

Appendix C: Forecast Tables

TABLE 1

U.S. SHORT-TERM ECONOMIC FORECASTS

ECONOMIC VARIABLE	FISCAL YEAR 2017				FISCAL YEAR 2018				FISCAL YEAR 2019			
	1ST. QTR.	2ND. QTR.	3RD QTR.	4TH. QTR.	1ST. QTR.	2ND. QTR.	3RD QTR.	4TH. QTR.	1ST. QTR.	2ND. QTR.	3RD QTR.	4TH. QTR.
Real Personal Consumption												
Expenditure per Capita												
(2009 \$)	36,059	36,178	36,407	36,530	36,727	36,902	37,082	37,246	37,404	37,562	37,713	37,865
Year over year change	2.3%	1.3%	2.6%	1.4%	2.2%	1.9%	2.0%	1.8%	1.7%	1.7%	1.6%	1.6%
Refiners' Acquisition Cost - Average												
(Dollars per barrel)	46.52	49.96	47.66	48.43	54.10	52.85	50.09	48.90	48.35	48.44	50.69	49.65
Year over year change	38.4%	33.0%	-17.2%	6.7%	55.7%	-8.9%	-19.3%	-9.1%	-4.5%	0.8%	19.8%	-7.9%
Consumer Price Index												
(1982-84 equals 100)	242.2	244.1	243.9	245.2	247.3	248.2	248.5	249.5	250.6	251.7	253.3	254.6
Seasonally Adjusted Annual Rate	3.0%	3.1%	-0.3%	2.0%	3.5%	1.6%	0.4%	1.7%	1.7%	1.8%	2.5%	2.0%
Source: IHS Global Insight												

TABLE 2

U.S. LONG-TERM ECONOMIC FORECASTS

FISCAL YEAR	REAL GROSS DOMESTIC PRODUCT (Billions 2009 \$)	REAL PERSONAL CONSUMPTION EXPENDITURE PER CAPITA (2009 \$)	CONSUMER PRICE INDEX (1982-84=1.00)	REFINERS' ACQUISITION COST AVERAGE (Dollars per barrel)
<u>Historical</u>				
2010	14,685	32,186	2.17	74.61
2015	16,390	34,842	2.37	56.69
2016	16,640	35,565	2.39	39.12
2017E	16,987	36,294	2.44	48.14
<u>Forecast</u>				
2018	17,433	36,990	2.48	51.48
2023	19,344	39,769	2.79	75.12
2028	21,188	42,617	3.16	92.53
2033	23,379	46,014	3.57	106.28
2038	25,840	49,678	4.03	118.15
<u>Avg Annual Growth</u>				
2010-17	2.1%	1.7%	1.7%	-6.1%
2017-18	2.6%	1.9%	1.9%	6.9%
2018-28	2.0%	1.4%	2.4%	6.0%
2018-38	2.0%	1.5%	2.4%	4.2%
Source: IHS Global Insight				

TABLE 3

INTERNATIONAL GDP FORECASTS BY TRAVEL REGION

CALENDAR YEAR	GROSS DOMESTIC PRODUCT (In Billions of 2010 U.S. Dollars)					WORLD
	CANADA	EUROPE / AFRICA / MIDDLE EAST	LATIN AMERICA / CARIBBEAN / MEXICO	JAPAN / PACIFIC BASIN / CHINA / OTHER ASIA / AUSTRALIA / NEW ZEALAND		
<u>Historical</u>						
2010	1,614	25,097	5,204	19,056	65,935	
2015	1,803	27,347	5,790	23,925	75,537	
2016	1,828	27,900	5,715	24,978	77,341	
2017E	1,882	28,601	5,788	26,165	79,737	
<u>Forecast</u>						
2018	1,928	29,309	5,897	27,380	82,275	
2023	2,141	32,756	6,824	34,071	95,466	
2028	2,358	36,351	7,942	41,756	109,954	
2033	2,588	40,114	9,230	49,665	125,382	
2038	2,845	44,143	10,729	58,186	142,187	
<u>Avg Annual Growth</u>						
2010-17	2.2%	1.9%	1.5%	4.6%	2.8%	
2017-18	2.4%	2.5%	1.9%	4.6%	3.2%	
2018-28	2.0%	2.2%	3.0%	4.3%	2.9%	
2018-38	2.0%	2.1%	3.0%	3.8%	2.8%	
Source: Global Insight website, GDP Components Tables (Interim Forecast, Monthly)						

TABLE 4

INTERNATIONAL GDP FORECASTS – SELECTED AREAS/COUNTRIES

CALENDAR YEAR	GROSS DOMESTIC PRODUCT (In Billions of 2010 U.S. Dollars)				
	NORTH AMERICA (NAFTA)	EUROZONE	UNITED KINGDOM	JAPAN	CHINA
<u>Historical</u>					
2010	17,636	12,634	2,441	5,701	6,082
2015	19,700	13,136	2,705	5,998	8,885
2016	20,005	13,370	2,758	6,054	9,483
2017E	20,467	13,702	2,806	6,162	10,132
<u>Forecast</u>					
2018	21,002	14,019	2,840	6,239	10,798
2023	23,291	15,166	3,099	6,517	14,509
2028	25,593	16,241	3,404	6,838	18,781
2033	28,317	17,324	3,731	7,117	22,917
2038	31,384	18,438	4,084	7,369	27,170
<u>Avg Annual Growth</u>					
2010-17	2.1%	1.2%	2.0%	1.1%	7.6%
2017-18	2.6%	2.3%	1.2%	1.2%	6.6%
2018-28	2.0%	1.5%	1.8%	0.9%	5.7%
2018-38	2.0%	1.4%	1.8%	0.8%	4.7%
Source: Global Insight website, GDP Components Tables (Interim Forecast, Monthly)					

TABLE 5

U.S. COMMERCIAL AIR CARRIERS¹

TOTAL SCHEDULED U.S. PASSENGER TRAFFIC

FISCAL YEAR	REVENUE PASSENGER ENPLANEMENTS (Millions)			REVENUE PASSENGER MILES (Billions)		
	DOMESTIC	INTERNATIONAL	TOTAL	DOMESTIC	INTERNATIONAL	TOTAL
<u>Historical</u>						
2010	635	77	712	555	231	786
2015	696	90	787	629	261	890
2016	726	93	820	663	265	928
2017E	743	97	840	683	271	955
<u>Forecast</u>						
2018	778	102	880	719	282	1,001
2023	844	119	964	792	337	1,128
2028	909	140	1,050	864	394	1,258
2033	995	165	1,159	958	459	1,417
2038	1,090	194	1,284	1,064	532	1,596
<u>Avg Annual Growth</u>						
2010-17	2.3%	3.3%	2.4%	3.0%	2.3%	2.8%
2017-18	4.7%	5.0%	4.7%	5.2%	4.0%	4.9%
2018-28	1.6%	3.3%	1.8%	1.9%	3.4%	2.3%
2018-38	1.7%	3.3%	1.9%	2.0%	3.2%	2.4%

Source: Forms 41 and 298-C, U.S. Department of Transportation.

¹Sum of U.S. Mainline and Regional Air Carriers.

