Appendix D
Runway Length Analysis Memo

RICONDO & ASSOCIATES

MEMORANDUM **VIA E-MAIL**

Date: March 12, 2003

To: Deborah L. Calevich
Kimley-Horn and Associates, Inc.

From: Ricondo & Associates, Inc.

Subject: RUNWAY LENGTH ANALYSIS

This memorandum presents the assumptions used for and the results of runway length analyses prepared for the Environmental Impact Statement for the Relocation of Panama City-Bay County International Airport (EIS). The purpose of the analysis was to review and validate runway length requirements identified in the July 2000 *Feasibility Study* (Feasibility Study), the December 2000 *Site Selection Study* (Site Selection Study), and the June 2001 *Airport Layout Alternatives Analysis* (Layout Alternatives Analysis), all prepared by Bechtel Infrastructure Corporation; as well as a white paper entitled "Runway Length Justification, Panama City-Bay County International Airport" (Runway Length Justification Document), provided by the Panama City-Bay County Industrial District. The results of this runway length analysis are intended to confirm whether the previously identified runway length requirements would accommodate the existing and forecast aircraft fleet, considering the critical aircraft or category of aircraft identified in the aviation demand forecasts. The results are also intended to identify the appropriate runway length assumptions to be used in the EIS assessment of alternatives for providing the required runway length at a new airport site as well as at the existing Panama City-Bay County International Airport (the Airport).

1. PREVIOUSLY IDENTIFIED CRITICAL AIRCRAFT AND RUNWAY LENGTH REQUIREMENTS

The Panama City-Bay County Airport and Industrial District has proposed that a new primary commercial service airport be constructed to serve the Panama City-Bay County Region. The ultimate layout for the proposed new airport—documented in the *Layout Alternatives Analysis*—included two parallel primary runways and a shorter crosswind runway. The runway lengths selected for the alternative layouts were based on the recommendations presented in both the *Feasibility Study* and the *Site Selection St*udy and additional factors considered in the *Layout Alternatives Analysis*, as described in the following paragraphs.

- It was recommended in both the *Feasibility Study* and the *Site Selection Study* that the primary parallel runway initially be planned and designed to accommodate airport reference code (ARC) C-III aircraft, which includes the Aérospatiale/Aeritalia ATR-

72 and the Canadair Regional Jet that are both being used or have been used to serve the existing Airport. The initial recommended length for the primary runway was a minimum of 6,800 feet.

- It was also recommended in both the *Feasibility Study* and the *Site Selection Study* that the primary runway be planned and designed for an extension to 8,400 feet within the first 20 years to accommodate narrow-body jet aircraft such as the Airbus 320. (The Airbus 320 and similar sized narrow-body jet aircraft are also within the ARC C-III aircraft category.) Both documents also identified that the site should be planned to accommodate an ultimate primary runway length of 10,400 feet and to accommodate aircraft up to ARC D-V. The 10,400-foot runway length would allow service by aircraft on long-range international routes.
- Based on further considerations, as presented in the *Layout Alternatives Analysis*, an initial runway length of 8,400 feet was selected for the primary runway, with the appropriate area preserved to accommodate a runway of up to 12,000 feet. The 12,000-foot runway length was identified to accommodate potential maintenance of large commercial and military transport aircraft.
- As presented in the *Layout Alternatives Analysis*, it was recommended that a crosswind runway with a length of between 4,300 and 5,000 feet be planned and designed for ARC B-II aircraft. It was noted in the *Site Selection Study* that the FAA agreed that a length of 4,500 feet would be considered for the crosswind runway.
- Also as presented in the *Layout Alternatives Analysis*, it was recommended that a secondary parallel runway with an ultimate length of 8,400 be planned and designed for ARC C-III aircraft.
- The subsequent Runway Length Justification Document summarized runway length requirements for a number of aircraft types serving different markets from Panama City. The document summary stated that an 8,400-foot runway would accommodate (1) the majority of aircraft currently serving or forecast to serve the Airport as well as, (2) aircraft operated by several potential tenants who have written letters of intent to serve the Airport if a longer runway were available.

2. RUNWAY LENGTH ANALYSIS

The methodology, assumptions, input data, and results of the runway length analysis are discussed in the following sections.

Methodology

As specified in FAA planning criteria, the recommended length for a primary runway must be determined by considering either the family of aircraft having similar performance characteristics or a specific aircraft requiring the longest runway. In either case, the choice should be based on aircraft that are anticipated to use the runway on a regular basis, which is defined by the FAA as at least 250 departures per year.

