



AIRPORT CAPITAL DEVELOPMENT NEEDS
2015 - 2019

March 2015

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RESULTS IN BRIEF

The ACI-NA total estimate of airports' capital development needs for 2015 through 2019, adjusted for inflation,¹ is \$75.7 billion or \$15.1 billion annualized.² Fifty-six percent of the development is intended to accommodate growth in passenger and cargo activity. Thirty-eight percent of the development is intended to rehabilitate existing infrastructure, maintain a state of good repair, and keep airports up to standards for the aircraft that use them.

This estimate is a 6.2 percent increase over the 2012³ estimate of \$71.3 billion or \$14.3 billion annualized for 2013 through 2017. The estimate for large, medium and small hubs only⁴ is a 9.1 percent increase over the last estimate. For non-hub, commercial service, reliever and general aviation airports, ACI-NA relied on the FAA National Plan of Integrated Airport System (NPIAS) 2014 estimate for development costs, which are expected to decrease by 1.5 percent from the last report completed in 2012.

The \$15.1 billion in average annual funding needs for U.S. airports is significantly higher than the funding available through annual AIP grants, new PFC revenue⁵, and airport generated net income. It is clear that the existing federally-mandated funding system cannot meet U.S. airport capital needs for modernizing and expanding airport capacity which is critical for a safe, efficient and globally competitive aviation system.

ACI-NA attributes the increase in airport capital needs to several factors, including the recovering U.S. economy and increasing traffic demand, airline consolidation and concentration on hub operations, and the need to upgrade aging infrastructure.

The ACI-NA total estimate includes all airport improvements that are planned within the next 5 years including those not eligible for AIP grants. Commercial-service airports⁶ account for \$62.2 billion (82.1 percent) of the total \$75.7 billion for planned investments, while non-commercial-service airports account for \$13.6 billion (17.9 percent) of the total \$75.7 billion. Within the commercial-service airports:

- large hubs account for \$40.1 billion (52.9 percent);
- medium hubs account for \$9.1 billion (12.0 percent);
- small hubs account for \$7.7 billion (10.1 percent), and;
- non-hubs account for \$5.3 billion (7.1 percent).

¹ ACI-NA used a 1.5 percent inflation adjustment.

² The ACI-NA total estimate of airports' capital development needs for the period 2015 through 2019, in 2014 constant dollars, not adjusted for inflation, is \$72.5 billion or \$14.5 billion annualized.

³ Estimates reflect the dollars at the time the report was prepared. 2013 report reflects 2012 dollars.

⁴ Development costs for large, medium and small hubs are based on ACI-NA Survey data. Development costs for non-hub, commercial service, reliever and general aviation airports are based on FAA 2015-2019 NPIAS report.

⁵ Existing PFC collections are for projects already approved by FAA. It may take up to 50 years to collect the PFCs approved by FAA for projects underway or already completed.

⁶ ACI-NA used the FAA definitions for categories of airports. See Appendix 4.

Commercial service airports reported significant capital project needs with an overall increase of 9.1 percent while non-commercial service airports had a 1.5 percent decrease. While the majority of airport categories showed growth from the previous estimate (large hubs with a 8.4 percent increase and small hubs with a 32.8 percent increase) medium hubs reported a 2.2 percent decrease. Significant development was identified at Austin, Nashville, New Orleans, Oakland, Columbus, San Antonio, and Maui Kahului Airport; in contrast, eight medium hub airports, Houston Hobby, San Jose, Milwaukee, Cincinnati, Kansas City, Jacksonville, Memphis and Southwest Florida airports all reported more than a 20 percent decrease in capital needs, primarily due to the completion of projects reported in the 2012 ACI-NA Survey.

Large hubs reported an increase of 8.3 percent, from \$37.0 billion to \$40.1 billion, and increased their share of the total development by 1.0 percent from the 2012 survey. Significant development was identified at Washington Reagan, Tampa, Miami, Los Angeles, San Francisco and New York LaGuardia international airports with a more than 50.0 percent increase as these airports undertake major capital improvement programs. Orlando, New York/JFK and Detroit international airports all reported a 50.0 percent decrease due to the completion of major capital improvement projects since the last ACI-NA survey in 2012.

Most small hubs reported double-digit increases in capital needs. Major development at Hawaii Kona and Lihue, Phoenix Mesa, Dayton and Huntsville airports resulted in an increase of over 50.0 percent in their capital improvement programs.

The overall increase shows that as a result of the recovering economy and increasing traffic demand, coupled with airline consolidation and their strategic shift to focus on hub operations, large hub airports are required to invest in capital improvement projects; while many medium hubs, facing reduced demand, are deferring some of the capital projects previously planned. Despite a decrease in flights at many small airports the need for upgrading aging infrastructure and the need to meet federal mandates and passenger expectations require additional funding.

ACI-NA ESTIMATE OF CAPITAL DEVELOPMENT NEEDS

As shown in Table 1, the total for each year from 2015 through 2019 ranges from \$13.7 billion in 2019 to \$16.2 billion in 2016⁷. Large hub airports account for the majority of these costs with 52.9 percent of the total followed by non-commercial service airports that account for 17.9 percent of the total.

