Airport Master Plan for the South Suburban Airport

Socio-Economic Impact Assessment of Alternative Build/No-Build Forecasts for the South Suburban Airport: Inaugural Airport Program

Prepared by

ACG: The al Chalabi Group, Ltd. in association with TAMS/Earth Tech

## Airport Master Plan for the South Suburban Airport

## Socio-Economic Impact Assessment of Alternative Build/No-Build Forecasts for the South Suburban Airport: Inaugural Airport Program

February 28, 2006

Prepared by

ACG: The al Chalabi Group, Ltd. in association with TAMS/Earth Tech

### **Executive Summary**

The <u>Socio-Economic Impact Assessment of Alternative Build/No-Build Forecasts for the South Suburban Airport: Inaugural Airport</u> <u>Program</u> identifies and describes the socio-economic impacts (direct, indirect and induced jobs generated; the additional households and population supported/induced; the income, in terms of wages and salaries, visitor expenditures, total economic output and revenues to local governments) of the various build airport alternatives (low, base, high) as compared to the no-build alternative.

ACG used the IDOT/FAA agreed-upon forecasts for commercial aviation, air cargo and general/corporate aviation for the years DBO plus one, 2015 and 2030. The socio-economic impacts of the forecasts were generated using models developed or modified by ACG over 20 years; the results then were distributed to the region's townships and mapped for the forecast periods DBO plus one, 2015 and 2030, using models and methods generally utilized by the Northeastern Illinois Planning Commission (NIPC).

It is the policy of IDOT to employ socio-economic forecasts and regional distributions developed by regional MPO's. In this case, the NIPC forecasts had been developed assuming a region served by a new South Suburban Airport (SSA) in addition to an expanded O'Hare and Midway Airports. The SSA aviation forecasts had been jointly developed by the state (IDOT) and the City of Chicago (DOA) for purposes of ground transportation planning. This necessitated ACG's use of a process to remove the SSA-induced impacts to develop the baseline (no-build) alternative.

The methodology used in this report was reviewed by the FAA and its consultant, URS, and approved in writing, prior to the calculation of the impacts and the generation of the draft report. The report was prepared in support of the FAA's preparation of the indirect and cumulative impacts of the South Suburban Airport for its Environmental Impact Statement.

The following tables summarize the DBO+1, 2015 and 2030 impacts for the following:

- job impacts of commercial operations, air cargo operations and GA/corporate operations
- total visitor expenditures and industrial output
- revenues to State governments
- distribution of total airport-generated jobs, by county in the Chicago CMSA.

Exhibit 1 shows the location of the South Suburban Airport within the Chicago CMSA.

#### Table 1 South Suburban Airport **Total Jobs Forecast** Passenger, Air Cargo, GA/Corporate

#### Low Forecast

	2010				2015				2030			
	Direct	<u>Indirect</u>	<u>Induced</u>	Total	<b>Direct</b>	<u>Indirect</u>	<b>Induced</b>	Total	<b>Direct</b>	<u>Indirect</u>	<b>Induced</b>	Total
Commercial Passenger	22	73	96	191	515	1,889	2,543	4,947	2,143	8,996	11,812	22,951
Air Cargo	0	0	0	0	278	39	338	655	1,712	250	2,111	4,073
General Aviation/Corp.	18	15	43	76	19	15	45	79	21	17	48	86
Total	40	88	139	267	812	1,943	2,926	5,681	3,876	9,263	13,971	27,110

#### **Base Forecast**

	2010			2015				2030				
	Direct	<b>Indirect</b>	<b>Induced</b>	Total	<b>Direct</b>	<u>Indirect</u>	<b>Induced</b>	Total	<b>Direct</b>	<u>Indirect</u>	Induced	Total
Commercial Passenger	143	467	652	1,262	775	2,843	3,828	7,446	4,265	16,368	21,497	42,130
Air Cargo	246	35	298	579	881	127	1,084	2,092	3,424	503	4,227	8,154
General Aviation/Corp.	39	31	93	163	40	33	95	168	46	37	109	192
Total	428	533	1,043	2,004	1,696	3,003	5,007	9,706	7,735	16,908	25,833	50,476

#### **High Forecast**

		201	0			201	5		2030			
	Direct	<u>Indirect</u>	<b>Induced</b>	Total	<b>Direct</b>	<u>Indirect</u>	Induced	Total	<b>Direct</b>	<u>Indirect</u>	<b>Induced</b>	Total
Commercial Passenger	193	629	885	1,707	1,059	3,881	5,232	10,172	7,539	24,499	34,102	66,140
Air Cargo	638	92	783	1,513	1,675	245	2,066	3,986	4,742	697	5,857	11,296
General Aviation/Corp.	61	49	144	<b>254</b>	63	50	149	262	71	57	168	296
Total	892	770	1,812	3,474	2,797	4,176	7,447	14,420	12,352	25,253	40,127	77,732

Prepared by: ACG: The al Chalabi Group, Ltd. (This table and all tables that follow)

Alternative/ Forecast Year	Commercial Passenger Ops	General Aviation /Corporate	Total
Low 2010	4,440,625	2,197,600	6,638,225
Low 2015	115,395,000	2,251,200	117,646,200
Low 2030	581,568,750	2,532,600	584,101,350
Base (Middle) 2010	28,542,500	4,663,200	33,205,700
Base (Middle) 2015	173,705,000	4,824,000	178,529,000
Base (Middle) 2030	1,058,155,000	5,427,000	1,063,582,000
High 2010	38,403,750	7,236,000	45,639,750
High 2015	237,160,000	7,450,400	244,610,400
High 2030	1,583,802,500	8,401,800	1,592,204,300

#### Table 2 Total Visitor Expenditures (in 2001 dollars)

Table 3 Total Industrial Output (in 2001 dollars)

Alternative/	Commercial			
Forecast Year	Passenger Ops.	Cargo	GA/Corp.	Total
Low 2010	19,702,069	0	7,757,200	$27,\!459,\!269$
Low 2015	503,276,306	83,373,716	7,946,400	594,596,422
Low 2030	2,263,681,533	$513,\!438,\!125$	8,939,700	2,786,059,358
Base (Middle) 2010	130,027,439	73,776,742	16,460,400	220,264,581
Base (Middle) 2015	757,117,225	264,287,621	17,028,000	1,038,432,846
Base (Middle) 2030	4,242,492,163	1,026,876,250	19,156,500	5,288,524,913
High 2010	176,205,966	191,339,673	25,542,000	393,087,639
High 2015	1,034,132,302	502,412,539	26,298,800	1,562,843,641
High 2030	6,745,995,403	1,422,151,685	29,657,100	8,197,804,188

# Table 4Revenue to State Governments:from Income Taxes(in 2001 dollars)

				Total
Alternative/	Total Labor	Revenues	Revenues	Income Tax
Forecast Year	Income	<b>To Illinois</b>	to Indiana	Revenues
Low 2010	10,128,869	279,557	$27,\!551$	307,107
Low 2015	236,318,560	6,451,497	723,135	7,174,631
Low 2030	1,112,371,673	30,367,747	3,403,857	33,771,604
Base (Middle) 2010	85,246,396	$2,\!352,\!801$	231,870	$2,\!584,\!671$
Base (Middle) 2015	411,041,737	11,221,439	$1,\!257,\!788$	12,479,227
Base (Middle) 2030	2,109,379,550	$57,\!586,\!062$	6,454,701	64,040,763
High 2010	151,982,651	4,194,721	413,393	4,608,114
High 2015	617,321,629	$16,\!852,\!880$	1,889,004	18,741,885
High 2030	3,267,431,126	89,200,870	9,998,339	99,199,209

## Table 5Revenue to State Governments:from Sales Taxes (on Wages)(in 2001 dollars)

				Total Sales
Alternative/	Total Labor	<b>Revenues to</b>	Revenues to	Tax (wage)
Forecast Year	Income	Illinois	Indiana	Revenues
Low 2010	10,128,869	131,270	17,503	148,773
Low 2015	236,318,560	3,020,151	459,403	3,479,554
Low 2030	1,112,371,673	14,216,110	2,162,451	16,378,561
Base (Middle) 2010	85,246,396	1,104,793	147,306	$1,\!252,\!099$
Base (Middle) 2015	411,041,737	$5,\!253,\!113$	799,065	6,052,179
Base (Middle) 2030	2,109,379,550	26,957,871	4,100,634	$31,\!058,\!504$
High 2010	151,982,651	1,969,695	262,626	2,232,321
High 2015	$617,\!321,\!629$	7,889,370	1,200,073	9,089,444
High 2030	3,267,431,126	41,757,770	6,351,886	48,109,656

#### Table 6

#### Revenue to State Governments: from Sales Taxes (on Visitor Expenditures) (in 2001 dollars)

	Total			Total Sales
Alternative/	Visitor	Revenues	Revenues	Tax (visitor)
Forecast Year	Expenditures	to Illinois	to Indiana	Revenues
Low 2010	6,638,225	311,997	$23,\!898$	335,894
Low 2015	117,646,200	5,499,960	458,820	5,958,780
Low 2030	584,101,350	26,868,662	2,803,686	29,672,349
Base (Middle) 2010	33,205,700	1,560,668	119,541	1,680,208
Base (Middle) 2015	178,529,000	8,346,231	696,263	9,042,494
Base (Middle) 2030	1,063,582,000	48,924,772	5,105,194	54,029,966
High 2010	45,639,750	2,145,068	164,303	2,309,371
High 2015	244,610,400	$11,\!435,\!536$	953,981	$12,\!389,\!517$
High 2030	1,592,204,300	73,241,398	7,642,581	80,883,978

# Table 7South Suburban Airport ImpactsForecast of Regional Employment:Distribution by County

	2010	Employmen	t - Low For	ecast	2010	Employmen	t - Base For	recast	2010 Employment - High Forecast			ecast
County	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total
McHenry County	0	0	0	0	0	0	0	0	0	0	13	13
Lake County (IL)	0	0	0	0	0	0	0	0	0	0	42	42
Kane County	0	0	0	0	0	0	2	2	0	0	29	29
DuPage County	0	0	5	5	0	0	26	26	0	26	154	180
Cook County	0	42	66	108	0	218	520	738	0	285	760	1,045
Will County	40	34	38	112	428	214	287	929	892	278	477	1,647
Kankakee County	0	5	16	21	0	52	76	128	0	81	124	205
Lake County (IN)	0	7	12	19	0	39	105	144	0	85	155	240
Porter County	0	0	2	2	0	10	27	37	0	15	58	73
Total	40	88	139	267	428	533	1,043	2,004	892	770	1,812	3,474
	2015 Employment - Low Forecast			ecast	2015	Employmen	t - Base For	ecast	2015 Employment - High Forecast			
County	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total
McHenry County	0	0	0	0	0	0	0	0	0	0	81	81
Lake County (IL)	0	0	0	0	0	0	0	0	0	0	211	211
Kane County	0	0	5	5	0	0	10	10	0	0	149	149
DuPage County	0	0	25	25	0	0	80	80	0	167	625	792
Cook County	0	873	1,522	2,395	0	1,297	2,469	3,766	0	1,687	3,050	4,736
Will County	812	686	859	2,357	1,488	1,312	1,421	4,221	2,292	1,775	1,900	5,967
Kankakee County	0	195	212	407	0	327	358	685	0	463	521	985
Lake County (IN)	0	149	258	407	0	251	508	759	0	506	633	1,139
Porter County	0	39	48	87	0	65	134	199	0	85	274	359
Total	812	1,942	2,929	5,683	1,488	3,252	4,980	9,720	2,292	4,683	7,444	14,420
	2030	Employmen	t - Low For	ecast	2030 1	2020 Employment Base Forecast			2020 Employment High Forecast			
County	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total
McHenry County	0	0	0	0	0	0	0	0	0	0	430	430
Lake County (IL)	0	0	0	0	0	0	0	0	0	0	1,140	1,140
Kane County	0	0	10	10	0	0	65	65	0	0	805	805
DuPage County	0	0	430	430	0	25	1,070	1,095	0	900	3,370	4,270
Cook County	0	4,165	6,955	11,120	0	6,738	12,237	18,975	0	9,093	16,440	25,533
Will County	3,876	3,272	4,115	11,263	7,735	6,800	7,287	21,822	12,352	9,570	10,245	32,167
Kankakee County	0	930	1,010	1,940	0	1,700	1,864	3,564	0	2,500	2,810	5,310
Lake County (IN)	0	711	1,230	1,941	0	1,305	2,640	3,945	0	2,730	3,410	6,140
Porter County	0	185	230	415	0	340	695	1,035	0	460	1,475	1,935
Total	3,876	9,263	13,980	27,119	7,735	16,908	25,858	50,501	12,352	25,253	40,125	77,730

Exhibit 1 Chicago Consolidated Metropolitan Statistical Area



Prepared by ACG: The al Chalabi Group, Ltd.

November 2005

## **Table of Contents**

Exe	cutive Su	ummary
I.	Introdu	action and Study Background1
II.	Change at the S	e in Volume and Characteristics of Enplanements South Suburban Airport
	А.	Change in Economic Climate7
	В.	Forecasted Character and Enplanement Composition of the South Suburban Airport
III.	Review	of Impact Model Assumptions
	А.	The Need for Model Assumption Review
	B.	Major Findings of the Review Analysis15
IV.	Updat	e of Employment Forecasts
	А.	Forecast of Direct Employment
	B.	Forecast of Indirect Employment
	C.	Forecast of Induced Employment
	D.	Totals of Direct, Indirect and Induced Jobs
	E.	Forecast of Air Cargo-Generated Jobs
	F.	Forecast of Jobs Generated by General Aviation and Corporate Operations
	G.	Estimate of Construction Jobs
V.	Updat	ed Forecast of Economic Impacts
	А.	Regional Impacts of the Airport System
	B.	South Suburban Airport Impacts

## Table of Contents (cont'd)

Page	num	ber

1. Total Value Added (TVA) 49
2. Labor Income 50
3. Visitor Expenditures51
4. Total Industry Output (TIO)51
C. Revenues to State and Local Governments
1. Income Tax Revenues
2. Sales Tax Revenues
3. Total Revenues to Governments
D. Summary of Findings57
VI. Regional Distribution of Employment, Population and Economic Impacts 59
A. Overview
B. The Allocation Assumptions
C. Methodologies for Distributing Jobs (Direct, Indirect and Induced) for the "Build" Alternatives
<ol> <li>Total Employment Distribution of the NIPC "Build" minus "No-Build"</li></ol>
2. Allocation of Direct Employment
3. Allocation of Indirect Employment
4. Allocation of Households and Population
5. Allocation of Induced Employment70
6. Graphic Distribution of Forecasted Employment, Households and Population

## Table of Contents (cont'd)

#### Page number

D. Impae Devel	cts of the South Suburban Airport on Economic opment and Regional Vitality and Efficiency	72
1.	Increase Employment Opportunities	72
2.	Develop Close-in Land	73
3.	Promote the Redevelopment of Underutilized Land	73
4.	Improve Accessibility to Jobs for Unemployed and Minority Populations	73
5.	Distribute Employment to Existing Population and Built Infrastructure	74
6.	Mitigate Impacts on Existing Residents, Communities and Enterprises	74

### List of Tables

Page	number
1 ugo	mannoor

Table 1 -	South Suburban Airport: Commercial Enplanement Forecast 10
Table 2 -	South Suburban Airport: Air Cargo Forecasts
Table 3 -	South Suburban Airport: General Aviation/Corporate Forecasts 12
Table 4 -	1995 Forecast: Direct Jobs - Annual Changes in Productivity14
Table 5 -	2004 Forecast of Productivity Changes17
Table 6 -	Direct Job Coefficients: (Base Year - 1990) (Jobs per million enplanements)19
Table 7 -	Direct Job Coefficients: (2010, 2015, 2020, 2030) (Jobs per million enplanements)
Table 8 -	Base Year Coefficients (1990): Direct Employment (Jobs per Enplanement)
Table 9 -	Annual Changes in Productivity
Table 10 -	Direct Job Forecast (adjusted for changes in sector activity)
Table 11 -	Direct Jobs Forecasts (adjusted for productivity)
Table 12 -	Visitor Expenditures (to various categories)
Table 13 -	Total Visitor Expenditures (in 2001, \$'s)
Table 14 -	Employment Due to Visitor Expenditures: Indirect Job Forecasts (Adjusted to changes in productivity)
Table 15 -	Change in Regional Output Multipliers for 2002, 2010, 2015, 2030 (1994-2004*)
Table 16 -	Forecast of Induced Jobs
Table 17 -	Forecast of Direct, Indirect and Induced Jobs of Commercial Operations and Enplanements

## List of Tables (cont'd)

Table 18 -	Employment Due to Air Cargo: Direct Job Forecasts (Adjusted for changes in productivity)
Table 19 -	Forecast of Direct, Indirect and Induced Jobs of Air Cargo Operations
Table 20 -	Comparison of Direct, Indirect, Induced Job Ratios (ACG vs. WSA)
Table 21 -	South Suburban Airport: General Aviation/Corporate Job Forecasts
Table 22 -	Forecast of Direct, Indirect and Induced* Jobs: General Aviation/Corporate (GA) Operations
Table 23 -	South Suburban Airport: Total Jobs Forecast Passenger, Air Cargo, GA/Corporate
Table 24 -	Annual Construction Draw Down: South Suburban Airport 45
Table 25 -	Estimate of Construction Jobs (Cumulative Totals, in person/years)
Table 26 -	Total Value Added (TVA) (in 2001 dollars)
Table 27 -	Labor Income (L.I.) (in 2001 dollars) 50
Table 28 -	Total Visitor Expenditures (in 2001 dollars)
Table 29 -	Total Industrial Output (in 2001 dollars)
Table 30 -	Revenue to State Governments: from Income Taxes (in 2001 dollars)
Table 31 -	Revenue to State Governments: from Sales Taxes (on Wages) (in 2001 dollars)

## List of Tables (cont'd)

Table 32 -	Revenue to State Governments: from Sales Taxes (on Visitor Expenditures) (in 2001 dollars)	6
Table 33 -	Total Annual Revenues to State Governments (in 2001 dollars)	66
Table 34 -	Cumulative Revenues to Illinois and Indiana (2001 million dollars)5	57
Table 35 -	South Suburban Airport – Cumulative Impacts – Employment Forecasts	53
Table 36 -	South Suburban Airport – Cumulative Impacts – Household Forecasts	64
Table 37 -	South Suburban Airport – Cumulative Impacts – Population Forecasts6	55
Table 38 -	South Suburban Airport Impacts: Forecast of Regional Employment: Distribution by County after pg 6	58
Table 39 -	South Suburban Airport Impacts: Forecast of Regional Households: Distribution by County	'1

### List of Exhibits

Exhibit 1	-	Direct Job Forecast (Original)	. 18
Exhibit 2	-	Direct Job Forecast (Updated)	. 20
Exhibit 3	-	Chicago Consolidated Metropolitan Statistical Area	. 33
Exhibit 4	-	South Suburban Airport Master Plan Environmental Impact Statement – Cumulative Impacts NIPC Minus Baseline 2030 Forecasts Employment Per Quarter Section	page 62
Exhibit 5	-	South Suburban Airport Master Plan Environmental Impact Statement – Cumulative Impacts NIPC Minus Baseline 2030 Forecasts Households Per Quarter Section	. 62
Exhibit 6	-	Airport Generated Employment Impacts – Low Forecast – 2010	. 72
Exhibit 7	-	Airport Generated Employment Impacts – Low Forecast – 2015	. 72
Exhibit 8	-	Airport Generated Employment Impacts – Low Forecast – 2030	. 72
Exhibit 9	-	Airport Generated Employment Impacts – Base Forecast – 2010	. 72
Exhibit 10	-	Airport Generated Employment Impacts – Base Forecast – 2015	. 72
Exhibit 11	-	Airport Generated Employment Impacts – Base Forecast – 2030	. 72
Exhibit 12	-	Airport Generated Employment Impacts – High Forecast – 2010	. 72
Exhibit 13	-	Airport Generated Employment Impacts – High Forecast – 2015	. 72

## List of Exhibits (cont'd)

Exhibit 14 -	Airport Generated Employment Impacts – High Forecast – 2030
Exhibit 15 -	Airport Generated Household Impacts – Low Forecast - 2010
Exhibit 16 -	Airport Generated Household Impacts – Low Forecast - 2015
Exhibit 17 -	Airport Generated Household Impacts – Low Forecast - 2030
Exhibit 18 -	Airport Generated Household Impacts – Base Forecast - 2010
Exhibit 19 -	Airport Generated Household Impacts – Base Forecast - 2015
Exhibit 20 -	Airport Generated Household Impacts – Base Forecast - 2030
Exhibit 21 -	Airport Generated Household Impacts – High Forecast - 2010
Exhibit 22 -	Airport Generated Household Impacts – High Forecast - 2015
Exhibit 23 -	Airport Generated Household Impacts – High Forecast - 2030
Exhibit 24 -	ACG Generated Population Impacts – Low Forecast – 2010
Exhibit 25 -	ACG Generated Population Impacts – Low Forecast – 2015
Exhibit 26 -	ACG Generated Population Impacts – Low Forecast – 2030

## List of Exhibits (cont'd)

Exhibit 27 -	ACG Generated Population Impacts – Base Forecast – 2010	72
Exhibit 28 -	ACG Generated Population Impacts – Base Forecast – 2015	72
Exhibit 29 -	ACG Generated Population Impacts – Base Forecast – 2030	72
Exhibit 30 -	ACG Generated Population Impacts – High Forecast – 2010	72
Exhibit 31 -	ACG Generated Population Impacts – High Forecast – 2015	72
Exhibit 32 -	ACG Generated Population Impacts – High Forecast – 2030	72

## Appendix Tables and Exhibits

Appendix Table 1	-	Passenger Airport Studied
Appendix Table 2	-	Actual and Model-Forecasted Direct Jobs at Passenger Airports
Appendix Table 3	-	Cargo Related Jobs at Airports
Appendix Table 4	-	Cargo Traffic – 2002 Preliminary
Appendix Table 5	-	Examples of Direct, Visitor and Total Jobs
Appendix Table 6	-	Estimates of Jobs and Impacts
Appendix Table 7	-	County Total for Labor Income
Appendix Table 8	-	County Totals for Income Taxes Generated
Appendix Table 9	-	Cumulative Tax Revenues by State
Appendix Table 10	-	Distribution of Jobs by Township - 2010
Appendix Table 11	-	Distribution of Jobs by Township - 2015
Appendix Table 12	-	Distribution of Jobs by Township - 2030
Appendix Table 13	-	Distribution of Households by Township - 2010
Appendix Table 14	-	Distribution of Households by Township - 2015
Appendix Table 15	-	Distribution of Households by Township – 2030
Appendix Table 16	-	Distribution of Population by Township – 2010
Appendix Table 17	-	Distribution of Population by Township – 2015
Appendix Table 18	-	Distribution of Population by Township – 2030

## Appendix Tables and Exhibits (cont'd)

Appendix Exhibit 1	-	Reported Direct Jobs vs. Model Total Direct Jobs
Appendix Exhibit 2	-	Reported Direct Jobs vs. Model Total Direct Jobs Adjusted by Productivity Factor
Appendix Exhibit 3	-	Reported Direct Jobs vs. Model Direct Jobs With and Without Productivity Factor
Appendix Exhibit 4	-	Original Direct Job Forecast Model
Appendix Exhibit 5	-	Unemployment in Chicago Region – 2000 Percent of Labor Force Unemployed
Appendix Exhibit 6	-	Poverty in Chicago Region – 1990-2000 Increase Superimposed on 2000 Poverty Density
Appendix Exhibit 7	-	African/Americans in Chicago Region – 1990-2000 Increase Superimposed on 2000 African/American Density
Appendix Exhibit 8	-	Hispanics in Chicago Region – 1990-2000 Increase Superimposed on 2000 Hispanic Density
Appendix Exhibit 9	-	Employment in Chicago Region – 1990-2000 Increase Superimposed on 2000 Employment Density
Appendix Exhibit 10	-	Excess Jobs in Chicago Region – 1990-2000 Increase Superimposed on 2000 Excess Jobs Density

#### I. INTRODUCTION AND STUDY BACKGROUND

The Chicago region has grown and prospered because of its unique locational attributes and superb transportation access. Its central location in the U.S. makes it a critical link in the nation's transportation networks. Chicago's pre-eminence as a meeting place, headquarters location and financial/business center depends on its ability to transport people and goods with ease, and to keep pace with the region's growth in households, income and jobs. Parts of the transportation network - primarily the region's airports - are reaching capacity; and parts of the region have grown (and are forecasted to grow) at great distances and access-time from the region's existing airports. Future economic growth, therefore, depends on the region's ability to provide the additional airport facilities or capacity to service past and projected growth, in fair measure, to all parts of the region.

Earlier studies, developed over the period 1988 through 2002, to address the issue of a supplemental airport for the Chicago region, identified the South Suburbs as both being in need of aviation facilities and having an appropriate location for such an airport. The Record of Decision (ROD), reached in July 2002, provided final Federal Aviation Administration (FAA) determination and approval of the South Suburban Airport site to meet these needs.

The Purpose and Need for the South Suburban Airport, as stated in its Tier 2 Environmental Impact (EIS), is "to satisfy the need to provide airport facilities to meet the existing and anticipated demands for air carrier, air cargo and general aviation use within the south suburban area of the greater Chicago region." It also states that, "The FAA's action would also continue to preserve the option of developing a future air carrier airport to serve the greater Chicago region as determined necessary and appropriate to meet future aviation capacity needs in the region."

Previous studies, prepared by the TAMS-Earth Tech/ACG team for the Illinois Department of Transportation (IDOT), substantiate the contention that the growth in jobs and the transportation that serves a region's economic activity are interdependent. The methodology that the TAMS-Earth Tech/ACG team has used over the 20-year planning period to forecast enplanements and employment has a solid econometric base, incorporating national and regional enplanement and employment forecasts. The techniques employed led to the development and refinement of the Build/No-Build Analysis, employed in earlier studies in this planning effort. The analysis being presented in this report estimates the socio-economic impacts of the South Suburban Airport under several alternative enplanement and operational forecasts – Low, Base (Middle) and High – for the years DBO+1, DBO+5, and DBO+20 (estimated as 2010, 2015, and 2030). Forecasts are made, separately, for commercial enplanements, air cargo and general aviation/corporate.

The three (Low, Base and High) alternative enplanement and operations forecasts of the TAMS-Earth Tech consultant team, prepared for IDOT, have been reviewed and agreed-upon by the FAA. They portray the Inaugural Airport and its alternative enplanement and operations forecasts as means to accommodate the demands of the South Suburban market area, as described in the report, <u>Projections of Aeronautical Activity for</u> <u>the Inaugural Airport Program: South Suburban Airport</u> (TAMS-Earth Tech/IDOT, 03/23/04).

Two additional alternatives also are examined; these are the No-build Alternative and an alternative that reflects the long-term aviation capacity needs of the greater Chicago region. The State of Illinois has received approval to preserve the option for a supplemental air carrier airport to serve this regional need. This regional demand consists of both commercial enplanements and air cargo. As earlier studies have demonstrated, major commercial airports have a significant impact on job and population growth and on the distribution and redistribution of jobs, households and population.

In November 2002, the State of Illinois and City of Chicago agreed on a breakdown of projected commercial enplanements for the year 2030 for purposes of surface transportation planning. These forecasts were inputs to the September 2003 long-range plan of the region's planning agency, the Northeastern Illinois Planning Commission (NIPC) and are a part of its currently-adopted long-range socio-economic forecasts. The latter forecasts are accepted by NIPC, the Chicago Area Transportation Study (CATS, the region's metropolitan planning organization), IDOT, the City of Chicago and local governmental units. These forecasts are referred to in this report, as the NIPC/CATS (03) forecasts. Prior commercial aviation studies had incorporated cargo into the commercial forecasts and, by extension, into the socio-economic impacts. Due to its recent rapid growth, cargo required a separate forecast. This long-range forecast was prepared by ACG: The al Chalabi Group, Ltd., in May 2002, for IDOT. Together, these two forecasts comprise the major constituents of the airport's socio-economic impacts and are referred to as the Long-Term Demand Alternative.

The No-Build Alternative, referenced earlier, is a requirement of the EIS process. The second alternative (Long-Term Demand) reflects the need to satisfy regional aviation demand as forecasted by the regional agencies and, as stated in the Purpose and Need, to provide for reasonable options or alternatives, "when dealing with the uncertainties of future aviation traffic in multi-airport systems...". In this report, the Long-Term Demand Alternative fills one critical additional need. It uses the NIPC/CATS forecast as the primary mechanism for deriving the baseline (No-Build) socio-economic forecast for the Between 1998 and 2003, the region's planning and transportation agencies region. (NIPC/CATS) had developed two socio-economic forecasts: one, reflecting the construction of the South Suburban Airport; the other, assuming all aviation growth at the region's two The 2003 NIPC/CATS forecast assumed development of the three existing airports. airports. It was necessary, therefore, to identify the socio-economic impacts and, more importantly their distribution, specific to the South Suburban Airport, in order to construct the required No-Build Alternative.

Consequently, the five alternatives examined in this report are:

- Low Forecast
- Base (Middle) Forecast
- High Forecast
- No-Build (Baseline) Forecast
- Long-Term Demand Forecast

The specific aviation forecasts examined include:

- Enplanements (O/D, connecting, international)
- Cargo (domestic, international)

General Aviation/Corporate Aviation

The specific socio-economic impacts addressed include:

- Population (total, distribution)
- Households (total, distribution)
- Employment (direct, indirect, induced, construction) (total, distribution)
- Visitor expenditures
- Wages and salaries
- Total output
- Revenues to local governments

The target years for the analyses are:

DBO+1	(2010)
DBO+5	(2015)
DBO+20	(2030)

It should be noted that total (regional) impacts of all factors are estimated for all five forecast alternatives. For distributional impacts (population, households and employment) at the township level, Low, Base and High forecasts, in addition to the No-Build (Baseline) forecast, are plotted. Distributions at county levels are tabulated for the three forecast alternatives of population, households and employment.

The impact analysis presented in this report incorporates many of the models, methods and techniques employed in earlier planning reports and analyses for the South Suburban Airport, most specifically those of the draft report, <u>South Suburban Airport:</u> <u>Master Plan and Environmental Assessment: Economic-Impact Assessment: Build Versus</u> <u>No-Build</u> (April 3, 1995). In the nearly eleven years since that report, there have been substantial revisions to the scope and intent of the proposed project; major changes to the regional, national and international economies; and volatility in the aviation industry. These factors have produced change, both dramatic and subtle, in the interrelationships between enplanements and employment. The most obvious changes reflected in this economic impact analysis are:

- The change in the character, scope and intent of the South Suburban Airport (SSA).
- The volatility of and substantive changes in the aviation industry with industry growth coming from low-cost carriers; and economic pressures on legacy airlines.
- The considerable growth of air cargo.
- The continued increase in national economic productivity.
- The continued resurgence in the Chicago regional economy and the considerable growth of the SSA market area.

These changes have produced substantial differences in the numbers and types of jobs that would be created by the South Suburban Airport from those previously forecasted. Models developed in the earlier regional airport studies are used to recalculate the direct and indirect job impacts for this analysis; a different input/output (I/O) model is used to calculate induced impacts. The consultants, however, believed it prudent to test the continued forecast accuracy of these former and new models and have devised several methods to do so, including the review and analysis of post-1995 economic impact studies prepared for 50 commercial airports in the U.S. and 15 cargo-oriented airports.

In addition, the Midwest and the nation, in general, have both made substantial economic strides because they have increased productivity in producing American goods and in providing services. The airline industry has long been among the groups considered to have made major improvements of this type; however, current economic conditions have accelerated these productivity improvements (primarily, reducing jobs). Related services, including hotels and convention facilities, also have made considerable productivity improvements.

Because of these substantial improvements, it was important for the consultants to review and test the productivity assumptions that had been made earlier and to adjust this facet of the forecast models, if necessary. Productivity changes could affect direct and indirect jobs and their impacts on the regional economy (induced jobs). Consequently, the consultant team undertook a review of airport economic impact studies that had been completed subsequent to 1995 to test the actual impact of economic belt-tightening on the nation's aviation, and related, industries. The input/output (I/O) model used to estimate induced jobs also was re-examined. The 1991 and 1995 studies employed an input/output model (MSRIOM)<sup>1</sup> run by the Northern Illinois University (NIU). This Illinois-tailored version of the RSRI<sup>2</sup> model was updated for the 1995 study. However, in 2004, this model was no longer available. Its successor (both at NIU and in this study) is the IMPLAN<sup>3</sup> model. Outcomes of this model were compared to earlier MSRIOM impacts and to impacts documented in the post-1995 economic impact studies.

In its original study of economic impact, the consultants used a number of regional accessibility models to distribute, throughout the study region, the various jobs generated by the airport. These same methodologies have been employed to distribute the updated job forecasts. In the earlier studies, these distributions were plotted and mapped at the township level. Distributions in this report, for the target years 2010, 2015 and 2030, also are made at the township level for the Six-County NIPC region. They are at the same township level outside the NIPC region. Distributions of households and population impacts are derived from these job distributions and are made at the same township level; they also are mapped at this level. Economic impacts from the job forecasts are tabulated at the county level and the tables are incorporated into the text. Appendix tables for jobs, households and population are at the township level.

