APPENDIX B ACTIVITY FORECAST

This appendix presents activity forecasts for 2008 suitable for use in the Part 150 Study for Buffalo Niagara International Airport (BNIA). The forecasts are based upon previous activity projections developed for the BNIA in the Master Plan Study/Environmental Assessment in March 2002 (EA/MP), and those developed by the Federal Aviation Administration's Terminal Area March 2003 Forecast (FAA TAF).

The EA/MP forecast presented actual activity levels for 2000 and projections for 2005 and 2010. These forecasts were interpolated using average annual growth rates to derive implied figures for 2001-2002 and 2008 that are presented throughout this appendix.

The material presented in this appendix is not intended to be a thorough update of the activity forecast for the BNIA. Rather, this effort uses available forecasts, as best possible, and makes adjustments to reflect recent events and changes that are not embodied in available forecasts. The forecast looks only five years into the future and was undertaken solely for the purpose of developing 2008 activity information necessary for the Part 150 Study. The most important information for the purposes of the Part 150 Study is the forecast of activity for an average annual day in 2008, i.e., number of operations, fleet mix, and day/night split. This projection of aircraft activity on an average annual day is presented in Table B-6. In order to derive an average annual day in 2008, however, it was necessary to make certain assumptions and adjustments to available forecasts.

The following sections review assumptions regarding future passenger enplanements and operations by passenger, cargo, general aviation, and military aircraft at the BNIA.

1. Passenger Enplanements

Since 1999, the BNIA's enplanement activity has been affected significantly by the scheduling activities of numerous carriers. Vanguard (July 1999-July 2002) and Midway (May 2000-September 2001) both initiated and terminated service during that period. Shuttle America terminated service in November 2001. JetBlue (February 2000) and Southwest (October 2000) began serving the BNIA. These two carriers now carry 12 percent and 17 percent, respectively, of the BNIA's traffic.

Another element of change at the Airport is the shift of service by some major carriers to commuter partners. American shifted all service to American Eagle in January 2003. In June 2003, Delta shifted service to its Comair partner. Continental and United still offer service, but each has shifted a significant part of its offerings to a commuter partner. US Airways has cut its major carrier service by 60 percent from 1999, and increased its commuter partner activity by 12 percent.

Given the magnitude of schedule fluctuation, the events of September 11, 2001 and economic trends since late 2000, it is difficult to project enplanement activity at the BNIA based on recent trends. Therefore, passenger projections have been developed for 2008 based upon assumptions regarding schedule development at the Airport over the next five years.

A 2008 schedule was hypothesized assuming that Delta and American continue to fly all commuter aircraft, and that additional service by United and US Airways will be accommodated on commuter aircraft. AirTran, JetBlue, Southwest and Northwest are all assumed to increase their traffic using large jet aircraft. This schedule in turn generated assumptions about the number of seats flown by carrier for 2008. Passenger traffic was estimated based on the schedule using each carrier's average load factor for the first four months of 2003. This resulted in the enplanement forecast presented in **Table B-1**. The Part 150 Study forecast is compared in Table B-1 with the EA/MP and FAA TAF enplanement forecasts.

TABLE B-1

Buffalo Niagara International Airport

ENPLANEMENT FORECAST COMPARISON

ENPLANEMENTS

	Actual			Environ. Assess./Master Plan			FAA TAF March 2003			Part 150 Study		
	Majors	Commuters	Total	Majors	Commuters	Total	Majors	Commuters	Total	Majors	Commuters	Total
1998	1,364,264	260,267	1,624,531									
1999	1,503,260	310,392	1,813,652									
2000	1,800,584	333,680	2,134,264									
2001	1,847,878	346,771	2,194,649	1,901,519	356,945	2,258,464	1,980,562	345,213	2,325,775			
2002	1,680,181	394,889	2,075,070	2,008,112	381,833	2,389,945	1,553,741	276,520	1,830,261			
2008				2,528,008	643,411	3,171,419	1,901,440	389,290	2,290,730	1,890,490	775,233	2,665,723