Table 1: Airport Capital Development Cost Estimates by Year and Airport Category

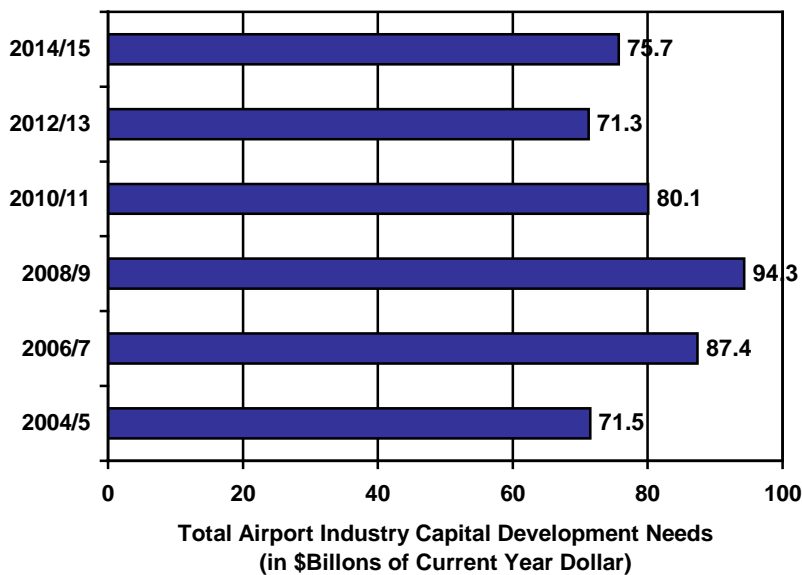
Millions of Current Year Dollars

Airport Category	2015	2016	2017	2018	2019	2015-2019	Percent
Large hub	8,560	9,462	9,132	7,225	5,705	40,083	52.9%
Medium hub	1,740	1,865	1,995	1,887	1,609	9,096	12.0%
Small hub	1,422	1,176	1,126	1,436	2,497	7,656	10.1%
Non-hub	1,037	1,052	1,068	1,084	1,100	5,340	7.1%
Other	2,633	2,672	2,712	2,753	2,794	13,564	17.9%
Total	15,391	16,227	16,033	14,384	13,705	75,740	100.0%
Annual Capital Needs 2015-19	-	-	-	-	-	15,148	-
Annual Capital Needs 2013-17	-	-	-	-	-	14,254	-
Annual Capital Needs 2011-15	-	-	-	-	-	16,015	-
Annual Capital Needs 2009-13	-	-	-	-	-	18,861	-
Annual Capital Needs 2007-11	-	-	-	-	-	17,472	-

Source: ACI-NA Survey and FAA NPIAS.

Figure 1 below shows an uptick in capital development needs in 2014 in response to the recovering economy, increasing travel demand, and the need to upgrade aging infrastructure. FAA has projected decreased capital needs for non-primary airports, and ACI-NA has relied on this data for our report.

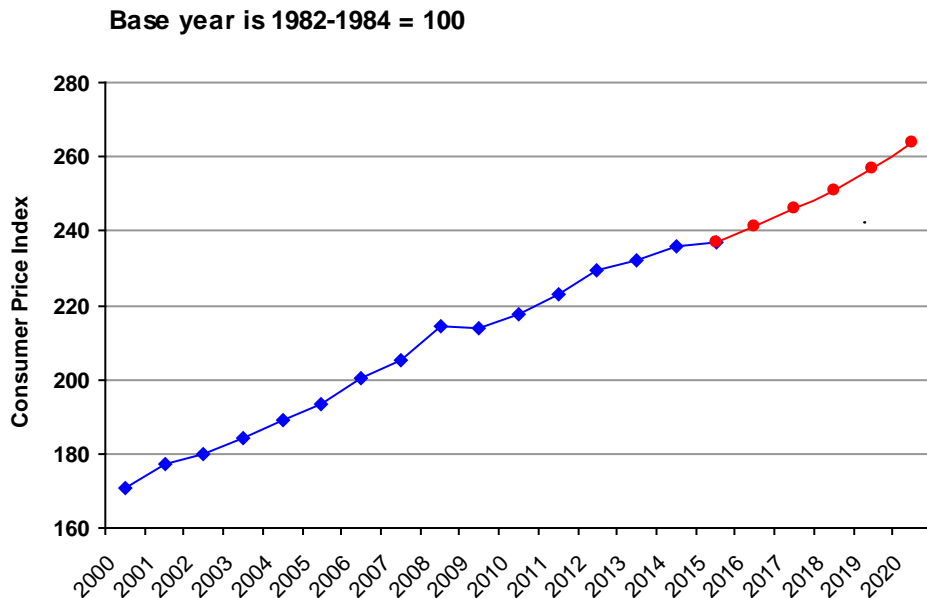
Figure 1: 5-Year Development Estimates from Published ACI-NA Capital Needs Reports



⁷ See appendix 3 for an explanation of how ACI-NA calculated airports' capital development costs.

ACI-NA adjusted its capital development cost estimate by 1.5 percent to account for inflation because inflation decreases the purchasing power of airport funds. As shown in Figure 2, inflation is projected to continue in the 2015 through 2019 development cost estimate period.

Figure 2: Consumer Price Index (CPI) Indicates Continued Inflation

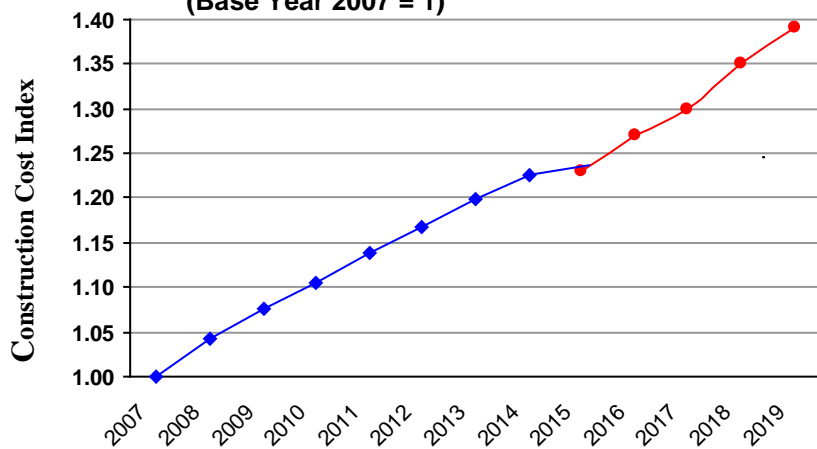


Year	Avg Growth
1993-2002	2.5%
2003-2007	2.8%
2007-2013	2.1%
FAA 2015 Forecast	
2014-2015	0.3%
2014-2024	2.0%
2014-2035	2.1%

Source: Actual Consumer Price Index from the US Dept. of Labor, Bureau of Labor Statistics, Forecast from the FAA 2015 Forecast Report based on IHS Global Insight 30-Year Forecast, Fourth Quarter 2014

Compounding the general inflationary trend is the much higher inflation rate for construction material and components. As shown in Figure 3, the “ENR Construction Cost Index (CCI)”⁸ data shows significant construction cost escalation in recent years. For the period 2015-2019, the predicted growth rate averages 2.5 percent.

