	Project Description	Direct	Indirect	Induced	Total
M209A	Construction Support Facilities	\$ 7.8	\$ 2.8	\$ 2.5	\$ 13.1
M101A	Crossfield Taxiway Project	142.9	50.4	46.0	239.4
M107A	LAX Aircraft Rescue and Fire Fighting Facility	13.0	4.6	4.2	21.8
M205A	Bradley West - Aprons	102.8	36.3	33.1	172.3
M204A	Taxilane "S"	151.2	53.4	48.7	253.3
M306A	Taxilane "T"	144.9	51.2	46.7	242.8
M210A	Demolition of Existing Concourses	43.6	15.4	14.1	73.1
A010A	Pavement Management Program – VNY Taxilane A2 Rehabilitation & RSA	5.1	1.8	1.6	8.5
M201A	Bradley West Gates	700.6	247.4	225.8	1,173.8
M203A	Bradley West & Core Improvements	699.1	246.8	225.3	1,171.2
M107B	Construction Traffic Mitigations	2.3	0.8	0.7	3.8
M308A	Art in Public Places	3.0	0.7	1.1	4.8
C001A	Central Utility Plant	372.8	131.6	120.1	624.6
U009A	Airport Response Coordination Center (ARCC)	13.7	4.8	4.4	22.9
L003A	AOA Perimeter Fence (World Way West) Phase 3	15.2	5.4	4.9	25.5
L005A	Theme Building Restoration	11.4	4.0	3.7	19.1
S004A	Aircraft & Noise Monitoring & Mgt System (ANMMS)-LAX	3.2	1.1	1.0	5.4
S002A	Noise Mitigation/Soundproofing (City of LA)	160.0	56.5	51.6	268.1
T001A	Elevators & Escalators Replacement	140.7	48.9	45.0	234.5
B001A	TBIT Interior Improvements and Baggage Screening Facilities	734.0	259.1	236.5	1,229.6
B002A	Passenger Boarding Bridges (PBB) Replacements & Extensions	4.4	1.6	1.4	7.4
A006B	Interim Taxiway Safety Improvement Project (ITSIP)	6.8	2.4	2.2	11.3
	Total *	\$ 3,478.0	\$ 1,227.0	\$ 1,121.0	\$ 5,826.0

* May not sum due to rounding
Source: LAWA, LAEDC

Employment Impact of Bradley West & Related Projects

Bradley West & Related Projects Employment Impact by Project					
Project #	Project Description	Direct	Indirect	Induced	Total
M209A	Construction Support Facilities	50	10	20	80
M101A	Crossfield Taxiway Project	850	230	300	1,380
M107A	LAX Aircraft Rescue and Fire Fighting Facility	80	20	30	130
M205A	Bradley West - Aprons	610	170	220	1,000
M204A	Taxilane "S"	900	250	320	1,460
M306A	Taxilane "T"	870	240	300	1,410
M210A	Demolition of Existing Concourses	260	70	90	420
A010A	Pavement Management Program – VNY Taxilane A2 Rehabilitation & RSA	30	10	10	50
M201A	Bradley West Gates	4,190	1,150	1,460	6,800
M203A	Bradley West Core Improvements	4,180	1,140	1,460	6,780
M203B	Construction Traffic Mitigations	10	10	10	30
M308A	Art in Public Places	10	10	10	30
C001A	Central Utility Plant	2,230	610	780	3,620
U009A	Airport Response Coordination Center (ARCC)	80	20	30	130
L003A	AOA Perimeter Fence (World Way West) Phase 3	90	30	30	150
L005A	Theme Building Restoration	70	20	20	110
S004A	Aircraft & Noise Monitoring & Mgt System (ANMMS)-LAX	20	10	10	40
S002A	Noise Mitigation/Soundproofing (City of LA)	960	260	330	1,550
T001A	Elevators & Escalators Replacement	830	230	290	1,350
B001A	TBIT Interior Improvements and Baggage Screening Facilities	4,390	1,200	1,530	7,120
B002A	Passenger Boarding Bridges (PBB) Replacements & Extensions	30	10	10	50
A006B	Interim Taxiway Safety Improvement Project (ITSIP)	40	10	10	60
	Total *	20,770	5,690	7,270	33,730

* May not sum due to rounding
Source: LAEDC

Labor Income Impact of Bradley West & Related Projects

Bradley West & Related Projects Labor Income Impact by Project (\$millions)					
Project #	Project Description	Direct	Indirect	Induced	Total
M209A	Construction Support Facilities	\$ 3.3	\$ 0.9	\$ 0.8	\$ 5.0
M101A	Crossfield Taxiway Project	60.2	16.2	14.7	91.1
M107A	LAX Aircraft Rescue and Fire Fighting Facility	5.5	1.5	1.3	8.3
M205A	Bradley West - Aprons	43.3	11.7	10.6	65.5
M204A	Taxilane "S"	63.7	17.1	15.5	96.3
M306A	Taxilane "T"	61.0	16.4	14.9	92.4
M210A	Demolition of Existing Concourses	18.4	4.9	4.5	27.8
A010A	Pavement Management Program – VNY Taxilane A2 Rehabilitation & RSA	2.1	0.6	0.5	3.2
M201A	Bradley West Gates	295.1	79.5	72.0	446.5
M203A	Bradley West Core Improvements	294.5	79.3	71.8	445.6
M203B	Construction Traffic Mitigations	0.9	0.3	0.2	1.4
M308A	Art in Public Places	1.6	0.3	0.3	2.2
C001A	Central Utility Plant	157.0	42.3	38.3	237.6
U009A	Airport Response Coordination Center (ARCC)	5.8	1.6	1.4	8.7
L003A	AOA Perimeter Fence (World Way West) Phase 3	6.4	1.7	1.6	9.7
L005A	Theme Building Restoration	4.8	1.3	1.2	7.3
S004A	Aircraft & Noise Monitoring & Mgt System (ANMMS)-LAX	1.4	0.4	0.3	2.1
S002A	Noise Mitigation/Soundproofing (City of LA)	67.4	18.1	16.4	102.0
T001A	Elevators & Escalators Replacement	58.8	15.9	14.3	89.0
B001A	TBIT Interior Improvements and Baggage Screening Facilities	309.2	83.3	75.4	467.8
B002A	Passenger Boarding Bridges (PBB) Replacements & Extensions	1.9	0.5	0.5	2.8
A006B	Interim Taxiway Safety Improvement Project (ITSIP)	2.8	0.8	0.7	4.3
	Total *	\$ 1,465.0	\$ 395.0	\$ 357.0	\$ 2,217.0

* May not sum due to rounding
Source: LAEDC

Total Economic Impact of Current CTA Program

Current CTA Program Economic Impact Summary (\$ millions)			
Impact	Output	Jobs	Labor Income
Direct	\$ 636	3,800	\$ 268
Indirect	225	1,040	72
Induced	204	1,330	65
Total *	\$ 1,065	6,170	\$ 405