The following two sections of the report describe, in greater detail, the assumptions, research and analysis methodologies and findings of the economic impact update; and the changes in volume and characteristics of the South Suburban Airport.

<sup>&</sup>lt;sup>1</sup> Multi-Scale Input/Output Model (MSRIOM).

<sup>&</sup>lt;sup>2</sup> Regional Sciences Research Institute (RSRI).

<sup>&</sup>lt;sup>3</sup> Input/Output Model for Planning (IMPLAN).

#### II. CHANGE IN VOLUME AND CHARACTERISTICS OF ENPLANEMENTS AT THE SOUTH SUBURBAN AIRPORT

#### A. Change in Economic Climate

The period between the first phase of this study and the current analysis period (1995-2005) has been one of great turbulence in the aviation industry. Airlines have suffered through painful financial adjustments and major restructurings brought on by a national recession, natural catastrophes and world-wide economic downturns. These problems were exacerbated by the attacks of 9/11, an event that hit the entire aviation industry hard; but which affected – in extraordinary ways – the two major airlines serving Chicago at O'Hare.

By 2004, aviation demand had recovered and industry growth (domestic) for many regions exceeded pre-9/11, pre-war levels. The Chicago region, in particular, has shown sharply-increased levels of operations at both its airports; and even international enplanements have recovered. But the landscape is greatly altered:

- The nation's major airlines (now referred to as "legacy" airlines) have been struggling to revive; for some, to survive).
- With labor their major cost component, airlines have cut jobs, but are beginning to recall airline personnel as demand increases. Lately, however, fuel costs present a serious concern.
- Industry growth, recently, has passed to the low cost carriers (lcc's) who are competing, not only at secondary airports but at hubs, for passengers.
- All airlines were increasing their fleets of smaller, regional jets to provide the frequency demanded by fliers, particularly in thin markets.
- For the period immediately after 9/11, major carriers consolidated their operations at their major hubs. This practice continues for most legacy airlines, although point-to-point operations are increasing, particularly at mid-size airports.

- Security demands have increased wait times; added to aviation employment levels; reduced airport revenues; and altered terminal configurations.
- Smaller aircraft and a dramatic growth in air cargo have produced a major new presence at primary and secondary airports the all-cargo air carrier and greatly-increased air cargo facilities.
- Security concerns for cargo, carried both in passenger aircraft bellies and in all-cargo aircraft, are emerging; and solutions can increase staff and facilities needed on-site.
- In the wake of security restrictions and delays, corporate aviation has expanded.

These changes can be expected to reverberate throughout the enplanement/ employment relationships established in earlier studies. This anticipated change in relationships required the consultants to review both the assumptions implicit in the models and formulae previously used; and to examine the experience of the Chicago region, the nation and other airports.

## B. Forecasted Character and Enplanement Composition of the South Suburban Airport

For the first half of the planning process for the South Suburban Airport, the assumptions regarding its composition, intent and enplanement were very different than those included in this Tier 2 Draft EIS. An agreement between the Governor of Illinois and the Mayor of Chicago, in August 2002, provided for both an expansion of O'Hare and the development of the South Suburban Airport. Subsequently, the FAA determined that, "Given the complexities of issues to be considered in the approval and development of a potential new air carrier airport... a tiered EIS process would be appropriate."

The South Suburban Airport currently is characterized as a Low-Cost Carrier (LCC) start-up commercial airport with point-to-point operations. International operations are added slowly. Cargo operations also grow slowly, and are nearly equally divided between domestic and international. The variation in GA/Corporate operations is considerable.

Tables 1, 2 and 3, on the following pages, show the alternative enplanement, air cargo and GA/Corporate operations forecasts for the four build alternatives under consideration in this analysis.

The ACG job forecast model assigns a considerably larger number of direct jobs to international enplanements than to domestic enplanements. It also assigns a larger number to O/D than to connecting, although the difference is small, particularly at airports at which there is substantial hubbing activity. Furthermore, those O/D enplanements who are visitors also contribute expenditures to the economy. The expenditures of international visitors are 1<sup>1</sup>/<sub>2</sub> times as great as those of domestic visitors. Impacts for air cargo and general aviation activity are being estimated for the first time in this analysis. The following section describes the impact model assumptions first employed in the 1995 study and the updated, new or modified assumptions that have been developed as part of an extensive ACG review of post-1995 economic impact analyses.

Table 1
South Suburban Airport
<b>Commercial Enplanement Forecast</b>

	DBO+1 (2010)					
Alternative	Domestic International Connecting To					
Low Case	19,600	0	0	19,600		
Base (Middle)	126,000	0	0	126,000		
High Case	169,400	0	0	169,400		
NIPC/CATS (03)	3,723,000	612,000	621,000	4,956,000		

	DBO+5 (2015)					
Alternative	Domestic International Connecting To					
Low Case	471,000	0	0	471,000		
Base (Middle)	709,000	0	0	709,000		
High Case	968,000	0	0	968,000		
NIPC/CATS (03)	5,739,500	1,023,500	1,555,000	8,318,000		

	DBO+20 (2030)					
Alternative	Domestic	Total				
Low Case	2,114,700	0	111,300	2,226,000		
Base (Middle)	3,764,700	83,000	418,300	4,453,000		
High Case	5,219,000	540,000	921,000	6,680,000		
NIPC/CATS (03)	14,486,000	2,667,000	7,203,000	24,356,000		

Source: TAMS/Earth Tech for IDOT

<u>Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban</u> <u>Airport</u>, March 23, 2004

Northeastern Illinois Planning Commission (NIPC)/ACG/TAMS/Build/No Build Impacts for the South Suburban Airport, September 2003.

Enplanement forecasts provided by November 4, 2004 letter of agreement by IDOT and City of Chicago.

	DBO+1 (2010)							
Alternative	Domestic Ops	Int'l Ops	Total Ops	Mail & Domestic Tons	Int'l Tons	Total Tons		
Low Case	0	0	0	0	0	0		
Base (Middle)	1,118	0	1,118	28,900	0	28,900		
High Case	1,700	900	2,600	46,800	28,200	75,000		
NIPC/CATS (03)	720	530	1,250	63,000	47,000	110,000		

#### Table 2 South Suburban Airport Air Cargo Forecasts

	DBO+5 (2015)						
Alternative	Domestic Ops	Int'l Ops	Total Ops	Mail & Domestic Tons	Int'l Tons	Total Tons	
Low Case	1,262	0	1,262	32,700	0	32,700	
Base (Middle)	2,520	930	3,450	68,700	34,900	103,600	
High Case	3,783	1,760	3,783	106,800	88,000	194,800	
NIPC/CATS (03)	6,290	4,935	11,225	243,670	191,330	435,000	

	DBO+20 (2030)						
Alternative	Domestic Ops	Int'l Ops	Total Ops	Mail & Domestic Tons	Int'l Tons	Total Tons	
Low Case	3,140	1,601	4,741	101,400	100,000	201,400	
Base (Middle)	5,382	2,669	8,051	216,800	186,000	402,800	
High Case	6,726	4,043	10,769	274,900	283,000	557,900	
NIPC/CATS (03)	24,795	27,205	52,000	913,000	1,187,000	2,100,000	

Source: TAMS/Earth Tech for IDOT

<u>Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban</u> <u>Airport</u>, March 23, 2004

<u>Air Cargo Logistics: 2030 Cargo Forecasts for the Chicago Region</u>, May 2002. Prepared for IDOT by ACG: The al Chalabi Group, Ltd.

## Table 3South Suburban AirportGeneral Aviation/Corporate Forecasts

	DBO+1 (2010)				
Alternative	Operations	Based Aircraft			
Low Case	16,400	41			
Base (Middle)	34,800	87			
High Case	54,000	135			
Long-Term	N/A	N/A			

	DBO+5 (2015)				
Alternative	Operations	Based Aircraft			
Low Case	16,800	42			
Base (Middle)	36,000	90			
High Case	55,600	139			
Long-Term	N/A	N/A			

	DBO+20 (2030)				
Alternative	Operations	Based Aircraft			
Low Case	18,900	44			
Base (Middle)	N/A	N/A			
High Case	62,700	146			
Long-Term	N/A	N/A			

Source: TAMS/Earth Tech for IDOT

Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport, March 23, 2004

#### III. REVIEW OF IMPACT MODEL ASSUMPTIONS

#### A. The Need for Model Assumption Review

Before the estimate of job and economic impacts could be calculated, one additional step was necessary. This was to validate both the productivity assumptions that had been built into the impact forecast models and the relationships between direct, indirect and induced jobs. Productivity improvement in the American economy was an emerging issue in the initial (1995) job forecast for the South Suburban Airport. Consequently, in 1995 the consultants developed a schedule of annual changes in productivity improvements, by decade, for major employment types (airlines, government, retail, etc.). Built into the forecast models, the productivity adjustments were made, automatically, for each of the three forecast years, 2001, 2010 and 2020.

In this analysis, the consultants used a methodology similar to that employed in Phase II of the airport study to determine any difference in productivity assumptions for the period 1995-2004 and actual data. The primary approach was to review recent economic impact studies prepared for major airports and to compare recent direct job/enplanement ratios with those developed earlier. It had been an earlier comparison of two sets of job/enplanement ratios (1981 set and 1988 set) that brought the effects of productivity improvements to the attention of the consultants.

The objective of this research and analysis was to collect additional studies on the economic impacts of airports (post-1995) to test the ACG forecast models and to adjust/update them based on new impact factors found, if any, and on any altered relationships. The study, in particular, was intended to determine:

- How direct and indirect jobs were affected by productivity.
- Whether connecting jobs were growing more important in light of hub development and post 9/11 hub concentration.
- How induced jobs were growing based on the growing importance of air transport as a basic industry.
- How air cargo has affected direct and indirect job growth at airports.

The first step in the review process involved a comparison of the 1995 forecasts of productivity increases with actual increases over the period 1989-2004. The data source is the U.S. Department of Labor, Bureau of Labor Statistics, Office of Productivity and Technology. During the 1990-2000 period, the productivity of air transportation grew by 1.7 percent per annum. The entire U.S. business sector grew by 2.1 percent. The actual productivity, over the period 1990-2000, is almost exactly that forecast in the 1995 study; that is, 1.71 percent per annum.

It is the expectation of economists that future productivity in the general economy will decrease, somewhat, to 2.0 percent per annum. If labor productivity in air transportation maintains its close relationship to that of the economy, in general, we should expect a similar small decrease in labor productivity in the airline industry. However, reductions in productivity in the airline industry could be much greater. The airline industry cut its labor by 20 percent after the attacks of 9/11; it has been rehiring, but at a slower rate than its increase in operations and enplanements. Ticketing has been automated and operations have been clustered in major hubs; but the use of smaller aircraft and the growth of security personnel have impeded these productivity gains. Consequently, the consultants believe that the forecasted productivity changes (smaller productivity increases) of the 1995 report remain reasonable for O/D and connecting. International productivity (originally expected to continue at high rates) is tempered, somewhat. Following, are the productivity assumptions of the former (1995) study.

	1989-2001	2002-2010	2011-2020
O/D	1.71%	1.15%	0.82%
Connecting	1.71%	1.15%	0.82%
International	1.71%	1.71%	1.71%

## Table 41995 ForecastDirect Jobs: Annual Changes in Productivity

Source: U.S. Department of Labor, Bureau of Labor Statistics (1989-2004); ACG estimates

Because of the introduction of air cargo into this analysis, the consultants also examined the productivity of trucking and rail, the likely beneficiaries of induced impacts of air cargo. Both railroads and local trucking had exhibited greater productivity increases (2.25 percent per annum) during the 1990-2000 period; long-distance trucking productivity was the same as that of air transportation -1.71 percent.

As a second step, ACG reviewed several comprehensive impact studies, including one prepared in 2003, for the Federal Aviation Administration<sup>4</sup>, as well as 44 reports prepared for major airports (airports with enplanements between 800,000 and 34,000,000); 7 studies/articles prepared for medium and smaller airports; and 15 studies/articles prepared for cargo-oriented airports. The list of these passenger airports, showing the year of their economic impact study and their total enplanements that year, is given as Table 1, in the Appendix. Table 2, in the Appendix, shows the actual direct jobs and the modelestimated direct jobs (with and without productivity adjustments) derived from the above studies and the 1995 ACG models.

#### B. Major Findings of the Review Analysis

This review involves comparing the major findings of the ACG analysis of over 60 economic impact studies and reports completed between 1994 and 2000 with those of the 40 reports that were the basis for ACG's development of its models and methodologies in 1995. Following are the major findings and assumptions.

The basic relationships between domestic O/D, international, and connecting enplanements and direct jobs appear to remain as described in the ACG direct jobs model. There is, however, one distinct observation. Productivity, as originally forecasted (or slightly lower), has been a factor in lowering, only-slightly, most of the direct jobs created by airports. The data, however, goes through 2000, only. However, there was a dramatic cut-back in operations and lay-off of airline employees after the 9/11 attacks (approximately 20 percent); and the legacy airlines continue to be adversely affected by labor issues. Whether productivity continues at the 1995 – 2000 rate after 2004 (when the FAA expects the recovery to be complete), or increases, is subject to the following factors:

<sup>&</sup>lt;sup>4</sup> Wilbur Smith Associates, The Economic Impact of Civil Aviation on the U.S. Economy: Update 2000.

- The growth of Low-Cost Carriers (LCC) versus legacy airlines.
- The continued decline in seats per aircraft and commensurate increase in operations.
- The growth or stabilization of security personnel.
- The growth of point-to-point versus hub operations for major carriers.

If all four trends continue, it is likely that the increased airline efficiencies may be offset by increased operations and staffing (more planes to fly the same number of passengers, additional security, etc.).

It appears that connecting enplanements have grown slightly more important (produce more jobs) over the period studied. However, both the overall connecting volume, as well as the percentage, are the major factors. As the airport grows larger, the number of jobs produced by connecting enplanements increases. And major hub airports (with high ratios of connecting) attract more airline functions (administration, maintenance).

There has been a considerable increase in jobs not attributed to enplanement levels at several airports. These increases are attributed to the increasingly-important role of air cargo. Air cargo tonnage and operations have grown at greater rates than passengers and commercial operations; and a large portion of this cargo growth has shifted to all-cargo airlines from belly cargo in passenger planes. A specific model to reflect the impact of cargo on direct job development is difficult to develop, given the scarcity of data and the intermingling of impacts cited in impact studies. This analysis examines a range of impacts. Table 3, in the Appendix, gives the data for 15 airports and one state airport system where cargo job impacts have been cited. Table 4, in the Appendix, gives the 2002 (preliminary) cargo traffic for the 30 largest national and international cargo airports, compiled by Airports Council International.

In summary, the ACG Direct Employment Model continues to show the following general relationships:

• Under 2 million enplanements, direct jobs created are fewer than 2,000.

- Between 2 million and 8 million enplanements, direct jobs are a virtual straight-line increase from 2,000 to 10,000.
- Between 8 million and 12 million enplanements, jobs generated can be as high as 40,000, depending on enplanement composition (international, highest; O/D, second-highest).
- Between 12 million and 30 million enplanements, there is a consistent growth from 35,000 to 50,000 jobs; and connecting enplanements increase in job-generating importance.

Exhibits 1, 2 and 3 in the Appendix, graph the actual and forecasted direct jobs, using the 1995 ACG forecast model with and without productivity adjustments. Exhibit 4 in the Appendix shows the 1995 ACG direct employment forecast model with actual data from the 1995 study. It should be noted, that there were very few airports with enplanements fewer than 2 million studied in the 1995 study.

As previously discussed, slight modifications to 1995 annual changes were made for anticipated changes in productivity. And changes were extrapolated for 2021-2030. These forecasts are shown below.

	1990-2001	2002-2010	2011-2020	2021-2030
O/D	1.71%	1.15%	0.82%	0.80%
Connecting	1.71%	1.15%	0.82%	0.80%
International	1.71%	1.50%	1.25%	1.00%

Table 52004 Forecast of Productivity Changes

While direct jobs have remained fairly consistent with the estimate/forecast model, there has been an inordinate increase (ratios of 8-11 to 1 direct) in indirect jobs attributed to the airport in a number of the airports studied. It is unclear whether some cities/airport sponsors are allocating all visitor (by all modes) impacts to their airports or whether induced, as well as indirect, impacts also are being counted. In either case, the consultants
choose to rely on visitor expenditures that are clearly attributable to air passengers, only; this method reflects ratios that were closer to those of the 1995 Study when adjusted for changes in the enplanement composition. Data from <u>Business Travel News</u> (02/03) for corporate travel for Chicago and 99 other major destinations, is used in concert with Bureau of Labor Statistics (BLS) data for 2003.

There is no question that the induced impacts of air transport have increased. Aviation can legitimately be considered a basic industry and a mass transit. As a basic industry, it currently employs 6 to 7 percent of the U.S. labor market. For those regions that are major air transportation hubs (such as Chicago), employment in the aviation industry is expected to reach 9 to 10 percent of total regional employment. ACG forecasted a 9.0 percent share of regional employment by 2020 as the contribution of the entire Chicago region airport system: O'Hare and Midway (with SSA). Tables 5 and 6, in the Appendix, list citations of airport sponsors or study authors on the total, visitor or induced impacts (jobs and/or revenues) of specific airports. These tables are for general information, only. The consultants are skeptical of the assertions of total or induced jobs in the 8-to-1 or greater volumes to direct that are given in several instances. However, they could reflect the total of indirect plus induced.





Coefficients for the base year (1990) for direct employment remain approximately as stated in the Phase I analysis. These coefficients are shown in Table 6, below.

Table 6
<b>Direct Job Coefficients</b>
(Base Year - 1990)
(Jobs per million enplanements)

Enplanement Type	Coefficient
Origin/Destination	1,529
Connecting	1,348
International	5,459

With the direct job model confirmed for the recent past (1990-2000), ACG conducted a review of current mid-range forecasts of productivity (output) for individual industries as previously discussed. Forecasts were determined to be well within the margins of error of estimates made earlier for those industries forecasted. On that basis, the original forecast assumptions were retained. In general, the airline and airline services industries continue to show significant productivity improvements through 2030. Government and ground transportation also show substantial improvements. By virtue of these productivity improvements, total direct job growth for 2030 is reduced by nearly 36.6 percent from unfactored forecasts for O/D and connecting and by 42.4 percent for international enplanements. The following table shows Direct Job coefficients for the forecast years 2010, 2015, 2020 and 2030.

# Table 7 Direct Job Coefficients (2010, 2015, 2020, 2030) Jobs per million enplanements

Enplanement Type	2010 Coefficient	2015 Coefficient	2020 Coefficient	2030 Coefficient
Origin/Destination	1,140	1,095	1,050	969
Connecting	1,005	965	925	854
International	3,941	3,708	3,475	3,143

Improvements in indirect jobs (lodging, food, retail, entertainment, business services) also remain similar to those originally forecast. While productivity in the hotel/motel industry continues to be high, that of retail and restaurants and other consumer services lag behind sufficiently to reduce the improvements in lodging.

In summary, both the direct jobs forecast model and the productivity improvements assumptions of the previous study for direct and indirect jobs remain valid, although the change decreases, slightly. The actual job forecast updates are shown in the following chapter. Exhibit 2, following, shows the updated direct job forecast model.



# Exhibit 2: Direct Job Forecast (Updated)

# IV. UPDATE OF EMPLOYMENT FORECASTS

The update of employment forecasts consists of six discrete components. The employment forecast categories are:

- Direct jobs (airline and passenger services jobs at the airport) derived from commercial enplanements.
- Direct jobs (at the airport) derived from air cargo.
- Direct jobs from GA/corporate aviation activity.
- Indirect jobs (those jobs in hotels, convention, retail, etc., created by visitor expenditures).
- Induced jobs (the multiplier effect of direct and indirect jobs).
- Construction jobs (person/year employment created by the construction of the airport).

The economic vitality of the Chicago region is highly dependent on its transportation access to the world. For the last forty-five years, and for the foreseeable future, air transport was/is a critical component of that transportation network. As the global economy expands, it encompasses larger numbers of passengers and greater portions of the region's economic activities. The 1995 Economic Impact study estimated that the regional airport system contributed 6.0 percent of the region's economy and that, by 2020, it would have grown to 9.0 percent. The Chicago region's well-being is inextricably bound to its air transport network. Chicago's access to the nation and to the world is a major factor in its attraction and retention of corporations and industries; and it is critical to its key industries – conventions/tourism, distribution and professional services.

This analysis recognizes the fact that, in a metropolitan region, these economic sectors and their impacts are interrelated. The South Suburban portion of the region can benefit from the region's aviation assets only as long as it has reasonable access to that aviation network. Furthermore, its impacts increase as its access improves. Development of the South Suburban Airport is intended to serve the defined South Suburban portion of the Chicago market. Its jobs and economic impacts, however, will spread beyond this market area. The first task of this analysis is to estimate the direct, indirect and induced jobs produced by the South Suburban Airport. The second task is to estimate the distribution of those jobs and their impacts.

### A. Forecast of Direct Employment

Direct jobs are those jobs created by the airlines, airline services, passenger services and government as they provide the air transportation service to the forecasted enplaning passengers. All these jobs - ranging from ticketing, concessions, and air carrier and airport maintenance, security, local and federal government and ground transportation - are assumed to be located at the airport, itself. Separate forecasts of direct jobs are made for air cargo operations and GA/corporate aviation activity. Cargo originally was included in the tabulation of direct jobs created by the overall enplanements; however, it has grown substantially and now requires separate treatment. GA/Corporate is a new aviation segment proposed for the South Suburban Airport.

The forecast of direct employment is based on the forecast of enplanements, air cargo, and GA as developed in the report, <u>Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport</u>, published in March 2004. These projections (Low, Base and High alternatives) are shown in Tables 1-3, in Chapter II, as are the NIPC/IDOT regional forecasts. Table 8, below, shows the base year coefficients for direct jobs (jobs per enplanement).

O/D	-	0.001529
Connecting	-	0.001348
International	-	0.005459

Table 8 - Base Year Coefficients (1990) Direct Employment (Jobs per Enplanement)

These coefficients are subject to annual changes in productivity; the changes, slightly modified from those assumed in the earlier (1995) economic impact study and extrapolated to 2030, are shown in Table 9, following:

	1990-2001	2001-2010	2010-2015	2015-2020	2020-2030
O/D	1.71%	1.15%	0.82%	0.82%	0.80%
Connecting	1.71%	1.15%	0.82%	0.82%	0.80%
International	1.71%	1.50%	1.25%	1.25%	1.00%

# Table 9Annual Changes in Productivity

The following table, Table 10, shows the percentage of jobs in each of the major categories in 2010 and as adjusted for changes in sector activity.

# Table 10Direct Job Forecast(adjusted for changes in sector activity)

Category	2010	2015	2030
Airline & Airline Services	80.0%	78.0%	76.0%
Government	5.5%	6.0%	6.0%
Passenger Services	9.0%	10.0%	12.0%
Ground Transportation	5.5%	6.0%	6.0%
Total	100.0%	100.0%	100.0%

The first group in this category, "Airline and Airline Services," includes passenger and cargo airlines; pilots and attendants; aircraft fueling, maintenance and cleaning personnel; in-flight catering; custodial, security, baggage, ticketing and sky cap employees and miscellaneous travel services. Constituting the preponderant share of direct employment (80 percent in 2010), this group has a wide range of skills, education levels and incomes. This sector is expected to shrink, somewhat, to 76 percent, in 2030, as labor cuts persist.

"Government" employees include Federal (FAA, postal service, immigration, health, security and customs) and local (airport management, custodial, fire crash and rescue,

police/security, and parking). "Ground Transportation" employees include car rental services, taxi drivers, owners and dispatchers; limousine, bus and van personnel; and private parking facilities. These two groups comprise approximately twelve percent of direct employment.

"Passenger Services" include retail, concessions, restaurants, bars, banks, advertising and other business and personal services housed at the airport. This group, at 9 percent in 2010, traditionally had been a fairly modest component of airport employment until the late 1990's. The consultants have increased the share of this sector to reflect its increasing importance. On-airport retailing will continue to expand over the next decade – and beyond. Facilities at most large European and American airports have proven successful in providing additional revenues to airport operations. As space requirements for ticketing declined, retail helped fill these voids – in both space and revenues. Revenue enhancements and/or creative financing of airport construction are likely to increase and this sector is a major contributor to those revenues. Currently, however, the post-9/11 added security has constrained retail growth – in space, access, and in revenues. As new development adapts to the post 9/11 realities, this forecast assumes that space would be expanded for both retail and security uses.

The direct job forecasts for the four alternatives are shown in Table 11, following.

# Table 11 Direct Jobs Forecasts (adjusted for productivity)

Low Case				
Category	2010	2015	2030	
Airline & Airline Services	18	402	1,629	
Government	1	31	129	
Passenger Services	2	52	256	
Ground Transportation	1	31	129	
Total	22	515	2,143	

Base (Middle)				
Category	2010	2015	2030	
Airline & Airline Services	114	604	3,241	
Government	8	47	256	
Passenger Services	13	77	512	
Ground Transportation	8	47	256	
Total	143	775	4,265	

High Case				
Category	2010	2015	2030	
Airline & Airline Services	154	826	5,730	
Government	11	64	452	
Passenger Services	17	105	905	
Ground Transportation	11	64	452	
Total	193	1,059	7,539	

NIPC/CATS Long-Term				
Category	2010	2015	2030	
Airline & Airline Services	5,823	9,020	21,709	
Government	400	694	1,714	
Passenger Services	656	1,157	3,428	
Ground Transportation	400	694	1,714	
Total	7,279	11,565	28,565	

Source: ACG: The al Chalabi Group, Ltd.

#### **B.** Forecast of Indirect Employment

Indirect jobs are created by the visitor expenditures spent in the region, but for the most part, off-airport. These expenditures are for such items as: hotels/motels, food and drink, retail purchases, entertainment, local transportation (rental cars, taxis and trains), business costs (convention fees, professional costs), entertainment (sports, museums, cultural events) and miscellaneous visitor costs. Travel agency jobs – at one time treated as a separate category - are incorporated into the indirect jobs category (as part of business) for this update because they have been cut so severely.

Former studies estimated, and current analyses confirm, that visitors comprise 44.9 percent of both domestic and international O/D enplanements for the Chicago study region. The ratio for the South Suburban share of the region is slightly lower. It is 37 percent, a figure based on the 1995 report, <u>Market Survey of Potential Users</u><sup>5</sup>. The fact that the South Suburban Airport is being developed for local use rather than regional use, compels the use of this ratio in 2010, raising it to 40 percent in 2015, and to 44.9 percent in 2030. The NIPC/IDOT forecast for the airport employs the regional 44.9 percent for all forecast years.

The extent and allocation of visitor expenditures are based on passenger surveys and are supplemented by data from various national travel and tourism organizations. The latest data – from <u>Business Travel News</u>, 2003 and 2004, - is used for this analysis. As a result of the study update, expenditure ratios have been maintained from the previous study; however, the expenditures, themselves, have been adjusted to 2003 dollars and to reflect the 2002 and 2003 costs for hotel, car and food. Also, the expenditure ratio between domestic and international visitor, assumed in the original study, has been maintained; the international visitor spends 1½ times as much, on average, as the domestic visitor; this is due to the longer average stay of the international visitor.

Some minor adjustments have been made to the allocations between transportation and hotel to reflect the fact that car costs have increased as a percentage, possibly as a

<sup>&</sup>lt;sup>5</sup> <u>Market Survey of Potential Users:</u> <u>South Suburban Airport</u>, ACG: The al Chalabi Group, Ltd, in association with Market Facts, Inc., 1995.

result of the Chicago region's expansion and the fact that hotel room costs have remained flat for several years. Other percentages are rounded. Hotel room costs and the cost of living (1989-2003) adjustment were the major factors for increasing the total daily costs. Daily costs, in 2003, were \$612.50 (in 2003 \$'s) versus \$478 in 1995 (1994 \$'s). It should be pointed out that cost-of-living increases accounted for nearly all of the increased costs for the 2003 visitor expenditures.

The allocation of visitor expenditures is shown in the following table, Table 12.

Category	1995 Percentage	2003 Percentage	2003 \$'s
Lodging	35.0	33.0	\$ 202.25
Food	18.1	18.0	\$ 110.25
Retail	12.9	13.0	\$ 79.50
Entertainment	9.8	10.0	\$ 61.25
Transportation	10.0	12.0	\$ 73.50
Business	13.7	13.5	\$ 82.75
Other	0.5	0.05	\$ 3.00
Total	100.00	100.00	\$ 612.50

Table 12 Visitor Expenditures (to various categories)

The following table, Table 13, shows the total visitor expenditures for individual categories for the target years 2010, 2015 and 2030 for the four commercial operation alternatives. These expenditures have been converted to 2001 dollars to be compatible with expenditures and revenues calculated, later in this analysis, by the input/output model, whose outputs are in 2001 dollars.

# Table 13 Total Visitor Expenditures (in 2001, \$'s)

Low Estimate			
Category	2010	2015	2030
Lodging	1,465,406	38,080,350	191,917,688
Food	799,313	20,771,100	$104,\!682,\!375$
Retail	577,281	15,001,350	75,603,938
Entertainment	444,063	11,539,500	58,156,875
Transportation	532,875	13,847,400	69,788,250
Business	599,484	$15,\!578,\!325$	78,511,781
Other	22,203	576,975	2,907,844
Total	4,440,625	115,395,000	581,568,750
Visitors	7,250	188,400	949,500

Base (Middle) Estimate					
Category	2010	2015	2030		
Lodging	9,419,025	57,322,650	349,191,150		
Food	5,137,650	31,266,900	190,467,900		
Retail	3,710,525	22,581,650	137,560,150		
Entertainment	2,854,250	17,370,500	105,815,500		
Transportation	3,425,100	20,844,600	126,978,600		
Business	3,853,238	23,450,175	142,850,925		
Other	142,713	868,525	$5,\!290,\!775$		
Total	28,542,500	173,705,000	1,058,155,000		
Visitors	46,600	283,600	1,727,600		

High Estimate					
Category	2010	2015	2030		
Lodging	12,673,238	78,262,800	$522,\!654,\!825$		
Food	6,912,675	42,688,800	285,084,450		
Retail	4,992,488	30,830,800	$205,\!894,\!325$		
Entertainment	3,840,375	23,716,000	158,380,250		
Transportation	4,608,450	28,459,200	190,056,300		
Business	5,184,506	32,016,600	213,813,338		
Other	192,019	1,185,800	7,919,013		
Total	38,403,750	237,160,000	1,583,802,500		
Visitors	62,700	387,200	2,585,800		

NIPC/CATS Long Term Estimate					
Category	2010	2015	2030		
Lodging	393,416,100	613,772,775	1,556,706,113		
Food	214,590,600	334,785,150	849,112,425		
Retail	154,982,100	241,789,275	613,247,863		
Entertainment	119,217,000	185,991,750	471,729,125		
Transportation	143,060,400	223,190,100	566,074,950		
Business	160,942,950	251,088,863	636,834,319		
Other	5,960,850	9,299,588	$23,\!586,\!456$		
Total	1,192,170,000	1,859,917,500	4,717,291,250		
Visitors	1,946,400	3,036,600	7,701,700		

Table 13 (cont'd)

Visitor expenditures were converted to jobs by dividing the sums of each category by the payroll content of that category; and then dividing by the average annual wage for the category. Payroll content, as a percentage, was determined from the <u>2002 U.S. Economic</u> <u>Census Table 1: Advance Summary Statistics for the United States</u>. Annual wages had the same source. Productivity in wages is taken from the U.S. Department of Labor: Bureau of Labor Statistics. The employment that is generated as a result of the visitor expenditures, and adjusted for changes in productivity, is shown in Table 14 on the following page for the four alternatives.

The skills and income range of indirect jobs is considerable. Included are hotel managers, reservations clerks and housekeeping staff; retail clerks, department heads, buyers and maintenance staff; restaurant and bar owners, waiters and dishwashers. Entertainment includes theater, museum and sports personnel. Business includes convention planners, suppliers and laborers; reproduction and business materials providers; and business services, such as architects, engineers, lawyers, accountants, public relations consultants, bankers and financial analysts. Business also includes travel agencies. Wages range from \$9,800 to \$35,950, in 2002 dollars.

In the 1995 Study, the jobs generated by visitor expenditures (indirect jobs) were approximately one for each direct job generated. This current analysis indicates a ratio of approximately three to four indirect jobs for each direct job. This change is due to a change in the composition of the enplanements (international, O/D and connecting). The limited number of international and connecting enplanements lowers the direct jobs and increases the percentage of visitors, with a consequent increase in the number of indirect jobs. Compensating for the change in enplanement composition, indirect job generation is approximately comparable to that of the 1995 Study.

