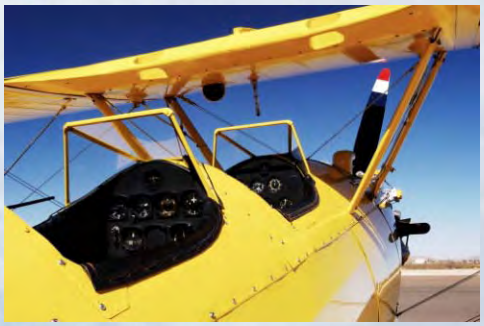
TALBERT & BRIGHT

ROWAN COUNTY AIRPORT MASTER PLAN



October 2008

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1.1 GOALS AND OBJECTIVES OF A MASTER PLAN

An Airport Master Plan presents both short-term and long-term development for an airport and graphically displays and reports data and logic upon which proposed development is based.

Location of Rowan County Airport
Source: MapQuest, Inc. (2007)

The goal of a Master Plan is to provide guidelines for future airport development, which will satisfy aviation demand in a cost-effective, feasible manner, while resolving aviation, environmental, and socioeconomic issues of the community.

The objectives are attainable targets that are action oriented and designed to address specific elements consistent with attainment of the goal. The objectives for Rowan County Airport (RUQ or the Airport) are based on an initial evaluation of the Airport and its surrounding environs and meetings with Airport and County staff and the Master Plan Technical Advisory Committee.

As information is developed during data-gathering efforts, objectives for the Airport Master Plan should be flexible to assure an objective basis for the final product. The specific goals and objectives for RUQ are to:

- Prepare a Master Plan Update and Airport Layout Drawing (ALP) plan set
- Protect and enhance community land use goals and regional aviation needs
- Evaluate current land uses adjacent to RUQ to prohibit encroachment, which could hinder future growth
- Evaluate existing airport infrastructure and make recommendations for future development
- Evaluate the facility layout for conformance with Federal Aviation Administration (FAA) *Advisory Circular 150/5300-13 – Airport Design* (as amended)

- Ensure that any short-term actions and recommendations do not preclude long-term planning objectives
- Optimize the operational efficiency, effectiveness, and safety of RUQ
- Establish the framework for a continuous planning process
- Meet the aviation needs of the community and customers
- Continue to meet the needs of RUQ tenants and help expand and attract new tenants
- Ensure that RUQ continues in its role of supporting the economy of Salisbury, Rowan County, and the region

1.2 STUDY PURPOSE

The purpose of this Master Plan Update is to determine the needs of RUQ for the next 20 years. To accomplish this purpose the following FAA defined steps are taken:

- **Inventory** – includes community, environmental, airport facilities, and aviation activity
- **Forecasts** – forecasts are made for general aviation and military activity for 5-, 10-, and 20-year time periods
- **Airfield Capacity** – examines the capacity and operational limits for runway and taxiway usage
- **Facility Requirements** – compares existing facilities, such as runways, taxiways, terminal space, automobile parking, aircraft aprons, and hangars against future needs
- **Financial Plan** – estimates cost (in current dollars) of proposed facilities with a projection of sources of funds; i.e., federal, state, local, or private

1.2.1 Key Issues

The following key issues were identified at the commencement of the Master Plan Update:

- Justification for extension of Runway 02/20 by 1,000 feet
- Provision of runway safety areas to meet federal standards
- Functional usage of existing runway surface
- Provision of itinerant and storage aircraft aprons

- Addition of aircraft hangars with demolition of selected hangars
- Provision of National Guard expansion options
- Programming of terminal expansion and/or replacement

1.2.2 Airport Layout Plans

With the support of the previous analyses, a series of drawings are provided depicting RUQ and proposed changes over the next 20 years. The principal drawing in the set of drawings is the Airport Layout Plan (ALP). The complete set of drawings is as follows:

- ALP
- Terminal Area Plan (TAP)
- Approach Surface (Part 77)
- Inner Portion Approach Surface Drawing
- Land Use Plan
- Exhibit "A" (property map)

2.1 SURVEYS

As required by FAA procedures, a detailed inventory of Rowan County Airport was conducted between October and November 2007. This inventory involved meetings with Airport staff, key airport users, and the National Guard. Airport statistics were collected including pilot surveys, fuel sales, hangar records, and instrument flight rules data. The physical facilities were inspected and air traffic operation counts conducted at various times of day for nine days. Complete air traffic survey counts are documented in Table 2.1-1 (pages 5 through 7).

2.2 REGIONAL OVERVIEW

2.2.1 Area Airports

A review of area airports is illustrated by Figure 2.2.1-1 (page 8) and summarized in Table 2.2.1-1 (page 9). As illustrated in Table 2.2.1-1 (page 9), a substantial number of aircraft are based in the growth corridors radiating from the Charlotte metropolitan area. Key comparisons are:

Airport	Based Aircraft	Operations
Rowan County	99	31,000
Concord Regional	177	67,513
Monroe Regional	91	56,000
Rock Hill/York County	92	42,500
Statesville Regional	67	31,200

Each of these airports has a precision runway of 5,500 feet or more and more than one based jet aircraft (except Rock Hill/York County Airport, which has no based jets). Of note is the intensity of itinerant general aviation activity (67,513 operations) at nearby Concord Regional Airport.

2.2.2 Vicinity Obstructions

With an airport elevation of 773 feet above mean sea level (MSL), several obstructions of over 1,000 feet above MSL are noted north and south of RUQ (Figure 2.2.1-1, page 8). A radio tower at 1,849 feet above MSL is located southwest of RUQ.

Table 2.1-1
Surveyed Aircraft Operational Counts
Rowan County Airport

Beginning Hour/ Aircraft Type	8am	9am	10am	11am	12noon	1pm	2pm	3pm	4pm	5pm	6pm	7pm	8pm
Monday 10/15/07 (clear weather)													
Single Engine							4	6	3	7 2	8 6	4 1	
Multi Engine Piston								3					
Multi Engine Turbo							1						
Helicopter							1	3		1	2		
Jet							1		4		2 1	2	1
Tuesday 10/16/07 (slightly overcast with clearing by 12:00 noon)													
Single Engine					1	1	6						
Multi Engine Piston													
Multi Engine Turbo		2	1				2						
Helicopter	2		2		3	3							
Jet	1			1		1	1						
					Blimp-1								
Wednesday 10/17/07 (high clouds)													
Single Engine	1	1	2	2									
Multi Engine Piston													
Multi Engine Turbo													
Helicopter		3	2										
Jet	1	1											
Wednesday 10/31/07 (clear weather)													
Single Engine						3 7	8	3 6	8				
Multi Engine Piston							1						
Multi Engine Turbo								1					
Helicopter						2	2	3	1				
Jet								1	3				

Table 2.1-1
Surveyed Aircraft Operational Counts
Rowan County Airport

Beginning Hour/ Aircraft Type	8am	9am	10am	11am	12noon	1pm	2pm	3pm	4pm	5pm	6pm	7pm	8pm
Thursday 11/01/07 (clear to partly cloudy)													
Single Engine	2 1	3 1	4 2	1	2	4	3	7	2				
Multi Engine Piston								6 1	2				
Multi Engine Turbo				2			1						
Helicopter			3	5	3			4	3				
Jet	1			1				1	2				
Friday 11/02/07 (clear, cold 56°F)													
Single Engine			2	2 3	2	2	5	-	4		12		
Multi Engine Piston								-	1	1 3	1		
Multi Engine Turbo								-	1				
Helicopter							1	-			1		
Jet								-	1		1		
Saturday 11/03/07 (clear, cold)													
Single Engine		2	3	10 5	6								
Multi Engine Piston				1	1								
Multi Engine Turbo	1		1										
Helicopter	3	4	2	3	11								
Jet													
Saturday 11/17/07 (clear, high clouds)													
Single Engine						6 4	9 5	9 9	5 4	2			
Multi Engine Piston						1	1	2					
Multi Engine Turbo													
Helicopter						2	5	4	2				
Jet													

Table 2.1-1
Surveyed Aircraft Operational Counts
Rowan County Airport

Beginning Hour/ Aircraft Type	8am	9am	10am	11am	12noon	1pm	2pm	3pm	4pm	5pm	6pm	7pm	8pm
Sunday 11/18/07 (clear, cold 38ºF)													
Single Engine	3 7	no counts			5	9	10 4	8	11	7	1		
Multi Engine Piston					1	1 2			5	1			
Multi Engine Turbo					2								
Helicopter	1				2	1		6	4	1			
Jet								1					

KEY
6 - Itinerant Operations
5 - Local Operations
4 - Local Touch and Go Operation
Source: Talbert & Bright, Inc. (October and November 2007)

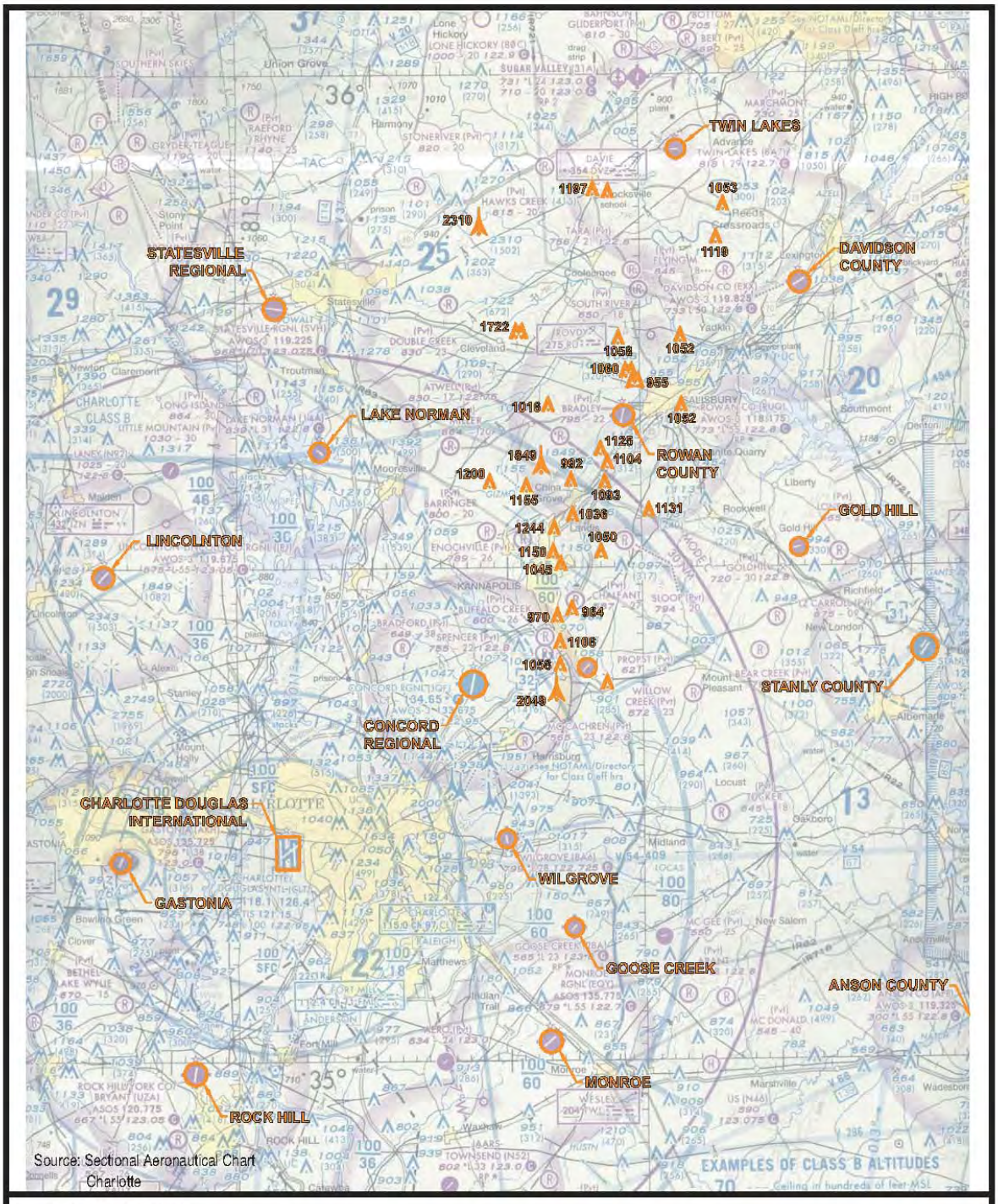


Figure 2.2.1-1
Rowan County Airport - Rowan County, North Carolina

Area Airports & Selected Vicinity Obstructions

Table 2.2.1-1
Selected FAA 5010 Form Comparisons
Rowan County Airport

	Based Aircraft								Runway Data				Services		Operations				
																General Aviation			
Airport	Single Engine	Multi Engine	Jet	Helicopter	Ultra Light	Military	Glider	TOTAL	Length	Surface	Marking	Fuel	Instruction	Maintenance	Air Carrier	Air Taxi	Local	Itinerant	Military	TOTAL
Rowan County	60	10	5	3	2	19		99	5,500'	Asphalt	Precision	100LL A1+	Yes	Minor	0	1,000	12,000	9,000	9,000	31,000
Davidson County	46	10	2					58	5000'	Asphalt	Basic	100LL A	Yes	Minor	0	500	5,000	3,000	500	9,000
Concord Regional	124	37	10	6				177	7,400'	Asphalt	Precision	100LL A,A1+	Yes	Major	0	9,260	13,723	44,282	248	67,513
Stanly County	30	4						34	5,500'	Asphalt	Precision	100LL A1+	Yes	Major	0	3,000	8,000	13,000	7,000	31,000
Anson County	21	2	0		8		1	32	5,498'	Asphalt	Non-Precision	100LL A	None	Minor	0	500	2,500	4,000	200	7,200
Statesville Regional	46	15	6					67	7,006	Asphalt	Precision	100LL A	None	Major	0	1,000	16,000	14,000	200	31,200
Gastonia Municipal	48	5	2					55	3770'	Asphalt	Non-Precision	100LL A1+	Yes	Minor	0	1,000	40,000	9,000	40	50,040
Lincoln-Lincoln Co. Regional	55	13	1	1				70	5,500'	Asphalt	Non-Precision	100LL A1+	Yes	Major	0	1,300	14,300	16,900	900	33,400
Monroe Regional	68	16	4	3				91	5,500'	Asphalt	Precision	100LL A	Yes	Major	0	4,100	30,500	20,500	1,000	56,100
Rock Hill/York County	101	3						104	5,500'	Asphalt	Precision	100LL A	Yes	Major	0	400	29,500	12,500	100	42,500
Twin Lakes (Mocksville Pvt.)	81	9	0	1			1	92	2,943'	Asphalt	Basic	100LL	Yes	Major	0	0	24,000	5,000	1,000	30,000
Wilgrove Air Park (Pvt.)	50	3	0					53	2,835'	Asphalt	NSTD	100LL	Yes	Minor	0	0	10,500	4,000	100	14,600
Lake Norman Airpark (Pvt.)	35	11		2				48	3,147'	Asphalt	NSTD	100LL	Yes	Major	0	0	9,000	1,000	0	10,000
Sugar Valley (Mocksville Pvt.)	15							15	2,424'	Asphalt	NSTD	100LL	Yes	Major	0	0	8,000	1,200	100	9,300
Goose Creek (Pvt.)	14				7			21	2,350"	Asphalt	Basic	100LL	Yes	Minor	0	20	2,500	500	50	3,070

Source: FAA 5010 Forms (2007)

2.3 SOCIOECONOMIC REVIEW

2.3.1 Population/Income/Housing

The future aviation demands at RUQ are tied in large part to the County's demographic and economic changes. Table 2.3.1-1 depicts a portion of this setting. As shown, Rowan County has a dynamic population growth pattern but somewhat slower than the City of Charlotte (Mecklenburg County) and nearby Cabarrus County and Union County. Median home values also mirror the population trends for these four counties.

Table 2.3.1-1
Population/Income/Home Value
Rowan County Airport

State/County City/Town	N.C.	Mecklenburg Charlotte	Rowan Salisbury	Davidson Lexington	Cabarrus Concord	Catawba Hickory	Union Monroe	Gaston Gastonia	Iredell Statesville	Stanly Albemarle
POPULATION & RATE OF CHANGE										
2007	8,968,800	842,622	135,597	157,450	157,985	152,597	174,767	196,765	146,384	59,498
Annual Rate of Change	1.39	2,21	0.94	0.97	2.23	1.15	3.04	0.44	2.03	0.62
2017	10,298,855	1,048,039	148,883	173,399	196,890	171,081	235,846	205,558	178,990	63,276
Annual Rate of Change	1.26	1.93	0.91	0.9	2.0	1.08	2.56	0.36	1.8	0.57
2027	11,676,321	1,268,238	162,999	189,595	240,114	190,363	303,803	213,006	214,013	66,954
PER CAPITA INCOME										
2005	$31,041	$42,984	$27,376	$28,983	$32,111	$28,598	$29,018	$29,854	$29,676	$26,251
MEDIAN HOME VALUE										
2000	$108,300	$141,800	$95,200	$98,600	$118,200	$103,000	$128,500	$90,300	$116,100	$87,700

Sources: POPULATION - Census projections based on North Carolina State Demography.
INCOME - Federal Agency Data - Bureau of Economic Analysis.
MEDIAN HOME VALUE - Owner occupied units - Census of Population and Housing.

Rowan County's population, income, and home value indices most closely resemble Iredell County. It is proposed that similar settings along two interstate highways with each of the two counties being 12 miles to 20 miles further from the City of Charlotte than Cabarrus and Union Counties help to formulate these socioeconomic patterns. Gaston County appears to be an anomaly with slow population growth and a little lower median home value. Both Rowan County and Iredell County appear to be in the direct paths for continued positive population and income changes.

2.3.2 Industry/Employment

Table 2.3.2-1 (page 11) documents additional socioeconomic data. Using industry employment percentages as a guide, it is evident that Rowan County has stronger than average manufacturing and transportation/warehousing employment components. Most of the other counties surrounding the city of Charlotte also have strong manufacturing components with the possible exception of Cabarrus County. Cabarrus County has a

stronger retail trade and unique arts/entertainment/recreation (automobile racing) function. While manufacturing and transportation/warehousing are often complemented by corporate aviation services, so is automobile racing. As the automobile racing phenomena in nearby Cabarrus County continues, spillover impacts and aviation service support should be expected in Rowan County.

Table 2.3.2-1
Selected County Employment Comparisons
Rowan County Airport

STATE/COUNTY CITY/TOWN	N. C.	Rowan Salisbury	Davidson Lexington	Cabarrus Concord	Catawba Hickory	Union Monroe	Gaston Gastonia	Iredell Statesville
Total Employment 2005	5,119,512	57,646	72,854	84,355	102,131	68,381	96,021	77,844
INDUSTRY	**EMPLOYMENT PERCENTAGE**							
Farm	1.4	1.7	1.4	0.6	0.7	2.4	0.4	2.0
Forestry/Fishing	0.5	0.2	0.2	-	-	-	-	-
Mining	0.1	0.4	0.2	-	-	-	-	-
Utilities	0.3	0.5	0.2	-	0.4	0.3	0.7	0.2
Construction	7.1	5.5	9.0	8.7	4.5	16.0	7.1	7.6
Manufacturing	11.5	20.8	19.6	9.8	28.7	17.4	18.0	16.2
Wholesale Trade	3.7	3.4	3.1	4.2	4.5	4.4	2.8	5.3
Retail Trade	10.4	9.3	11.2	14.7	11.7	9.3	12.6	13.1
Transportation/Warehousing	2.8	5.5	3.4	-	3.7	2.2	2.8	3.3
Information	1.7	0.6	0.8	1.1	0.7	0.7	0.9	0.6
Finance/Insurance	3.8	1.8	2.5	2.2	1.9	2.2	2.4	2.0
Real Estate/Rental/Leasing	3.5	1.5	3.7	3.8	2.0	3.5	3.6	2.7
Professional/Technical Services	5.2	-	4.1	4.9	2.3	4.0	3.6	3.5
Management of Companies	1.3	-	1.3	1.4	1.8	0.2	0.3	0.5
Administrative/Waste Services	6.1	3.5	6.8	7.0	5.9	6.6	7.5	5.8
Educational Services	1.7	2.0	1.0	1.0	0.8	1.5	1.3	1.0
Health Care/Social Assistance	9.1	9.7	7.5	6.1	8.1	4.2	11.4	8.7
Arts/Entertainment/Recreation	1.6	1.1	1.7	3.8	1.2	1.2	1.3	3.2
Accommodation/Food Services	6.5	5.8	5.0	7.7	6.6	4.8	6.0	6.5
Other Services	5.5	5.7	7.5	6.1	4.5	5.8	7.2	6.3
Federal Civilian Government	1.2	3.2	0.2	0.3	0.5	0.4	0.4	0.4
Military Employment	2.5	0.6	0.5	0.4	0.4	0.6	0.5	0.4
State Government	3.8	3.1	1.6	0.8	1.5	1.0	1.4	1.3
Local Government	8.2	8.2	7.4	12.6	7.5	11.2	7.6	9.2
Not Defined	0.0	5.5	0.0	2.8	0.1	0.9	0.2	0.3
Total	99.5	99.6	99.9	100.0	99.9	99.9	99.8	99.8

Note: Red color denotes a defining employment category
Rounding has been applied.

Source: Base employment data from Bureau of Economic Analysis (BEA) Employment by Industry (NAICS) categories.
Talbert & Bright Inc. (December 2007)

2.4 ROWAN COUNTY AIRPORT

2.4.1 Airport Location

Regional Location of Rowan County Airport
Source: MapQuest, Inc. (2007)

RUQ is a public airport located three miles southwest of Salisbury, North Carolina off Airport Loop Road. Rowan County is located in the vastly growing Piedmont region of North Carolina along Interstate 85 (I-85) between the exploding Charlotte metropolitan area and Winston-Salem, Greensboro, and High Point markets.

RUQ is owned and operated by Rowan County and is within the city limits of Salisbury. RUQ encompasses approximately 527 acres and is generally bounded by Airport Loop Road to the east, Airport Road to the south, National Guard Road to the west, and Rowan Mills Road to the north. The elevation of the airport is 773 feet above MSL. A 100-foot by 5,500-foot runway and parallel taxiway is provided. A general aviation terminal is located in the southeast quadrant of the Airport. National Guard facilities are located in the northwest quadrant of RUQ. Figure 2.4.1-1 (page 13) illustrates the current layout and facilities of RUQ.

2.4.2 Historical Funding

Table 2.4.2-1 (page 14) provides a historical listing of federal and state funded projects at RUQ. This listing provides the chronological development of RUQ between 1990 and 2006.

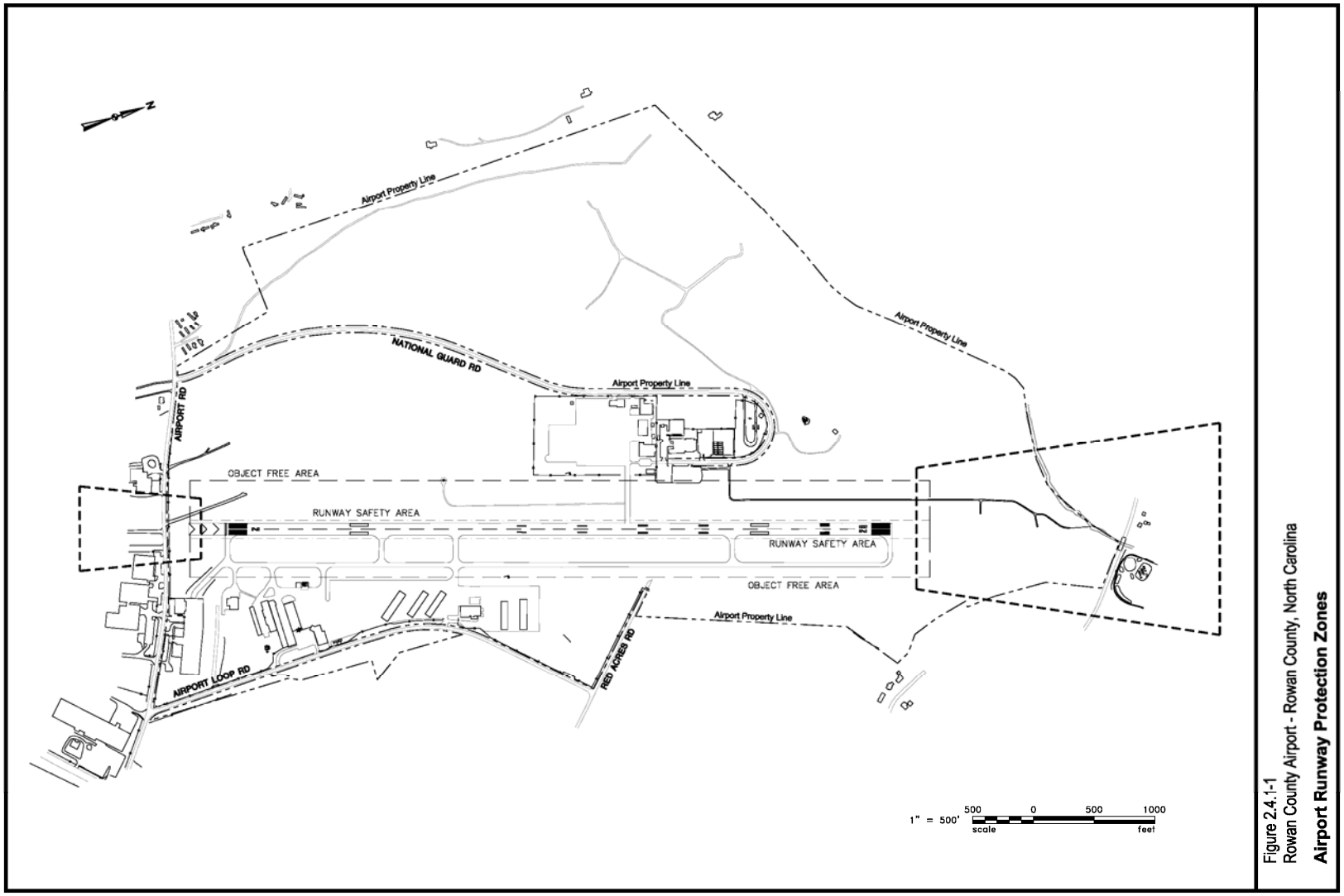


Figure 2.4.1-1
Rowan County Airport - Rowan County, North Carolina
Airport Runway Protection Zones

Table 2.4.2-1
Historical Listing of Federal and State Funded Projects
Rowan County Airport

Fiscal Year	Amount	Funding Source	Description
1990	$2,552,003	F/S	Site Preparation Runway and Taxiway Extension to 5,500'
1991	$421,810	F/S	Pave and Light Runway and Taxiway Extension to 5,500'
1992	$200,200	F/S/L	Land and Clearing
1992	$179,834	F/S	Land, Obstruction Removal
1993	$93,750	S	Construct Terminal Building
1993	$650,000	F/S/L	Land Acquisition
1993	$595,000	S	Localizer/Glideslope
1993	$491,666	S/L	Relocate Parallel Taxiway
1993	$15,000	S	ALP Update
1995	$15,000	S	Pavement Sealing
1995	$87249	S	Expand Apron
1996	$120,000	S/L	Construct Access Taxiway to Hangar Area
1996	$30,000	S/L	Update Airport Layout Plan
1996	$3,000	S/L	Approach Survey
1996	$73,700	S	NCDOT NAVAIDS Operations and Maintenance
1997	$450,000	S/L	Rehabilitate Runway 02-20
1997	$120,000	S/L	Expand Aircraft Parking Apron
1998	$18,000	S/L	Obstruction Removal for Runway Approaches
1998	782,877	S/L	Relocate Parallel Taxiway
1998	$73,700	S	NCDOT NAVAIDS Operations and Maintenance
1999	$73,700	S	NCDOT NAVAIDS Operations and Maintenance
1999	$90,000	S/L	Upgrade AWOS System
1999	$11,111	S/L	Obstruction Removal for Lighting Runway 02
1999	$14,400	S/L	Obstruction Removal Runway Approaches
1999	$676,742	S/L	Rehabilitate Runway
2000	$73,700	S	NCDOT NAVAIDS Operations and Maintenance
2001	$90,000	F/L	Runway Rehabilitation
2001	$76,666	F/L	Corporate Taxiway Phase I
2001	$100,000	S/L	Obstruction Removal
2001	$30,000	S/L	Rehabilitate Rotating Beacon
2001	$49,084	S/L	Construct Hangar Area Access Taxiway, Phase II
2002	$166,667	F/L	Taxiway Extension
2003	$267,161	S/L	Rehabilitate/Construct Taxiway
2003	$396,135	F/L	Parallel Taxiway Lights
2003	$288,394	S/L	Land Acquisition Part 77 Surfaces
2004	$927,051	F/L	T-Hangar Taxiways, Wetlands Mitigation, Hangar Access Road, Water and Sewer for Future Hangars
2006	$944,444	F/L	Land Acquisition (RSA)
	$11,248,044		

F = Federal
S = State
L = Local
Source: NCDOA (November 2007)

2.4.3 Airport Facility Directory

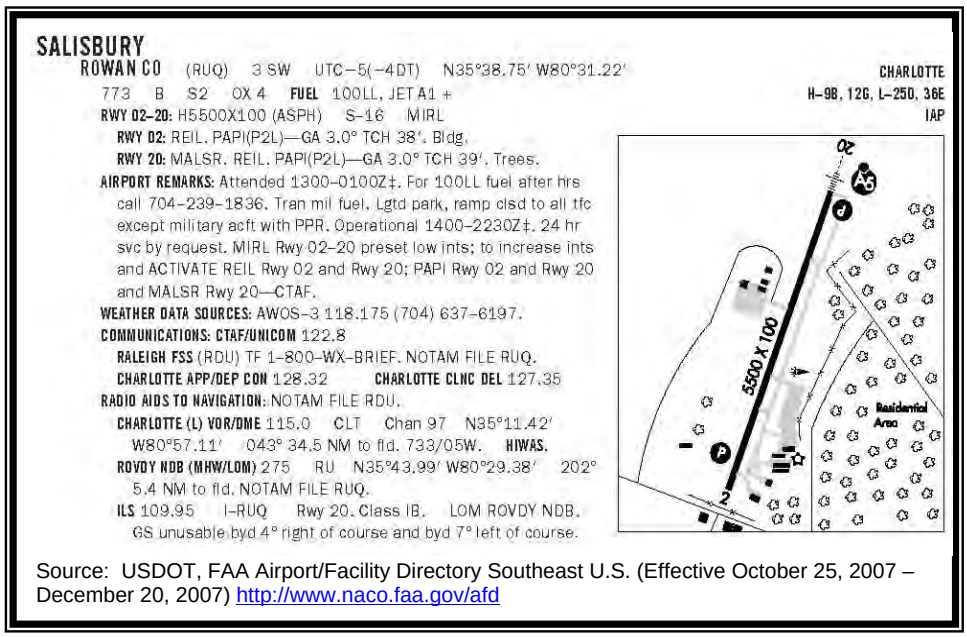
This section describes the airside characteristics of RUQ. Many of the characteristics noted are published in the Airport/Facility Directory (AFD).