IMPLIED AVERAGE ANNUAL GROWTH RATE 2002-2008

	Actual			Environ. Assess./Master Plan			FAA TAF March 2003			Part 150 Study		
	Majors	Commuters	Total	Majors	Commuters	Total	Majors	Commuters	Total	Majors	Commuters	Total
				3.9%	9.1%	4.8%	3.4%	5.9%	3.8%	2.0%	11.9%	4.3%

MAJOR / COMMUTER SPLIT

	Actual			Environ. Assess./Master Plan			FAA TAF March 2003			Part 150 Study		
	Majors	Commuters	Total	Majors	Commuters	Total	Majors	Commuters	Total	Majors	Commuters	Total
1998	84%	16%	100%									
1999	83%	17%	100%									
2000	84%	16%	100%									
2001	84%	16%	100%	84%	16%	100%	85%	15%	100%			
2002	81%	19%	100%	84%	16%	100%	85%	15%	100%			
2008				80%	20%	100%	83%	17%	100%	71%	29%	100%

Sources: NFTA Airport Records.
Master Plan Update, Final Report, March 2002, prepared by McFarland-Johnson, Inc. in association with URS Inc. and R.A. Weidemann & Assoc.
Benefit-Cost Analysis of the Extension of Runway 14-32, May 28, 2003, prepared by Unison-Maximus, Inc. in association with URS Corporation.
PB Aviation

Note: Numbers may differ slightly, and insignificantly, between printed reports and NFTA data.

The recommended enplanement forecast in the rightmost block of Table B-1 implies an average annual growth rate of 4.3 percent for total passenger traffic from 2002 through 2008. This growth rate is a combination of a growth rate of 2.0 percent on major carriers, and 11.9 percent on commuter carriers. The shift in traffic from majors to commuters reflects the impact of American and Delta shifting to all commuter aircraft, and United and US Airways growing primarily through their commuter services. The recommended forecast is 16 percent below the EA/MP forecast for 2008. The EA/MP forecast used calendar year 2000 as its last historical data point. It embodied an average annual growth rate of 4.8 percent 2002-2008. Actual history shows that enplanements at the BNIA grew 2.8 percent in 2001 and declined in 2002. January-June 2003 data indicates that traffic is down 3.4 percent from January-June 2002. Therefore, it is unlikely that traffic will increase by 2008 to the levels predicted by the EA/MP forecast.

The recommended forecast is 16 percent above the FAA TAF forecast. The FAA TAF forecast is based upon an October-September fiscal year, rather than a January-December calendar year which accounts for a slight variation in absolute historical enplanement numbers between NFTA records (calendar years) and FAA numbers (fiscal years). While this usually is not a significant issue, in measuring growth 2001-2002 it is an issue because of the timing of the September 11, 2001 events. The FAA TAF projected the BNIA enplanements to decline 21.3 percent FY 2001 to FY 2002. In reality, the BNIA's traffic declined only 13.3 percent FY 2001 to FY 2002. The pessimistic assumption about growth in the year following the September 11 terrorist attacks produced the lower FAA TAF enplanement forecast presented in Table B-1. Also, the FAA TAF forecast did not take into account the shift of service from major to commuter aircraft that has occurred at the BNIA over the past year. Thus, the FAA TAF forecast is probably too low for planning purposes.

Table B-1 indicates that there is not only a difference in total enplanements, but also in the split between major/national and commuter activity. Major/national carriers carried 84 percent of the BNIA's traffic through 2001. Currently, that share has fallen to 73 percent. That is well below the share projected by both the EA/MP (80 percent) and

the FAA TAF (83 percent) forecasts. The proposed enplanement forecast embodies a split of 71 percent major/national traffic and 29 percent commuter traffic.