# Table 14Employment Due to Visitor ExpendituresIndirect Job Forecasts(Adjusted to changes in productivity)

Low Estimate				
Category	2030			
Lodging	27	704	3,212	
Food	23	589	2,969	
Retail	3	90	399	
Entertainment	6	155	744	
Transportation	6	154	777	
Business	7	189	863	
Other	0	7	32	
Total	73	1,889	8,996	
Visitors	7,250	188,400	949,500	

Base (Middle) Estimate					
Category	2010	2015	2030		
Lodging	174	1,060	5,844		
Food	146	887	5,403		
Retail	22	135	725		
Entertainment	38	234	1,354		
Transportation	38	232	1,414		
Business	47	285	1,570		
Other	2	10	58		
Total	467	2,843	16,368		
Visitors	46,600	283,600	1,727,600		

Table 14	(cont'd)
----------	----------

High Estimate				
Category	2010	2015	2030	
Lodging	234	1,447	8,747	
Food	196	1,211	8,087	
Retail	30	184	1,086	
Entertainment	52	319	2,027	
Transportation	51	317	2,117	
Business	63	389	2,350	
Other	2	14	87	
Total	629	3,881	24,499	
Visitors	62,700	387,200	2,585,800	

NIPC/CATS Long-Term Estimate							
Category 2010 2015 2030							
Lodging	7,275	11,350	26,054				
Food	6,087	9,496	24,086				
Retail	926	1,444	3,234				
Entertainment	1,604	2,502	6,036				
Transportation	1,593	2,486	6,305				
Business	1,954	3,049	6,998				
Other	72	112	258				
Total	19,511	30,439	72,971				
Visitors	1,946,400	3,036,600	7,701,700				

# C. Forecast of Induced Employment

Induced employment reflects the multiplier effects, within the study region, of the direct and indirect jobs. Induced jobs include both the suppliers to the industries previously calculated and the jobs created by the wages spent. Examples of the first type would be the suppliers of linens to the hotels and the flight attendant uniforms to the airlines. Examples of the second, would be the sellers or producers of groceries and cars purchased by the airline and hotel employees.

Multipliers are different for each major industry in each region. For example, the multiplier for the Chicago auto industry, as calculated in the 1995 study, was 6.651. The multiplier for retail trade was 1.460. The multiplier incorporates both the original jobs (as 1.0) and those induced. Therefore, in 1995, the auto industry created 5.651 induced jobs for every 1.0 direct; the retail industry created 0.460 induced jobs for each 1.0. The former multiplier reflects the far-greater amount of material and number of supplies required for the production of a car as opposed to the sale of goods.

Multipliers (for jobs, wages and output) were calculated by an input/output (I/O) model. The I/O model used in both the Phase I Study and the 1995 Economic Impact Assessment was the Multi-Scale Regional Input/Output Model (MSRIOM) of Northern Illinois University (NIU). The model was an Illinois-tailored version of the Regional Sciences Research Institute (RSRI) model. The 1995 RSRI-based I/O model used 1987 BEA data, with the model updated internally to 1993. This model was a substantial improvement over the old model (used in 1991). It incorporated a two-generation (sixteen-year) update and improvement in the regional purchase coefficients which model the U.S. economy.

For the prior (1995) study, NIU was asked to update the base year (1993) multipliers for direct, indirect and travel agency jobs. The results were very instructive. The sixteenyear period of the I/O model update reflected the period over which air transportation became the dominant business-related transportation mode and a significant pleasure travel mode, particularly for long-distance trips. It was also a period in which transportation and air transport-related industries (hotels, convention facilities) expanded greatly - both nationally and in the Chicago region. Consequently, the change in regional multipliers was dramatic - particularly the multiplier for direct employment, which has as its major component, transportation.

NIU subsequently has stopped using the MSRIOM because it is no longer available in an updated version. NIU is using the IMPLAN model, as developed and serviced by the Minnesota Implan Group (MIG). This model is similar to the prior model used. It employs 2002 regional purchase coefficients (a nine year update); and has been tailored to individual states and counties within those states. The model's structure differs, slightly, in that it calculates both indirect and induced impacts from the direct inputs. Since ACG calculates indirect impacts from visitor expenditures, this was a concern discussed, directly, with the IMPLAN developers. When assured that indirect jobs, calculated independently from visitor expenditures, could be substituted in the model, ACG acquired the IMPLAN model and its data base for the 9-county Chicago CMSA, for use in this analysis; and assembled the 9-county adjusted prototype. The 9-county region is shown in Exhibit 3, following.



Exhibit 3 Chicago Consolidated Metropolitan Statistical Area

Prepared by ACG: The al Chalabi Group, Ltd.

November 2005

As a result of eliminating the double-counting implicit in the model's forecast of both indirect and induced totals, the IMPLAN model produced a direct employment multiplier that increased, slightly, from 2.598 to 2.661; this increase is 2.4 percent. This multiplier means that 1.661 induced jobs are generated for every 1.0 direct job created. This is a moderately higher multiplier than the 1995 multiplier; it clearly indicates that air transportation remains a basic and dominant industry in the Chicago region.

Indirect impacts also increased, but far-more substantially, from 1.585 to 1.881. This increase of 18.7 percent, from 1.585 to 1.881, is due, primarily, to the increase of the hotel multiplier and to the employment services needed for the visitor industries. Double counting, once again, has been eliminated from the model run. Following, is the change in regional multipliers from those obtained in 1995 to those obtained in 2004 for both direct and indirect jobs.

Table 15 Change in Regional Output Multipliers for 2002, 2010, 2015, 2030 (1994-2004\*)

	20	02	20	10	20	15	20	30
Category	Old	New	Old	New	Old	New	Old	New
Direct	2.598	2.661	2.598	2.661	2.598	2.661	N/A	2.661
Indirect	1.585	1.881	1.585	1.881	1.585	1.881	N/A	1.881

\* Base data change is 1993 to 2002.

A separate Work Sheet Appendix document shows the detailed induced jobs generated in 509 job categories for direct and indirect jobs for the forecast years and four alternatives. This series of appendix tables also shows the factoring of model-generated indirect for both direct and indirect jobs to eliminate double counting. Applying the new job multipliers to the updated job forecasts results in the following numbers of total induced jobs, shown on Table 16, following.

# Table 16 Forecast of Induced Jobs

Low Forecast						
Category 2010 2015 2030						
Induced by Direct	36	865	3,556			
Induced by Indirect	60	1,,678	7,926			
Total	96	2,543	11,812			

Base (Middle) Forecast								
Category 2010 2015 2030								
Induced by Direct	242	1,301	7,081					
Induced by Indirect	410	2,527	14,416					
Total	Total 652 3,828 21,497							

High Forecast							
Category 2010 2015 2030							
Induced by Direct	327	1,779	12,521				
Induced by Indirect	558	3,453	21,581				
Total	885	5,232	34,102				

NIPC/CATS Long-Term Forecast					
Category 2010 2015 2030					
Induced by Direct	12,409	19,457	47,451		
Induced by Indirect	17,369	27,102	64,287		
Total	29,778	46,559	111,738		

# D. Totals of Direct, Indirect and Induced Jobs

Traditional economic impact models talley the sum of direct, indirect and induced jobs as the major – and, often, only – employment impacts. These totals are shown on Table 17, following:

# Table 17Forecast of Direct, Indirect and Induced Jobsof Commercial Operations and Enplanements

Low Forecast			
Category	2010	2015	2030
Direct	22	515	2,143
Indirect	73	1,889	8,996
Induced	96	2,543	11,812
Total	191	4,947	22,951

Base (Middle) Forecast			
Category	2010	2015	2030
Direct	143	775	4,265
Indirect	467	2,843	16,368
Induced	652	3,828	21,497
Total	1,262	7,446	42,130

High Forecast			
Category	2010	2015	2030
Direct	193	1,059	7,539
Indirect	629	3,881	24,499
Induced	885	5,232	34,102
Total	1,707	10,172	66,140
	NIPC/CATS Lon	g-Term Forecast	
Category	2010	2015	2030
Direct	7,279	11,515	28,565
Indirect	19,511	30,439	72,971
Induced	29,778	46,559	111,738
Total	56,568	88,513	213,274

The forecast for the 2004 impact analysis of the South Suburban Airport adds to the above-cited totals the job impacts of both air cargo and GA/Corporate. These impacts, are discussed in the following sections.

# E. Forecast of Air Cargo-Generated Jobs

For the most part, data on cargo tonnage and operations is inconsistent and sporadic. Data provided by individual airports or by national/international organizations that maintain statistics on air cargo are often at odds with records and statistics provided by the FAA for the United States and its major airports. The lack of consistent standards makes it very difficult to make comparisons of trends over long periods and among airports. Furthermore, until recently (1997), the FAA did not publish a national air cargo forecast.

The importance of airports as economic engines has been demonstrated, over the past several decades, through economic impact studies prepared by or for the airports. ACG has reviewed these many (100+) studies and has been able to construct a reasonable model to estimate and forecast total direct employment that is the result of enplanements and commercial operations (as discussed in Chapters III and IV). The validated direct jobs model, plus reasonable visitor expenditure data, gives a solid basis for forecasting direct and indirect employment of commercial airport operations. In contrast, only a few reports and scattered data exist to describe the relationship between air cargo and the direct jobs generated by it. Much of the air cargo data is anecdotal. Furthermore, relationships are described in many ways: in revenues produced or value of freight transported; in jobs per freight facilities or firms attracted to the airport; in jobs per freight operation; or in jobs per metric ton serviced.

Much of the data on cargo is taken from the report, <u>Air Cargo Logistics: The</u> <u>Attraction and Congestion of Major Hub Airports: The Emerging Desirability of Mid-Size</u> <u>Hubs; and 2030 Cargo Forecast for the Chicago Region</u>, prepared by ACG: The al Chalabi Group, Ltd., for IDOT, in May 2002. While air cargo data is difficult to standardize, several trends are fairly evident:

- Where cargo is merely loaded, unloaded, stored or disbursed, the jobs generated are in the range of 7 to 10 per 1,000 tons.
- Where air cargo is the means for generating airport industries such as just-in-time repairs or just-in-time product deliveries; or is the focus of an express package facility the jobs generated are nearly double, at 16 per 1,000 tons.

The first trend set of airports is the general prototype, be they large, medium or small hub. The second trend set is the industrial cargo airport, based on the Louisville, Alliance (Ft. Worth), Mather (Sacramento), and Rickenbacker (Ohio) model, as well as the express package hubs such as Memphis and Cincinnati. Alliance and Rickenbacker are industrial airports, attracting aviation-related firms to the airport. The express package carriers at Louisville, Memphis and Cincinnati, on the other hand, also are major industries, carrying out sorting and distribution activities at their hubs. In addition, they attract just-in-time products and service providers to the airport at which they hub.

This analysis uses the conservative (low) estimate of jobs generated. However, it is possible that, with its substantial land availability, the South Suburban Airport could become a significant industrial airport. Following, are the direct job forecasts generated by Cargo Operations for the four alternatives for 2010, 2015, and 2030. They are further broken down into seven major categories; these categories have been selected to encompass categories within the existing 509 categories of input/output of the I/O model. Table 18 shows the job forecasts and distribution to these categories.

Low Estimate			
Category	2010	2015	2030
Air Transportation	0	83	514
Rail Transportation	0	14	86
Truck Transportation	0	56	342
Warehousing & Storage	0	83	514
Telecommunications	0	14	86
Management	0	14	86
Business Support	0	14	86
Total	0	278	1,712
Cargo Tons	0	32,700	201,400

Table 18Employment Due to Air CargoDirect Job Forecasts(Adjusted for changes in productivity)

# Table 18 (cont'd)

Base (Middle) Estimate			
Category	2010	2015	2030
Air Transportation	74	264	1,027
Rail Transportation	12	44	237
Truck Transportation	49	176	948
Warehousing & Storage	74	264	1,423
Telecommunications	12	44	237
Management	12	44	237
Business Support	12	44	237
Total	246	881	3,424
Cargo Tons	28,900	103,600	402,800

High Estimate			
Category	2010	2015	2030
Air Transportation	191	503	1,423
Rail Transportation	32	84	237
Truck Transportation	128	335	948
Warehousing & Storage	191	503	1,423
Telecommunications	32	84	237
Management	32	84	237
Business Support	32	84	237
Total	638	1,675	4,742
Cargo Tons	75,000	194,800	557,900

NIPC/CATS Long-Term Estimate			
Category	2010	2015	2030
Air Transportation	281	1,109	5,418
Rail Transportation	47	185	903
Truck Transportation	187	740	3,612
Warehousing & Storage	281	1,109	5,418
Telecommunications	47	185	903
Management	47	185	903
Business Support	47	185	903
Total	935	3,698	18,060
Cargo Tons	110,000	435,000	2,100,000

Because the cargo segment of the South Suburban Airport (or any commercial airport) is not expected to generate visitor expenditures of any consequence, the consultants set the IMPLAN model to produce both indirect and induced impacts from the direct jobs forecast; this is its normal forecast mode. Furthermore, because a large portion of the air transportation component (international air carriers) is likely to be based outside the South Suburban Airport study region, the consultants have adjusted (reduced) portions of the indirect impacts calculated. The following table shows the direct jobs and the adjusted indirect and induced jobs that the air cargo portion of the South Suburban Airport produces.

# Table 19 Forecast of Direct, Indirect and Induced Jobs of Air Cargo Operations

Low Forecast			
Category	2010	2015	2030
Direct	0	278	1,712
Indirect	0	39	250
Induced	0	338	2,111
Total	0	655	4,073

Base (Middle) Forecast			
Category	2010	2015	2030
Direct	246	881	3,424
Indirect	35	127	503
Induced	298	1,084	4,227
Total	578	2,092	8,154

High Forecast					
Category	2010	2015	2030		
Direct	638	1,675	4,742		
Indirect	92	245	697		
Induced	783	2,066	5,857		
Total	1,513	3,986	11,296		
	NIPC/CATS Lon	g-Term Forecast			
Category	2010	2015	2030		
Direct	935	3,698	18,060		
Indirect	135	543	2,666		
Induced	1,151	4,566	22,315		
Total	2,221	8,807	43,041		

# F. Forecast of Jobs Generated by General Aviation and Corporate Operations

For its forecast of jobs and impacts generated by general aviation and corporate operations, ACG references a report prepared in 2000 by Wilbur Smith Associates (WSA) for the Federal Aviation Administration. This report, <u>The Economic Impact of Civil</u> <u>Aviation on the U.S. Economy - Update 2000</u>, examines general aviation, as well as commercial service, for the nation and its 538 commercial service airports and its 19,219 exclusive general aviation airports.

The relevant GA findings in the WSA study are as follows:

In 2000, a total of 102,133,203 GA operations in the USA produced:

- 114,900 direct jobs
- 92,300 indirect jobs (from visitor expenditures)
- 192,800 jobs induced by direct
- 79,700 jobs induced by indirect

Put in a formula similar to that used for other forecasts in this analysis, the above data indicates that:

- 889 operations produce 1 direct job
- 1 direct job induces 1.68 jobs
- 1,107 operations (or expenditures from them) produce 1 indirect job
- 1 indirect job induces 0.86 jobs

ACG also examined the WSA direct, indirect and induced job ratios of this study and compared them with the ratios obtained by the ACG/IMPLAN methodology. These comparisons, as follow on Table 20, indicate substantial methodological agreement and sufficient consistency for the WSA Study results to be used in and incorporated into this analysis.

	ACG	WSA
Indirect to Direct	3.25	3.55
Induced of Direct	1.66	2.08
Induced of Indirect	0.88	0.90

# Table 20Comparison of Direct, Indirect, Induced Job Ratios(ACG vs. WSA)

The WSA ratios are all slightly higher due to the fact that the region they are studying is the entire nation. Although the Chicago region retains much of its induced impacts, there is always some leakage. When applied to the GA operations forecast, the ratios identified in the WSA study produced the following direct and indirect jobs for the South Suburban Airport.

# Table 21 South Suburban Airport General Aviation/Corporate Job Forecasts

DBO+1 (2010)								
Alternative	Operations	Direct Jobs <sup>©</sup>	Indirect Jobs <sup>©</sup>					
Low Case	16,400	18	15					
Base (Middle)	34,800	39	31					
High Case	54,000	61	49					
Long-Term	N/A	-	_					

	DBO+1 (2015)								
Alternative	Operations	Direct Jobs <sup>©</sup>	Indirect Jobs <sup>©</sup>						
Low Case	16,800	19	15						
Base (Middle)	36,000	40	33						
High Case	55,600	63	50						
Long-Term	N/A	_	_						

DBO+1 (2030)								
Alternative	Operations	Direct Jobs <sup>©</sup>	Indirect Jobs <sup>©</sup>					
Low Case	18,900	21	17					
Base (Middle)	40,500	46	37					
High Case	62,700	71	57					
Long-Term	N/A	_	_					

 $^{\odot}$  1 job for every 889 operations

 $^{\odot}$  1 job for every 1,107 operations

The following table, Table 22, shows the direct, indirect, induced and total job forecasts for the Low, Baseline and High GA alternatives for the South Suburban Airport. No GA was forecast for the NIPC/IDOT alternative.

Low Forecast								
Category	2010	2015	2030					
Direct	18	19	21					
Indirect	15	15	17					
Induced	43	45	48					
Total	76	79	86					

# Table 22Forecast of Direct, Indirect and Induced\* JobsGeneral Aviation (GA)/Corporate Operations

Base (Middle) Forecast								
Category 2010 2015 2030								
Direct	39	40	46					
Indirect	31	33	37					
Induced	93	95	109					
Total	163	168	192					

High Forecast								
Category	2030							
Direct	61	63	71					
Indirect	49	50	57					
Induced	144	149	168					
Total	254	262	296					

\* 1 direct job induces 1.68 jobs 1 indirect job induces 0.86 jobs

The following matrix, Table 23, shows direct, indirect and induced jobs created by forecasts for commercial passenger operations, air cargo and general aviation for the South Suburban Airport.

# Table 23 South Suburban Airport Total Jobs Forecast Passenger, Air Cargo, GA/Corporate

# Low Forecast

	2010			2015			2030					
	Direct	<b>Indirect</b>	<b>Induced</b>	<u>Total</u>	Direct	<b>Indirect</b>	<b>Induced</b>	Total	<b>Direct</b>	<b>Indirect</b>	Induced	<u>Total</u>
Commercial Passenger	22	73	96	191	515	1,889	2,543	4,947	2,143	8,996	11,812	22,951
Air Cargo	0	0	0	0	278	39	338	655	1,712	250	2,111	4,073
General Aviation/Corp.	18	15	43	76	19	15	45	79	21	17	48	86
Total	40	88	139	267	812	1,943	2,926	5,681	3,876	9,263	13,971	27,110

### **Base Forecast**

	2010			2015			2030					
	<b>Direct</b>	<b>Indirect</b>	<b>Induced</b>	<u>Total</u>	Direct	<b>Indirect</b>	<b>Induced</b>	Total	Direct	<b>Indirect</b>	Induced	<u>Total</u>
Commercial Passenger	143	467	652	1,262	775	2,843	3,828	7,446	4,265	16,368	21,497	42,130
Air Cargo	246	35	298	579	881	127	1,084	2,092	3,424	503	4,227	8,154
General Aviation/Corp.	39	31	93	163	40	33	95	168	46	37	109	192
Total	428	533	1,043	2,004	1,696	3,003	5,007	9,706	7,735	16,908	25,833	50,476

# **High Forecast**

	2010			2015			2030					
	<b>Direct</b>	<b>Indirect</b>	<b>Induced</b>	Total	Direct	<b>Indirect</b>	<b>Induced</b>	<u>Total</u>	Direct	<b>Indirect</b>	<b>Induced</b>	<u>Total</u>
Commercial Passenger	193	629	885	1,707	1,059	3,881	5,232	10,172	7,539	24,499	34,102	66,140
Air Cargo	638	92	783	1,513	1,675	245	2,066	3,986	4,742	697	5,857	11,296
General Aviation/Corp.	61	49	144	<b>254</b>	63	50	149	262	71	57	168	296
Total	892	770	1,812	3,474	2,797	4,176	7,447	14,420	12,352	25,253	40,127	77,732

# NIPC/CATS Long-Term Alternative Forecast

	2010			2015			2030					
	<b>Direct</b>	<b>Indirect</b>	<b>Induced</b>	<u>Total</u>	Direct	<b>Indirect</b>	<b>Induced</b>	<u>Total</u>	Direct	<b>Indirect</b>	<u>Induced</u>	<u>Total</u>
Commercial Passenger	7,279	19,511	29,778	56,568	11,515	30,439	46,559	88,513	28,565	72,971	111,738	213,274
Air Cargo	935	135	1,151	2,221	3,698	543	4,566	8,807	18,060	2,666	22,315	43,041
General Aviation/Corp	0	0	0	0	0	0	0	0	0	0	0	0
Total	8,214	19,646	30,929	58,789	15,213	30,982	51,125	97,320	46,625	75,637	134,053	256,315

# G. Estimate of Construction Jobs

The estimate of construction jobs is derived directly from the labor content of the construction cost of the airport. The jobs estimate includes both direct construction jobs and jobs induced by construction. It is assumed that construction jobs will be in place with the first drawdown of construction funds. Construction jobs then become a function of all subsequent development cost drawdowns. Jobs are expressed as full-time equivalents and person/year jobs. The following table, Table 24, shows the annual drawdown of construction funds through 2015 and at key points through 2030. The funds are separated into three categories: structures, site/runway, and access/transportation work.

Year	Structures	Site/Runway	Access/Transportation
2006			
2007			
2008			
2009			
2010			
2011			
2012			
2013			
2014			
2015			
2020			
2025			
2030			

Table 24 Annual Construction Draw Down South Suburban Airport

The IMPLAN model estimated jobs produced. The job estimates are expressed as "direct construction jobs"; "jobs induced by construction"; and "total construction and related jobs" for 2010, 2015 and 2030. These are shown on Table 25.

# Table 25Estimate of Construction Jobs(Cumulative Totals, in person/years)

Year	Direct	Induced	Total Construction Jobs
2010			
2015			
2030			

Construction jobs are shown as cumulative totals for each of the key forecast years. A detailed estimate by year is shown in the Appendix. Construction costs and labor wage rates are in 2001 dollars. A comparison of I/O model-generated employment with those estimated in 1995 (at 25 jobs per \$1 million (1994 \$'s) construction cost proved reasonable.

A complete update of construction job forecasts is dependent on cost revision, if any, that may result from the detailed engineering tasks currently underway; at present, no such increases are anticipated. Forecasts also would be affected by any acceleration of the construction period that may be necessitated by an urgency to provide capacity to a severely-constrained region.

**Note:** Tables 24 and 25 are left purposely blank pending finalization of project construction cost estimates and draw-downs.

# V. UPDATED FORECAST OF ECONOMIC IMPACTS

#### A. Regional Impacts of the Airport System

Studies prepared in 1991<sup>6</sup> and in 1995 documented that employment at the existing Chicago regional airport system (direct, indirect and induced) contributed approximately 7 percent of the 9-county employment, based on refinements to the original input/output model. It also was estimated that the contribution of the regional airport system (for O'Hare, Midway, and the South Suburban) in 2020 would have grown from the current 7 percent to 9 percent, a 30 percent increase. Currently, it is estimated that, by 2030, the regional airport system will provide approximately 10 percent of the region's jobs. The South Suburban Airport will contribute a wide range – 27,110 to 77,732 and a NIPC/IDOT forecast of 256,315 jobs; this is 0.4 percent to 1.1 percent of the regional economy's total of 7,070,000 jobs. The NIPC/IDOT forecast would provide 3.5 percent.

While jobs are generally regarded as the most tangible manifestation of the airport, there are many other economic impacts. The first - and most essential - is the airport's ability to support the economic growth and vitality of the region. It does this in many ways: by providing business access to markets and materials; by facilitating reasonable access for personal travel; by creating a prime interchange of goods, ideas and people. Chicago's airports serve a four-state region, providing world-wide access to its abundant agricultural resources, its diverse manufacturing/commercial products and its corporate/financial skills. It is one of the nation's primary access points for international trade and travel.

Both a national crossroad and an international entry point, Chicago serves as the premier hub of the national aviation network. Approximately 6.5 percent of the nation's air travelers pass through Chicago's airports; this is down, slightly, from its 7.0 percent in 1995. It is this flight frequency and service that has made Chicago the major convention center for the nation. The airport system also makes the area a prime location for headquarters and businesses that serve national and international clients. In an

<sup>&</sup>lt;sup>6</sup> The al Chalabi Group, Ltd., "Primary Economic Impacts," Working Paper 15A <u>Illinois-Indiana</u> <u>Regional Airport Study</u>, 1991; ACG, OPCIT, 1995.

increasingly-global marketplace, access to a major international airport is critical to economic survival. The South Suburban area currently is ill-served by the region's airports. This has limited its competitiveness and ability to attract new industries, particularly those that serve the global marketplace.

Access to the world is critical for the sale of Chicago's products and services and for the growth of its industries. The expenditures of its visitors and the wages of its airportrelated employees help fuel the regional economy. Similar access must be extended to the southern portion of the region. Visitor expenditures generally have concentrated in the region's commercial centers, primarily the Chicago Central Area. Jobs and airport-related wages, on the other hand, are widely distributed throughout the region, although the Chicago Central Area and the O'Hare area are its major focuses. The development of the South Suburban Airport would permit it and the region around it to attract jobs, industries and economic impacts commensurate with balanced development.

# B. South Suburban Airport Impacts

Just as O'Hare and Midway have done before it, it is anticipated that the South Suburban Airport will provide a substantial infusion of economic impacts to the regional economy. Among these are:

- Value Added (labor income, other property income, business taxes)
- Labor Income (employee compensation, proprietor income)
- Expenditures (visitor impacts)
- Total Industry Output (gross regional product)

These economic impacts, in turn, provide sources of revenue to state and local governments to provide services (highways, local roads, utilities, schools) to their increased populations. Revenue sources include:

- State income taxes (including rebate)
- Property (real estate) taxes
- Sales taxes (on wages and expenditures)
- Motor vehicle tax
- Other taxes (business and household)

# 1. Total Value Added (TVA)

Value Added impacts consist of four components; these are:

- Employee compensation
- Other property income

• Proprietor income

• Indirect business tax

Value Added is a total of all wage and salary payments, including benefits; all payments to self-employed individuals and private business owners; all payments from rents, interest, royalties, dividends, and profits to individuals and corporations; and excise and sales taxes paid by individuals to business. The first two components, employee compensation and proprietary income, are added to reflect Labor Income.

Value Added is calculated from the IMPLAN model for direct, indirect, induced and total jobs of commercial passenger operations and cargo for 2010, 2015 and 2030. An estimate of Value Added for GA is derived from the "General Aviation's Economic Impact" chapter of the report, <u>The Economic Impact of Civil Aviation on the U.S. Economy – Update 2000</u>, (previously cited), with 2000 dollars updated to 2001 levels.

Table 26, following, shows Total Value Added for commercial passenger operations, cargo and GA. TVA is estimated for the Low, Base (Middle) and High forecasts, only.

(III 2001 dollars)					
	TVA				
Alternative/	Commercial				
Forecast	Passenger	TVA	TVA		
Year	Ops.	Cargo	GA/Corp.	Total	
Low 2010	11,276,235	0	3,526,000	14,802,235	
Low 2015	292,023,745	46,388,767	3,612,000	342,024,512	
Low 2030	1,319,507,366	287,110,618	4,063,500	1,610,681,484	
Base (Middle) 2010	74,926,029	41,015,980	7,482,000	123,424,009	
Base (Middle) 2015	439,397,030	147,656,490	7,740,000	594,793,520	
Base (Middle) 2030	2,466,499,843	574,474,079	8,707,500	3,049,681,422	
High 2010	101,604,125	106,805,599	11,610,000	220,019,724	
High 2015	600,247,614	280,948,537	11,954,000	893,150,151	
High 2030	3,901,129,166	795,714,266	13,480,500	4,710,323,932	

# Table 26 Total Value Added (TVA) (in 2001 dollars)

Total Value Added grows from \$14.8 to \$220 Million, in 2010 to \$1.6 to \$4.7 Billion in 2030 for the three alternatives.

### 2. Labor Income

Labor Income consists of total employee wages and salary payments and payments received by the self-employed and private business owners. It is estimated, for each of the employment categories – direct, indirect and induced. Income is based on the weighted average for employee salaries and compensation within each employment group for direct, indirect and induced jobs.

Calculations of labor income are made for direct, indirect, induced and total jobs of commercial passenger operations and cargo. Labor Income for these two segments was calculated by the Implan model, with adjustments made for the elimination of doublecounting. To these calculations are added estimates of Labor Income for GA derived from the Economic Impact report, previously cited. These Total Labor Income estimates and forecasts are shown in the following table, Table 27. Estimates are shown for Low, Base, and High forecasts. All values are in 2001 dollars.

Table 27 Labor Income (L.I.) (in 2001 dollars)

Alternative/ Forecast	Labor Income Commercial	Labor Income	Labor Income	
Year	Passenger Ops.	Cargo	GA/Corp.	Total
Low 2010	7,832,869	0	2,296,000	10,128,869
Low 2015	201,819,040	32,147,520	2,352,000	236, 318, 560
Low 2030	910,757,375	198,968,298	2,646,000	1,112,371,673
Base (Middle) 2010	51,950,230	28,424,166	4,872,000	$85,\!246,\!396$
Base (Middle) 2015	303,676,469	102, 325, 268	5,040,000	411,041,737
Base (Middle) 2030	1,705,597,734	398,111,816	$5,\!670,\!000$	2,109,379,550
High 2010	70,406,133	74,016,518	7,560,000	$151,\!982,\!651$
High 2015	414,840,678	194,696,951	7,784,000	617,321,629
High 2030	2,707,221,366	551,431,760	8,778,000	3,267,431,126

Labor Income for direct, indirect and induced jobs grows from \$10.1 to \$152.0 Million, in 2010 to \$1.1 to \$3.3 Billion in 2030.

# 3. Visitor Expenditures

Per capita visitor expenditures were estimated from airline surveys conducted earlier; supplemented by data from national travel and tourism organizations; and updated to 2001 dollars. Because these visitor expenditures were the basis for the calculations of indirect jobs, they have been described, fully, in Chapter IV-B of this report. Total visitor expenditures grow from \$6.6 to \$45.6 Million in 2010, to \$0.6 to \$1.6 Billion, in 2030. These amounts are shown in the following table. Per capita visitor expenditures were calculated by the IMPLAN model for the commercial passenger operations, only. Cargo is not expected to produce visitor expenditures of any consequence. Visitor expenditures from GA/Corporate are extracted from the Economic Impact report, previously cited. Table 28 shows these Visitor Expenditures.

Alternative/ Forecast Year	Commercial Passenger Ops	General Aviation /Corporate	Total
Low 2010	4,440,625	2,197,600	$6,\!638,\!225$
Low 2015	115,395,000	2,251,200	117,646,200
Low 2030	581,568,750	2,532,600	584,101,350
Base (Middle) 2010	28,542,500	4,663,200	33,205,700
Base (Middle) 2015	173,705,000	4,824,000	178,529,000
Base (Middle) 2030	1,058,155,000	5,427,000	1,063,582,000
High 2010	38,403,750	7,236,000	45,639,750
High 2015	237,160,000	7,450,400	244,610,400
High 2030	1,583,802,500	8,401,800	1,592,204,300

Table 28 Total Visitor Expenditures (in 2001 dollars)

# 4. Total Industry Output (TIO)

The Total Industry Output approximates a gross regional product. It is defined as the total market transactions contributed by each sector of production. Total Industry Output includes:

- Wages and salaries industry pays its employees
- Profits that firm owners retain
- Depreciation allowances on fixed assets

- Interest paid on borrowed capital
- Taxes industry pays to government

Output accounts, only once, for the contribution of each sector of production. Outputs of direct, indirect and induced jobs have been estimated by the IMPLAN model for commercial passenger operations and cargo. TIO for GA/Corporate has been extracted from the Update 2000, previously cited. These total estimates for commercial passenger operations, cargo and GA/Corporate are shown in the following table, Table 29.

Alternative/	Commercial			
Forecast Year	Passenger Ops.	Cargo	GA/Corp.	Total
Low 2010	19,702,069	0	7,757,200	$27,\!459,\!269$
Low 2015	503,276,306	83,373,716	7,946,400	594,596,422
Low 2030	2,263,681,533	$513,\!438,\!125$	8,939,700	2,786,059,358
Base (Middle) 2010	130,027,439	73,776,742	16,460,400	220,264,581
Base (Middle) 2015	757,117,225	264,287,621	17,028,000	1,038,432,846
Base (Middle) 2030	4,242,492,163	1,026,876,250	19,156,500	5,288,524,913
High 2010	176,205,966	191,339,673	25,542,000	393,087,639
High 2015	1,034,132,302	502,412,539	26,298,800	1,562,843,641
High 2030	6,745,995,403	1,422,151,685	29,657,100	8,197,804,188

# Table 29 Total Industrial Output (in 2001 dollars)

Total Industry Output grows from \$27 to \$393 Million in 2010 to \$2.8 to \$8.2 Billion in 2030. This estimate seems quite reasonable when compared with the \$14.7 Billion output estimated for the Chicago airport system in 1992<sup>7</sup>, the estimated \$30 billion output of O'Hare in 1998; and the \$38 Billion<sup>8</sup> in 2002.

<sup>&</sup>lt;sup>7</sup> National Economic Research Associates, Inc. OP CIT.