TABLE 6

U.S. COMMERCIAL AIR CARRIERS¹

SCHEDULED PASSENGER CAPACITY, TRAFFIC, AND LOAD FACTORS

FISCAL YEAR	DOMESTIC			INTERNATIONAL			SYSTEM		
	ASMs (BIL)	RPMs (BIL)	% LOAD FACTOR	ASMs (BIL)	RPMs (BIL)	% LOAD FACTOR	ASMs (BIL)	RPMs (BIL)	% LOAD FACTOR
<u>Historical</u>									
2010	679	555	81.7	281	231	82.1	961	786	81.8
2015	744	629	84.5	323	261	80.7	1,067	890	83.4
2016	783	663	84.7	329	265	80.6	1,112	928	83.5
2017E	809	683	84.5	335	271	81.0	1,144	955	83.5
<u>Forecast</u>									
2018	849	719	84.7	348	282	81.1	1,197	1,001	83.7
2023	924	792	85.7	415	337	81.1	1,340	1,128	84.2
2028	1,003	864	86.2	486	394	81.1	1,489	1,258	84.5
2033	1,108	958	86.4	566	459	81.1	1,674	1,417	84.6
2038	1,228	1,064	86.6	656	532	81.2	1,884	1,596	84.7
<u>Avg Annual Growth</u>									
2010-17	2.5%	3.0%		2.5%	2.3%		2.5%	2.8%	
2017-18	4.9%	5.2%		4.0%	4.0%		4.6%	4.9%	
2018-28	1.7%	1.9%		3.4%	3.4%		2.2%	2.3%	
2018-38	1.9%	2.0%		3.2%	3.2%		2.3%	2.4%	

Source: Forms 41 and 298-C, U.S. Department of Transportation.

¹Sum of U.S. Mainline and Regional Air Carriers.

TABLE 7

U.S. COMMERCIAL AIR CARRIERS¹

TOTAL SCHEDULED U.S. INTERNATIONAL PASSENGER TRAFFIC

FISCAL YEAR	REVENUE PASSENGER ENPLANEMENTS				REVENUE PASSENGER MILES			
	LATIN		PACIFIC	TOTAL	LATIN		PACIFIC	TOTAL
	ATLANTIC	AMERICA			ATLANTIC	AMERICA		
	(Mil)	(Mil)	(Mil)	(Mil)	(Bil)	(Bil)	(Bil)	(Bil)
<u>Historical</u>								
2010	25	40	13	77	109	63	59	231
2015	25	52	14	90	107	83	71	261
2016	24	55	14	93	105	87	73	265
2017E	25	58	14	97	106	90	75	271
<u>Forecast</u>								
2018	26	62	14	102	109	96	77	282
2023	30	73	16	119	133	115	89	337
2028	34	88	18	140	151	142	101	394
2033	38	106	20	165	171	173	115	459
2038	43	128	23	194	192	210	130	532
<u>Avg Annual Growth</u>								
2010-17	0.2%	5.5%	1.1%	3.3%	-0.3%	5.2%	3.4%	2.3%
2017-18	3.0%	6.9%	0.8%	5.0%	2.5%	6.2%	3.4%	4.0%
2018-28	2.9%	3.6%	2.5%	3.3%	3.3%	4.0%	2.7%	3.4%
2018-38	2.6%	3.7%	2.5%	3.3%	2.9%	4.0%	2.6%	3.2%

Source: Forms 41 and 298-C, U.S. Department of Transportation.

¹Sum of U.S. Mainline and Regional Air Carriers.

TABLE 8

U.S. AND FOREIGN FLAG CARRIERS

TOTAL PASSENGER TRAFFIC TO/FROM THE UNITED STATES

CALENDAR YEAR	TOTAL PASSENGERS BY WORLD TRAVEL AREA (Millions)				
	ATLANTIC	LATIN AMERICA	PACIFIC	U.S./CANADA TRANSBORDER	TOTAL
<u>Historical</u>					
2010	56	53	27	22	158
2015	70	75	36	27	208
2016	75	79	39	28	220
2017E	79	82	41	29	232
<u>Forecast</u>					
2018	84	87	43	30	244
2023	99	99	53	36	288
2028	117	119	64	43	344
2033	137	145	76	50	409
2038	159	178	89	60	486
<u>Avg Annual Growth</u>					
2010-17	5.1%	6.4%	6.2%	4.2%	5.6%
2017-18	5.9%	5.1%	4.7%	4.3%	5.2%
2018-28	3.4%	3.2%	4.1%	3.5%	3.5%
2018-38	3.3%	3.7%	3.7%	3.4%	3.5%

Source: US Customs & Border Protection data processed and released by Department of Commerce; data also received from Transport Canada.

TABLE 9

U.S. COMMERCIAL AIR CARRIERS' FORECAST ASSUMPTIONS¹

SEATS PER AIRCRAFT MILE AND PASSENGER TRIP LENGTH

FISCAL YEAR	AVERAGE SEATS PER AIRCRAFT MILE			AVERAGE PASSENGER TRIP LENGTH		
	DOMESTIC (Seats/Mile)	INTERNATIONA L (Seats/Mile)	SYSTEM (Seats/Mile)	DOMESTIC (Miles)	INTERNATIONA L (Miles)	SYSTEM (Miles)
<u>Historical</u>						
2010	121.8	216.4	139.7	874.8	2,988.0	1,104.2
2015	131.5	214.8	149.0	902.7	2,892.6	1,131.0
2016	134.8	214.8	151.5	913.2	2,833.7	1,132.2
2017E	137.9	216.7	154.3	919.1	2,798.7	1,135.9
<u>Forecast</u>						
2018	139.3	216.8	155.5	924.3	2,770.6	1,137.9
2023	143.0	219.6	160.3	937.7	2,824.6	1,171.1
2028	145.8	221.3	164.1	950.3	2,808.0	1,198.9
2033	148.3	222.8	167.2	963.0	2,784.4	1,222.0
2038	150.9	224.4	170.3	975.9	2,747.2	1,243.3

Source: Forms 41 and 298-C, U.S. Department of Transportation.

¹Sum of U.S. Mainline and Regional Air Carriers.

TABLE 10

**U. S. MAINLINE AIR CARRIERS
SCHEDULED PASSENGER TRAFFIC**

FISCAL YEAR	REVENUE PASSENGER ENPLANEMENTS (Millions)			REVENUE PASSENGER MILES (Billions)		
	DOMESTIC	INTERNATIONAL	SYSTEM	DOMESTIC	INTERNATIONAL	SYSTEM
<u>Historical</u>						
2010	473	75	548	480	230	710
2015	543	87	630	556	259	815
2016	575	90	665	590	262	852
2017E	595	93	689	612	269	881
<u>Forecast</u>						
2018	627	98	725	646	280	926
2023	682	115	797	711	334	1,045
2028	734	136	871	776	391	1,167
2033	803	160	964	859	456	1,315
2038	880	189	1,069	954	528	1,482
<u>Avg Annual Growth</u>						
2010-17	3.3%	3.3%	3.3%	3.5%	2.3%	3.1%
2017-18	5.3%	5.2%	5.3%	5.6%	4.0%	5.1%
2018-28	1.6%	3.3%	1.8%	1.8%	3.4%	2.3%
2018-38	1.7%	3.3%	2.0%	2.0%	3.2%	2.4%
Source: Form 41, U.S. Department of Transportation.						