Figure 3: CCI Exceeds CPI over the Next Five Years
(Base Year 2007 = 1)



Year	% Change
2008	4.3
2009	3.1
2010	2.7
2011	3.1
2012	2.6
2013	2.6
2014	2.7
Forecast	
2015	-0.4
2016	3.4
2017	2.8
2018	3.3
2019	3.3

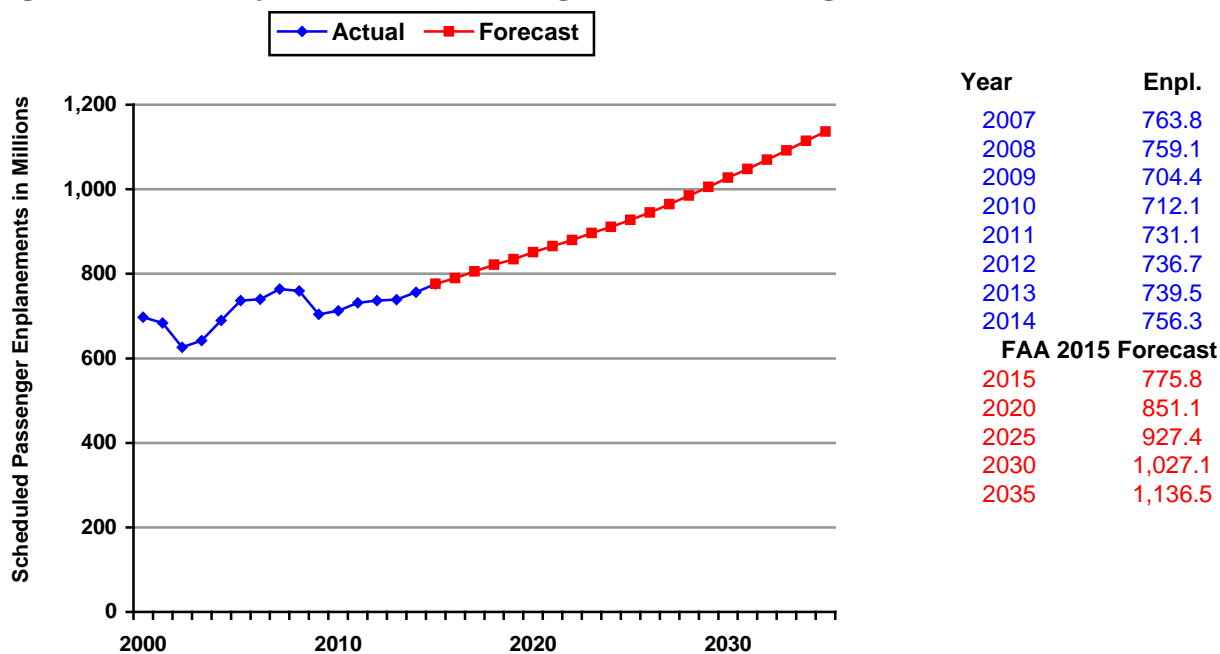
Source: Engineering News-Record/IHS Global Insight.

⁸ ENR Construction Cost Index, U.S. 20 City Average, Engineering News Record.

As FAA points out in the 2015-2019 NPIAS report, airport capital development needs are driven by current and forecast traffic; use and age of facilities; and changing aircraft technology which requires airports to update or replace equipment and infrastructure⁹.

The demand for passenger and cargo service will continue to grow resulting in a corresponding increase in airport capital development costs. The FAA’s Aerospace Forecast Fiscal Years 2015-2035 predicts that U.S. airlines will reach the one billion passengers-per-year mark by 2029. The industry will grow from 756.3 million passengers in 2014 to 1.1 billion in 2035 as shown in Figure 4; and more than double the cargo traffic measured by revenue ton miles as shown in Figure 5.

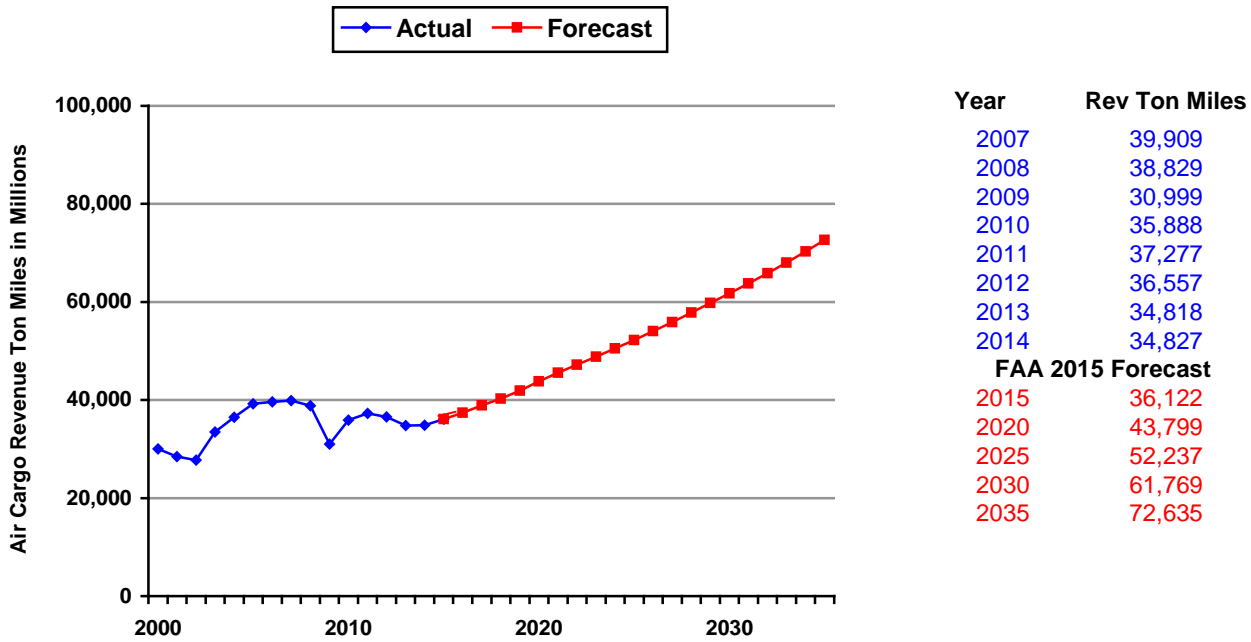
Figure 4: FAA Projects Continued Strong Growth in Passengers



Source: FAA.