Runway length requirements were estimated using procedures outlined in FAA Advisory Circular (AC) 150/5325-4A, *Runway Length Requirements for Airport Design*, along with additional information provided in aircraft data charts from aircraft manufacturers. The runway length analysis methodology contained in AC 150/5325-4A considers both arrivals and departures; however, departures typically require longer runway lengths. The required departure runway length can be defined as the longest of the following three distances:

- Accelerate-takeoff distance—The total distance needed for the aircraft to accelerate to the critical takeoff speed (V_1), takeoff, and climb to an altitude of 35 feet above the ground, with one engine failing when the aircraft reaches V_1
- Accelerate-stop distance - The distance needed for the aircraft to accelerate to V_1 and then brake to a full stop
- All-engine takeoff distance - 115 percent of the distance needed for the aircraft to accelerate to V_1, takeoff, and climb to an altitude of 35 feet above the ground with all engines operating normally

Based on these definitions, it can be noted that as the critical takeoff speed is increased, the accelerate-takeoff distance decreases while the accelerate-stop distance increases. The methodology described in FAA AC 150/5325-4A provides for the "balanced field length" runway design, or the runway length at which the tradeoff between the reduced accelerate-takeoff distance approximately equals the increased accelerate-stop distance.

The required runway length as calculated using the methodology described in FAA AC 150/5325-4A is a function of the maximum operating temperature and elevation of the airport as well as the specific aircraft takeoff weight.

Input Data and Assumptions

For the initial calculations, the following input data and assumptions were used for the runway length analysis:

- The aircraft weight was assumed to be the maximum allowable gross takeoff weight for the specific aircraft type and model
- The temperature at takeoff was assumed to be the average maximum daily temperature in August in the Panama City region (89 degrees Fahrenheit) [1]
- The runway elevation was assumed to be 50 feet above mean sea level (MSL)
- The windspeed was assumed to be zero and the optimal flap settings were assumed
- Two runway gradients were assumed—zero (flat runway) and a 0.2% uphill gradient, which could occur at the alternative airport sites

The aircraft types analyzed included:

- Aérospatiale/Aeritalia ATR-72
- Airbus 320
- Boeing 737-800
- Boeing 767-200ER for potential international operations
- Canadair 200 LR (50-Seat Canadair Regional Jet)
- Canadair 700 (70-Seat Canadair Regional Jet)
- Canadair 900 (90-Seat Canadair Regional Jet)
- Embraer 145 regional jet
- Embraer 120 Brasilia turboprop
- Learjet 30 series business jet

The aircraft selected were based on a review of the aircraft types currently operating at the Airport and the aircraft types identified in the previous planning studies for the proposed new airport. Although not all of the aircraft currently operating at the Airport and not all of the aircraft that could be expected to operate at a new airport are listed, the list is representative of the overall aircraft fleet for the purposes of the runway length analysis.

The Airbus 320 was the only narrow-body jet aircraft included in the fleet mix in the previous planning studies. Considering the air carriers that have historically served the

[1] In the Runway Length Justification Document a temperature of 90 degrees Fahrenheit was used. The difference of 1 degree would not result in a notable difference in runway length requirements.

Airport or currently serve the Airport as of March 2003, or that could provide service in the future, and the fleets of those airlines, it was decided to also include the Boeing 737-800 for the runway length analysis. The Boeing aircraft is also a narrow-body jet aircraft and is in the same C-III aircraft category for airport planning as the Airbus 320. The aircraft also have similar seating capacity—the Airbus aircraft has a typical seating capacity of 150, while the Boeing aircraft has a typical seating capacity of 162. Both aircraft are one derivative of a family of narrow-body jet aircraft.

Delta Air Lines, Northwest Airlines, and U.S. Airways all provide service to the existing Airport through commuter/regional affiliate air carriers. In other markets, Delta Air Lines operates the Boeing 737-800, Northwest Airlines operates the Airbus 320 aircraft, and U.S. Airways operates the Airbus 320 as well as several of the derivatives of the Boeing 737 family of aircraft. Other air carriers, such as American Airlines and Continental Airlines that could be considered potential air carriers to serve Panama City also operate the Boeing 737-800 aircraft and Continental Airlines operates a number of the derivatives of the Boeing 737 family. Therefore, it was decided that if the Panama City market could sustain service by narrow-body jet aircraft similar to the Airbus 320 in the future, it would prudent to consider the Boeing 737-800 as well as the Airbus 320 in the runway length assessment.