2.4.3.1 Airport Name and Associated City

The AFD lists the airport name as Rowan County Airport. Airports are listed alphabetically in the AFD by the associated city and state. The associated city for the RUQ is Salisbury, North Carolina. RUQ is located three miles southwest of the center of Salisbury, North Carolina**.**

2.4.3.2 Airport Identifier

A three- or four-character code is assigned to airports. These identifiers are used by Air Traffic Control (ATC) in lieu of the airport name in flight plans, flight strips, and other written records and computer operations. The location identifier for Rowan County Airport is RUQ.



SALISBURY
ROWAN CO (RUQ) 3 SW UTC−5(−4DT) N35°38.75′ W80°31.22′ CHARLOTTE
773 B S2 OX 4 **FUEL** 100LL, JET A1 + H–9B, 12G, L–25D, 36E
RWY 02–20: H5500X100 (ASPH) S–16 MIRL IAP
RWY 02: REIL. PAPI(P2L)—GA 3.0° TCH 38′. Bldg.
RWY 20: MALSR. REIL. PAPI(P2L)—GA 3.0° TCH 39′. Trees.
AIRPORT REMARKS: Attended 1300–0100Z‡. For 100LL fuel after hrs call 704–239–1836. Tran mil fuel. Lgtd park, ramp clsd to all tfc except military acft with PPR. Operational 1400–2230Z‡. 24 hr svc by request. MIRL Rwy 02–20 preset low ints; to increase ints and ACTIVATE REIL Rwy 02 and Rwy 20; PAPI Rwy 02 and Rwy 20 and MALSR Rwy 20—CTAF.
WEATHER DATA SOURCES: AWOS–3 118.175 (704) 637–6197.
COMMUNICATIONS: CTAF/UNICOM 122.8
RALEIGH FSS (RDU) TF 1–800–WX–BRIEF. NOTAM FILE RUQ.
CHARLOTTE APP/DEP CON 128.32 **CHARLOTTE CLNC DEL** 127.35
RADIO AIDS TO NAVIGATION: NOTAM FILE RDU.
CHARLOTTE (L) VOR/DME 115.0 CLT Chan 97 N35°11.42′ W80°57.11′ 043° 34.5 NM to fld. 733/05W. **HIWAS.**
ROVDY NDB (MHW/LOM) 275 RU N35°43.99′ W80°29.38′ 202° 5.4 NM to fld. NOTAM FILE RUQ.
ILS 109.95 I–RUQ Rwy 20. Class IB. LOM ROVDY NDB. GS unusable byd 4° right of course and byd 7° left of course.

Source: USDOT, FAA Airport/Facility Directory Southeast U.S. (Effective October 25, 2007 – December 20, 2007) http://www.naco.faa.gov/afd

2.4.3.3 Airport Coordinates (Airport Reference Point)

The geographic position is shown in degrees, minutes, and hundredths of a minute and represents the approximate center of mass of usable runways, also defined as the Airport Reference Point (ARP). The existing ARP for RUQ is N 35° 38.75', W 080° 31.22'. This will change if the 1,000-foot runway extension is constructed.

2.4.34 Navigational Charts

Airports are typically illustrated on Sectional and IFR Enroute Low and High Altitude Charts. RUQ is shown on the Charlotte Sectional Aeronautical Chart, Charlotte VFR Flyway Planning Chart, Charlotte VFR Terminal Area Chart, H-9 and H-12 IFR Enroute High Altitude Charts, and L-25 IFR Enroute Low Altitude Chart.

2.4.4 Airport Inventory

2.4.4.1 Runway/Taxiway

As shown by Figure 2.4.1-1 (page 13), RUQ has a 5,500-foot by 100-foot runway. A 300-foot paved overrun is provided at the Runway 02 end. A 35-foot-wide parallel taxiway is located on the east side of the runway. The runway safety area at the Runway 02 end is 482 feet in length. The runway protection zone at the Runway 02 end is 500 feet by 1,000 feet by 700 feet. The runway safety area at the Runway 20 end is 500 feet by 1,000 feet. The runway protection zone at the Runway 20 end is 1,000 feet by 2,500 feet by 1,750 feet.

A precision CAT-I instrument landing system is provided for the approach to Runway 20. This system includes a medium intensity approach lighting system with runway alignment indicator lights (MALSR), outer and middle markers, medium intensity runway lights (MIRL), localizer, and glide slope indicator. In addition, both runway ends have a precision approach path indicators (PAPI-2, visual slope indicator), and runway end identifier lights (REIL).

The runway is in good condition with some questions of wet condition ponding. The taxiway is also in good condition but some crack sealing and patching is evident. The strength of the runway is rated as 16,000 pounds for single-wheel gear aircraft.

2.4.4.2 Facility Locations and Surroundings

Figure 2.4.4.1-1 (page 17) illustrates the general aviation terminal and Fixed Based Operator (FBO) hangar, located on the east side of the Airport toward the south end of the runway. A collection of individual open hangars and four closed hangars are located immediately south of the terminal. T-hangars are located north of the terminal with three corporate hangars located to the far south. A stand-alone paint hangar is located between the corporate hangars and the open hangars, as well as a second stand-alone hangar is located between the T-hangars.

The National Guard occupies the northwest portion of the Airport. Both a helicopter and ground unit are positioned there.

2.4.4.3 Aviation Facilities

Table 2.4.4.3-1 (pages 18 and 19) provides a summary of RUQ facilities. The runway parameters listed in the previous section are also listed in this table. Of significance is the documentation of both the general aviation and National Guard aprons. The general aviation itinerant apron and the storage apron are near or at capacity. These aprons are approximately 6,700 square yards and 15,600 square yards, respectively. Observations during the inventory survey illustrated extreme itinerant aircraft congestion when three or more large corporate aircraft require ramp parking space. These aircraft are often jet aircraft. Ramp storage is at first inspection less constrained with 44 tie-downs and 15

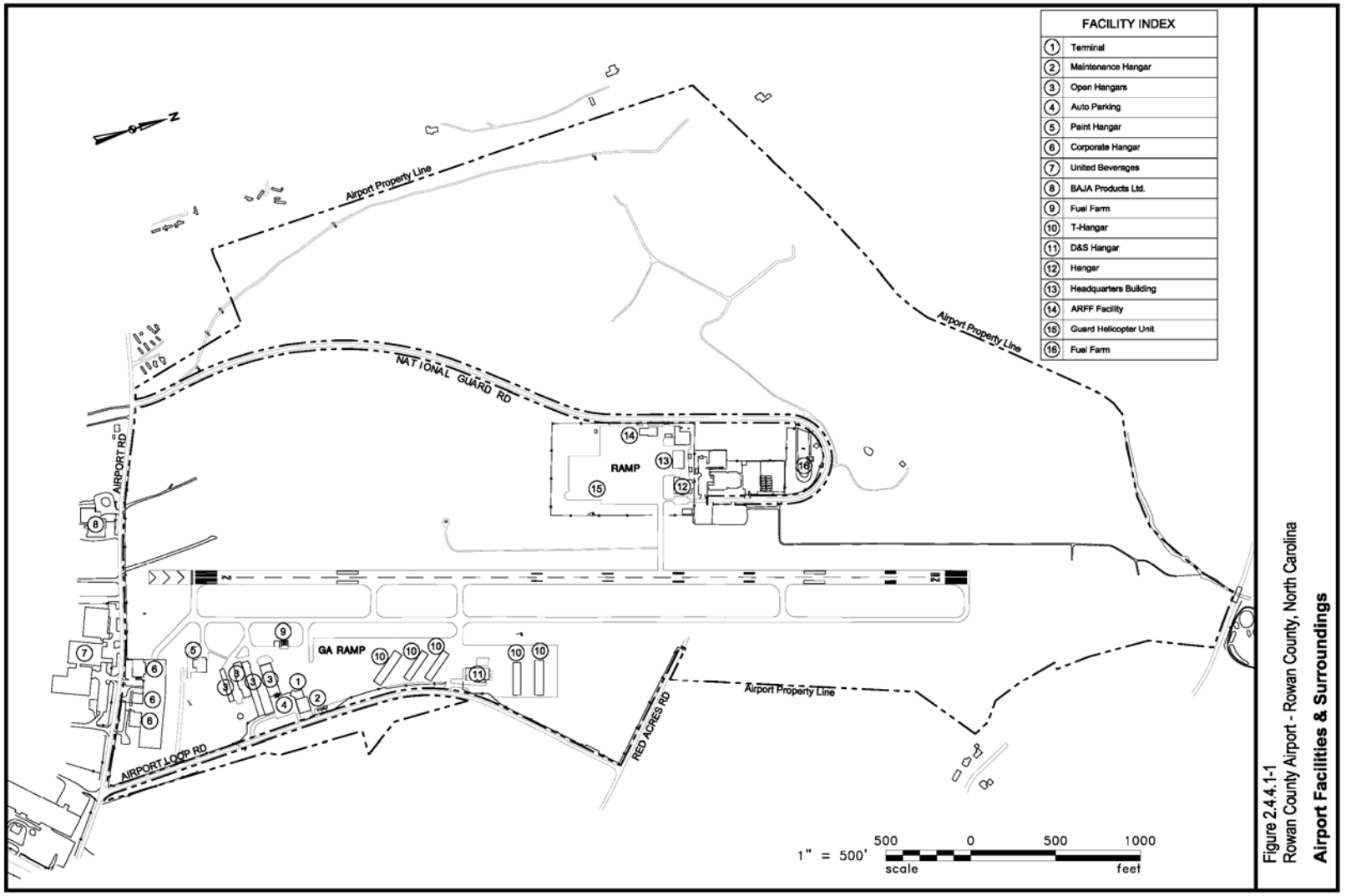

FACILITY INDEX
1 Terminal
2 Maintenance Hangar
3 Open Hangars
4 Auto Parking
5 Paint Hangar
6 Corporate Hangar
7 United Beverages
8 BAJA Products Ltd.
9 Fuel Farm
10 T-Hangar
11 D&S Hangar
12 Hangar
13 Headquarters Building
14 ARFF Facility
15 Guard Helicopter Unit
16 Fuel Farm
Airport Property Line
NATIONAL GUARD RD
AIRPORT RD
RAMP
GA RAMP
AIRPORT LOOP RD
RED ACRES RD
Airport Property Line
Airport Property Line
1" = 500'
500 0 500 1000
scale
feet
Figure 2.4.4.1-1
Rowan County Airport - Rowan County, North Carolina
Airport Facilities & Surroundings

Table 2.4.4.3-1
Inventory of Existing Facilities
Rowan County Airport

A. Aviation Facilities — **RWY 02/20**

1. Runway
   - a) Length: 5,500'
   - b) Width: 100'
   - c) Type Pavement: Asphalt
   - d) Pavement Condition: Good
   - e) Strength: SWG 16,000 lbs.
   - f) Marking: Precision
2. Taxiways
   - a) Description/Width: Full Parallel/35'
   - b) Type Pavement: Asphalt
   - c) Pavement Condition: Good
   - d) Marking: Centerline
3. Lighting
   - a) Runway Type: MIRL
   - b) Taxiway Type: MITL
   - c) Approach: P2L/P2L; REIL/REIL; MALSR – RWY 20
4. General Aviation Apron
   - a) Area
     - Itinerant: 6,700 sq. yds.
     - Storage: 15,600 sq. yds.
   - b) Type Pavement: Asphalt
   - c) Condition: Fair
   - d) Tie-downs: 44
   - e) Lighting: Flood
5. National Guard Apron
   - a) Area: 32,500 sq. yds.
   - b) Type Pavement: Asphalt

C. Terminal Facilities/Services

1. County
   - a) Terminal
     - 2,797 sq. ft. ground floor
     - 1,066 sq. ft. upper floor
   - b) Automobile Parking
     - 45 regular spaces
     - 2 handicap spaces
     - 3 spaces inside fence
   - c) Fuel Farm
     - 2 – 10,000 gal. Jet A tanks
     - 1 – 10,000 gal. 100LL tank
     - 1 – 1,200 gal. AVGAS truck
     - 1 – 3,000 gal. Jet A truck
   - d) Services
     - Minor Airframe Maintenance
     - Minor Powerplant Maintenance
     - Bottled Oxygen - low
     - Aircraft Parking
     - Hangars
     - Tie-downs
   - e) Hangars
     - T-hangars 5 – 10 unit
     - Box Hangars – 27
     - Stand Alone – 5
   - f) Equipment
     - Clark Tug
     - Jet Porter
     - Hobart GPU
     - Bush hog/Snow plow

D. National Guard Facilities

1. Air Battalion Unit 2
   - a) Apron 32,500 sq. yds.
   - b) Hangars/Wash Shed
     - 120' x 100' = 12,000 sq. ft. hangar
     - 70' x 90' = 6,300 sq. ft. hangar
     - 65' x 120' = 7,800 sq. ft. wash shed
   - c) ARFF Units
     - 1 – 3,000 gal. tactical unit
     - 1 – 200 gal. twin agent foam truck
   - d) Operations and Maintenance Support Buildings
   - e) Fuel
     - 3 – Fuel Trucks
2. Ground Army Unit
   - a) 120' x 189' = 21,600 sq. ft. Armory

E. Flight Navigation Aids

1. Airport Beacon – a 35-inch beacon located 80 feet south of terminal.
2. Instrument Approaches
   - ILS RWY 20
   - RNAV(GPS) RWY 2
   - NDB RWY 20
3. Visual Approach Aids
   - PAPI 2L/RWY 2
   - PAPI2L/RWY 20
   - REILS RWYS 2 & 20
4. Communications & NAVAIDS
   - NDB, ILS, GPS
   - AWOS-3 118.175

Table 2.4.4.3-1
Inventory of Existing Facilities
Rowan County Airport

c) Condition — Good
d) Black Hawk spaces — 12+

A. Aviation Facilities — **RWY 02/20**

6. Wind Indicator & Segmented Circle
   a) Location — Mid-Field South of Taxiway
7. AWOS-3
   a) Location — Near Runway 02 end
8. Beacon
   a) Location — Near Terminal

B. Physical Site

1. Location – 3 miles SW of Salisbury, NC
2. Counties Served – Rowan, Cabarrus, Davidson, Iredell, Catawba
3. Ground Access – N.C. 29 and Airport Road
4. Mean Max. Hot Mo. Temp. – 82ºF
5. Airport Elevation – 773'
6. Airport Ownership – Rowan County

C. Terminal Facilities/Services

Courtesy Car
John Deere Gator Truck
Quick Response fire unit 909
Forklift

2. Alpha One Air Service
   a) Primary Flight Training
   b) Advanced Flight Services
   c) Pilot Services
   d) Ground Schools
   e) Aircraft Rentals
   f) Aircraft
      Cessna 150
      Cessna 152
      Cessna 172
      Piper Archer
3. Carolina Avionics LLC
   a) Avionics sales and service
   b) Auto-pilot repair
   c) Altimeter and Transponder Inspection
   d) Custom avionics installations
4. Carolina Aircraft Inc.
   a) Stripping and Painting
5. NC Rotor & Wing, LLC
   a) Helicopter Flight Training

E. Flight Navigation Aids

CTAF/UNICOM 122.8
Charlotte App. CON. 128.32
Clearance Delivery 127.35
Charlotte VOR/DME 115.00
ILS 109.95
NDB 202 degrees
5.4 nm to field

Source: Talbert & Bright, Inc. (December 2007)

stored aircraft. However, FBO maintenance activity often requires several transient tie-downs, as does overflow from the itinerant ramp.

The National Guard apron (32,500 square yards) is in good condition with resurfacing for parts of the ramp programmed for the immediate future. While the current apron can accommodate 12-plus Black Hawk helicopters, there is a Guard desire to investigate a long-term footprint for an expanded ramp or relocation of the aviation facility.

2.4.4.4 General Aviation Terminal

The current general aviation terminal was built in 1991. A general estimate of the total square footage is 3,835 square feet. Incorporated into the terminal were portions of the FBO-hangar office space; i.e., the conference room and upper floor rooms. The effective floor usage is the ground floor, which is estimated to be approximately 2,769 square feet. Figure 2.4.4.4-1 (page 21) illustrates the floor plan of the terminal. Table 2.4.4.4-1 provides a room by room listing of square footage. While the terminal is 16 years old, it is in good condition and functions effectively on a daily basis given the existing usage demands.

Table 2.4.4.4-1
Existing Terminal Square Footage
Rowan County Airport

Area	Square Footage*	Area	Square Footage*
Ground Floor			
Lobby	578	Flight School	227
Operations Area	166	Flight Planning	123
Refreshment Area	140	Pilot Lounge	229
Administration Office	156	Conference Room	304
Administration Office	144	Main Corridor	252
Administration Office	168	Vestibule	38
Restroom	100	Vestibule	44
Restroom	100	Subtotal	2,769
Upper Floor			
Unused Room	368	Unused Room	427
Restroom	91	Corridor	180
		Subtotal	1,066
Grand Total	3,835		

* Square footages are estimates only.
Source: Talbert & Bright Inc. (December 2007)

Figure 2.4.4.4-1
Rowan County Airport - Rowan County, North Carolina

Generalized Terminal Schematic

A security camera system provides six views around the terminal, terminal lobby, and FBO hangar. These images are projected to the terminal operations desk. A limited amount of ramp flood lighting is available.

Adjacent to the terminal is a 47-space automobile parking lot. The lot is in excellent condition with clear marking and selected areas with concrete bumpers. During the October and November onsite surveys, automobile parking lot usage ranged from 13 percent to 30 percent of capacity.

2.4.4.5 Aviation FBO Services

Principal services offered by RUQ are: fuel, minor aircraft maintenance, storage tie-downs, itinerant ramp parking, and a variety of hangar storage options. Table 2.4.4.5-1 documents a record of fuel sales. Before 2004, substantial FBO fuel sales included corporate sales to Food Lion (two Citation jets) and National Guard helicopters. Since 2004, limited sales of Jet-A fuel to the government are documented, as are no sales to Food Lion. Each of these two entities now has its own fuel resources. Overall fuel sales are increasing given low 100LL prices of $3.85 per gallon for self-service and $4.45 per gallon 100LL for line-service.

Table 2.4.4.5-1
Fuel Sales (Gallons)
Rowan County Airport

		100LL		Jet A		
Year	Total	Pumped	Self-Service	Pumped	Government	Food Lion
2007*	254,472	36,975	96,432	105,686	15,380	-
2006	244,786	36,460	79,227	107,471	21,628	-
2005	223,743	60,106	19,847	137,679	6,111	-
2004	215,978	64,931	-	120,312	-	30,735
2003	436,855	71,148	-	181,880	-	183,827
2002	430,692	96,376	-	194,915	-	139,400

* Estimate based on 1/01/07 to 10/14/07 data
Sources: Salisbury Air Service (2002 to November 1, 2004)
Rowan County Airport Records (December 31, 2004 to October 14, 2007)

Permanent aircraft ramp storage is provided by 44 tie-downs. An area is reserved for itinerant aircraft in front of the terminal that can accommodate approximately three large

corporate aircraft. Overflow itinerant aircraft parking is transferred to empty space on the storage ramp.

FBO maintenance service includes minor airframe, minor power plant, plus bottled oxygen. Principal FBO equipment includes two fuel trucks (1,200-gallon AVGAS and 3,000-gallon Jet A) and smaller items including:

- Bush Hog/Snow Plow
- Clark Tug
- Fork Lift
- Hobart GPU
- Courtesy Car
- Jet Porter
- John Deere Gator Truck
- Quick Response Fire Unit 909

The limited quick response unit (Number 909) was out of service during the inventory survey. The National Guard provides fire service to the Airport from 7:00 a.m. to 8:00 p.m. Monday through Friday.

2.4.4.6 Other Services

Other services from private providers are as follows:

- Alpha One Air Service – flight training and aircraft rental
- Carolina Avionics LLC – avionics sales and service
- Carolina Aircraft Inc. – aircraft painting
- NC Rotor & Wing LLC – helicopter flight training

2.4.4.7 Hangars

A summary of hangars is provided by Table 2.4.4.7-1 (page 24)

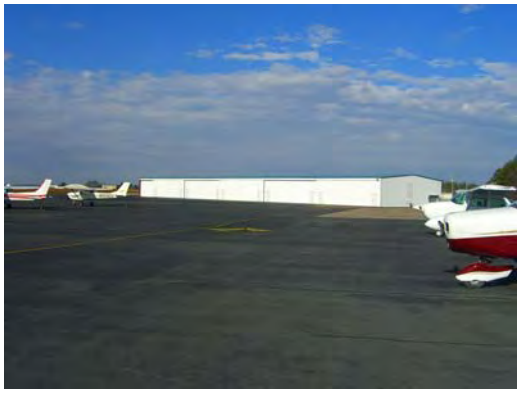


Table 2.4.4.7-1
Hangar Square Footage
Rowan County Airport

Terminal Area Hangars		Mid-Field Hangars		North-Field Hangars	
	Open Hangars		T-Hangars		T-Hangars
Number	Sq. Footage	Number	Sq. Footage	Number	Sq. Footage
0-1	1,580	40	1,254	T-1	1,085
0-2	1,394	41	1,085	T-2	1,085
0-3	1,394	42	1,085	T-3	1,085
0-4	1,394	43	1,452	T-4	1,085
0-5	1,476	44	1,476	T-5	1,085
0-6	2,057	45	1,254	T-6	1,085
0-7	1,638	46	1,085	T-7	1,085
0-8	1,638	47	1,085	T-8	1,085
0-9	1,804	48	1,085	T-9	1,085
0-10	2,310	49	1,476	T-10	1,085
0-11	2,783	50	1,254	T-11	1,085
0-12	1,270	51	1,085	T-12	1,085
0-13	2,530	52	1,085	T-13	1,085
0-14	2,530	53	1,085	T-14	1,085
0-15	2,530	54	1,476	T-15	1,085
0-16	2,530	55	1,254	T-16	1,085
0-17	2,475	56	1,085	T-17	1,085
0-22	1,280	57	1,085	T-18	1,085
0-23	1,280	58	1,085	T-19	1,085
0-24	1,280	59	1,476	T-20	1,085
0-25	1,280	60	1,685	Total	21,700
0-26	1,280	61	1,452		
0-27	1,280	62	1,452	Stand Alone	
Total	41,013	63	1,452		Hangars
		64	1,975	Number	Sq. Footage
Terminal Area Hangars		65	1,685	0-28	7,750
	Closed Hangars	66	1,452	0-29	10,000
Number	Sq. Footage	67	1,452	0-30	4,900*
0-18	3,648	68	1,452	0-31	8,000*
0-19	3,648	69	1,975	35	4,800*
0-20	3,648	Total	40,339	Total	35,450
0-21	3,648				
Total	14,592				

	Units	Sq. Footage
T-Hangars	50	62,039
Open Box	23	41,013
Closed Box	4	14,592
Stand Alone	5	35,450
Total	82	153,094

* Estimated
Source: Rowan County Airport (December 2007)

Excluding three hangars used for painting or avionics, November 2007 hangar occupancy was at 92 percent.

2.4.4.8 Based Aircraft

An inventory of each hangar and the storage ramp provides a November 2007 count of general aviation based aircraft as documented by Table 2.4.4.8-1 (page 26). The jet aircraft include two Food Lion Inc. Citations, one Show Shoe Inc. Citation, and one Russian L-39 trainer.

2.4.4.9 National Guard Facilities

On Sunday November 18, 2007, a visual survey was conducted of the Air National Guard Facility. As documented on Table 2.4.4.3-1 (page 18), the Air Battalion Unit-2 consists of the following:

- 32,500 square yard apron
- 2 maintenance hangars
- 1 wash shed
- ARFF facility
- several operations support buildings
- 10 Black Hawk helicopters
- 2 fire units
- fuel farm
- 3 fuel trucks

The fire units include a 200-gallon twin agent foam truck with a high mount spray nozzle, and a large tactical fire fighting truck with 1,000 gallons of water and 120 pounds of foam. These units are in service from 7:00 a.m. to 8:00 p.m. Monday through Friday and on weekend training days. This fire service covers approximately 70 percent of the flight activity time periods at RUQ.

The apron is in excellent condition and has in-pavement lights, as well as some lights used in a former night-pad landing site. The gradient of the apron to the runway will require examination for options of potential fixed wing usage of the apron.

National Guard personnel include: 52 full-time technicians, six full-time guards, and 150 weekend guardsmen.