TABLE 11

U.S. MAINLINE AIR CARRIERS

SCHEDULED PASSENGER CAPACITY, TRAFFIC, AND LOAD FACTORS

FISCAL YEAR	DOMESTIC			INTERNATIONAL			SYSTEM		
	ASMs (BIL)	RPMs (BIL)	% LOAD FACTOR	ASMs (BIL)	RPMs (BIL)	% LOAD FACTOR	ASMs (BIL)	RPMs (BIL)	% LOAD FACTOR
<u>Historical</u>									
2010	581	480	82.7	279	230	82.2	860	710	82.5
2015	653	556	85.1	321	259	80.8	973	815	83.7
2016	692	590	85.3	325	262	80.7	1,017	852	83.8
2017E	718	612	85.2	331	269	81.1	1,049	881	83.9
<u>Forecast</u>									
2018	756	646	85.5	345	280	81.1	1,100	926	84.1
2023	823	711	86.4	412	334	81.1	1,235	1,045	84.6
2028	893	776	86.9	482	391	81.2	1,375	1,167	84.9
2033	986	859	87.2	561	456	81.2	1,547	1,315	85.0
2038	1,091	954	87.4	651	528	81.2	1,742	1,482	85.1
<u>Avg Annual Growth</u>									
2010-17	3.1%	3.5%		2.5%	2.3%	-0.2%	2.9%	3.1%	
2017-18	5.3%	5.6%		4.0%	4.0%	0.0%	4.9%	5.1%	
2018-28	1.7%	1.8%		3.4%	3.4%	0.0%	2.3%	2.3%	
2018-38	1.9%	2.0%		3.2%	3.2%	0.0%	2.3%	2.4%	
Source: Form 41, U.S. Department of Transportation.									

TABLE 12

U.S. MAINLINE AIR CARRIERS

SCHEDULED INTERNATIONAL PASSENGER ENPLANEMENTS

FISCAL YEAR	REVENUE PASSENGER ENPLANEMENTS (MIL)			
	ATLANTIC	LATIN AMERICA	PACIFIC	TOTAL
<u>Historical</u>				
2010	24.5	37.2	12.9	74.6
2015	24.6	48.6	14.0	87.2
2016	24.4	51.5	14.0	89.9
2017E	24.8	54.7	13.9	93.5
<u>Forecast</u>				
2018	25.6	58.7	14.1	98.3
2023	30.5	69.0	16.0	115.4
2028	34.2	84.2	18.0	136.4
2033	38.2	101.9	20.4	160.4
2038	42.7	123.2	22.9	188.9
<u>Avg Annual Growth</u>				
2010-17	0.2%	5.7%	1.1%	3.3%
2017-18	3.0%	7.2%	0.8%	5.2%
2018-28	2.9%	3.7%	2.5%	3.3%
2018-38	2.6%	3.8%	2.5%	3.3%
Source: Form 41, U.S. Department of Transportation.				

TABLE 13

U.S. MAINLINE AIR CARRIERS

SCHEDULED PASSENGER CAPACITY, TRAFFIC, AND LOAD FACTORS
BY INTERNATIONAL TRAVEL REGIONS

FISCAL YEAR	ATLANTIC			LATIN AMERICA			PACIFIC			INTERNATIONAL		
	ASMs (BIL)	RPMs (BIL)	% LOAD FACTOR	ASMs (BIL)	RPMs (BIL)	% LOAD FACTOR	ASMs (BIL)	RPMs (BIL)	% LOAD FACTOR	ASMs (BIL)	RPMs (BIL)	% LOAD FACTOR
<u>Historical</u>												
2010	131	109	82.9	78	62	79.2	70	59	84.1	279	230	82.2
2015	133	107	80.0	101	81	80.3	86	71	82.5	321	259	80.8
2016	134	105	78.0	104	85	81.4	87	73	83.9	325	262	80.7
2017E	134	106	79.5	107	88	82.3	91	75	82.2	331	269	81.1
<u>Forecast</u>												
2018	137	109	79.5	113	93	82.3	94	77	82.2	345	280	81.1
2023	167	133	79.5	137	112	82.3	108	89	82.2	412	334	81.1
2028	190	151	79.5	169	139	82.3	123	101	82.2	482	391	81.2
2033	215	171	79.5	207	170	82.3	140	115	82.2	561	456	81.2
2038	242	192	79.5	251	207	82.3	158	130	82.2	651	528	81.2
<u>Avg Annual Growth</u>												
2010-17	0.3%	-0.3%		4.6%	5.1%		3.7%	3.4%		2.5%	2.3%	
2017-18	2.5%	2.5%		6.4%	6.4%		3.4%	3.4%		4.0%	4.0%	
2018-28	3.3%	3.3%		4.1%	4.1%		2.7%	2.7%		3.4%	3.4%	
2018-38	2.9%	2.9%		4.1%	4.1%		2.6%	2.6%		3.2%	3.2%	

Source: Form 41, U.S. Department of Transportation.

TABLE 14

U.S. MAINLINE AIR CARRIER FORECAST ASSUMPTIONS

SEATS PER AIRCRAFT MILE

FISCAL YEAR	DOMESTIC (Seats/Mile)	INTERNATIONAL			TOTAL (Seats/Mile)	SYSTEM (Seats/Mile)
		ATLANTIC (Seats/Mile)	LATIN AMERICA (Seats/Mile)	PACIFIC (Seats/Mile)		
<u>Historical</u>						
2010	152.0	231.7	171.7	287.2	220.9	169.2
2015	157.7	237.0	173.9	272.1	219.5	173.8
2016	159.9	241.7	174.1	266.6	219.8	175.1
2017E	162.3	243.4	176.4	267.5	221.8	177.3
<u>Forecast</u>						
2018	162.9	243.9	176.9	268.2	221.8	177.7
2023	165.9	246.4	179.4	272.0	224.2	181.6
2028	168.5	248.9	181.9	275.7	225.5	184.8
2033	170.6	251.4	184.4	279.5	226.8	187.5
2038	172.7	253.9	186.9	283.2	228.1	189.9
Source: Form 41, U.S. Department of Transportation.						

TABLE 15

U.S. MAINLINE AIR CARRIER FORECAST ASSUMPTIONS

AVERAGE PASSENGER TRIP LENGTH

FISCAL YEAR	DOMESTIC (Miles)	INTERNATIONAL			TOTAL (Miles)	SYSTEM (Miles)
		ATLANTIC (Miles)	LATIN AMERICA (Miles)	PACIFIC (Miles)		
<u>Historical</u>						
2010	1,015	4,433	1,660	4,587	3,077	1,296
2015	1,023	4,336	1,669	5,080	2,969	1,292
2016	1,027	4,291	1,650	5,176	2,917	1,283
2017E	1,028	4,278	1,602	5,373	2,875	1,279
<u>Forecast</u>						
2018	1,031	4,256	1,589	5,507	2,844	1,276
2023	1,044	4,351	1,629	5,566	2,893	1,311
2028	1,057	4,425	1,650	5,610	2,869	1,341
2033	1,070	4,474	1,668	5,641	2,840	1,365
2038	1,083	4,497	1,676	5,658	2,798	1,386

Source: Form 41, U.S. Department of Transportation.