* May not sum due to rounding
Source: LAWA, LAEDC

Current CTA Program Economic Impact by Industry (\$ millions)			
Industry	Output	Jobs	Labor Income
Agriculture	\$ 0.1	1	\$ 0.1
Mining	6.3	10	1.5
Utilities	3.8	4	0.7
Construction	637.8	3,815	268.8
Manufacturing	89.0	151	11.3
Wholesale trade	21.4	117	8.4
Retail trade	30.9	353	13.0
Transportation and warehousing	11.9	80	4.8
Information	22.9	44	4.9
Finance and insurance	32.6	119	11.3
Real estate	51.9	102	4.6
Professional, scientific and technical services	68.9	417	35.6
Management of companies	4.4	17	1.9
Administrative and waste management	10.4	155	5.3
Education services	4.7	68	2.5
Health care and social assistance	27.8	270	15.1
Arts, entertainment and recreation	4.7	46	1.7
Accommodations and food services	11.5	168	4.1
Other services	18.9	209	7.2
Households	5.6	25	2.3
Total *	\$ 1,065.0	6,170	\$ 405.0

* May not sum due to rounding
Source: LAEDC

Output Impact of Current CTA Projects

CTA Program Output Impact by Project (\$millions)				
Elements	Direct	Indirect	Induced	Total
Improvements to Terminals 4, 5 and 6	\$ 636	\$ 225	\$ 204	\$ 1,065
Total	\$ 636	\$ 225	\$ 204	\$ 1,065

Source: LAWA, LAEDC

Employment Impact of Current CTA Projects

CTA Program Employment Impact by Project				
Elements	Direct	Indirect	Induced	Total
Improvements to Terminals 4, 5 and 6	3,800	1,040	1,330	6,170
Total	3,800	1,040	1,330	6,170

Source: LAEDC

Labor Income Impact of Current CTA Projects

CTA Program Labor Income Impact by Project (\$millions)				
Elements	Direct	Indirect	Induced	Total
Improvements to Terminals 4, 5 and 6	\$ 268	\$ 72	\$ 65	\$ 405
Total	\$ 268	\$ 72	\$ 65	\$ 405

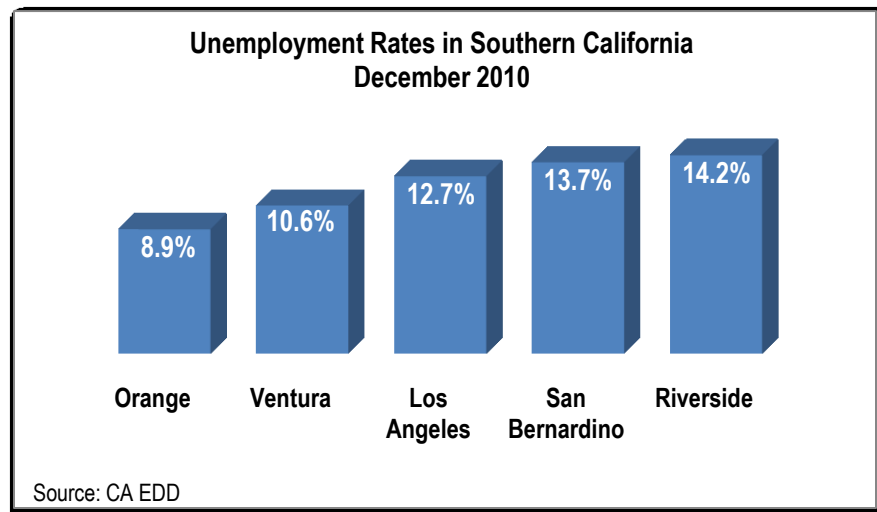
Source: LAEDC

Implications

LAWA is in the midst of a \$4.11 billion renovation and improvement program to modernize LAX. The timing of this project is fortuitous, both to position the airport to be competitive as a leading global gateway and because the schedule projects will create an average of 5,500 to 6,000 jobs per year during the construction period. These jobs will be most welcome at a time when the county economy is recovering from a deep recession, unemployment remains stubbornly high and the construction industry has been particularly hard hit.

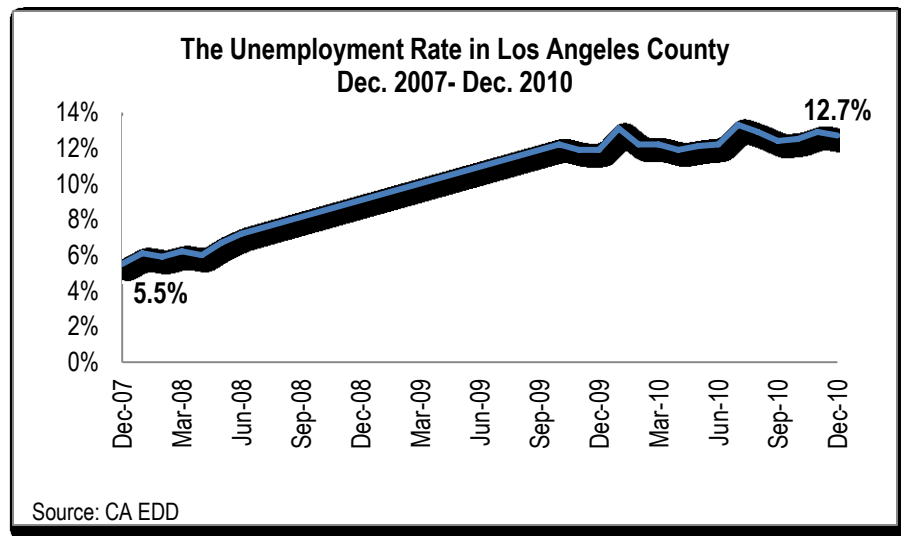
Unemployment in Los Angeles County and Southern California

In December 2010, the unemployment rate in the five counties of Southern California ranged from 8.9 percent in Orange County to 14.2 percent in Riverside County.