2.4.5 Aviation Activity

As previously documented, aircraft operations were counted at various times for nine days during October and November of 2007. Complete counts are provided in Table 2.1-1 (pages 5 through 7). An average of these counts is as follows:

Table 2.4.4.8-1
Based Aircraft (2007)
Rowan County Airport

Single And Double Unit Hangars			Mid-Field Hangars			North-Field Hangars		
Hangar #	Aircraft Type	Aircraft Class	Hangar #	Aircraft Type	Aircraft Class	Hangar #	Aircraft Type	Aircraft Class
O-1	Cessna 172	Single Engine	40	COZY Experimental	Single Engine	T-1	Cessna 182	Single Engine
O-2	Cessna 177B	Single Engine	41	Socata TB-20	Single Engine	T-2	Piper PA28	Single Engine
O-3	Cessna 172	Single Engine	42	Beechcraft V35	Single Engine		Beech A-36	Single Engine
O-4	Cessna 172 K	Single Engine	43	McKean Velocity	Single Engine	T-3	Cirrus SR22	Single Engine
O-5	Piper 32R	Single Engine	44	R-22	Helicopter	T-4	Beech A-36	Single Engine
O-6	Beech V-35A	Single Engine	45	Mooney M20K	Single Engine	T-5	Beech A-36	Single Engine
O-7	Piper 22 Tri Pacer	Single Engine	46	Bellanca Citabria	Single Engine	T-6	Gulfstream AA5B	Single Engine
O-8	Cessna 170B	Single Engine	47	Eurofox LSA	Single Engine	T-7	American Champion	Single Engine
O-9	Cessna 182H	Single Engine	48	Cessna 150G	Single Engine	T-8	Cessna 180	Single Engine
O-10	Empty	–	49	Cessna 210	Single Engine	T-9	Empty	-
O-11A	Piper 32R300	Single Engine	50	Empty	–	T-10	Piper 28	Single Engine
O-11B	Piper32R300	Single Engine	51	YAK -52	Single Engine	T-11	Cessna 172 A	Single Engine
O-12A	Beech G35	Single Engine	52	Cessna 182	Single Engine		Cessna 182H	Single Engine
O-13	Cessna 182G	Single Engine	53	Piper PA 32	Single Engine	T-12	Cessna 414	Twin Turbo
O-14	N. American SNJ/5	Single Engine	54	Beechcraft B33	Single Engine	T-13	Gulfstream AA5B	Single Engine
O-15A	Piper 28	Single Engine	55	Mooney M20	Single Engine	T-14	Cessna 310R	Twin Turbo
O-15B	Cessna 150A	Single Engine	56	Piper 32	Single Engine	T-15	Beech 55	Twin Turbo
O-16	Cessna 188	Single Engine	57	Ultra-Light	Ultra-Light	T-16	Cessna 182	Single Engine
O-17	Cessna 210	Single Engine	58	Mooney M20	Single Engine	T-17	Cessna 182	Single Engine
O-18	Beech 200	Twin Turbo	59	Empty	–	T-18	Empty	-
O-19	Avionic Hangar	–	60	Cessna 175	Single Engine	T-19	Pitts S-2B	Single Engine
O-20	OH-58	Helicopter	61	Diamond DA20C1	Single Engine	T-20	Piper J3C	Single Engine
	OH-58	Helicopter	62	Cessna 182	Single Engine			
O-21	Empty	–	63	Diamond DA20C1	Single Engine			
O-22	Piper J3C65	Single Engine	64	Cirrus SR-22	Single Engine			
O-23	Cessna 172I	Single Engine	65	Beech Bonanza G36	Single Engine			
O-24	Cessna 182E	Single Engine	66	Piper 28	Single Engine			
O-25	Piper 28	Single Engine	67	Beech B60	Twin Piston			

Table 2.4.4.8-1
Based Aircraft (2007)
Rowan County Airport

Single And Double Unit Hangars

Hangar #	Aircraft Type	Aircraft Class
O-26	Cessna R182	Single Engine
O-27	Cessna 172	Single Engine
O-28	Cessna 172M	Single Engine
O-29	Cessna 560XL	Jet
	Cessna 560XL	Jet
O-30	Paint Shop	–
O-31	Raytheon B300	Twin Turbo
	Cessna 560XL	Jet
	Beach baron	Twin Turbo

SUMMARY

Single Engine	79
Twin Piston	3
Twin Turbo	8
Helicopter (Civilian)	3
Jet	4
Ultra-Light	1
Helicopter (Military)	10
Total	108

Mid-Field Hangars

Hangar #	Aircraft Type	Aircraft Class
68	Beech B60	Twin Piston
69	Cessna 310R	Twin Turbo
35	Russian L-39	Jet
	Cessna 421	Twin Turbo

North-Field Hangars

Tie-Down Ramp

Aircraft Type	Aircraft Class
Cessna 172	Single Engine
Aerostar	Twin Turbo
Cessna 150	Single Engine
Cessna 172	Single Engine
Cessna 182	Single Engine
Cessna 170	Single Engine
Cessna 172	Single Engine
Cessna 150	Single Engine
Piper 24	Single Engine
Piper 28	Single Engine
Cessna 150	Single Engine
Cessna 172	Single Engine
LANCAIR 350	Single Engine
Piper Archer II	Single Engine
Cessna 150	Single Engine

Source: Rowan County Airport (December 2007)

Aircraft Type	Daily Average Operations
Single Engine	74.90
Multi-Engine Piston	7.38
Multi-Engine Turboprop	2.61
Helicopter	18.58
Jet	8.75
Total	112.22

Source: Talbert & Bright, Inc. (December 2007)

The counts will require a context review for day/night operations and yearly relevance. Part of the aircraft operations review will include utilizing Instrument Flight Rules data as summarized by Table 2.4.5-1. As shown by this data, Instrument Flight Rules operations have been substantial for several years.

Table 2.4.5-1
Instrument Flight Rules Operations Summary
Rowan County Airport

	Single Engine	Multi-Engine			
Year	Piston	Piston	Turboprop	Jet	Helicopters
2007*	1,145	446	525	1,553	0
2006	1,303	512	612	1,718	0
2005	1,144	556	507	1,562	0
2004	1,261	451	534	1,324	0
2003	1,233	413	443	1,349	0
2002	1,253	502	580	1,200	0
2001	1,275	682	350	1,123	0
2000	893	604	759	1,076	0

* Estimated from January 2007 through July 2007 data.
Source: Federal Aviation Administration (August 2007)

3.1 FORECAST COMPONENTS

Forecasts of aviation demand are a key element in airport planning. Demand forecast components provide a template for determining facility type, size, and development timing. While providing the key quantitative facility guide, it does not replace community desires or judgment with respect to financial feasibility or reasonable facility options. To arrive at the forecast elements the following analyses were conducted:

- Based Aircraft Methodologies
- Forecasts of Aircraft by Type
- Forecasts of Aircraft Operations
- Peak Period Forecasts

3.2 BASED AIRCRAFT METHODOLOGIES

To arrive at a selected based aircraft forecast, five forecasts were reviewed:

- Population Based Forecast
- Historical Terminal Area Forecast (TAF) Regression
- Adjusted Historical TAF Regression
- North Carolina 1992 Airport System Plan
- Adjusted Regional Market Share

3.2.1 Population Based Forecast

The initial forecast trial incorporated Rowan County's annual rate of population change, as documented on Table 2.3.1-1 (page 10). These rates are as follows:

Year	County Population	Annual Rate Of Change
2007	135,597	
2017	148,883	0.94
2027	162,999	0.91

Source: Talbert & Bright, Inc. (February 2008)

Using the above annual rates of change the based aircraft forecast is estimated as follows:

Year	Based Aircraft
2007	108
2012	113
2017	119
2022	125
2027	130

Source: Talbert & Bright, Inc.
(February 2008)

3.2.2 Historical TAF Regression

Table 3.2.2-1 documents regression of historical based aircraft for Rowan County and other area airports as taken from the TAF. Using 2007 based aircraft count of 99, the forecast derived is as follows:

Table 3.2.2-1
Historical Based Aircraft for Area Airports
Rowan County Airport

Airport	FAA ID	Historical Based Aircraft							Forecast			
		2000	2001	2002	2003	2004	2005	2006	2007	2012	2017	2027
Rowan County (revised)	RUQ	83	83	83	83	99	99	99	108*	121	138	172
Rowan County	RUQ	83	83	83	83	99	99	99	99*	117	132	163
Concord Regional	JQF	88	88	88	198	205	175	177	225	325	425	624
Davidson County	EXX	36	36	36	36	58	58	58	64	88	111	159
Lincolnton-Lincoln County	IPJ	52	52	52	52	60	60	70	68	82	96	124
Monroe Regional	EQY	82	82	82	82	88	88	91	91	99	108	124
Statesville Regional	SVH	64	64	64	64	67	67	67	68	71	74	81
Gastonia Municipal	AKH	85	87	87	87	87	87	55	69	53	37	5
Rock Hill/York County	UZA	76	91	109	109	109	116	116	128	158	189	249

*Note: Actual count for 108 and FAA 5010 Form count for 99.
Sources: FAA Terminal Area Forecasts
Talbert & Bright Inc. (February 2008)

Year	Based Aircraft
2007	99
2012	117
2017	132
2022	147
2027	163

Source: Talbert & Bright, Inc.
(February 2008)

3.2.3 Adjusted Historical TAF Regression

Also shown on Table 3.2.2-1 (page 30) is the regression of historical TAF based aircraft with 2007 adjusted to 108 as determined by recent surveys. The forecast derived is as follows:

Year	Based Aircraft
2007	108
2012	121
2017	138
2022	154
2027	172

Source: Talbert & Bright, Inc. (February 2008)

3.2.4 North Carolina 1992 Airport System Plan

The North Carolina 1992 Airport System Plan adopted as a preferred forecast methodology that placed Rowan County within a Regional Market Share context. Table 3.2.4-1 defines this market share based aircraft assignment with Rowan County receiving the following:

Table 3.2.4-1
Airport System Plan Regional Market Share Comparisons
Rowan County Airport

	North Carolina Airport System Plan					
	1990		2010		Actual 5010 Form 2007	
Airport	Aircraft	%	Aircraft	%	Aircraft	%
Rowan County	67	13.7	70	13.3	108	15.0
Lincolnton-Lincoln County	60	12.3	65	12.3	70	9.7
Gastonia Municipal	72	14.7	77	14.6	55	7.6
Charlotte-Douglas International	145	29.7	168	31.8	105	14.6
Wilgrove Air Park	53	10.9	54	10.2	53	7.3
Monroe Regional	76	15.6	79	15.0	91	12.6
Goose Creek	15	3.1	15	2.8	21	2.9
Concord Regional	Not in Plan		Not in Plan		171	23.7
Lake Norman Airpark	Not in Plan		Not in Plan		48	6.6
Total	488	100.0	528	100.0	722	100.0

Sources: North Carolina 1992 Airport System Plan
FAA 2007 5010 Forms
Talbert & Bright Inc. (February 2008)

	1990	2010
Based Aircraft	67	70
Percent Market Share	13.7	13.3

Source: Talbert & Bright, Inc. (February 2008)

Comparing these assignments to 2007, Rowan County is receiving a larger percentage share (15 percent) even with the additions of the Concord Regional Airport and Lake Norman Airpark. For comparison, the trend established above was extrapolated into the following North Carolina 1992 Airport System Plan projection:

Year	Based Aircraft
2007	70
2012	71
2017	71
2022	72
2027	72

Source: Talbert & Bright, Inc. (February 2008)

3.2.5 Adjusted Regional Market Share

To determine new market share based aircraft assignments, the based aircraft for the region were forecast through the study timeframe and documented on Table 3.2.5-1. The forecast approach for the regional airports used historical TAF based aircraft regression for Rowan County, Lincolnton-Lincoln County, and Monroe Regional Airports. Gastonia Municipal, Charlotte-Douglas International, Wilgrove Air Park, Goose Creek, and Lake Norman Airpark Airports were straight-lined. The Concord Regional Airport based aircraft were derived from the recent Concord Master Plan. With these forecasts Rowan County's market share percentage based aircraft ranges from 14.3 percent to 16.4 percent.

Table 3.2.5-1
Based Aircraft Regional Market Share Forecasts
Rowan County Airport

	2007		2012		2017		2027	
Airport	Aircraft	%	Aircraft	%	Aircraft	%	Aircraft	%
Rowan County[1]	108	14.3	121	14.7	138	15.4	172	16.4
Lincolnton-Lincoln County[1]	70	9.3	82	10.0	96	10.7	124	11.8
Gastonia Municipal[3]	55	7.3	55	6.7	55	6.2	55	5.3
Charlotte-Douglas International[3]	105	13.9	105	12.7	105	11.7	105	10.0
Wilgrove Air Park[3]	53	7.0	53	6.4	53	5.9	53	5.1
Monroe Regional[1]	91	12.0	99	12.0	108	12.1	124	11.8
Goose Creek[3]	21	2.8	21	2.6	21	2.3	21	2.0
Concord Regional[2]	205	27.1	240	29.1	271	30.0	346	33.0
Lake Norman Air Park[3]	48	6.3	48	5.8	48	5.4	48	4.6
Total	756	100.0	824	100.0	895	100	1,048	100.0

[1]Regression of historical based aircraft.
[2]Master Plan based aircraft forecast.
[3]Straight-line extended.
Source: Talbert & Bright, Inc. (February 2008)

Given the recent FAA 5010 form tabulation of 171 based aircraft at Concord Regional Airport in 2007, it becomes evident that the Concord Regional Airport Master Plan demand is currently being restrained. Given this reality, a new reduced regional market share was calculated for Concord Regional Airport and redistributions of demand assigned to Rowan County, Lincolnton-Lincoln County, and Monroe Regional Airports. This adjusted market share is documented on Table 3.2.5-2.

Table 3.2.5-2
Adjusted Based Aircraft Regional Market Share Forecasts
Rowan County Airport

	2007		2012		2017		2027	
Airport	Aircraft	%	Aircraft	%	Aircraft	%	Aircraft	%
Rowan County[1]	108	15.0	141	17.1	160	17.9	200	19.1
Lincolnton-Lincoln County[1]	70	9.7	92	11.2	108	12	138	13.2
Gastonia Municipal[3]	55	7.6	55	6.7	55	6.2	55	5.3
Charlotte-Douglas International[3]	105	14.6	105	12.7	105	11.7	105	10.0
Wilgrove Air Park[3]	53	7.3	53	6.4	53	5.9	53	5.1
Monroe Regional[1]	91	12.6	109	13.2	119	13.3	137	13.1
Goose Creek[3]	21	2.9	21	2.6	21	2.3	21	2.0
Concord Regional[2]	171	23.7	200	24.3	226	25.3	289	27.6
Lake Norman Airpark[3]	48	6.6	48	5.8	48	5.4	48	4.6
Total	722	100.0	824	100.0	895	100.0	1,046	100.0

[1]Regression of historical based aircraft.
[2]Master Plan based aircraft forecast.
[3]Straight-line extended.
Source: Talbert & Bright, Inc. (February 2008)

The resultant Rowan County Airport based aircraft forecast is as follows:

Year	Based Aircraft
2007	108
2012	141
2017	160
2022	179
2027	200

Source: Talbert & Bright, Inc. (February 2008)

3.2.6 Based Aircraft Summary

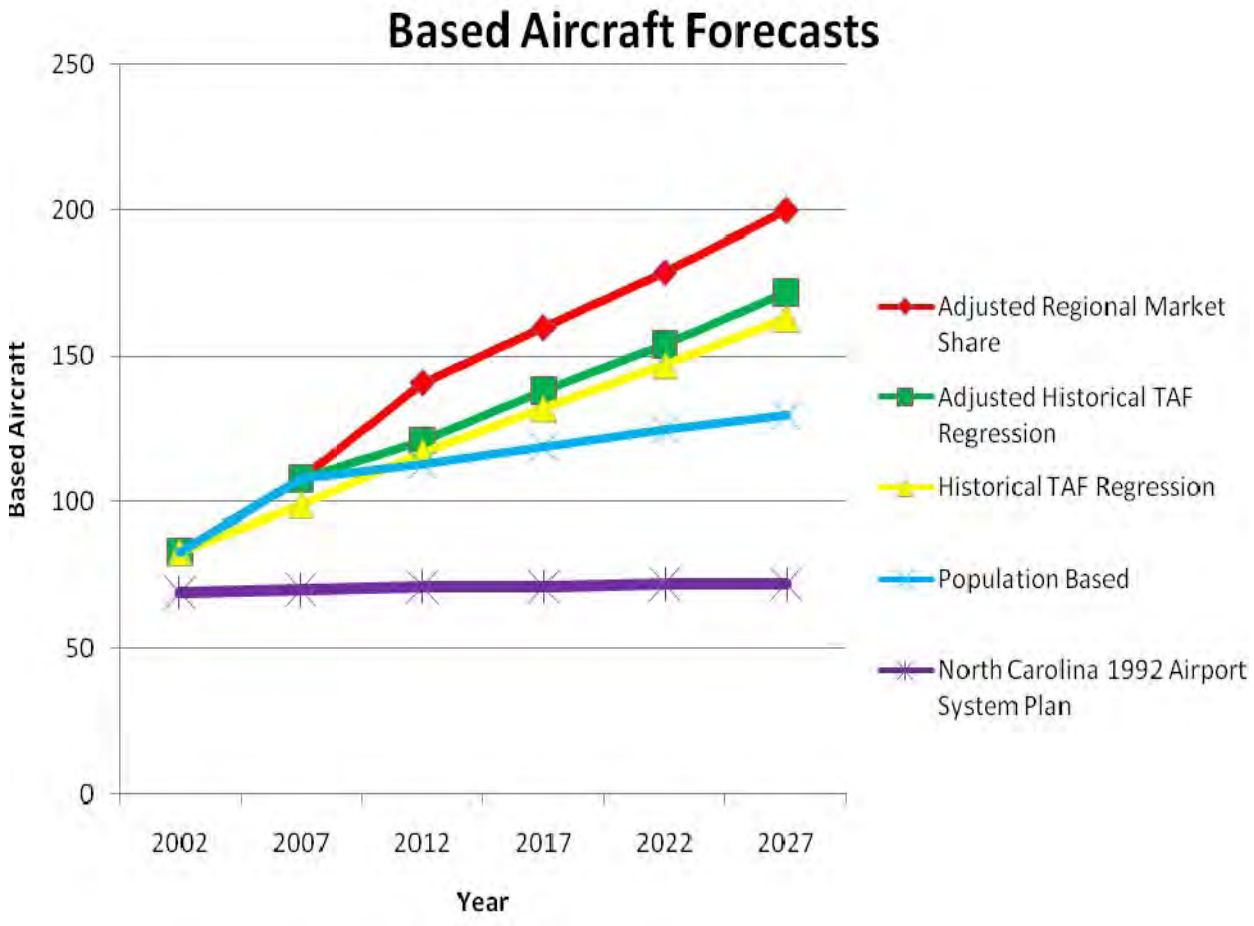
A summary of based aircraft methodologies is shown by Table 3.2.6-1 (page 34). The adopted forecast is the Adjusted Regional Market Share. A judgment was made that Rowan County Airport is in the best position to capitalize on the constrained demand from

Concord Regional Airport. The adopted forecast is unrestrained for Rowan County Airport. A cautionary note is that facility development will need to be aggressive to capture the forecast demand.

Table 3.2.6-1
Based Aircraft Forecasts
Rowan County Airport

	Based Aircraft					
Methodology	**2002**	**2007**	**2012**	**2017**	**2022**	**2027**
Adjusted Regional Market Share	83	108	141	160	179	200
Adjusted Historical TAF Regression	83	108	121	138	154	172
Historical TAF Regression	83	99	117	132	147	163
Population Based	83	108	113	119	125	130
North Carolina 1992 Airport System Plan	69	70	71	71	72	72

Source: Talbert & Bright Inc. (February 2008)



3.3 FORECAST OF AIRCRAFT BY TYPE

Onsite surveys of Rowan County Airport during October and November 2007 established the aircraft base as follows:

Type	Based Aircraft
Single Engine	80
Multi-Engine Piston	3
Multi-Engine Turbo	8
Jet	4
Rotorcraft Civilian	3
Rotorcraft Military	10
Total	108

Source: Talbert & Bright, Inc. (February 2008)

Given this base, future aircraft were projected as shown by Table 3.3-1.

Table 3.3-1
Based Aircraft Forecast By Aircraft Type
Rowan County Airport

	Single	Multi Engine			Rotorcraft		
Year	Engine	Piston	Turbo	Jet	Civilian	Military	Total
2007	80*	3	8	4	3	10	108
2012	106	4	10	5	4	12	144
2017	112	5	12	6	5	20	160
2027	143	6	16	8	7	20	200

*Includes one ultralight
Source: Talbert & Bright Inc. (February 2008)

The projections are unrestrained by facility development issues. The military rotorcraft numbers reflect discussions with the Army Air National Guard. The strongest growth projections are for corporate aircraft; i.e., multi-engine turboprop and jet aircraft. Whether or not corporate or single engine aircraft have the strongest growth will depend in large part on the type of hangar facilities developed.

3.4 FORECASTS OF AIRCRAFT OPERATIONS

As a starting point for estimating aircraft operations, historical instrument operations were projected by using regression techniques as shown by Table 3.4-1 (page 36). From this table strong operations growth is shown for jet aircraft.

Table 3.4-1
Historical Instrument Flight Rules Operations
Rowan County Airport

		Instrument Flight Rules Operations								Forecast		
Aircraft Type		**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2012**	**2017**	**2027**
Single Engine	8 yrs.	893	1,275	1,253	1,233	1,261	1,144	1,303	1,336	1510	1685	2035
Piston	6 yrs.			1,253	1,233	1,261	1,144	1,303	1,336	1364	1436	1582
Multi Engine Piston	8 yrs.	604	682	502	413	451	556	512	520	405	331	184
	6 yrs.			502	413	451	556	512	520	598	668	809
Turboprop	8 yrs.	759	350	580	443	534	507	612	612	565	574	592
	6 yrs.			580	443	534	507	612	612	685	777	959
Jet	8 yrs.	1,076	1,123	1,200	1,349	1,324	1,562	1,718	1,812	2325	2872	3966
	6 yrs.			1,200	1,349	1,324	1,562	1,718	1,812	2438	3067	4326
Helicopter	8 yrs.	2	0	0	0	0	0	0	0	0	0	0
	6 yrs,			0	0	0	0	0	0	0	0	0
Total	8 yrs.	3,334	3,430	3,535	3,438	3,570	3,769	4,145	4280	4805	5462	6777
	6 yrs.			3,535	3,438	3,570	3,769	4,145	4280	5085	5948	7676

Note: Red numbers represent annual estimates based on seven months of data
Blue numbers represent straight line regression forecasts
Sources: FAA Instrument Flight Rules Operations Data
Talbert & Bright Inc. (February 2008)

A second starting point evolves from the October and November traffic surveys as shown by Table 3.4-2. As shown by this table, total aircraft yearly 2007 operations equal 43,000 with local operations of 17,000 and itinerant operations of 26,000.

Table 3.4-2
Aircraft Operations 2007 Calculations
Rowan County Airport

	Daily Operations		
Aircraft Type	**Itinerant**	**Local**	**Total**
Single Engine	47.52	27.38	74.90
Multi-Engine Piston	4.50	2.88	7.38
Multi-Engine Turbo	2.61	0.00	2.61
Jet	7.69	1.06	8.75
Helicopter	9.00	15.00	24.00
Total	71.32	46.32	117.64

Table 3.4-2
Aircraft Operations 2007 Calculations
Rowan County Airport

	2007 Yearly Operations					Rounded
Local	46.32	x	365	=	16,907	17,000
Itinerant	71.32	x	365	=	26,032	26,000
Total	117.64	x	365	=	42,938	43,000

Source: Aircraft surveys October and November 2007.
Army Air National Guard estimates.
Talbert & Bright Inc. (February 2008)

A final forecast of aircraft operations is shown by Table 3.4-3. This forecast analysis utilizes 157 operations per based aircraft and previously projected based aircraft to determine total local operations. Instrument operations are used as a guide for total itinerant operations in combination with military projections.

Table 3.4-3
Operations Forecasts
Rowan County Airport

		Itinerant Operations				Local Operations				Local Ops/	
Year/%	AC	Comm/ ATaxi	GA	Mil*	Total	GA	Mil*	Total	Total Ops	Based Aircraft	Based AC
5010/2007	0	1,000	9,000	8,000	18,000	12,000	1,000	13,000	31,000	131 157Adjusted	99
% Inst. Ops.					0.1646						
% total splits	0	0.0385	0.8500	0.1115	1.0	0.9412	0.0588	1.0		INST.	
2006/07	0	1,000	22,100	2,900	26,000	16,000	1,000	17,000	43,000	4,280	108
2012	0	1,200	25,600	4,300	31,100	20,700	1,400	22,100	53,200	5,085	141
2017	0	1,400	28,500	6,500	36,400	23,100	2,000	25,100	61,500	5,948	160
2027	0	1,800	38,500	6,500	46,800	29,400	2,000	31,400	78,200	7,676	200

Note: 2006/07 adjustment based on October 2007 and November 2007 surveys
* Military operations forecast based on direct contact with the Army National Guard
Source: Talbert & Bright Inc. (February 2008)

Aircraft operations were projected further by mix of aircraft as shown by Table 3.4-4 (page 38). This table utilized daily operation levels documented by Table 3.4-2 (page 36) with extrapolation to yearly levels for a 2007 starting base. From this base some professional judgments were made as to operations per based aircraft changes through time. Military operations were defined by contact with the Army Air National Guard.

Table 3.4-4
Aircraft Operations By Mix Of Aircraft
Rowan County Airport

Year	Single Engine	Multi-Engine		Jet	Rotorcraft		Total
		Piston	Turbo		Civilian	Military	
2007							
No. of Aircraft	80*	3	8	4	3	10	108
Ops. per Aircraft	341	900	125	800	1,633	390	
Operations	27,300	2,700	1,000	3,200	4,900	3,900	43,000
Percentage	63.49%	6.28%	2.33%	7.44%	11.40%	9.07%	100%
2012							
No. of Aircraft	106	4	10	5	4	12	141
Ops. per Aircraft	312	800	200	800	1,300	475	
Operations	33,100	3,200	2,000	4,000	5,200	5,700	53,200
Percentage	62.22%	6.02%	3.76%	7.52%	9.77%	10.71%	100%
2017							
No. of Aircraft	112	5	12	6	5	20	160
Ops. per Aircraft	322	600	300	800	1,100	425	
Operations	36,100	3,000	3,600	4,800	5,500	8,500	61,500
Percentage	58.70%	4.88%	5.86%	7.80%	8.94%	13.82%	100%
2027							
No. of Aircraft	143	6	16	8	7	20	200
Ops. per Aircraft	332	500	400	800	900	425	
Operations	47,600	3,000	6,400	6,400	6,300	8,500	78,200
Percentage	60.87%	3.84%	8.18%	8.18%	8.05%	10.87%	100%

* Includes one ultralight

Notes: Multi-engine piston operations per based aircraft in 2007 are skewed by transient training during surveys. Civilian rotorcraft operations are high in 2007 due to daily training at the airport.
During the October/November surveys the multi-engine turbo operations were almost exclusively transient. As more multi-engine aircraft are based at Rowan County Airport the operations per based aircraft will increase.

Source: Talbert & Bright Inc.

3.5 PEAK PERIOD FORECASTS

General peak period forecasts are shown by Table 3.5-1 (page 39). Peak month operations of 11 percent were determined from nearby tower counts at the Concord Regional Airport. A determination of itinerant peak hour flights is necessary for the following peak hour passenger projections. The use of 20 percent of average day flights for the peak hour is a standard planning percentage.

Table 3.5-1
Peak Period Forecasts
Rowan County Airport

Peak Month Forecasts

Year	Total Operations	Peak Month Operations (11% of Total)	Peak Month Flights (Divide by 2)	Peak Month Daily Flights (Divide by 31)
2007	43,000	4,730	2,365	76.3
2012	53,200	5,852	2,926	94.4
2017	61,500	6,765	3,383	109.1
2027	78,200	8,602	4,301	138.7

Peak Month Itinerant Forecasts

Year	Total GA Itinerant Operations	Peak Month GA Operations	Peak Month GA Flights
2007	22,100	2,431	1,216
2012	25,600	2,816	1,408
2017	28,500	3,135	1,568
2027	38,500	4,235	2,118

Peak Hour Itinerant Forecasts

Year	Peak Month GA Flights	Average Day Flights (Divide by 31)	Peak Hour Flights (20% of Av. Day)
2007	1,216	39	7.8
2012	1,408	45	9.0
2017	1,568	51	10.2
2027	2,118	68	13.6

Source: Talbert & Bright Inc. (February 2008)

Shown on Table 3.5-2 (page 40) are the calculations for peak hour passengers as would be relevant to terminal building usage. The "Utilization 60 Percent" is a factor accounting for the fact that significant itinerant flights may not utilize terminal facilities. The 2007 determination of 16.90 peak hour passengers is consistent with observations at the Rowan County Airport.

Table 3.5-2
Peak Hour Passenger Forecasts
Rowan County Airport

Year	Calculation Categories	Single Engine	Multi-Engine		Jet	Rotorcraft		Totals
			Piston	Turbo		Civilian	Military	
2007	% Aircraft Ops.	63.49	6.28	2.33	7.44	11.4	9.07	43,000 ops.
	% Civil AC. Ops	69.82	6.91	2.56	8.18	12.53	-	39,100 ops.
	Pk. Hr. Flights	5.45	0.54	0.2	0.64	0.98	-	7.8
	Est. Pass. Capc.	3	4	8	8	3	-	
	Peak Hr. Pass.	16.35	2.16	1.6	5.12	2.94	-	28.17 Pass.
	Utilization 60%							16.90 Pass.
2012	% Aircraft Ops.	62.22	6.02	3.76	7.52	9.77	10.71	53,200
	% Civil AC. Ops	69.68	6.74	4.21	8.42	10.95	-	47,500
	Pk. Hr. Flights	6.27	0.61	0.38	0.76	0.99	-	9.0
	Est. Pass. Capc.	3	4	8	8	3	-	
	Peak Hr. Pass.	18.81	2.44	3.04	6.08	2.97	-	33.34 Pass.
	Utilization 60%							20.00 Pass.
2017	% Aircraft Ops.	58.70	4.88	5.86	7.80	8.94	13.82	61,500
	% Civil AC. Ops	68.11	5.66	6.79	9.06	10.38	-	53,000
	Pk. Hr. Flights	6.95	0.58	0.69	0.92	1.06	-	10.2
	Est. Pass. Capc.	3	4	8	8	3	-	
	Peak Hr. Pass.	20.85	2.32	5.52	7.36	3.18	-	39.23 Pass.
	Utilization 60%							23.54 Pass.
2027	% Aircraft Ops.	60.87	3.84	8.18	8.18	8.05	10.87	78,200
	% Civil AC. Ops	68.29	4.3	9.18	9.18	9.04	-	69,700
	Pk. Hr. Flights	9.29	0.58	1.25	1.25	1.23	-	13.6
	Est. Pass. Capc.	3	4	8	8	3	-	
	Peak Hr. Pass.	27.87	2.32	10.0	10.0	3.69	-	53.88 Pass.
	Utilization 60%							32.33 Pass.