Atlantic Southeast Airlines (d/b/a Delta Connection) announced new seasonal service between Panama City and Atlanta using CRJ-700 aircraft in a press release dated December 26, 2002. The CRJ-700 is a 70-seat version of the Canadair Regional jet. The 50-seat version of the aircraft already operates at the Airport, serving a number of markets. An additional aircraft considered in this runway length analysis is the CRJ-900, the 90-seat version of the Canadair Regional Jet. Although no service has been announced for the CRJ-900 at this time, at least one airline serving the Airport has placed orders for this 90-seat aircraft.

Runway Length Analysis Results

The runway length requirements based on maximum gross takeoff weight for the aircraft types listed above are presented in **Table 1**.

As shown in Table 1, the effect of an uphill runway gradient of 0.2% compared with a flat runway is an increased runway length requirement of about 200 to 300 feet depending on the aircraft type.

Table 1

Runway Length Requirements based on Maximum Allowable Gross Takeoff Weight

Aircraft Type	Runway Length (in feet) 0% gradient	0.2% gradient[(a)]
Aérospatiale/Aeritalia ATR-72	6,400	6,600
Airbus 320 (CFM56-5A1 engines)	10,100	10,400
Boeing 737-800 (CFM56-7B24 engines)	9,700	9,900
Boeing 767-200ER (PW4056 engines)	9,200	9,400
Canadair 200 LR (CF34-3B1 engines)	6,900	7,100
Canadair 700 ER (CF34-8C1 engines)	5,600	5,800
Canadair 900 (CF34-8C5 engines)	6,800	7,000
Embraer 145	6,900	7,100
Embraer 120 Brasilia (PW118 engines)	5,400	5,600
Learjet 30 series business jet	5,550	5,700

(a) Uphill runway gradient assumed.

Source: Ricondo & Associates, Inc., on the basis of FAA Advisory Circular 150/5325-4A, *Runway Length Requirements for Airport Design*, and information provided by individual aircraft manufacturers.
Prepared by: Ricondo & Associates, Inc.

The runway length requirements based on maximum allowable gross takeoff weight shown in Table 1 provide for the maximum range and the associated payload for the aircraft listed. It is not likely that aircraft would operate at both their maximum range and maximum payload from either the existing Airport or a new airport in the Panama City-Bay County Region. The actual service provided to and from an airport is a function of demand and the ability of airlines to serve that demand at the facilities provided. The demand within a specific origin-destination market[2] determines the number of air passengers that could be served. For non-stop airline service to be profitable within an origin-destination market, the load factors (i.e., the average percentage of seats filled) must be at or above the "break-even" load factors that are a function of the operating costs on the route and the fares that can be charged. To better understand the demand for service in the Panama City market, the numbers of annual passengers within each market were reviewed. **Table 2** provides a summary of the numbers of passengers and the percentage of passengers in the top 30 markets at the Airport in 2001.

[2] An origin-destination market is defined as a city pair of which air passengers begin their air trip in one city and end their air trip in the other city, regardless of the number actual flight segments involved. For example, a passenger traveling from New York City to Panama City would be considered a passenger in the Panama City-New York City origin-destination market even though their air trip would include at least one connection and at least two flight segments.

Table 2

Origin and Destination Passengers at Panama City-Bay County International Airport by City, 2001