<sup>&</sup>lt;sup>8</sup> Chicago Department of Aviation, 1998, 2002.

# C. Revenues to State and Local Governments

Government revenues generated as a result of the proposed airport development are a considerable portion of its economic impact. This section describes and quantifies the major sources of revenue – income taxes and sales taxes – to two governmental bodies; they are:

- State of Illinois
- State of Indiana

The State of Illinois rebates a portion of its sales tax revenues to municipalities and counties in which the taxes are generated. Neither jobs nor economic impacts have been distributed to municipalities because municipal boundaries will change over the course of the airport forecast period; and these changes are unpredictable for revenues. Furthermore, distribution of jobs will depend on an array of incentives and land availabilities and values neither available nor foreseeable at this time. County totals for income taxes are based on the distribution of jobs. Township totals for revenues are internal to the study; county totals are shown in Appendix Table 7.

The consultants recognize that property tax revenues are probably the principal source of local funding (25-30 percent of municipal revenues) of such improvements as local roads, schools, community services and utilities. Forecasting property values over a 25year period, however, is treacherous, at best. These local funding estimates and issues are the subject of local planning efforts that have been initiated by IDOT and the Project Office. Planning and analysis are ongoing.

# 1. Income Tax Revenues

The major sources of revenue to the units of government under study are personal income tax and sales tax. Calculated and included in this text are these revenues for two units of government: the States of Illinois and Indiana. Revenue calculations for income tax by county are included in the Appendix, as Appendix Table 8.
Income and sales tax revenues are calculated as "effective" percentages of the state's share of wages generated by airport-related jobs. Distributions of airport-generated jobs to the states are taken from tables developed in the following section, VI, Regional Distribution of Employment, Population and Economic Impacts. To these distributions, are applied the following tax rates: the Illinois income tax rate is 3.0 percent; the Indiana income tax rate is 3.4 percent. Table 30 shows the airport-generated revenues to the two states from income taxes, for the three forecast alternatives. Calculations are not made for the Long-Term alternative.

Table 30
<b>Revenue to State Governments:</b>
from Income Taxes
(in 2001 dollars)

Alternative/ Forecast Year	Total Labor Income	Revenues To Illinois	Revenues to Indiana	Total Income Tax Revenues
Low 2010	10,128,869	279,557	27,551	307,107
Low 2015	236,318,560	6,451,497	723,135	7,174,631
Low 2030	1,112,371,673	30,367,747	3,403,857	33,771,604
Base (Middle) 2010	85,246,396	2,352,801	231,870	2,584,671
Base (Middle) 2015	411,041,737	11,221,439	$1,\!257,\!788$	12,479,227
Base (Middle) 2030	2,109,379,550	57,586,062	6,454,701	64,040,763
High 2010	151,982,651	4,194,721	413,393	4,608,114
High 2015	617,321,629	16,852,880	1,889,004	18,741,885
High 2030	$3,\!\overline{267,\!431,\!126}$	89,200,870	9,998,339	99,199,209

### 2. Sales Tax Revenues

State sales tax for Illinois and Indiana is 5.0 percent and 6.0 percent, respectively. A comparable "effective" rate of 1.8 percent and 2.16 percent of wages for Illinois and Indiana<sup>9</sup>, respectively, is used in this calculation because total sales volumes are

<sup>&</sup>lt;sup>9</sup> Updated from calculations made in prior study, <u>South Suburban Airport: Economic Impact</u> <u>Assessment – Build versus No-Build</u>. Updated to reflect state sales taxes of 2001.

unavailable. Table 31 shows revenues to the two states from sales taxes generated by airport jobs.

### Table 31 Revenue to State Governments: from Sales Taxes (on Wages) (in 2001 dollars)

Alternative/ Forecast Year	Total Labor Income	Revenues to Illinois	Revenues to Indiana	Total Sales Tax (wage) Revenues
Low 2010	10,128,869	131,270	17,503	148,773
Low 2015	236,318,560	3,020,151	459,403	3,479,554
Low 2030	1,112,371,673	14,216,110	2,162,451	16,378,561
Base (Middle) 2010	85,246,396	1,104,793	147,306	1,252,099
Base (Middle) 2015	411,041,737	$5,\!253,\!113$	799,065	6,052,179
Base (Middle) 2030	2,109,379,550	26,957,871	4,100,634	31,058,504
High 2010	151,982,651	1,969,695	262,626	2,232,321
High 2015	617,321,629	7,889,370	1,200,073	9,089,444
High 2030	3,267,431,126	41,757,770	$6,\!351,\!886$	48,109,656

Sales taxes also are calculated on that portion of visitor expenditures (retail and food) that is taxable. Sales tax rates are 5.0 percent, and 6.0 percent for Illinois and Indiana, respectively. Table 32 shows sales taxes to state the two governments generated by visitor expenditures. These sales taxes do not include hotel/motel and rental car taxes, or local food and beverage taxes.

### Table 32 Revenue to State Governments: from Sales Taxes (on Visitor Expenditures) (in 2001 dollars)

Alternative/	Total Visitor	Revenues	Revenues	Total Sales Tax (visitor)
Forecast Year	Expenditures	to Illinois	to Indiana	Revenues
Low 2010	6,638,225	311,997	23,898	335,894
Low 2015	117,646,200	5,499,960	458,820	5,958,780
Low 2030	584,101,350	26,868,662	2,803,686	29,672,349
Base (Middle) 2010	33,205,700	1,560,668	119,541	1,680,208
Base (Middle) 2015	178,529,000	8,346,231	696,263	9,042,494
Base (Middle) 2030	1,063,582,000	48,924,772	5,105,194	54,029,966
High 2010	$45,\!639,\!750$	2,145,068	164,303	2,309,371
High 2015	244,610,400	11,435,536	953,981	12,389,517
High 2030	1,592,204,300	73,241,398	7,642,581	80,883,978

### 3. Total Revenues to Governments

Total revenues to governments indicate an initial annual resource of approximately \$792,000 - \$9,150,000 growing to approximately \$80,000,000-\$228,000,000, annually, by 2030, depending on the alternative (Low, Base and High). These calculations are shown on Table 33, following.

### Table 33 Total Annual Revenues to State Governments (in 2001 dollars)

Alternative/ Forecast	<b>Total Revenues</b>	<b>Total Revenues</b>	<b>Total Revenues</b>
Year	to Illinois	to Indiana	to State
Low 2010	722,824	68,951	791,774
Low 2015	14,971,608	1,641,358	16,612,966
Low 2030	71,452,519	8,369,994	79,822,513
Base (Middle) 2010	5,018,262	498,716	5,516,978
Base (Middle) 2015	24,820,784	2,753,116	$27,\!573,\!900$
Base (Middle) 2030	133,468,704	$15,\!660,\!529$	149,129,233
High 2010	8,309,485	840,322	9,149,807
High 2015	36,177,787	4,043,058	40,220,845
High 2030	204,200,037	23,992,806	228,192,843

### D. Summary of Findings

The development of the South Suburban Airport creates major benefits in jobs, income and government revenues for the entire region. These job and income benefits are well distributed, with both states, the City of Chicago and counties and municipalities participating. Other governmental units participate, as well, proportionate to the numbers of jobs, workers and/or households attracted. Furthermore, the benefits of construction jobs and their attendant income and revenue steams can materialize quickly; and the rewards of permanent jobs are already substantial by the period 2010 to 2015.

One interesting observation from the calculations in Tables 31 and 32 is that sales taxes from visitor expenditures contribute a significantly larger revenue to governments than do the sales taxes contributed by airport-generated workers and their households. As such, the major income generated is imported rather than locally-generated.

While all portions of the region benefit, as the major taxing body, the State of Illinois is the recipient of the preponderant share of revenues – starting at 0.7 to 71 million dollars, annually, in the year 2010, and increasing to 8.3 to 204 million dollars, annually, in 2030.

The cumulative revenues (in 2001 dollars) for the two major taxing bodies, over the 20-year forecast period are shown in the following table, Table 34, as follows:

# Table 34Cumulative Revenuesto Illinois and Indiana(2001 million dollars)

Alternative	State of Illinois	State of Indiana	Total
Low	723	83	807
Base	1,331	154	1,490
High	2,020	234	2,260

It should be noted, that these revenues are based on current taxing rates and are calculated for only the major taxes. They do not include hotel/motel taxes, rental car taxes or special taxing districts of projects intended to enhance overall airport development or to encourage additional economic investment. Furthermore, they do not include those revenues generated at the airport, itself, which would be used to finance airport development. These latter revenues include concession, rental car, hotel, fuel and food/beverage taxes. Appendix Table 9 shows the cumulative tax revenue amounts by year, by state.

### VI. REGIONAL DISTRIBUTION OF EMPLOYMENT, POPULATION AND ECONOMIC IMPACTS

### A. Overview

The development of the proposed South Suburban Airport is intended to provide the air transportation capacity needed for the Southern part of the Chicago region; but the airport's development will allow the entire Chicago region to thrive. Consequently, while the airport is expected to be a major catalyst for nearby growth and development, it is also expected to create and sustain economic benefits that will reach well beyond its environs.

Indeed, by 2030, there is a range of 27,110 to 77,732 permanent jobs that are dependent on the development of the South Suburban Airport. These are the jobs that both serve the study area and create additional demand for the South Suburban Airport. These jobs, the establishments that house them, the employees that hold them, and the communities that service them can be expected to complement existing regional development patterns.

The term complement, in its most precise form, means that which completes. The South Suburban Airport can provide a development of the south side of the region that complements the development which has occurred over the past forty years in the north. It will reinforce the position of the Chicago Central Area as pivotal to the region. It will help to shorten the lengthy trips to work imposed on the residents of Chicago's south side, South Cook and Will Counties and Northwest Indiana. It will provide jobs within reasonable commute of existing communities with a wide diversity of job skills and housing values. It will re-establish a more-uniform growth pattern radiating outward from the region's traditional center along a transportation network that is, for the most part, already in place. This analysis indicates that development of the South Suburban Airport would substantially enhance the economy of Chicago and its region.

Until the early 1970's, regional population and employment growth in the Chicago region had been fairly concentric. Population growth was "contained in a nearly-continuous fifteen-township corridor that extended from South Lake County, Illinois to Lake County, Indiana<sup>10</sup>. Subsequently, however, the region's employment growth began to reflect the differential growth in the manufacturing and service economies. Manufacturing, in response to global competition, was cutting back, dismantling and – eventually – increasing its productivity through modernization and automation. Much of the older, more-basic, industry of the South Side was affected, drastically shrinking the job base of the South Side and the South Suburbs.

Conversely, the retail, financial and service industries and "high-tech" industry – both nationally and in the Chicago region – had launched a twenty-year period of sustained growth. In the Chicago area, retail followed the population exodus and located within the newly-suburbanized centers. Service jobs continued to grow in the Chicago Central Area, but the O'Hare Airport area began to emerge as a second development focus for both service and high-tech manufacturing.

By 1990, the economic engine that is O'Hare had skewed regional development, decidedly, to the northwest. Because the area to the south and east of the airport, in Chicago, already was developed before 1950, new development radiated outward (to the Northwest) from O'Hare. This outward development has progressed for 45 years, covering areas to the north, northwest, west, and most-recently, the Southwest. Consequently, major recent developments and relocations are now at the extreme southwest and northwest edges of the metropolitan area, some 35 and 65 miles, respectively, from the Central Area of Chicago. Access to these relocated and newly-developed jobs has strained many employees' budgets of time and money.

This skewed development pattern of the past 45 years attests to the considerable attraction of the airport. In recognition of this fact, the feasibility study for a "third regional airport," the <u>Chicago Airport Capacity Study</u><sup>11</sup>, concluded that the southern portion of the region was inadequately served by a major airport and that this factor was a deterrent to development. "This fact prompted the delineation of the southern part of the region as the major area to be served by the alternative airport sites. It was felt that a

<sup>&</sup>lt;sup>10</sup> The al Chalabi Group, Ltd., "Regional and Sub-Regional Distribution of Economic Impacts, "Working Paper 15B, <u>Illinois-Indiana Regional Airport</u>.

<sup>&</sup>lt;sup>11</sup> KMPG Peat Marwick, <u>Chicago Airport Capacity Study</u>, 1988.

third airport serving the southern half of the region would begin to redistribute the economic opportunities of the region and restore a balance to the historic growth pattern of the metropolitan area"<sup>12</sup>. Earlier studies, including those for the City of Chicago, also had concentrated on a site in the southern part of the region or the City's southeast side.

The South Suburban Airport will help accomplish the major development objectives of the southern part of the region, in addition to providing the essential added capacity to the regional and national aviation networks. Few public investments can contribute so substantially, and diversely, to the public good. The construction of the airport will result in the following accomplishments:

- The South Suburban Airport will decrease the average trip-to-work travel time for residents of South Cook, Will, Kankakee, Lake (IN) and Porter Counties.
- The South Suburban Airport will favor the development of land closer to the region's central area over the decentralization of current trends.
- The South Suburban Airport and its proximate development will promote the redevelopment of vacant, under-utilized and abandoned parcels between it and the region's center.
- The South Suburban Airport will improve accessibility to jobs for larger segments of the unemployed, underemployed and minority populations.
- The South Suburban Airport and its associated development will distribute employment more evenly to the existing population and around the built-up environment.

The following sections of this Chapter describe the allocation assumptions and methodology; the distribution of jobs, households and population; and the impacts such distributions have on the economic vitality of the Chicago region.

<sup>&</sup>lt;sup>12</sup> The al Chalabi Group, OP CIT.

### **B.** The Allocation Assumptions

The allocation of jobs, population, households and economic activities associated with the South Suburban Airport is accomplished through a series of forecasting iterations, that are both interdependent and reinforcing. As an initial step, base socio-economic forecasts for the six-county metropolitan region were developed by the Northeastern Illinois Planning Commission (NIPC) in September 2003. The base forecasts (of population, households jobs, and economic activities) for the six-county region established the starting point (origin) of the trip to the airport.

These 2003 base forecasts, generated by the regional planning agency, were adjusted by the consultants, to include the three counties (Kankakee, Lake and Porter, Indiana) that are part of the original airport study area and which comprise a substantial part of the economic impact area. This forecast, to 2030, was defined as the forecast that would occur if the impact of the airport were generic rather than site-specific. It also assumed that adequate air transport capacity would be available throughout the forecast period. The jobs, households and population generated by the proposed airport forecast (as provided by a joint forecast approved by IDOT and the City of Chicago) were calculated, distributed, then subtracted from the NIPC base forecasts. These forecasts – net of airport development (2000-2030) – are the adjusted bases for the region – for employment, population and households. As population is a derivative of households, it was not mapped. Exhibits 4 and 5, show the base forecasts for employment and households. Tables, 35, 36 and 37 on pages following the above-cited exhibits, show the employment, household and population impacts by County.

The consultants and the regional planning agencies – primarily the Northeastern Illinois Planning Commission (NIPC) – worked closely together to develop these two alternative forecasts to reflect the jobs and development impacts of airport development, including the South Suburban Airport. The "Build" forecast recognizes that the NIPCforecasted employment for the region – for 2010, 2015 and 2030 – would require the construction of the South Suburban Airport plus the expansion of O'Hare and Midway Airports. The Low, Base and High forecasts for the South Suburban Airport, therefore, assume various alternative means of accommodating this demand. The jobs forecasts of Exhibit 4: South Suburban Airport Master Plan Environmental Impact Statement - Cumulative Impacts NIPC Minus Baseline 2030 Forecasts Employment Per Quarter Section



Prepared by ACG: The al Chalabi Group, Ltd. in association with TAMS an Earth Tech Co.

November 2005

Exhibit 5: South Suburban Airport Master Plan Environmental Impact Statement - Cumulative Impacts NIPC Minus Baseline 2030 Forecasts Households Per Quarter Section



Prepared by ACG: The al Chalabi Group, Ltd. in association with TAMS an Earth Tech Co.

November 2005

# Table 35South Suburban AirportCumulative Impacts - Employment Forecasts

		NIPC	SSA Baseline	NIPC 30 Minus	SSA Baseline
Sub Area	Actual 2000	Forecasts 2030	Forecasts 2030	SSA Baseline 30	Change 00-30
City of Chicago	1,785,391	2,231,186	$2,\!174,\!599$	56,587	389,208
North Cook	864,655	1,023,482	1,008,502	14,980	143,847
West Cook	340,308	371,247	365,747	5,500	25,439
South Cook	369,788	474,005	443,618	30,387	73,830
DuPage	704,019	1,025,467	1,010,434	15,033	306,415
Kane	$242,\!351$	$423,\!442$	417,244	6,198	174,893
Lake	419,409	569,931	561,588	8,343	142,179
McHenry	111,833	207,438	204,402	3,036	92,569
Will	186,316	547,946	469,087	78,859	282,771
Kankakee	54,915	85,000	71,104	13,896	16,189
Lake (IN)	246,323	$274,\!945$	257,013	17,932	10,690
Porter	71,210	92,424	86,859	5,565	15,649
Total	5,396,518	7,326,513	7,070,198	256,315	1,673,680
Knk, Lake, Porter	$372,\!448$	452,369	414,976	37,393	42,528
NIPC Counties	5,024,070	6,874,144	$6,\!655,\!222$	218,922	1,631,152

Prepared by ACG: The al Chalabi Group, Ltd. in association with TAMS, an Earth Tech Co.

February 2005

# Table 36South Suburban AirportCumulative Impacts - Household Forecasts

		NIPC	SSA Baseline	NIPC 30 Minus	SSA Baseline
Sub Area	Actual 2000	Forecasts 2030	Forecasts 2030	SSA Baseline 30	Change 00-30
City of Chicago	1,061,928	1,221,163	1,207,612	13,551	$145,\!684$
North Cook	394,196	418,971	416,391	2,580	22,195
West Cook	$217,\!557$	$227,\!591$	$226,\!217$	1,374	8,660
South Cook	300,500	$357,\!204$	343,039	14,165	42,539
DuPage	$325,\!648$	363,779	360,533	3,246	34,885
Kane	133,941	236,441	227,717	8,724	93,776
Lake	216,236	293,434	286,863	6,571	70,627
McHenry	89,451	$157,\!629$	151,826	5,803	62,375
Will	167,648	361,483	330,867	30,616	163,219
Kankakee	40,524	51,000	45,077	5,923	4,553
Lake (IN)	181,605	198,303	191,328	6,975	9,723
Porter	54,732	77,730	74,222	3,508	19,490
Total	3,183,966	3,964,728	3,861,692	103,036	677,726
Knk, Lake, Porter	276,861	327,033	$310,\!627$	16,406	33,766
NIPC Counties	2,907,105	$3,\!637,\!695$	3,551,066	86,629	643,961

Prepared by ACG: The al Chalabi Group, Ltd. in association with TAMS, an Earth Tech Co. February 2005

# Table 37South Suburban AirportCumulative Impacts - Population Forecasts

		NIPC	SSA Baseline	NIPC 30 Minus	SSA Baseline
Sub Area	Actual 2000	Forecasts 2030	Forecasts 2030	SSA Baseline 30	Change 00-30
City of Chicago	2,896,016	$3,\!260,\!897$	3,227,825	33,072	331,809
North Cook	1,046,098	1,089,922	1,083,283	6,639	37,185
West Cook	603,629	611,841	608,534	3,307	4,905
South Cook	830,998	$975,\!588$	935,756	39,832	104,758
DuPage	904,313	1,007,669	998,727	8,942	94,414
Kane	$404,\!255$	$697,\!345$	670,670	$26,\!675$	266,415
Lake	644,457	847,548	827,707	19,841	$183,\!250$
McHenry	260,154	456,714	439,365	17,349	179,211
Will	502,526	1,114,594	1,013,320	101,274	510,794
Kankakee	103,843	140,000	123,859	16,141	20,016
Lake (IN)	484,610	$524,\!978$	506,490	18,488	21,880
Porter	146,833	204,978	195,677	9,301	48,844
Total	8,827,732	10,932,074	10,631,213	300,861	1,803,481
Knk, Lake, Porter	735,286	869,956	826,026	43,930	90,740
NIPC Counties	8,092,446	10,062,118	9,805,187	256,931	1,712,741

Prepared by ACG: The al Chalabi Group, Ltd. in association with TAMS, an Earth Tech Co.	February 2005
---	---------------

these assumptions include all jobs related to the airport: direct, indirect and induced for commercial passenger, air cargo and general aviation.

The agreed-to job differences between the "Build" and "No-Build" alternatives for the 9-county region is 256,315 for 2030. The three "Build" alternatives, described in this analysis, provide 27,110, 50,476 and 77,732 jobs, respectively, for the Low, Base and High forecasts.

For the "Build" alternatives, the consultants have developed distributions for all job categories described in Chapter IV-Update of Employment Forecasts. These include:

- Direct Jobs
- Indirect Jobs
- Induced Jobs

From these job forecasts, the consultants also calculate and distribute the airportrelated households (residence of airport-related job holders) and airport-related population. Finally, distributions are developed for:

- Total Employment
- Total Households
- Total Population

The methodologies employed overall and in each of the allocations of distributions are described in the following section.

## C. Methodologies for Distributing Jobs (Direct, Indirect and Induced) for the "Build" Alternatives

### 1. Total Employment Distribution of the NIPC "Build" minus "No-Build"

Considerable effort went into the development of a jobs distribution methodology that would link the official jobs forecast distribution of the regional agency, NIPC, and of IDOT, and the three alternative forecasts of the South Suburban Airport: Inaugural Airport. That process subtracted the "No-Build" alternative jobs distribution from the Airport "Build" alternative. This resulted in a distribution of jobs that reflect one airport of the size assumed in the NIPC/CATS Forecast Alternative, with a total 256,315 jobs by 2030.

This above-described distribution, shown in the previous section, became the format for the maximum impact. Impacts for the Low, Base and High alternatives were "stepped down" from this forecast. The NIPC/CATS forecast distribution was done at the quartersection level. "Step-down" distributions were done, at the Township level. This is due to the fact that impacts – particularly for 2010 and 2015 – were very small.

### 2. Allocation of Direct Employment

The allocation of direct employment is simple and straightforward. In general (across the country), most direct employment is located at the airport property. The more space there is available at the airport, the larger the percentage of employment that can be accommodated there. It is estimated that, in general, between 85 to 100 percent of all direct employment is located at the airport. The balance of the direct employment is located in close proximity.

For purposes of this analysis, all direct employment of commercial passenger and much of the air cargo and GA/Corporate employment are allocated to the zone in which the airport is located. This analysis zone is larger than the airport site, itself. More specifically, the allocation of direct employment for the South Suburban Airport is allocated to Zone 115 (Will Township). As the airport grows, larger portions of the air cargo direct employment is located in adjacent or nearby townships.

### 3. Allocation of Indirect Employment

Indirect employment is composed of several categories, including lodging, food, retail, entertainment, transportation, business services and travel agency employment. For purposes of allocation, indirect employment is grouped into two major categories – those jobs that are related to hotels or to functions that locate near, and provide services to, hotel guests. This group is composed of all the hotel employment and 50 percent of the

employment in the food, retail, entertainment, transportation and business services. This group of employment is referred to as "hotel and hotel-related" employment. The balance of the indirect employment is referred to as "non-hotel-related" indirect employment.

The hotel and hotel-related indirect employment is allocated to each zone on the basis of existing hotel rooms. However, the allocation process is not a simple one proportionate to the number of hotel rooms. The allocation process is based on the use of an intervening opportunity model (IOM). The IOM is a form of gravity model developed to link points of origin with points of destination. The hotel and hotel-related employment allocated to each zone is directly related to the number of visitors who would be starting at that zone. Visitors are arriving at the airport, which becomes their point of origin for seeking hotels. Hotels are distributed throughout the region and the IOM model is particularly well-suited to linking the two ends of such a theoretical trip. The IOM is described mathematically in the "Household Allocation" section of this report, following.

The "non-hotel-related" employment is distributed proportionately (arithmetic proportions) to the distribution of O/D enplanements from each zone. The theoretical rationale for this allocation process is that visitors who stay in hotels expend their monies at the hotel or at nearby establishments (given the average size of a zone, nearby is defined as within three miles). Visitors who are not staying at hotels will expend their monies in the proximity of where they are staying. Approximately half (44.9 percent) the visitors who arrive by air to the Chicago region stay at hotels and the other half stay at residences or return within the same day. Because the South Suburban Airport is being developed as a local, rather than regional, airport, its visitor component is lower; starting at 37 percent in 2010, it grows to 44.9 percent in 2030. For those who do not stay at hotels, the O/D starting point of the return trip to the airport is a good indication of where the expenditures occurred. Finally, travel agencies serve all travelers, with an emphasis on residents rather than visitors. Accordingly, an allocation based completely on where people originate enplanement trips is the best basis for determining the location of travel agencies and the jobs therein.

Table 38 shows the location and distribution of direct, indirect and induced employment, by County, for the forecast years 2010, 2015, 2030 for Low, Base and High

# Table # 38South Suburban Airport ImpactsForecast of Regional Employment:Distribution by County

	2010 Employment - Low Forecast				2010 Employment - Base Forecast				2010 Employment - High Forecast			
County	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total
McHenry County	0	0	0	0	0	0	0	0	0	0	13	13
Lake County (IL)	0	0	0	0	0	0	0	0	0	0	42	42
Kane County	0	0	0	0	0	0	2	2	0	0	29	29
DuPage County	0	0	5	5	0	0	26	26	0	26	154	180
Cook County	0	42	66	108	0	218	520	738	0	285	760	1,045
Will County	40	34	38	112	428	214	287	929	892	278	477	1,647
Kankakee County	0	5	16	21	0	52	76	128	0	81	124	205
Lake County (IN)	0	7	12	19	0	39	105	144	0	85	155	240
Porter County	0	0	2	2	0	10	27	37	0	15	58	73
Total	40	88	139	267	428	533	1,043	2,004	892	770	1,812	3,474

	2015 Employment - Low Forecast				2015 Employment - Base Forecast				2015 Employment - High Forecast			
County	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total
McHenry County	0	0	0	0	0	0	0	0	0	0	81	81
Lake County (IL)	0	0	0	0	0	0	0	0	0	0	211	211
Kane County	0	0	5	5	0	0	10	10	0	0	149	149
DuPage County	0	0	25	25	0	0	80	80	0	167	625	792
Cook County	0	873	1,522	2,395	0	1,297	2,469	3,766	0	1,687	3,050	4,736
Will County	812	686	859	2,357	1,488	1,312	1,421	4,221	2,292	1,775	1,900	5,967
Kankakee County	0	195	212	407	0	327	358	685	0	463	521	985
Lake County (IN)	0	149	258	407	0	251	508	759	0	506	633	1,139
Porter County	0	39	48	87	0	65	134	199	0	85	274	359
Total	812	1,942	2,929	5,683	1,488	3,252	4,980	9,720	2,292	4,683	7,444	14,420

	2030 Employment - Low Forecast				2030 Employment - Base Forecast				2030 Employment - High Forecast			
County	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total
McHenry County	0	0	0	0	0	0	0	0	0	0	430	430
Lake County (IL)	0	0	0	0	0	0	0	0	0	0	1,140	1,140
Kane County	0	0	10	10	0	0	65	65	0	0	805	805
DuPage County	0	0	430	430	0	25	1,070	1,095	0	900	3,370	4,270
Cook County	0	4,165	6,955	11,120	0	6,738	12,237	18,975	0	9,093	16,440	25,533
Will County	3,876	3,272	4,115	11,263	7,735	6,800	7,287	21,822	12,352	9,570	10,245	32,167
Kankakee County	0	930	1,010	1,940	0	1,700	1,864	3,564	0	2,500	2,810	5,310
Lake County (IN)	0	711	1,230	1,941	0	1,305	2,640	3,945	0	2,730	3,410	6,140
Porter County	0	185	230	415	0	340	695	1,035	0	460	1,475	1,935
Total	3,876	9,263	13,980	27,119	7,735	16,908	25,858	50,501	12,352	25,253	40,125	77,730

Forecasts. Induced employment is described in section 5, following. Appendix Tables 10-12 show distribution, by Township, for the same data.

### 4. Allocation of Households and Population

Once the direct and indirect employment have been allocated, the housing units for these workers are allocated to various analysis zones. The household allocation process is based on the "Intervening Opportunity Model" (IOM), a more-advanced form of the standard gravity model. The IOM was developed, initially, at the Chicago Area Transportation Study (CATS) in 1959/1960. Its initial use was in transportation planning, linking trip ends. The IOM concept was incorporated into the socio-economic forecasting models of NIPC in the late sixties and the 1970's. The IOM is used in this assignment to distribute households (residences) around jobs in a manner that would duplicate the observed trip length distribution of the journey to work.

The mathematical formulation of the IOM, as used in the housing allocation, is:

 $P_{ij} = ((1-L)^O_{j-1}) - ((1-L)^O_j)$ 

where

- $P_{ij}$  = probability of a person working in zone i and living in zone j.
- L = probability of a person accepting a single housing opportunity.
- $O_{j-1}$  = the number of housing opportunities available to the person before getting to zone j.

and

O<sub>j</sub> = the number of housing opportunities available to the person after getting to zone j (including all prior opportunities).

The value of L is calibrated on the basis of observed journey-to-work trip length distributions. The definition of the term "opportunity" and how it is measured is an integral part of the calibration process.

Each of the zones that were allocated direct and indirect employment became centers around which housing developments occurred. The influence of each employment zone is extended to many zones through the recipients of housing growth. The growth in housing in each zone (zone H, for example), resulting from the influence of all the employment zones, is added to provide the final housing growth for that zone (zone H). The population forecasts are derived from the household forecasts using the township-specific household size as forecasted by NIPC and as implied in the forecasts of the Northwestern Indiana Regional Planning Commission (NIRPC).

Table 39 shows the distribution of households, by County, related to the total of direct, indirect and induced jobs for 2010, 2015 and 2030 for Low, Base and High Forecasts. Appendix Tables 13-15 show the distribution, by township, for the same data.

### 5. Allocation of Induced Employment

This report, and its precursors, divided Induced Employment into two categories. The first, included the multiplier effects that are the result of expenditures by direct and indirect employees at their places of residence. This induced employment includes those jobs and expenditures associated with the retail, community and personal services developed as a result of new workers in direct and indirect jobs. This category is estimated at approximately 35 percent of total induced employment; and is located in the general vicinity of the residential location of employees, more specifically, in commercial centers.

The second group, or remainder of the induced employment, is due to industrial, business and institutional expenditures resulting from the direct and indirect employment. This employment, approximately 65 percent of all induced, is allocated in proportion to existing employment throughout the study region. The allocation is highly scattered, but with concentrations in major business, commercial and industrial centers.

## 6. Graphic Distribution of Forecasted Employment, Households and Population

The forecasts developed for employment households and population have been distributed through the study region based on the above described allocation methodology. Exhibits 6-14 show the distribution of Total Employment (direct, indirect and induced) for the forecast periods 2010, 2015 and 2030 for Low, Base and High Forecasts. Exhibits 15-23 and Exhibits 24-32 show the distribution of households and population, respectively, for the periods 2010, 2015 and 2030, for Low, Base and High Forecasts. Appendix Tables 10-18 present this data in tabular form.

### Table 39 South Suburban Airport Impacts Forecast of Regional Households: Distribution by County

		2010	
	Low	Base	High
City of Chicago	24	159	278
North Cook	0	9	14
West Cook	1	4	4
South Cook	31	190	322
Cook County (Total)	56	362	618
DuPage County	0	8	13
Kane County	1	16	32
Lake County (IL)	0	9	18
McHenry County	0	3	5
Will County	47	367	638
Kankakee County	2	17	29
Lake County (IN)	1	20	38
Porter County	0	0	0
Grand Total	107	802	1,391
		2015	
	Low	Base	High
City of Chicago	410	698	1,036
North Cook	29	49	84
West Cook	4	8	8
South Cook	529	881	1,180
Cook County (Total)	972	1,636	2,308
DuPage County	23	36	57
Kane County	31	72	189
Lake County (IL)	73	122	181
McHenry County	24	51	85
Will Country			
will County	978	1,649	2,446
Kankakee County	978 78	1,649 $130$	2,446 187
Kankakee County Lake County (IN)	978 78 74	1,649 130 148	2,446 187 257
Kankakee County Lake County (IN) Porter County	978 78 74 21	1,649 130 148 38	2,446 187 257 58

### Table 39 (cont'd)

		2030	
	Low	Base	High
City of Chicago	1,411	2,625	4,120
North Cook	221	413	808
West Cook	222	413	413
South Cook	1,763	2,855	4,335
Cook County (Total)	3,617	6,306	9,676
DuPage County	434	808	968
Kane County	806	1,532	2,433
Lake County (IL)	633	1,181	1,916
McHenry County	607	1,148	1,693
Will County	3,321	6,146	9,441
Kankakee County	660	1,223	1,824
Lake County (IN)	548	1,240	2,205
Porter County	217	606	1,060
Grand Total	10,843	20,190	31,216

### D. Impacts of the South Suburban Airport on Economic Development and Regional Vitality and Efficiency

The following statements describe the ability of the South Suburban Airport to encourage economic development and to improve regional vitality and efficiency.