Source: Talbert & Bright Inc. (February 2008)

4.1 PURPOSE

The purpose of the demand capacity analysis is to determine an airport's capacity and its ability to support the forecasted aviation demand. Facility requirements identify development, replacement, and/or modification of airport facilities to accommodate the existing and 20-year forecasted demand. In addition, alternative analyses will be presented in appropriate sections to review various airport configurations to accommodate the 20-year demand.

4.2 APPROACH

The methodology used to determine facility requirements examines each of the following major airport components:

- **Airfield** – runway, taxiways, aprons, tie-downs, approach lights/guidance structures, weather structures, fuel farms, etc.
- **Buildings** – terminals, T-hangars, maintenance hangars, stand alone hangars, fire-fighting rescue buildings, etc.
- **Landside** – highway access, perimeter service roads, auto parking, security fencing, security gates etc.

It is important to balance each of these components to maximize the efficiency and the economic service of the airport. Any deficiencies in the airport facilities will be identified based on standards presented in FAA Advisory Circulars:

- *Advisory Circular 150/5300-13 – Airport Design* (as amended)
- *Advisory Circular 150/5060-5 – Airport Capacity and Delay* (as amended)
- *Advisory Circular 150/5325-4B – Runway Length Requirements for Airport Design*

4.3 DESIGN CRITERIA

4.3.1 Airport Reference Code (ARC)

The airport reference code (ARC) is a code system used to relate airport design criteria to the operational and physical characteristics of the airplanes intended to operate at the airport. The reference code has two components. The first component, depicted by a letter, is the aircraft approach category and relates to aircraft approach speed. The second component, depicted by a Roman numeral is the airplane design group and relates to airplane wingspan or tail height, whichever is the most restrictive.

4.3.1.1 Aircraft Approach Category

By definition the aircraft approach category is a grouping of aircraft based on 1.3 times their stall speed in their landing configuration at the certificated maximum flap setting and maximum landing weight at standard atmospheric conditions. The categories are as follows:

- Category A – Speed less than 91 knots
- Category B – Speed 91 knots or more but less than 121 knots
- Category C – Speed 121 knots or more but less than 141 knots
- Category D – Speed 141 knots or more but less than 166 knots
- Category E – Speed 166 knots or more

4.3.1.2 Airplane Design Group

The airplane design group is a grouping of airplanes based on wingspan or tail height. The groups are as follows:

- Group I – Up to but not including 49 feet (15m) wingspan or tail height up to but not including 20 feet.
- Group II – 49 feet (15m) up to but not including 79 feet (24m) wingspan or tail height from 20 up to but not including 30 feet.
- Group III – 79 feet (24m) up to but not including 118 feet (36m) wingspan or tail height from 30 up to but not including 45 feet.
- Group IV – 118 feet (36m) up to but not including 171 feet (52m) wingspan or tail height from 45 up to but not including 60 feet.
- Group V – 171 feet (52m) up to but not including 214 feet (65m) wingspan or tail height from 60 up to but not including 66 feet.

- Group VI – 214 feet (65m) up to but not including 262 feet (80m) wingspan or tail height from 66 up to but not including 80 feet.

4.3.2 Critical Aircraft

Federally funded projects require that airports be designed to standards for aircraft that exhibit substantial use of the airport. This standard is called the "Critical Aircraft Standard". It requires that the critical airplanes have at least 500 or more annual itinerant operations at the airport (landings and takeoffs are considered as separate operations) for an individual airplane or a group of airplanes. Critical aircraft standards will be developed for current aircraft usage and for projected aircraft usage. The weight, wingspan, and performance characteristics of these aircraft, in conjunction with site-specific conditions, determine an airport's geometry in terms of runway/taxiway configurations, lengths, and separations. Table 4.3.2-1 describes the existing and future critical aircraft for the Rowan County Airport.

Table 4.3.2-1
Critical Aircraft
Rowan County Airport

Criteria	Citation Excel	Citation750 X
Time Frame/Phase	Existing/Phase I	Phase II/Phase III
Airport Reference Code	B-II	C-II
Wingspan (feet)	55.8	63.9
Approach Speed (mph)	117 (101.6 knots)[1]	151 (131 knots)
Maximum Takeoff Weight (lbs)	20,000	36,100
Number of Engines	2	2
Gear Configuration	Dual	Dual

[1]Estimated from stall speed of 90 knots from published Cessna specifications and descriptions
Source: *Aviation Week* (January 2007)
Talbert & Bright, Inc. (April 2008)

4.3.2.1 Critical Aircraft Support

In order to establish the most appropriate critical aircraft as defined by the FAA, information was obtained from the sign-in survey conducted by the Rowan County Airport and from selected FAA annual tabulations of Instrument Flight Rules Operations for the Rowan County Airport. A summary of the turbofan sign-in survey flights is provided by Table 4.3.2.1-1 (page 44).

Table 4.3.2.1-1
Sign-In Survey of Turbofan Aircraft
June 26, 2006 through June 25, 2007
Rowan County Airport

Aircraft with FAA Takeoff Distance between 3,200' & 4,000'		Aircraft with FAA Takeoff Distance Above 4,000'		
Type of Aircraft	No. of Visits	Type of Aircraft	No. of Visits	Takeoff Distance
Citation	2	Falcon 10	2	4,500'
Citation 500	2	Falcon 50	5	4,890'
Citation 501	1	Lear Jet 35	2	4,972'
Citation 525	16	Lear Jet 45	7	4,350'
Citation 550	8	Hawker 125	3	5,088'
Citation 560	41	Hawker	1	–
Citation 650	6	Gulfstream G4	2	5,280'
Beech 400	15			
Lear 31	1			
Total	92	Total	22	

Notes:
FAA takeoff distance assumes standard day temperature (STD-59°F), sea level, ideal weather and equipment, plus zero runway gradient.
The sign-in survey is estimated to be approximately 14% of the yearly turbofan flights as measured by the October 2007 and November 2007 on site air traffic counts.
Estimated yearly flights of aircraft with above 4,000' FAA takeoff distance equals 157.
Estimated yearly operations of aircraft with above 4,000' FAA takeoff distance equals 314.
Source: Rowan County Airport Administration – Desk Survey
Talbert & Bright Inc. (April 2008)

Table 4.3.2.1-2 documents the IFR operations from January 2000 through July 2007.

Table 4.3.2.1-2
Instrument Flight Rules Operations
Rowan County Airport
Turbofan Powered Aircraft

Aircraft Type	No. of Aircraft	Aircraft Type	No. of Aircraft	Aircraft Type	No. of Aircraft
2000					
ASTR Astra	14	FA 20 Falcon	2	LJ 60 Learjet	4
BE 40 Beech Jet 400	742	G 2 Gulfstream	3	MU 30 Mitsubishi	1
C 500 Citation 1	6	GLF 2 Gulfstream	4	SBR1 Saberliner	39
C 501 Citation 1-SP	20	GLF 4 Gulfstream	10	WW 24 Westwind	7
C 525 (CJ-1)	19	H25B Hawker	19		
C 550 Citation Bravo	66	H25C Hawker	2		
C 560 Citation Encore	63	LJ 24 Learjet	2		
C 650 Citation VII	13	LJ 25 Learjet	1		

Table 4.3.2.1-2
Instrument Flight Rules Operations
Rowan County Airport
Turbofan Powered Aircraft

Aircraft Type	No. of Aircraft	Aircraft Type	No. of Aircraft	Aircraft Type	No. of Aircraft
C 750 Citation X	6	LJ 31 Learjet	6		
CL 60 Challenger 600	2	LJ 35 Learjet	10		
F2TH	2	LJ 45 Learjet	1		
FA 10 Falcon	2	LJ 55 Learjet	9		
				2000 Total	1,075
				Red Numbers	1,021
				Blue Numbers	35
2001					
ASTR Astra	17	FA 10 Falcon	11	LJ 45 Learjet	2
BE 40 Beech Jet 400	805	FA 20 Falcon	3	LJ 55 Learjet	5
C 500 Citation I	4	G 2 Gulfstream	1	LJ 60 Learjet	23
C 501 Citation 1-SP	6	GALX Galaxy	3	MU 30 Mitsubishi 300	4
C 525 (CJ-1)	13	GLF 2 Gulfstream	7	SBR1 Saberliner	62
C 550 Citation Bravo	40	GLF 3 Gulfstream	4	WW 24 Westwind	2
C 560 Citation Encore	52	GLF 4 Gulfstream	4		
C56X Excel	3	H25B Hawker	16		
C 650 Citation VII	9	LJ 24 Learjet	2		
C 750 Citation X	4	LJ 25 Learjet	2		
F2TH	4	LJ 31 Learjet	4		
F 900 Falcon 900	7	LJ 35 Learjet	4		
				2001 Total	1,123
				Red Numbers	1,044
				Blue Numbers	59
2002					
ASTR Astra	12	F2TH	2	LJ 35 Learjet	12
B 190	1	FA 20 Falcon	8	LJ 45 Learjet	10
BE 40 Beech Jet 400	869	FA 50 Falcon	3	LJ 55 Learjet	6
C 500 Citation I	3	GALX Galaxy	7	LJ 60 Learjet	2
C 501 Citation 1-SP	2	GLF 2 Gulfstream	3	SBR1 Saberliner	37
C 525 (CJ-1)	25	GLF 3 Gulfstream	5	WW24 Westwind	8
C 550 Citation Bravo	55	GLF 4 Gulfstream	4		
C 560 Citation Encore	41	GLF 5 Gulfstream	5		
C56X Excel	11	H25B Hawker	18		
C 650 Citation VII	9	LJ 24 Learjet	2		
C 750 Citation X	6	LJ 25 Learjet	6		
CL 60 Challenger 600	4	LJ 31 Learjet	24		
				2002 Total	1,200
				Red Numbers	1,143
				Blue Numbers	37
2003					
ASTR Astra	4	FA 50 Falcon	6	LJ 60 Learjet	9
BE 40 Beech Jet 400	1,026	G 2 Gulfstream	1	MU 30 Mitsubishi 300	1
C 500 Citation I	2	GALX Galaxy	14	SBR 1 Saberliner	28
C 501 Citation 1-SP	15	GLF 2 Gulfstream	1		

Table 4.3.2.1-2
Instrument Flight Rules Operations
Rowan County Airport
Turbofan Powered Aircraft

Aircraft Type	No. of Aircraft	Aircraft Type	No. of Aircraft	Aircraft Type	No. of Aircraft
C 525 (CJ-1)	14	GLF 3 Gulfstream	3		
C 550 Citation Bravo	33	H25B Hawker	24		
C 560 Citation Encore	55	LJ 24 Learjet	1		
C56X Excel	24	LJ 25 Learjet	6		
C 650 Citation VII	10	LJ 31 Learjet	14		
CL 60 Challenger 600	8	LJ 35 Learjet	16		
F2TH	4	LJ 45 Learjet	9		
FA 20 Falcon	14	LJ 55 Learjet	7		
				2003 Total	1,349
				Red Numbers	1,298
				Blue Numbers	42
2004					
AC 95	4	C 750 Citation X	16	LJ 24 Learjet	6
ASTR Astra	17	CL 60 Challenger 600	4	LJ 25 Learjet	4
B 230	1	CRJ2	1	LJ 31 Learjet	15
BE 40 Beech Jet 400	1,045	F 900 Falcon 900	2	LJ 35 Learjet	4
C25A (CJ2)	2	FA 10 Falcon	3		
C 500 Citation 500	6	FA 20 Falcon	15		
C 501 Citation 501 Sp	2	FA 50 Falcon	4		
C 525 (CJ-1)	22	GLF 3 Gulfstream	3		
C 550 Citation Bravo	24	GLF 4 Gulfstream	8		
C 560 Citation Encore	26	GLF 5 Gulfstream	2		
C56X Excel	20	H25A Hawker	2		
C 650 Citation III/IV	15	H25B Hawker	24		
				2004 Total	1,324
				Red Numbers	1,266
				Blue Numbers	39
2005					
ASTR Astra	2	C 750 Citation X	6	LJ 24 Learjet	6
B 190	4	CL 30 Challenger 300	2	LJ 25 Learjet	18
BE 40 Beech Jet 400	700	C 135	4	LJ 31 Learjet	18
C25A (CJ 2)	4	F2TH	2	LJ 35 Learjet	4
C 500 Citation I	2	F 900 Falcon 900	2	LJ 45 Learjet	10
C 501 Citation 1-SP	11	FA 10 Falcon	52	LJ60 Learjet	1
C 525 (CJ1)	34	FA 20 Falcon	14	MU 30 Mitsubishi 300	4
C 550 Citation Bravo	35	FA 50 Falcon	4	SBR1 Saberliner	2
C 560 Citation Encore	50	GALX Gulfstream 2	14		
C56X Excel	446	GLF 4	18		
C 650 Citation III/IV	39	H25B Hawker	42		
C 680 Sovereign	2	H25C Hawker	4		
				2005 Total	1,562
				Red Numbers	1,509
				Blue Numbers	25

Table 4.3.2.1-2
Instrument Flight Rules Operations
Rowan County Airport
Turbofan Powered Aircraft

Aircraft Type	No. of Aircraft	Aircraft Type	No. of Aircraft	Aircraft Type	No. of Aircraft
2006					
BE -40 Beech Jet 400	48	FA 10 Falcon	4	ASTR Astra	6
C25A (CJ2)	2	FA 20 Falcon	24	B-190	2
C25B (CJ3)	1	FA 50 Falcon	9	C 501 Citation 1-SP	8
C 525 (CJ-1)	22	GLF 4 Gulfstream	16	C 560 Citation Encore	86
C 550 Citation Bravo	24	GLF 5 Gulfstream	4	C 650 Citation III/IV	49
C56X Excel	1,225	H25B Hawker	23	GLF 2 Gulfstream	4
CL 60 Challenger 600	8	HS 25 Hawker	3	LJ 24 Learjet	7
LJ 31 Learjet	39	J 328 Doriner Jet	2	LJ 25 Learjet	15
PRM 1 Premier I	4	LJ 35 Learjet	11	MU 30 Mitsubishi 300	2
C 500 Citation 1	2	LJ 45 Learjet	36	B-737	1
C 680 Sovereign	4	LJ 60 Learjet	10		
C750 Citation X	6	E 145 Embraer	1		
				2006 Total	1,708
				Red Numbers	1,599
				Blue Numbers	79
2007 (7 months)					
BE 40 Beech Jet 400	42	C 680 Sovereign	2	GLF 4 Gulfstream	2
C25A Citation II	3	C 750 Citation X	6	H25B Hawker	19
C 500 Citation I	2	CL 60 Challenger 600	4	LJ 24 Learjet	2
C 501 Citation 1-SP	2	F 900 Falcon 900	4	LJ 25 Learjet	2
C 525 (CJ-1)	29	FA 10 Falcon	4	LJ 31 Learjet	3
C 550 Citation Bravo	21	FA 20 Falcon	4	LJ 35 Learjet	4
C560 Citation Encore	56	FA 50 Falcon	2	LJ 45 Learjet	10
C56X Excel	657	GALX Galaxy	2	SBR1 Saberline	2
C 650 Citation VII	18	GLF 2 Gulfstream	4		
				2007 (7 months) Total	904
				Red Numbers	884
				Blue Numbers	14

Note:
Red numbers are aircraft listed under Table 3-1 Airplanes that Make Up 75 Percent of the Fleet in *Advisory Circular 150/5325-4B – Runway Length Requirements for Airport Design*
Blue numbers are aircraft listed under Table 3-2 Remaining 25 Percent of Airplanes that Make Up 100 Percent of Fleet in *Advisory Circular 150/5325-4B – Runway Length Requirements for Airport Design*
Source: FAA Instrument Flight Rules Operations Data (January 2000 through July 2007)

As shown in Table 4.3.2.1-1 (page 44), turbofan sign-in data, an array of Cessna Citation aircraft are transient visitors to the Rowan County Airport, as well as occasional higher performance aircraft including: Learjets, Hawkers, Falcons, and Gulfstreams.

Most significant to the determination of the critical aircraft are the IFR operations data from January 2000 through July 2007. As shown in the Table 4.3.2.1-2 (page 44), Beechjet 400 aircraft were the dominate Rowan County Airport turbofan aircraft through 2005. However, beginning in 2005, Citation Excels began to also utilize the airport in significant numbers. The 2005 split between these two aircraft was 700 Beechjet operations and 446 Citation Excel operations. In 2006, Citation Excel operations totaled 1,225. In 2007 (7 months), a total of 657 Citation Excel operations were tabulated. Given these tabulations, the Citation Excel is selected as the critical aircraft for the Existing and Phase I design years of the Rowan County Airport Master Plan.

A review of each of IFR operations indicates several higher performance aircraft with the Citation 750X appearing in most of the years. With the evidence of higher performance aircraft showing a usage of the airport, the Citation 750 is selected as the design standard for Phases II and III of the Rowan County Airport Master Plan.

4.4 AIRPORT CAPACITY

Airport capacity was calculated using airport capacity and delay calculations from Chapter 2 of FAA *Advisory Circular 150/5060-5 – Airport Capacity and Delay* (as amended). This chapter contains calculations for determining hourly airport capacity, annual service volume (ASV), and aircraft delay for long-range planning. To utilize this methodology the airport operational characteristics must in essence meet the following assumptions.

A. Runway-Use Configuration-must approximate depicted configurations

B. Percent Arrivals –arrivals equal departures

C. Percent Touch and Go's – 0-50

D. Taxiways - full-length parallel taxiway, ample runway entrance/exit taxiways, and no taxiway crossing

E. Airspace Limitations – no airspace limitations which would adversely impact flight operations. Missed approach protection is assured for all converging operations in IFR weather

F. Runway Instrumentation – one runway equipped with an ILS and has the necessary ATC facilities and services to carry out operations in a radar environment

4.4.1 Annual Service Volume Assumptions (ASV)

A. Assumptions of Table 2-1 (page 5) and Figure 2-1 (page 7) of FAA *Advisory Circular 150/5060-5 – Airport Capacity and Delay* (as amended)

			Demand Ratios	
Mix Index % (C+3D)	Percent Arrivals	Percent Touch & Go	Annual Demand/Average Daily Demand	Average Daily Demand/Average Peak Hour Demand*
0-20	50	0-50	290	9

*In the peak month
Note:
C = aircraft 12,500 lbs. to 300,000 lbs. maximum certified takeoff weight
D = aircraft over 300,000 lbs. maximum certified takeoff weight

B. Weather – IFR weather conditions occur roughly 10% of the time

C. Runway Use Configuration – Roughly 80 percent of the time the Airport is operated with the runway-use configuration which produces the greatest hourly capacity

Given the determination that the Rowan County Airport meets or exceeds the assumption parameters, the following capacity and service volume limits were generated.

Diagram Number 1 Hourly Capacity Annual Service Volume	Hourly Capacity (Operations/Hour)		ASV
	VFR	IFR	Operations/Year
Chapter 2 FAA *Advisory Circular 150/5060-5 – Airport Capacity and Delay* (as amended) (page 7)	98	59	230,000

Utilizing the selected forecast of 2027 operations of 78,200, it is clear that the Rowan County Airport is not projected to reach its capacity or service volume limits within the 20-year long-range planning time frame.

4.5 RUNWAY REQUIREMENTS

Determination of runway length requirements is dictated by FAA *Advisory Circular 150/5325-4B – Runway Length Requirements for Airport Design*. Use of these guidelines is mandatory for federal funding.

Various factors govern the suitability of available runway lengths, most notably airport elevation above mean sea level, temperature, wind velocity, airplane operating weights, takeoff and landing flap settings, runway surface condition (dry or wet), effective runway gradient, presence of obstructions in the vicinity of the airport, and , if any, locally imposed noise abatement restrictions or other prohibitions. It is the goal, considering the above factors, to construct an available runway length suitable for the existing and forecasted critical design airplanes. The critical design airplanes are required to have a substantial use of a selected runway. This substantial use is defined as at least 500 or more of annual itinerant operations for an individual airplane or a family grouping of airplanes.

4.5.1 Procedure for Runway Length Determination

The determination of the appropriate Rowan County runway length utilizes Chapter 3 of FAA *Advisory Circular 150/5325-4B – Runway Length Requirements for Airport Design*; i.e., "Runway Lengths For Airplanes Within A Maximum Certificated Takeoff Weight Of More Than 12,500 Pounds (5,670 KG) Up To And Including 60,000 Pounds (27,200 KG)".

The recommended runway length for this weight category of airplanes is based on performance curves (FAA Figures 3-1 and 3-2) developed from FAA-approved airplane flight manuals. To determine which of the performance curves to apply, Tables 4.5.1-1 and 4.5.1-2 (page 51) outline the critical aircraft previously identified, as well as the mix of aircraft shown by IFR operations for January 2000 through July 2007.

Table 4.5.1-1
Airplanes that Make Up 75 Percent of the Fleet
Rowan County Airport

Manufacturer	Model	Manufacturer	Model
Aerospatiale	Sn-601 Corvette	Dassault	Falcon 10
Bae	125-700	Dassault	Falcon 20
Beech Jet	400A	Dassault	Falcon 50/50 EX
Beech Jet	Premier I	Dassault	Falcon 900/900B
Beech Jet	2000 Starship	Israel Aircraft Industries (IAI)	Jet Commander 1121
Bombardier	Challenger 300	IAI	Westwind 1123/1124
Cessna	500 Citation/501Citation Sp	Learjet	20 Series
Cessna	Citation I/II/III	Learjet	31/31A/31A ER
Cessna	525A Citation II (CJ-2)	Learjet	35/35A/36/36A
Cessna	550 Citation Bravo	Learjet	40/45
Cessna	550 Citation II	Mitsubishi	Mu-300 Diamond
Cessna	551 Citation II/Special	Raytheon	390 Premier
Cessna	552 Citation	Raytheon Hawker	400/400 XP
Cessna	560 Citation Encore	Raytheon Hawker	600
Cessna	560/560 XL Citation Excel	Sabreliner	40/60
Cessna	560 Citation V Ultra	Sabreliner	75A
Cessna	650 Citation VII	Sabreliner	80
Cessna	680 Citation Sovereign	Sabreliner	T-39

Source: FAA *Advisory Circular 150/5325-4B – Runway Length Requirements for Airport Design* (July 1, 2005) – Table 3-1, page 14

Table 4.5.1-2
Remaining 25 Percent of Airplanes that Make Up 100 Percent of Fleet
Rowan County Airport

Manufacturer	Model
Bae	Corporate 800/1000
Bombardier	600 Challenger
Bombardier	601/601-3A/3ER Challenger
Bombardier	604 Challenger
Bombardier	BD-100 Continental
Cessna	S550 Citation S/II
Cessna	650 Citation III/IV
Cessna	750 Citation X
Dassault	Falcon 900C/900EX
Dassault	Falcon 2000/2000EX
Israel Aircraft Industries (IAI)	Astra 1125
IAI	Galaxy 1126
Learjet	45 XR
Learjet	55/55B/55C
Learjet	60
Raytheon/Hawker	Horizon
Raytheon/Hawker	800/800 XP
Raytheon/Hawker	1000
Sabreliner	65/75

Note:
Airplanes in Tables 4.5.1-1 (page 50) and 4.5.1-2 combine to comprise 100 percent of the fleet
Source: FAA *Advisory Circular 150/5325-4B – Runway Length Requirements for Airport Design* (July 1, 2005) – Table 3-2, page 15

Review of Tables 4.5.1-1 (page 50) and 4.5.1-2 and cross inspection of IFR operations (Table 4.3.2.1-2, page 44) reveals the following shown on Table 4.5.1-3 (page 52).

Table 4.5.1-3
Selected Summary of Aircraft Operations
Rowan County Airport
Table 4.3.2.1-2 (page 44)

2007 (7 months) IFR Operations				2006 IFR Operations			
On Table 4.5.1-1		**On Table 4.5.1-2**		**On Table 4.5.1-1**		**On Table 4.5.1-2**	
Beechjet 400	42	C750 X6	6	Beechjet 400	48	CL 60	8
C525 CJ-1	29	CL 60	4	C525 CJ-1	22	C750 X6	4
C 550 Bravo	21	Falcon 900	4	C550 Bravo	24	Learjet 60	10
C 560 Encore	56	Sub Total	14	C56X Excel	1,225	Astra	6
C56X Excel	657	All Operations	16	C560 Encore	86	Sub Total	28
H25B Hawker	19			C-650 Citation VI	49	All Operations	30
Sub Total	824			Learjet 31	39		
All Operations	884			Learjet 45	36		
				Sub Total	1,529		
				All Operations	1,648		

Source: Talbert & Bright Inc. (April 2008)

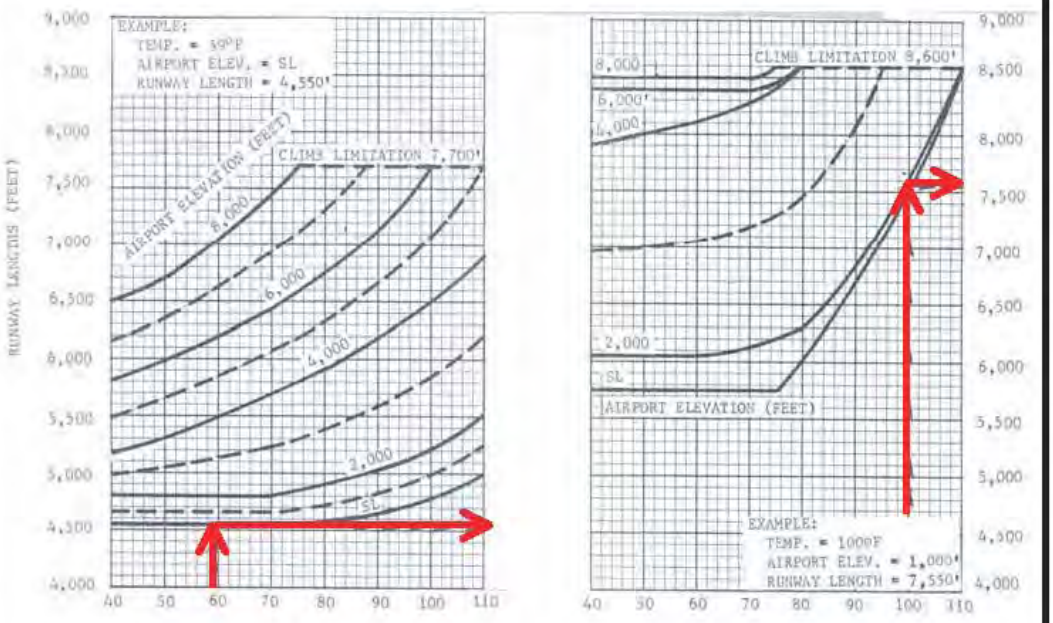
4.5.2 Runway Length Measurement

As shown in Table 4.5.1-3, substantial operations of itinerant turbofan aircraft frequent the Rowan County Airport to justify usage of Table 4.5.1-1(page 50) in the determination of appropriate runway length. The corresponding runway length graphs are found in Figure 4.5.2-1 (page 53). In Figure 4.5.2-1 (page 53) two options are provided; i.e., 75 percent of fleet at 60 percent useful load or 75 percent of fleet at 90 percent load. The 90 percent load graph has been selected based on the fact that the majority of the C56X Excel flights (1,225 in 2006) from the Rowan County Airport are conducted by the Food Lion Citations based at the Airport. This runway user has dedicated fuel supplies at the Airport, which encourages this user to fill airplane tanks to the maximum for cost saving reasons. Runway length measurement calculations for 75 percent of the fleet at both 60 percent load and 90 percent load are shown in Table 4.5.2-1.

Table 4.5.2-1
Calculations for 75 Percent of Fleet
Rowan County Airport

60 Percent Useful Load		90 Percent Useful Load	
Measurement	4,700'	Measurement	6,200'
15% adjustment*	705'	15% adjustment*	930'
Runway Length	5,405'	Runway Length	7,130'

Input variables: 1) 82°F mean daily temperature hottest month
2) airport elevation 773'
*15% adjustment is for wet runway conditions
Source: Talbert & Bright, Inc. (April 2008)



Source: FAA Advisory Circular 150/5325-4B

Figure 4.5.2-1
Rowan County Airport - Rowan County, North Carolina

75 Percent of Fleet at 60 or 90 Percent Useful Load

Based on the runway lengths generated, it has been determined that the minimum runway length for the Rowan County Airport should be between 6,300 feet and 7,130 feet. Looking ahead to possible future runway length needs, the runway graphs for 100 percent of the fleet are presented (Figure 4.5.2-2, page 55). It should be noted from these graphs that the minimum runway length suggested is 6,095 feet at 60 percent useful load. This length assumes adjustment for wet runway conditions.