A graphic comparison of the three enplanement forecasts is presented in **Exhibit B-1**. After experiencing strong growth from 1997 through 2001, enplanements declined 5.4 percent in 2002. In the first six months of 2003 traffic has declined 3.4 percent from January-June 2002. The EA/MP forecast used 2000 as its last data point. Following the strong growth exhibited up to that point, the EA/MP forecast projected that growth into the future, producing the higher forecast line shown in Exhibit B-1. The FAA TAF forecast assumed a steeper decline in 2001 traffic than that actually experienced at the BNIA, and its projection is very low. The recommended forecast developed from assumptions about schedule growth through 2008 produced the forecast shown in Exhibit B-1. The projected 2008 enplanement level selected for the purposes of this analysis is between the EA/MP and FAA projections.

2. Passenger Aircraft Operations

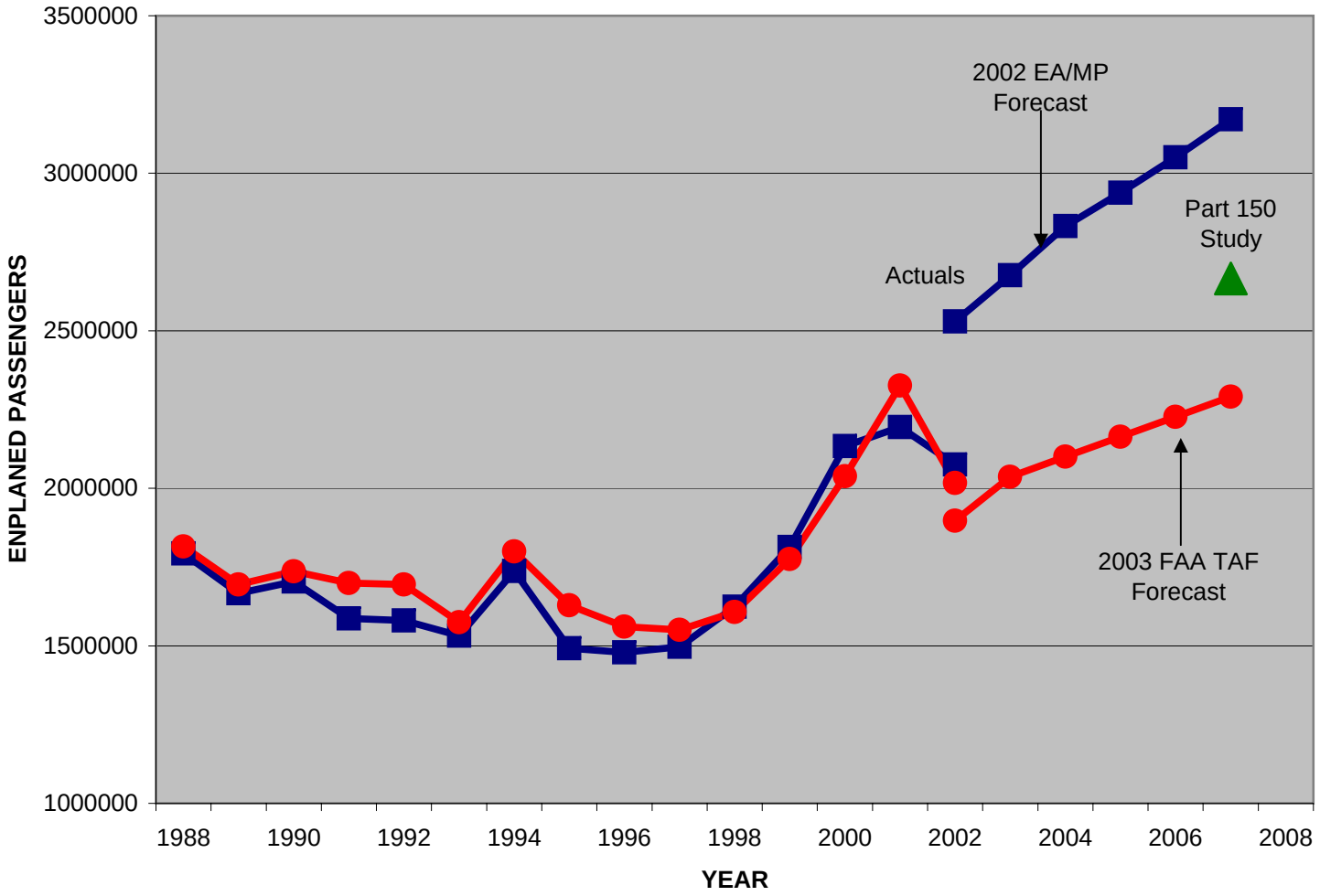
As with the enplanement forecast, the passenger operations forecast was developed based upon a proposed activity schedule in 2008. The hypothesized schedule increases the number of departures on a "typical weekday" from 102 in the July 2003 schedule to 129 in 2008. This increase corresponds to a growth in annual operations from 2002 to 2008 of 5.1 percent per year.