⁹ Executive Summary, FAA 2015-2019 NPIAS report.

Figure 5: FAA Projects Continued Growth in Air Cargo



Source: FAA.

PROJECT DEVELOPMENT COSTS BY LOCATION AND TYPE

To help provide a broad perspective on the various capital development projects that airports are considering for 2015 through 2019, ACI-NA asked respondents to provide information on project costs by location and type. Project location indicates whether projects are for the airside, terminal, or landside areas of the airport. Project type indicates whether projects are for access, airfield capacity, airfield standards, terminal development, environmental projects, airfield reconstruction, safety, security, or construction of a new airport.

Development Costs by Location

As shown in Table 2, for 2015 through 2019, terminal projects represent 48.1 percent of the total capital development costs for responding airports¹⁰, followed by airside projects that represent 26.5 percent of total costs and landside projects that represent 25.3 percent of total costs. Compared to the 2012/13 estimates, terminal projects still represent the majority of airports' capital needs and a higher share of landside projects than reported two years ago. This information is based on the ACI-NA Survey sample.

¹⁰ See Appendix 5 for a full list of airport respondents.

Table 2: Development Costs by Project Location

Project location	Percentage for all respondents	Percentage for large hub respondents	Percentage for medium hub respondents	Percentage for small hub respondents
Airside	26.5%	20.8%	42.1%	53.9%
Terminal	48.1%	54.0%	26.6%	30.6%
Landside	25.3%	25.1%	31.3%	15.6%
Total*	100.0%	78.0%	14.4%	7.0%

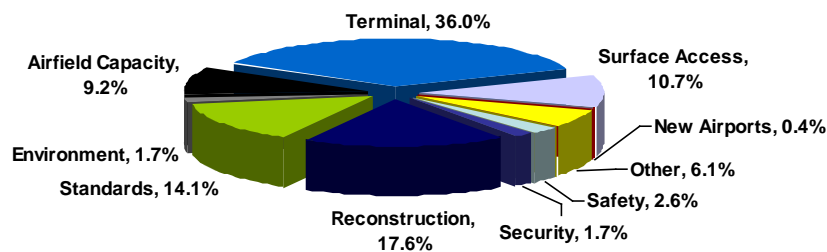
Source: ACI-NA Survey.

*Note: Summary excludes projects without specified location code or projects located in multiple locations without breakdown.

Development Costs by Project Type

Figure 6 below shows that terminal projects to accommodate more passengers, larger aircraft, new security requirements, and increased competition among airlines account for 36 percent of the total development needs of all airports for 2015 through 2019, followed by reconstruction projects to replace or rehabilitate airport facilities at 17.6 percent.

Figure 6: Airport Capital Needs by Type of Development



Source: ACI-NA Survey.

As shown in Table 3, for 2015 through 2019 for large hub airports, terminal projects are the dominant project type representing 55.2 percent of all projects, followed by surface access projects at 14.7 percent and capacity projects at 9.3 percent. According to the FAA NPIAS report, about 50 to 60 percent of the overall costs of terminal projects are eligible for AIP grants. Revenue-generating areas that are leased by a single tenant or used by concessions, such as gift shops and restaurants, are not eligible for AIP and therefore are excluded from the FAA NPIAS estimate. Projects such as aircraft gates and related areas are eligible for the PFC Program but are ineligible under the Federal grant program.

For medium hub airport respondents, terminal projects are the dominant project type, representing 29.8 percent of all projects followed by reconstruction projects at 20.0 percent. Small hub airport respondents reported that their dominant project type is capacity projects at 25.4 percent, followed by reconstruction projects at 22.2 percent and terminal projects at 21.5 percent. This information is based on the ACI-NA survey sample.

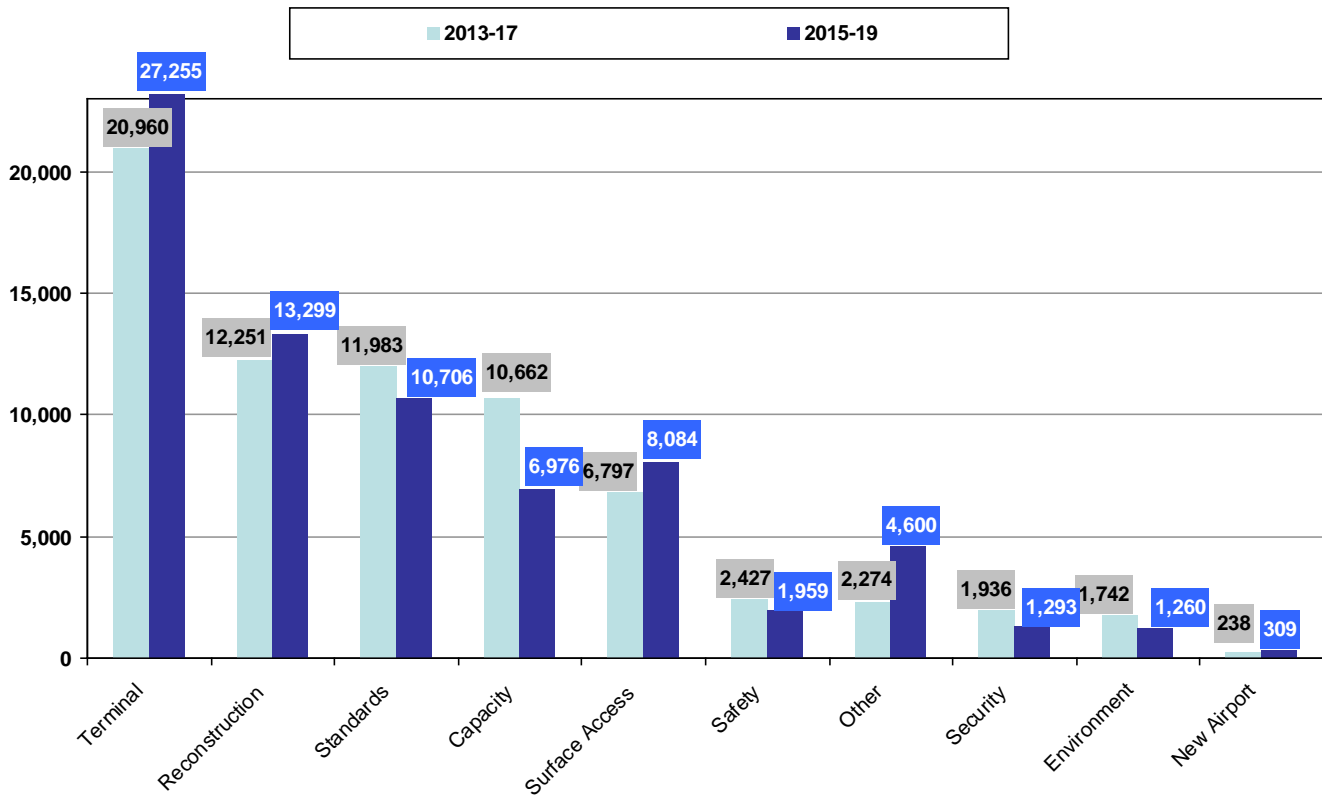
Table 3: Development Costs by Project Type