TABLE 16

U.S. MAINLINE AIR CARRIER FORECAST ASSUMPTIONS

PASSENGER YIELDS

FISCAL YEAR	REVENUE PER PASSENGER MILE					
	DOMESTIC		INTERNATIONAL		SYSTEM	
	CURRENT \$ (Cents)	FY 2017 \$ (Cents)	CURRENT \$ (Cents)	FY 2017 \$ (Cents)	CURRENT \$ (Cents)	FY 2017 \$ (Cents)
<u>Historical</u>						
2010	12.62	14.15	12.84	14.40	12.69	14.23
2015	14.79	15.23	14.16	14.59	14.59	15.03
2016	13.96	14.24	12.88	13.14	13.62	13.90
2017E	13.89	13.89	12.93	12.93	13.60	13.60
<u>Forecast</u>						
2018	13.90	13.64	13.10	12.86	13.66	13.41
2023	15.56	13.58	14.31	12.49	15.16	13.23
2028	17.23	13.30	15.71	12.12	16.72	12.90
2033	18.95	12.94	17.25	11.77	18.36	12.53
2038	20.73	12.55	18.84	11.41	20.05	12.14
<u>Avg Annual Growth</u>						
2010-17	1.4%	-0.3%	0.1%	-1.5%	1.0%	-0.6%
2017-18	0.0%	-1.8%	1.3%	-0.6%	0.4%	-1.4%
2018-28	2.2%	-0.3%	1.8%	-0.6%	2.0%	-0.4%
2018-38	2.0%	-0.4%	1.8%	-0.6%	1.9%	-0.5%
Source: Form 41, U.S. Department of Transportation.						

TABLE 17

U.S. MAINLINE AIR CARRIER FORECAST ASSUMPTIONS

INTERNATIONAL PASSENGER YIELDS BY REGION

FISCAL YEAR	REVENUE PER PASSENGER MILE							
	ATLANTIC		LATIN AMERICA		PACIFIC		TOTAL INTERNATIONAL	
	CURRENT \$ (Cents)	FY 2017 \$ (Cents)	CURRENT \$ (Cents)	FY 2017 \$ (Cents)	CURRENT \$ (Cents)	FY 2017 \$ (Cents)	CURRENT \$ (Cents)	FY 2017 \$ (Cents)
<u>Historical</u>								
2010	12.73	14.28	13.33	14.95	12.50	14.02	12.84	14.40
2015	14.64	15.08	14.38	14.81	13.20	13.59	14.16	14.59
2016	13.83	14.11	12.72	12.98	11.69	11.94	12.88	13.14
2017E	13.58	13.58	13.50	13.50	11.36	11.36	12.93	12.93
<u>Forecast</u>								
2018	13.76	13.51	13.65	13.40	11.51	11.31	13.10	12.86
2023	15.10	13.17	14.74	12.86	12.60	10.99	14.31	12.49
2028	16.65	12.85	16.01	12.36	13.89	10.72	15.71	12.12
2033	18.35	12.53	17.42	11.89	15.34	10.47	17.25	11.77
2038	20.18	12.22	18.82	11.39	16.90	10.23	18.84	11.41
<u>Avg Annual Growth</u>								
2010-17	0.9%	-0.7%	0.2%	-1.4%	-1.4%	-3.0%	0.1%	-1.5%
2017-18	1.3%	-0.5%	1.1%	-0.7%	1.4%	-0.5%	1.3%	-0.6%
2018-28	1.9%	-0.5%	1.6%	-0.8%	1.9%	-0.5%	1.8%	-0.6%
2018-38	1.9%	-0.5%	1.6%	-0.8%	1.9%	-0.5%	1.8%	-0.6%
Source: Form 41, U.S. Department of Transportation.								

TABLE 18

U.S. MAINLINE AIR CARRIER FORECAST ASSUMPTIONS

JET FUEL PRICES

FISCAL YEAR	DOMESTIC		INTERNATIONAL		SYSTEM	
	CURRENT \$ (Cents)	FY 2017 \$ (Cents)	CURRENT \$ (Cents)	FY 2017 \$ (Cents)	CURRENT \$ (Cents)	FY 2017 \$ (Cents)
<u>Historical</u>						
2010	219.16	240.87	220.12	241.93	219.49	241.23
2015	207.29	209.21	211.77	213.73	208.96	210.90
2016	146.17	146.17	147.01	147.01	146.47	146.47
2017E	162.31	162.31	160.79	160.79	161.46	161.46
<u>Forecast</u>						
2018	174.76	171.58	173.12	169.97	173.84	170.68
2023	253.68	221.35	251.31	219.27	252.36	220.19
2028	314.56	242.77	311.62	240.50	312.92	241.50
2033	362.34	247.42	358.95	245.10	360.44	246.12
2038	402.42	243.70	398.65	241.42	400.31	242.43
<u>Avg Annual Growth</u>						
2010-17	-4.2%	-5.5%	-4.4%	-5.7%	-4.3%	-5.6%
2017-18	7.7%	5.7%	7.7%	5.7%	7.7%	5.7%
2018-28	6.1%	3.5%	6.1%	3.5%	6.1%	3.5%
2018-38	4.3%	1.8%	4.3%	1.8%	4.3%	1.8%
Source: Form 41, U.S. Department of Transportation						

TABLE 19

U.S. COMMERCIAL AIR CARRIERS

AIR CARGO REVENUE TON MILES^{1, 2, 3}

FISCAL YEAR	ALL-CARGO CARRIER RTMS (Millions)			PASSENGER CARRIER RTMS (Millions)			TOTAL RTMS (Millions)		
	DOMESTIC	INT'L.	TOTAL	DOMESTIC	INT'L.	TOTAL	DOMESTIC	INT'L.	TOTAL
<u>Historical</u>									
2010	11,243	16,733	27,976	1,580	6,332	7,912	12,823	23,065	35,888
2015	11,636	16,008	27,643	1,453	6,704	8,157	13,089	22,712	35,801
2016	11,851	15,687	27,538	1,469	6,476	7,944	13,320	22,163	35,483
2017E	13,031	17,569	30,600	1,605	6,967	8,572	14,636	24,536	39,172
<u>Forecast</u>									
2018	14,069	19,265	33,334	1,719	7,527	9,247	15,788	26,792	42,580
2023	15,728	25,837	41,565	1,848	9,361	11,209	17,576	35,198	52,774
2028	16,810	32,841	49,652	1,897	11,003	12,900	18,707	43,844	62,551
2033	18,798	41,437	60,235	2,034	12,797	14,831	20,832	54,233	75,065
2038	20,829	51,902	72,731	2,177	14,721	16,898	23,006	66,623	89,629
<u>Avg Annual Growth</u>									
2010-17	2.1%	0.7%	1.3%	0.2%	1.4%	1.2%	1.9%	0.9%	1.3%
2017-18	8.0%	9.7%	8.9%	7.1%	8.0%	7.9%	7.9%	9.2%	8.7%
2018-28	1.8%	5.5%	4.1%	1.0%	3.9%	3.4%	1.7%	5.0%	3.9%
2018-38	2.0%	5.1%	4.0%	1.2%	3.4%	3.1%	1.9%	4.7%	3.8%

Source: Form 41, U.S. Department of Transportation

¹Includes freight/express and mail revenue ton miles on mainline air carriers and regionals/commuters.

²Domestic figures from 2000 through 2002 exclude Airborne Express, Inc.; international figures for 2003 and beyond include new reporting of contract service by U.S. carriers for foreign flag carriers.

³Domestic figures from 2003 and beyond include Airborne Express, Inc.

