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bcc

Subject Revised Average Annual Delay Calculations for Phase I
OMP BCA Analysis

Hi Shawn -

After some additional work, attached you will find a revised average annual delay calculation for use in your BCA calculations. This includes a phased approach which realizes delay benefits as Phase I is implemented (proposed new north runway online in 2007 and proposed Runway 10C/28C and Runway 10L/28R extension in 2009). This is based on the TAAM experiments conducted as part of the alternatives analysis for the EIS. Please review and let me know if you have any questions or need any additional information. I will be reachable all weekend on my cell phone at (312) 203-5315. Please do not hesitate to call if you have any questions or need any additional information.

Thank you.

Rich



Average Annual Delay Estimates--Phase 1 OMP with phasing.xls

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SUMMARY OF ANNUAL ENPLANED PASSENGERS
Chicago O'Hare International Airport

	<u>Originating</u>	<u>Domestic Connecting</u>	<u>Total</u>	<u>Originating</u>	<u>International Connecting</u>	<u>Total</u>	<u>Total Enplaned Passengers</u>	<u>Average Seats</u>	<u>Average Load Factor</u>
Unconstrained									
2002	13,146,000	14,241,078	27,387,078	2,810,000	1,513,434	4,323,434	31,710,512	-	
2003	13,174,000	14,855,000	28,029,000	3,023,000	1,557,000	4,580,000	32,609,000	-	105
2004	13,512,844	15,246,037	28,758,881	3,211,708	1,683,042	4,874,750	33,633,730	-	106
2005	13,860,608	15,647,368	29,507,975	3,412,196	1,776,305	5,188,502	34,696,477	-	106
2006	14,217,216	16,059,262	30,276,479	3,625,200	1,897,283	5,522,483	35,798,962	-	107
2007	14,583,000	16,482,000	31,065,000	3,851,500	2,026,500	5,878,000	36,943,000	-	108
2008	15,008,541	16,815,378	31,823,920	4,043,704	2,159,627	6,203,331	38,027,251	-	109
2009	15,446,500	17,155,500	32,602,000	4,245,500	2,301,500	6,547,000	39,149,000	-	109
2010	15,901,957	17,491,971	33,393,928	4,488,582	2,388,112	6,866,694	40,280,622	-	110
2011	16,370,843	17,835,041	34,205,884	4,768,751	2,477,983	7,244,735	41,450,619	-	111
2012	16,853,555	18,184,840	35,038,395	5,050,906	2,571,237	7,622,143	42,660,538	-	112
2013	17,350,500	18,541,500	35,892,000	5,352,000	2,868,000	8,020,000	43,912,000	-	113
2014	17,897,416	18,814,634	36,712,050	5,645,334	2,762,034	8,407,368	45,119,418	-	114
2015	18,461,573	19,091,791	37,553,363	5,954,746	2,659,382	8,614,128	46,367,491	-	115
2016	19,043,512	19,373,031	38,416,543	6,281,116	2,960,161	9,241,277	47,657,820	-	116
2017	19,643,795	19,658,413	39,302,208	6,625,374	3,064,492	9,689,866	48,992,074	-	117
2018	20,263,000	19,948,000	40,211,000	6,988,500	3,172,500	10,161,000	50,372,000	-	118
Constrained—No Project									
2007	14,536,500	15,642,500	30,379,000	3,868,000	1,972,500	5,840,500	36,219,500	-	109
2008	14,816,307	15,986,595	30,803,287	4,060,700	2,093,065	6,153,844	36,957,132	-	111