Airport Category	Safety	Sec.	Recon.	Stnds.	Env.	Cap.	Term.	Access	New Airports	Other	Percent
Large hub	1.2%	1.4%	8.6%	1.5%	0.9%	9.3%	55.2%	14.7%	0.0%	7.0%	100.0%
Medium hub	4.3%	1.2%	20.0%	7.8%	4.4%	5.1%	29.8%	13.1%	0.0%	14.4%	100.0%
Small hub	6.2%	2.8%	22.2%	7.8%	3.2%	25.4%	21.5%	7.0%	0.0%	3.8%	100.0%
Non-hub	6.3%	1.1%	37.3%	33.8%	2.2%	3.3%	11.3%	3.8%	0.0%	0.8%	100.0%
Other	2.1%	2.5%	31.9%	51.4%	0.9%	4.8%	1.2%	2.0%	2.3%	1.0%	100.0%
Total	2.6%	1.7%	17.6%	14.1%	1.7%	9.2%	36.0%	10.7%	0.4%	6.1%	100.0%

Sources: ACI-NA Survey and FAA NPIAS.

Figure 7 below shows that terminal, reconstruction and surface access projects and others have increased while standards, capacity, access, safety, security and environment projects have decreased. Additionally, the FAA 2015-2019 NPIAS report identifies 14 proposed airports that are anticipated to be developed over the five-year period, including 11 new general aviation airports, two non-primary commercial service and one new primary airports. FAA anticipates new airport projects to decrease as some new airports that were under development have now been completed or no longer planned.

Figure 7: Change in Development Cost from 2012/2013 ACI-NA Report



Source: ACI-NA Surveys.

Note: see Table 9 for total cost by project type.

COMPARISON OF ACI-NA AND FAA ESTIMATES

The ACI-NA Capital Needs Survey is far more comprehensive than the FAA NPIAS survey, which is also issued every two years. It is critical to understand the differences between the ACI-NA and FAA estimates because of the importance of the data in both surveys in developing federal policy for funding airport development.

ACI-NA's survey includes important information that the FAA estimate fails to capture, including:

- Development eligible under the PFC Program but ineligible under the AIP grant program, such as gates and related areas;
- AIP-ineligible projects, including parking facilities, hangars, cargo buildings, the revenue producing portions of passenger terminals, and certain improvements to highway and transit airport access systems;
- AIP-eligible projects that airports did not report to the FAA because the airport believes there is a low probability of obtaining additional AIP discretionary grants; and
- Airport-funded air traffic control facilities and airport or TSA-funded security projects;

For example, the cost for projects at large hub airports in the NPIAS totals \$8.4 billion while the ACI-NA estimate totals \$40.1 billion. Within this category, the NPIAS totals \$0.4 billion for terminal type projects while the ACI-NA estimate totals \$17.7 billion. The difference in this case is because the NPIAS generally does not include gates and related areas, or the revenue generating portions of terminals such as development of facilities for non-aeronautical revenue.

The ACI-NA estimate of \$75.7 billion is greater than the FAA NPIAS estimate of \$33.5 billion for several reasons:¹¹

- First, the ACI-NA estimate includes all future projects while the FAA estimate includes only future AIP-eligible projects;
- Second, the ACI-NA estimate includes both projects that have identified and not identified funding sources, while the FAA estimate only includes projects that do not have identified funding sources. This results in current projects with approved PFC collections not being included in the NPIAS report;¹²
- Third, the ACI-NA estimate uses more recent data than that used by the FAA; and
- Fourth, the ACI-NA estimate is adjusted for inflation, while the FAA estimate is not.¹³

The ACI-NA and FAA estimates are the two main sources for Congress and other stakeholders to review in considering the funding necessary for airport capital development going forward as part of the FAA reauthorization process. As in the past, decisions on funding reach well beyond the actual authorization period and impact the capital improvements that can be achieved to address aviation demand. Additionally, these decisions have a direct and long-term bearing on the ability of communities to generate jobs and commerce as well as ensure our nation's competitive position in the global economy.

¹¹ Both the ACI-NA and the FAA estimates are for 2015 through 2019. The ACI-NA survey was completed in 2014 and the FAA estimate is based on airport master and state system planning documents available through FY2013.

¹² See page vii of the FAA NPIAS report 2015-2019.

¹³ The Government Accountability Office testimony *Airport Finance: Preliminary Analysis of Proposed Changes in the Airport Improvement Program May Not Resolve Funding Needs for Smaller Airports*, GAO-07-617T (Washington, D.C.; March 28, 2007) also explains the differences between the ACI-NA and FAA estimates, including variances related to estimating approach, definition, measurement, and timing.

CONCLUSION

The development cost estimate for 2015-2019 for large, medium and small hub airports combined shows an increase of 9.3 percent from the estimate for 2013-2017 and a 1.5 percent decrease for non-hubs and non-commercial service airports. The improving economic environment, increasing passenger travel, and aging infrastructure have forced airports to plan or begin capital projects that were previously postponed or canceled.

Airport capital development needs are driven by current and forecast aviation activity; use and age of airport facilities and the need to modernize aging infrastructure; and changing aircraft technology which requires airports to update or replace equipment and infrastructure. Airport capital needs are not only correlated with passenger and cargo activity levels, but are also affected by how airlines use airport infrastructure. Airport operators have a responsibility to make needed investments in modernizing aging airport facilities so that they can ensure efficient, safe and secure operations for aeronautical users and the traveling public. Without adequate investment, the ability of airports to fully serve the public and the community as a growth engine is diminished.