TABLE 20

U.S. COMMERCIAL AIR CARRIERS

INTERNATIONAL AIR CARGO REVENUE TON MILES BY REGION^{1, 2}

FISCAL YEAR	ATLANTIC (MILLIONS)	LATIN AMERICA (MILLIONS)	PACIFIC (MILLIONS)	OTHER INTERNATIONAL (MILLIONS)	TOTAL (MILLIONS)
<u>Historical</u>					
2010	6,865	1,991	8,348	5,860	23,065
2015	6,669	1,639	9,021	5,383	22,712
2016	6,601	1,566	8,761	5,253	22,181
2017E	7,061	1,689	9,939	5,848	24,536
<u>Forecast</u>					
2018	7,475	1,817	11,097	6,404	26,792
2023	9,203	2,030	14,706	9,259	35,198
2028	10,849	2,084	18,399	12,513	43,844
2033	12,676	2,178	23,096	16,283	54,233
2038	14,771	2,285	28,729	20,837	66,623
<u>Avg Annual Growth</u>					
2010-17	0.4%	-2.3%	2.5%	0.0%	0.9%
2017-18	5.9%	7.6%	11.7%	9.5%	9.2%
2018-28	3.8%	1.4%	5.2%	6.9%	5.0%
2018-38	3.5%	1.2%	4.9%	6.1%	4.7%
Source: Form 41, U.S. Department of Transportation					

¹Includes freight/express and mail revenue ton miles on mainline air carriers and regionals/commuters.

²Figures for 2003 and beyond include new reporting of contract service by U.S. carriers for foreign flag carriers.

TABLE 21

U.S. MAINLINE AIR CARRIERS

PASSENGER JET AIRCRAFT

CALENDAR YEAR	LARGE NARROWBODY				LARGE WIDEBODY				LARGE JETS	REGIONAL JETS	TOTAL JETS
	2 ENGINE	3 ENGINE	4 ENGINE	TOTAL	2 ENGINE	3 ENGINE	4 ENGINE	TOTAL			
<u>Historical</u>											
2010	3,120	8	1	3,129	470	9	43	522	3,651	71	3,722
2015	3,319	2	0	3,321	492	0	31	523	3,844	99	3,943
2016	3,457	2	0	3,459	490	0	27	517	3,976	97	4,073
2017E	3,539	1		3,540	517	0	0	517	4,057	98	4,155
<u>Forecast</u>											
2018	3,616	1	0	3,617	526	0	0	526	4,143	98	4,241
2023	3,710	1	0	3,711	601	0	0	601	4,312	80	4,392
2028	3,844	0	0	3,844	619	0	0	619	4,463	79	4,542
2033	4,012	0	0	4,012	718	0	0	718	4,730	78	4,808
2038	4,190	0	0	4,190	833	0	0	833	5,023	78	5,101
<u>Avg Annual Growth</u>											
2010-17	1.8%	-25.7%	N/A	1.8%	1.4%	N/A	-100.0%	-0.1%	1.5%	4.7%	1.6%
2017-18	2.2%	0.0%	N/A	2.2%	1.7%	N/A	N/A	1.7%	2.1%	0.0%	2.1%
2018-28	0.6%	N/A	N/A	0.6%	1.6%	N/A	N/A	1.6%	0.7%	-2.1%	0.7%
2018-38	0.7%	N/A	N/A	0.7%	2.3%	N/A	N/A	2.3%	1.0%	-1.1%	0.9%

TABLE 22

U.S. MAINLINE AIR CARRIERS

CARGO JET AIRCRAFT

CALENDAR YEAR	LARGE NARROWBODY				LARGE WIDEBODY				TOTAL
	2 ENGINE	3 ENGINE	4 ENGINE	TOTAL	2 ENGINE	3 ENGINE	4 ENGINE	TOTAL	
<u>Historical</u>									
2010	153	104	31	288	265	200	97	562	850
2015	228	22	2	252	309	156	72	537	789
2016	235	19	2	256	328	149	77	554	810
2017E	243	16	2	261	360	149	85	594	855
<u>Forecast</u>									
2018	246	15	2	263	365	148	82	595	858
2023	254	11	2	267	415	109	97	621	888
2028	265	2	0	267	488	76	113	677	944
2033	270	0	0	270	621	37	129	787	1,057
2038	272	0	0	272	759	11	136	906	1,178
<u>Avg Annual Growth</u>									
2010-17	6.8%	-23.5%	N/A	-1.4%	4.5%	-4.1%	-1.9%	0.8%	0.1%
2017-18	1.2%	-6.3%	N/A	0.8%	1.4%	-0.7%	-3.5%	0.2%	0.4%
2018-28	0.7%	N/A	N/A	0.2%	2.9%	-6.4%	3.3%	1.3%	1.0%
2018-38	0.5%	N/A	N/A	0.2%	3.7%	-12.2%	2.6%	2.1%	1.6%

TABLE 23

TOTAL JET FUEL AND AVIATION GASOLINE FUEL CONSUMPTION

U.S. CIVIL AVIATION AIRCRAFT
(Millions of Gallons)

FISCAL YEAR	JET FUEL					AVIATION GASOLINE			TOTAL FUEL CONSUMED
	U.S. AIR CARRIERS ^{1,2}		GENERAL AVIATION	GENERAL TOTAL	AIR CARRIER	GENERAL AVIATION	TOTAL		
	DOMESTIC	INT'L.						TOTAL	
<u>Historical</u>									
2010	11,973	6,290	18,263	1,435	19,698	2	221	223	19,921
2015	12,682	6,481	19,163	1,383	20,545	2	196	198	20,743
2016	13,337	6,363	19,699	1,437	21,136	2	206	208	21,345
2017E	13,642	6,526	20,168	1,535	21,703	2	209	211	21,914
<u>Forecast</u>									
2018	14,169	6,717	20,886	1,615	22,502	2	207	209	22,711
2023	14,681	7,629	22,311	1,832	24,143	2	194	196	24,339
2028	15,157	8,496	23,653	1,967	25,620	2	188	190	25,810
2033	15,935	9,407	25,342	2,105	27,447	2	185	187	27,634
2038	16,804	10,374	27,178	2,247	29,424	2	184	186	29,610
<u>Avg Annual Growth</u>									
2010-17	1.9%	0.5%	1.4%	1.0%	1.4%	0.0%	-0.7%	-0.7%	1.4%
2017-18	3.9%	2.9%	3.6%	5.2%	3.7%	0.0%	-1.0%	-1.0%	3.6%
2018-28	0.7%	2.4%	1.3%	2.0%	1.3%	0.0%	-1.0%	-1.0%	1.3%
2018-38	0.9%	2.2%	1.3%	1.7%	1.4%	0.0%	-0.6%	-0.6%	1.3%

Source: Air carrier jet fuel, Form 41, U.S. Department of Transportation; all others, FAA APO estimates.

¹Includes both passenger (mainline and regional air carrier) and cargo carriers.