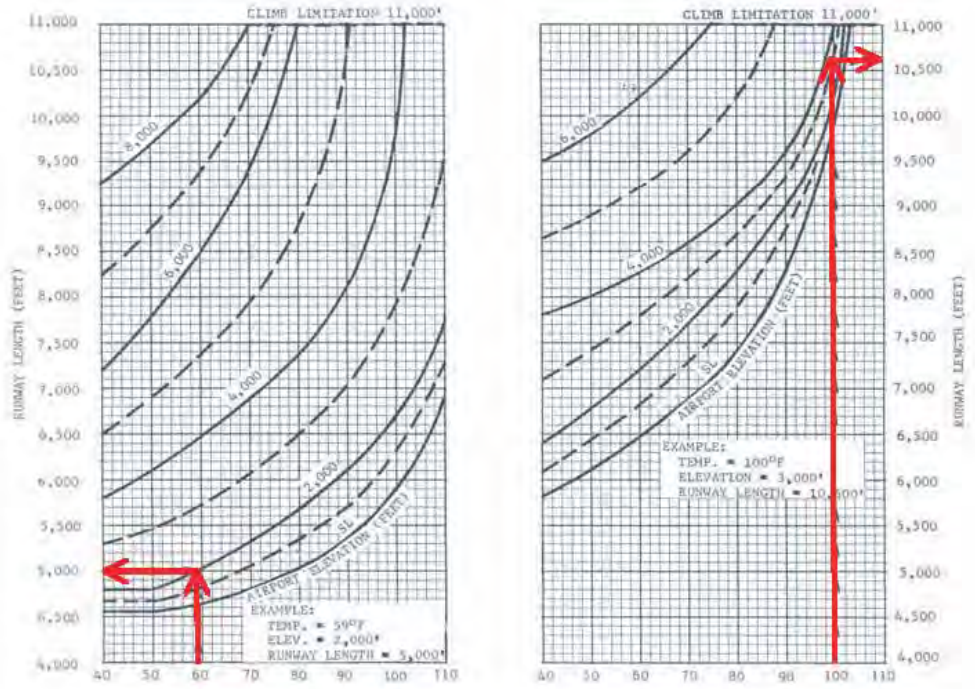
Previous analyses have shown the construction feasibility for a 6,500-foot runway. Given the existing Phase I need for a longer runway and the potential demand from higher performance aircraft, it has been determined that a runway length of 6,500 feet is appropriate for Phase I development at Rowan County Airport.

4.6 HANGAR/TIE-DOWN REQUIREMENTS

Some general guidance for establishing apron and hangar requirements is provided by FAA *Advisory Circular 150/5300-13 – Airport Design* (as amended) particularly for small airports, i.e., those that serve aircraft of principally 12,500 pounds or less. While the Rowan County Airport serves many aircraft of this classification it also increasingly serves larger corporate aircraft. These dual functions require adjustments to some standards based on observations and experience at the airport. To this end, the Airport Advisory Committee in collaboration with the aviation consultant has worked to define the most appropriate hangar and apron requirements.

4.6.1 Based Aircraft

One scenario for provision of based aircraft hangars and tie-downs is illustrated by Table 4.6.1-1 (page 56). The goal is to provide hangars for 70 percent or more of the based aircraft. This will be difficult to do in Phase I given that this scenario calls for demolition of the 23 open box hangars. As partial replacement, two ten-unit T-hangars are programmed for development in Phase I. A steady increase in corporate hangars is expected along with a need for tie-down space. While 44 existing tie-downs are in place, they are in places functionally deficient and will require some adjustment. Expansion of military tie-downs is anticipated in Phase II.



Source: FAA Advisory Circular 150/5325-4B

Figure 4.5.2-2
Rowan County Airport - Rowan County, North Carolina

100 Percent of Fleet at 60 or 90 Percent Useful Load

Table 4.6.1-1
Hangared Aircraft and Based Aircraft Tie-Downs
Rowan County Airport

	Existing 2007		Phase I 2012		Phase II 2017		Phase III 2027	
Hangar Type	Units	Aircraft Number	Units	Aircraft Number	Units	Aircraft Number	Units	Aircraft Number
T-Hangars	50	46	70	66	80	76	100	96
Open Box	23	25	–	–	–	–	–	–
Closed Box	4	4	4	4	5	6	6	8
Stand Alone (Corporate)	5	8	7	12	9	16	14	24
Subtotal	82	83	81	82	94	98	120	128
Tie-downs								
General Aviation	44	15	50	47	50	42	60	52
Military	12	10	12	12	20	20	20	20
Subtotal	56	25	62	56	70	62	80	72
Total		108		141		160		200

Source: Talbert & Bright Inc. (April 2008)

4.6.2 Corporate Hangar Provision

As shown in Table 4.6.1-1, stand alone or corporate hangars are projected to increase from five to 14 through the 20-year planning time period. Given the potential growth of this aviation sector, additional long range expansion areas should be programmed. An extra plus would be experienced if the airport could provide optional temporary secure hangar space for overnight transient aircraft. If a new FBO maintenance hangar is developed, then the current maintenance hangar could be utilized for this function or as a leased site for a corporate user.

4.6.3 Itinerant/Transient Tie-Downs

A significant element for apron requirements is the daily tie-down needs of itinerant/transient aircraft. Table 4.6.3-1 (page 57) calculates an estimate of this need. The calculations define the peak month average day itinerant flights. From this number, the percentage of transient flights is estimated (i.e., 50 percent). For tie-down needs, the number of concurrent usage tie-downs is estimated (i.e., 45 percent).

Table 4.6.3-1
Itinerant Aircraft Daily Tie-Downs
Rowan County Airport

Category	Existing 2007	Phase I 2012	Phase II 2017	Phase III 2027
Itinerant Operations[1]	23,100	26,800	29,900	40,300
Peak Month Operations (11% of Total)	2,541	2,948	3,289	4,433
Peak Month Flights	1,271	1,474	1,645	2,217
Peak Month Average Daily Flights (Peak Month Divided by 31)	41	48	53	72
Transient Peak Month Average Daily Flights (50% of flights)	21	24	27	36
Concurrent Ramp Usage[2] (45% of flights)	9	11	12	16

[1]Note: Includes air taxi and itinerant GA, excludes military.
[2]Note: Under existing conditions the transient ramp in front of the terminal can only accommodate 4 to 6 aircraft depending on aircraft type. Aircraft overflows are parked on the storage ramp.
Source: Talbert & Bright Inc. (April 2008)

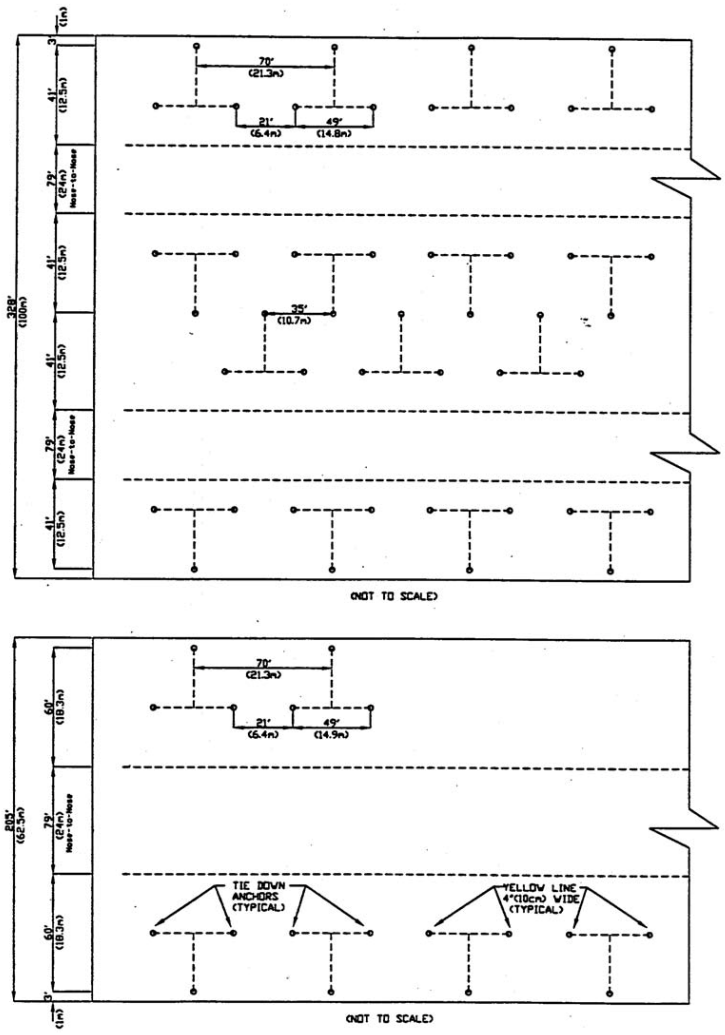
4.7 APRON REQUIREMENTS

Given the based aircraft tie-down requirements of Table 4.6.1-1 (page 56) and the transient aircraft tie-down requirements of Table 4.6.3-1, it is possible to calculate the apron square footage requirement of both itinerant/transient aircraft and based aircraft.

FAA *Advisory Circular 150/5300-13 – Airport Design* (as amended) suggests 300 square yards of apron for based aircraft and 360 square yards of apron for itinerant aircraft plus 10 percent for expansion for the next two-year period. A review of these guideline standards indicates that they conform primarily to the typical general aviation airport with predominantly local traffic and some itinerant fly-ins. A review of FAA *Advisory Circular 150/5300-13 – Airport Design* (as amended) Appendix 5 depicts typical tie-down layouts as illustrated in Figure 4.7-1, page 58).

Given the higher design level of aircraft that must be accommodated at the Rowan County Airport, these standards have been changed to equal 342 square yards for based aircraft and a much larger 490 square yards for itinerant aircraft. An illustration of how the 490 square yard standard will work on the itinerant/transient ramp is shown by Figure 4.7-2 (page 59).

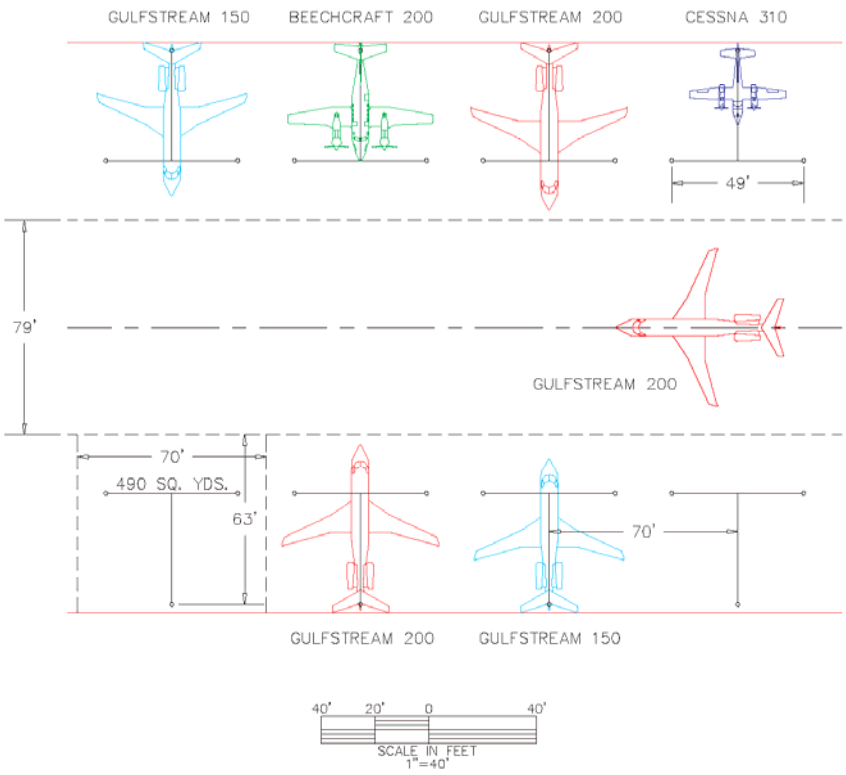
Given the new apron standards, Table 4.7.1 summarizes the projected apron square yardage needs.



Source: FAA Advisory Circular 150/5300-13 - Airport Design (as amended)
Figure A5-2 Tie-Down Layouts (page 120)

Figure 4.7-1
Rowan County Airport - Rowan County, North Carolina

Tie-Down Layouts



Source: Talbert & Bright, Inc. (April 2008)

Figure 4.7-2
Rowan County Airport - Rowan County, North Carolina

490.0 Square Yard Apron Tie-Down Concept

Table 4.7-1
General Aviation Aircraft Tie-Downs and Apron Square Yardage
Rowan County Airport

Category			Existing 2007	Phase I 2012	Phase II 2017	Phase III 2027
Based Aircraft Tie-downs						
Total			15*	50	50	60
Itinerant Aircraft Tie-downs						
Total			9	11	12	16
Square Yardage Requirement	Sq. Yds. per Aircraft					
Based Aircraft	342.0	required	9,738.0	32,460.0	32,460.0	38,952.0
Taxilane	307.2	existing	15,600.0	15,600.0	15,600.0	15,600.0
Total	649.2	deficit	no deficit	16,860.0	16,860.0	23,352.0
Itinerant Aircraft	490.0	required	7,174.80	8,769.2	9,566.4	12,755.2
Taxilane	307.2	existing	6,700.0	6,700.0	6,700.0	6,700.0
Total	797.2	deficit	474.8	2,069.2	2,866.4	6,055.2

* Space for 44 small aircraft tie-downs presently exists. Fifteen aircraft are tied-down as of 2007.
Source: Talbert & Bright Inc. (April 2008)

4.8 TERMINAL REQUIREMENTS

This section investigates the planning needs with respect to the following terminal elements.

- Functionality of the existing terminal
- Internal components of the existing terminal
- Terminal expansion
- Automobile parking requirements

4.8.1 Existing Terminal

As documented in Section 2.4.4.4 (page 20), the existing terminal has a total square footage of approximately 3,835 square feet. Due to the remote location of the upper floor, only the ground floor of approximately 2,769 square feet is being examined from a functional perspective. Table 2.4.4.4-1 (page 20) and Figure 2.4.4.4-1 (page 17) documents the footprint of the internal components of this terminal. In general, the principal components (i.e., offices, lobby, restrooms, operations area, vending area, pilots lounge, conference room etc.) are adequately sized and functional for the current level of airport activity. The increasing level of pilot training can become a short coming of this terminal through time. Upgrading of the pilots lounge and/or the conference room could provide Phase I benefits to corporate

airport users. The continued high quality maintenance of the terminal will allow the continued usage option through Phase I and probably through Phase II. However, the timing of a terminal-upgrade/new terminal may be controlled more by the need for transient ramp space or the opportunity to lease the terminal to a corporate tenant.

4.8.2 Future Terminal

A review of two standard planning manuals gives guidance for air carrier terminals but they are not specifically structured to general aviation needs. These manuals are:

1. *Advisory Circular 150/5360-9 – Planning and Design of Airport Terminal Facilities at Non-Hub Locations*

2. *Advisory Circular 150/5360-13 – Planning and Design Guidelines for Airport Terminal Facilities* (as amended)

Some of the guidelines abstracted from these manuals are outlined in Table 4.8.2-1.

Table 4.8.2-1
FAA Terminal Development Guidelines
Rowan County Airport

Terminal Area	FAA Guidelines
General Lobby	100 sq. ft. per./hr. pass[1]
Departure Lobby	500 sq. ft. to 1,200 sq. ft.[1]
	20 sq. ft. per seat
Rental Car	48 sq. ft. per agency[1]
Coffee Shop	80 seats (million pass)
(includes kitchen)	35 to 40 sq. ft./seat[2]
	1,000 to 3,000 sq. ft.[1]
Gift Shop	600 sq. ft. to 700 sq. ft. per million passengers
Maintenance/Storage	12% to 18% of airport[2]
Circulation	20% to 30% of airport[1]
Restrooms	1,500 sq. ft. to 1,800 sq. ft. per 500 peak/hr. passengers[2]

Source: *Advisory Circular 150/5360-9 – Planning and Design of Airport Terminal Facilities at Non-Hub Locations*
Advisory Circular 150/5360-13 – Planning and Design Guidelines for Airport Terminal Facilities (as amended)

A new set of guidelines for development of a general aviation terminal was developed utilizing some inputs from these guidelines and general knowledge of numerous general aviation terminals. These guidelines were used to construct Table 4.8.2-2 (page 62) that provides three scenarios for general aviation terminal design and construction.

Table 4.8.2-2
General Aviation Terminal Guidelines
Rowan County Airport

Terminal Area	Guidelines	Existing (Square Feet)	Scenario I (Square Feet)	Scenario II (Square Feet)	Scenario III (Square Feet)
Lobby	40 S.F.	578	1,400	800	600
(FAA Guide 20 S.F. per seat)	per seat		35 seats	20 seats	15 seats
Rental Car	48 S.F.		50	50	-
	per agency		1 agency	1 agency	
Coffee Shop/Vending Area	40 S.F.	140	480	240	120
	per seat		12 seats	6 seats	3 seats
Manager's Office	140 S.F.	144	140	140	140
Secondary Office	120 S.F.	156	120	120	120
Secondary Office	120 S.F	168	120	120	120
Flight School	200 S.F.	227	200	200	200
Flight Planning Room	150 S. F.	123	150	150	150
Flight Training Room	300 S. F.		300		
Counter Area	140 S. F.	166	140	140	140
Conference Room	700 S.F.	304	700	500	400
Pilots Lounge	500 S.F.	229	500	400	300
Gift Shop	300 S.F.		300	150	
Maintenance	12% to 18%		1,180	750	570
	of building		15% of bldg.	15% of bldg.	15% of bldg.
Circulation	20% to 30%	334	1,570	1,000	760
	of building		20% of bldg.	20% of bldg.	20 % of bldg.
Restrooms	250 S. F.	200	500	250	200
	per set	1 set	2 sets	1 set	1 set
		2,769*	7,850	5,010	3,820

*Upper floor excluded due to limited use.

Source: *Advisory Circular 150/5360-9 – Planning and Design of Airport Terminal Facilities at Non-Hub Locations*
Advisory Circular 150/5360-13 – Planning and Design Guidelines for Airport Terminal Facilities (as amended)
Talbert & Bright Inc. (April 2008)

Table 4.8.2-2 is provided for discussion and adjustment depending upon the desires and finances available at time of construction. For example, if a terminal size between Scenarios I and II is contemplated, then the following questions could be asked:

- Considering business needs to continue work while waiting for an airplane or a rental car should the largest size lobby be constructed?
- Should there be a second work room beyond an available conference room?
- Will a vending area be sufficient or will a coffee shop with kitchen work better?

- If a new terminal is on the west side of the airport will the Army Air Guard use the coffee shop?
- Can the office areas be maintained at their present sizes?
- How much flight training space will be needed for how many flight schools?
- Will rental car space be needed at all?
- Can the counter area be maintained at the present size?
- Will a second set of restrooms be needed?

4.8.3 Terminal Automobile Parking

As documented in Section 2.4.4.4 (page 20), the existing terminal automobile parking lot contains a total of 47 spaces. This lot is in excellent condition both in terms of pavement and marking. Fringe parking spaces have concrete bumpers to protect both the surrounding environment as well as the vehicles. During the October and November surveys the parking lot had an average daily peak utilization rate of 30 percent. It is assumed that in peak months the average peak utilization should be around a daily 50 percent.

Reviewing the daily peak hour passenger forecast in the peak month, shown by Table 3.5-2 (page 40) the following is listed:

Year	Peak Hour Passengers
2007	16.9
2012	20.0
2017	23.54
2027	32.33

With the assumption of 50 percent parking lot utilization in the peak month, the existing automobile parking lot will be sufficient in size through Phases I, II and most of Phase III. By 2027 the parking lot will have reached capacity assuming the terminal stays at its present location. If the terminal does not move, then it is proposed that a portion of the area now occupied by open hangars be reserved for future automobile parking.

If the terminal moves to a new location, it is proposed that an automobile parking lot with 50 spaces be built for Phases I and II. An additional 25 spaces should be added during Phase III. If the function of the terminal expands, such as, more flight training, daily use of the coffee shop by neighboring workers or rental car spaces, then more spaces may be needed.

4.8.4 Highway Access/Perimeter Road

Adequate highway access is provided to both sides of the airport via-Airport Loop Road and National Guard Road. It is proposed that a full or partial perimeter road be constructed within the security fence. This road will aid in excluding vehicle traffic from crossing the active runway or taxiways as both sides of the airport develop. A complete perimeter fence should be maintained with limited access security gates.

4.9 FACILITY REQUIREMENTS SUMMARY

A summary of the facility requirements is provided in Table 4.9-1.

Table 4.9-1
Summary of Facility Requirements
Rowan County Airport

Facility	Existing 2007	Phase I 2012	Phase II 2017	Phase III 2027
Runway				
Length	5,500'	6,500'	6,500'	6,500'
Width	100'	100"	100'	100'
Strength (lbs.)	S-16,000	S-30,000	S-30,000	S-30,000
		D-60,000	D-60,000	D-60,000
Taxiways				
Width	35'	35'	35'	35'
Parallel	East	East	East/West	East/West
Aircraft Location				
Based Aircraft Hangared	83	82	98	128
Based Aircraft Tie-downs	15	47	42	52
Itinerant Aircraft Tie-downs	4(5)*	11	12	16
Military Tie-downs	10	12	20	20
Total	112	152	172	216
Apron (square yards)				
Based Aircraft	15,000	32,460.0	32,460.0	38,952.0
Itinerant Aircraft	6,700	8,769.2	9,566.4	12,755.2
Total	21,700	41,229.2	42,026.4	51,707.2
Terminal Area (square feet)			Scenario II	
Lobby	578	same	800	same
Rental Car	–	same	50	same
Vending	140	same	240	same
Office 1	144	same	140	same
Office 2	156	same	120	same
Office 3	168	same	120	same
Flight School	227	same	200	same
Flight Planning	123	same	150	same
Flight Training Room	–	same	optional	same

Table 4.9-1
Summary of Facility Requirements
Rowan County Airport

Facility	Existing 2007	Phase I 2012	Phase II 2017	Phase III 2027
Counter Area	166	same	140	same
Conference Room	304	same	500	same
Pilots Lounge	229	same	400	same
Gift Shop	–	same	150	same
Restrooms	200	same	250	same
Other	334	same	1,750	same
Total	2,769**	same	5,010	same
Terminal Automobile Parking Spaces	47	47	50	75

* 5 tie-downs overflow to main storage ramp.
**first floor
Source: Talbert & Bright Inc. (April 2008)

The affect of an airport on its environment is an important consideration in continued development. The objective of this section is to note the potential changes in environmental conditions, which could result from the recommendations made in the Demand Capacity Analysis/Facility Requirements (page 41). This environmental overview is intended as a review of environmental conditions at RUQ in accordance with Appendix A – Analysis of Environmental Impact Categories in FAA Order 1050.1E Change 1 *Environmental Impacts: Policies and Procedures* (March 20, 2006). Detailed environmental analyses will have to be performed as each proposed project outlined on the ALP is implemented to determine compliance with environmental rules and regulations.

5.1 AIR QUALITY

In accordance with the Clean Air Act of 1990 (as amended, 42 USC 7401 *et seq.*), the U.S. Environmental Protection Agency (USEPA) established the National Ambient Air Quality Standards (NAAQS), which defined six criteria pollutants and established ambient concentration limits to protect public health. Monitoring sites report data to USEPA for the following six criteria air pollutants:

- Carbon monoxide (CO)
- Lead (Pb)
- Nitrogen dioxide (NO_2)
- Ozone (O_3)
- Particulate matter (PM_{10} and $PM_{2.5}$)[1]
- Sulfur dioxide (SO_2)

The North Carolina Department of Environment and Natural Resources, Division of Air Quality (NCDENR-DOA) was granted authority by the USEPA to administer the Clean Air Act in North Carolina.

The Clean Air Act established primary (protect public health) and secondary (protect public welfare) standards; which are based on a pollutant's effect on plants and animals. Table 5.1-1 (page 67) illustrates the primary and secondary standards for the six criteria pollutants.

[1] PM_{10} and $PM_{2.5}$ are acronyms for particulate matter consisting of particles smaller than 10 and 2.5 micrometers, respectively.

Table 5.1-1
National Ambient Air Quality Standards
Rowan County Airport

Pollutant	Primary Standards	Averaging Times	Secondary Standards
Carbon Monoxide (CO)	9 ppm (10 mg/m^3)	8-hour[1]	None
	35 ppm (40 mg/m^3)	1-hour[1]	None
Lead	1.5 μg/m^3	Quarterly Average	Same as Primary
Nitrogen Oxide (NO_x)	0.053 ppm (100 μg/m^3)	Annual (arithmetic mean)	Same as Primary
Particulate Matter (PM_{10})	Revoked[2]	Revoked[2]	Revoked
	150 μg/m^3	24-hour[3]	Same as Primary
Particulate Matter ($PM_{2.5}$)	15.0 μg/m^3	Annual (arithmetic mean)[4]	Same as Primary
	35 μg/m^3	24-hour[5]	Same as Primary
Ozone (O_3)	0.08 ppm	8-hour[6]	Same as Primary
	0.12 ppm	1-hour (applies only in limited areas)[7]	Same as Primary
Sulfur Oxides (SO_x)	0.03 ppm	Annual (arithmetic mean)	None
	0.14 ppm	24-hour[1]	None
	None	3-hour[1]	0.5 ppm (1300 μg/m^3)

Notes: Units of measure for the standards are part per million (ppm) by volume, milligrams per cubic meter of air (mg/m^3), and micrograms per cubic meter of air (μg/m^3)

[1]Not to be exceeded more than once per year

[2]Due to lack of evidence linking health problems to long-term exposure of coarse particle pollution, USEPA revoked the annual PM_{10} standard in 2006 (effective December 17, 2006)

[3]Not to be exceeded more than once per year on an average over three years

[4]To attain this standard, the three-year average of the weighed annual $PM_{2.5}$ concentrations from single or multiple community-oriented monitors must not exceed 15.0 μg/m^3

[5]To attain this standard, the three-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 35 μg/m^3 (effective December 17, 2006)

[6]To attain this standard, the three-year average of the fourth highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area must not exceed 0.8 ppm

[7]a. The standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is <1, as determined by Appendix H

[7]b. As of June 15, 2005 USEPA revoked the 1-hour ozone standard in all areas except the 14 8-hour ozone nonattainment Early Action Compact (EAC) areas

Source: U.S. Environmental Protection Agency, "National Ambient Air Quality Standards (NAAQS)," <http://www.epa.gov/air/criteria.html>, accessed March 13, 2008

Geographic areas of the United States have been divided into attainment and nonattainment areas. Attainment areas are defined as those areas where the NAAQS for each pollutant is not exceeded. Nonattainment areas are defined as any portion of an air quality control region for which any pollutant exceeds NAAQS for a particular pollutant. In nonattainment areas, regional goals for achieving attainment of the NAAQS are addressed in the State Implementation Plan (SIP), as approved by the USEPA. Rowan County is a nonattainment area for USEPA's health-based standards for 8-hour ozone pollution; however, existing Clean Air Act programs will bring the county into attainment by 2010.

USEPA collects emissions data for three criteria air pollutants:

- Carbon monoxide (CO)
- Sulfur dioxide (SO_2)
- Particulate matter (PM_{10} and $PM_{2.5}$)

and three precursors/promoters of criteria air pollutants:

- Volatile organic compounds (VOC)
- Nitrogen oxides (NO_x)
- Ammonia (NH_3)

The Clean Air Act also lists 188 hazardous air pollutants (HAPs), which are known as *toxic air pollutants* or *air toxics*. However, monitoring of ambient concentrations of HAPs is not mandated by the Clean Air Act but, USEPA is developing regulations to limit HAP emissions, thereby preventing ambient HAP concentrations from reaching levels that would pose significant health risks.

Rowan County has four criteria pollutant monitoring sites as outlined in Table 5.1-2.