The passenger operations forecast generated by the hypothesized schedule is presented in **Table B-2**, where it is also compared to the other forecasts. The 2002 EA/MP passenger operations forecast of 83,817 is 30 percent above the actual, and the FAA TAF is 40 percent higher. FAA TAF figures include all-cargo operations and air taxi operations.

In light of the drastic variations from 2002 actual operations levels, it was assumed that the 2008 projections by EA/MP and FAA TAF were too high. Also, the split between major/national carriers and commuter carriers that is assumed in the other

Exhibit B-1

HISTORICAL AND PROJECTED ENPLANEMENTS



Sources: PB Aviation, Inc.
Federal Aviation Administration, Terminal Area Forecast, March 2003
McFarland-Johnson, Inc. Master Plan Update, Final Report, March 2002.

TABLE B-2

Buffalo Niagara International Airport

PASSENGER OPRERATIONS FORECAST COMPARISON

PASSENGER OPERATIONS

	Actual			Environ. Assess./Master Plan			FAA TAF March 2003 (includes Cargo and Air Taxi)			Part 150 Study		
	Majors	Commuters	Total	Majors	Commuters	Total	Majors	Commuters	Total	Majors	Commuters	Total
1998	37,094	27,213	64,307									
1999	39,676	31,350	71,026									
2000	45,155	32,441	77,596									
2001	44,683	29,503	74,186	46,850	33,797	80,647	58,827	46,871	105,698			
2002	37,557	26,672	64,229	48,611	35,207	83,817	48,731	41,258	89,989			
2008				56,841	43,525	100,366	55,956	49,117	105,073	38,870	47,576	86,446

IMPLIED AVERAGE ANNUAL GROWTH RATE 2002-2008

Actual			Environ. Assess. / Master Plan			FAA TAF March 2003			Part 150 Study		
Majors	Commuters	Total	Majors	Commuters	Total	Majors	Commuters	Total	Majors	Commuters	Total
			2.6%	3.6%	3.0%	2.3%	2.9%	2.6%	0.6%	10.1%	5.1%

MAJOR / COMMUTER SPLIT

	Actual			Environ. Assess. / Master Plan			FAA TAF March 2003			Part 150 Study		
	Majors	Commuters	Total	Majors	Commuters	Total	Majors	Commuters	Total	Majors	Commuters	Total
1998	58%	42%	100%									
1999	56%	44%	100%									
2000	58%	42%	100%									
2001	60%	40%	100%	58%	42%	100%	56%	44%	100%			
2002	58%	42%	100%	58%	42%	100%	54%	46%	100%			
2008				57%	43%	100%	53%	47%	100%	45%	55%	100%

Sources: NFTA Airport Records.
Master Plan Update, Final Report, March 2002, prepared by McFarland-Johnson, Inc. in association with URS Inc. and R.A. Weidemann & Assoc.
Benefit-Cost Analysis of the Extension of Runway 14-32, May 28, 2003, prepared by Unison-Maximus, Inc. in association with URS Corporation.
PB Aviation

Note: Numbers may differ slightly, and insignificantly, between printed reports and NFTA data.

forecasts does not sufficiently account for the significant shift to regional jets that has actually transpired as of July 2003. The proposed forecast embodies a split of 45 percent major/national operations and 55 percent commuter operations. This is consistent with the 2003 experience of a 44/56 split.