Rank	City	Distance (miles)	Passengers in CY 2001[(a)]			Percentage	
			Inbound	Outbound	Total	Total	Cumulative
1	Washington	768	8,990	8,940	17,930	5.6%	5.6%
2	Atlanta	247	8,220	8,260	16,480	5.1	10.7
3	New York/Newark	980	6,930	6,880	13,810	4.3	15.0
4	Detroit	838	5,850	6,000	11,850	3.7	18.7
5	Philadelphia	889	5,150	5,320	10,470	3.3	22.0
6	Chicago	820	4,970	4,910	9,880	3.1	25.1
7	Boston	1,168	3,890	3,870	7,760	2.4	27.5
8	Dallas/Fort Worth	695	3,480	3,780	7,260	2.3	29.8
9	Tampa	245	4,880	2,370	7,250	2.3	32.1
10	Orlando	290	2,690	4,290	6,980	2.2	34.3
11	Los Angeles	1,929	3,160	3,380	6,540	2.0	36.3
12	St. Louis	646	3,180	3,180	6,360	2.0	38.3
13	Denver	1,261	3,180	3,050	6,230	1.9	40.2
14	Baltimore/Washington	802	3,040	3,150	6,190	1.9	42.1
15	Columbus	692	2,750	2,760	5,510	1.7	43.8
16	Kansas City	809	2,710	2,650	5,360	1.7	45.5
17	Norfolk	714	2,660	2,700	5,360	1.7	47.2
18	Minneapolis/St. Paul	1,092	2,660	2,660	5,320	1.7	48.9
19	Indianapolis	657	2,620	2,540	5,160	1.6	50.5
20	Hartford	1,085	2,470	2,530	5,000	1.6	52.1
21	Dayton	673	2,450	2,520	4,970	1.5	53.6
22	San Diego	1,862	2,430	2,380	4,810	1.5	55.1
23	Las Vegas	1,749	2,300	2,440	4,740	1.5	56.6
24	Seattle/Tacoma	2,276	2,320	2,240	4,560	1.4	58.0
25	Phoenix	1,560	2,300	2,180	4,480	1.4	59.4
26	Louisville	549	2,170	2,280	4,450	1.4	60.8
27	San Francisco	2,155	2,220	2,130	4,350	1.4	62.2
28	Pittsburgh	772	2,030	2,010	4,040	1.3	63.5
29	Nashville	412	2,000	2,020	4,020	1.3	64.8
30	Cincinnati	612	1,800	1,950	3,750	1.2	66.0
	Other Cities		55,640	54,810	110,450	34.0	
	Total for Year		161,140	160,180	321,320		

(a) CY = calendar year

Source: O&D Survey of Airline Passenger Traffic, U.S. DOT, Table 8
Prepared by: Ricondo & Associates, Inc.

As Table 2 shows, passenger traffic to and from Panama City in 2001 was spread among a number of markets, with the highest percentage for any market (Washington, D.C.) accounting for just over five percent of the total annual traffic. The same assessment of passenger markets was performed for traffic in calendar year 1999 and the results were similar. A review of the 1999 and 2001 data indicate that service to Panama City would likely continue to be provided in most origin-destination markets through the major airline hubs such as Atlanta, Memphis, Orlando, and Dallas/Fort Worth. As traffic levels increase and more passengers in the markets to and from Panama City are served through the hubs, there may be a need for increased frequencies (numbers of daily trips) or increased aircraft sizes to adequately serve the markets.

Also as traffic levels increase, non-stop service may be initiated in some other origin-destination markets such as Washington or New York, which accounted for two of the three highest traffic levels from Panama City in 2001. The potential for non-stop service in these two origin-destination markets increases if other smaller markets to Panama City could be served via connections through these two cities. Depending on seasonal fluctuations in demand, some service may be offered only on a seasonal basis at least initially. Again, the decision to initiate non-stop service in a particular market and the types of aircraft to be used for that service depend on the potential profitability of that service.

Table 3 summarizes the load factors under varying assumptions of number of seats per aircraft and the numbers of days per week the route is served for the level of demand in the Panama City-Washington origin-destination market in 2001 (nearly 9,000 outbound passengers and nearly 18,000 total passengers).

Table 3

Load Factors for Theoretical Service to Washington, D.C. based on demand in 2001[(a)]

Number of days per week of service	Load factor for aircraft size	
	50 seats	70 seats
5	70%	50%
6	60	40
7	50	30

(a) Includes origin-destination demand level only, without the potential for connecting passengers in other markets.

Source: Ricondo & Associates, Inc., based on 2001 O&D Survey of Airline Passenger Traffic, U.S. DOT, Table 8
Prepared by: Ricondo & Associates, Inc.

Based on the data presented in Table 3, if all of the passengers in the Panama City-Washington market were served on one non-stop flight per day, the load factor could be as high as 70% if the service were provided 5 days per week using a 50-seat aircraft. Over time, it is estimated that if traffic increases at the rate of about 2.9% annually as estimated in the forecasts of aviation demand, the load factors could reach as high as 85% for 5 days per week service by 2008, but again assuming that all passengers in the market used this service.

Based on the traffic levels in the Panama City-New York market in 2001 and assuming an average 2.9% increase per year, traffic levels in the Panama City-New York market in 2008 would be similar to those in the Panama City-Washington market in 2001. The load factors on the non-stop flights again could be higher if other origin-destination markets were served via connections through either Washington or New York. For example, United Airlines operates a primarily north-south hub at Washington Dulles International Airport and could provide connecting service to Panama City for passengers along the eastern seaboard and the northeastern U.S. through connections at Dulles. Continental Airlines operates a hub at Newark International Airport and could offer similar service for Panama City passengers primarily in New England markets through connections at Newark. Although no known plans exist by any air carriers to offer non-stop service in new markets at this time, as traffic levels increase, some markets may be viable for non-stop service in the longer-haul markets, especially if passengers in other markets could be served via connections.