### 1. Increase Employment Opportunities

In addition to adding approximately 27,000 to 77,700 jobs to the 9-county regional inventory, by 2030, the "Build" alternative provides needed jobs in the near-in South Suburbs, the South Side of Chicago and Northwest Indiana.

It can be concluded that building the South Suburban Airport would not take jobs or development away from the areas that would otherwise benefit without its construction; these jobs are directly or indirectly related to the airport, itself, and are a straightforward consequence of building it. However, the economy of the southern portion of the region can benefit, significantly, only if the South Suburban Airport is built.

Because O'Hare International Airport would continue to grow throughout the forecast period, it would continue to be the major focus of economic development. With all









#### **Base Forecast - 2015** Kenosha **Commuter Rail** Interstate and Primary Roads - Limited Access Roads Other Primary Roads $\mathbf{7}$ Secondary Roads McHenry 🔆 Existing Large Hub Airport 9-County Airport Study Region Chicago CMSA Lake County South Suburban Airport SSA Inaugural Airport Major Waters $\mathbf{21}$ Impact by Air Analysis Zone No Impact 1 -33 - 100 100 -300 - 900 900 - 2,700 2,700 - 8,100 Kane More than 8,100 $\mathbf{45}$ Prepared by ACG: DuPage The al Chalabi Group, Ltd. in association with DeKalb TAMS Consultants, an EarthTech Co. Coo November 2005 $\overline{51}$ Kendall Porter Will Lake 166 🖵 Grundy Kankakee 1\$2 33 135 48 Miles n

## **Exhibit 10 : Airport Generated Employment Impacts**



## **Exhibit 11 : Airport Generated Employment Impacts**

### Exhibit 12 : Airport Generated Employment Impacts High Forecast - 2010



### Exhibit 13 : Airport Generated Employment Impacts High Forecast - 2015



### Exhibit 14 : Airport Generated Employment Impacts High Forecast - 2030





### Exhibit 16 : Airport Generated Household Impacts Low Forecast - 2015








#### **Exhibit 20 : Airport Generated Household Impacts Base Forecast - 2030** Kenosha **Commuter Rail** Interstate and Primary Roads - Limited Access Roads Other Primary Roads Secondary Roads McHenry 挨 Existing Large Hub Airport 1/29-County Airport Study Region Chicago CMSA Lake County South Suburban Airport SSA Inaugural Airport Major Waters Impact by Air Analysis Zone No Impact 1 -33 - 100 100 - 300 300 - 900 900 - 2,700 2,700 - 8,100 Kane More than 8,100 $\mathbf{45}$ Prepared by ACG: DuPage The al Chalabi Group, Ltd. in association with DeKalb TAMS Consultants, an EarthTech Co. Coo November 2005 Kendall Porter Will Lake Grundy Kankakee 33 135 48 Miles N



## Exhibit 22 : Airport Generated Household Impacts High Forecast - 2015



## Exhibit 23 : Airport Generated Household Impacts High Forecast - 2030





#### **Exhibit 25 : Airport Generated Population Impacts** Low Forecast - 2015 Kenosha **Commuter Rail** Interstate and Primary Roads - Limited Access Roads Other Primary Roads 9 23 24 26 $\mathbf{7}$ Secondary Roads McHenry 🔆 Existing Large Hub Airport 11 121330 9-County Airport Study Region Chicago CMSA Lake 32 County 1516 3 8 South Suburban Airport SSA Inaugural Airport Major Waters 80 $\mathbf{21}$ Impact by Air Analysis Zone No Impact

64

69

39

42

43

1 -

33 - 100 100 - 300

900 - 2,700

33

100 - 300 300 - 900



#### **Exhibit 26 : Airport Generated Population Impacts** Low Forecast - 2030 Kenosha **Commuter Rail** Interstate and Primary Roads - Limited Access Roads Other Primary Roads 9 7 23 26 24 Secondary Roads McHenry 🔆 Existing Large Hub Airport 11 1/213 30 9-County Airport Study Region Chicago CMSA Lake 15 32 County 16 3 8 South Suburban Airport SSA Inaugural Airport Major Waters 80 21 Impact by Air Analysis Zone



24

36

12

n

48 Miles

12









**Exhibit 30 : Airport Generated Population Impacts** 



# **Exhibit 31 : Airport Generated Population Impacts**



three airports – O'Hare, Midway and the South Suburban – serving the region, they would contribute to a more-balanced regional growth.

#### 2. Develop Close-in Land

The land developed under the "Build" alternative, as opposed to the "No-Build" alternative, is concentrated in a band within 36 miles of the Loop. It tends to concentrate development, both commercial and residential, in an area along the south edge of Lake Michigan and along major expressways in the southern half of the metropolitan area. Much of this land already is developed and serviced, particularly with major highways and commuter rail.

#### 3. Promote the Redevelopment of Underutilized Land

Probably the most obvious difference between the "Build" and "No-Build" alternatives is the impact on those townships that lie between the South Suburban Airport and the Central Area of Chicago. This area would see substantial development where otherwise there would be slow growth. The development of the South Suburban Airport also would tend to encourage both job and residential redevelopment in the older, satellite cities, such as Joliet and Kankakee, and enhance development in cities such as Hammond, and Gary, Indiana.

#### 4. Improve Accessibility to Jobs for Unemployed and Minority Populations

A large segment of the region's un- and under-employed persons reside in the areas close to the current and former manufacturing concentrations along the southern edge of Lake Michigan. When these industries closed, relocated or retooled, tens of thousands of jobs were lost. Many who lost those jobs were never re-employed; some endure long work trips to the Chicago Central Area or to the growing suburban areas of DuPage, Northwestern Will, and North Cook Counties. Few could afford to relocate to the newer, more-expensive houses surrounding those jobs; consequently, the Chicago region long has suffered a disparity between available jobs and affordable housing. Maps showing, unemployment and poverty are shown as Appendix Exhibits A5 and A6. The South Side of Chicago, the Southern Suburbs and Northwest Indiana are home to the region's major concentrations of minority populations. These are the same areas that have been hard hit by the loss of manufacturing jobs. With redevelopment efforts in these communities, as well as concentrations of jobs in the vicinity of the South Suburban Airport, access to these jobs will be improved considerably. The universities and community colleges of the area have been involved in planning for this airport facility for some time; curricula have been developed to prepare the surrounding residents to become the work force for the South Suburban Airport. Furthermore, new industrial and commercial developments in the municipalities housing minority populations will help increase the tax bases of these areas; and help to improve desirable public/community services. Maps showing African/American and Hispanic Populations, as well as Employment Density and Excess Jobs are shown as Appendix Exhibits 7, 8, 9 and 10.

#### 5. Distribute Employment to Existing Population and Built Infrastructure

With the redevelopment and enhancement of the mature areas between the proposed airport and the Chicago Central Area, the South Suburban Airport will achieve objectives that have gone unfulfilled for several decades. It will bring jobs closer to areas with substantial un- and under-employment. It will help encourage development of mature communities that have limited access to jobs. This will improve the residents' accessibility to jobs and the community's revenue base. Finally, it will begin to redress the disparity between jobs and affordable housing in the region, bringing a wide array of jobs to the areas and labor force that need them.

#### 6. Mitigate Impacts on Existing Residents, Communities and Enterprises

In order to assemble the parcel that is required for the airport and its highway access, many existing properties will be acquired. A substantial number of farms, residences and enterprises must be acquired. Detailed studies are in process to address the acquisition and relocation requirements of this proposed project. Efforts will be made to maintain much of the land in agricultural use as long as possible, until its reversion or reuse, is critical to the project. Since agricultural uses are compatible with an airport, peripheral lands – although in airport ownership – can be maintained in farm use well after airport operations have been initiated.

# Appendix

## Appendix Table #1: Passenger Airports Studied

		Year of	Total
<u>LocID</u>	Airport	<u>Study</u>	<u>Enplanements</u>
HTS	Huntington	2000	54,887
CRW	Charleston	2000	271,000
BTV	Burlington VT	2001	$425,\!694$
New WV	Western West Virginia (est)	2006	444,853
PSP	Palm Springs	2001	652,479
New WV	Western West Virginia (est)	2020	654,357
DSM	Des Moines	1998	814,967
LIT	Little Rock	2002	1,288,315
GEG	Spokane	1998	1,466,671
ORF	Norfolk	2002	1,500,339
TIA	Tucson	1999	1,774,397
ANC	Anchorage	2000	1,903,455
RSW	Southwest Florida Int'l	2000	2,363,202
BUR	Burbank	1995	2,459,939
CMH	Port Columbus	1994	2,762,729
SNA	John Wayne (Santa Ana)	1993	2,831,845
SAT	San Antonio	1995	2,999,178
ONT	Ontario	2000	3,170,682
AUS	Austin	1999	3,237,008
SJC	San Jose	1999	4,074,122
BNA	Nashville	1999	4,099,813
HOU	Houston Hobby	1998	4,161,392
MEM	Memphis	1997	4,802,366
OAK	Oakland	2000	5,080,877
CLE	Cleveland Hopkins	2000	6,371,648
MDW	Chicago Midway	2000	6,957,434
DCA	Reagan National	1998	$7,\!483,\!227$
IAD	Dulles	1998	7,530,377
SAN	San Diego	2001	7,785,863
BWI	Baltimore Washington	2000	9,440,844
PIT	Pittsburgh	2000	9,624,018
CVG	Cincinnati	1998	10,183,928
SLC	Salt Lake City	1997	10,356,213
PHL	Philadelphia	1998	11,509,451
CLT	Charlotte-Douglas	2001	11,859,005
LGA	New York- LaGuardia	2000	12,496,139
SEA	Seattle Seatac	2000	14,629,199
MCO	Orlando	2000	$14,\!692,\!534$
PHX	Phoenix	1997	$15,\!253,\!422$

## Appendix Table #1: Passenger Airports Studied (Cont.)

<u>Airport</u>	Year of <u>Study</u>	Total <u>Enplanements</u>
Houston Bush	1998	15,580,288
New York- Kennedy	2000	16,224,183
Newark	2001	$16,\!521,\!266$
Detroit	2000	$17,\!567,\!869$
Denver	2000	18,291,726
San Francisco	2000	19,766,094
Miami Int'l	1997	20,615,806
Dallas/Ft Worth	2000	$29,\!576,\!619$
Los Angeles	2000	32,312,537
Chicago O'Hare	2000	34,330,390
Atlanta Hartsfield	2000	39,458,720
Atlanta Hartsfield	2002	40,767,073
	<u>Airport</u> Houston Bush New York- Kennedy Newark Detroit Denver San Francisco Miami Int'l Dallas/Ft Worth Los Angeles Chicago O'Hare Atlanta Hartsfield	AirportYear of StudyHouston Bush1998New York- Kennedy2000Newark2001Detroit2000Denver2000San Francisco2000Miami Int'l1997Dallas/Ft Worth2000Los Angeles2000Chicago O'Hare2000Atlanta Hartsfield2002

### Appendix Table #2: Actual and Model-Forecasted Direct Jobs at Passenger Airports

LocID	Airport	Year of Study	Total Enplanements	Reported Direct Jobs	Model Total Direct Jobs	Model Total Adjusted by Productivity
HTS	Huntington	2000	54,887	-	83	68
CRW	Charleston	2000	271,000	-	410	335
BTV	Burlington VT	2001	425,694	1,806	646	513
New WV	Western West Virginia (est)	2006	444,853	528	672	463
PSP	Palm Springs	2001	652,479	1,146	981	780
New WV	Western West Virginia (est)	2020	654,357	761	989	333
DSM	Des Moines	1998	814,967	3,595	1,233	1,054
LIT	Little Rock	2002	1,288,315	3,500	1,951	1,511
GEG	Spokane	1998	1,466,671	7,365	2,222	1,899
ORF	Norfolk	2002	1,500,339	1,521	$2,\!273$	1,760
TUS	Tucson	1999	1,774,397	13,000	2,755	2,301
ANC	Anchorage	2000	1,903,455	9,119	2,929	2,388
RSW	Southwest Florida Int'l	2000	2,363,202	30,147	4,049	3,301
BUR	Burbank	1995	2,459,939	2,516	3,750	3,418
CMH	Port Columbus	1994	2,762,729	2,000	4,181	3,888
SNA	John Wayne (Santa Ana)	1993	2,831,845	3,760	4,308	4,083
SAT	San Antonio	1995	2,999,178	11,350	4,754	4,334
ONT	Ontario	2000	3,170,682	5,044	4,830	3,938
AUS	Austin	1999	3,237,008	2,159	4,954	4,137
SJC	San Jose	1994	4,074,122	3,560	6,830	6,351
BNA	Nashville	1999	4,099,813	4,494	6,219	5,193
HOU	Houston Hobby	1998	4,161,392	5,000	6,202	5,301
MEM	Memphis	1997	4,802,366	26,220	7,265	6,349
OAK	Oakland	2000	5,080,877	10,700	7,984	6,509
CLE	Cleveland Hopkins	2000	6,371,648	24,600	9,994	8,147
MDW	Chicago Midway	2000	6,957,434	7,955	10,435	8,507
DCA	Reagan National	1998	7,483,227	10,211	11,179	9,555
IAD	Dulles	1998	7,530,377	15,481	17,133	14,644
SAN	San Diego	2001	7,785,863	12,000	12,017	9,553
BWI	Baltimore Washington	2000	9,440,844	12,030	$15,\!234$	12,419
PIT	Pittsburgh	2000	9,624,018	18,000	14,850	12,106
CVG	Cincinnati	1998	10,183,928	$15,\!241$	16,290	13,924
SLC	Salt Lake City	1997	10,356,213	12,500	15,816	13,823

### Appendix Table #2: Actual and Model-Forecasted Direct Jobs at Passenger Airports (Cont.)

PHL	Philadelphia	1998	11,509,451	13,000	21,135	18,064
CLT	Charlotte-Douglas	2001	11,859,005	16,345	18,550	14,747
LGA	New York-LaGuardia	2000	12,496,139	9,000	21,595	17,604
SEA	Seattle Seatac	2000	$14,\!629,\!199$	17,970	25,909	21,121
MCO	Orlando	2000	$14,\!692,\!534$	11,400	26,831	21,873
PHX	Phoenix	1997	$15,\!253,\!422$	24,516	23,948	20,930
$\operatorname{STL}$	St. Louis Lambert	2000	$15,\!264,\!747$	19,000	22,729	18,529
IAH	Houston Bush	1998	$15,\!580,\!288$	14,400	30,754	26,286
JFK	New York-Kennedy	2000	16,224,183	37,000	59,774	48,729
EWR	Newark	2001	$16,\!521,\!266$	24,000	41,081	32,658
DTW	Detroit	2000	$17,\!567,\!869$	15,000	32,935	26,849
DIA	Denver	2000	$18,\!291,\!726$	22,000	28,860	23,528
SFO	San Francisco	2000	19,766,094	54,000	44,962	$36,\!654$
MIA	Miami Int'l	1997	20,615,806	36,800	58,877	51,458
DFW	Dallas/Ft Worth	2000	$29,\!576,\!619$	55,000	48,921	39,882
LAX	Los Angeles	2000	32,312,537	50,000	80,143	65,334
ORD	Chicago O'Hare	2000	34,330,390	67,910	69,121	56,349
ATL	Atlanta Hartsfield	2000	39,458,720	43,000	68,488	57,000
ATL	Atlanta Hartsfield	2002	40,767,073	55,000	67,732	52,500

## Appendix Table #3: Cargo-Related Jobs at Airports

<b>LocID</b>	<u>Airport</u>	Data/ Comments	<u>Job Estimate</u>	<u>Source/ Data</u>
ORD	Chicago O'Hare	"Express Center" new addition to Cargo City 850,000 of 2,050,000 sq. ft	600+ for Ex Center	2003 O'Hare Web Page
OAK	Oakland	FedEx, Airborne, UPS, USPS 41 all-cargo departures/day	2,200 related cargo (2,470 Fed Ex) 10,700 total employment	2003 Port of Oakland Web Page
JFK & EWR	New York/ New Jersey air cargo region	World's largest air cargo market 3 million tons of air cargo 1,000 cargo companies 4 new projects include: AIRIS Corp (see next) \$161 million - 435,000 sq. ft. Cont. Airl. \$16 million - 80,000 sq. ft. Port Auth \$33 million - 152,000 sq. ft. TBA - \$70 million - 300,000 sq. ft.	85,000 jobs \$9 billion in annual economic activity \$3 billion in wages	2002 Port Authority of NY & NJ
JFK	Kennedy New York	Nearly 25% of air cargo import comes through JFK & EWR 435,000 new sq. ft.	new facility to create 500 jobs in the region	2003 tdctrade.com
IAD	Dulles	Value of air cargo estimated at \$12.4 billion/year	more than 2,200 jobs in local economy	1998 Study by Metro Wash. Airport Authority
FASP	Florida Airports	2.6 million tons moved 1.8 tons (69%) trans. enplane 6% of nation's air cargo	\$33.4 billion in economic activity 361,756 jobs	2002 Florida DOT Aviation System Plan – 2000 "Airport Economic Impact Study"

## Appendix Table #3: Cargo-Related Jobs at Airports (Cont.)

<u>LocID</u>	<u>Airport</u>	Data/ Comments	<u>Job Estimate</u>	<u>Source/ Data</u>
РНХ	Phoenix Sky Harbor	$\begin{array}{l} 1,039 \ \text{tons cargo/day} \\ \text{total direct jobs} \\ \text{on airport} - 24,516 \\ \text{off airport} - \underline{16,229} \\ \text{total} & 40,745 \\ \text{total induced } 94,407 \end{array}$	6,938 jobs (air cargo firms) 17% of total direct	2000 Phoenix Web Page
DFW	Dallas/ Fort Worth	17 international cargo flights/week DFW Air Cargo Association re-established	\$25 million in economic impact/year	2001 DFW Web Page
		22 international flights/week	\$50 million in economic impact	2003
MIA	Miami International	Claims to be #1 U.S. airport for international freight \$500 million cargo development program	<ul><li>\$13.2 billion economic impact on Pade Co.</li><li>300 freight forwarders,</li><li>400 inspectors</li></ul>	2000 MIA Web Page
IAH	Houston Bush	60 million #'s/month enplaned + deplaned	HAS provides \$8 billion in economic impact; 90,000 jobs in regions of Houston Airport System (HAS)	2004 HAS Web Page
HOV	Houston Hobby	1 million/month enplaned/deplaned	_	2004 HAS Web Page
LCK	Columbus Rickenbacker	5000-acre cargo airport Airport's total impact (military, cargo, GA) estimated at \$2.8 billion	<ul> <li>\$811 million impact;</li> <li>supported 7,600 jobs;</li> <li>paid \$7 million in</li> <li>income taxes to</li> <li>Franklin Co.</li> <li>\$2.6 million in sales</li> <li>taxes; \$5.1 million</li> <li>property taxes.</li> </ul>	2001 University of Cincinnati Study; American City Business Journals Web
TIA	Tucson	61 million #'s of freight	_	2002

## Appendix Table #3: Cargo-Related Jobs at Airports (Cont.)

<u>LocID</u>	<u>Airport</u>	Data/ Comments	<u>Job Estimate</u>	Source/Data
SDF	Louisville	\$1.1 billion expansion of UPS hub – Worldport – doubled size of sorting operation 1.52 million metric tonnes	16,737 employees of cargo facility in 1999* 24,329 employees in 2001 (**)	2002 *UPS Facts 2002 **ACG report
RNO	Reno/Tahoe	2 cargo facilities on 10 acres – 461,757 sq. ft. plus FTZ FedEx, UPS, ABX Air plus passenger/cargo	Developed job/ cargo relationship: 481,000 # increase in air cargo for every job added to manufacturing, wholesale/ distribution, retail	2004 No. Nevada Development Authority
PHL	Philadelphia	600,000 tons of cargo handled (with mail) nearly ½ the nation's population (100 million) is within a one-day drive from PHL	_	2003

### Appendix Table #4: Cargo Traffic – 2002 Preliminary

<u>Rank</u>	<u>Airport</u>	Total Cargo <u>(metric tones)</u>	% Change <u>(from 2001)</u>
1	Memphis Tenn. (MEM)	3,390,299	28.8
2	Hong Kong (HKG)	2,516,441	19.9
3	Anchorage, Alaska (ANC)	2,027,754	16.8
4	Tokyo (NRT)	2,001,824	19.1
<b>5</b>	Los Angeles (LAX)	1,757,974	-1.9
6	Seoul, South Korea (ICN)	1,705,880	43.2
7	Singapore (SIN)	1,660,404	8.5
8	Frankfurt, Germany (FRA)	1,631,489	1.1
9	Miami (MIA)	1,624,240	-0.9
10	New York (JFK)	1,574,462	-1.1
11	Louisville, KY (SDF)	1,523,880	2.9
12	Paris (CDG)	1,397,000	2.2
13	Taipei, Taiwan (TPE)	1,380,748	16
14	London (LHR)	1,310,615	3.7
15	Amsterdam, Netherlands (AMS)	1,288,624	4.4
16	Chicago (ORD)	1,279,176	-0.1
17	Bangkok, Thailand (BKK)	957,176	13.7
18	Indianapolis (IND)	866,014	-23.4
19	Newark, N.J. (EWR)	821,537	-7.6
20	Osaka, Japan (KIX)	805,432	-7.5
21	Dubai (DXB)	784,997	24.2
22	Atlanta Hartsfield (ATL)	$732,\!532$	-1.2
23	Tokyo (HND)	707,074	-2.6
24	Dallas (DFW)	669,507	-11.9
25	Beijing (PEK)	668,733	14.4
26	Oakland, California (OAK)	650,375	6.9
27	Shanghai, China (PUG)	634,966	80.1
28	San Francisco (SFO)	593,803	-6.6
29	Guangzhou, China (CAN)	$592,\!554$	11.5
30	Philadelphia (PHL)	542,086	4.4

#### Source: Airports Council International, April 2003

## Appendix Table #5: Examples of Direct, Visitor and Total Jobs

<u>Airport</u>	<u>Year</u>	<u>Enplanements</u>	<u>Direct</u>	Jobs <u>Visitor/Related</u>	<u>Total</u>
Oakland	1994	5,000,000	10,400	63,400	109,500
Santa Ana John Wayne	1993	3,900,000	3,760	53,680	57,440
Ontario	2000	3,100,000	5,044	50,391	55,435
San Jose	1999	6,000,000	5,888	51,191	83,484
LAX	2000	32,000,000	50,000	(Airport	407,670
			72,000	(ACG est.)	
LAX	1996	20,000,000	45,000	_	_
San Diego	2001	7,800,000	12,000	_	47,000
San Francisco	1999	19,500,000	34,893	145,890	275,275
Burbank	1995	2,370,000	1,854	12,745	15,667
Palm Springs	2001	656,000	1,146	9,634	14,966
Cleveland	2001	6,372,000	5,600	19,000	24,600
Charlotte	2001	11,859,000	16,345	_	_
Oakland	2001	5,081,000	10,700	_	_
Tucson	1999	1,774,000	13,000	10,000	_
Southwest Florida	2000	2,363,000	_	_	30,150
San Jose	1999	4,100,000	3,560	_	71,000

## Appendix Table #6: Estimates of Jobs & Impacts

Airport	Comments	Source/Date
ABQ	"Approx. 3,000 people are employed by ABQ ABQ's master plan update of 1994 determined that civilian activities at the airport supported 26,741 jobs in 1992" 3000 jobs at airport	ABQ Fast Facts, 2001- www.cabq.gov/airport/facts.htm
ATL	"estimated 43,000 people tracing employment through airport" (2000)	Hartsfield Development Program: Focus on the Future- 8/22/02- www.eng.fiu.edu/html2002/index.htm
AUS	"In 1993, the City estimated that, at opening in May 1999, AUS would support 2,159 direct and 3,452 indirect jobs by 2012, this is expected to grow to 6,656 direct and 5,284 indirect jobs"	Press Release for Austin-Bergstrom, 7/17/98- www.ci.austin.tx.us/news/0717week.htm
CLE	"there are approximately 5,600 on-airport jobs and 19,000 airport-related positions"	About Hopkins- Fast Facts- CLE website, 2001
CLT	Total airport employment = 16,345 (2001)	Charlotte-Douglas International Airport Fast Facts- 2001- www.charlotteairport.com
CVG	"the airport employed a total of 10,500 workers in 1995"	1995 Economic Impact Update, The Economic Research Group @ University of Cincinnati, 4/4//96
DAL	"Estimated 24,243 jobs attributable to Love Field" (2001)	Dallas Love Field Love Notes, 2001- www.dallas- lovefield.com/lovenotes/lovefacts.html
DEN	"over 22,000 people work at DIA"	Airport Business-2002- www.flydenver.com
EWR	"there are over 24,000 people employed by the airport EWR contributes approx. \$11.3 billion in economic activity generating some 110,000 jobs"	EWR Website, 2001- www.panynj.gov
IAD	"Dulles employs more than 15,400 people"	Dulles website- 2002- www.metwashairports.com
JFK	"there are over 37,000 people employed by the airport JFK contributes approx. \$22 billion in economic activity generating some 207,700 jobs" (2000)	JFK Facts, 2001, www.panynj.gov
LAX	Direct Employment = approx. 50,000 employees	LAWA/City of Los Angeles, 4/6/00

### Appendix Table #6: Estimates of Jobs & Impacts (Cont.)

Airport	Comments	Source/Date
LGA	"there are over 9,000 people employed by the airport LGA contributes \$6.1 billion in economic activity generating more than 63,000 jobs"	LaGuardia Facts, 2001, www.panynj.gov
МСО	more than 11,400 direct jobs	Press Release- Greater Orlando Aviation Authority- 12/22/97, www.orlandoairports.net
MIA	1992 Master Plan had 26,870 direct jobs; forecast for 2005= 47,000	Empowerment Zone Trust (www.ezonetrust.org), 1992
OAK	over 10,700 direct jobs	Charles W. Foster, Executive Director, Port of Oakland, 2/27/01, www.netvista.net/~hpb/new/feb-27.html
PHL	"In 1997, (PHL) added 3,000 direct jobs for a total of over 13,000 employees"	Press release, 04/06/98- www.phl.org/news
РНХ	"24,516 direct jobs on the airport in FY 1999- 2000"; Direct Economic Impact chart, under "Employment", said 104,003	Phoennix Sky Harbor website- www.ci.phoenix.az.us, 2000
PIT	"creating over 18,000 direct airport-related jobs"	Testimony of Chief Exec. Of Alleghany County, 7/10/00- http://judiciary.senate.gov/oldsite/7102000 _jcr.htm
RSW	30,147 direct jobs	Press Release- Southwest Florida International Airport- 9/25/00- www.swfia.com/rswpress/2000
SFO	54,000 direct jobs	Congressman Jerry Lewis press release, 11/21/00
SJC	Jobs: 71,000 direct & induced; 3,560 on-site jobs	SJC Website- Airport Highlights- Economic Contribution- 1999- www.sjc.org
STL	Employs over 19,000 people- unclear whether direct/indirect	Lambert STL website, no date
TIA	"The airport employs nearly 13,000 people it is estimated there are another 10,000 people working in the airport area"	TIA Facts- 1999- www.tucsonairport.org
DTW	15,000 plus (2000) cargo 530 m #	Metro airport facts, 2001

### **Appendix Table 7**

### County Totals for Labor Income - 2010 (in 2001 dollars)

County	Low	Base	High
City of Chicago	1,934,614	42,537,341	146,833,061
North Cook	263,351	8,507,468	50,056,725
West Cook	111,418	2,835,823	$15,\!573,\!203$
South Cook	1,782,681	33,320,917	$121,\!248,\!512$
Cook County (Total)	4,092,063	87,201,549	334,823,874
DuPage County	192,449	2,599,504	57,843,327
Kane County	0	236,319	8,898,973
Lake County (IL)	0	0	13,348,460
McHenry County	0	0	3,337,115
Will County	4,254,125	$109,\!651,\!812$	527,264,173
Kankakee County	800,181	15,124,388	$65,\!629,\!929$
Lake County (IN)	719,150	17,014,936	76,753,645
Porter County	70,902	$4,\!253,\!734$	23,359,805
Grand Total	10,128,869	236,082,241	1,111,259,301

#### County Totals for Labor Income - 2015 (in 2001 dollars)

County	Low	Base	High
City of Chicago	16,367,308	77,275,847	305,860,035
North Cook	3,324,609	14,386,461	94,922,080
West Cook	1,108,203	4,932,501	29,531,314
South Cook	15,088,612	62,478,344	$263,\!672,\!444$
Cook County (Total)	35,973,979	159,484,194	691,876,492
DuPage County	340,986	3,288,334	116,015,875
Kane County	85,246	411,042	21,093,796
Lake County (IL)	0	0	31,640,693
McHenry County	0	0	$12,\!656,\!277$
Will County	35,377,254	178,392,114	873,283,134
Kankakee County	6,137,741	28,772,922	143,437,809
Lake County (IN)	6,052,494	32,061,255	166,640,984
Porter County	$1,\!278,\!696$	8,220,835	52,734,489
Grand Total	85,246,396	410,630,695	2,109,379,550

#### County Totals for Labor Income - 2030 (in 2001 dollars)

County	Low	Base	High
City of Chicago	29,180,669	116,056,466	473,777,513
North Cook	4,407,497	14,815,719	147,034,401
West Cook	1,671,809	8,025,181	45,744,036
South Cook	$27,\!052,\!912$	$93,\!215,\!566$	408,428,891
Cook County (Total)	62,312,887	232,112,933	1,071,717,409
DuPage County	2,431,722	$13,\!581,\!076$	179,708,712
Kane County	0	617,322	32,674,311
Lake County (IL)	0	0	49,011,467
McHenry County	0	0	19,604,587
Will County	63,072,800	266,682,944	1,352,716,486
Kankakee County	10,942,751	43,829,836	222, 185, 317
Lake County (IN)	10,942,751	48,151,087	258, 127, 059
Porter County	$2,\!279,\!740$	12,346,433	81,685,778
Grand Total	151,982,651	617,321,629	3,267,431,126

### **Appendix Table 8**

#### **County Totals for Income Tax Generated - 2010**

County	Low	Base	High
City of Chicago	57,868	463,502	608,235
North Cook	8,107	94,112	209,736
West Cook	3,355	30,586	67,116
South Cook	53,675	364,684	503,367
Cook County (Total)	123,005	952,884	1,388,453
DuPage County	5,591	32,939	239,099
Kane County	0	2,353	37,752
Lake County (IL)	0	0	54,531
McHenry County	0	0	16,779
Will County	127,198	1,199,929	2,185,450
Kankakee County	23,762	164,696	272,657
Illinois Total	279,557	2,352,801	4,194,721
Lake County (IN)	24,934	184,569	317,072
Porter County	2,617	47,301	96,321
Indiana Total	27,551	231,870	413,393
Grand Total	307,108	2,584,671	4,608,114

#### **County Totals for Income Tax Generated - 2015**

County	Low	Base	High
City of Chicago	1,361,266	2,345,281	2,730,167
North Cook	277,414	437,636	842,644
West Cook	90,321	145,879	252,793
South Cook	$1,\!258,\!042$	1,896,423	2,342,550
Cook County (Total)	2,980,592	4,825,219	6,168,154
DuPage County	32,257	100,993	1,028,026
Kane County	6,451	11,221	202,235
Lake County (IL)	0	0	269,646
McHenry County	0	0	101,117
Will County	2,928,980	5,408,734	7,802,883
Kankakee County	503,217	875,272	1,280,819
Illinois Total	6,451,497	11,221,439	16,852,880
Lake County (IN)	595,140	996,168	1,435,643
Porter County	127,995	261,620	453,361
Indiana Total	723,135	1,257,788	1,889,004
Grand Total	7,174,632	12,479,227	18,741,884

#### **County Totals for Income Tax Generated - 2030**

County	Low	Base	High
City of Chicago	6,407,595	28,824,897	39,267,527
North Cook	971,768	3,702,503	12,262,368
West Cook	364,413	1,918,018	3,790,504
South Cook	5,921,711	23,140,644	33,880,470
Cook County (Total)	13,665,486	24,004,207	32,697,808
DuPage County	$516,\!252$	1,385,223	5,468,204
Kane County	0	82,228	1,030,891
Lake County (IL)	0	0	1,459,895
McHenry County	0	0	550,662
Will County	13,817,325	27,605,787	41,193,373
Kankakee County	2,368,684	4,508,616	6,800,038
Illinois Total	30,367,747	57,586,062	89,200,870
Lake County (IN)	2,804,778	5,112,123	7,598,738
Porter County	599,079	1,342,578	2,399,601
Indiana Total	3,403,857	6,454,701	9,998,339
Grand Total	33,771,604	64,040,763	99,199,209