²Forecast assumes 1.0% annual improvement in available seat miles per gallon for U.S. Commercial Air Carrier

TABLE 24

U.S. REGIONAL CARRIER FORECAST ASSUMPTIONS

FISCAL YEAR	AVERAGE SEATS PER AIRCRAFT MILE			AVERAGE PASSENGER TRIP LENGTH			REVENUE PER PASSENGER MILE**	
	DOMESTIC (Seats/Mile)	INT'L (Seats/Mile)	TOTAL (Seats/Mile)	DOMESTIC (Miles)	INT'L (Miles)	TOTAL (Miles)	CURRENT \$ (Cents)	2017 \$ (Cents)
<u>Historical</u>								
2010	56.1	53.2	56.0	464	503	465	15.74	17.65
2015	59.9	62.6	60.0	475	695	480	10.94	11.27
2016	61.5	68.8	61.8	481	721	487	11.32	11.56
2017E	63.0	66.1	63.1	482	717	487	11.29	11.29
<u>Forecast</u>								
2018	64.0	66.4	64.0	484	720	489	11.30	11.09
2023	67.2	67.9	67.2	494	735	500	12.64	11.03
2028	69.7	69.4	69.7	504	750	510	13.98	10.79
2033	72.3	70.9	72.3	514	765	520	15.37	10.49
2038	75.1	72.4	75.0	525	780	530	16.80	10.17
<u>Avg Annual Growth</u>								
2010-17	1.7%	3.1%	1.7%	0.5%	5.2%	0.7%	-4.6%	-6.2%
2017-18	1.5%	0.5%	1.5%	0.4%	0.4%	0.4%	0.0%	-1.8%
2018-28	0.9%	0.4%	0.9%	0.4%	0.4%	0.4%	2.2%	-0.3%
2018-38	0.8%	0.4%	0.8%	0.4%	0.4%	0.4%	2.0%	-0.4%

Source: Form 41 and 298C, U.S. Department of Transportation.

** Reporting carriers.

TABLE 25

U.S. REGIONAL CARRIERS
SCHEDULED PASSENGER TRAFFIC
(In Millions)

FISCAL YEAR	REVENUE PASSENGERS			REVENUE PASSENGER MILES		
	DOMESTIC	INTERNATIONAL	TOTAL	DOMESTIC	INTERNATIONAL	TOTAL
<u>Historical</u>						
2010	162	3	164	75,030	1,347	76,377
2015	153	3	156	72,754	2,116	74,870
2016	152	4	155	72,964	2,556	75,520
2017E	148	3	152	71,502	2,463	73,965
<u>Forecast</u>						
2018	151	4	155	73,236	2,522	75,759
2023	163	4	166	80,390	2,769	83,159
2028	175	4	179	88,216	3,038	91,254
2033	191	4	196	98,395	3,389	101,784
2038	210	5	215	109,962	3,787	113,750
<u>Avg Annual Growth</u>						
2010-17	-1.2%	3.6%	-1.1%	-0.7%	9.0%	-0.5%
2017-18	2.0%	2.0%	2.0%	2.4%	2.4%	2.4%
2018-28	1.5%	1.5%	1.5%	1.9%	1.9%	1.9%
2018-38	1.6%	1.6%	1.6%	2.1%	2.1%	2.1%

Source: Form 41 and 298C, U.S. Department of Transportation.

TABLE 26

U.S. REGIONAL CARRIERS

SCHEDULED PASSENGER CAPACITY, TRAFFIC, AND LOAD FACTORS

YEAR	DOMESTIC			INTERNATIONAL			TOTAL		
	ASMs (MIL)	RPMs (MIL)	% LOAD FACTOR	ASMs (MIL)	RPMs (MIL)	% LOAD FACTOR	ASMs (MIL)	RPMs (MIL)	% LOAD FACTOR
<u>Historical</u>									
2010	98,461	75,030	76.2	1,857	1,347	72.5	100,318	76,377	76.1
2015	90,681	72,754	80.2	2,819	2,116	75.0	93,500	74,870	80.1
2016	91,158	72,964	80.0	3,506	2,556	72.9	94,665	75,520	79.8
2017E	90,853	71,502	78.7	3,374	2,463	73.0	94,226	73,965	78.5
<u>Forecast</u>									
2018	92,763	73,236	79.0	3,445	2,522	73.2	96,207	75,759	78.7
2023	100,829	80,390	79.7	3,744	2,769	73.9	104,573	83,159	79.5
2028	110,127	88,216	80.1	4,089	3,038	74.3	114,216	91,254	79.9
2033	122,514	98,395	80.3	4,549	3,389	74.5	127,063	101,784	80.1
2038	136,688	109,962	80.4	5,076	3,787	74.6	141,763	113,750	80.2
<u>Avg Annual Growth</u>									
2010-17	-1.1%	-0.7%		8.9%	9.0%	0.1%	-0.9%	-0.5%	
2017-18	2.1%	2.4%		2.1%	2.4%	0.3%	2.1%	2.4%	
2018-28	1.7%	1.9%		1.7%	1.9%	0.1%	1.7%	1.9%	
2018-38	2.0%	2.1%		2.0%	2.1%	0.1%	2.0%	2.1%	
Source: Form 41 and 298C, U.S. Department of Transportation.									

TABLE 27

U.S. REGIONAL CARRIERS

PASSENGER AIRCRAFT

AS OF JANUARY 1	REGIONAL AIRCRAFT									TOTAL FLEET		
	LESS THAN 9 SEATS	10 TO 19 SEATS	20 TO 30 SEATS	31 TO 40 SEATS			OVER 40 SEATS			NON JET	JET	TOTAL
				PROP	JET	TOTAL	PROP	JET	TOTAL			
<u>Historical</u>												
2010	440	92	82	144	28	172	99	1,728	1,827	857	1,756	2,613
2015	346	68	13	32	0	32	57	1,628	1,685	516	1,628	2,144
2016	365	55	0	59	0	59	40	1,637	1,677	519	1,637	2,156
2017E	321	65	10	26	0	26	65	1,644	1,709	487	1,644	2,131
<u>Forecast</u>												
2018	276	63	10	25	0	25	55	1,651	1,706	429	1,651	2,080
2023	220	50	8	20	0	20	53	1,716	1,769	351	1,716	2,067
2028	158	36	6	14	0	14	52	1,663	1,715	266	1,663	1,929
2033	101	23	4	9	0	9	50	1,756	1,806	187	1,756	1,943
2038	39	9	1	4	0	4	48	1,910	1,958	101	1,910	2,011
<u>Avg Annual Growth</u>												
2010-17	-4.4%	-4.8%	-26.0%	-21.7%	N/A	-23.7%	-5.8%	-0.7%	-0.9%	-7.8%	-0.9%	-2.9%
2017-18	-14.0%	-3.1%	N/A	-3.8%	N/A	-3.8%	-15.4%	0.4%	-0.2%	-11.9%	0.4%	-2.4%
2018-28	-5.4%	-5.4%	N/A	-5.6%	N/A	-5.6%	-0.6%	0.1%	0.1%	-4.7%	0.1%	-0.8%
2018-38	-9.3%	-9.3%	N/A	-8.8%	N/A	-8.8%	-0.7%	0.7%	0.7%	-7.0%	0.7%	-0.2%