Table 5.1-2
Rowan County Criteria Pollutant Monitoring Sites
Rowan County Airport

Information	Ozone Sites		$PM_{2.5}$ Site	CO Site
Site Name	Enochville	Rockwell	Rockwell	Rockwell
AIRS Identification Number	371590022	371590021	371590021	371590021
County	Rowan	Rowan	Rowan	Rowan
Metropolitan Forecast Area	Charlotte	Charlotte	Charlotte	General
Land Use	Residential	Commercial	Commercial	Commercial
Elevation (ft. above MSL)	886	787	787	787
Years of Operation	1995 to Present	1993 to Present	1993 to Present	1993 to Present
Operated by	NCDENR-DOA	NCDENR-DOA	NCDENR-DOA	NCDENR-DOA

Source: U.S. Environmental Protection Agency, Air Data, "Monitor Locator Map - Criteria Air Pollutants," <http://daq.state.nc.us/monitor/data/>, accessed March 13, 2008

AirData[2] county air quality report illustrates air pollution values related to national standards for air quality. The county air quality report shows if a county's peak air pollution levels were

[2]U.S. Environmental Protection Agency, "AirData: Access to Air Pollution Data, <http://www.epa.gov/oar/data/>, accessed March 13, 2008.

above the national standards during a particular year. Counties that persistently exceed the standards may be classified nonattainment by USEPA, and be required to take measures to improve their air quality. Each column of the county air quality report lists standards-related air pollution values for the six criteria pollutants for one year. The values shown are the highest reported during the year by the monitoring sites in the county. A value that exceeded the level of an air quality standard is **highlighted in red** (Table 5.1-3).

Table 5.1-3
Rowan County Air Quality Report - Criteria Air Pollutants
Rowan County Airport

Criteria Pollutant	Year									
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
CO (ppm)										
2nd Max 1-hr	1.6	1.5	1.5	1.3	0.9	1	1	1.9	1.4	1.2
2nd Max 8-hr	0.8	0.7	0.9	0.8	0.6	0.6	0.6	1	0.9	0.7
NO_2 (ppm)										
Annual Mean										
O_3 (ppm)										
2nd Max 1-hr	0.126	0.128	0.122	0.142	0.128	0.129	0.101	0.123	0.11	0.114
4th Max 8-hr	0.101	0.107	0.094	0.103	0.108	0.098	0.08	0.088	0.089	0.096
SO_2 (ppm)										
2nd Max 24-hr	0.012									
Annual Mean	0.006									
$PM_{2.5}$ (µg/m³)										
98th Percentile								22	29	30
Annual Mean								14.2	14.2	14.2
PM_{10} (µg/m³)										
2nd Max 24-hr										
Annual Mean										
Pb (µg/m³)										
Quarterly Mean										

EPA Air Quality Standards:
Carbon Monoxide: 35 ppm (1-hour average), 9 ppm (8-hour average)
Nitrogen Dioxide: 0.053 ppm (annual mean)
Ozone: 0.12 ppm (1-hour average), 0.08 ppm (8-hour average)
Sulfur Dioxide: 0.14 ppm (24-hour average), 0.030 ppm (annual mean)
Particulate (diameter <2.5 micrometers): 65 µg/m3 (24-hour average), 15.0 µg/m3 (annual mean)
Particulate (diameter <10 micrometers): 150 µg/m3 (24-hour average), 50 µg/m3 (annual mean)
Lead: 1.5 µg/m3 (quarterly mean)
ppm = parts per million
µg/m³ = micrograms per cubic meter
Source: U.S. Environmental Protection Agency, "County Air Quality Report - Criteria Air Pollutants," <http://www.epa.gov/air/data/repsco.html?co~37159~Rowan%20Co%2C%20North%20Carolina>, accessed March 13, 2008

In addition, USEPA provides an air quality index report (AQI), which is an index for reporting daily air quality. The AQI determines how clean or polluted the air is in an area; and what associated health effects might be for concern. The AQI focuses on health effects

that may be experienced within a few hours or days after breathing polluted air. USEPA calculates the AQI for five major air pollutants regulated by the Clean Air Act: ground-level O_3, $PM_{10, 2.5}$, CO, SO_2, and NO_2. For each of these pollutants, USEPA has established national air quality standards to protect public health (Table 5.1-4).

Table 5.1-4
Air Quality Index Values
Rowan County Airport

AQI Values	Levels of Concern	Health Concern
0 to 50	Good	Air quality is considered satisfactory, and air pollution poses little or no risk.
51 to 100	Moderate	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people. For example, people who are unusually sensitive to ozone may experience respiratory symptoms.
101 to 150	Unhealthy for Sensitive Groups	This means they are likely to be affected at lower levels than the general public. For example, people with lung disease are at greater risk from exposure to ozone, while people with either lung disease or heart disease are at greater risk from exposure to particle pollution. The general public is not likely to be affected when the AQI is in this range.
151 to 200	Unhealthy	Everyone may begin to experience health effects when AQI values are between 151 and 200. Members of sensitive groups may experience more serious health effects.
201 to 300	Very Unhealthy	AQI values between 201 and 300 trigger a health alert, meaning everyone may experience more serious health effects.
301 to 500	Hazardous	AQI values over 300 trigger health warnings of emergency conditions. The entire population is more likely to be affected.

Source: AirNow, "Air Quality Index," <http://airnow.gov/index.cfm?action=aqibroch.aqi>, accessed March 13, 2008

Table 5.1-5 outlines the air quality index for Rowan County for 1998 through 2007 (page 71).

Determination of the need for an air quality analysis at an airport is based on the ultimate forecast level of aircraft operations. FAA Order 1050.1E Change 1 *Environmental Impacts: Policies and Procedures* (March 20, 2006), Appendix A, Section 2.4b states that for *detailed guidance on air quality procedures see FAA's report "Air Quality for Civilian Airports and Air Force Bases."* The report states that if the level of general aviation and air taxi activity exceeds 180,000 operations per year, a NAAQS assessment should be considered.[3] Forecasts for RUQ indicate a total of approximately 78,200 annual operations by 2027 (Table 3.4-4, page 38), which is well below the minimum operations threshold requiring an air quality analysis. However, because O_3 exceeds the 8-hour average standards, an air quality analysis would

[3]U.S. Department of Transportation, Federal Aviation Administration (April 1997). *Air Quality Procedures for Civilian Airports and Air Force Bases*, page 20.

have to be performed to determine if development at RUQ would add to existing O_3 levels, if the County has not been brought back into attainment.

Table 5.1-5
Rowan County Air Quality Index Report
Rowan County Airport

	Number of Days when Air Quality was...				AQI Statistics			Number of Days when AQI pollutant was...					
Year	Good	Moderate	Unhealthy for Sensitive Groups	Unhealthy	Maximum	90th percentile	Median	CO	NO_2	O_3	SO_2	$PM_{2.5}$	PM_{10}
2007	200	146	18	1	151	90	48	0	0	187	0	178	0
2006	256	96	13	0	140	73	41	0	0	283	0	82	0
2005	197	93	14	0	129	85	44	0	0	219	0	85	0
2004	167	46	2	0	129	66	40	0	0	215	0	0	0
2003	160	47	6	2	179	77	43	0	0	215	0	0	0
2002	133	52	24	6	185	116	46	0	0	215	0	0	0
2001	128	64	22	1	195	101	48	0	0	215	0	0	0
2000	137	65	12	1	151	90	45	0	0	215	0	0	0
1999	113	65	30	7	203	116	50	0	0	215	0	0	0
1998	125	61	25	4	166	111	46	0	0	215	0	0	0

Source: U.S. Environmental Protection Agency, "Air Quality Index Report," <http://www.epa.gov/air/data/repsco.html?co~37159~Rowan%20Co%2C%20North%20Carolina>, accessed March 13, 2008

5.2 COASTAL RESOURCES

NCDENR, Division of Coastal Management (NCDENR-DCM) is the federally-approved coastal zone management authority and administers the North Carolina Coastal Area Management Act (CAMA) in the 20 coastal counties of North Carolina. As a part of CAMA, areas of environmental concern (AECs) were designated within the 20 coastal counties and rules set for managing development within these areas. An AEC is an area of natural importance that may be easily destroyed by erosion or flooding, or may have environmental, social, economic, or aesthetic values that make it valuable to North Carolina.

In addition, the Coastal Barrier Resource Act of 1982 (CBRA, P.L. 97-348, 16 USC 3501 *et seq.*), Coastal Barrier Improvement Act of 1990, and Coastal Barrier Resources Reauthorization Act of 2000 prohibit the use of federal funds for projects that would impact undeveloped coastal barrier units in the Coastal Barrier Resources System. Coastal barriers are unique land forms that provide protection for diverse aquatic habitats and serve as the

first line of defense against the impacts of severe coastal storms and erosion. Located at the interface of land and sea, the dominant physical factors responsible for shaping coastal land forms are tidal range, wave energy, and sediment supply from rivers and older, pre-existing coastal sand bodies. Relative changes in local sea level also profoundly affect coastal barrier diversity. CBRA units have been designated and maps showing their locations are on file with the U.S. Fish and Wildlife Service (USFWS).

However, Rowan County is not a coastal county and would not be required to comply with either the North Carolina Coastal Area Management Act or Coastal Barrier Resource Act (as amended).

5.3 COMPATIBLE LAND USE

Rowan County is located in the vastly growing Piedmont region of North Carolina between the Charlotte metropolitan area and Winston-Salem, Greensboro, and High Point markets. RUQ is located within the city limits of the City of Salisbury and is generally bounded by Airport Loop Road to the east, Airport Road to the south, National Guard Road to the west, and Rowan Mills Road to the north. Land use surrounding RUQ includes (Figure 5.3-1, page 73):

- **North** – residential development and undeveloped land within the city limits
- **East** – undeveloped land, residential, and commercial development within the city limits
- **South** – commercial and light industrial development within the city limits and Rowan County
- **West** – residential development and undeveloped land within the city limits and Rowan County

RUQ and the area around the airport are zoned either by the City of Salisbury[4] or Rowan County.[5] City zoning includes (Figure 5.3-2, page 74):

[4]*Code of Ordinances City of Salisbury, North Carolina* Codified through Ordinance No. 2007-57, Enacted September 4, 2007. (Supplement No. 36).
[5]*Code of Ordinances County of Rowan, North Carolina* Codified through Amendment of August 20, 2007. (Supplement No. 7).

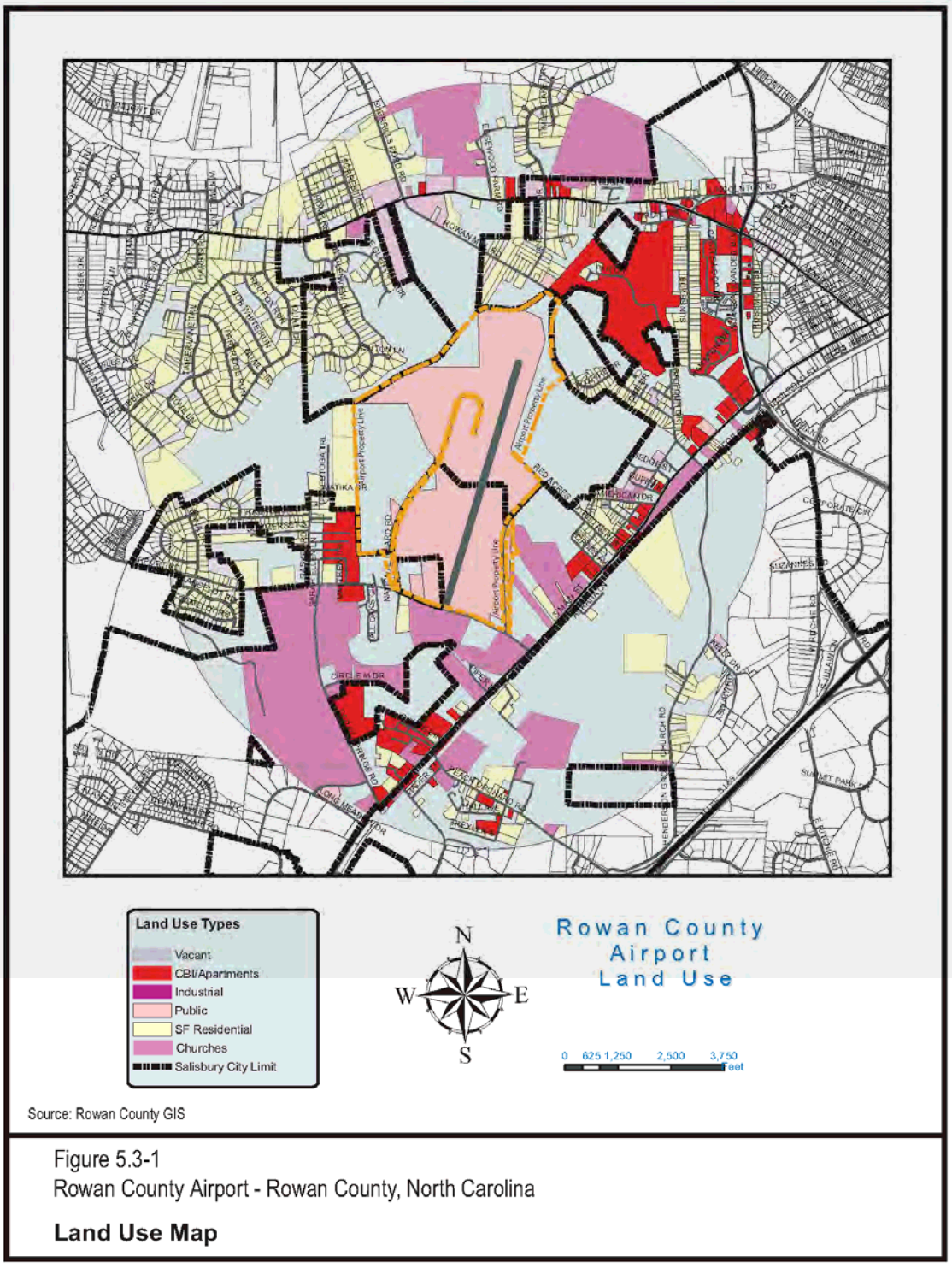
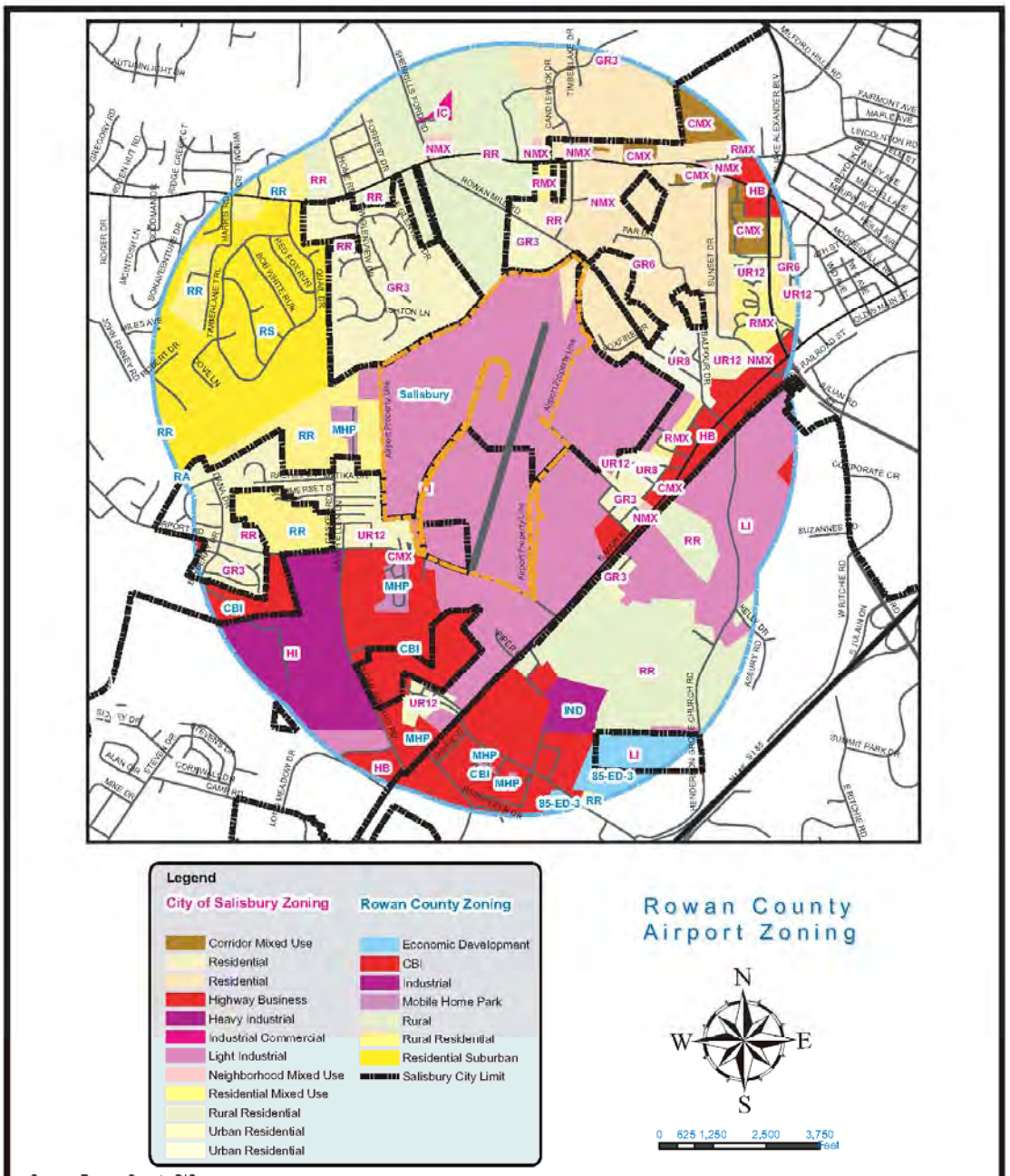


Figure 5.3-1
Rowan County Airport - Rowan County, North Carolina

Land Use Map



Source: Rowan County GIS

Figure 5.3-2
Rowan County Airport - Rowan County, North Carolina

Zoning Map

- **Agricultural district (A-1)** – this district is intended primarily as a district for bona fide farms and their related uses, provided such uses are an integral part of a specific bona fide farm. The continuance of agricultural endeavors and forestry are encouraged within this district.

- **Single family-20 residential district (R-20)** – this district is primarily for detached single family dwellings and their customary accessory buildings or structures in areas when water supply and sewage disposal is primarily the responsibility of the individual (i.e., no public water supply or public sewage disposal or its equivalent is readily available) and to establish areas for a density of development to the lot size requirements of this district.

- **Single family-15 residential district (R-15)** – this district is primarily for detached single family dwellings and their customary accessory buildings or structures in areas when either water supply or sewage disposal is primarily the responsibility of the individual (i.e., either public water supply or public sewage disposal system or the equivalent is not readily available) and to establish areas for a density of development relative to the lot size requirements of this district.

- **Single family-8 residential district (R-8)** – this district is intended primarily for detached single-family dwellings and their customary accessory buildings or structures and to establish areas for a density of development relative to the lot size requirements of this district.

- **Multi-family residential district (R-6A)** – this district is intended primarily as a residential district for the location of detached single-family dwellings, two-family dwellings, and multi-family dwellings along with their customary accessory uses and to establish areas for a density of development relative to the lot size requirements of this district.

- **Retail trade business district (B-RT)** – this district is intended primarily for the retailing of merchandise and the location of commercial activities, which serve community trade areas.

- **Light industrial district (M-I)** – this district is to provide areas for the location of wholesaling and industries for manufacturing, processing, and assembling parts and products, distribution of products at wholesale, transportation terminals, none of which will create smoke, fumes, noise, odor, dust or be detrimental to the health, safety, and general welfare of the community.

- **Heavy industrial district (M-2)** – this district is intended to provide an area for the location of general manufacturing, fabricating, processing, and assembling of parts

and products for distribution at wholesale, wholesaling, and transportation terminal uses.

County zoning includes:

- **Extraterritorial jurisdiction (ETJ)** – means that portion of a city or town planning jurisdiction that lies outside the corporate limits of the city or town within which municipal land use regulations apply.

- **Rural Residential (RR)** – this district is comprised of areas of the county in which moderate levels of single-family housing has occurred or is occurring. In this district, agricultural uses have been replaced to a significant degree with single-family housing. The regulations in this district are intended to provide a land owner with an opportunity to engage in limited business or commercial activities. Multifamily uses are not allowed.

- **Manufactured Home Park (MHP)** - this district is established in order to provide for the proper location and planning of manufactured home parks, excluding family manufactured home parks. Special requirements shall be applied to these parks, which shall specify improvements to the park to ensure the public health, safety, and welfare of the park inhabitants, as well as the surrounding area. Designation of an area as being in the MHP district provides design and appearance criteria, which are more appropriate for rental manufactured housing and/or spaces, including vinyl or similar skirting, clustering of units and reduced road construction standards. These standards are not applicable to manufactured homes and/or lots located outside a MHP district. This district requires site plan review for development of manufactured home parks by the board of commissioners. This review is required because the use may have particular impacts on the surrounding area and the county as a whole. Approval of the site plan may include the addition of fair and reasonable standards to the site plan. No other uses allowed in the MHP district shall require site plan approval by the Board of Commissioners.

- **Commercial, Business, Industrial (CBI)** – this district allows for a wide range of commercial, business, and light industrial activities, which provide goods and services. This district is typically for more densely developed suburban areas, major transportation corridors, and major cross-roads communities.

In addition, both the City of Salisbury and Rowan County have Airport Zone Overlays (AZO), which protect RUQ's imaginary surfaces, and chapters within their zoning ordinances specifically dedicated to aviation.

Potential land use impacts associated with the proposed projects outlined on the ALP are described in terms of airport and community planning efforts, jurisdictional coordination,

and development patterns. The compatibility of existing and planned land uses in the vicinity of an airport is usually associated with two factors:

- the extent of noise impacts from and to the airport and related development
- consistency with local land use plans and development policies

The principal factors influencing land use in the vicinity of an airport often include height obstructions, airport safety zones, and noise. Overall, noise exposure is often the most objectionable interference of the airport with the surrounding environment, as the compatibility with existing and planned land uses in the airport's vicinity is normally associated with the extent of noise impacts. Therefore, prior to development of the proposed projects outlined on the ALP a noise survey shall be performed to determine the extent of noise impacts on the surrounding land use. Table 5.3-1 identifies FAA land use compatibility standards, as identified by the 65, 70, 75, and 80 DNL noise contours.

Table 5.3-1
Compatible Land Use for Noise Level Ranges
Ashe County Airport

	Yearly DNL in Decibels (dB)					
Land Use	**Below 65**	**65–70**	**70–75**	**75–80**	**80–85**	**Over 85**
Residential, other than mobile homes and transient lodgings	Y	N	N	N	N	N
Mobile home parks	Y	N	N	N	N	N
Transient lodgings	Y	N	N	N	N	N
Public Use						
Schools	Y	N	N	N	N	N
Hospitals and nursing homes	Y	25	30	N	N	N
Churches, auditoriums, and concert halls	Y	25	30	N	N	N
Government Services	Y	Y	25	30	N	N
Transportation	Y	Y	Y	Y	Y	Y
Parking	Y	Y	Y	Y	Y	Y
Commercial Use						
Offices, businesses, and professional	Y	Y	25	30	N	N
Wholesale and retail – building materials, hardware, and farm equipment	Y	Y	Y	Y	Y	N
Retail trade – general	Y	Y	25	30	N	N
Utilities	Y	Y	Y	Y	Y	N
Communication	Y	Y	25	30	N	N
Manufacturing and Production						
Manufacturing – general	Y	Y	Y	Y	Y	N
Photographic and optical	Y	Y	25	30	N	N
Agriculture (except livestock) and	Y	Y	Y	Y	Y	Y

Table 5.3-1
Compatible Land Use for Noise Level Ranges
Ashe County Airport

Land Use	Yearly DNL in Decibels (dB)					
	Below 65	65–70	70–75	75–80	80–85	Over 85
forestry						
Livestock farming and breeding	Y	Y	Y	N	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y	Y
Recreational						
Outdoor sports areas and spectator sports	Y	Y	Y	N	N	N
Outdoor music amphitheaters	Y	N	N	N	N	N
Nature exhibits and zoos	Y	Y	N	N	N	N
Amusements, parks, resorts, and camps	Y	Y	Y	N	N	N
Golf courses, riding stables, and water recreation	Y	Y	25	30	N	N

Notes:
Y (Yes) – Land use and related structures compatible without restrictions
N (No) – Land use and related structures are not compatible and should be prohibited
NLR – Noise level reduction (outdoor and indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure
25 or 30 – Land use and related structures generally compatible; measures to achieve NLR of 25, 30, or 35 dB must be incorporated in design and construction of structure
Source: Federal Aviation Administration (August 1983)

It should be noted that the responsibility for determining the acceptable and permissible land use in the vicinity of an airport remains with local authorities in response to local needs and values in achieving compatible land use.

5.4 CONSTRUCTION IMPACTS

During construction of the proposed projects outlined on the ALP, there are a number of potential environmental impacts that could occur to air and water quality, as well as construction noise, but these would be controlled through careful attention to construction methods and implementation of best management practices (BMPs).

5.5 DEPARTMENT OF TRANSPORTATION ACT: SECTION 4(f)

Section 4(f) of the U.S. Department of Transportation (USDOT) Act of 1966 states that the Secretary of Transportation shall not approve any program or project, which requires the use of any publicly-owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance as determined by federal, state, or local officials having jurisdiction thereof, or any land from an historic structure of national, state, or local significance as so determined by such officials unless:

- there is no feasible and prudent alternative to the use of such land
- the project includes all possible planning to minimize harm to the land resulting from such use

Prior to development of the proposed projects outlined on the ALP on currently undeveloped areas within the RUQ property boundary a cultural resources survey shall be performed to determine whether there are any Section 4(f) properties located onsite. Also, if additional property is to be acquired, compliance with Section 4(f) will be necessary, as well as coordination with appropriate federal and state agencies. In addition, an assessment will be performed to determine land use compatibility and location of recreational areas in respect to potential impacts under the requirements of Section 4(f).

5.6 FARMLANDS

U.S. Department of Agriculture (USDA) oversees the Farmland Protection Policy Act (FPPA). The purpose of FPPA is to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to non-agricultural uses. The FPPA establishes the protocol and criteria to be used by federal agencies to:

- identify and take into account the adverse effects of their programs on the preservation of farmland
- consider alternative actions, as appropriate, that could lessen adverse effects
- ensure that their programs are compatible with state and units of local government and private programs and policies to protect farmland

FPPA does not provide authority to withhold federal assistance for projects that convert farmland to non-agricultural uses. For the purposes of implementing the FPPA, farmland is defined as prime or unique farmlands or farmland that is determined by the State or unit of local government agency to be farmland of statewide or local importance (Figure 5.6-1, page

81 and Table 5.6-1, page 82).[6] The Natural Resources Conservation Service (NRCS) definitions are:[7]

- **Prime farmland** – land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and that is available for these uses. It has the combination of soil properties, growing season, and moisture supply needed to produce sustained high yields of crops in an economic manner if it is treated and managed according to acceptable farming methods. In general, prime farmland has an adequate and dependable water supply from precipitation or irrigation, a favorable temperature and growing season, an acceptable level of acidity or alkalinity, an acceptable content of salt or sodium, and few or no rocks. Its soils are permeable to water and air. Prime farmland is not excessively eroded or saturated with water for long periods of time, and it either does not flood frequently during the growing season or is protected from flooding.

- **Unique farmland** – land other than prime farmland that is used for the production of specific high value food and fiber crops. It has the special combination of soil quality, location, growing season, and moisture supply needed to economically produce sustained high quality and/or high yields of a specific crop when treated and managed according to acceptable farming methods.

- **Statewide or local important** – land, in addition to prime and unique farmlands, that is of statewide or local importance for the production of food, feed, fiber, forage, and oil seed crops. Criteria for defining and delineating this land are to be determined by the appropriate State agency or agencies. Generally, additional farmlands of statewide or local importance include those that are nearly prime farmland and economically produce high yields of crops when treated and managed according to acceptable farming methods. Some may produce as high a yield as prime farmlands if conditions are favorable.

Development of the proposed projects outlined on the ALP will have an impact on soils by converting undeveloped land; however, these soils are not considered prime, unique, or statewide important because of the presence of zoning and land use ordinances for the City of Salisbury[8] and Rowan County.[9] Therefore, there would be no impact to farmland.

[6]Code Of Federal Regulations Title 7 – Agriculture, Chapter VI – Natural Resources Conservation Service, Department Of Agriculture, Part 658 – Farmland Protection Policy Act. (January 1, 2006 edition).
[7]U.S. Department of Agriculture (October 1993). Soil Survey Manual Handbook No. 18.
[8]Code of Ordinances City of Salisbury, North Carolina Codified Through Ord. No. 2007-57, Enacted September 4, 2007. (Supplement No. 36).
[9]Code of Ordinances County of Rowan, North Carolina Codified through Amendment of August 20, 2007. (Supplement No. 7).