3. Cargo Aircraft Operations

Table B-3 presents historical and forecast cargo enplaned volume and operations from the EA/MP. The FAA TAF forecast does not break out cargo operations; nor does it forecast cargo volume.

Since 2000, cargo operations have been declining while enplaned volumes have been increasing. Tonnage carried per operation has been increasing steadily. The cargo growth in the EA/MP forecast embodies a 5.5 percent average annual growth rate 2003-2008. Cargo at the BNIA grew 5.2 percent in the first six months of 2003 versus the same period in 2002. Therefore, the EA/MP cargo volume forecast is used for this analysis. Tons per operation have fluctuated since 1993. The forecast of all-cargo operations assumes that tons per operation will continue to fluctuate as it has over the last 10 years, leveling off at 6.05 tons per operation. This generates 5,590 annual cargo operations in 2008.

4. General Aviation Aircraft Operations

The forecast of "general aviation" activity for the Part 150 Study includes what the FAA classifies as "general aviation" and also air taxi activity. Air taxi operations occur on the same equipment types as general aviation, so these two are grouped as "general aviation" in this analysis. The EA/MP study also grouped "general aviation" and "air taxi" activities together.

Table B-4 presents historical and forecast general aviation operations. The FAA TAF forecast of strictly general aviation (no air taxi) operations is very consistent with actuals, so that forecast is accepted for use in this Study. Air taxi operations are projected

TABLE B-3

Buffalo Niagara International Airport

CARGO FORECAST COMPARISON

	Actual Cargo			Environ. Assess./Master Plan			Part 150 Study		
	Enplaned Tons	Operations	Tons/ Operation	Enplaned Tons	Operations	Tons/ Operation	Enplaned Tons	Operations	Tons/ Operation
1993	23,020.4	4,314	5.34						
1994	26,457.4	4,558	5.80						
1995	25,970.4	4,546	5.71						
1996	29,031.4	4,620	6.28						
1997	29,121.7	4,159	7.00						
1998	N/A	N/A	N/A						
1999	22,519.0	3,752	6.00						
2000	23,555.4	3,713	6.34						
2001	23,553.3	3,510	6.71						
2002	24,666.2	3,286	7.51						
2008				33,790.9	4,260	7.93	33,790.9	5,364	6.30

Sources: NFTA Airport Records.
Master Plan Update, Final Report, March 2002, prepared by McFarland-Johnson, Inc. in association with URS Inc. and R.A. Weidemann & Assoc.
Benefit-Cost Analysis of the Extension of Runway 14-32, May 28, 2003, prepared by Unison-Maximus, Inc. in association with URS Corporation.
PB Aviation

TABLE B-4

Buffalo Niagara International Airport

GENERAL AVIATION OPERATIONS FORECAST COMPARISON

	Actual			EA/MP	March 2003	Part 150 Study		
	General Aviation	Air Taxi	Total	(GA + Air Taxi)	(GA Only) FAA TAF	General Aviation	Air Taxi	Total
2000	57,811	15,786	73,597		57,037			
2001	55,491	22,789	78,280	77,875	61,323			
2002	41,429	22,822	64,251	78,138	40,767			
2008				81,753	46,825	46,825	19,296	66,121

Sources: NFTA Airport Records.
Master Plan Update, Final Report, March 2002, prepared by McFarland-Johnson, Inc. in association with URS Inc. and R.A. Weidemann & Assoc.
Benefit-Cost Analysis of the Extension of Runway 14-32, May 28, 2003, prepared by Unison-Maximus, Inc. in association with URS Corporation.
PB Aviation

using the same rate of growth as that in the general aviation forecast. The 2002 EA/MP forecast of combined general aviation and air taxi activity is well above the actual. Therefore, it was assumed that the EA/MP forecast is too high for use in the Part 150 Study.

5. Military Aircraft Operations

Military operations were accepted as forecast in the EA/MP.

6. Total Aircraft Operations

Table B-5 presents total operations recommended for use in the Part 150 Study and compares this forecast with the EA/MP and FAA TAF forecasts. In 2008, the Part 150 and FAA TAF forecasts for total operations are within 3 percent of each other. The EA/MP forecast is 17.4 percent above the recommended forecast. This is a result of the actual experience for 2001-2002 being so low relative to the EA/MP expectations. When the EA/MP forecast was developed, the downward trends of 2001 and 2002 were not apparent.