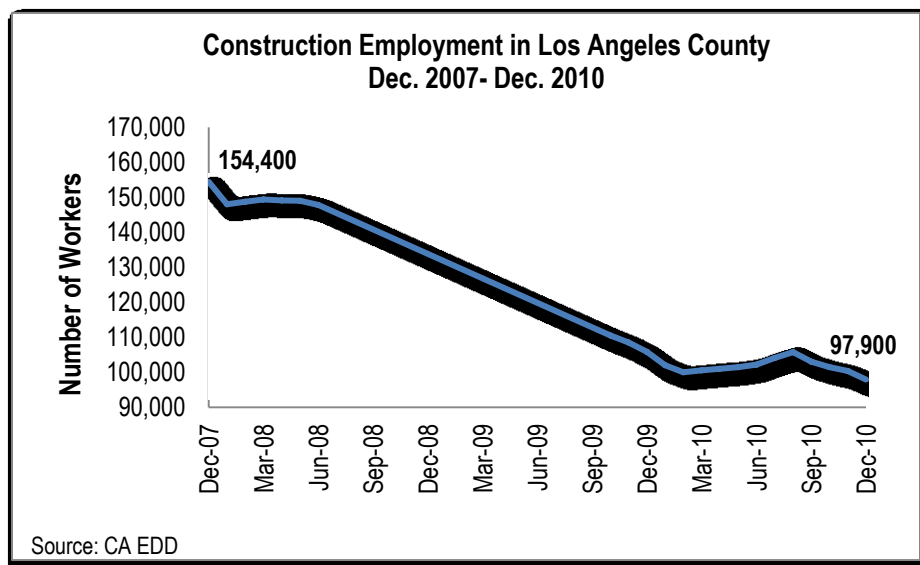
Between December 2007, the official beginning of the recession according to the National Bureau of Economic Research (NBER), and December 2010, the unemployment rate in Los Angeles County more than doubled, rising from 5.5 percent to 12.7 percent.

Other than Orange County, unemployment in the counties of Southern California remains in the double-digits.



Construction Industry in Los Angeles County

While total nonfarm employment in the county shrank by at least 382,500 jobs during this two-year period, almost 15 percent of these losses, or 56,500 jobs, were in the construction sector. Although the number of construction workers slightly improved between January and August of 2010, it continued its downward sloping trend in the fourth quarter of 2010, as shown in the chart below.



The LAX Airfield and Terminal Construction project will create 39,900 jobs over the course of the program, or an average of 5,500 to 6,000 per year. Of these, between 3,500 and 4,000 jobs will be in construction industries. This represents more than 6 percent of the

construction jobs lost over the past two years, and more than 3 percent of *current* industry employment of 97,900 workers.

The most recent recession, which according to the NBER ended in June of 2009, hit construction harder than perhaps any other industry. Any new activity in the sector will be a welcome relief, particularly during these continued stages of economic recovery.

The Importance of Modernizing LAX

LAX is an important regional and global transportation hub. It is the primary international gateway for Southern California, from San Luis Obispo to the Mexican border. Flights to and from LAX, particularly those serving markets overseas, make a substantial contribution to the regional economy in three ways. First, there is the activity associated with airport operations, including LAWA employees, airline personnel, and people working for related services such as car rental firms and taxis. Second, tourists arriving at LAX generate spending at hotels, amusement parks, restaurants, museums and other attractions. Third, the flights serve as important conduits for trade, particularly exports.

The need to upgrade and modernize this vital regional asset was recognized in the early 1990s, but progress was repeatedly delayed. LAX saw its passenger traffic fall sharply after September 11, 2001 and remain low during the recession, as it did at most comparable airports. When the economy improved, however, passenger levels recovered at almost all major U.S. airports *except* LAX. The airport lost flights and passengers, most notably to San Francisco which invested billions of dollars in improvements.

At the same time, two new competitive threats appeared in the form of latest aircraft from Airbus and Boeing. First, the giant 550-passenger Airbus A-380 was too large for LAX (and most other airports), necessitating modifications to runways, taxiways and gates to accommodate the aircraft and upgrades to the passenger boarding areas, terminals and baggage handling systems to handle so many passengers at once.

Second, the new Boeing 787 Dreamliner promised to introduce a heretofore unfamiliar competitive pressure. With its fuel efficient design and extremely long range, the B-787 could open up nonstop routes to far flung points around the globe. This long-range capability is a double-edged sword for LAX.

On one hand, the B-787 could open up direct service to new cities in existing markets (bypassing congested hubs) and to new markets that were previously unreachable (connecting Southern California directly to cities in India, for example). On the other hand, the extended range of the B-787 also means that many international airlines will for the first time have the option of bypassing LAX entirely. In this context, the problem is not so much the size of the gates, but their location, ease of use, decor and amenities. Airlines are more likely to add routes to attractive, modern airports where they can use direct ‘contact’ gates, rather than remote gates that require the extra time and hassle of a shuttle bus.

Fortunately for LAX and the regional economy it serves, both new aircraft were beset by difficulties that delayed their introduction by years. The A-380 is now in limited service, and the Dreamliner is still in flight testing. The delays have provided LAX with a window of opportunity to complete its modernization and renovation program (now well underway). By the time the Dreamliner enters service, Los Angeles will once again boast a modern airport that will position the region to compete for additional flights and the economic activity they represent.

Appendix

Description of Industry Sectors

The industry sectors used in this report are established by the North American Industry Classification System (NAICS). NAICS divides the economy into twenty sectors, and groups industries within these sectors according to production criteria. Listed below is a short description of each sector as taken from the sourcebook, *North American Industry Classification System*, published by the U.S. Office of Management and Budget (2007).

Agriculture, Forestry, Fishing and Hunting: Activities of this sector are growing crops, raising animals, harvesting timber, and harvesting fish and other animals from farms, ranches, or the animals' natural habitats.

Mining: Activities of this sector are extracting naturally-occurring mineral solids, such as coal and ore; liquid minerals, such as crude petroleum; and gases, such as natural gas; and beneficiating (e.g., crushing, screening, washing and flotation) and other preparation at the mine site, or as part of mining activity.

Utilities: Activities of this sector are generating, transmitting, and/or distributing electricity, gas, steam, and water and removing sewage through a permanent infrastructure of lines, mains, and pipes.

Construction: Activities of this sector are erecting buildings and other structures (including additions); heavy construction other than buildings; and alterations, reconstruction, installation, and maintenance and repairs.

Manufacturing: Activities of this sector are the mechanical, physical, or chemical transformation of material, substances, or components into new products.

Wholesale Trade: Activities of this sector are selling or arranging for the purchase or sale of goods for resale; capital or durable non-consumer goods; and raw and intermediate materials and supplies used in production, and providing services incidental to the sale of the merchandise.

Retail Trade: Activities of this sector are retailing merchandise generally in small quantities to the general public and providing services incidental to the sale of the merchandise.

Transportation and Warehousing: Activities of this sector are providing transportation of passengers and cargo, warehousing and storing goods, scenic and sightseeing transportation, and supporting these activities.

Information: Activities of this sector are distributing information and cultural products, providing the means to transmit or distribute these products as data or communications, and processing data.

Finance and Insurance: Activities of this sector involve the creation, liquidation, or change of ownership of financial assets (financial transactions) and/or facilitating financial transactions.

Real Estate and Rental and Leasing: Activities of this sector are renting, leasing, or otherwise allowing the use of tangible or intangible assets (except copyrighted works), and providing related services.

Professional, Scientific, and Technical Services: Activities of this sector are performing professional, scientific, and technical services for the operations of other organizations.