Figure 5.6-1
Rowan County Airport - Rowan County, North Carolina

Soils Map

Table 5.6-1
Soils Located on the Airport
Rowan County Airport

Map Unit Symbol	Map Unit Name	Development Suitabilities and Limitations for Use: Small Commercial Buildings	Buildings without Basements	Roads and Streets	Farmland Classification
CcC	Cecil sandy loam, 8 to 15 percent slopes	very limited	somewhat limited	somewhat limited	statewide important
CeC2	Cecil sandy clay loam, 8 to 15 percent slopes, eroded	very limited	somewhat limited	somewhat limited	statewide important
CfB	Cecil-Urban land complex, 2 to 8 percent slopes	somewhat limited	not limited	somewhat limited	not prime farmland
EnB	Enon fine sandy loam, 2 to 8 percent slopes	very limited	very limited	very limited	prime farmland
EnC	Enon fine sandy loam, 8 to 15 percent slopes	very limited	very limited	very limited	statewide important
HwB2	Hiwassee clay loam, 2 to 8 percent slopes, eroded	somewhat limited	not limited	somewhat limited	prime farmland
HwC2	Hiwassee clay loam, 8 to 15 percent slopes, eroded	very limited	somewhat limited	somewhat limited	statewide important
MeB2	Mecklenburg clay loam, 2 to 8 percent slopes, eroded	somewhat limited	somewhat limited	very limited	prime farmland
PaD	Pacolet sandy loam, 15 to 25 percent slopes	very limited	very limited	very limited	not prime farmland
PcB2	Pacolet sandy clay loam, 2 to 8 percent slopes, eroded	somewhat limited	not limited	somewhat limited	prime farmland
PcC2	Pacolet sandy clay loam, 8 to 15 percent slopes, eroded	very limited	somewhat limited	somewhat limited	statewide important
PxB	Poindexter-Mocksville complex, 2 to 8 percent slopes	somewhat limited	not limited	somewhat limited	not prime farmland
PxC	Poindexter-Mocksville complex, 8 to 15 percent slopes	very limited	somewhat limited	somewhat limited	not prime farmland
PxD	Poindexter-Mocksville complex, 15 to 25 percent slopes	very limited	very limited	very limited	not prime farmland
Ud	Udorthents, loamy	very limited	somewhat limited	somewhat limited	not prime farmland
VaB	Vance sandy loam, 2 to 8 percent slopes	somewhat limited	somewhat limited	very limited	statewide important
ZeC	Zion-Enon complex, 8 to 15 percent slopes	very limited	very limited	very limited	statewide important

Source: Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture, "Web Soil Survey," <http://websoilsurvey.nrcs.usda.gov/>, accessed March 14, 2008

Table 5.6-1 (page 82) illustrates the degree and soil limitations that affect small commercial buildings, buildings without basements, and roads and streets. The limitations indicate the extent to which the soils are limited by soil features that affect the specified use.

- **Not limited** – indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected.

- **Somewhat limited** – indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected.

- **Very limited** – indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Special studies shall be performed where soil limitations are very limited prior to development of the proposed projects outlined on the ALP.

5.7 FISH, WILDLIFE, AND PLANTS

The Endangered Species Act of 1973, as amended, gives the Secretary of the Interior, acting for the Secretary of Commerce, USFWS, and National Marine Fisheries Service (NMFS), the power to protect and conserve forms of wildlife and plants deemed to be in serious jeopardy. Section 7 of the Act requires federal agencies or their designated non-federal representatives, in consultation with and assisted by the USFWS, to ensure that their actions are not likely to jeopardize the continued existence of endangered and threatened species or result in the destruction or adverse modification of critical habitat of such species.

The North Carolina Natural Heritage Program (NCNHP) on-line database and the USFWS website were consulted regarding current federal and state listed species within Rowan County. Listed species of concern and their respective federal and state status and state rank are identified in Table 5.7-1 (page 84).

Table 5.7-1
Species of Concern in Rowan County
Rowan County Airport

Common Name	Scientific Name	State Status	Federal Status	State Rank	Habitat
Flora					
Agoyan Cataract Moss	*Scopelophila cataractae*	SR-D	–	S1	in moist areas, seepages, waterfalls
Bush's Sedge**	*Carex bushii*	SR-P	–	S1	open wet areas
Carolina Birdfoot-trefoil	*Lotus helleri*	SR-T	FSC	S3	open woods over clay soils, road sides
Carolina Thistle**	*Cirsium carolinianum*	SR-P	–	S2	forests and disturbed areas, mostly on basic soils
Copper Moss	*Scopelophila ligulata*	SR-O	–	S1	copper-rich soils
Dissected Toothwort+	*Cardamine dissecta*	SR-P	–	S2	rich woods, cove forests, bottomlands
Georgia Aster (Aster georgianus)	*Symphyotrichum georgianum*	T	C	S2	open woods and roadsides
Heller's Rabbit-Tobacco**	*Pseudognaphalium helleri*	SR-P	–	S3	dry woodlands, openings, and glades, especially over mafic rocks
Littleleaf Sneezeweed**	*Helenium brevifolium*	E	–	S2	bogs, seeps, riverbanks, other wet sites
Piedmont Indigo-bush	*Amorpha schwerinii*	SR-T	–	S3	dry forests
Piedmont Quillwort**	*Isoetes piedmontana*	T	–	S2	granite flatrocks and diabase glades
Prairie Goldenrod**	*Solidago ptarmicoides*	E	–	S1	diabase glades
Rota's Feather Moss	*Brachythecium rotaeanum*	SR-D	–	S1	on bark or rock in cove forests
Schweinitz's Sunflower	*Helianthus schweinitzii*	E	E	S3	open woods and roadsides
Single-flowered Sandwort	*Minuartia uniflora*	E	–	S1	granite flatrock
Small's Portulaca	*Portulaca smallii*	T	–	S2	granite flatrocks and diabase glades
Smooth Sunflower	*Helianthus laevigatus*	SR-P	–	S2	shaly open woods and roadsides
Southern Anemone	*Anemone berlandieri*	SR-P	–	S2	thin soils around rock outcrops
Thin-pod White Wild Indigo**	*Baptisia albescens*	SR-P	–	S2	open woodlands, clearings
Three-ranked Didymodon	*Didymodon tophaceus*	SR-O	–	S1?	on limestone, limy shale, clay
Virginia Quillwort	*Isoetes virginica*	SR-L	FSC	S1	upland depression swamp forests, clayey soils
Witch Grass**	*Dichanthelium annulum*	SR-P	–	S1	dry sandy or rocky open woods and borders of thickets
Yellow Fringeless Orchid**	*Platanthera integra*	T	–	S2	savannas

Table 5.7-1
Species of Concern in Rowan County
Rowan County Airport

Common Name	Scientific Name	State Status	Federal Status	State Rank	Habitat
Fauna					
Bald Eagle	*Haliaeetus leucocephalus*	T	–	S3B, S3N	mature forests near large bodies of water (for nesting); lakes and sounds, nesting sites; regular non-breeding sites
Caddisfly	*Dibusa angata*	SR	–	S2	rivers and creeks in the Piedmont
Cahaba Sand-filtering Mayfly	*Homoeoneuria cahabensis*	SR	–	S2	rivers and creeks in upper Piedmont
Carolina Creekshell	*Villosa vaughaniana*	E	FSC	S2	mainly Pee Dee and Catawba systems
Loggerhead Shrike	*Lanius ludovicianus*	SC	–	S3B, S3N	fields and pastures, breeding season only
Mole Salamander	*Ambystoma talpoideum*	SC	–	S2	breeds in fish-free semi-permanent woodland ponds; forages in adjacent woodlands
Robust Redhorse*	*Moxostoma robustum*	SR(PE)	FSC	S1	Pee Dee River
Yellow Lampmussel	*Lampsilis cariosa*	E	FSC	S1	river systems; mainly near the Fall Line

**Counties with historic populations (not seen since 1979)
+Obscure or undateable records
*Last observed over 20 years ago
C – Candidate
E – Endangered
FSC – Federal Species of Concern
PE – Proposed Endangered
S_? – Unranked, or rank uncertain
S_B – Rank of breeding population in the state. Used for migratory species only
S_N – Rank of non-breeding population in the state. Used for migratory species only
S1 – Critically imperiled in North Carolina because of extreme rarity or otherwise very vulnerable to extirpation in the state
S2 – Imperiled in North Carolina because of rarity or otherwise vulnerable to extirpation in the state
S3 – Rare or uncommon in North Carolina
SC – Special Concern
SR – Significantly Rare
SR-D – Significantly Rare-Disjunct
SR-L – Significantly Rare-Limited
SR-O – Significantly Rare-Other
SR-P – Significantly Rare-Proposed
SR-T – Significantly Rare-Throughout
T – Threatened
Source: North Carolina Department of Environment and Natural Resources, "The North Carolina Natural Heritage Program Database," <http://149.168.1.196/nhp/find.php>, accessed March 17, 2008.

Prior to development of the proposed projects outlined on the ALP in undeveloped areas, a threatened and endangered species survey will be performed to achieve compliance with Section 7 of the Endangered Species Act, as well as to coordinate with federal and state environmental agencies.

5.8 FLOODPLAINS

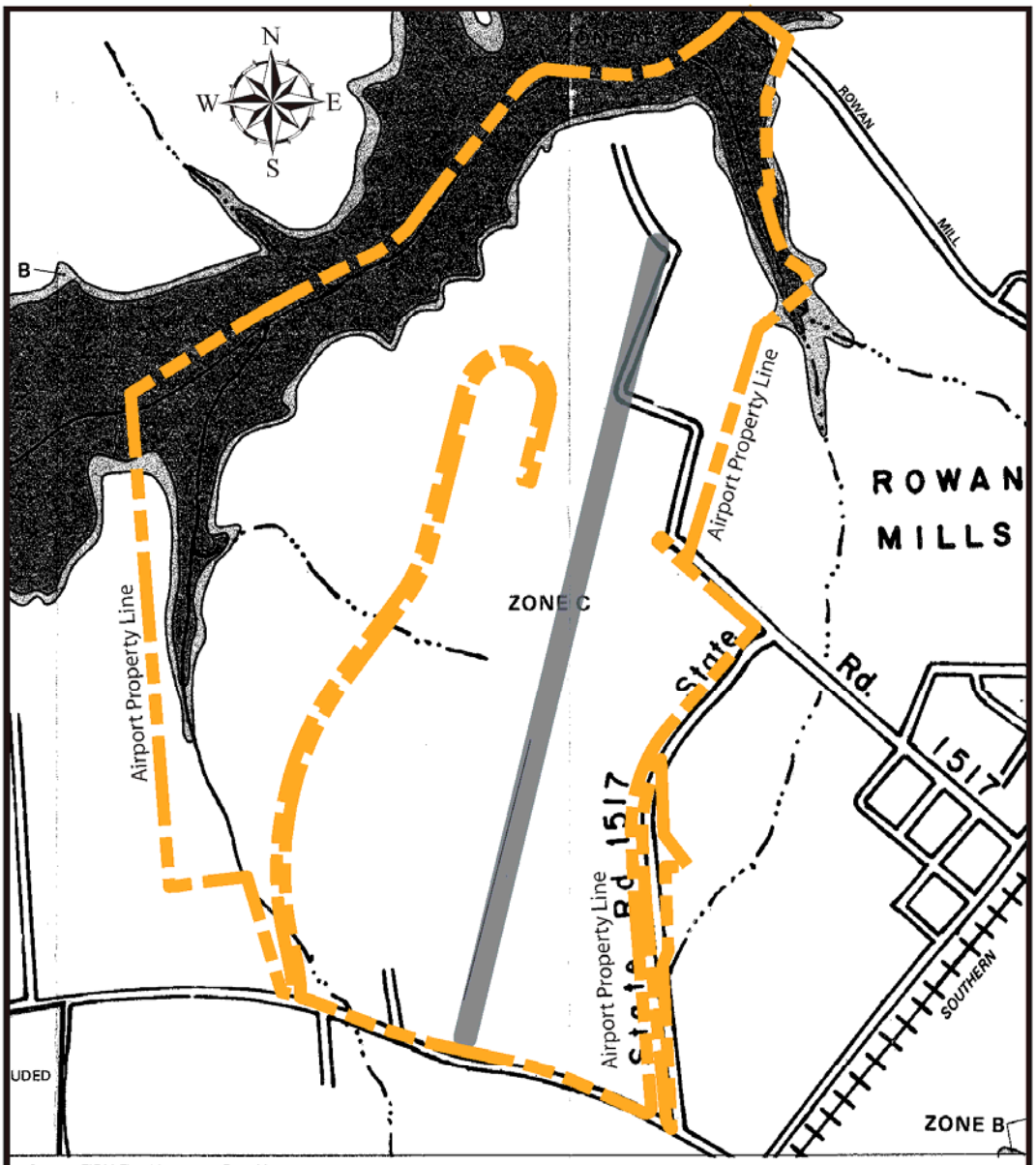
As outlined in Executive Order 11988, *Floodplain Management*,[10] agencies are required to reduce the risk of flood loss; minimize the impact of floods on human safety, health, and welfare; and restore and preserve the natural and beneficial values served by the floodplain.

Federal regulations permit development in the 100-year floodplain if it is demonstrated through hydraulic analysis that the development would meet the requirements set forth by the Federal Emergency Management Agency (FEMA) for the National Flood Insurance Program. These requirements allow encroachment in the floodplain as long as the base flood elevation does not increase by more than one-foot. When a regulatory floodway has been defined for a waterway, the encroachment should remain outside the floodway limits.

Review of the Rowan County floodplain maps provided by the FEMA Map Service Center[11] indicates that the 100-year floodplain may encroach within the development area of the proposed projects outlined on the ALP (Figure 5.8-1, page 87). The majority of RUQ is located within an area zoned C, which corresponds to areas determined to be outside the 100- and 500-year floodplains. However; there are two unnamed tributaries to Grants Creek that are zoned A5 (an area inundated by 100 year flooding, for which no base flood elevations [BFE] have been established) and B (an area inundated by 500-year flooding, an area inundated by 100-year flooding with average depths of less than one-foot or with drainage areas less than one square mile; or an area protected by levees from 100-year flooding).

Prior to development of the proposed projects outlined on the ALP, should proposed projects be located in the vicinity of the unnamed tributaries, a floodplain analysis is recommended to determine whether there would be an impact.

[10]Federal Register, Vol. 42, Pg. 26951, May 24, 1977, "Floodplain Management," <https://propertydisposal.gsa.gov/RedinetDocs/Env/EO11988.pdf>, accessed March 17, 2008.
[11]Federal Emergency Management Agency Map Service Center, "FEMA issued Flood Maps – Rowan County Flood Insurance Rate Map, Community Panel Number 3703510105B, Effective Date November 1, 1979," <http://map1.msc.fema.gov/idms/IntraView.cgi?KEY=22267314&IFIT=1>, accessed March 14, 2008.



Source: FIRM Flood Insurance Rate Map
Rowan County, North Carolina Panel 105 of 225
November 1, 1979

Figure 5.8-1
Rowan County Airport - Rowan County, North Carolina

Floodplain Map

5.9 HAZARDOUS MATERIALS, POLLUTION PREVENTION, AND SOLID WASTE

5.9.1 Hazardous Materials

The purpose of a Phase I Environmental Site Assessment (ESA) is to identify, to the extent feasible, pursuant to American Society of Testing and Materials (ASTM) E 1527-00, R*ecognized Environmental Conditions* (RECs) in connection with the property. The ASTM Standard Practice E 1527-00 defines *good commercial and customary practice for conducting an environmental site assessment of a parcel of commercial real estate with respect to the range of contaminants within the scope of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and to petroleum products*. This practice is intended to permit a user to satisfy one of the requirements to qualify for the *innocent landowner defense* to CERCLA liability.

There is a closed municipal solid waste landfill (Facility Permit #80-01) located to the west of National Guard Armory Road (Figure 5.9.1-1, page 89). The site is currently monitored by five onsite groundwater monitoring wells and two offsite surface water monitoring points on Grants Creek. In 2007, there were detections of Resource Conservation and Recovery Act (RCRA) metals (barium, chromium, and lead) above solid waste section limits in the five groundwater monitoring wells (MW-1, MW-2, MW-3S, MW-3D, and MW-4) and in the downstream surface water monitoring point.[12] In addition, VOCs (benzene. 1,4-dichlorobenzene, 1,2-dichloroethane, tetrachloroethane, and vinyl chloride)were detected in the five groundwater monitoring wells.

Prior to development of the proposed projects outlined on the ALP, an ESA should be performed of the airport property and the surrounding environs to determine the potential extent (if any) of hazardous material contamination.

5.9.2 Pollution Prevention

RUQ must comply with applicable regulations pertaining to the use, storage and disposal of hazardous materials as outlined in FAA Order 1050.10B, *Prevention, Control and Abatement of Environmental Pollution at FAA Facilities*; FAA Order 1050.14A, *Polychlorinated Biphenyls (PCB) in the National Airspace System*; FAA Order 1050.15A, *Underground Storage Tanks at FAA Facilities*; FAA Order 1050.18, *Chlorofluorocarbons and Halon Use at FAA Facilities*; and FAA Advisory Circular 150/5320-15, *Management of Airport Industrial Wastes*. This compliance can be in the form of a Spill Prevention, Control, and Countermeasure (SPCC) Plan.[13]

[12]North Carolina Department of Environment and Natural Resources Division of Waste Management, "Rowan County Landfill, permit: 8001, county: Rowan, facility type: MSWLF, July 2007 sampling," <http://www.wastenotnc.org/sw/swdocuments.asp?PERMIT_NUM=8001&SITENAME=ROWAN%20COUNTY%20LANDFILL>, accessed March 18, 2008.
[13]Code of Federal Regulations, "Title 40, Protection of Environment, Part 112 – Oil Pollution Prevention," <http://ecfr.gpoaccess.gov/>, accessed March 17, 2008.

Figure 5.9.1-1
Rowan County Airport - Rowan County, North Carolina

Closed Landfill

Although each SPCC is unique to the facility, there are certain elements that must be included in order for the SPCC Plan to comply with the provisions of 40 CFR 112. Three areas which should be addressed in the Plan are:

1) operating procedures the facility implements to prevent oil spills
2) control measures installed to prevent oil from entering navigable waters or adjoining shorelines
3) countermeasures to contain, cleanup, and mitigate the effects of an oil spill that has an impact on navigable waters or adjoining shorelines.

Other important elements of a SPCC include, but are not limited to, the following:

- Professional Engineer certification
- Plan must follow the sequence of 40 CFR 112.7 or provide cross-references to the requirements in 40 CFR 112.7
- Facility diagram
- Oil spill predictions
- Facility drainage
- Facility inspections
- Site security
- Five-year plan review
- Management approval
- Appropriate secondary containment or diversionary structures
- Loading/unloading requirements and procedures for tank trucks
- Personnel training and oil discharge prevention briefings
- Bulk storage container compliance
- Transfer procedures and equipment (including piping)

5.9.2 Solid Waste

Development of the proposed projects outlined on the ALP would not have a direct effect on solid waste collection or disposal, other than during actual construction of the proposed projects. Building and hangar development would generate solid waste for disposal and

would be the responsibility of the occupants of the facilities. There are two solid waste facilities in Rowan County:[14]

- Rowan County Landfill (located at 789 Campbell Road, Woodleaf, North Carolina, 15 miles northwest of RUQ), which has been in operation since 1989 and accepts municipal solid waste and construction and demolition materials from Rowan County and other North Carolina counties with approval. The landfill has approximately 16 years of capacity left.[15]

- East Spencer Waste Transfer Facility (located at North Long Street, East Spencer, North Carolina), which accepts waste from Cabarrus, Davidson, Iredell, Randolph, Rowan, and Stanley Counties and disposes of its waste at the BFI-Charlotte Motor Speedway Landfill V (located at 5105 Morehead Road, Concord, North Carolina), which accepts municipal solid waste.

The existing landfill and transfer station will not be adversely affected by development of the proposed projects outlined on the ALP.

5.10 HISTORICAL, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

Section 106 of the National Historic Preservation Act of 1966, as amended through 1992 (16 United States Code [USC] 470), and the Archeological and Historic Preservation Act of 1974; requires that a state or federal agency with jurisdiction over a specific project must identify and evaluate affected cultural resources, assess the project's effect on such resources, and grant opportunity for comment. Cultural resources are evaluated by their eligibility for placement on the National Register of Historic Places (NRHP).

Prior to development of the proposed projects outlined on the ALP on currently undeveloped areas within the RUQ property boundary, a cultural resources survey shall be performed to determine whether there are any Section 106 properties located onsite. Also, if additional property is to be acquired, compliance with Section 106 will be necessary, as well as coordination with appropriate federal and state agencies.

[14]North Carolina Department of Environment and Natural Resources Division of Waste Management, "Solid Waste Program," <http://wastenot.enr.state.nc.us/sw/swfacilitylist.asp>, accessed March 17, 2008.
[15]North Carolina Department of Environment and Natural Resources Division of Waste Management, "Municipal Solid Waste Landfill Capacity, Analysis date April 23, 2007," <http://wastenot.enr.state.nc.us/swhome/AR05_06/AppendixD.pdf>, accessed March 18, 2008.

5.11 LIGHT EMISSIONS AND VISUAL IMPACTS

5.11.1 Light Emissions

Currently there are two main sources of light emissions from RUQ:

- A rotating beacon with alternating white and green lights located next to the terminal building
- Medium intensity approach runway lighting system (MIRLs) with runway alignment indicator lights (MALSR) on Runway 20.

Prior to development of the proposed projects outlined on the ALP on currently undeveloped areas within the RUQ property boundary or acquired property, a light emissions impact analysis will be performed to determine the extent of potential impacts.

5.11.2 Visual Impacts

Visual impacts are identified by examining the visual view-shed of the airport and its surrounding environs. The visual view-shed, which takes into account the entire landscape, is comprised of two main aspects: views to and views from the proposed projects.

Prior to development of the proposed projects outlined on the ALP on currently undeveloped areas within the RUQ property boundary or acquired property, a visual impact analysis will be performed to determine the extent of potential visual impacts.

5.12 NATURAL RESOURCES AND ENERGY SUPPLY

Executive Order 13123, *Greening the Government through Efficient Energy Management*,[16] encourages each federal agency to expand the use of renewable energy within its facilities and in its activities. Executive Order 13123 also requires each federal agency to reduce petroleum use, total energy use and associated air emissions, and water consumption in its facilities.

The assessment of natural resources and energy supply generally entails altered requirements for stationary facilities. Energy consumption impacts associated with the development of the proposed projects outlined on the ALP consider the direct consumption of energy required to construct the facility. Prior to development of the proposed projects outlined on the ALP

[16]Federal Register, Vol. 64, No. 109, June 8, 1999, "Greening the Government through Efficient Energy Management," <http://www.ofee.gov/eo/eo13123.pdf>, accessed March 17, 2008.

on currently undeveloped areas within the RUQ property boundary or acquired property, an energy analysis will be performed to determine the extent of potential impacts.

5.13 NOISE

Noise is comprised of three characteristics: frequency (or pitch), amplitude (or loudness), and intensity. Frequency relates to whether noise has a high pitch, low pitch, or contains a combination of pitches ranging from low (rumble) to high (squeal) and is measured in cycles per seconds, or Hertz units. The human ear is capable of discerning noise in the range of 20 to 20,000 Hertz. Various frequencies of noise allow identification of the source. For example, a door slamming shut would produce noise identified with the action.

The intensity of noise is a measure of the magnitude of the sound pressure level (SPL). The ear is responsive to sounds having a tremendous range in intensity. For this reason, and because the sensitivity of the ear is more logarithmic than linear in its response, sound levels are expressed on a logarithmic scale. Using a base 10 logarithm to measure relative sound pressure, the range is compressed to a scale of 0 to 9. Thus, this is a system based on the number of tenfold increases, rather than on the actual number itself. The numbers 0 to 9 represent relative quantities, and the quantity measured on this scale is referred to as a level.

Scientists and engineers work with energy quantities that would be proportional to the square of the sound pressure rather than the sound pressure itself. This presents no difficulty, since the logarithm of a squared number is two times the logarithm of the original number; therefore, instead of a range of levels from 0 to 9, the range runs from 0 to 18 for sound pressure squared. The unit on this scale is called a bel. The bel has been divided into 10 smaller units known as decibels (dB), so that the range of sound pressures from the approximate threshold of hearing to rocket noise runs from 0 to 180 decibels. The decibel is the common term used for noise density. Human hearing is less sensitive at low and high frequencies than in the frequency mid-range; therefore the A-weighted system favoring mid-range frequencies is used to determine how frequencies impact human hearing. The use of this system is denoted as dBA. Increases in noise levels produce varying effects. For example, a 1-dBA increase, except in controlled laboratory conditions, cannot be perceived, a 3-dBA increase is considered barely noticeable in exterior environments, and a 5-dBA increase is considered noticeable in exterior environments.

Since noise varies over time, a statistical parameter, known as the equivalent sound level, $L_{(eq)}$ has been developed to quantify the time varying pattern of noise, or the intensity of the noise. Noise levels are based on an $L_{(eq)}$ descriptor, which refers to the steady-state (constant sound) A-weighted sound level. This sound level contains the same acoustic energy as the actual time-varying sound levels during the same time period. In other words, the fluctuating sound levels of traffic noise over a period of time are represented in terms of a constant noise level with the same energy content.

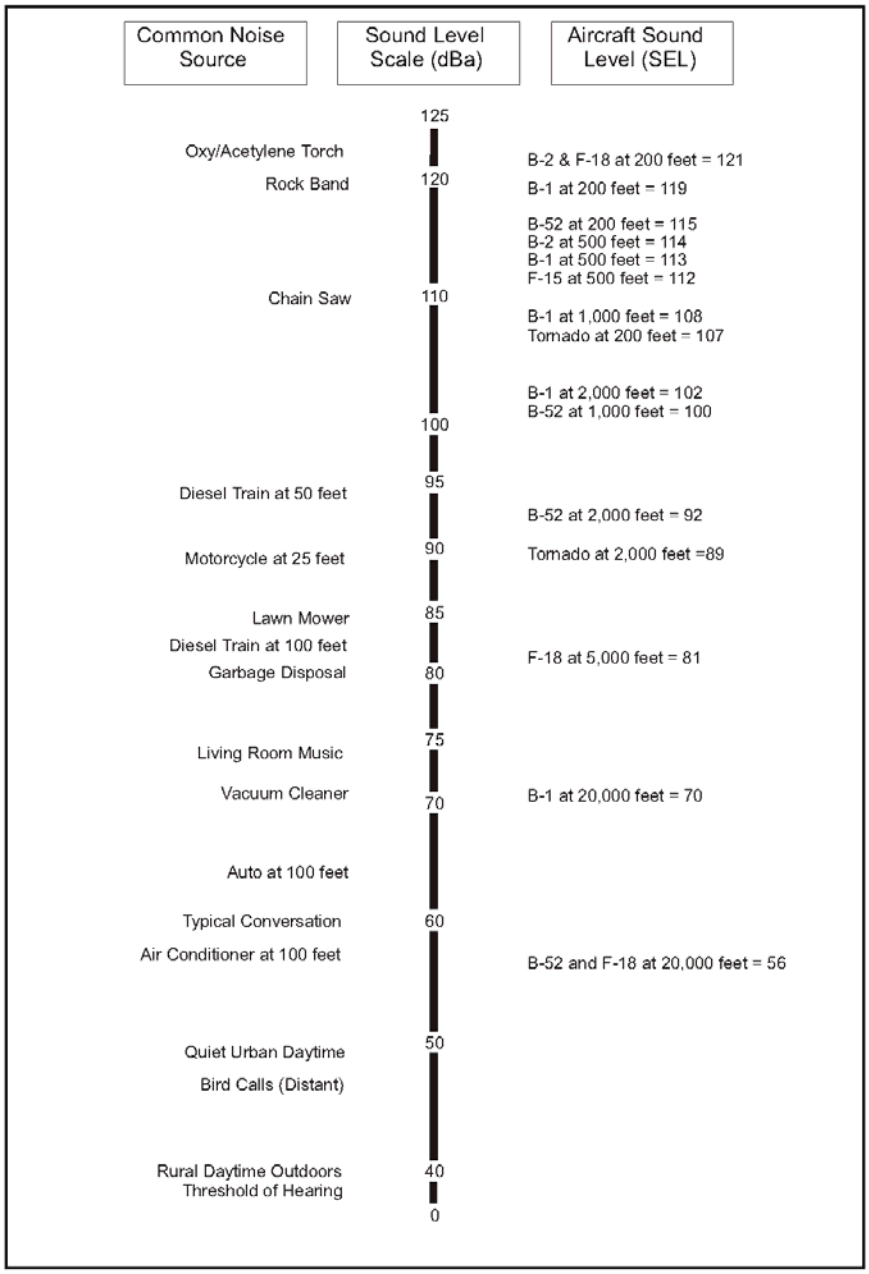
Noise, often defined as unwanted sound, is one of the most common environmental issues associated with aircraft operations. Aircraft are not the only sources of noise in an urban or suburban surrounding, where interstate and local roadway traffic, rail, industrial, and neighborhood sources also intrude on the everyday quality of life. Sound is a physical phenomenon consisting of minute vibrations that travel through a medium, such as air, and are sensed by the human ear. Whether that sound is interpreted as pleasant or unpleasant depends largely on the listener's current activity, past experience, and attitude toward the source of that sound.