TABLE B-5

Buffalo Niagara International Airport

TOTAL OPERATIONS FORECAST

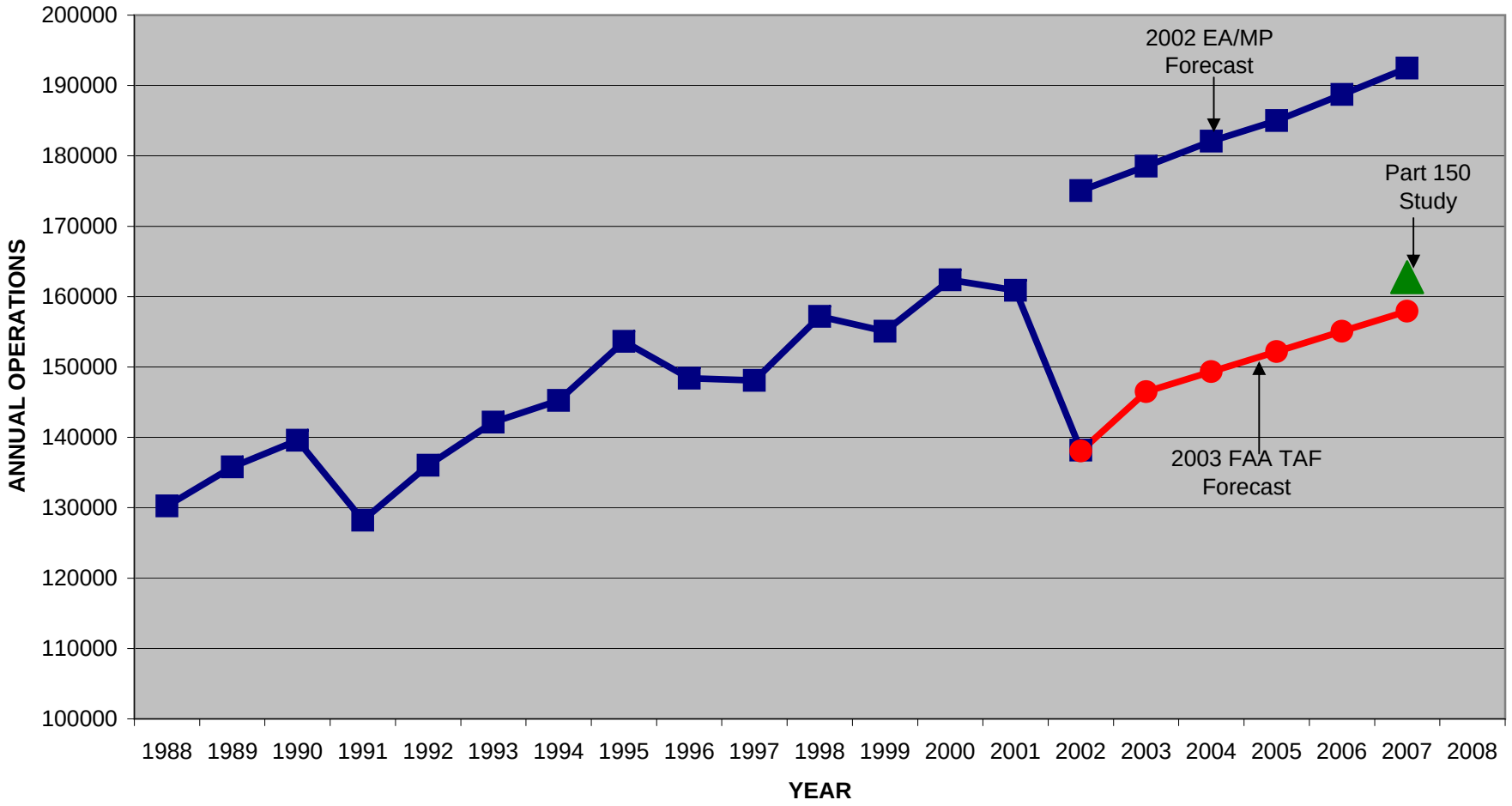
	Part 150 Study						EA/MP	FAA TAF March 2003
Year	Passenger	Cargo	General Aviation	Air Taxi	Military	Total	Total	Total
2000	77,596	3,713	57,811	15,786	5,923	160,828	164,969	162,380
2001	74,186	3,510	55,491	22,789	4,930	160,906	170,070	172,294
2002	64,229	3,286	41,429	22,822	6,399	138,165	175,328	136,785
2008	86,446	5,590	46,825	19,296	4,600	162,757	191,015	157,927