It is important to understand that the existing federally-mandated funding system fails to meet U.S. airport capital needs for modernizing and expanding airport capacity. Failure to meet the future capital needs of airports will impair the ability of U.S. airports to be globally competitive.

APPENDIX 1: SCOPE AND METHODOLOGY

The 2014 ACI-NA Survey was based on the 2014/15 survey instrument that was developed with input from the FAA and the GAO. This included the various definitions in the survey, such as project type codes.

ACI-NA surveyed all of its airport members in the United States. Ninety three (93) airports responded. ACI-NA staff followed-up with respondents as necessary to answer questions about the survey and ensure accuracy of respondents answers.

Respondents were asked to identify all capital development projects and associated costs for calendar years 2015 through 2019, and to report these costs in 2014 constant year dollars. Costs included interest, construction and management costs, architectural and engineering costs, and contingency costs. Costs for multi-year projects were listed in the year when the money was expected to be spent.

Information on costs for capital development projects were divided into two sections: committed and uncommitted. For each section, airports were requested to list the ten largest projects in terms of costs and list the rest of the project costs as “all other projects.”

Committed projects included those projects for which financing was secured or was expected to be secured, and environmental and other required approvals had been obtained or were expected to be obtained. These are projects that airlines supported or will not block through such actions as Majority in Interest (MII) veto/disapproval.

Uncommitted projects included projects in airport master, layout, or capital plans that are essential to meet current or future air traffic growth and facility demand, but that could not proceed due to inadequate funding. Respondents were specifically asked to include only projects they expected the airlines would support or would not block through such actions as MII disapproval, and for which they expected to obtain all environmental and other approvals.

For both committed and uncommitted projects, respondents were asked to identify projects by location and type. Location codes included whether a project was airside, terminal, or landside. Type codes included whether a project was access, airfield capacity, airfield standards, environment, new airport, airfield reconstruction, safety, terminal, or security. To ensure the ACI-NA data was fully comparable with the FAA, ACI-NA used the same definitions for project type as the FAA uses in its NPIAS. In cases where multiple codes applied for either project location or type, respondents were asked to provide the cost percentage for each code.

APPENDIX 2: BACKGROUND

Airports Council International-North America (ACI-NA) regularly updates its estimate of capital development needs for the airports that comprise the national airport system of the United States, as defined by the Federal Aviation Administration (FAA).

The national airport system is composed of close to 3,400 airports, ranging from the largest commercial service airports to small general aviation airports. Development projects at these airports generally fall within five categories: (1) expanding an airport's capacity beyond its current design to meet growth in demand for aviation services; (2) upgrading infrastructure to accommodate the introduction of different aircraft types; (3) reconstructing aging airport infrastructure; (4) bringing an airport up to FAA-mandated design standards to achieve full productivity of aircraft using the airport; and (5) addressing safety, security, and environmental concerns.

ACI-NA conducts its assessment using the FAA's airport classifications. Definitions of the FAA's airport classifications used in this report are included in Appendix 4.

APPENDIX 3: HOW ACI-NA CALCULATED CAPITAL DEVELOPMENT COSTS

ACI-NA calculated airports' capital development needs using the ACI-NA survey and the FAA NPIAS. Specifically, ACI-NA used its survey data to calculate costs for large, medium, and small hub airports and used the FAA NPIAS data to calculate costs for non-hub, commercial service, reliever, and general aviation airports. ACI-NA also used FAA 2013 enplanement data, which is the latest available information, to make calculations.

The total capital development costs for large, medium, and small hub airports were based on responses from 29 large hub, 28 medium hub, and 27 small hub airports. As shown in Table 4, this represents 98 percent of all passengers enplaned at large hubs, 87 percent of all passengers enplaned at medium hubs, and 45 percent of all passengers enplaned at small hubs in 2013.

Table 4: ACI-NA Sample Compared to Industry Total

Airport Category	Number of respondents	Total number of airports in the category	Respondents percentage of all airports in the category	Respondents percentage of total 2013 enplanements in the category	Respondents percentage of total 2013 enplanements
Large hub	29	30	97%	98%	70.5%
Medium hub	28	33	85%	87%	13.9%
Small hub	27	71	38%	45%	3.7%
All other	9	3,194	<1%	3%	0.1%
Total	93	3,328	-	-	88.3%

As shown in Table 5, ACI-NA then calculated the total capital development costs per 2013 enplanement for the respondent large, medium, and small hub airports.

Table 5: ACI-NA Sample Capital Development Costs Per Enplanement

Airport Category	Total costs for 2015-2019 in millions of 2014 constant dollars	Total 2013 enplanements by category	Cost per enplanement in 2014 constant dollars
Large hub	37,621	521,706,573	72.11
Medium hub	7,572	103,063,197	73.47
Small hub	3,301	27,701,089	119.16

As shown in Table 6, this cost per enplanement in 2014 constant dollars was then used as the unit cost to estimate the capital development costs for all large, medium, and small hub airports.

Table 6: Total Capital Development Costs Estimate for Large, Medium, and Small Hub Airports

2014 Constant Dollars			
Airport Category	Total 2013 enplanements	Cost per enplanement in 2014 constant dollars	Total 2015-2019 capital development costs in millions of 2014 constant dollars
Large hub	533,244,713	72.11	38,453
Medium hub	118,472,049	73.47	8,704
Small hub	61,171,732	119.16	7,289

Table 7 shows the total capital development costs for all airports in the national airport system in 2014 constant dollars using the ACI-NA estimate for large, medium, and small hub airports and the FAA NPIAS data for non-hub, commercial service, reliever, and general aviation airports. ACI-NA used the NPIAS data due to the small number of non-hub, commercial service, reliever, and general aviation airports in the ACI-NA survey sample.

Table 7: Total Capital Development Costs Estimate

2014 Constant Dollars

Airport Category	Total number of airports by category in national airport system	Total 2015-2019 capital development costs in millions of 2014 constant dollars	Percentage of Total
Large hub	29	38,453	53.0%
Medium hub	33	8,704	12.0%
Small hub	76	7,289	10.1%
Non-hub	251	5,106	7.0%
Other	2,939	12,969	17.9%
Total	3,328	72,521	100%

Taking the escalation of construction costs into consideration, ACI-NA made a 1.5 percent inflation adjustment to the total estimate in 2014 constant dollars to reflect total capital needs in current year dollars. As shown in Table 8, total industry capital needs are estimated to be \$75.7 billion in current year dollars. Average annual capital needs for the years 2015 through 2019 are 6.3 percent higher than for the years 2013-2017 estimated in the ACI-NA survey done almost two years ago.