Based on the information presented in Tables 2 and 3, it was decided to calculate the runway length requirements again, but for a smaller list of aircraft and for non-stop trip lengths consistent with the distances to two of the potential markets that could be served from Panama City. One market selected was Panama City-Atlanta, from which non-stop service is now provided via the Delta Connection. It is anticipated that traffic will continue to be served through hubs such as Atlanta, and that as traffic increases, additional regional jets and possibly larger narrow-body jets such as the Boeing 737-800 and the Airbus 320 could be used to provide service from the hubs. As of January 2003, the Delta Connection offered, through June 2003, 6 midweek daily flights (6 arrivals and 6 departures) between Panama City and Atlanta using 66-seat Aérospatiale/Aeritalia ATR-72 aircraft, and one daily flight each using Canadair 200 (CRJ-200) and Canadair 700 (CRJ-700) aircraft in the market. Replacement of additional ATR-72 flights with the same number of 50-seat regional jet flights would actually reduce the seat capacity in the market. As larger regional jets (e.g. CRJ-700 and CRJ-900) are being introduced into airline fleets, regional carriers have more options as to the equipment to assign within certain markets such as Panama City. Further, the replacement of the ATR-72 service with regional jet service is a reasonable assumption considering the regional and commuter air carrier industry trend for replacing turboprop

aircraft with regional jet aircraft. However, as traffic continues to increase, one or more of the daily regional jet trips could be replaced with service by a narrow-body jet aircraft.

It was also decided to estimate runway length requirements for non-stop service to New York in the event that traffic levels increased to the extent that non-stop jet service could become viable at least using regional jet aircraft. Based on the travel distance of about 1,000 miles in between Panama City and New York, it is assumed that only jet service would be feasible in that market, considering aircraft range and speed capabilities and the associated travel time. Although demand in the Panama City-New York market was about 15% lower in 2001 than demand in the Panama City-Atlanta market (16,480 total passengers in 2001 in the Panama City-Atlanta market compared with 13,810 total passengers in 2001 in the Panama City-New York market), other cities included in the top 30 markets listed in Table 2, such as Boston, Hartford, and potentially Philadelphia could be served via connections through New York. Service to the other cities would result in more passengers served by a non-stop flight from New York.

Based on the stated assumptions and a review of the runway length requirements presented in Table 1, it is assumed that either the Airbus 320 or the Boeing 737-800 should be the critical aircraft for determining runway length requirements at least for the Panama City-Atlanta market. This is because a number of markets could be served via connections through Atlanta on the Delta Air Lines system and at least once-daily service could be supported, which would result in more than the required 250 departures per year for an aircraft to be considered the critical aircraft. At this time, it appears that the regional jet would be more likely considered the critical aircraft at least through 2015 in the Panama City-New York market assuming that any service at all were initiated in the market.

The New York market represents a maximum trip distance of about 1,000 miles from Panama City. For comparison purposes, non-stop service from several northern Florida and nearby airports was examined to determine whether longer non-stop trips lengths may be viable from Panama City. **Table 4** provides a summary of non-stop service from six airports serving similar or in some cases larger resort areas. Of those listed, the longest nonstop trip is between Jacksonville and Boston—a distance of 1,010 miles. Therefore, a maximum trip length of 1,000 miles from Panama City seems to be a reasonable assumption.

Table 4

Longest Non-Stop Service from Selected Airports in and around Northern Florida during 2001

	Longest non-stop service from originating airport	
Originating Airport	Market	Distance (miles)
Daytona Beach International	Newark, NJ	885
Fort Walton Beach	Cincinnati, OH	601
Jacksonville International	Boston, MA	1,010
Mobile Regional	Washington, DC (Dulles)	834
Pensacola Regional	Dallas/Ft. Worth, TX	602
Tallahassee Regional	Cincinnati, OH	597

Source: Official Airline Guide, 2001
Prepared by: Ricondo & Associates, Inc.