TABLE 28

ACTIVE GENERAL AVIATION AND AIR TAXI AIRCRAFT

AS OF DEC. 31	FIXED WING						ROTORCRAFT			LIGHT			TOTAL GENERAL AVIATION FLEET	TOTAL PISTONS	TOTAL TURBINES
	PISTON		TOTAL	TURBINE			PISTON	TURBINE	TOTAL	EXPERI- MENTAL**	SPORT AIRCRAFT**	OTHER			
	SINGLE ENGINE	MULTI- ENGINE		TURBO PROP	TURBO JET	TOTAL									
<u>Historical*</u>															
2010	139,519	15,900	155,419	9,369	11,484	20,853	3,588	6,514	10,102	24,784	6,528	5,684	223,370	159,007	27,367
2015	127,887	13,254	141,141	9,712	13,440	23,152	3,286	7,220	10,506	27,922	2,369	4,941	210,031	144,427	30,372
2016	129,652	12,986	142,638	9,779	13,751	23,530	3,344	7,233	10,577	27,585	2,478	4,986	211,794	145,982	30,763
2017E	130,330	12,935	143,265	9,430	14,075	23,505	3,405	7,400	10,805	27,865	2,585	5,025	213,050	146,670	30,905
<u>Forecast</u>															
2018	130,500	12,895	143,395	9,195	14,390	23,585	3,465	7,565	11,030	28,140	2,705	5,050	213,905	146,860	31,150
2023	125,330	12,720	138,050	9,025	16,220	25,245	3,750	8,375	12,125	29,595	3,330	5,045	213,390	141,800	33,620
2028	118,740	12,465	131,205	9,870	18,120	27,990	4,035	9,200	13,235	30,980	3,995	5,060	212,465	135,240	37,190
2033	112,620	12,170	124,790	11,225	20,085	31,310	4,345	10,105	14,450	32,105	4,705	5,060	212,420	129,135	41,415
2038	107,800	11,845	119,645	12,855	22,195	35,050	4,675	11,110	15,785	33,105	5,440	5,065	214,090	124,320	46,160
<u>Avg Annual Growth</u>															
2010-17	-1.0%	-2.9%	-1.2%	0.1%	2.9%	1.7%	-0.7%	1.8%	1.0%	1.7%	-12.4%	-1.7%	-0.7%	-1.1%	1.8%
2017-18	0.1%	-0.3%	0.1%	-2.5%	2.2%	0.3%	1.8%	2.2%	2.1%	1.0%	4.6%	0.5%	0.4%	0.1%	0.8%
2018-28	-0.9%	-0.3%	-0.9%	0.7%	2.3%	1.7%	1.5%	2.0%	1.8%	1.0%	4.0%	0.0%	-0.1%	-0.8%	1.8%
2018-38	-1.0%	-0.4%	-0.9%	1.7%	2.2%	2.0%	1.5%	1.9%	1.8%	0.8%	3.6%	0.0%	0.0%	-0.8%	2.0%

* Source: 2001-2010, 2012-2016, FAA General Aviation and Air Taxi Activity (and Avionics) Surveys.

**Experimental Light-sport category that was previously shown under Sport Aircraft is moved under Experimental Aircraft category, starting in 2012.

Note: An active aircraft is one that has a current registration and was flown at least one hour during the calendar year.

TABLE 29

ACTIVE GENERAL AVIATION AND AIR TAXI HOURS FLOWN
(In Thousands)

AS OF DEC. 31	FIXED WING						ROTORCRAFT			LIGHT			TOTAL GENERAL AVIATION FLEET	TOTAL PISTONS	TOTAL TURBINES
	PISTON		TOTAL	TURBINE		TOTAL	PISTON	TURBINE	TOTAL	EXPERI- MENTAL**	SPORT AIRCRAFT**	OTHER			
	SINGLE ENGINE	MULTI- ENGINE		TURBO PROP	TURBO JET										
<u>Historical*</u>															
2010	12,161	1,818	13,979	2,325	3,375	5,700	794	2,611	3,405	1,226	311	181	24,802	14,773	8,311
2015	11,217	1,608	12,825	2,538	3,837	6,375	798	2,496	3,294	1,295	191	162	24,142	13,623	8,871
2016	11,865	1,683	13,548	2,708	3,847	6,554	780	2,348	3,128	1,224	187	193	24,834	14,328	8,902
2017E	11,878	1,666	13,543	2,674	4,274	6,948	810	2,427	3,237	1,248	197	195	25,369	14,353	9,376
<u>Forecast</u>															
2018	11,765	1,647	13,412	2,642	4,604	7,246	834	2,510	3,344	1,273	208	196	25,679	14,246	9,756
2023	10,608	1,578	12,187	2,621	5,616	8,237	933	2,884	3,817	1,415	269	196	26,120	13,119	11,122
2028	10,021	1,546	11,567	2,863	6,331	9,194	1,009	3,239	4,248	1,556	336	196	27,097	12,576	12,433
2033	9,625	1,545	11,170	3,259	7,067	10,326	1,088	3,593	4,681	1,677	409	197	28,460	12,257	13,919
2038	9,419	1,556	10,976	3,742	7,849	11,591	1,172	3,980	5,152	1,799	490	198	30,206	12,148	15,571
<u>Avg Annual Growth</u>															
2010-17	-0.3%	-1.2%	-0.5%	2.0%	3.4%	2.9%	0.3%	-1.0%	-0.7%	0.3%	-6.3%	1.1%	0.3%	-0.4%	1.7%
2017-18	-0.9%	-1.1%	-1.0%	-1.2%	7.7%	4.3%	3.0%	3.4%	3.3%	2.0%	5.5%	0.5%	1.2%	-0.7%	4.1%
2018-28	-1.6%	-0.6%	-1.5%	0.8%	3.2%	2.4%	1.9%	2.6%	2.4%	2.0%	4.9%	0.0%	0.5%	-1.2%	2.5%
2018-38	-1.1%	-0.3%	-1.0%	1.8%	2.7%	2.4%	1.7%	2.3%	2.2%	1.7%	4.4%	0.1%	0.8%	-0.8%	2.4%

* Source: 2001-2010, 2012-2016, FAA General Aviation and Air Taxi Activity (and Avionics) Surveys.

**Experimental Light-sport category that was previously shown under Sport Aircraft is moved under Experimental Aircraft category, starting in 2012.

Note: An active aircraft is one that has a current registration and was flown at least one hour during the calendar year.

TABLE 30

ACTIVE PILOTS BY TYPE OF CERTIFICATE, EXCLUDING STUDENT PILOTS*

AS OF DEC. 31	RECREA- TIONAL	SPORT PILOT	PRIVATE	COMMERCIAL	AIRLINE TRANSPORT	ROTOR- CRAFT ONLY	GLIDER ONLY	TOTAL LESS STUDENT PILOTS	INSTRUMENT RATED PILOTS ¹
<u>Historical**</u>									
2010	212	3,682	202,020	123,705	142,198	15,377	21,275	508,469	318,001
2015	190	5,482	170,718	101,164	154,730	15,566	19,460	467,310	304,329
2016	175	5,889	162,313	96,081	157,894	15,518	17,991	455,861	302,572
2017	153	6,097	162,455	98,161	159,825	15,355	18,139	460,185	306,652
<u>Forecast</u>									
2018	150	6,385	162,450	96,650	161,300	15,250	18,050	460,235	307,000
2023	125	7,915	157,450	92,000	165,900	15,650	17,650	456,690	308,600
2028	100	9,520	149,600	90,150	171,000	17,100	17,350	454,820	313,000
2033	85	11,050	142,400	89,400	177,100	18,950	17,150	456,135	318,600
2038	65	12,340	136,650	89,150	183,900	21,050	17,100	460,255	325,100
<u>Avg Annual Growth</u>									
2010-17	-4.6%	7.5%	-3.1%	-3.3%	1.7%	0.0%	-2.3%	-1.4%	-0.5%
2017-18	-2.0%	4.7%	0.0%	-1.5%	0.9%	-0.7%	-0.5%	0.0%	0.1%
2018-28	-4.0%	4.1%	-0.8%	-0.7%	0.6%	1.2%	-0.4%	-0.1%	0.2%
2018-38	-4.1%	3.3%	-0.9%	-0.4%	0.7%	1.6%	-0.3%	0.0%	0.3%

** Source: FAA U.S. Civil Airmen Statistics.

*Starting in April 2016, there is no expiration date on the new student pilot certificates. This generates a cumulative increase in the student pilot numbers and breaks the link between student pilot and private pilot or higher level certificates. As the implementation is very new and there is not sufficient data to forecast the student certificates under the new rule, student pilot forecast is suspended and excluded from this table.