Table 8: Total Industry Estimate

Millions of Current Year Dollars

Airport Category	2015	2016	2017	2018	2019	2015-2019	Percent
Large hub	8,560	9,462	9,132	7,225	5,705	40,083	52.9%
Medium hub	1,740	1,865	1,995	1,887	1,609	9,096	12.0%
Small hub	1,422	1,176	1,126	1,436	2,497	7,656	10.1%
Non-hub	1,037	1,052	1,068	1,084	1,100	5,340	7.1%
Other	2,633	2,672	2,712	2,753	2,794	13,564	17.9%
Total	15,391	16,227	16,033	14,384	13,705	75,740	100.0%
Annual Capital Needs 2015-19	-	-	-	-	-	15,148	-
Annual Capital Needs 2013-17	-	-	-	-	-	14,254	-
Annual Capital Needs 2011-15	-	-	-	-	-	16,015	-
Annual Capital Needs 2009-13						18,861	
Annual Capital Needs 2007-11						17,472	

Besides calculating the total developments costs, ACI-NA also calculated development costs by project type. To do this ACI-NA first determined the percentage distribution by project type using ACI-NA survey results for large, medium, and small hub airports and using the NPIAS data for non-hub, commercial service, reliever, and general aviation airports. As shown in Table 13, the project type percentage distribution was then multiplied by the total industry estimate for each category of airport to determine the total costs by project type as shown in Table 9.

Table 9: ACI-NA Total Costs by Project Type

Millions of Current Year Dollars

Airport Type	Safety	Sec.	Recon	Stnds.	Env.	Cap.	Term.	Access	New Airports	Other	Total	Percent
Large Hub	475	573	3,464	618	367	3,743	22,135	5,886		2,822	40,083	52.9%
Medium Hub	390	114	1,817	707	402	460	2,708	1,189		1,309	9,096	12.0%
Small Hub	478	211	1,701	599	247	1,946	1,648	536		291	7,657	10.1%
Non-hub	338	60	1,994	1,808	119	178	601	202		42	5,340	7.1%
Other	278	336	4,323	6,974	125	649	163	271	309	136	13,564	17.9%
Total	1,959	1,293	13,299	10,706	1,260	6,979	27,255	8,084	309	4,600	75,741	100.0%
Percent	2.6%	1.7%	17.6%	14.1%	1.7%	9.2%	36.0%	10.7%	0.4%	6.1%	100.0%	

APPENDIX 4: FAA DEFINITIONS OF AIRPORT CATEGORIES

FAA defines airports by categories of airport activities, including commercial service, primary, reliever, and general aviation airports, as shown below:

Airport Classifications		Hub Type: Percentage of Annual Passenger Boardings	Common Name
See Definitions of Airport Categories below for more information.			
Commercial Service: Publicly owned airports that have at least <u>2,500</u> passenger boardings each calendar year and receive scheduled passenger service §47102(7)	Primary: Have more than <u>10,000</u> passenger boardings each year §47102(11)	Large: 1% or more	Large Hub
		Medium: At least 0.25%, but less than 1%	Medium Hub
		Small: At least 0.05%, but less than 0.25%	Small Hub
		Non-hub: More than 10,000, but less than 0.05%	Non-hub Primary
	Nonprimary	Non-hub: At least 2,500 and no more than 10,000	Nonprimary Commercial Service
Nonprimary (Except Commercial Service)		Not Applicable	Reliever §47102(18)

Definition of Airport Categories

1. **Commercial Service Airports** are publicly owned airports that have at least 2,500 passenger boardings each calendar year and receive scheduled passenger service. Passenger boardings refer to revenue passenger boardings on an aircraft in service in air commerce whether or not in scheduled service. The definition also includes passengers who continue on an aircraft in international flight that stops at an airport in any of the 50 States for a non-traffic purpose, such as refueling or aircraft maintenance rather than passenger activity. Passenger boardings at airports that receive scheduled passenger service are also referred to as Enplanements.
 1. **Nonprimary Commercial Service Airports** are Commercial Service Airports that have at least 2,500 and no more than 10,000 passenger boardings each year.
 2. **Primary Airports** are Commercial Service Airports that have more than 10,000 passenger boardings each year. Hub categories for Primary Airports are defined as a percentage of total passenger boardings within the United States in the most current calendar year ending before the start of the current fiscal year. For example, calendar year 2001 data are used for fiscal year 2003 since the fiscal year began 9 months after the end of that calendar year. The table below depicts the formulae used for the definition of airport categories based on statutory provisions cited within the table, including Hub Type described in 49 USC 47102.

2. **Reliever Airports** are airports designated by the FAA to relieve congestion at Commercial_Service Airports and to provide improved general aviation access to the overall community. These may be publicly or privately-owned.
3. **General Aviation Airports** are the largest single group of airports in the U.S. system. The category also includes privately owned, public use airports that enplane 2500 or more passengers annually and receive scheduled airline service.