2009	15,101,500	16,132,000	31,233,500	4,283,000	2,221,000	6,484,000	37,717,500	-	112
2010	15,381,255	16,314,988	31,696,243	4,491,255	2,294,065	6,785,319	38,481,562	-	113
2011	15,668,192	16,500,051	32,168,244	4,731,731	2,369,533	7,101,264	39,267,508	-	114
2012	15,956,408	16,687,214	32,643,622	4,985,083	2,447,484	7,432,567	40,076,189	-	116
2013	16,252,000	16,876,500	33,128,500	5,252,000	2,528,000	7,780,000	40,908,500	-	117
2014	16,687,254	16,976,996	33,664,250	5,434,036	2,582,407	8,016,443	41,680,693	-	118
2015	17,134,164	17,076,090	34,212,255	5,822,382	2,837,985	8,260,367	42,472,622	-	120
2016	17,593,044	17,179,787	34,772,830	5,817,255	2,694,760	8,512,015	43,284,845	-	121
2017	18,064,212	17,282,089	35,346,301	6,018,883	2,752,758	8,771,639	44,117,940	-	122
2018	18,548,000	17,385,000	35,933,000	6,227,500	2,812,000	9,039,500	44,972,500	-	123
2019	18,953,000	17,463,000	36,416,000	6,402,000	2,874,000	9,276,000	45,692,000	-	125
2020	19,365,000	17,541,000	36,906,000	6,581,000	2,936,000	9,517,000	46,423,000	-	127
2021	19,786,000	17,617,000	37,403,000	6,764,000	2,999,000	9,763,000	47,166,000	-	129
2022	20,215,000	17,690,000	37,905,000	6,952,000	3,064,000	10,016,000	47,921,000	-	131
2023	20,652,000	17,763,000	38,415,000	7,144,000	3,129,000	10,273,000	48,688,000	-	133
2024	20,989,000	17,827,000	38,816,000	7,316,000	3,189,000	10,505,000	49,321,000	-	134
2025	21,331,000	17,889,000	39,220,000	7,492,000	3,250,000	10,742,000	49,962,000	-	136
2026	21,879,000	17,950,000	39,829,000	7,871,000	3,312,000	10,983,000	50,612,000	-	137
2027	22,032,000	18,010,000	40,042,000	7,853,000	3,375,000	11,228,000	51,270,000	-	139
2028	22,391,000	18,068,000	40,459,000	8,039,000	3,439,000	11,478,000	51,937,000	-	141
Constrained—Phase 1 Project									
2016	18,698,000	19,220,000	38,118,000	6,135,000	2,928,000	9,063,000	47,181,000	-	116
2017	19,388,000	19,386,000	38,772,000	6,333,000	3,005,000	9,338,000	48,110,000	-	117
2018	19,887,000	19,554,000	39,441,000	6,537,000	3,084,000	9,621,000	49,062,000	-	118
2019	20,384,000	19,707,000	40,091,000	6,742,000	3,161,000	9,903,000	49,994,000	-	120
2020	20,892,000	19,858,000	40,750,000	6,953,000	3,241,000	10,194,000	50,944,000	-	122
2021	21,371,000	19,989,000	41,340,000	7,155,000	3,315,000	10,470,000	51,810,000	-	124
2022	21,859,000	20,078,000	41,937,000	7,363,000	3,391,000	10,754,000	52,691,000	-	128
2023	22,357,000	20,168,000	42,543,000	7,576,000	3,468,000	11,044,000	53,587,000	-	127
2024	22,865,000	20,292,000	43,157,000	7,795,000	3,546,000	11,341,000	54,498,000	-	129
2025	23,339,000	20,355,000	43,694,000	8,002,000	3,619,000	11,621,000	55,315,000	-	131
2026	23,820,000	20,417,000	44,237,000	8,215,000	3,693,000	11,908,000	56,145,000	-	132
2027	24,311,000	20,475,000	44,788,000	8,433,000	3,788,000	12,201,000	56,987,000	-	134
2028	24,811,000	20,532,000	45,343,000	8,655,000	3,844,000	12,499,000	57,842,000	-	135