Table 5 presents the runway length requirements for the selected aircraft to depart non-stop from Panama City to Atlanta (250 nautical miles) or to New York (1000 nautical miles) rather than departing at the maximum allowable gross takeoff weight (MGTOW) of each of the aircraft. The Canadair 200 LR was selected as the representative Canadair regional jet aircraft for the market assessment. As shown in Table 1, the runway length requirement for the Canadair 700 ER at MGTOW is significantly less than that for the Canadair 200 LR at MGTOW. It is therefore assumed that the required runway lengths to serve specific markets would also be significantly less for the Canadair 700 ER than for the Canadair 200 LR. Also, although the runway length requirement for the Canadair 900 at a 0.2% runway gradient is 7,000 feet, the range of the aircraft is over 1,700 miles. Therefore, it was assumed that the runway length required for a 1,000-mile flight would be similar too or less than that for the Canadair 200 aircraft.

Table 5

Runway Length Requirements based on Fixed Ranges

	Runway Length (in feet)	
Aircraft	Atlanta	New York
Airbus 320 (CFM56-5A1 engines)	5,200	6,400
Boeing 737-800 (CFM56-7B24 engines)	5,700	6,800
Canadair 200 LR (CF34-3B1 engines)	5,500	6,500
Embraer 145	5,600	6,500

Source: Ricondo & Associates, Inc., on the basis of FAA Advisory Circular 150/5325-4A, *Runway Length Requirements for Airport Design*, and information provided by individual aircraft manufacturers.
Prepared by: Ricondo & Associates, Inc.

As shown in Table 5, using specific markets to determine the required runway length rather than maximum allowable gross takeoff weight, results in appreciably reduced runway length requirements. Table 5 also shows that the Boeing 737-800 requires the longest runway length and the Airbus 320 the shortest runway length in both of the markets. The range of runway length requirements is rather small in both markets for the types of aircraft considered—5,200 to 5,700 feet in the Panama City-Atlanta market and 6,400 to 6,800 feet in the Panama City-New York market.

3. SUMMARY AND CONCLUSIONS

The results of the runway length analyses can be summarized as follows:

- In the event that air carriers currently serving the Airport replace some of the existing service provided by regional affiliates with service using mainline jet aircraft or that another air carrier introduces mainline service, the critical aircraft for runway length would be the Boeing 737-800 aircraft. The regional jet aircraft have the next highest runway length requirements.
- For short- and medium-range markets (up to about 1,000 miles) served by regional or narrow-body jets, the runway length requirement would be 6,800 feet. Although it would seem more likely for regional jets requiring a runway length of about 6,500 feet to serve the non-stop market between Panama City and New York, an additional 300 feet of runway, for a total of 6,800 feet, would allow the Boeing 737-800 to serve New York and markets at a similar distance from Panama City.
- For long-range domestic and international destinations, the runway length requirement would be 10,400 feet. As shown in Table 1, a 10,400-foot runway would accommodate the full range of aircraft considered in this analysis at their maximum gross takeoff weights.
- Although the results are not specifically described in the preceding paragraphs, the required runway length for narrow-body jets to serve domestic markets with distances of up to 2,000 nautical miles, such as Denver and Los Angeles, would be about 8,400 feet.
- Although not specifically assessed for this calculation, the recommended length of 4,500 feet for the crosswind runway as described in previous planning studies appears to be appropriate.

These results confirm the runway length requirements identified in previous planning studies and validate the assertion that these runway lengths would be able to accommodate the existing and forecast fleet mix and would allow for enhanced non-stop service either to new

cities or through larger aircraft in existing non-stop markets. It should be noted that the fleet mix assumptions are consistent with those already presented in previous planning studies. The assumptions regarding the potential non-stop departure distance (i.e., up to about 1,000 miles) would allow the Airport to accommodate airline service within the more heavily traveled markets that would appear to have greatest potential for non-stop service through 2015, based on the assumed fleet mix.

Although the Runway Length Justification Document stated that an 8,400-foot runway was needed to accommodate non-stop departures of some of the aircraft types in a number of longer-range markets from Panama City, no documentation was provided that adequate demand exists in those markets to support service and therefore justify the additional runway length.

Based on the analysis, a runway of 6,800 feet would provide adequate length to accommodate the types of regional jets and narrow-body aircraft consistent with the previously identified and FAA-accepted fleet mix in non-stop markets up to 1,000 miles Comparisons with service provided from other nearby airports in northern Florida and neighboring states show that this capability would be adequate to provide service in markets where non-stop flights could be reasonably anticipated over the planning period considered in the EIS.

cc: 01-10-0197-2
Panama City Read File