Management of Companies and Enterprises: Activities of this sector are the holding of securities of companies and enterprises, for the purpose of owning controlling interest or influencing their management decision, or administering, overseeing, and managing other establishments of the same company or enterprise and normally undertaking the strategic or organizational planning and decision-making of the company or enterprise.

Administrative and Support and Waste Management and Remediation Services: Activities of this sector are performing routine support activities for the day-to-day operations of other organizations, such as: office administration, hiring and placing of personnel, document preparation and similar clerical services, solicitation, collection, security and surveillance services, cleaning, and waste disposal services.

Educational Services: Activities of this sector are providing instruction and training in a wide variety of subjects. Educational services are usually delivered by teachers or instructors that explain, tell, demonstrate, supervise, and direct learning. Instruction is imparted in diverse settings, such as educational institutions, the workplace, or the home through correspondence, television, or other means.

Health Care and Social Assistance: Activities of this sector are operating or providing health care and social assistance for individuals.

Arts, Entertainment and Recreation: Activities of this sector are operating facilities or providing services to meet varied cultural, entertainment, and recreational interests of their patrons, such as: (1) producing, promoting, or participating in live performances, events, or exhibits intended for public viewing; (2) preserving and exhibiting objects and sites of historical, cultural, or educational interest; and (3) operating facilities or providing services that enable patrons to participate in recreational activities or pursue amusement, hobby, and leisure-time interests.

Accommodation and Food Services: Activities of this sector are providing customers with lodging and/or preparing meals, snacks, and beverages for immediate consumption.

Other Services (except Public Administration): Activities of this sector are providing services not specifically provided for elsewhere in the classification system. Establishments in this sector are primarily engaged in activities, such as equipment and machinery repairing, promoting or administering religious activities, grant-making, advocacy, and providing dry-cleaning and laundry services, personal care services, death care services, pet care services, photofinishing services, temporary parking services, and dating services.

Bradley West & Related Projects (Economic Impact of Individual Projects)

Economic Impact of Construction Support Facilities

Construction Support Facilities – M209A (\$ millions)			
Impact	Output	Jobs	Labor Income
Direct	\$ 7.8	50	\$ 3.3
Indirect	2.8	10	0.9
Induced	2.5	20	0.8
Total *	\$ 13.1	80	\$ 5.0

* May not sum due to rounding
Source: LAWA, LAEDC

Construction Support Facilities – M209A Economic Impact by Industry (\$ thousands)			
Industry	Output	Jobs	Labor Income
Agriculture	\$ 2	1	\$ 1
Mining	78	1	18
Utilities	47	1	9
Construction	7,821	47	3,297
Manufacturing	1,091	2	139
Wholesale trade	262	1	103
Retail trade	379	4	159
Transportation and warehousing	145	1	59
Information	281	1	60
Finance and insurance	400	2	139
Real estate	637	1	57
Professional, scientific & technical services	844	5	437
Management of companies	54	1	24
Administrative and waste management	128	2	65
Education services	57	1	31
Health care and social assistance	340	3	186
Arts, entertainment and recreation	58	1	21
Accommodations and food services	141	2	51
Other services	231	3	88
Households	69	1	28
Total *	\$ 13,100	80	\$ 5,000

* May not sum due to rounding
Source: LAEDC

Economic Impact of Crossfield Taxiway Project

Crossfield Taxiway Project – M101A (\$ millions)			
Impact	Output	Jobs	Labor Income
Direct	\$ 142.9	850	\$ 60.2
Indirect	50.4	230	16.2
Induced	46.0	300	14.7
Total *	\$ 239.4	1,380	\$ 91.1

* May not sum due to rounding

Source: LAWA, LAEDC

Crossfield Taxiway Project – M101A Economic Impact by Industry (\$ thousands)			
Industry	Output	Jobs	Labor Income
Agriculture	\$ 30	1	\$ 10
Mining	1,420	2	330
Utilities	860	1	160
Construction	143,290	857	60,400
Manufacturing	19,990	34	2,540
Wholesale trade	4,810	26	1,880
Retail trade	6,940	79	2,920
Transportation and warehousing	2,670	18	1,080
Information	5,150	10	1,110
Finance and insurance	7,330	27	2,550
Real estate	11,660	23	1,040
Professional, scientific and technical services	15,470	94	8,010
Management of companies	990	4	440
Administrative and waste management	2,340	35	1,200
Education services	1,050	15	560
Health care and social assistance	6,230	61	3,400
Arts, entertainment and recreation	1,060	10	380
Accommodations and food services	2,590	38	930
Other services	4,240	47	1,610
Households	1,260	6	520
Total *	\$ 239,400	1,380	\$ 91,100

* May not sum due to rounding

Source: LAEDC

Economic Impact of LAX Aircraft Rescue & Fire Fighting Facility

LAX Aircraft Rescue & Fire Fighting Facility – M107A (\$millions)			
Impact	Output	Jobs	Labor Income
Direct	\$ 13.0	80	\$ 5.5
Indirect	4.6	20	1.5
Induced	4.2	30	1.3
Total *	\$ 21.8	130	\$ 8.3

* May not sum due to rounding

Source: LAWA, LAEDC

LAX Aircraft Rescue & Fire Fighting Facility – M107A Economic Impact by Industry (\$ thousands)			
Industry	Output	Jobs	Labor Income
Agriculture	\$ -	-	\$ -
Mining	130	0	30
Utilities	80	0	10
Construction	13,070	78	5,510
Manufacturing	1,820	3	230
Wholesale trade	440	2	170
Retail trade	630	7	270
Transportation and warehousing	240	2	100
Information	470	1	100
Finance and insurance	670	2	230
Real estate	1,060	2	90
Professional, scientific & technical services	1,410	9	730
Management of companies	90	0	40
Administrative and waste management	210	3	110
Education services	100	1	50
Health care and social assistance	570	6	310
Arts, entertainment and recreation	100	1	30
Accommodations and food services	240	3	80
Other services	390	4	150
Households	110	1	50
Total *	\$ 21,800	130	\$ 8,300

* May not sum due to rounding

Source: LAEDC

Economic Impact of Bradley-Aprons

Bradley-Aprons – M205A (\$ millions)			
Impact	Output	Jobs	Labor Income
Direct	\$ 102.8	610	\$ 43.3
Indirect	36.3	170	11.7
Induced	33.1	220	10.6
Total *	\$ 172.3	1,000	\$ 65.5

* May not sum due to rounding

Source: LAWA, LAEDC

Bradley-Aprons – M205A Economic Impact by Industry (\$ thousands)			
Industry	Output	Jobs	Labor Income
Agriculture	\$ 20	0	\$ 10
Mining	1,020	2	240
Utilities	620	1	120
Construction	103,110	617	43,460
Manufacturing	14,380	24	1,830
Wholesale trade	3,460	19	1,350
Retail trade	5,000	57	2,100
Transportation and warehousing	1,920	13	780
Information	3,700	7	800
Finance and insurance	5,270	19	1,830
Real estate	8,390	17	750
Professional, scientific & technical services	11,130	67	5,760
Management of companies	720	3	310
Administrative and waste management	1,680	25	860
Education services	760	11	400
Health care and social assistance	4,490	44	2,450
Arts, entertainment and recreation	760	7	270
Accommodations and food services	1,860	27	670
Other services	3,050	34	1,160
Households	910	4	370
Total *	\$ 172,300	1,000	\$ 65,500