¹Instrument rated pilots should not be added to other categories in deriving total.

Note: An active pilot is a person with a pilot certificate and a valid medical certificate.

TABLE 31

GENERAL AVIATION AIRCRAFT FUEL CONSUMPTION

(In Millions of Gallons)

CALENDAR YEAR	FIXED WING				ROTORCRAFT		EXPERI- MENTAL* * / OTHER	LIGHT SPORT**	TOTAL FUEL CONSUMED		
	PISTON		TURBINE		PISTON	TURBINE			AVGAS	JET FUEL	TOTAL
	SINGLE ENGINE	MULTI- ENGINE	TURBO PROP	TURBO JET							
<u>Historical*</u>											
2010	133	54	187	1,123	11	125	22	1	221	1,435	1,656
2015	128	40	191	1,063	10	128	15	1	196	1,383	1,578
2016	137	42	207	1,117	10	113	17	1	206	1,437	1,643
2017E	137	42	203	1,211	10	121	20	1	209	1,535	1,744
<u>Forecast</u>											
2018	135	41	200	1,291	10	124	20	1	207	1,615	1,823
2023	121	39	194	1,498	12	140	21	1	194	1,832	2,026
2028	114	38	207	1,606	12	153	22	2	188	1,967	2,155
2033	108	37	232	1,705	13	167	24	2	185	2,105	2,290
2038	104	38	260	1,801	14	186	25	3	184	2,247	2,430
<u>Avg Annual Growth</u>											
2010-17	0.4%	-3.5%	1.2%	1.1%	-0.8%	-0.5%	-1.2%	N/A	-0.7%	1.0%	0.7%
2017-18	-1.0%	-1.5%	-1.7%	6.6%	2.6%	2.9%	-1.3%	2.4%	-1.0%	5.2%	4.5%
2018-28	-1.7%	-0.9%	0.4%	2.2%	1.8%	2.1%	1.4%	4.7%	-1.0%	2.0%	1.7%
2018-38	-1.3%	-0.4%	1.3%	1.7%	1.7%	2.0%	1.3%	4.3%	-0.6%	1.7%	1.4%

*Source: FAA APO Estimates.

**Experimental Light-sport category that was previously shown under Sport Aircraft is moved under Experimental Aircraft category, starting in 2012.

Note: Detail may not add to total because of independent rounding.

TABLE 32

**TOTAL COMBINED AIRCRAFT OPERATIONS AT AIRPORTS
WITH FAA AND CONTRACT TRAFFIC CONTROL SERVICE
(In Thousands)**

FISCAL YEAR	AIR CARRIER	AIR TAXI/ COMMUTER	GENERAL AVIATION			MILITARY			TOTAL	NUMBER OF TOWERS	
			ITINERANT	LOCAL	TOTAL	ITINERANT	LOCAL	TOTAL		FAA	CONTRACT
<u>Historical</u>											
2010	12,658	9,410	14,864	11,716	26,580	1,309	1,298	2,607	51,255	264	244
2015	13,755	7,895	13,887	11,691	25,578	1,292	1,203	2,495	49,722	264	252
2016	14,417	7,580	13,904	11,632	25,536	1,317	1,145	2,462	49,995	264	252
2017E	15,047	7,179	13,838	11,732	25,570	1,326	1,200	2,526	50,322	264	253
<u>Forecast</u>											
2018	15,677	7,037	13,868	11,939	25,807	1,326	1,200	2,526	51,047	264	253
2023	18,617	5,442	14,040	12,136	26,176	1,326	1,200	2,526	52,761	264	253
2028	20,418	5,672	14,217	12,338	26,555	1,326	1,200	2,526	55,171	264	253
2033	22,336	5,971	14,399	12,547	26,947	1,326	1,200	2,526	57,780	264	253
2038	24,362	6,288	14,587	12,764	27,351	1,326	1,200	2,526	60,527	264	253
<u>Avg Annual Growth</u>											
2010-17	2.5%	-3.8%	-1.0%	0.0%	-0.6%	0.2%	-1.1%	-0.4%	-0.3%		
2017-18	4.2%	-2.0%	0.2%	1.8%	0.9%	0.0%	0.0%	0.0%	1.4%		
2018-28	2.7%	-2.1%	0.2%	0.3%	0.3%	0.0%	0.0%	0.0%	0.8%		
2018-38	2.2%	-0.6%	0.3%	0.3%	0.3%	0.0%	0.0%	0.0%	0.9%		
Source: FAA Air Traffic Activity.											

TABLE 33

TOTAL TRACON OPERATIONS

(In Thousands)

FISCAL YEAR	AIR CARRIER	AIR TAXI/ COMMUTER	GENERAL AVIATION	MILITARY	TOTAL
<u>Historical</u>					
2010	13,174	9,511	13,864	2,438	38,987
2015	13,948	7,861	13,076	2,286	37,171
2016	14,640	7,672	13,090	2,311	37,713
2017E	15,276	7,281	13,276	2,254	38,085
<u>Forecast</u>					
2018	15,902	7,176	13,317	2,254	38,649
2023	18,819	5,351	13,537	2,254	39,961
2028	20,626	5,583	13,841	2,254	42,303
2033	22,550	5,895	14,166	2,254	44,865
2038	24,582	6,226	14,505	2,254	47,567
<u>Avg Annual Growth</u>					
2010-17	2.1%	-3.7%	-0.6%	-1.1%	-0.3%
2017-18	4.1%	-1.4%	0.3%	0.0%	1.5%
2018-28	2.6%	-2.5%	0.4%	0.0%	0.9%
2018-38	2.2%	-0.7%	0.4%	0.0%	1.0%
Source: FAA Air Traffic Activity.					

TABLE 34

**IFR AIRCRAFT HANDLED
AT FAA EN ROUTE TRAFFIC CONTROL CENTERS
(In Thousands)**

FISCAL YEAR	IFR AIRCRAFT HANDLED				
	AIR CARRIER	AIR TAXI/ COMMUTER	GENERAL AVIATION	MILITARY	TOTAL
<u>Historical</u>					
2010	22,342	8,624	6,550	2,982	40,498
2015	25,270	7,847	7,007	1,795	41,918
2016	26,318	7,787	7,301	1,826	43,231
2017E	26,074	8,591	7,428	1,765	43,857
<u>Forecast</u>					
2018	27,896	7,525	7,513	1,765	44,699
2023	31,120	6,640	7,737	1,765	47,261
2028	34,780	6,332	8,039	1,765	50,916
2033	38,437	6,400	8,411	1,765	55,013
2038	42,174	6,614	8,822	1,765	59,374
<u>Avg Annual Growth</u>					
2010-17	2.2%	-0.1%	1.8%	-7.2%	1.1%
2017-18	7.0%	-12.4%	1.1%	0.0%	1.9%
2018-28	2.2%	-1.7%	0.7%	0.0%	1.3%
2018-38	2.1%	-0.6%	0.8%	0.0%	1.4%
Source: FAA Air Traffic Activity					