APPENDIX 5: RESPONDENTS 2013 PASSENGER TRAFFIC STATISTICS

Airport Name	Code	Category	CY2013 Enplanements	CY2012 Enplanements
Hartsfield - Jackson Atlanta International	ATL	L	45,308,407	45,798,928
Los Angeles International	LAX	L	32,425,892	31,326,268
Chicago O'Hare International	ORD	L	32,317,835	32,171,795
Dallas/Fort Worth International	DFW	L	29,038,128	28,022,904
Denver International	DEN	L	25,496,885	25,799,841
John F Kennedy International	JFK	L	25,036,358	24,520,981
San Francisco International	SFO	L	21,704,626	21,284,236
Charlotte/Douglas International	CLT	L	21,346,601	20,033,816
McCarran International	LAS	L	19,946,179	19,959,651
Phoenix Sky Harbor International	PHX	L	19,525,109	19,560,870
Miami International	MIA	L	19,420,089	18,987,488
George Bush Intercontinental/Houston	IAH	L	18,952,840	19,039,000
Newark Liberty International	EWR	L	17,546,506	17,055,993
Orlando International	MCO	L	16,884,524	17,159,427
Seattle-Tacoma International	SEA	L	16,690,295	16,121,123
Minneapolis-St Paul International	MSP	L	16,280,835	15,943,878
Detroit Metropolitan Wayne County	DTW	L	15,683,523	15,599,879
General Edward Lawrence Logan International	BOS	L	14,810,153	14,293,695
Philadelphia International	PHL	L	14,727,945	14,589,337
La Guardia	LGA	L	13,372,269	12,818,717
Baltimore/Washington International Thurgood Marshall	BWI	L	11,132,731	11,186,444
Washington Dulles International	IAD	L	10,570,993	10,816,216
Chicago Midway International	MDW	L	9,915,646	9,436,387
Ronald Reagan Washington National	DCA	L	9,838,034	9,462,231
Salt Lake City International	SLC	L	9,668,048	9,579,840
Honolulu International	HNL	L	9,466,995	9,225,848
San Diego International	SAN	L	8,878,772	8,686,621
Tampa International	TPA	L	8,267,752	8,218,487
Portland International	PDX	L	7,452,603	7,142,620
Lambert-St Louis International	STL	M	6,216,104	6,208,750
William P Hobby	HOU	M	5,377,050	5,043,737
Nashville International	BNA	M	5,050,989	4,797,102
Austin-Bergstrom International	AUS	M	4,900,959	4,606,252
Kansas City International	MCI	M	4,836,221	4,866,850
Metropolitan Oakland International	OAK	M	4,770,716	4,926,683
Louis Armstrong New Orleans International	MSY	M	4,576,539	4,293,624
John Wayne Airport-Orange County	SNA	M	4,540,628	4,381,172
Raleigh-Durham International	RDU	M	4,482,016	4,490,374
Norman Y. Mineta San Jose International	SJC	M	4,315,839	4,077,654
Sacramento International	SMF	M	4,255,145	4,357,899
Dallas Love Field	DAL	M	4,023,779	3,902,628
San Antonio International	SAT	M	4,005,874	4,036,625
Pittsburgh International	PIT	M	3,812,460	3,892,338
Southwest Florida International	RSW	M	3,788,870	3,634,152

Indianapolis International	IND	M	3,535,015	3,586,422
General Mitchell International	MKE	M	3,214,811	3,710,384
Port Columbus International	CMH	M	3,063,822	3,095,575
Kahului	OGG	M	2,955,304	2,861,278
Palm Beach International	PBI	M	2,844,507	2,796,359
Cincinnati/Northern Kentucky International	CVG	M	2,776,377	2,937,850
Bradley International	BDL	M	2,681,181	2,647,610
Jacksonville International	JAX	M	2,549,070	2,579,023
Ted Stevens Anchorage International	ANC	M	2,325,030	2,249,717
Memphis International	MEM	M	2,301,003	3,359,668
Eppley Airfield	OMA	M	1,975,339	2,018,738
Ontario International	ONT	M	1,970,538	2,142,393
Bob Hope	BUR	M	1,918,011	2,027,203
Reno/Tahoe International	RNO	S	1,671,926	1,685,333
Louisville International-Standiford Field	SDF	S	1,668,667	1,642,790
Tucson International	TUS	S	1,569,932	1,710,649
Norfolk International	ORF	S	1,560,754	1,651,440
Kona International at Keahole	KOA	S	1,376,641	1,367,091
El Paso International	ELP	S	1,363,102	1,442,102
Birmingham-Shuttlesworth International	BHM	S	1,334,177	1,412,483
Tulsa International	TUL	S	1,323,377	1,324,202
Lihue	LIH	S	1,315,141	1,308,549
Boise Air Terminal/Gowen Field	BOI	S	1,313,741	1,307,505
James M Cox Dayton International	DAY	S	1,244,841	1,289,758
Manchester	MHT	S	1,190,082	1,210,189
Gerald R. Ford International	GRR	S	1,123,257	1,063,153
Des Moines International	DSM	S	1,078,496	1,018,188
Bill and Hillary Clinton National/Adams Field	LIT	S	1,055,293	1,111,442
Greenville Spartanburg International	GSP	S	917,088	936,288
Dane County Regional-Truax Field	MSN	S	825,702	799,053
Savannah/Hilton Head International	SAV	S	798,376	789,663
Phoenix-Mesa Gateway	IWA	S	725,048	744,685
City of Colorado Springs Municipal	COS	S	657,962	836,998
Hilo International	ITO	S	640,411	641,904
Burlington International	BTV	S	606,503	615,026
Sarasota/Bradenton International	SRQ	S	594,970	637,264
Huntsville International-Carl T Jones Field	HSV	S	505,541	578,993
Bozeman Yellowstone International	BZN	S	442,075	434,038
Baton Rouge Metropolitan, Ryan Field	BTR	S	400,712	406,318
Wilmington International	ILM	S	397,274	392,155
Eglin AFB	VPS	N	353,953	373,542
Asheville Regional	AVL	N	342,400	318,395
Rickenbacker International	LCK	N	17,765	6,513
Charles B. Wheeler Downtown	MKC	None	3,065	2,261
Ellington Airport	EFD	None	1,299	1,010
Destin-Fort Walton Beach	DTS	None	534	119
Bolton Field	TZR	None	49	2
Bowman Field	LOU	None	14	450

Bob Sikes	CEW	None	7	3
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Source: FAA

Please note that in this report, ACI-NA defines airport category based on FAA calendar year 2013 enplanements, while the latest FAA NPIAS report for 2015-2019 categorized airports based on FAA Calendar Year 2012 enplanements.

Number of Airports for Each Airport Category for CY 2013 and 2012

Airport Category	2013	2012
Large Hub	30	29
Medium Hub	33	33
Small Hub	71	76
Non-hub	260	251
Nonprimary Commercial Service	112	125
Reliever	264	264
General Aviation	2553	2,553
Subtotal	3,323	3,331

APPENDIX 6: ABOUT THIS REPORT

The ACI-NA thanks its member airports for their contribution and input to this report. Without their participation, ACI-NA would not have been able to create this report and the important information on the airport development costs required for the national airport system of the United States.

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