* May not sum due to rounding

Source: LAEDC

Economic Impact of Taxilane “S”

Taxilane “S” – M204A (\$ millions)			
Impact	Output	Jobs	Labor Income
Direct	\$ 151.2	900	\$ 63.7
Indirect	53.4	250	17.1
Induced	48.7	320	15.5
Total *	\$ 253.3	1,470	\$ 96.3

* May not sum due to rounding
Source: LAWA, LAEDC

Taxilane “S” – M204A Economic Impact by Industry (\$ thousands)			
Industry	Output	Jobs	Labor Income
Agriculture	\$ 30	0	\$ 10
Mining	1,500	2	350
Utilities	910	1	170
Construction	151,600	907	63,900
Manufacturing	21,150	36	2,690
Wholesale trade	5,090	28	1,990
Retail trade	7,340	84	3,090
Transportation and warehousing	2,820	19	1,140
Information	5,450	11	1,170
Finance and insurance	7,750	28	2,700
Real estate	12,340	24	1,100
Professional, scientific & technical services	16,370	99	8,470
Management of companies	1,050	4	460
Administrative and waste management	2,480	37	1,270
Education services	1,110	16	590
Health care and social assistance	6,600	64	3,600
Arts, entertainment and recreation	1,120	11	400
Accommodations and food services	2,740	40	980
Other services	4,490	50	1,710
Households	1,330	6	550
Total *	\$ 253,300	1,470	\$ 96,300

* May not sum due to rounding
Source: LAEDC

Economic Impact of Taxilane “T”

Taxilane “T” – M306A (\$ millions)			
Impact	Output	Jobs	Labor Income
Direct	\$ 144.9	870	\$ 61.0
Indirect	51.2	240	16.4
Induced	46.7	300	14.9
Total *	\$ 242.8	1,410	\$ 92.4

* May not sum due to rounding
Source: LAWA, LAEDC

Taxilane “T” – M306A Economic Impact by Industry (\$ thousands)			
Industry	Output	Jobs	Labor Income
Agriculture	\$ 30	1	\$ 10
Mining	1,440	2	340
Utilities	870	1	170
Construction	145,310	869	61,250
Manufacturing	20,270	34	2,580
Wholesale trade	4,880	27	1,910
Retail trade	7,040	81	2,960
Transportation and warehousing	2,700	18	1,090
Information	5,220	10	1,120
Finance and insurance	7,430	27	2,580
Real estate	11,830	23	1,050
Professional, scientific & technical services	15,690	95	8,120
Management of companies	1,010	4	440
Administrative and waste management	2,370	35	1,220
Education services	1,070	15	570
Health care and social assistance	6,320	62	3,450
Arts, entertainment and recreation	1,070	10	390
Accommodations and food services	2,620	38	940
Other services	4,300	48	1,640
Households	1,280	6	530
Total *	\$ 242,800	1,410	\$ 92,400

* May not sum due to rounding
Source: LAEDC

Economic Impact of Demolition of Existing Concourses

Demolition of Existing Concourses – M210A (\$ millions)			
Impact	Output	Jobs	Labor Income
Direct	\$ 43.6	260	\$ 18.4
Indirect	15.4	70	4.9
Induced	14.1	90	4.5
Total *	\$ 73.1	420	\$ 27.8

* May not sum due to rounding
Source: LAWA, LAEDC

Demolition of Existing Concourses – M2010A Economic Impact by Industry (\$ thousands)			
Industry	Output	Jobs	Labor Income
Agriculture	\$ 10	0	\$ -
Mining	430	1	100
Utilities	260	0	50
Construction	43,730	262	18,430
Manufacturing	6,100	10	780
Wholesale trade	1,470	8	570
Retail trade	2,120	24	890
Transportation and warehousing	810	6	330
Information	1,570	3	340
Finance and insurance	2,240	8	780
Real estate	3,560	7	320
Professional, scientific & technical services	4,720	29	2,440
Management of companies	300	1	130
Administrative and waste management	710	11	370
Education services	320	5	170
Health care and social assistance	1,900	19	1,040
Arts, entertainment and recreation	320	3	120
Accommodations and food services	790	12	280
Other services	1,290	14	490
Households	380	2	160
Total *	\$ 73,100	420	\$ 27,800

* May not sum due to rounding
Source: LAEDC

Economic Impact of Pavement Management Program – VNY Taxilane A2 Rehabilitation and RSA Improvements

Pavement Management Program – VNY Taxilane A2 Rehabilitation and RSA Improvements –A010A (\$ millions)			
Impact	Output	Jobs	Labor Income
Direct	\$ 5.1	30	\$ 2.1
Indirect	1.8	10	0.6
Induced	1.6	10	0.5
Total *	\$ 8.5	50	\$ 3.2

* May not sum due to rounding

Source: LAWA, LAEDC

Pavement Management Program – VNY Taxilane A2 Rehabilitation and RSA Improvements –A010A Economic Impact by Industry (\$ thousands)			
Industry	Output	Jobs	Labor Income
Agriculture	\$ -	-	\$ -
Mining	50	0	10
Utilities	30	1	10
Construction	5,080	30	2,140
Manufacturing	710	1	90
Wholesale trade	170	1	70
Retail trade	250	3	100
Transportation and warehousing	90	1	40
Information	180	0	40
Finance and insurance	260	1	90
Real estate	410	1	40
Professional, scientific & technical services	550	3	280
Management of companies	40	1	20
Administrative and waste management	80	1	40
Education services	40	1	20
Health care and social assistance	220	2	120
Arts, entertainment and recreation	40	1	10
Accommodations and food services	90	1	30
Other services	150	2	60
Households	40	1	20
Total *	\$ 8,500	50	\$ 3,200

* May not sum due to rounding

Source: LAEDC

Economic Impact of Bradley West Gates

Bradley West Gates – M201A (\$ millions)			
Impact	Output	Jobs	Labor Income
Direct	\$ 700.6	4,190	\$ 295.1
Indirect	247.4	1,150	79.5
Induced	225.8	1,460	72.0
Total *	\$ 1,173.8	6,800	\$ 446.5