### Appendix Table 9 Cumulative Total Annual Revenues to State Governments (in 2001 dollars)

	Lo	ow Forecas	st	Ba	ase Forecas	st	High Forecast			
Alternative/ Forecast Year	Total Revenues to Illinois	Total Revenues to Indiana	Total Revenues to State	Total Revenues to Illinois	Total Revenues to Indiana	Total Revenues to State	Total Revenues to Illinois	Total Revenues to Indiana	Total Revenues to State	
2010	722,824	68,951	791,774	5,018,262	498,716	5,516,978	8,309,485	840,322	9,149,807	
2011	4,295,404	452,383	4,747,787	13,997,028	1,448,312	15,445,340	22,192,630	2,321,191	24,513,822	
2012	10,717,741	1,150,297	11,868,038	26,936,299	2,848,788	29,785,087	41,649,436	4,442,608	46,092,044	
2013	19,989,835	2,162,692	$22,\!152,\!527$	43,836,074	4,700,144	48,536,218	66,679,902	7,204,571	73,884,474	
2014	32,111,687	3,489,568	$35,\!601,\!255$	64,696,354	7,002,380	71,698,734	97,284,029	10,607,082	107,891,111	
2015	47,083,295	5,130,926	52,214,221	89,517,138	9,755,496	99,272,634	133,461,816	14,650,140	148,111,956	
2016	$65,\!820,\!297$	7,220,860	73,041,157	$121,\!581,\!117$	13,369,106	134,950,223	180,841,086	20,023,181	200,864,268	
2017	88,322,693	9,759,370	98,082,062	160,888,290	17,843,211	178,731,501	239,421,840	26,726,206	266,148,046	
2018	114,590,483	12,746,455	127,336,938	$207,\!438,\!658$	23,177,809	230,616,467	309,204,077	34,759,213	343,963,290	
2019	144,623,667	16,182,116	160,805,783	261,232,221	29,372,902	290,605,123	390,187,797	44,122,204	434,310,001	
2020	178,422,246	20,066,352	198,488,598	322,268,978	36,428,489	$358,\!697,\!467$	482,373,001	54,815,178	537,188,179	
2021	215,986,218	$24,\!399,\!165$	240,385,383	390,548,930	44,344,570	434,893,500	585,759,688	66,838,135	652, 597, 823	
2022	$257,\!315,\!584$	29,180,553	286,496,137	466,072,077	53,121,146	519,193,222	700,347,858	80,191,076	780,538,934	
2023	302,410,345	34,410,517	336,820,862	548,838,418	62,758,215	611,596,633	826,137,512	94,873,999	921,011,511	
2024	351,270,500	40,089,056	391,359,556	638,847,954	73,255,779	712,103,733	963,128,649	110,886,906	1,074,015,555	
2025	403,896,048	46,216,172	450,112,220	736,100,685	84,613,837	820,714,522	1,111,321,269	128,229,796	1,239,551,065	
2026	460,286,991	52,791,863	513,078,854	840,596,610	96,832,389	937,428,999	1,270,715,373	146,902,669	1,417,618,042	
2027	520,443,328	59,816,130	$580,\!259,\!457$	952,335,730	109,911,436	1,062,247,166	1,441,310,960	166,905,526	1,608,216,486	
2028	584,365,059	67,288,972	651,654,031	1,071,318,045	123,850,976	1,195,169,021	1,623,108,030	188,238,365	1,811,346,396	
2029	$652,\!052,\!184$	75,210,390	727,262,574	1,197,543,554	138,651,011	1,336,194,565	1,816,106,584	210,901,188	2,027,007,772	
2030	723,504,703	83,580,384	807,085,087	1,331,012,258	154,311,540	1,485,323,798	2,020,306,621	234,893,994	2,255,200,615	

Appendix Exhibit 1 Reported Direct Jobs vs. Model Total Direct Jobs



Appendix Exhibit 2 Reported Direct Jobs vs. Model Total Direct Jobs Adjusted by Productivity Factor



Model Direct Jobs Adjusted by Productivity Factor

### Appendix Exhibit 3 Reported Direct Jobs vs. Model Direct Jobs With and Without Productivity Factor





# Appendix Exhibit 4 Original Direct Job Forecast Model

#### Appendix Table 10 South Suburban Airport Impacts Forecast for Regional Employment - 2010 Distribution by Township

		2010 E	2010 Employment Low Forecast			2010 Employment Base Forecast				2010 Employment High Forecast			
MCD_NAME	CO_NAME	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total
Chemung	McHenry	0	0	0	0	0	0	0	0	0	0	0	0
Alden	McHenry	0	0	0	0	0	0	0	0	0	0	0	0
Hebron	McHenry	0	0	0	0	0	0	0	0	0	0	0	0
<b>Richmond/Burton</b>	McHenry	0	0	0	0	0	0	0	0	0	0	0	0
Dunham	McHenry	0	0	0	0	0	0	0	0	0	0	0	0
Hartland	McHenry	0	0	0	0	0	0	0	0	0	0	0	0
Greenwood	McHenry	0	0	0	0	0	0	0	0	0	0	0	0
McHenry	McHenry	0	0	0	0	0	0	0	0	0	0	3	3
Marengo	McHenry	0	0	0	0	0	0	0	0	0	0	0	0
Seneca	McHenry	0	0	0	0	0	0	0	0	0	0	0	0
Dorr	McHenry	0	0	0	0	0	0	0	0	0	0	3	3
Nunda	McHenry	0	0	0	0	0	0	0	0	0	0	0	0
Riley	McHenry	0	0	0	0	0	0	0	0	0	0	0	0
Coral	McHenry	0	0	0	0	0	0	0	0	0	0	0	0
Grafton	McHenry	0	0	0	0	0	0	0	0	0	0	0	0
Algonquin	McHenry	0	0	0	0	0	0	0	0	0	0	7	7
Antioch/Lake V	Lake	0	0	0	0	0	0	0	0	0	0	0	0
Lake V/Antioch	Lake	0	0	0	0	0	0	0	0	0	0	0	0
Newport	Lake	0	0	0	0	0	0	0	0	0	0	0	0
Benton-Zion	Lake	0	0	0	0	0	0	0	0	0	0	0	0
Grant/Lake V	Lake	0	0	0	0	0	0	0	0	0	0	0	0
Lake V/Avon	Lake	0	0	0	0	0	0	0	0	0	0	3	3
Warren	Lake	0	0	0	0	0	0	0	0	0	0	6	6
Waukegan	Lake	0	0	0	0	0	0	0	0	0	0	4	4
Wauconda	Lake	0	0	0	0	0	0	0	0	0	0	0	0
Fremont	Lake	0	0	0	0	0	0	0	0	0	0	0	0
Libertyvill	Lake	0	0	0	0	0	0	0	0	0	0	7	7
Shields	Lake	0	0	0	0	0	0	0	0	0	0	4	4
Cuba	Lake	0	0	0	0	0	0	0	0	0	0	0	0
Ela	Lake	0	0	0	0	0	0	0	0	0	0	4	4
Vernon	Lake	0	0	0	0	0	0	0	0	0	0	7	7
Moraine/West Deer	f Lake	0	0	0	0	0	0	0	0	0	0	7	7
Hampshire	Kane	0	0	0	0	0	0	0	0	0	0	0	0
Rutland	Kane	0	0	0	0	0	0	0	0	0	0	0	0
Dundee	Kane	0	0	0	0	0	0	0	0	0	0	7	7
Burlington	Kane	0	0	0	0	0	0	0	0	0	0	0	0
Plato	Kane	0	0	0	0	0	0	0	0	0	0	0	0
Elgin	Kane	0	0	0	0	0	0	0	0	0	0	7	7

		2010 Employment Low Forecast			2010 Employment Base Forecast				2010 Employment High Forecast				
MCD_NAME	CO_NAME	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total
Virgil	Kane	0	0	0	0	0	0	0	0	0	0	0	0
Campton/St. Charle	e:Kane	0	0	0	0	0	0	0	0	0	0	0	0
St. Charles/Campto	or Kane	0	0	0	0	0	0	0	0	0	0	4	4
Kaneville	Kane	0	0	0	0	0	0	0	0	0	0	0	0
Blackberry	Kane	0	0	0	0	0	0	0	0	0	0	0	0
Geneva/Batavia	Kane	0	0	0	0	0	0	0	0	0	0	5	5
Big Rock	Kane	0	0	0	0	0	0	0	0	0	0	0	0
Sugar Grove	Kane	0	0	0	0	0	0	0	0	0	0	0	0
Aurora	Kane	0	0	0	0	0	0	2	2	0	0	6	6
Wayne	DuPage	0	0	0	0	0	0	0	0	0	0	6	6
Bloomingdal	DuPage	0	0	0	0	0	0	4	4	0	0	14	14
Addison	DuPage	0	0	3	3	0	0	5	5	0	0	14	14
Winfield	DuPage	0	0	0	0	0	0	0	0	0	0	10	10
Milton	DuPage	0	0	0	0	0	0	0	0	0	0	7	7
York	DuPage	0	0	1	1	0	0	5	5	0	0	35	35
Naperville	DuPage	0	0	1	1	0	0	4	4	0	6	35	41
Lisle	DuPage	0	0	0	0	0	0	4	4	0	10	16	26
Downers Grove	DuPage	0	0	0	0	0	0	4	4	0	10	17	27
Barrington	Cook	0	0	0	0	0	0	2	2	0	0	9	9
Palatine	Cook	0	0	0	0	0	0	2	2	0	0	8	8
Wheeling	Cook	0	0	0	0	0	0	2	2	0	0	13	13
Northfield	Cook	0	0	0	0	0	0	2	2	0	0	16	16
New Trier	Cook	0	0	0	0	0	0	0	0	0	0	0	0
Hanover	Cook	0	0	0	0	0	0	2	2	0	0	9	9
Schaumburg	Cook	0	0	3	3	0	0	20	20	0	0	30	30
Elk Grove	Cook	0	0	4	4	0	0	30	30	0	0	45	45
Maine	Cook	0	0	0	0	0	0	5	5	0	0	9	9
Niles	Cook	0	0	0	0	0	0	5	5	0	0	11	11
Evanston/Niles	Cook	0	0	0	0	0	0	2	2	0	0	8	8
Leyden/Norwood P	'a Cook	0	0	3	3	0	0	16	16	0	0	25	25
Proviso/Riverfores	/I Cook	0	0	0	0	0	0	5	5	0	0	12	12
Oak Park/Berwyn/	C Cook	0	0	0	0	0	0	1	1	0	0	5	5
Lyons	Cook	0	0	0	0	0	0	2	2	0	0	8	8
Lemont	Cook	0	0	0	0	0	0	0	0	0	0	0	0
Palos	Cook	0	0	0	0	0	0	0	0	0	0	4	4
Worth/Calumet/Stie	clCook	0	0	0	0	0	0	3	3	0	0	23	23
Orland	Cook	0	0	3	3	0	0	16	16	0	0	22	22
Bremen	Cook	0	0	0	0	0	0	5	5	0	0	11	11
Thornton	Cook	0	0	3	3	0	0	20	20	0	0	24	24
Rich	Cook	0	15	13	28	0	60	90	150	0	75	110	185
Bloom	Cook	0	7	6	13	0	43	45	88	0	55	55	110
Chicago	Cook/DuPage	0	0	0	0	0	0	0	0	0	0	0	0
Chicago	Cook	0	0	3	3	0	0	30	30	0	0	35	35
					•				•				
		2010	Employment	Low Forecast		2010 E	Employment	<b>Base Foreca</b>	st	2010 E	mployment	High Foreca	$\mathbf{st}$
-------------------	----------	--------	------------	--------------	-------	--------	------------	--------------------	-------	--------	-----------	-------------	---------------
MCD_NAME	CO_NAME	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total
Chicago	Cook	0	0	0	0	0	0	6	6	0	0	10	10
Chicago	Cook	0	0	0	0	0	0	6	6	0	0	11	11
Chicago	Cook	0	10	8	18	0	56	55	111	0	75	70	145
Chicago	Cook	0	10	8	18	0	55	55	110	0	75	70	145
Chicago	Cook	0	0	3	3	0	0	25	25	0	0	25	25
Chicago	Cook	0	0	0	0	0	0	6	6	0	0	11	11
Chicago	Cook	0	0	6	6	0	4	45	49	0	5	50	55
Chicago	Cook	0	0	3	3	0	0	17	17	0	0	21	21
Wheatland	Will	0	0	3	3	0	0	25	25	0	0	35	35
Du Page	Will	0	0	3	3	0	0	20	20	0	0	30	30
Plainfield	Will	0	0	0	0	0	0	2	2	0	0	10	10
Lockport	Will	0	0	0	0	0	0	5	5	0	0	11	11
Homer	Will	0	0	0	0	0	0	5	5	0	0	10	10
Troy	Will	0	0	3	3	0	0	19	19	0	10	22	32
Joliet	Will	0	4	4	8	0	25	30	55	0	35	35	70
New Lenox	Will	0	3	3	6	0	14	11	25	0	3	12	15
Frankfort	Will	0	5	5	10	0	38	36	74	0	45	45	90
Channahon	Will	0	0	0	0	0	0	2	2	0	0	9	9
Jackson	Will	0	0	2	2	0	0	16	16	0	0	18	18
Manhattan	Will	0	0	0	0	0	0	0	0	0	0	5	5
Green Garde	Will	0	0	0	0	0	2	8	10	0	0	10	10
Monee	Will	0	7	6	13	0	50	45	95	0	70	80	150
Crete	Will	0	5	5	10	0	42	36	78	0	55	60	115
Wilmington	Will	0	0	0	0	0	0	0	0	0	0	0	0
Florence	Will	0	0	0	0	0	0	0	0	0	0	0	0
Wilton	Will	0	0	0	0	0	7	0	7	0	21	0	21
Peotone	Will	0	5	3	8	0	19	21	40	0	14	36	50
Will	Will	40	2	0	42	428	7	0	435	892	10	35	937
Washington	Will	0	3	1	4	0	10	6	16	0	15	14	29
Wesley/Custer/Ree	d Will	0	0	0	0	0	0	0	0	0	0	0	0
Custer/Wesley	Will	0	0	0	0	0	0	0	0	0	0	0	0
Rockville	Kankakee	0	0	0	0	0	0	0	0	0	0	4	4
Manteno	Kankakee	0	0	2	2	0	13	16	29	0	20	25	45
Sumner	Kankakee	0	0	0	0	0	14	0	14	0	29	0	29
Yellowhead	Kankakee	0	0	0	0	0	0	0	0	0	0	4	4
Essex	Kankakee	0	0	0	0	0	0	0	0	0	0	0	0
Salina	Kankakee	0	0	0	0	0	0	0	0	0	0	0	0
Limestone	Kankakee	0	0	0	0	0	0	0	0	0	0	0	0
Bourbonnais	Kankakee	0	5	7	12	0	25	55	80	0	26	75	101
Ganeer/Aroma	Kankakee	0	0	0	0	0	0	0	0	0	0	3	3
Momence	Kankakee	0	0	0	0	0	0	0	0	0	0	0	0
Norton	Kankakee	0	0	0	0	0	0	0	0	0	0	0	0
Pilot	Kankakee	0	0	0	0	0	0	0	0	0	0	0	0
		-			•								

	-	2010 E	mployment	Low Forecast		2010 E	mployment	Base Forecast	t .	2010 E	mployment	High Forecas	t
MCD_NAME	CO_NAME	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total
Otto	Kankakee	0	0	0	0	0	0	0	0	0	0	0	0
Kankakee	Kankakee	0	0	7	7	0	0	5	5	0	6	10	16
Otto/Aroma	Kankakee	0	0	0	0	0	0	0	0	0	0	3	3
Aroma/Kankakee	Kankakee	0	0	0	0	0	0	0	0	0	0	0	0
Aroma	Kankakee	0	0	0	0	0	0	0	0	0	0	0	0
St. Anne	Kankakee	0	0	0	0	0	0	0	0	0	0	0	0
Pembroke	Kankakee	0	0	0	0	0	0	0	0	0	0	0	0
North	Lake (IN)	0	0	2	2	0	0	16	16	0	13	20	33
Calumet	Lake (IN)	0	0	0	0	0	0	10	10	0	6	15	21
Calumet	Lake (IN)	0	0	0	0	0	0	10	10	0	6	11	17
North	Lake (IN)	0	2	3	5	0	11	19	30	0	14	25	39
Calumet	Lake (IN)	0	0	0	0	0	4	2	6	0	5	6	11
Hobart	Lake (IN)	0	0	0	0	0	0	0	0	0	6	0	6
St. John	Lake (IN)	0	3	4	7	0	13	24	37	0	20	35	55
Ross	Lake (IN)	0	2	3	5	0	11	21	32	0	15	30	45
Hanover	Lake (IN)	0	0	0	0	0	0	1	1	0	0	6	6
Center	Lake (IN)	0	0	0	0	0	0	2	2	0	0	7	7
Winfield	Lake (IN)	0	0	0	0	0	0	0	0	0	0	0	0
West Creek	Lake (IN)	0	0	0	0	0	0	0	0	0	0	0	0
Cedar Creek	Lake (IN)	0	0	0	0	0	0	0	0	0	0	0	0
Eagle Creek	Lake (IN)	0	0	0	0	0	0	0	0	0	0	0	0
Portage	Porter	0	0	0	0	0	0	9	9	0	0	12	12
Westchester	Porter	0	0	0	0	0	0	2	2	0	0	5	5
Pine	Porter	0	0	0	0	0	0	0	0	0	0	0	0
Liberty	Porter	0	0	0	0	0	0	0	0	0	0	0	0
Jackson	Porter	0	0	0	0	0	0	0	0	0	0	0	0
Union	Porter	0	0	0	0	0	0	4	4	0	0	10	10
Center	Porter	0	0	2	2	0	10	10	20	0	15	20	35
Washington	Porter	0	0	0	0	0	0	2	2	0	0	11	11
Porter	Porter	0	0	0	0	0	0	0	0	0	0	0	0
Morgan	Porter	0	0	0	0	0	0	0	0	0	0	0	0
Boone	Porter	0	0	0	0	0	0	0	0	0	0	0	0
Pleasant	Porter	0	0	0	0	0	0	0	0	0	0	0	0

	-	2010	Employment	Low Forecas	st	2010 E	Imployment	Base Foreca	st	2010 E	mployment	High Foreca	st
MCD_NAME	CO_NAME	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total
Summary													
City of Chicago		0	20	31	51	0	115	245	360	0	155	303	458
North Cook		0	0	7	7	0	0	72	72	0	0	158	158
West Cook		0	0	3	3	0	0	24	24	0	0	50	50
South Cook		0	22	25	47	0	103	179	282	0	130	249	379
Cook County (Tot	al)	0	42	66	108	0	218	520	738	0	285	760	1,045
DuPage County		0	0	5	5	0	0	26	26	0	26	154	180
Kane County		0	0	0	0	0	0	2	2	0	0	29	29
Lake County (IL)		0	0	0	0	0	0	0	0	0	0	42	42
<b>McHenry County</b>		0	0	0	0	0	0	0	0	0	0	13	13
Will County		40	34	38	112	428	214	287	929	892	278	477	1,647
Kankakee County	,	0	5	16	21	0	52	76	128	0	81	124	205
Lake County (IN)		0	7	12	19	0	39	105	144	0	85	155	240
Porter County		0	0	2	2	0	10	27	37	0	15	58	73
Grand Total		40	88	139	267	428	533	1,043	2,004	892	770	1,812	3,474

#### Appendix Table 11 South Suburban Airport Impacts Forecast for Regional Employment - 2015 Distribution by Township

		2015 I	Employment	Low Forecast		2015 E	mployment	Base Forecast	_	2015 Eı	nployment	High Forecas	st
MCD_NAME	CO_NAME	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total
Chemung	McHenry	0	0	0	0	0	0	0	0	0	0	0	0
Alden	McHenry	0	0	0	0	0	0	0	0	0	0	0	0
Hebron	McHenry	0	0	0	0	0	0	0	0	0	0	0	0
<b>Richmond/Burton</b>	McHenry	0	0	0	0	0	0	0	0	0	0	5	5
Dunham	McHenry	0	0	0	0	0	0	0	0	0	0	0	0
Hartland	McHenry	0	0	0	0	0	0	0	0	0	0	0	0
Greenwood	McHenry	0	0	0	0	0	0	0	0	0	0	0	0
McHenry	McHenry	0	0	0	0	0	0	0	0	0	0	12	12
Marengo	McHenry	0	0	0	0	0	0	0	0	0	0	4	4
Seneca	McHenry	0	0	0	0	0	0	0	0	0	0	0	0
Dorr	McHenry	0	0	0	0	0	0	0	0	0	0	15	15
Nunda	McHenry	0	0	0	0	0	0	0	0	0	0	13	13
Riley	McHenry	0	0	0	0	0	0	0	0	0	0	0	0
Coral	McHenry	0	0	0	0	0	0	0	0	0	0	0	0
Grafton	McHenry	0	0	0	0	0	0	0	0	0	0	5	5
Algonquin	McHenry	0	0	0	0	0	0	0	0	0	0	27	27
Antioch/Lake V	Lake	0	0	0	0	0	0	0	0	0	0	0	0
Lake V/Antioch	Lake	0	0	0	0	0	0	0	0	0	0	4	4
Newport	Lake	0	0	0	0	0	0	0	0	0	0	0	0
Benton-Zion	Lake	0	0	0	0	0	0	0	0	0	0	5	5
Grant/Lake V	Lake	0	0	0	0	0	0	0	0	0	0	4	4
Lake V/Avon	Lake	0	0	0	0	0	0	0	0	0	0	13	13
Warren	Lake	0	0	0	0	0	0	0	0	0	0	23	23
Waukegan	Lake	0	0	0	0	0	0	0	0	0	0	19	19
Wauconda	Lake	0	0	0	0	0	0	0	0	0	0	9	9
Fremont	Lake	0	0	0	0	0	0	0	0	0	0	9	9
Libertyvill	Lake	0	0	0	0	0	0	0	0	0	0	32	32
Shields	Lake	0	0	0	0	0	0	0	0	0	0	15	15
Cuba	Lake	0	0	0	0	0	0	0	0	0	0	6	6
Ela	Lake	0	0	0	0	0	0	0	0	0	0	15	15
Vernon	Lake	0	0	0	0	0	0	0	0	0	0	29	29
Moraine/West Deer	f Lake	0	0	0	0	0	0	0	0	0	0	30	30
Hampshire	Kane	0	0	0	0	0	0	0	0	0	0	3	3
Rutland	Kane	0	0	0	0	0	0	0	0	0	0	6	6
Dundee	Kane	0	0	0	0	0	0	0	0	0	0	29	29
Burlington	Kane	0	0	0	0	0	0	0	0	0	0	0	0
Plato	Kane	0	0	0	0	0	0	0	0	0	0	3	3
Elgin	Kane	0	0	$^{2}$	2	0	0	4	4	0	0	29	29

	_	2015	Employment	Low Forecas	t	2015 E	mployment	<b>Base Forecas</b>	st	2015 E	mployment	High Foreca	st
MCD_NAME	CO_NAME	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total
Virgil	Kane	0	0	0	0	0	0	0	0	0	0	0	0
Campton/St. Charl	e: Kane	0	0	0	0	0	0	0	0	0	0	0	0
St. Charles/Campt	or Kane	0	0	0	0	0	0	0	0	0	0	19	19
Kaneville	Kane	0	0	0	0	0	0	0	0	0	0	0	0
Blackberry	Kane	0	0	0	0	0	0	0	0	0	0	0	0
Geneva/Batavia	Kane	0	0	0	0	0	0	0	0	0	0	23	23
Big Rock	Kane	0	0	0	0	0	0	0	0	0	0	3	3
Sugar Grove	Kane	0	0	0	0	0	0	0	0	0	0	10	10
Aurora	Kane	0	0	3	3	0	0	6	6	0	0	26	26
Wayne	DuPage	0	0	0	0	0	0	0	0	0	0	26	26
Bloomingdal	DuPage	0	0	5	5	0	0	10	10	0	0	58	58
Addison	DuPage	0	0	5	5	0	0	35	35	0	0	57	57
Winfield	DuPage	0	0	0	0	0	0	0	0	0	0	41	41
Milton	DuPage	0	0	0	0	0	0	0	0	0	0	29	29
York	DuPage	0	0	4	4	0	0	10	10	0	0	139	139
Naperville	DuPage	0	0	4	4	0	0	10	10	0	37	136	173
Lisle	DuPage	0	0	4	4	0	0	10	10	0	65	68	133
Downers Grove	DuPage	0	0	3	3	0	0	5	5	0	65	72	137
Barrington	Cook	0	0	6	6	0	0	11	11	0	0	37	37
Palatine	Cook	0	0	6	6	0	0	11	11	0	0	33	33
Wheeling	Cook	0	0	0	0	0	0	11	11	0	0	56	56
Northfield	Cook	0	0	0	0	0	0	11	11	0	0	66	66
New Trier	Cook	0	0	0	0	0	0	0	0	0	0	8	8
Hanover	Cook	0	0	6	6	0	0	11	11	0	0	38	38
Schaumburg	Cook	0	0	70	70	0	0	90	90	0	0	122	122
Elk Grove	Cook	0	0	97	97	0	0	140	140	0	0	174	174
Maine	Cook	0	0	15	15	0	0	24	24	0	0	37	37
Niles	Cook	0	0	15	15	0	0	24	24	0	0	46	46
Evanston/Niles	Cook	0	0	6	6	0	0	11	11	0	0	33	33
Leyden/Norwood I	PaCook	0	0	52	52	0	0	75	75	0	0	96	96
Proviso/Riverfores	s/I Cook	0	0	15	15	0	0	24	24	0	0	51	51
Oak Park/Berwyn/	C Cook	0	0	0	0	0	0	4	4	0	0	21	21
Lyons	Cook	0	0	6	6	0	0	11	11	0	0	32	32
Lemont	Cook	0	0	0	0	0	0	0	0	0	0	5	5
Palos	Cook	0	0	0	0	0	0	5	5	0	0	16	16
Worth/Calumet/Sti	iclCook	0	0	8	8	0	0	13	13	0	0	96	96
Orland	Cook	0	0	52	52	0	0	86	86	0	0	89	89
Bremen	Cook	0	0	15	15	0	0	24	24	0	0	46	46
Thornton	Cook	0	0	59	59	0	0	96	96	0	0	99	99
Rich	Cook	0	326	266	592	0	354	435	789	0	462	430	892
Bloom	Cook	0	154	128	282	0	258	209	467	0	334	223	557
Chicago	Cook/DuPage	0	0	0	0	0	0	0	0	0	0	0	0
Chicago	Cook	0	0	82	82	0	0	134	134	0	0	131	131
-													

		2015	Employment	Low Forecas	t	2015 E	Employment	Base Foreca	ast	2015 E	mployment	High Foreca	$\mathbf{st}$
MCD_NAME	CO_NAME	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total
Chicago	Cook	0	0	17	17	0	0	27	27	0	0	40	40
Chicago	Cook	0	0	17	17	0	0	27	27	0	0	46	46
Chicago	Cook	0	200	161	361	0	336	263	599	0	437	254	691
Chicago	Cook	0	193	161	354	0	323	263	586	0	421	286	707
Chicago	Cook	0	0	67	67	0	0	110	110	0	0	103	103
Chicago	Cook	0	0	17	17	0	0	27	27	0	0	45	45
Chicago	Cook	0	0	128	128	0	26	209	235	0	33	201	234
Chicago	Cook	0	0	50	50	0	0	83	83	0	0	88	88
Wheatland	Will	0	0	83	83	0	0	144	144	0	0	141	141
Du Page	Will	0	0	68	68	0	0	120	120	0	0	121	121
Plainfield	Will	0	0	6	6	0	0	11	11	0	0	33	33
Lockport	Will	0	0	15	15	0	0	24	24	0	0	45	45
Homer	Will	0	0	15	15	0	0	24	24	0	0	37	37
Troy	Will	0	0	57	57	0	0	92	92	0	65	92	157
Joliet	Will	0	97	84	181	0	163	137	300	0	213	135	348
New Lenox	Will	0	54	47	101	0	100	92	192	0	130	93	223
Frankfort	Will	0	126	105	231	0	211	171	382	0	275	167	442
Channahon	Will	0	0	6	6	0	0	11	11	0	0	37	37
Jackson	Will	0	0	46	46	0	0	75	75	0	0	74	74
Manhattan	Will	0	0	0	0	0	0	4	4	0	0	19	19
Green Garde	Will	0	6	10	16	62	0	0	62	115	0	5	120
Monee	Will	0	159	132	291	123	310	215	648	207	403	312	922
Crete	Will	0	128	105	233	62	254	171	487	115	330	248	693
Wilmington	Will	0	0	0	0	0	0	0	0	0	0	3	3
Florence	Will	0	0	0	0	0	0	0	0	0	0	3	3
Wilton	Will	0	20	0	20	0	34	0	34	0	72	0	72
Peotone	Will	0	44	63	107	124	133	103	360	207	146	148	501
Will	Will	812	13	0	825	987	42	0	1,029	1,418	56	130	1,604
Washington	Will	0	39	17	56	130	65	27	222	230	85	56	371
Wesley/Custer/Ree	d Will	0	0	0	0	0	0	0	0	0	0	4	4
Custer/Wesley	Will	0	0	0	0	0	0	0	0	0	0	0	0
Kockville	Kankakee	0	0	0	0	0	0	4	4	0	0	15	15
Manteno	Kankakee	0	51	48	99	0	87	79	166	0	113	102	215
Sumner	Kankakee	0	30	0	30	0	50	0	50	0	110	17	110
Facer	Kankakee	0	0	0	0	0	0	4	4	0	0	17	17
Salina	Kankakee	0	0	0	0	0	0	0	0	0	0	0	0
Jimostono	Kankakee	0	0	0	0	0	0	0	0	0	0	0	0
Bourbonnais	Kankakee	0	114	149	263	0	190	243	433	0	203	4 207	500
Ganger/Aroma	Kankakee	0	114 0	143	200 ∩	0	190	240 0	400	0	203 0	201 19	19
Momence	Kankakee	0	0	0	0	0	0	0	0	0	0	12	12
Norton	Kankakee	0	0	0	0	0	0	0	0	0	0	0	0
Pilot	Kankakee	0	0	0	0	0	0	0	0	0	0	U 2	9 U
1 1101	nankakee	0	0	0	0	0	0	0	0	0	0	5	9