Sources: Leigh Fisher Associates, FAA Terminal Area Forecast, and U.S. DOT data.

Notes: (1) 2002 and 2003 distributions are estimated based on input from FAA and Ricondo & Associates.

(2) Unconstrained: based on 2002 TAF.

(3) Constrained-No Project

Data through 2016 from ORD OMP EIS.

Data after 2018 extrapolated assuming:

Gradually reduced annual growth rates

Increasing enplaned passengers per operation (up-gauging in constrained environment)

Increased proportion of originating passengers

(4) Constrained-Phase 1 Project:

Gradually reduced annual growth rates

Increasing enplaned passengers per operation (up-gauging in constrained environment)

Increased proportion of originating passengers

**SUMMARY OF ANNUAL AIRCRAFT OPERATIONS
Chicago O'Hare International Airport**

	<u>Unconstrained</u>	<u>Constrained-- No Project</u>	<u>Constrained-- Phase 1 Project</u>	<u>Average annual delay estimates: Phase 1 Project (minutes per operation) (4)</u>	
2002	922,787				
2003	960,500			15.2	Actual TAAM estimate, No Action Alternative
2004	976,544			16.2	Actual TAAM estimate, No Action Alternative
2005	992,855			17.3	Interpolated estimate, No Action Alternative
2006	1,009,439			19.4	Interpolated estimate, No Action Alternative
2007	1,026,300	974,000		15.5	Actual TAAM estimate, new north runway
2008	1,041,635	974,000		20.0	Interpolated estimate, new north runway
2009	1,057,200	974,000		10.3	Actual TAAM estimate, Full Phase 1 Build Out
2010	1,072,706	974,000		10.9	Interpolated estimate, Full Phase 1 Build Out
2011	1,088,438	974,000		11.6	Interpolated estimate, Full Phase 1 Build Out
2012	1,104,402	974,000		12.7	Interpolated estimate, Full Phase 1 Build Out
2013	1,120,600	974,000		14.2	Actual TAAM estimate, Full Phase 1 Build Out
2014	1,134,910	974,000		15.9	Extrapolated estimate, Full Phase 1 Build Out
2015	1,149,402	974,000		17.8	Extrapolated estimate, Full Phase 1 Build Out
2016	1,164,080	974,000	1,150,000	17.8	Extrapolated estimate, Full Phase 1 Build Out
2017	1,178,945	974,000	1,150,000		
2018	1,194,000	974,000	1,150,000		
2019		974,000	1,150,000		
2020		974,000	1,150,000		
2021		974,000	1,150,000		
2022		974,000	1,150,000		
2023		974,000	1,150,000		
2024		974,000	1,150,000		
2025		974,000	1,150,000		
2026		974,000	1,150,000		
2027		974,000	1,150,000		
2028		974,000	1,150,000		

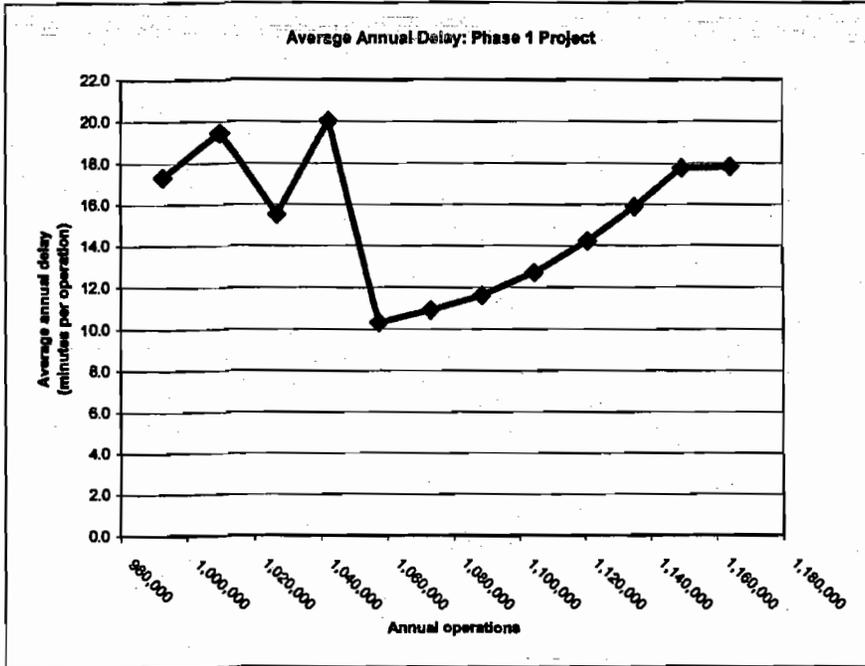
Sources: Leigh Fisher Associates and FAA Terminal Area Forecast.

Notes: (1) Unconstrained from 2002 TAF.

(2) Constrained-No Project: Assumed capped at 974,000 annual operations.

(3) Constrained-Phase 1 Project: Assumed capped at 1,150,000 annual operations.

(4) Average annual delay estimates from Leigh Fisher Associates' interpolation of TAAM delay results from the OMP EIS for EIS No Action Alternative.



n Alternative, North Runway Only Case, and Alternative B.