* May not sum due to rounding

Source: LAWA, LAEDC

Bradley West Gates – M201A Economic Impact by Industry (\$ thousands)			
Industry	Output	Jobs	Labor Income
Agriculture	\$ 150	1	\$ 60
Mining	6,970	11	1,640
Utilities	4,200	4	800
Construction	702,610	4,202	296,160
Manufacturing	98,010	166	12,480
Wholesale trade	23,580	129	9,210
Retail trade	34,040	389	14,330
Transportation and warehousing	13,070	88	5,290
Information	25,240	49	5,420
Finance and insurance	35,930	131	12,500
Real estate	57,190	112	5,090
Professional, scientific & technical services	75,850	459	39,260
Management of companies	4,880	19	2,140
Administrative and waste management	11,480	171	5,880
Education services	5,150	74	2,740
Health care and social assistance	30,570	298	16,690
Arts, entertainment and recreation	5,200	50	1,870
Accommodations and food services	12,680	185	4,540
Other services	20,800	231	7,920
Households	6,180	27	2,550
Total *	\$ 1,173,800	6,800	\$ 446,500

* May not sum due to rounding

Source: LAEDC

Economic Impact of Bradley West Core Improvements

Bradley West Core Improvements – M203A (\$ millions)			
Impact	Output	Jobs	Labor Income
Direct	\$ 699.1	4,180	\$ 294.5
Indirect	246.8	1,140	79.3
Induced	225.3	1460	71.8
Total *	\$ 1,171.2	6,780	\$ 445.6

* May not sum due to rounding

Source: LAWA, LAEDC

Bradley West Core Improvements – M203A Economic Impact by Industry (\$ thousands)			
Industry	Output	Jobs	Labor Income
Agriculture	\$ 150	1	\$ 60
Mining	6,950	11	1,640
Utilities	4,190	4	800
Construction	701,070	4,193	295,510
Manufacturing	97,800	166	12,450
Wholesale trade	23,520	129	9,190
Retail trade	33,970	388	14,300
Transportation and warehousing	13,040	88	5,280
Information	25,180	49	5,410
Finance and insurance	35,850	131	12,470
Real estate	57,060	112	5,080
Professional, scientific & technical services	75,690	458	39,170
Management of companies	4,870	19	2,140
Administrative and waste management	11,450	170	5,860
Education services	5,140	74	2,740
Health care and social assistance	30,500	297	16,650
Arts, entertainment and recreation	5,190	50	1,860
Accommodations and food services	12,650	184	4,530
Other services	20,750	230	7,900
Households	6,160	27	2,540
Total *	\$ 1,171,200	6,780	\$ 445,600

* May not sum due to rounding

Source: LAEDC

Economic Impact of Construction Traffic Mitigations

Construction Traffic Mitigations – M107B (\$ millions)			
Impact	Output	Jobs	Labor Income
Direct	\$ 2.3	10	\$ 0.9
Indirect	0.8	10	0.3
Induced	0.7	10	0.2
Total *	\$ 3.8	30	\$ 1.4

* May not sum due to rounding

Source: LAWA, LAEDC

Construction Traffic Mitigations – M107B Economic Impact by Industry (\$ thousands)			
Industry	Output	Jobs	Labor Income
Agriculture	\$ -	-	\$ -
Mining	20	1	10
Utilities	10	1	10
Construction	2,260	14	950
Manufacturing	320	1	40
Wholesale trade	80	1	30
Retail trade	110	1	50
Transportation and warehousing	40	1	20
Information	80	1	20
Finance and insurance	120	1	40
Real estate	180	1	20
Professional, scientific & technical services	240	2	130
Management of companies	20	1	10
Administrative and waste management	40	1	20
Education services	20	1	10
Health care and social assistance	100	1	50
Arts, entertainment and recreation	20	1	10
Accommodations and food services	40	1	10
Other services	70	1	30
Households	20	1	10
Total *	\$ 3,800	30	\$ 1,400

* May not sum due to rounding

Source: LAEDC

Economic Impact of “Art in Public Places”

Art in Public Places – M308A (\$ millions)			
Impact	Output	Jobs	Labor Income
Direct	\$ 3.0	12	\$ 1.6
Indirect	0.7	6	0.3
Induced	1.1	7	0.4
Total *	\$ 4.8	25	\$ 2.2

* May not sum due to rounding

Source: LAWA, LAEDC

Art in Public Places – M308A Economic Impact by Industry (\$ thousands)			
Industry	Output	Jobs	Labor Income
Agriculture	\$ -	-	\$ -
Mining	10	-	-
Utilities	10	-	-
Construction	10	-	-
Manufacturing	120	0	20
Wholesale trade	50	0	20
Retail trade	130	2	60
Transportation and warehousing	40	0	20
Information	170	0	40
Finance and insurance	160	1	50
Real estate	240	0	20
Professional, scientific & technical services	220	1	100
Management of companies	30	0	10
Administrative and waste management	60	1	30
Education services	30	0	10
Health care and social assistance	150	2	80
Arts, entertainment and recreation	3,270	15	1,700
Accommodations and food services	60	1	20
Other services	60	1	20
Households	30	0	10
Total *	\$ 4,800	25	\$ 2,200

* May not sum due to rounding

Source: LAEDC

Economic Impact of Central Utility Plant Replacement

Central Utility Plant Replacement – C001A (\$ millions)			
Impact	Output	Jobs	Labor Income
Direct	\$ 372.8	2,230	\$ 157.0
Indirect	131.6	610	42.3
Induced	120.1	780	38.3
Total *	\$ 624.6	3,620	\$ 237.6

* May not sum due to rounding
Source: LAWA, LAEDC

Central Utility Plant Replacement – C001A Economic Impact by Industry (\$ thousands)			
Industry	Output	Jobs	Labor Income
Agriculture	\$ 80	1	\$ 30
Mining	3,710	6	870
Utilities	2,240	2	430
Construction	373,860	2,236	157,580
Manufacturing	52,150	88	6,640
Wholesale trade	12,540	69	4,900
Retail trade	18,110	207	7,620
Transportation and warehousing	6,950	47	2,810
Information	13,430	26	2,890
Finance and insurance	19,120	70	6,650
Real estate	30,430	60	2,710
Professional, scientific & technical services	40,360	244	20,890
Management of companies	2,600	10	1,140
Administrative and waste management	6,110	91	3,130
Education services	2,740	40	1,460
Health care and social assistance	16,270	158	8,880
Arts, entertainment and recreation	2,770	27	990
Accommodations and food services	6,750	98	2,410
Other services	11,070	123	4,210
Households	3,290	15	1,350
Total *	\$ 624,600	3,620	\$ 237,600

* May not sum due to rounding
Source: LAEDC

Economic Impact of Airport Response Coordination Center

Airport Response Coordination Center – U009A (\$ millions)			
Impact	Output	Jobs	Labor Income
Direct	\$ 13.7	80	\$ 5.8
Indirect	4.8	20	1.6
Induced	4.4	30	1.4
Total *	\$ 22.9	130	\$ 8.7