MCD_NAMECO_OttoKanKankakeeKanOtto/AromaKanAroma/KankakeeKanAroma/KankakeeKanAromaKanSt. AnneKanPembrokeKanNorthLakeCalumetLakeCalumetLakeCalumetLakeCalumetLakeCalumetLakeCalumetLakeCalumetLakeCalumetLakeHobartLake	_NAME Direct hkakee 00 hka	Indirect 0 0 0 0 0 0 0 0 0 0 1	Induced 0 15 0 0 0 0 48 8 15	<b>Total</b> 0 15 0 0 0 0 0 48 8	Direct 0 0 0 0 0 0 0 0 0	Indirect 0 0 0 0 0 0 0 0 0 0	Induced 0 24 4 0 0 0 0 79	Total 0 24 4 0 0 0 0 0	Direct 0 0 0 0 0 0 0 0	Indirect 0 37 0 0 0 0 0 0	Induced 0 43 14 3 0 3 2	<b>Total</b> 0 80 14 3 0 3
OttoKanKankakeeKanOtto/AromaKanAroma/KankakeeKanAromaKanSt. AnneKanPembrokeKanNorthLakeCalumetLakeCalumetLakeCalumetLakeCalumetLakeCalumetLakeCalumetLakeCalumetLakeCalumetLakeCalumetLakeKorthLakeKopartLake	nkakee     0       se (IN)     0	0 0 0 0 0 0 0 0 0 0 0	0 15 0 0 0 0 48 8 15	0 15 0 0 0 0 48 8	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 24 4 0 0 0 0 79	0 24 4 0 0 0 0 0	0 0 0 0 0 0	0 37 0 0 0 0 0	0 43 14 3 0 3	0 80 14 3 0 3
KankakeeKanOtto/AromaKanAroma/KankakeeKanAromaKanAromaKanSt. AnneKanPembrokeKanNorthLakeCalumetLakeCalumetLakeCalumetLakeCalumetLakeCalumetLakeCalumetLakeCalumetLakeCalumetLakeCalumetLakeCalumetLakeHobartLake	nkakee         0           se (IN)         0	0 0 0 0 0 0 0 0 0	15 0 0 0 0 48 8 15	$15 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 48 \\ 8 \\ 8$	0 0 0 0 0 0 0	0 0 0 0 0 0 0	24 4 0 0 0 0 79	24 4 0 0 0 0	0 0 0 0 0	37 0 0 0 0 0	43 14 3 0 3	80 14 3 0 3
Otto/AromaKanAroma/KankakeeKanAromaKanSt. AnneKanSt. AnneKanPembrokeKanNorthLakeCalumetLakeCalumetLakeCalumetLakeCalumetLakeCalumetLakeCalumetLakeCalumetLakeCalumetLakeCalumetLakeCalumetLakeCalumetLake	nkakee         0           nkakee         0           nkakee         0           nkakee         0           nkakee         0           nkakee         0           se (IN)         0	0 0 0 0 0 0 0 0	0 0 0 48 8 15	$\begin{array}{c} 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 48 \\ 8 \end{array}$	0 0 0 0 0 0	0 0 0 0 0	4 0 0 0 0 79	4 0 0 0 0	0 0 0 0	0 0 0 0	14 3 0 3	14 3 0 3
Aroma/KankakeeKanAromaKanSt. AnneKanSt. AnneKanPembrokeKanNorthLakeCalumetLakeCalumetLakeCalumetLakeCalumetLakeCalumetLakeCalumetLakeCalumetLakeCalumetLakeCalumetLakeHobartLake	nkakee         0           nkakee         0           nkakee         0           nkakee         0           se (IN)         0	0 0 0 0 0 0 0	0 0 0 48 8 15	$     \begin{array}{c}       0 \\       0 \\       0 \\       48 \\       8     \end{array} $	0 0 0 0 0	0 0 0 0	0 0 0 79	0 0 0 0	0 0 0	0 0 0	3 0 3	3 0 3
AromaKanSt. AnneKanPembrokeKanNorthLakeCalumetLakeCalumetLakeCalumetLakeCalumetLakeCalumetLakeCalumetLake	nkakee         0           nkakee         0           nkakee         0           se (IN)         0	0 0 0 0 0	0 0 48 8 15	0 0 48 8	0 0 0 0	0 0 0 0	0 0 0 79	0 0 0	0 0 0	0 0 0	0 3	0 3
St. AnneKanPembrokeKanNorthLakoCalumetLakoCalumetLakoCalumetLakoCalumetLakoHobartLako	nkakee         0           nkakee         0           se (IN)         0	0 0 0 0	0 0 48 8 15	0 0 48 8	0 0 0	0 0 0	0 0 79	0 0	0 0	0 0	3	3
Pembroke Kan North Lake Calumet Lake Calumet Lake Calumet Lake Hobart Lake	nkakee         0           se (IN)         0	0 0 0 0	0 48 8 15	$\begin{array}{c} 0\\ 48\\ 8\end{array}$	0 0 0	0 0	0 79	0	0	0	0	
North Lake Calumet Lake North Lake Calumet Lake Hobart Lake	xe (IN)         0	0 0 0	48 8 15	48 8	0	0	79				2	2
Calumet Lake Calumet Lake North Lake Calumet Lake Hobart Lake	xe (IN)         0	0	8 15	8	0		15	79	0	83	77	160
Calumet Lake North Lake Calumet Lake Hobart Lake	xe (IN)         0           xe (IN)         0           xe (IN)         0	0	15		0	0	48	48	0	37	50	87
North Lake Calumet Lake Hobart Lake	ce (IN) 0 ce (IN) 0	41		15	0	0	48	48	0	37	46	83
Calumet Lake Hobart Lake	ce (IN) 0	41	54	95	0	68	89	157	0	89	104	193
Hobart Lake		16	0	16	0	27	11	38	0	19	23	42
G/ T.L. T.L	ce (IN) 0	0	0	0	0	0	0	0	0	37	10	47
St. John Lake	ce (IN) 0	51	71	122	0	87	116	203	0	113	139	252
Ross Lake	ce (IN) 0	41	61	102	0	69	99	168	0	91	115	206
Hanover Lake	ce (IN) 0	0	0	0	0	0	7	7	0	0	24	24
Center Lake	<b>ce (IN)</b> 0	0	0	0	0	0	11	11	0	0	29	29
Winfield Lake	ce (IN) 0	0	0	0	0	0	0	0	0	0	3	3
West Creek Lake	ce (IN) 0	0	0	0	0	0	0	0	0	0	6	6
Cedar Creek Lake	<b>ce (IN)</b> 0	0	0	0	0	0	0	0	0	0	6	6
Eagle Creek Lake	ce (IN) 0	0	0	0	0	0	0	0	0	0	0	0
Portage Port	rter 0	0	6	6	0	0	44	44	0	0	51	51
Westchester Port	rter 0	0	0	0	0	0	11	11	0	0	20	20
Pine Port	rter 0	0	0	0	0	0	0	0	0	0	5	5
Liberty Port	rter 0	0	0	0	0	0	0	0	0	0	3	3
Jackson Port	rter 0	0	0	0	0	0	0	0	0	0	3	3
Union Port	rter 0	0	11	11	0	0	32	32	0	30	38	68
Center Port	rter 0	39	31	70	0	65	36	101	0	55	95	150
Washington Port	rter 0	0	0	0	0	0	11	11	0	0	46	46
Porter Port	rter 0	0	0	0	0	0	0	0	0	0	2	2
Morgan Port	rter 0	0	0	0	0	0	0	0	0	0	2	2
Boone Port	rter 0	0	0	0	0	0	0	0	0	0	5	5
Pleasant Port	rter 0	0	0	0	0	0	0	0	0	0	4	4

	-	2015	Employment	Low Foreca	st	2015 E	Imployment	Base Foreca	ast	2015 E	mployment	High Foreca	st
MCD_NAME	CO_NAME	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total
Summary													
City of Chicago		0	393	700	1,093	0	685	1,143	1,828	0	891	1,194	2,085
North Cook		0	0	221	221	0	0	344	344	0	0	650	650
West Cook		0	0	73	73	0	0	114	114	0	0	200	200
South Cook		0	480	528	1,008	0	612	868	1,480	0	796	1,004	1,800
Cook County (Tota	al)	0	873	1,522	2,395	0	1,297	2,469	3,766	0	1,687	3,048	4,735
DuPage County		0	0	25	25	0	0	80	80	0	167	626	793
Kane County		0	0	5	5	0	0	10	10	0	0	151	151
Lake County (IL)		0	0	0	0	0	0	0	0	0	0	213	213
McHenry County		0	0	0	0	0	0	0	0	0	0	81	81
Will County		812	686	859	2,357	1,488	1,312	1,421	4,221	2,292	1,775	1,903	5,970
Kankakee County		0	195	212	407	0	327	358	685	0	463	523	986
Lake County (IN)		0	149	257	406	0	251	508	759	0	506	632	1,138
Porter County		0	39	48	87	0	65	134	199	0	85	274	359
Grand Total		812	1,942	2,928	5,682	1,488	3,252	4,980	9,720	2,292	4,683	7,451	14,426

#### Appendix Table 12 South Suburban Airport Impacts Forecast for Regional Employment - 2030 Distribution by Township

		2030 E	Employment	Low Forecas	t	<b>2030 E</b>	mployment	<b>Base Forecast</b>	t _	2030 E	mployment ]	High Forecas	t
MCD_NAME	CO_NAME	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total
Chemung	McHenry	0	0	0	0	0	0	0	0	0	0	0	0
Alden	McHenry	0	0	0	0	0	0	0	0	0	0	0	0
Hebron	McHenry	0	0	0	0	0	0	0	0	0	0	0	0
<b>Richmond/Burton</b>	McHenry	0	0	0	0	0	0	0	0	0	0	25	25
Dunham	McHenry	0	0	0	0	0	0	0	0	0	0	0	0
Hartland	McHenry	0	0	0	0	0	0	0	0	0	0	0	0
Greenwood	McHenry	0	0	0	0	0	0	0	0	0	0	0	0
McHenry	McHenry	0	0	0	0	0	0	0	0	0	0	65	65
Marengo	McHenry	0	0	0	0	0	0	0	0	0	0	20	20
Seneca	McHenry	0	0	0	0	0	0	0	0	0	0	0	0
Dorr	McHenry	0	0	0	0	0	0	0	0	0	0	80	80
Nunda	McHenry	0	0	0	0	0	0	0	0	0	0	70	70
Riley	McHenry	0	0	0	0	0	0	0	0	0	0	0	0
Coral	McHenry	0	0	0	0	0	0	0	0	0	0	0	0
Grafton	McHenry	0	0	0	0	0	0	0	0	0	0	25	25
Algonquin	McHenry	0	0	0	0	0	0	0	0	0	0	145	145
Antioch/Lake V	Lake	0	0	0	0	0	0	0	0	0	0	0	0
Lake V/Antioch	Lake	0	0	0	0	0	0	0	0	0	0	20	20
Newport	Lake	0	0	0	0	0	0	0	0	0	0	0	0
Benton-Zion	Lake	0	0	0	0	0	0	0	0	0	0	25	25
Grant/Lake V	Lake	0	0	0	0	0	0	0	0	0	0	20	20
Lake V/Avon	Lake	0	0	0	0	0	0	0	0	0	0	70	70
Warren	Lake	0	0	0	0	0	0	0	0	0	0	125	125
Waukegan	Lake	0	0	0	0	0	0	0	0	0	0	105	105
Wauconda	Lake	0	0	0	0	0	0	0	0	0	0	50	50
Fremont	Lake	0	0	0	0	0	0	0	0	0	0	50	50
Libertyvill	Lake	0	0	0	0	0	0	0	0	0	0	170	170
Shields	Lake	0	0	0	0	0	0	0	0	0	0	80	80
Cuba	Lake	0	0	0	0	0	0	0	0	0	0	30	30
Ela	Lake	0	0	0	0	0	0	0	0	0	0	80	80
Vernon	Lake	0	0	0	0	0	0	0	0	0	0	155	155
Moraine/West Deerfi	elLake	0	0	0	0	0	0	0	0	0	0	160	160
Hampshire	Kane	0	0	0	0	0	0	0	0	0	0	15	15
Rutland	Kane	0	0	0	0	0	0	0	0	0	0	30	30
Dundee	Kane	0	0	0	0	0	0	0	0	0	0	155	155
Burlington	Kane	0	0	0	0	0	0	0	0	0	0	0	0
Plato	Kane	0	0	0	0	0	0	0	0	0	0	15	15
Elgin	Kane	0	0	5	5	0	0	35	35	0	0	155	155

		2030	Employment	Low Forecas	st	2030 E	mployment	Base Forecas	t	2030 E	mployment	High Foreca	st
MCD_NAME	CO_NAME	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total
Virgil	Kane	0	0	0	0	0	0	0	0	0	0	0	0
Campton/St. Charles	Kane	0	0	0	0	0	0	0	0	0	0	0	0
St. Charles/Campton	Kane	0	0	0	0	0	0	10	10	0	0	100	100
Kaneville	Kane	0	0	0	0	0	0	0	0	0	0	0	0
Blackberry	Kane	0	0	0	0	0	0	0	0	0	0	0	0
Geneva/Batavia	Kane	0	0	0	0	0	0	5	5	0	0	125	125
Big Rock	Kane	0	0	0	0	0	0	0	0	0	0	15	15
Sugar Grove	Kane	0	0	0	0	0	0	0	0	0	0	55	55
Aurora	Kane	0	0	5	5	0	0	15	15	0	0	140	140
Wayne	DuPage	0	0	0	0	0	0	35	35	0	0	140	140
Bloomingdal	DuPage	0	0	10	10	0	0	35	35	0	0	310	310
Addison	DuPage	0	0	105	105	0	0	138	138	0	0	305	305
Winfield	DuPage	0	0	0	0	0	0	10	10	0	0	220	220
Milton	DuPage	0	0	0	0	0	0	10	10	0	0	155	155
York	DuPage	0	0	165	165	0	25	200	225	0	0	750	750
Naperville	DuPage	0	0	35	35	0	0	303	303	0	200	735	935
Lisle	DuPage	0	0	105	105	0	0	304	304	0	350	365	715
Downers Grove	DuPage	0	0	10	10	0	0	35	35	0	350	390	740
Barrington	Cook	0	0	30	30	0	0	55	55	0	0	200	200
Palatine	Cook	0	0	30	30	0	0	55	55	0	0	180	180
Wheeling	Cook	0	0	0	0	0	0	55	55	0	0	300	300
Northfield	Cook	0	0	0	0	0	0	55	55	0	0	355	355
New Trier	Cook	0	0	0	0	0	0	0	0	0	0	45	45
Hanover	Cook	0	0	30	30	0	0	55	55	0	0	205	205
Schaumburg	Cook	0	0	180	180	0	0	240	240	0	0	655	655
Elk Grove	Cook	0	0	360	360	0	0	400	400	0	0	940	940
Maine	Cook	0	0	70	70	0	0	125	125	0	0	200	200
Niles	Cook	0	0	70	70	0	0	125	125	0	0	250	250
Evanston/Niles	Cook	0	0	30	30	0	0	55	55	0	0	180	180
Leyden/Norwood Par	k Cook	0	0	185	185	0	0	430	430	0	0	520	520
Proviso/Riverfores/Ri	ivCook	0	0	70	70	0	0	125	125	0	0	275	275
Oak Park/Berwyn/Cio	Cook	0	0	0	0	0	0	22	22	0	0	115	115
Lyons	Cook	0	0	30	30	0	0	55	55	0	0	175	175
Lemont	Cook	0	0	0	0	0	0	0	0	0	0	25	25
Palos	Cook	0	0	5	5	0	0	10	10	0	0	85	85
Worth/Calumet/Sticks	n Cook	0	0	40	40	0	0	70	70	0	0	515	515
Orland	Cook	0	0	250	250	0	0	395	395	0	0	480	480
Bremen	Cook	0	0	70	70	0	0	125	125	0	0	250	250
Thornton	Cook	0	0	280	280	0	0	500	500	0	0	535	535
Rich	Cook	0	1,555	1,275	2,830	0	1,840	2,260	4,100	0	2,488	2,320	4,808
Bloom	Cook	0	735	610	1,345	0	1,340	1,085	2,425	0	1,800	1,200	3,000
Chicago	Cook/DuPage	0	0	0	0	0	0	0	0	0	0	0	0
Chicago	Cook	0	0	390	390	0	0	695	695	0	0	705	705

		2030	Employmen	t Low Foreca	ıst	2030 I	Employment	t Base Forec	ast	2030 1	Employment	High Forec	ast
MCD_NAME	CO_NAME	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total
Chicago	Cook	0	0	80	80	0	0	140	140	0	0	215	215
Chicago	Cook	0	0	80	80	0	0	140	140	0	0	250	250
Chicago	Cook	0	955	770	1,725	0	1,745	1,370	3,115	0	2,355	1,370	3,725
Chicago	Cook	0	920	770	1,690	0	1,680	1,370	3,050	0	2,270	1,540	3,810
Chicago	Cook	0	0	320	320	0	0	570	570	0	0	555	555
Chicago	Cook	0	0	80	80	0	0	140	140	0	0	240	240
Chicago	Cook	0	0	610	610	0	133	1,085	1,218	0	180	1,085	1,265
Chicago	Cook	0	0	240	240	0	0	430	430	0	0	475	475
Wheatland	Will	0	0	400	400	0	0	750	750	0	0	760	760
Du Page	Will	0	0	345	345	0	0	625	625	0	0	650	650
Plainfield	Will	0	0	30	30	0	0	55	55	0	0	180	180
Lockport	Will	0	0	70	70	0	0	125	125	0	0	240	240
Homer	Will	0	0	70	70	0	0	125	125	0	0	200	200
Troy	Will	0	0	270	270	0	0	480	480	0	350	495	845
Joliet	Will	0	465	400	865	0	825	615	1,440	0	1,150	730	1,880
New Lenox	Will	0	265	235	500	0	390	470	860	0	570	500	1,070
Frankfort	Will	0	600	500	1,100	0	1,095	890	1,985	0	1,480	900	2,380
Channahon	Will	0	0	30	30	0	0	55	55	0	0	200	200
Jackson	Will	0	0	220	220	0	0	390	390	0	0	400	400
Manhattan	Will	0	0	0	0	0	0	22	22	0	0	100	100
Green Garde	Will	0	20	35	55	320	130	0	450	620	130	25	775
Monee	Will	0	760	630	1,390	640	1,610	1,120	3,370	1,115	2,175	1,680	4,970
Crete	Will	0	612	500	1,112	320	1,320	890	2,530	620	1,780	1,335	3,735
Wilmington	Will	0	0	0	0	0	0	0	0	0	0	15	15
Florence	Will	0	0	0	0	0	0	0	0	0	0	15	15
Wilton	Will	0	35	0	35	0	150	0	150	0	301	0	301
Peotone	Will	0	270	300	570	645	720	535	1,900	1,115	874	800	2,789
Will	Will	3,876	60	0	3,936	5,135	220	0	5,355	7,642	300	700	8,642
Washington	Will	0	185	80	265	675	340	140	1,155	1,240	460	300	2,000
Wesley/Custer/Reed	Will	0	0	0	0	0	0	0	0	0	0	20	20
Custer/Wesley	Will	0	0	0	0	0	0	0	0	0	0	0	0
Rockville	Kankakee	0	0	0	0	0	0	22	22	0	0	80	80
Manteno	Kankakee	0	245	230	475	0	450	410	860	0	610	550	1,160
Sumner	Kankakee	0	40	0	40	0	110	0	110	0	350	0	350
Yellowhead	Kankakee	0	0	0	0	0	0	22	22	0	0	90	90
Essex	Kankakee	0	0	0	0	0	0	0	0	0	0	0	0
Salina	Kankakee	0	0	0	0	0	0	0	0	0	0	0	0
Limestone	Kankakee	0	0	0	0	0	0	0	0	0	0	20	20
Bourbonnais	Kankakee	0	645	710	1,355	0	1,140	1,265	2,405	0	1,340	1,600	2,940
Ganeer/Aroma	Kankakee	0	0	0	0	0	0	0	0	0	0	65	65
Momence	Kankakee	0	0	0	0	0	0	0	0	0	0	45	45
Norton	Kankakee	0	0	0	0	0	0	0	0	0	0	0	0
rnot	nankakee	0	0	0	0	0	0	0	0	0	0	15	15

		2030 E	Employment	Low Forecast	t	2030 E	mployment	Base Forecas	t _	2030 E	mployment	High Forecas	st
MCD_NAME	CO_NAME	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Tota
Otto	Kankakee	0	0	0	0	0	0	0	0	0	0	0	(
Kankakee	Kankakee	0	0	70	70	0	0	125	125	0	200	230	430
Otto/Aroma	Kankakee	0	0	0	0	0	0	20	20	0	0	75	7
Aroma/Kankakee	Kankakee	0	0	0	0	0	0	0	0	0	0	15	1
Aroma	Kankakee	0	0	0	0	0	0	0	0	0	0	0	
St. Anne	Kankakee	0	0	0	0	0	0	0	0	0	0	15	1
Pembroke	Kankakee	0	0	0	0	0	0	0	0	0	0	10	1
North	Lake (IN)	0	0	230	230	0	0	410	410	0	450	415	86
Calumet	Lake (IN)	0	0	40	40	0	0	250	250	0	200	270	47
Calumet	Lake (IN)	0	0	70	70	0	0	250	250	0	200	250	45
North	Lake (IN)	0	195	260	455	0	355	465	820	0	480	560	1,04
Calumet	Lake (IN)	0	75	0	75	0	140	55	195	0	100	125	22
Hobart	Lake (IN)	0	0	0	0	0	0	0	0	0	200	55	25
St. John	Lake (IN)	0	245	340	585	0	450	605	1,055	0	610	750	1,36
Ross	Lake (IN)	0	196	290	486	0	360	515	875	0	490	620	1,11
Hanover	Lake (IN)	0	0	0	0	0	0	35	35	0	0	130	13
Center	Lake (IN)	0	0	0	0	0	0	55	55	0	0	155	15
Winfield	Lake (IN)	0	0	0	0	0	0	0	0	0	0	15	1
West Creek	Lake (IN)	0	0	0	0	0	0	0	0	0	0	35	3
Cedar Creek	Lake (IN)	0	0	0	0	0	0	0	0	0	0	30	3
Eagle Creek	Lake (IN)	0	0	0	0	0	0	0	0	0	0	0	
Portage	Porter	0	0	30	30	0	0	230	230	0	0	275	27
Westchester	Porter	0	0	0	0	0	0	55	55	0	0	110	11
Pine	Porter	0	0	0	0	0	0	0	0	0	0	25	2
Liberty	Porter	0	0	0	0	0	0	0	0	0	0	15	1
Jackson	Porter	0	0	0	0	0	0	0	0	0	0	15	1
Union	Porter	0	0	25	25	0	0	35	35	0	100	45	14
Center	Porter	0	185	175	360	0	340	320	660	0	360	675	1,03
Washington	Porter	0	0	0	0	0	0	55	55	0	0	250	25
Porter	Porter	0	0	0	0	0	0	0	0	0	0	10	10
worgan	Porter	0	0	0	0	0	0	0	0	0	0	10	10
Boone	Porter	0	0	0	0	0	0	0	0	0	0	25	2
Boone Pleasant	Porter Porter	0	0	0	0	0	0	0	0	0	0	25 20	

		2030	Employment	Low Foreca	st	2030 E	Imployment	Base Foreca	st	2030 E	mployment	High Foreca	st
MCD_NAME	CO_NAME	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total
Summary													
City of Chicago		0	1,875	3,340	5,215	0	3,558	5,940	9,498	0	4,805	6,435	11,240
North Cook		0	0	800	800	0	0	1,220	1,220	0	0	3,510	3,510
West Cook		0	0	285	285	0	0	632	632	0	0	1,085	1,085
South Cook		0	2,290	2,530	4,820	0	3,180	4,445	7,625	0	4,288	5,410	9,698
Cook County (Total)		0	4,165	6,955	11,120	0	6,738	12,237	18,975	0	9,093	16,440	25,533
DuPage County		0	0	430	430	0	25	1,070	1,095	0	900	3,370	4,270
Kane County		0	0	10	10	0	0	65	65	0	0	805	805
Lake County (IL)		0	0	0	0	0	0	0	0	0	0	1,140	1,140
McHenry County		0	0	0	0	0	0	0	0	0	0	430	430
Will County		3,876	3,272	4,115	11,263	7,735	6,800	7,287	21,822	12,352	9,570	10,245	32,167
Kankakee County		0	930	1,010	1,940	0	1,700	1,864	3,564	0	2,500	2,810	5,310
Lake County (IN)		0	711	1,230	1,941	0	1,305	2,640	3,945	0	2,730	3,410	6,140
Porter County		0	185	230	415	0	340	695	1,035	0	460	1,475	1,935
		0.050	0.042	10.000	05 110		10.000	05.050	<b>X0 X01</b>	10.050	07.075	40.105	
Grand Total		3,876	9,263	13,980	27,119	7,735	16,908	25,858	50,501	12,352	25,253	40,125	77,730

### Appendix Table 13 Forecast of Regional Households - 2010 Distribution by Township

MCD_NAME	CO_NAME	Low Forecast	<b>Base Forecast</b>	<b>High Forecast</b>
Chemung	McHenry	0	0	0
Alden	McHenry	0	0	0
Hebron	McHenry	0	0	0
<b>Richmond/Burton</b>	McHenry	0	0	0
Dunham	McHenry	0	0	0
Hartland	McHenry	0	0	0
Greenwood	McHenry	0	0	0
McHenry	McHenry	0	0	0
Marengo	McHenry	0	0	0
Seneca	McHenry	0	0	0
Dorr	McHenry	0	1	1
Nunda	McHenry	0	1	2
Riley	McHenry	0	0	0
Coral	McHenry	0	0	0
Grafton	McHenry	0	0	0
Algonquin	McHenry	0	1	2
Antioch/Lake V	Lake	0	0	0
Lake V/Antioch	Lake	0	0	0
Newport	Lake	0	0	0
Benton-Zion	Lake	0	0	0
Grant/Lake V	Lake	0	0	0
Lake V/Avon	Lake	0	0	0
Warren	Lake	0	1	3
Waukegan	Lake	0	1	1
Wauconda	Lake	0	0	0
Fremont	Lake	0	2	4
Libertyvill	Lake	0	1	2
Shields	Lake	0	1	2
Cuba	Lake	0	0	0
Ela	Lake	0	1	2
Vernon	Lake	0	1	2
Moraine/West Deerfield	Lake	0	1	2
Hampshire	Kane	0	0	0
Rutland	Kane	0	0	0
Dundee	Kane	0	2	3
Burlington	Kane	0	0	1
Plato	Kane	0	0	0
Elgin	Kane	1	4	7
Virgil	Kane	0	0	0
Campton/St. Charles	Kane	0	0	0
St. Charles/Campton	Kane	0	2	3
Kaneville	Kane	0	0	0
Blackberry	Kane	0	0	0

MCD_NAME	CO_NAME	Low Forecast	<b>Base Forecast</b>	High Forecast
Geneva/Batavia	Kane	0	2	4
Big Rock	Kane	0	0	0
Sugar Grove	Kane	0	4	10
Aurora	Kane	0	2	4
Wayne	DuPage	0	1	1
Bloomingdal	DuPage	0	0	1
Addison	DuPage	0	0	1
Winfield	DuPage	0	1	1
Milton	DuPage	0	1	1
York	DuPage	0	1	1
Naperville	DuPage	0	1	2
Lisle	DuPage	0	1	2
Downers Grove	DuPage	0	2	3
Barrington	Cook	0	0	0
Palatine	Cook	0	1	1
Wheeling	Cook	0	1	2
Northfield	Cook	0	1	2
New Trier	Cook	0	0	0
Hanover	Cook	0	1	1
Schaumburg	Cook	0	1	2
Elk Grove	Cook	0	1	2
Maine	Cook	0	1	1
Niles	Cook	0	1	2
Evanston/Niles	Cook	0	1	1
Leyden/Norwood Park	Cook	0	1	1
Proviso/Riverfores/Rivers	i Cook	0	1	1
Oak Park/Berwyn/Cicero	Cook	1	1	1
Lyons	Cook	0	1	1
Lemont	Cook	1	8	15
Palos	Cook	0	3	5
Worth/Calumet/Stickney	Cook	1	6	11
Orland	Cook	2	13	22
Bremen	Cook	6	26	42
Thornton	Cook	1	9	16
Rich	Cook	10	75	126
Bloom	Cook	10	50	85
Chicago	Cook/DuPage	0	0	0
Chicago	Cook	2	12	21
Chicago	Cook	1	6	11
Chicago	Cook	2	11	20
Chicago	Cook	5	37	65
Chicago	Cook	2	12	20
Chicago	Cook	4	27	47
Chicago	Cook	1	6	10
Chicago	Cook	6	41	72
Chicago	Cook	1	7	12
Wheatland	Will	3	24	42

MCD_NAME	CO_NAME	Low Forecast	<b>Base Forecast</b>	<b>High Forecast</b>
Du Page	Will	3	26	44
Plainfield	Will	3	20	34
Lockport	Will	1	9	16
Homer	Will	3	23	40
Troy	Will	2	18	32
Joliet	Will	1	1	2
New Lenox	Will	3	21	37
Frankfort	Will	3	22	38
Channahon	Will	1	7	13
Jackson	Will	1	8	13
Manhattan	Will	3	23	40
Green Garde	Will	5	39	67
Monee	Will	7	49	74
Crete	Will	3	24	47
Wilmington	Will	0	3	5
Florence	Will	1	5	8
Wilton	Will	0	3	5
Peotone	Will	1	15	34
Will	Will	1	10	17
Washington	Will	2	13	23
Wesley/Custer/Reed	Will	0	3	5
Custer/Wesley	Will	0	1	2
Rockville	Kankakee	0	0	0
Manteno	Kankakee	1	4	6
Sumner	Kankakee	0	1	2
Yellowhead	Kankakee	0	2	3
Essex	Kankakee	0	0	0
Salina	Kankakee	0	0	0
Limestone	Kankakee	0	0	0
Bourbonnais	Kankakee	1	4	7
Ganeer/Aroma	Kankakee	0	0	1
Momence	Kankakee	0	1	1
Norton	Kankakee	0	0	0
Pilot	Kankakee	0	0	0
Otto	Kankakee	0	0	0
Kankakee	Kankakee	0	3	5
Otto/Aroma	Kankakee	0	1	3
Aroma/Kankakee	Kankakee	0	1	1
Aroma	Kankakee	0	0	0
St. Anne	Kankakee	0	0	0
Pembroke	Kankakee	0	0	0
North	Lake (IN)	0	1	3
Calumet	Lake (IN)	0	2	3
Calumet	Lake (IN)	0	1	2
North	Lake (IN)	0	3	5
Calumet	Lake (IN)	0	2	3
Hobart	Lake (IN)	0	1	2

MCD_NAME	CO_NAME	Low Forecast	<b>Base Forecast</b>	High Forecast
St. John	Lake (IN)	1	7	13
Ross	Lake (IN)	0	1	2
Hanover	Lake (IN)	0	1	2
Center	Lake (IN)	0	1	2
Winfield	Lake (IN)	0	0	1
West Creek	Lake (IN)	0	0	0
Cedar Creek	Lake (IN)	0	0	0
Eagle Creek	Lake (IN)	0	0	0
Portage	Porter	0	0	0
Westchester	Porter	0	0	0
Pine	Porter	0	0	0
Liberty	Porter	0	0	0
Jackson	Porter	0	0	0
Union	Porter	0	0	0
Center	Porter	0	0	0
Washington	Porter	0	0	0
Porter	Porter	0	0	0
Morgan	Porter	0	0	0
Boone	Porter	0	0	0
Pleasant	Porter	0	0	0
Summary				
City of Chicago		24	159	278
North Cook		0	9	14
West Cook		1	4	4
South Cook		31	190	322
Cook County (Total)		56	362	618
DuPage County		0	8	13
Kane County		1	16	32
Lake County (IL)		0	9	18
McHenry County		0	3	5
Will County		47	367	638
Kankakee County		2	17	29
Lake County (IN)		1	20	38
Porter County		0	0	0
Grand Total		107	802	1,391

### Appendix Table 14 Forecast of Regional Households - 2015 Distribution by Township

MCD_NAME	CO_NAME	Low Forecast	<b>Base Forecast</b>	<b>High Forecast</b>
Chemung	McHenry	0	0	0
Alden	McHenry	0	0	0
Hebron	McHenry	0	0	0
<b>Richmond/Burton</b>	McHenry	0	5	11
Dunham	McHenry	0	0	0
Hartland	McHenry	0	0	0
Greenwood	McHenry	0	0	2
McHenry	McHenry	5	10	15
Marengo	McHenry	0	0	0
Seneca	McHenry	0	0	0
Dorr	McHenry	3	5	8
Nunda	McHenry	6	12	16
Riley	McHenry	0	0	0
Coral	McHenry	0	0	0
Grafton	McHenry	0	5	14
Algonquin	McHenry	10	14	19
Antioch/Lake V	Lake	2	3	5
Lake V/Antioch	Lake	5	7	10
Newport	Lake	5	8	11
Benton-Zion	Lake	8	12	17
Grant/Lake V	Lake	7	12	17
Lake V/Avon	Lake	7	12	17
Warren	Lake	6	9	15
Waukegan	Lake	3	5	8
Wauconda	Lake	7	11	17
Fremont	Lake	7	14	20
Libertyvill	Lake	4	7	10
Shields	Lake	2	4	6
Cuba	Lake	1	1	2
Ela	Lake	4	7	10
Vernon	Lake	4	7	11
<b>Moraine/West Deerfield</b>	Lake	1	3	5
Hampshire	Kane	0	0	0
Rutland	Kane	0	4	21
Dundee	Kane	7	11	24
Burlington	Kane	0	0	0
Plato	Kane	0	5	22
Elgin	Kane	10	17	37
Virgil	Kane	0	0	0
Campton/St. Charles	Kane	0	0	7
St. Charles/Campton	Kane	4	8	17
Kaneville	Kane	0	0	0
Blackberry	Kane	0	1	3

MCD_NAME	CO_NAME	Low Forecast	<b>Base Forecast</b>	High Forecast
Geneva/Batavia	Kane	5	9	21
Big Rock	Kane	0	0	0
Sugar Grove	Kane	0	9	18
Aurora	Kane	5	8	19
Wayne	DuPage	2	3	5
Bloomingdal	DuPage	1	2	3
Addison	DuPage	1	1	2
Winfield	DuPage	2	3	5
Milton	DuPage	2	3	5
York	DuPage	2	3	5
Naperville	DuPage	4	7	10
Lisle	DuPage	3	5	8
Downers Grove	DuPage	6	9	14
Barrington	Cook	2	2	3
Palatine	Cook	2	4	6
Wheeling	Cook	3	5	7
Northfield	Cook	3	5	7
New Trier	Cook	1	1	1
Hanover	Cook	7	13	35
Schaumburg	Cook	3	5	6
Elk Grove	Cook	1	3	4
Maine	Cook	2	3	4
Niles	Cook	3	5	7
Evanston/Niles	Cook	2	3	4
Leyden/Norwood Park	Cook	1	2	2
Proviso/Riverfores/Rivers	i Cook	1	2	2
Oak Park/Berwyn/Cicero	Cook	1	2	2
Lyons	Cook	1	2	2
Lemont	Cook	38	60	79
Palos	Cook	8	14	19
Worth/Calumet/Stickney	Cook	18	31	41
Orland	Cook	37	63	85
Bremen	Cook	63	107	143
Thornton	Cook	26	44	59
Rich	Cook	220	357	475
Bloom	Cook	119	205	279
Chicago	Cook/DuPage	0	0	0
Chicago	Cook	32	54	80
Chicago	Cook	16	27	40
Chicago	Cook	29	49	73
Chicago	Cook	95	163	242
Chicago	Cook	30	51	75
Chicago	Cook	69	117	174
Chicago	Cook	15	26	39
Chicago	Cook	106	181	268
Chicago	Cook	18	30	45
Wheatland	Will	45	58	65