Source: PB Aviation.

Exhibit B-2 graphically compares the three forecasts of total annual operations. Note that the EA/MP forecast continues the upward trend seen in the 2000 data point,

Exhibit B-2

HISTORICAL AND PROJECTED TOTAL ANNUAL OPERATIONS



unaware that operations would decline in 2001 and 2002. The FAA TAF and the forecast recommended for the Part 150 Study (the triangle in the graph) both had the benefit of seeing the 2001-2002 decline.

7. Fleet Mix

Table B-6 presents the fleet mix for an average day in 2008 by equipment type, arrivals and departures, and day/night time. The air carrier equipment types and times were extracted from the hypothesized 2008 schedule. The cargo schedule and fleet mix were developed based upon current cargo schedules and operations, all-cargo operations forecast growth, and discussions with the NFTA staff. The general aviation operational fleet mix was the same as that used in the EA/MP forecast.

TABLE B-6

Buffalo Niagara International Airport

2008 AVERAGE ANNUAL DAY FLEET MIX

	Arrivals		Departures	
	2008		2008	
	Day	Night	Day	Night
Equipment	(0701-2200)	(2201-0700)	(0701-2200)	(2201-0700)
Airbus 320	7.3	0.8	6.5	1.7
Boeing 737-400	2.8	2.8	4.6	1.0
Boeing 737-300	10.0	0.0	10.0	0.0
Boeing 737-700	8.5	3.9	11.4	1.0
McDonnell Douglas DC9-50	1.8	1.0	1.8	1.0
Airbus 319	5.8	0.0	5.8	0.0
McDonnell Douglas DC9	0.0	0.0	0.0	0.0
Boeing 717	5.4	1.0	5.4	1.0
Boeing 737-500	0.1	0.0	0.1	0.0
McDonnell Douglas DC9-30	2.1	0.0	2.1	0.0
Canadair Regional Jet	5.5	1.9	5.5	1.9
Embraer 170	0.8	1.8	0.8	1.8
Canadair Regional Jet 700	16.2	2.9	17.2	1.9
Embraer 145	6.8	1.0	6.8	1.0
Embraer Regional Jet	26.2	1.9	23.3	4.9
de Havilland DHC8	0.0	0.0	0.0	0.0
Jet Stream 41	0.0	0.0	0.0	0.0
Beechcraft	0.0	0.0	0.0	0.0
C-130	0.0	0.1	0.1	0.0
Boeing 737	0.0	0.1	0.1	0.0
Boeing 727-100	0.0	0.0	0.0	0.0
Boeing 727-200	0.0	2.0	1.0	1.0
Airbus 300	0.8	1.3	0.9	1.3
Airbus 310	0.0	0.9	0.0	0.9
Boeing 757	0.0	1.4	0.0	1.3
McDonnell Douglas DC9	0.0	0.5	0.0	0.5
Single-Engine Prop	7.3	1.8	7.3	1.8
Multi-Engine Prop	49.3	8.7	49.3	8.7
Turbo-Jet	20.0	3.5	20.0	3.5
Rotorcraft	0.3	0.1	0.3	0.1
Military	5.7	0.6	5.7	0.6
Total	**182.9**	**40.1**	**186.1**	**36.8**

Source: PB Aviation

Note: Figures may not sum precisely to annual totals due to rounding.