* May not sum due to rounding
Source: LAWA, LAEDC

Airport Response Coordination Center – U009A Economic Impact by Industry (\$ thousands)			
Industry	Output	Jobs	Labor Income
Agriculture	\$ -	-	\$ -
Mining	140	1	30
Utilities	80	1	20
Construction	13,740	82	5,790
Manufacturing	1,920	3	240
Wholesale trade	460	3	180
Retail trade	670	8	280
Transportation and warehousing	260	2	100
Information	490	1	110
Finance and insurance	700	3	240
Real estate	1,120	2	100
Professional, scientific & technical services	1,480	9	770
Management of companies	100	1	40
Administrative and waste management	220	3	110
Education services	100	2	50
Health care and social assistance	600	6	330
Arts, entertainment and recreation	100	1	40
Accommodations and food services	250	4	90
Other services	410	5	150
Households	120	1	50
Total *	\$ 22,900	130	\$ 8,700

* May not sum due to rounding
Source: LAEDC

Economic Impact of AOA Perimeter Fence (World Way West) Phase 3

AOA Perimeter Fence (World Way West) Phase 3 – L003A (\$ millions)			
Impact	Output	Jobs	Labor Income
Direct	\$ 15.2	90	\$ 6.4
Indirect	5.4	30	1.7
Induced	4.9	30	1.6
Total *	\$ 25.5	150	\$ 9.7

* May not sum due to rounding
Source: LAWA, LAEDC

AOA Perimeter Fence (World Way West) Phase 3 – L003A Economic Impact by Industry (\$ thousands)			
Industry	Output	Jobs	Labor Income
Agriculture	\$ -	-	\$ -
Mining	150	1	40
Utilities	90	1	20
Construction	15,260	91	6,430
Manufacturing	2,130	4	270
Wholesale trade	510	3	200
Retail trade	740	9	310
Transportation and warehousing	280	2	110
Information	550	1	120
Finance and insurance	780	3	270
Real estate	1,240	2	110
Professional, scientific & technical services	1,650	10	850
Management of companies	110	1	50
Administrative and waste management	250	4	130
Education services	110	2	60
Health care and social assistance	660	7	360
Arts, entertainment and recreation	110	1	40
Accommodations and food services	280	4	100
Other services	450	5	170
Households	130	1	60
Total *	\$ 25,500	150	\$ 9,700

* May not sum due to rounding
Source: LAEDC

Economic Impact of Theme Building Restoration

Theme Building Restoration – L005A (\$ millions)			
Impact	Output	Jobs	Labor Income
Direct	\$ 11.4	70	\$ 4.8
Indirect	4.0	20	1.3
Induced	3.7	20	1.2
Total *	\$ 19.1	110	\$ 7.3

* May not sum due to rounding

Source: LAWA, LAEDC

Theme Building Restoration – L005A Economic Impact by Industry (\$ thousands)			
Industry	Output	Jobs	Labor Income
Agriculture	\$ -	-	\$ -
Mining	110	1	30
Utilities	70	1	10
Construction	11,460	69	4,830
Manufacturing	1,600	3	200
Wholesale trade	380	2	150
Retail trade	560	6	230
Transportation and warehousing	210	1	90
Information	410	1	90
Finance and insurance	590	2	200
Real estate	930	2	80
Professional, scientific & technical services	1,240	8	640
Management of companies	80	1	30
Administrative and waste management	190	3	100
Education services	80	1	40
Health care and social assistance	500	5	270
Arts, entertainment and recreation	80	1	30
Accommodations and food services	210	3	70
Other services	340	4	130
Households	100	1	40
Total *	\$ 19,100	110	\$ 7,300

* May not sum due to rounding

Source: LAEDC

Economic Impact of Aircraft & Noise Monitoring & Management System

Aircraft & Noise Monitoring & Management System–LAX –S004A (\$ millions)			
Impact	Output	Jobs	Labor Income
Direct	\$ 160.0	960	\$ 67.4
Indirect	56.5	260	18.1
Induced	51.6	330	16.4
Total *	\$ 268.1	1,550	\$ 102.0

* May not sum due to rounding
Source: LAWA, LAEDC

Aircraft & Noise Monitoring & Management System–LAX –S004A Economic Impact by Industry (\$ thousands)			
Industry	Output	Jobs	Labor Income
Agriculture	\$ 30	0	\$ 10
Mining	1,590	3	370
Utilities	960	1	180
Construction	160,460	960	67,630
Manufacturing	22,380	38	2,850
Wholesale trade	5,380	29	2,100
Retail trade	7,770	89	3,270
Transportation and warehousing	2,980	20	1,210
Information	5,760	11	1,240
Finance and insurance	8,210	30	2,850
Real estate	13,060	26	1,160
Professional, scientific & technical services	17,320	105	8,970
Management of companies	1,110	4	490
Administrative and waste management	2,620	39	1,340
Education services	1,180	17	630
Health care and social assistance	6,980	68	3,810
Arts, entertainment and recreation	1,190	11	430
Accommodations and food services	2,900	42	1,040
Other services	4,750	53	1,810
Households	1,410	6	580
Total *	\$ 268,100	1,550	\$ 102,000

* May not sum due to rounding
Source: LAEDC

Economic Impact of Noise Mitigation/Soundproofing (City of LA)

Noise Mitigation/Soundproofing (City of LA) – S002A (\$ millions)			
Impact	Output	Jobs	Labor Income
Direct	\$ 3.2	20	\$ 1.4
Indirect	1.1	10	0.4
Induced	1.0	10	0.3
Total	\$ 5.4	40	\$ 2.1

* May not sum due to rounding
Source: LAWA, LAEDC

Noise Mitigation/Soundproofing (City of LA) – S002A Economic Impact by Industry (\$ thousands)			
Industry	Output	Jobs	Labor Income
Agriculture	\$ 1	-	\$ 0
Mining	32	1	8
Utilities	19	1	4
Construction	3,242	19	1,367
Manufacturing	452	1	58
Wholesale trade	109	1	43
Retail trade	157	2	66
Transportation and warehousing	60	1	24
Information	116	1	25
Finance and insurance	166	1	58
Real estate	264	1	23
Professional, scientific & technical services	350	2	181
Management of companies	23	1	10
Administrative and waste management	53	1	27
Education services	24	1	13
Health care and social assistance	141	1	77
Arts, entertainment and recreation	24	1	9
Accommodations and food services	59	1	21
Other services	96	1	37
Households	28	1	12
Total *	\$ 5,400	40	\$ 2,100

* May not sum due to rounding
Source: LAEDC

Economic Impact of Elevators & Escalators Replacement

Elevators & Escalators Replacement – T001A (\$ millions)			
Impact	Output	Jobs	Labor Income
Direct	\$ 140.7	830	\$ 58.8
Indirect	48.9	230	15.9
Induced	45.0	290	14.3
Total	\$ 234.5	1,350	\$ 89.0