MCD_NAME	CO_NAME	Low Forecast	<b>Base Forecast</b>	High Forecast
Du Page	Will	69	118	175
Plainfield	Will	63	96	139
Lockport	Will	25	43	64
Homer	Will	63	107	159
Troy	Will	49	84	125
Joliet	Will	5	6	9
New Lenox	Will	57	98	145
Frankfort	Will	59	101	150
Channahon	Will	20	34	51
Jackson	Will	20	35	51
Manhattan	Will	62	106	157
Green Garde	Will	105	179	265
Monee	Will	134	212	306
Crete	Will	52	94	145
Wilmington	Will	8	14	21
Florence	Will	13	22	33
Wilton	Will	8	14	21
Peotone	Will	45	103	179
Will	Will	27	45	67
Washington	Will	35	60	89
Wesley/Custer/Reed	Will	6	10	15
Custer/Wesley	Will	8	10	15
Rockville	Kankakee	0	0	0
Manteno	Kankakee	24	36	46
Sumner	Kankakee	2	8	12
Yellowhead	Kankakee	7	11	17
Essex	Kankakee	0	0	0
Salina	Kankakee	0	0	0
Limestone	Kankakee	1	1	2
Bourbonnais	Kankakee	20	30	45
Ganeer/Aroma	Kankakee	2	3	5
Momence	Kankakee	3	5	8
Norton	Kankakee	0	0	0
Pilot	Kankakee	0	0	0
Otto	Kankakee	0	0	0
Kankakee	Kankakee	11	19	28
Otto/Aroma	Kankakee	4	6	8
Aroma/Kankakee	Kankakee	3	5	7
Aroma	Kankakee	1	1	2
St. Anne	Kankakee	0	1	1
Pembroke	Kankakee	0	4	6
North	Lake (IN)	6	11	16
Calumet	Lake (IN)	8	13	20
Calumet	Lake (IN)	6	10	15
North	Lake (IN)	12	21	31
Calumet	Lake (IN)	7	12	18
Hobart	Lake (IN)	5	8	12

MCD_NAME	CO_NAME	Low Forecast	<b>Base Forecast</b>	High Forecast
St. John	Lake (IN)	14	44	103
Ross	Lake (IN)	6	10	14
Hanover	Lake (IN)	1	3	5
Center	Lake (IN)	6	10	14
Winfield	Lake (IN)	2	3	5
West Creek	Lake (IN)	0	1	1
Cedar Creek	Lake (IN)	1	1	2
Eagle Creek	Lake (IN)	0	1	1
Portage	Porter	6	10	16
Westchester	Porter	3	5	8
Pine	Porter	0	1	1
Liberty	Porter	2	3	5
Jackson	Porter	1	2	2
Union	Porter	2	4	6
Center	Porter	5	8	12
Washington	Porter	1	2	3
Porter	Porter	1	2	2
Morgan	Porter	0	0	1
Boone	Porter	0	1	1
Pleasant	Porter	0	0	1
Summary				
City of Chicago		410	698	1,036
North Cook		29	49	84
West Cook		4	8	8
South Cook		529	881	1,180
Cook County (Total)		972	1,636	2,308
DuPage County		23	36	57
Kane County		31	72	189
Lake County (IL)		73	122	181
McHenry County		24	51	85
Will County		978	1,649	2,446
Kankakee County		78	130	187
Lake County (IN)		74	148	257
Porter County		21	38	58
Grand Total		2,274	3,882	5,768

### Appendix Table 15 Forecast of Regional Households - 2030 Distribution by Township

MCD_NAME	CO_NAME	Low Forecast	<b>Base Forecast</b>	High Forecast
Chemung	McHenry	11	20	30
Alden	McHenry	16	31	45
Hebron	McHenry	11	20	30
<b>Richmond/Burton</b>	McHenry	86	166	248
Dunham	McHenry	5	10	14
Hartland	McHenry	7	14	20
Greenwood	McHenry	29	53	80
McHenry	McHenry	112	212	311
Marengo	McHenry	7	14	21
Seneca	McHenry	11	20	29
Dorr	McHenry	29	54	79
Nunda	McHenry	91	172	250
Riley	McHenry	8	15	23
Coral	McHenry	17	32	47
Grafton	McHenry	107	207	309
Algonquin	McHenry	60	108	157
Antioch/Lake V	Lake	16	29	47
Lake V/Antioch	Lake	77	144	235
Newport	Lake	38	70	113
Benton-Zion	Lake	58	106	172
Grant/Lake V	Lake	52	96	155
Lake V/Avon	Lake	82	153	249
Warren	Lake	43	80	131
Waukegan	Lake	22	41	66
Wauconda	Lake	69	128	209
Fremont	Lake	59	113	183
Libertyvill	Lake	30	55	89
Shields	Lake	13	25	40
Cuba	Lake	5	10	16
Ela	Lake	29	55	89
Vernon	Lake	30	56	91
Moraine/West Deerfield	Lake	10	20	31
Hampshire	Kane	31	60	92
Rutland	Kane	101	194	312
Dundee	Kane	65	120	193
Burlington	Kane	30	57	88
Plato	Kane	100	194	312
Elgin	Kane	94	174	280
Virgil	Kane	4	8	13
Campton/St. Charles	Kane	33	61	102
St. Charles/Campton	Kane	42	79	126
Kaneville	Kane	1	2	3
Blackberry	Kane	41	79	123

MCD_NAME	CO_NAME	Low Forecast	<b>Base Forecast</b>	High Forecast
Geneva/Batavia	Kane	52	98	156
Big Rock	Kane	1	2	3
Sugar Grove	Kane	164	316	490
Aurora	Kane	47	88	140
Wayne	DuPage	37	70	84
Bloomingdal	DuPage	26	48	57
Addison	DuPage	17	31	38
Winfield	DuPage	39	73	87
Milton	DuPage	37	69	83
York	DuPage	39	72	86
Naperville	DuPage	75	140	168
Lisle	DuPage	58	108	129
Downers Grove	DuPage	106	197	236
Barrington	Cook	15	27	53
Palatine	Cook	22	41	79
Wheeling	Cook	27	51	99
Northfield	Cook	27	51	99
New Trier	Cook	5	10	19
Hanover	Cook	51	95	199
Schaumburg	Cook	13	24	43
Elk Grove	Cook	10	19	36
Maine	Cook	8	15	28
Niles	Cook	27	50	96
Evanston/Niles	Cook	16	30	57
Leyden/Norwood Park	Cook	34	63	63
Proviso/Riverfores/Rivers	i Cook	70	130	130
Oak Park/Berwyn/Cicero	Cook	12	23	23
Lyons	Cook	106	197	197
Lemont	Cook	131	209	318
Palos	Cook	28	46	69
Worth/Calumet/Stickney	Cook	62	102	155
Orland	Cook	128	208	317
Bremen	Cook	210	343	520
Thornton	Cook	89	145	221
Rich	Cook	713	1,145	1,735
Bloom	Cook	402	657	1,000
Chicago	Cook/DuPage	0	0	0
Chicago	Cook	109	203	318
Chicago	Cook	55	102	160
Chicago	Cook	100	185	291
Chicago	Cook	329	612	961
Chicago	Cook	103	191	300
Chicago	Cook	236	440	690
Chicago	Cook	53	99	155
Chicago	Cook	365	679	1,066
Chicago	Cook	61	114	179
Wheatland	Will	133	334	466

MCD_NAME	CO_NAME	Low Forecast	<b>Base Forecast</b>	<b>High Forecast</b>
Du Page	Will	247	459	705
Plainfield	Will	200	358	547
Lockport	Will	91	169	259
Homer	Will	224	416	639
Troy	Will	176	328	503
Joliet	Will	14	25	38
New Lenox	Will	205	381	585
Frankfort	Will	212	394	606
Channahon	Will	72	134	206
Jackson	Will	72	135	207
Manhattan	Will	221	411	632
Green Garde	Will	374	696	1,069
Monee	Will	366	656	1,001
Crete	Will	185	350	544
Wilmington	Will	30	56	87
Florence	Will	46	86	133
Wilton	Will	30	55	85
Peotone	Will	158	214	378
Will	Will	95	177	271
Washington	Will	125	233	358
Wesley/Custer/Reed	Will	28	51	79
Custer/Wesley	Will	17	28	43
Rockville	Kankakee	1	1	2
Manteno	Kankakee	153	277	408
Sumner	Kankakee	32	70	121
Yellowhead	Kankakee	64	119	178
Essex	Kankakee	6	11	16
Salina	Kankakee	1	2	3
Limestone	Kankakee	8	14	21
Bourbonnais	Kankakee	180	326	471
Ganeer/Aroma	Kankakee	18	34	51
Momence	Kankakee	30	56	84
Norton	Kankakee	1	2	3
Pilot	Kankakee	5	10	15
Otto	Kankakee	1	2	3
Kankakee	Kankakee	106	197	295
Otto/Aroma	Kankakee	8	12	18
Aroma/Kankakee	Kankakee	25	47	70
Aroma	Kankakee	8	15	23
St. Anne	Kankakee	5	8	13
Pembroke	Kankakee	8	20	29
North	Lake (IN)	50	112	196
Calumet	Lake (IN)	62	138	242
Calumet	Lake (IN)	46	103	181
North	Lake (IN)	97	216	378
Calumet	Lake (IN)	58	129	226
Hobart	Lake (IN)	39	87	153

MCD_NAME	CO_NAME	Low Forecast	<b>Base Forecast</b>	High Forecast
St. John	Lake (IN)	71	174	335
Ross	Lake (IN)	45	101	176
Hanover	Lake (IN)	9	22	39
Center	Lake (IN)	45	100	176
Winfield	Lake (IN)	15	34	60
West Creek	Lake (IN)	2	5	9
Cedar Creek	Lake (IN)	5	11	20
Eagle Creek	Lake (IN)	4	8	14
Portage	Porter	60	166	292
Westchester	Porter	30	85	149
Pine	Porter	4	12	20
Liberty	Porter	17	49	85
Jackson	Porter	9	26	45
Union	Porter	21	60	105
Center	Porter	47	130	228
Washington	Porter	10	28	49
Porter	Porter	9	25	43
Morgan	Porter	3	7	12
Boone	Porter	5	13	23
Pleasant	Porter	2	5	9
Summary				
City of Chicago		1,411	2,625	4,120
North Cook		221	413	808
West Cook		222	413	413
South Cook		1,763	2,855	4,335
Cook County (Total)		3,617	6,306	9,676
DuPage County		434	808	968
Kane County		806	1,532	2,433
Lake County (IL)		633	1,181	1,916
McHenry County		607	1,148	1,693
Will County		3,321	6,146	9,441
Kankakee County		660	1,223	1,824
Lake County (IN)		548	1,240	2,205
Porter County		217	606	1,060
Grand Total		10,843	20,190	31,216

# Appendix Table 16 Forecast of Population Distribution by Township - 2010

MCD_NAME	CO_NAME	Low Forecast	<b>Base Forecast</b>	High Forecast
Chemung	McHenry	0	0	0
Alden	McHenry	0	0	0
Hebron	McHenry	0	0	0
<b>Richmond/Burton</b>	McHenry	0	0	0
Dunham	McHenry	0	0	0
Hartland	McHenry	0	0	0
Greenwood	McHenry	0	0	0
McHenry	McHenry	0	0	0
Marengo	McHenry	0	0	0
Seneca	McHenry	0	0	0
Dorr	McHenry	0	3	3
Nunda	McHenry	0	3	6
Riley	McHenry	0	0	0
Coral	McHenry	0	0	0
Grafton	McHenry	0	0	0
Algonquin	McHenry	0	3	6
Antioch/Lake V	Lake	0	0	0
Lake V/Antioch	Lake	0	0	0
Newport	Lake	0	0	0
Benton-Zion	Lake	0	0	0
Grant/Lake V	Lake	0	0	0
Lake V/Avon	Lake	0	0	0
Warren	Lake	0	3	8
Waukegan	Lake	0	3	3
Wauconda	Lake	0	0	0
Fremont	Lake	0	6	12
Libertyvill	Lake	0	3	6
Shields	Lake	0	4	8
Cuba	Lake	0	0	0
Ela	Lake	0	3	6
Vernon	Lake	0	3	6
Moraine/West Deerfield	Lake	0	3	6
Hampshire	Kane	0	0	0
Rutland	Kane	0	0	0
Dundee	Kane	0	6	9
Burlington	Kane	0	0	0
Plato	Kane	0	0	0
Elgin	Kane	3	12	21
Virgil	Kane	0	0	0
Campton/St. Charles	Kane	0	0	0
St. Charles/Campton	Kane	0	6	9

MCD_NAME	CO_NAME	Low Forecast	<b>Base Forecast</b>	<b>High Forecast</b>
Kaneville	Kane	0	0	0
Blackberry	Kane	0	0	0
Geneva/Batavia	Kane	0	6	11
Big Rock	Kane	0	0	0
Sugar Grove	Kane	0	12	30
Aurora	Kane	0	6	12
Wayne	DuPage	0	3	3
Bloomingdal	DuPage	0	0	3
Addison	DuPage	0	0	3
Winfield	DuPage	0	3	3
Milton	DuPage	0	3	3
York	DuPage	0	3	3
Naperville	DuPage	0	3	5
Lisle	DuPage	0	3	5
<b>Downers Grove</b>	DuPage	0	5	8
Barrington	Cook	0	0	0
Palatine	Cook	0	3	3
Wheeling	Cook	0	3	5
Northfield	Cook	0	3	5
New Trier	Cook	0	0	0
Hanover	Cook	0	3	3
Schaumburg	Cook	0	3	5
Elk Grove	Cook	0	3	5
Maine	Cook	0	3	3
Niles	Cook	0	3	5
Evanston/Niles	Cook	0	3	3
Leyden/Norwood Park	Cook	0	3	3
Proviso/Riverfores/Rivers	s Cook	0	3	3
Oak Park/Berwyn/Cicero	Cook	3	3	3
Lyons	Cook	0	3	3
Lemont	Cook	3	24	46
Palos	Cook	0	8	13
Worth/Calumet/Stickney	Cook	3	16	29
Orland	Cook	6	37	63
Bremen	Cook	17	74	119
Thornton	Cook	3	25	44
Rich	Cook	27	199	335
Bloom	Cook	29	143	244
Chicago	Cook/DuPage	0	0	0
Chicago	Cook	6	35	62
Chicago	Cook	2	12	22
Chicago	Cook	7	40	73
Chicago	Cook	10	72	127
Chicago	Cook	3	21	35
Chicago	Cook	11	75	130

MCD_NAME	CO_NAME	Low Forecast	<b>Base Forecast</b>	High Forecast
Chicago	Cook	3	20	33
Chicago	Cook	17	114	200
Chicago	Cook	3	21	36
Wheatland	Will	10	81	142
Du Page	Will	9	81	137
Plainfield	Will	9	62	106
Lockport	Will	3	27	48
Homer	Will	10	74	128
Troy	Will	6	52	93
Joliet	Will	3	3	6
New Lenox	Will	9	65	114
Frankfort	Will	9	68	117
Channahon	Will	3	23	42
Jackson	Will	3	23	37
Manhattan	Will	9	70	121
Green Garde	Will	16	128	220
Monee	Will	20	139	210
Crete	Will	8	64	126
Wilmington	Will	0	8	13
Florence	Will	3	15	25
Wilton	Will	0	9	15
Peotone	Will	3	43	97
Will	Will	3	29	50
Washington	Will	6	37	66
Wesley/Custer/Reed	Will	0	8	14
Custer/Wesley	Will	0	3	6
Rockville	Kankakee	0	0	0
Manteno	Kankakee	2	10	15
Sumner	Kankakee	0	3	6
Yellowhead	Kankakee	0	5	8
Essex	Kankakee	0	0	0
Salina	Kankakee	0	0	0
Limestone	Kankakee	0	0	0
Bourbonnais	Kankakee	3	11	18
Ganeer/Aroma	Kankakee	0	0	3
Momence	Kankakee	0	3	3
Norton	Kankakee	0	0	0
Pilot	Kankakee	0	0	0
Otto	Kankakee	0	0	0
Kankakee	Kankakee	0	8	13
Otto/Aroma	Kankakee	0	3	8
Aroma/Kankakee	Kankakee	0	3	3
Aroma	Kankakee	0	0	0
St. Anne	Kankakee	0	0	0
Pembroke	Kankakee	0	0	0

MCD_NAME	CO_NAME	Low Forecast	<b>Base Forecast</b>	High Forecast
North	Lake (IN)	0	3	8
Calumet	Lake (IN)	0	5	7
Calumet	Lake (IN)	0	2	5
North	Lake (IN)	0	8	13
Calumet	Lake (IN)	0	5	8
Hobart	Lake (IN)	0	3	5
St. John	Lake (IN)	3	20	38
Ross	Lake (IN)	0	3	5
Hanover	Lake (IN)	0	3	6
Center	Lake (IN)	0	3	6
Winfield	Lake (IN)	0	0	3
West Creek	Lake (IN)	0	0	0
Cedar Creek	Lake (IN)	0	0	0
Eagle Creek	Lake (IN)	0	0	0
Portage	Porter	0	0	0
Westchester	Porter	0	0	0
Pine	Porter	0	0	0
Liberty	Porter	0	0	0
Jackson	Porter	0	0	0
Union	Porter	0	0	0
Center	Porter	0	0	0
Washington	Porter	0	0	0
Porter	Porter	0	0	0
Morgan	Porter	0	0	0
Boone	Porter	0	0	0
Pleasant	Porter	0	0	0
Summary				
City of Chicago		62	410	717
North Cook		0	24	37
West Cook		3	11	11
South Cook		86	527	893
Cook County (Total)		152	971	1,658
DuPage County		0	22	36
Kane County		3	47	92
Lake County (IL)		0	28	55
McHenry County		0	9	14
Will County		143	1,113	1,933
Kankakee County		5	44	76
Lake County (IN)		3	55	104
Porter County		0	0	0
Grand Total		305	2,289	3,968

# Appendix Table 17 Distribution of Population by Township - 2015

MCD_NAME	CO_NAME	Low Forecast	<b>Base Forecast</b>	High Forecast
Chemung	McHenry	0	0	0
Alden	McHenry	0	0	0
Hebron	McHenry	0	0	0
<b>Richmond/Burton</b>	McHenry	0	15	33
Dunham	McHenry	0	0	0
Hartland	McHenry	0	0	0
Greenwood	McHenry	0	0	6
McHenry	McHenry	14	28	42
Marengo	McHenry	0	0	0
Seneca	McHenry	0	0	0
Dorr	McHenry	8	14	22
Nunda	McHenry	17	35	47
Riley	McHenry	0	0	0
Coral	McHenry	0	0	0
Grafton	McHenry	0	15	43
Algonquin	McHenry	29	40	55
Antioch/Lake V	Lake	5	7	12
Lake V/Antioch	Lake	14	20	28
Newport	Lake	15	23	32
Benton-Zion	Lake	23	35	49
Grant/Lake V	Lake	19	32	45
Lake V/Avon	Lake	21	36	51
Warren	Lake	16	24	40
Waukegan	Lake	9	16	25
Wauconda	Lake	20	31	48
Fremont	Lake	21	41	59
Libertyvill	Lake	11	19	27
Shields	Lake	8	17	25
Cuba	Lake	3	3	5
Ela	Lake	12	22	31
Vernon	Lake	11	20	31
Moraine/West Deerfield	Lake	3	9	14
Hampshire	Kane	0	0	0
Rutland	Kane	0	11	56
Dundee	Kane	22	34	74
Burlington	Kane	0	0	0
Plato	Kane	0	15	68
Elgin	Kane	29	50	109
Virgil	Kane	0	0	0
Campton/St. Charles	Kane	0	0	23
St. Charles/Campton	Kane	11	23	48
Kaneville	Kane	0	0	0

MCD_NAME	CO_NAME	Low Forecast	<b>Base Forecast</b>	High Forecast
Blackberry	Kane	0	3	9
Geneva/Batavia	Kane	14	26	60
Big Rock	Kane	0	0	0
Sugar Grove	Kane	0	27	54
Aurora	Kane	15	24	57
Wayne	DuPage	6	10	16
Bloomingdal	DuPage	3	6	9
Addison	DuPage	3	3	6
Winfield	DuPage	6	9	16
Milton	DuPage	6	9	14
York	DuPage	5	8	13
Naperville	DuPage	10	18	26
Lisle	DuPage	8	14	22
<b>Downers Grove</b>	DuPage	16	23	37
Barrington	Cook	6	6	8
Palatine	Cook	5	10	16
Wheeling	Cook	8	13	18
Northfield	Cook	8	13	19
New Trier	Cook	3	3	3
Hanover	Cook	20	38	102
Schaumburg	Cook	8	13	16
Elk Grove	Cook	2	7	10
Maine	Cook	5	8	10
Niles	Cook	8	14	19
Evanston/Niles	Cook	5	8	10
Leyden/Norwood Park	Cook	3	5	5
Proviso/Riverfores/Rivers	s Cook	3	5	5
Oak Park/Berwyn/Cicero	Cook	3	6	6
Lyons	Cook	3	5	5
Lemont	Cook	116	184	242
Palos	Cook	21	36	49
Worth/Calumet/Stickney	Cook	48	83	110
Orland	Cook	107	182	246
Bremen	Cook	178	302	404
Thornton	Cook	71	120	161
Rich	Cook	583	946	1,258
Bloom	Cook	340	585	796
Chicago	Cook/DuPage	0	0	0
Chicago	Cook	94	159	236
Chicago	Cook	32	55	81
Chicago	Cook	104	176	263
Chicago	Cook	184	316	469
Chicago	Cook	51	87	127
Chicago	Cook	188	318	473
Chicago	Cook	50	87	131

MCD_NAME	CO_NAME	Low Forecast	<b>Base Forecast</b>	High Forecast
Chicago	Cook	292	499	738
Chicago	Cook	54	91	136
Wheatland	Will	151	195	218
Du Page	Will	213	365	541
Plainfield	Will	196	299	433
Lockport	Will	75	129	192
Homer	Will	203	344	511
Troy	Will	145	249	371
Joliet	Will	14	17	25
New Lenox	Will	177	304	450
Frankfort	Will	181	310	460
Channahon	Will	65	110	165
Jackson	Will	59	104	151
Manhattan	Will	187	320	473
Green Garde	Will	352	600	889
Monee	Will	385	610	880
Crete	Will	142	256	395
Wilmington	Will	22	39	59
Florence	Will	41	70	104
Wilton	Will	23	41	61
Peotone	Will	131	300	522
Will	Will	79	132	196
Washington	Will	102	175	259
Wesley/Custer/Reed	Will	17	28	42
Custer/Wesley	Will	25	31	46
Rockville	Kankakee	0	0	0
Manteno	Kankakee	61	91	116
Sumner	Kankakee	6	23	34
Yellowhead	Kankakee	19	30	46
Essex	Kankakee	0	0	0
Salina	Kankakee	0	0	0
Limestone	Kankakee	3	3	6
Bourbonnais	Kankakee	53	80	120
Ganeer/Aroma	Kankakee	5	8	13
Momence	Kankakee	8	13	21
Norton	Kankakee	0	0	0
Pilot	Kankakee	0	0	0
Otto	Kankakee	0	0	0
Kankakee	Kankakee	29	50	74
Otto/Aroma	Kankakee	10	16	21
Aroma/Kankakee	Kankakee	8	13	18
Aroma	Kankakee	4	4	7
St. Anne	Kankakee	0	3	3
Pembroke	Kankakee	0	11	16
North	Lake (IN)	16	29	42

MCD_NAME	CO_NAME	Low Forecast	<b>Base Forecast</b>	High Forecast
Calumet	Lake (IN)	20	32	49
Calumet	Lake (IN)	14	24	36
North	Lake (IN)	31	55	81
Calumet	Lake (IN)	19	32	49
Hobart	Lake (IN)	13	21	32
St. John	Lake (IN)	41	128	300
Ross	Lake (IN)	16	27	37
Hanover	Lake (IN)	3	9	14
Center	Lake (IN)	17	28	39
Winfield	Lake (IN)	6	9	16
West Creek	Lake (IN)	0	3	3
Cedar Creek	Lake (IN)	3	3	6
Eagle Creek	Lake (IN)	0	3	3
Portage	Porter	16	27	43
Westchester	Porter	8	13	20
Pine	Porter	0	2	2
Liberty	Porter	5	8	13
Jackson	Porter	3	6	6
Union	Porter	6	12	18
Center	Porter	13	20	30
Washington	Porter	3	6	9
Porter	Porter	3	6	6
Morgan	Porter	0	0	3
Boone	Porter	0	3	3
Pleasant	Porter	0	0	3
Summary				
City of Chicago		1,051	1,787	2,654
North Cook		78	132	231
West Cook		11	22	22
South Cook		1,463	2,438	3,266
Cook County (Total)		2,603	4,379	6,172
DuPage County		64	99	158
Kane County		92	212	557
Lake County (IL)		211	354	524
McHenry County		68	147	247
Will County		2,985	5,025	7,443
Kankakee County		205	343	495
Lake County (IN)		199	402	706
Porter County		57	102	156
Grand Total		6,483	11,064	16,458

# Appendix Table 18 Distribution of Population by Township - 2030

MCD_NAME	CO_NAME	Low Forecast	<b>Base Forecast</b>	High Forecast
Chemung	McHenry	33	59	89
Alden	McHenry	47	91	133
Hebron	McHenry	29	53	80
<b>Richmond/Burton</b>	McHenry	255	491	734
Dunham	McHenry	17	33	46
Hartland	McHenry	22	43	62
Greenwood	McHenry	85	155	234
McHenry	McHenry	316	599	878
Marengo	McHenry	20	40	60
Seneca	McHenry	35	63	92
Dorr	McHenry	80	150	219
Nunda	McHenry	262	494	719
Riley	McHenry	26	48	74
Coral	McHenry	50	94	138
Grafton	McHenry	327	633	944
Algonquin	McHenry	170	305	444
Antioch/Lake V	Lake	39	70	113
Lake V/Antioch	Lake	223	417	680
Newport	Lake	114	209	338
Benton-Zion	Lake	164	300	487
Grant/Lake V	Lake	143	264	427
Lake V/Avon	Lake	233	434	706
Warren	Lake	112	209	342
Waukegan	Lake	67	125	202
Wauconda	Lake	201	373	610
Fremont	Lake	173	330	535
Libertyvill	Lake	80	147	238
Shields	Lake	55	105	168
Cuba	Lake	13	27	43
Ela	Lake	88	166	269
Vernon	Lake	83	155	251
Moraine/West Deerfield	Lake	29	57	89
Hampshire	Kane	110	214	328
Rutland	Kane	277	531	855
Dundee	Kane	195	359	578
Burlington	Kane	104	197	304
Plato	Kane	305	592	952
Elgin	Kane	270	499	803
Virgil	Kane	11	22	35
Campton/St. Charles	Kane	107	197	330
St. Charles/Campton	Kane	120	227	361
Kaneville	Kane	3	5	8

MCD_NAME	CO_NAME	Low Forecast	<b>Base Forecast</b>	High Forecast
Blackberry	Kane	131	253	394
Geneva/Batavia	Kane	146	276	439
Big Rock	Kane	3	6	8
Sugar Grove	Kane	501	965	1,496
Aurora	Kane	135	253	402
Wayne	DuPage	117	221	265
Bloomingdal	DuPage	75	139	165
Addison	DuPage	48	87	107
Winfield	DuPage	121	226	269
Milton	DuPage	108	202	243
York	DuPage	102	189	226
Naperville	DuPage	193	360	432
Lisle	DuPage	158	295	352
<b>Downers Grove</b>	DuPage	276	512	614
Barrington	Cook	41	74	146
Palatine	Cook	56	105	202
Wheeling	Cook	67	127	247
Northfield	Cook	71	134	259
New Trier	Cook	13	27	50
Hanover	Cook	147	274	573
Schaumburg	Cook	34	63	113
Elk Grove	Cook	25	47	89
Maine	Cook	20	38	71
Niles	Cook	73	135	260
Evanston/Niles	Cook	42	78	149
Leyden/Norwood Park	Cook	86	159	159
Proviso/Riverfores/Rivers	s Cook	186	346	346
Oak Park/Berwyn/Cicero	Cook	35	67	67
Lyons	Cook	271	503	503
Lemont	Cook	402	641	975
Palos	Cook	73	119	179
Worth/Calumet/Stickney	Cook	166	274	416
Orland	Cook	371	604	920
Bremen	Cook	592	967	1,466
Thornton	Cook	236	385	586
Rich	Cook	1,867	2,998	4,543
Bloom	Cook	1,135	1,855	2,823
Chicago	Cook/DuPage	0	0	0
Chicago	Cook	326	606	950
Chicago	Cook	112	207	325
Chicago	Cook	352	651	1,025
Chicago	Cook	623	1,158	1,819
Chicago	Cook	165	305	480
Chicago	Cook	613	1,142	1,792
Chicago	Cook	182	340	532

MCD_NAME	CO_NAME	Low Forecast	<b>Base Forecast</b>	High Forecast
Chicago	Cook	986	1,834	2,879
Chicago	Cook	182	341	535
Wheatland	Will	440	1,104	1,540
Du Page	Will	751	1,396	2,145
Plainfield	Will	625	1,119	1,709
Lockport	Will	283	525	805
Homer	Will	724	1,345	2,066
Troy	Will	549	1,023	1,569
Joliet	Will	39	69	105
New Lenox	Will	645	1,200	1,842
Frankfort	Will	636	1,182	1,819
Channahon	Will	234	435	669
Jackson	Will	230	431	661
Manhattan	Will	653	1,214	1,867
Green Garde	Will	1,333	2,480	3,810
Monee	Will	1,088	1,951	2,976
Crete	Will	526	994	1,545
Wilmington	Will	92	171	266
Florence	Will	156	291	450
Wilton	Will	83	151	234
Peotone	Will	489	663	1,171
Will	Will	281	523	801
Washington	Will	387	721	1,107
Wesley/Custer/Reed	Will	78	142	221
Custer/Wesley	Will	49	81	125
Rockville	Kankakee	3	3	6
Manteno	Kankakee	407	737	1,085
Sumner	Kankakee	93	203	350
Yellowhead	Kankakee	174	324	485
Essex	Kankakee	16	29	42
Salina	Kankakee	3	6	8
Limestone	Kankakee	22	39	58
Bourbonnais	Kankakee	496	899	1,299
Ganeer/Aroma	Kankakee	48	90	136
Momence	Kankakee	83	155	232
Norton	Kankakee	3	6	8
Pilot	Kankakee	14	28	42
Otto	Kankakee	3	5	8
Kankakee	Kankakee	292	542	811
Otto/Aroma	Kankakee	22	32	48
Aroma/Kankakee	Kankakee	67	126	188
Aroma	Kankakee	28	53	82
St. Anne	Kankakee	13	21	35
Pembroke	Kankakee	23	56	82
North	Lake (IN)	130	292	511
MCD_NAME	CO_NAME	Low Forecast	<b>Base Forecast</b>	High Forecast
---------------------	-----------	--------------	----------------------	---------------
Calumet	Lake (IN)	152	339	594
Calumet	Lake (IN)	109	243	427
North	Lake (IN)	252	560	980
Calumet	Lake (IN)	156	347	608
Hobart	Lake (IN)	104	233	409
St. John	Lake (IN)	206	505	973
Ross	Lake (IN)	119	268	467
Hanover	Lake (IN)	26	63	111
Center	Lake (IN)	124	277	487
Winfield	Lake (IN)	47	106	187
West Creek	Lake (IN)	6	14	26
Cedar Creek	Lake (IN)	14	31	57
Eagle Creek	Lake (IN)	11	22	38
Portage	Porter	159	439	773
Westchester	Porter	76	215	377
Pine	Porter	9	26	43
Liberty	Porter	46	132	228
Jackson	Porter	27	78	135
Union	Porter	63	179	313
Center	Porter	118	326	572
Washington	Porter	29	80	140
Porter	Porter	26	72	124
Morgan	Porter	9	21	36
Boone	Porter	14	35	62
Pleasant	Porter	6	14	25
Summary				
City of Chicago		3,540	6,585	10,336
North Cook		590	1,102	2,160
West Cook		578	1,075	1,075
South Cook		4,842	7,841	11,907
Cook County (Total)		9,549	16,604	25,478
DuPage County		1,198	2,231	2,672
Kane County		2,417	4,595	7,293
Lake County (IL)		1,816	3,390	5,499
McHenry County		1,772	3,353	4,946
Will County		10,371	19,214	29,505
Kankakee County		1,809	3,354	5,006
Lake County (IN)		1,456	3,300	5,876
Porter County		579	1,616	2,827
Grand Total		30,966	57,658	89,101

## Appendix Exhibit 5: Unemployment in Chicago Region 2000 Percent of Labor Force Unemployed



Prepared by ACG: The al Chalabi Group, Ltd. in association with TAMS Consultants, an EarthTech Co.



Prepared by ACG: The al Chalabi Group, Ltd. in association with TAMS Consultants, an EarthTech Co.



Prepared by ACG: The al Chalabi Group, Ltd. in association with TAMS Consultants, an EarthTech Co.



Prepared by ACG: The al Chalabi Group, Ltd. in association with TAMS Consultants, an EarthTech Co.



Prepared by ACG: The al Chalabi Group, Ltd. in association with TAMS Consultants, an EarthTech Co.



Prepared by ACG: The al Chalabi Group, Ltd. in association with TAMS Consultants, an EarthTech Co.