* May not sum due to rounding
Source: LAWA, LAEDC

Elevators & Escalators Replacement – T001A Economic Impact by Industry (\$ thousands)			
Industry	Output	Jobs	Labor Income
Agriculture	\$ 30	1	\$ 10
Mining	1,300	2	310
Utilities	850	1	160
Construction	125,400	750	52,860
Manufacturing	18,390	31	2,350
Wholesale trade	20,540	109	8,030
Retail trade	6,610	76	2,780
Transportation and warehousing	2,810	20	1,170
Information	5,550	11	1,220
Finance and insurance	7,280	27	2,530
Real estate	11,450	23	1,010
Professional, scientific & technical services	14,550	88	7,480
Management of companies	1,210	5	530
Administrative and waste management	2,470	37	1,260
Education services	1,030	15	550
Health care and social assistance	6,090	59	3,330
Arts, entertainment and recreation	1,060	10	390
Accommodations and food services	2,550	37	910
Other services	4,040	45	1,540
Households	1,320	6	570
Total *	\$ 234,500	1,350	\$ 89,000

* May not sum due to rounding
Source: LAEDC

Economic Impact of TBIT Interior Improvements and Baggage Screening Facilities

TBIT Interior Improvements and Baggage Screening Facilities – B001A (\$ millions)			
Impact	Output	Jobs	Labor Income
Direct	\$ 734.0	4,390	\$ 309.2
Indirect	259.1	1,200	83.3
Induced	236.5	1,530	75.4
Total	\$ 1,229.6	7,120	\$ 467.8

* May not sum due to rounding
Source: LAWA, LAEDC

TBIT Interior Improvements and Baggage Screening Facilities – B001A Economic Impact by Industry (\$ thousands)			
Industry	Output	Jobs	Labor Income
Agriculture	\$ 160	1	\$ 60
Mining	7,300	11	1,720
Utilities	4,400	5	840
Construction	736,050	4,402	310,260
Manufacturing	102,680	174	13,070
Wholesale trade	24,700	135	9,650
Retail trade	35,660	408	15,010
Transportation and warehousing	13,690	92	5,540
Information	26,440	51	5,680
Finance and insurance	37,640	137	13,090
Real estate	59,910	118	5,330
Professional, scientific & technical services	79,460	481	41,130
Management of companies	5,110	20	2,250
Administrative and waste management	12,020	179	6,160
Education services	5,400	78	2,870
Health care and social assistance	32,030	312	17,480
Arts, entertainment and recreation	5,440	53	1,960
Accommodations and food services	13,280	194	4,750
Other services	21,780	242	8,290
Households	6,470	29	2,670
Total *	\$ 1,229,600	7,120	\$ 467,800

* May not sum due to rounding
Source: LAEDC

Economic Impact of Passenger Boarding Bridges Replacement & Extensions

Passenger Boarding Bridges Replacement & Extensions – B002A (\$ millions)			
Impact	Output	Jobs	Labor Income
Direct	\$ 4.4	30	\$ 1.9
Indirect	1.6	10	0.5
Induced	1.4	10	0.5
Total	\$ 7.4	50	\$ 2.8

* May not sum due to rounding
Source: LAWA, LAEDC

Passenger Boarding Bridges Replacement & Extensions – B002A Economic Impact by Industry (\$ thousands)			
Industry	Output	Jobs	Labor Income
Agriculture	\$ -	-	\$ -
Mining	40	1	10
Utilities	30	1	10
Construction	4,460	27	1,880
Manufacturing	620	1	80
Wholesale trade	150	1	60
Retail trade	220	3	90
Transportation and warehousing	80	1	30
Information	160	1	30
Finance and insurance	230	1	80
Real estate	360	1	30
Professional, scientific & technical services	480	3	250
Management of companies	30	1	10
Administrative and waste management	70	1	40
Education services	30	1	20
Health care and social assistance	190	2	110
Arts, entertainment and recreation	30	1	10
Accommodations and food services	80	1	30
Other services	130	2	50
Households	40	1	20
Total *	\$ 7,400	50	\$ 2,800

* May not sum due to rounding
Source: LAEDC

Economic Impact of Interim Taxiway Safety Improvement Project

Interim Taxiway Safety Improvement Project – A006B (\$ millions)			
Impact	Output	Jobs	Labor Income
Direct	\$ 6.8	40	\$ 2.8
Indirect	2.4	10	0.8
Induced	2.2	10	0.7
Total	\$ 11.3	60	\$ 4.3

* May not sum due to rounding
Source: LAWA, LAEDC

Interim Taxiway Safety Improvement Project – A006B Economic Impact by Industry (\$ thousands)			
Industry	Output	Jobs	Labor Income
Agriculture	\$ -	-	\$ -
Mining	70	0	20
Utilities	40	-	10
Construction	6,770	41	2,860
Manufacturing	940	2	120
Wholesale trade	230	1	90
Retail trade	330	4	140
Transportation and warehousing	130	1	50
Information	240	1	50
Finance and insurance	350	1	120
Real estate	550	1	50
Professional, scientific & technical services	730	4	380
Management of companies	50	0	20
Administrative and waste management	110	2	60
Education services	50	1	30
Health care and social assistance	290	3	160
Arts, entertainment and recreation	50	1	20
Accommodations and food services	120	2	40
Other services	200	2	80
Households	60	0	20
Total *	\$ 11,300	60	\$ 4,300

* May not sum due to rounding
Source: LAEDC

CTA Program (Economic Impact of Current Projects)

Economic Impact of Terminal 4, 5 and 6 Improvements

Terminal 4, 5 and 6 Improvements (\$millions)			
Impact	Output	Jobs	Labor Income
Direct	\$ 636	3,800	\$ 268
Indirect	225	1,040	72
Induced	204	1,330	65
Total	\$ 1,065	6,170	\$ 405

* May not sum due to rounding
Source: LAEDC

Terminal 4, 5 and 6 Improvements Economic Impact by Industry (\$millions)			
Industry	Output	Jobs	Labor Income
Agriculture	\$ 0.1	1	\$ 0.1
Mining	6.3	10	1.5
Utilities	3.8	4	0.7
Construction	637.8	3,815	268.8
Manufacturing	89.0	151	11.3
Wholesale trade	21.4	117	8.4
Retail trade	30.9	353	13.0
Transportation and warehousing	11.9	80	4.8
Information	22.9	44	4.9
Finance and insurance	32.6	119	11.3
Real estate	51.9	102	4.6
Professional, scientific & technical services	68.9	417	35.6
Management of companies	4.4	17	1.9
Administrative and waste management	10.4	155	5.3
Education services	4.7	68	2.5
Health care and social assistance	27.8	270	15.1
Arts, entertainment and recreation	4.7	46	1.7
Accommodations and food services	11.5	168	4.1
Other services	18.9	209	7.2
Households	5.6	25	2.3
Total *	\$ 1,065.0	6,170	\$ 405.0

* May not sum due to rounding
Source: LAEDC



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