The measurement and human perception of sound involves two basic physical characteristics: intensity and frequency (pitch). Intensity is a measure of the acoustic energy of sound vibrations and is expressed in terms of sound pressure. The higher the sound pressure, the more energy carried by the sound and the louder the perception of that sound. The second important physical characteristic is sound frequency, which is the number of times per second the air vibrates or oscillates. Low-frequency sounds are characterized as rumbles or roars, while high-frequency sounds are typified by sirens or screeches (Figure 5.13-1, page 95).

A logarithmic unit known as the dB is used to represent the intensity of a sound. Such a representation is called a sound level. Because of the logarithmic nature of the dB unit, sound levels cannot be added or subtracted directly. However, if a sound's intensity is doubled, the sound level increases by three dB, regardless of the initial sound level. But the total sound level produced by two sounds of different levels is usually only slightly more than the higher of the two. Measured in decibels, the 65 DNL ambient noise contour is compatible with all land uses.

The FAA Integrated Noise Model (INM) was used to evaluate noise impacts for existing and future operations. Inputs to the INM included airport geometry (runways, taxiways), aircraft mix, runway use, flight tracks, approach and departure profiles, and day/evening/night arrivals and departures. The noise model produced sound exposure contours around the airport, measured in day-night average sound level (DNL). Of critical concern in planning for airport/land use compatibility is the location of noise contours 65 DNL or greater.

It is desirable that the airport acquires areas impacted by the 70 DNL contour or greater. Typically this level of noise impact beyond airport property is associated with large, high activity airports. For airports with low activity, noise contours of 70 DNL and above are usually contained within airport property. Often, the 65 DNL noise contour extends off airport property. Land uses that should not be located within areas exposed to 65 DNL and above include all residential development. When public institutions such as schools, hospitals, and churches are constructed within noise contours of 65 DNL or higher, measures should be taken to achieve reduced noise levels. Most land uses are compatible in areas impacted by noise levels less than 65 DNL.



Source: GlobalSecurity.org

Figure 5.13-1
Rowan County Airport - Rowan County, North Carolina

Typical A-Weighted Sound Levels of Common Sounds

Tables 5.13-1 and 5.13-2 (pages 97 and 98) outline aircraft operation forecasts from the Forecast section (pages 29 through 40), used to create the noise contours to evaluate potential noise impacts for existing and future operations.

The existing noise contours show no significant noise impact to the areas adjacent to RUQ (Figure 5.13-2, page 99). The 65 DNL sound exposure contour comprises 95.0 acres and does not extend outside the current airport boundary.

The future operations forecast shows a slight increase in runway usage, therefore the future sound exposure level increased in size (146.6 acres) over the existing baseline model (Figure 5.13-2, page 99). This increase can be attributed to an increase in the total number of operations and a slight increase in operations by heavier aircraft. The future 65 DNL noise contour extends slightly off of the end of Runway 02 (12.9 acres); however, this property will be acquired as part of the runway extension and RPZ requirements. The model showed no significant impact on adjacent areas. The future Airport boundaries would either include this land in fee simple ownership or the Airport would control the land by avigation easement. Other adjacent parcels, upon which the 65 DNL noise contours overlap, are undeveloped. Therefore, all land use adjacent to Airport property would be considered compatible according to FAA guidelines.

5.14 SECONDARY (INDUCED) IMPACTS

Positive economic impacts, due to development of the proposed projects outlined on the ALP, could include an increase in business locations in the vicinity of RUQ, as well as economic development because of new businesses locating to the region. Construction of the proposed projects outlined on the ALP could also directly benefit local retailers and commercial establishments particularly those providing construction equipment and materials. In addition, the proposed action would create temporary employment opportunities for laborers, equipment operators, and other construction-type employees. Also during the construction period, retail and service facilities in the vicinity of the RUQ should experience an increase in sales from construction employees.

Negative impacts would result from the expenditure of public funds for construction and long-term maintenance of the proposed projects outlined on the ALP. Regardless of how the facility is funded, there would be an additional economic burden imposed on the general public.

Table 5.13-1
2007 Integrated Noise Model Input Factors
Rowan County Airport

Total Annual Aircraft Operations (2007): 34,200 without rotorcraft (43,000 with rotorcraft)

Annual And Daily Operations by Aircraft Type

			Annual			Daily		
Aircraft	% Mix	Operations	Day	Evening	Night	Day	Evening	Night
GASEPV	79.82%	27,300	20,475	4,095	2,730	56.096	11.219	7.479
BEC58P	7.89%	2,700	2,025	405	270	5.548	1.109	0.739
CNA500	9.36%	3,200	2,400	480	320	6.575	1.315	0.877
CNA441	2.92%	1,000	750	150	100	2.0548	0.411	0.274

% Operations by Time Of Day

Day %	75.00%
Evening %	15.00%
Night %	10.00%

% Operations for Each Runway End by Aircraft Type

	Approach		Departure	
Aircraft	RWY 02	RWY 20	RWY 02	RWY 20
GASEPV	10.00%	40.00%	10.00%	40.00%
BEC58P	10.00%	40.00%	10.00%	40.00%
CNA500	10.00%	40.00%	10.00%	40.00%
CNA441	10.00%	40.00%	10.00%	40.00%

GASEPV = Single Engine
BEC58P = Twin Engine
CNA500 = Turbo Prop
CNA441 = Jet

Daily Operations by Aircraft Type

	Approach Runway 02			Approach Runway 20			Departure Runway 02			Departure Runway 20		
Aircraft	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night
GASEPV	5.609	1.122	0.748	22.438	4.488	2.992	5.609	1.122	0.748	22.438	4.488	2.992
BEC58P	0.555	0.111	0.074	2.219	0.444	0.296	0.555	0.111	0.074	2.219	0.444	0.296
CNA500	0.658	0.132	0.088	2.630	0.526	0.351	0.658	0.132	0.088	2.630	0.526	0.351
CNA441	0.205	0.041	0.027	0.822	0.164	0.109	0.205	0.041	0.027	0.822	0.164	0.109

Source: Rowan County Airport, personal communication with Maurice "Dusty" Mills regarding operations split (March 24, 2008)
Talbert & Bright, Inc. (March 2008)

Table 5.13-2
2027 Integrated Noise Model Input Factors
Rowan County Airport

Total Annual Aircraft Operations (2027): 63,400 without rotorcraft (78,200 with rotorcraft)

Annual And Daily Operations by Aircraft Type

			Annual			Daily		
Aircraft	% Mix	Operations	Day	Evening	Night	Day	Evening	Night
GASEPV	75.08%	47,600	35,700	7,140	4,760	97.808	19.562	13.041
BEC58P	4.73%	3,000	2,250	450	300	6.164	1.233	0.822
CNA500	10.09%	6,400	4,800	960	640	13.151	2.630	1.753
CNA441	10.09%	6,400	4,800	960	640	13.151	2.630	1.753

% Operations by Time Of Day

Day %	75.00%
Evening %	15.00%
Night %	10.00%

% Operations for Each Runway End by Aircraft Type

	Approach		Departure	
Aircraft	RWY 02	RWY 20	RWY 02	RWY 20
GASEPV	10.00%	40.00%	10.00%	40.00%
BEC58P	10.00%	40.00%	10.00%	40.00%
CNA500	10.00%	40.00%	10.00%	40.00%
CNA441	10.00%	40.00%	10.00%	40.00%

GASEPV = Single Engine
BEC58P = Twin Engine
CNA500 = Turbo Prop
CNA441 = Jet

Daily Operations by Aircraft Type

	Approach Runway 02			Approach Runway 20			Departure Runway 02			Departure Runway 20		
Aircraft	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night
GASEPV	9.781	1.956	1.304	39.123	7.825	5.216	9.781	1.956	1.304	39.123	7.825	5.216
BEC58P	0.616	0.123	0.082	2.466	0.493	0.329	0.616	0.123	0.082	2.466	0.493	0.329
CNA500	1.315	0.263	0.175	5.260	1.052	0.701	1.315	0.263	0.175	5.260	1.052	0.701
CNA441	1.315	0.263	0.175	5.260	1.052	0.701	1.315	0.263	0.175	5.260	1.052	0.701

Source: Rowan County Airport, personal communication with Maurice "Dusty" Mills regarding operations split (March 24, 2008)
Talbert & Bright, Inc. (March 2008)

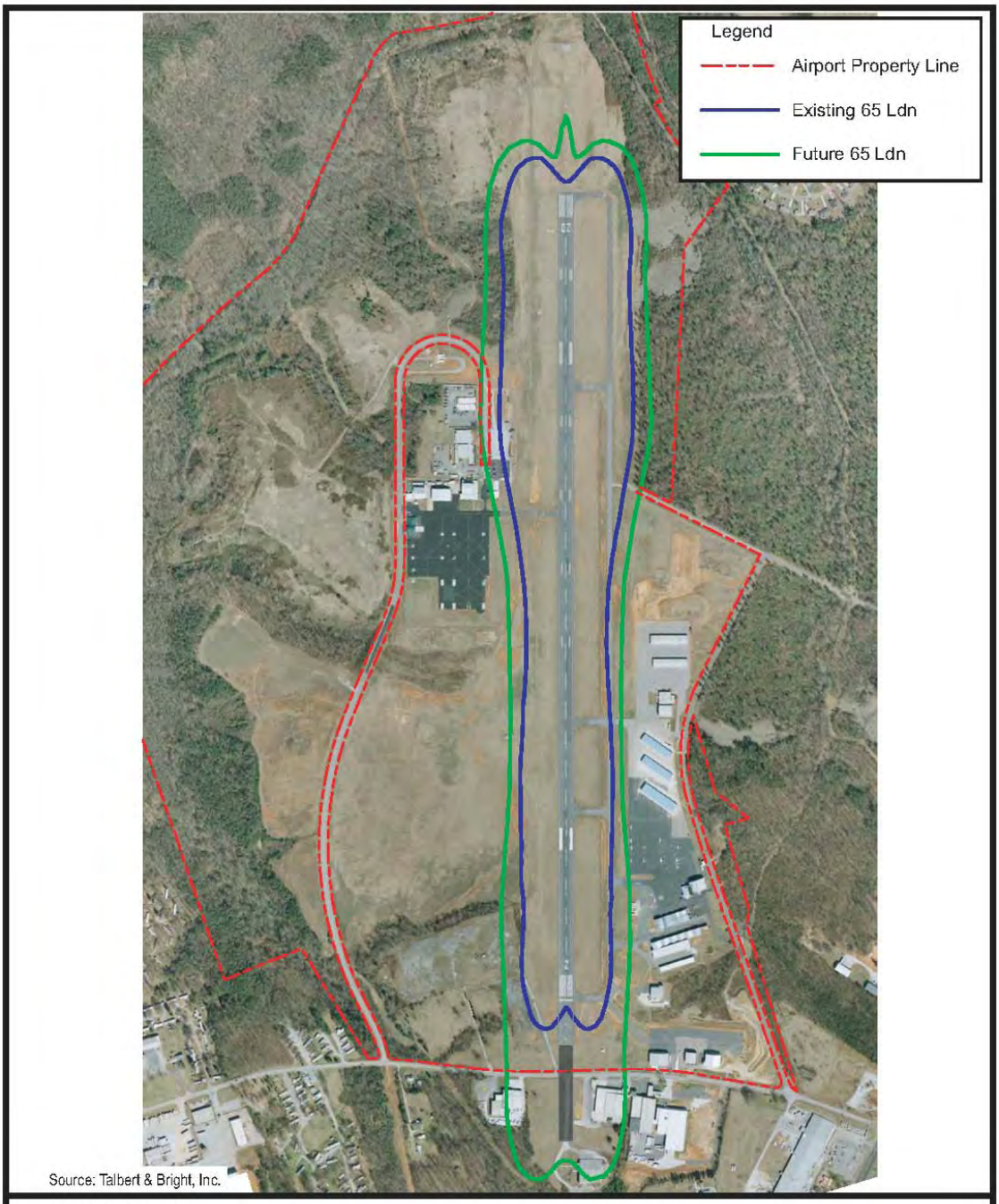


Figure 5.13-2
Rowan County Airport - Rowan County, North Carolina

Existing and Future Noise Contours

Overall, any principle negative social impacts on existing or planned property from the proposed projects outlined on the ALP are not expected to cause shifts in population patterns or growth or place demands on public services, as outlined in FAA Order 1050.1E Change 1 *Environmental Impacts: Policies and Procedures* (March 20, 2006), Appendix A, Section 15.

5.15 SOCIOECONOMIC IMPACTS, ENVIRONMENTAL JUSTICE, AND CHILDREN'S ENVIRONMENTAL HEALTH AND SAFETY RISKS

5.15.1 Socioeconomic Impacts

The population of Rowan County was 133,156 in 2005 according to the U.S. Census Bureau. The population of Rowan County increased by 11.5 percent between 1980 and 1990; and 17.9 percent between 1990 and 2000, respectively. Current projections by the North Carolina State Demographics anticipate that Rowan County would increase its population an additional 6.6 percent by 2010. From 2000 to 2030 it is expected to increase an additional 27.1 percent, as illustrated in the Table 5.15.1-1.

Table 5.15.1-1
Population Projections
Rowan County Airport

	Rowan County		North Carolina	
Year	Population	Percent Change	Population	Percent Change
1970	90,035		5,084,411	
1980	99,186	10.2%	5,880,095	15.6%
1990	110,605	11.5%	6,632,448	12.8%
2000	130,348	17.9%	8,046,813	21.3%
2005	133,156	2.2%	8,672,544	7.8%
2010	138,931	4.3%	9,450,494	9.0%
2015	145,719	4.9%	10,178,807	7.7%
2020	152,160	4.4%	10,850,228	6.6%
2025	159,290	4.7%	11,596,651	6.9%
2030	165,647	4.0%	12,274,433	5.8%

Source: North Carolina State Demographics, "Population Overview: 1970-1995," <http://demog.state.nc.us/>accessed March 17, 2008
North Carolina State Demographics, "Population Overview: 2000-2030," <http://demog.state.nc.us/>accessed March 17, 2008

Table 5.15.1-2 illustrates the current demographic characteristics for Rowan County.

Table 5.15.1-2
General Demographic Characteristics (2000)
Rowan County Airport

Subject	Salisbury	Rowan County	North Carolina
Population			
Total population	26,462	130,340	8,049,313
Sex and Age			
Male	12,548	64,380	3,943,695
Female	13,914	65,960	4,106,618
Under 5 years	1,697	8,566	539,509
5 to 9 years	1,658	9,090	562,553
10 to 14 years	1,567	9,374	551,367
15 to 19 years	1,903	8,654	539,931
20 to 24 years	2,412	8,384	577,508
25 to 34 years	3,276	18,041	1,213,415
35 to 44 years	3,352	20,737	1,287,120
45 to 54 years	3,162	17,388	1,085,150
55 to 59 years	1,157	6,569	400,207
60 to 64 years	1,017	5,332	323,505
65 to 74 years	2,200	9,360	533,777
75 to 84 years	2,118	6,603	329,810
85 years and over	943	2,242	105,461
Median age (years)	37.1	36.4	35.3
18 years and over	20,703	98,165	6,085,266
Male	9,589	47,900	2,936,570
Female	11,114	50,265	3,148,696
Average household size	2.29	2.52	2.49
Average family size	2.92	2.98	2.98
Housing Occupancy			
Total housing units	11,288	53,980	3,523,944
Occupied housing units	10,276	49,940	3,132,013
Vacant housing units	1,012	4,040	391,931
For seasonal, recreational, or occasional use	56	5437	134,870
Homeowner vacancy rate (percent)	3.1	1.6	2.0
Rental vacancy rate (percent)	7.0	7.0	8.8
Occupied housing units	10,276	49,940	3,132,013
Owner-occupied housing units	5,493	36,732	2,172,355
Renter-occupied housing units	4,783	13,208	959,658
Average household size of owner-occupied unit	2.29	2.55	2.54
Average household size of renter-occupied unit	2.28	2.43	2.37

Source: U.S. Census Bureau, Census 2000, "Profiles of General Demographic Characteristics 2000 Census of Population and Housing, North Carolina," <http://www2.census.gov/census_2000/datasets/demographic_profile/North_Carolina/2kh37.pdf>, accessed March 18, 2008

Major employers in Rowan County are outlined on Table 5.15.1-3.

Table 5.15.1-3
Major Employers
Rowan County Airport

Company Name	Employees	Type of Business
Auto Truck Transport Corporation	250+	Trade, Transportation, and Utilities
Carolina Building Solutions	210	Manufacturing
City of Salisbury	250+	Public Administration
Dillard's Distribution Center	300	Manufacturing
Food Lion LLC	1000+	Trade, Transportation, and Utilities
Freightliner LLC	4500	Manufacturing
Invista	800	Manufacturing
Meridian Automotive Systems	200	Manufacturing
Noranda	250	Manufacturing
PGT Industries	500	Manufacturing
Rowan County	500+	Public Administration
Rowan Regional Medical Center	1000+	Education and Health Services
Rowan Salisbury School Systems	1000+	Education and Health Services
Rowan-Cabarrus Community College	500+	Education and Health Services
Schult Plant 957	250	Manufacturing
State of North Carolina	500+	Public Administration
VA Medical Center 659	1000+	Education and Health Services
Wal-Mart Associates Inc	500+	Trade, Transportation, and Utilities

Source: Salisbury-Rowan Economic Development Commission, "Major Employers and Industries," <http://www.rowanedc.com/topemp.html>, accessed March 17, 2008

Prior to development of the proposed projects outlined on the ALP or additional property to be acquired, an analysis will be performed to determine whether there will be any impacts to the socioeconomics of the area.

5.15.2 Environmental Justice

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*,[17] states that to the greatest extent practicable and permitted by law, each federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations.

A block group analysis was conducted to identify the number of minority and low-income areas that may be impacted by development of the proposed projects outlined on the ALP.

[17]Federal Register, Vol. 59, No. 32, February 16, 1994, "Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations," <http://www.epa.gov/fedreg/eo/eo12898.pdf>, accessed March 17, 2008.

The development of the proposed projects outlined on the ALP was then examined to determine whether disproportionate patterns or concentrations of adverse effects would occur in areas with environmental justice populations.

Total minority population in the study area (Census Tract 512.04, Block Groups 1 and 2) in 2000 was estimated at 20.2 percent. This percentage is 7.8 percent lower than North Carolina (28 percent). The total percentage of people in the study area (Census Tract 512.04, Block Groups 1 and 2) classified as living at or below the poverty level in 2000 was 9.6 percent. This rate is 2.7 percent lower than North Carolina (12.3 percent) as a whole. As a result, although there are minority and/or low-income populations that reside within the vicinity of RUQ, none meet or exceed the thresholds for the state of North Carolina.

Prior to development of the proposed projects outlined on the ALP or additional property to be acquired, an analysis will be performed to determine whether there are environmental justice impacts.

5.15.3 Children's Environmental Health and Safety Risks

Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks* (April 23, 1997),[18] states that each federal agency shall:

- make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children

- ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks

Prior to development of the proposed projects outlined on the ALP or additional property to be acquired, an analysis will be performed to determine whether there will be impacts to the health and safety of children.

5.16 WATER QUALITY

Rowan County is located in the Yadkin-Pee Dee River basin. From its headwaters near Blowing Rock, the Yadkin River flows east and then south across North Carolina's densely populated midsection. It flows 203 miles passing farmland; draining the urban landscapes of Winston-Salem, Statesville, Lexington, and Salisbury; and passes through seven man-made reservoirs before its name changes to the Pee Dee River below Lake Tillery. The Pee Dee

[18]Federal Register, Vol. 62, No. 78, April 23, 1997, "Protection of Children from Environmental Health Risks and Safety Risks," <http://www.epa.gov/fedreg/eo/eo13045.htm>, accessed March 17, 2008.

courses another 230 miles to the Atlantic Ocean, leaving North Carolina near the community of McFarlan and ending its journey at South Carolina's Winyah Bay.

RUQ is located in subbasin 03-07-04 (Figure 5.16-1, page 103),[19] which is located entirely within the Piedmont portion of the state. Grants Creek, which is located along the west side of the airport boundary, flows through Salisbury, Spencer, and East Spencer. Grants Creek has several NCDENR, Division of Water Quality (NCDENR-DWQ) monitoring stations including: two benthic macroinvertebrate community monitoring sites at State Road 1914 and State Road 1500, fish community monitoring at State Road 2202, ambient monitoring near the mouth of the creek, two Yadkin-Pee Dee Association monitoring sites at the Third Street Extension, and near the mouth of the creek.

The 1998 basin plan identified portions of Grants Creek as impaired because of discharges from the Salisbury Grants Creek Wastewater Treatment Plant (WWTP) and Spencer Sowers Ferry Road WWTP discharges. The City of Salisbury relocated the Grants Creek WWTP discharge to the Yadkin River in 1998 and purchased the Spencer Sowers Ferry Road WWTP and eliminated all discharge into Grants Creek by the end of 2002. In addition, the Grants Creek watershed (03040103 010010) has been identified by the North Carolina Wetlands Restoration Program (NCWRP) as an area with the greatest need and opportunity for stream and wetland restoration efforts, which include buffer acquisition and fecal coliform total maximum daily load (TMDL) reduction.

Short-term impacts, which may occur as a result of the proposed projects outlined on the ALP, are a result of construction activities. Erosion could occur during the construction phase when the vegetation would be cleared and the surface layer disturbed for the proposed action. Soil erosion may lead to silt deposits and increased turbidity in surface waters (ditches), which could temporarily upset flow and impact aquatic organisms.

Oil and grease spills during construction are another possible source of water pollution. The chance for serious mishaps of this type is small; however, since such incidents would be handled by an SPCC, as specified in a National Pollution Discharge Elimination System (NPDES) permit and any undetected accidental leakage would be absorbed and/or filtered by slopes and ditches before reaching major streams. Appropriate BMPs would be used during construction for erosion control and water quality protection, as well as other mitigative measures required for NPDES permit approval.

[19]North Carolina Department of Environment and Natural Resources Division of Water Quality Water Quality Section Planning Branch (March 2003), "Yadkin-Pee Dee River Basinwide Water Quality Plan," <http://h2o.enr.state.nc.us/basinwide/yadkin/YadkinPD_wq_dt_management_plan0103.htm>, accessed March 14, 2008.

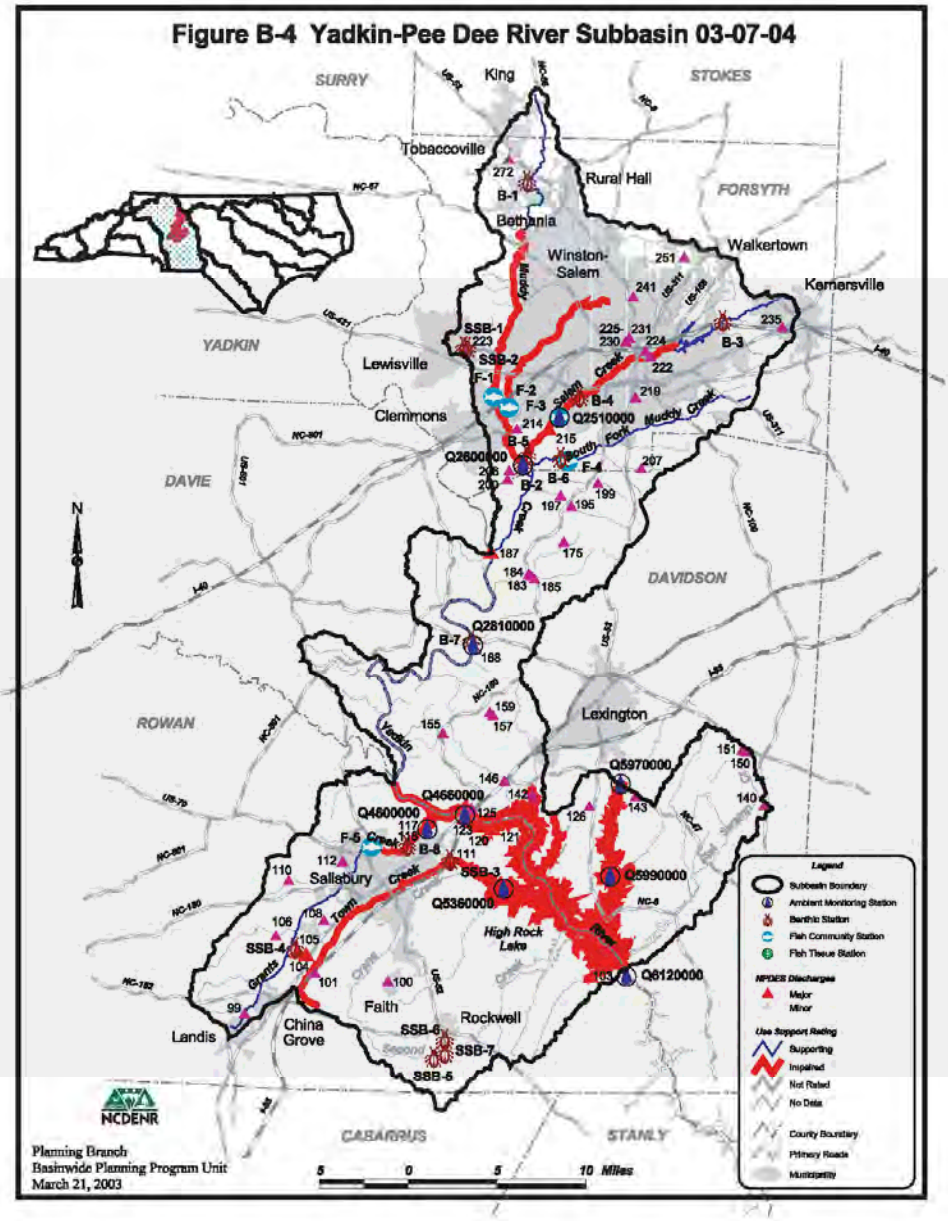


Figure 5.16-1
Rowan County Airport - Rowan County, North Carolina

Yadkin-Pee Dee Subbasin 03-07-04

Long-term water quality impact that may result from the proposed projects outlined on the ALP would be pollutant wash off. The primary components of pollutant wash off include the following potential contaminants: biochemical oxygen demand, chemical oxygen demand, volatile suspended solids, oil, grease, pesticides, polychlorinated biphenyls, total and suspended solids, algal nutrients, heavy metals, salts, asbestos, and coliform bacterial indicators. Pollutant concentration and discharge rates of runoff are dependent on rainfall rates. Rainfall energy dislodges deposited particles on the impervious surfaces, which are then conveyed in stormwater runoff to the receiving drainage appurtenances. However, BMPs based on NDPES requirements would be implemented to reduce introduction of contaminants to adjacent surface water resources.

Sedimentation basins, if necessary, would be designed to provide the level of treatment necessary to ensure that stormwater discharges would not result in degradation of the physical, chemical, or biological integrity of the receiving waters; i.e., Grants Creek. Sedimentation basins use a permanent pool of water as the primary mechanism to treat stormwater. The pool of water allows settling of sediments (including fine sediments) and removal of soluble pollutants. Sedimentation basins also can be used to control the peak rate of stormwater runoff. In addition, swales for collecting and conveying stormwater runoff can be an effective BMP for water quality enhancement. The primary components of swales for water quality enhancement are the length of the swale and the velocity of the stormwater runoff as it travels through the swale; pollutant removal efficiency of grass swales increases proportionately to their length.

Prior to development of the proposed projects outlined on the ALP on currently undeveloped areas within the RUQ property or additional property to be acquired, compliance with the Clean Water Act will be necessary, as well as coordination with appropriate federal and state agencies regarding potential water quality impacts.

5.17 WETLANDS

Executive Order 11990, *Protection of Wetlands*,[20] requires federally supported projects to preserve wetlands and avoid and minimize wetland impacts to the maximum extent practicable. In addition, Section 404 of the Clean Water Act requires regulation for the fill or discharge of materials in to waters of the United States. Water bodies, such as rivers, lakes, and streams, as well as wetlands are subject to jurisdictional consideration under the Section 404 program. Although the principal administrative agency of the Clean Water Act is the USEPA, the U.S. Army Corps of Engineers (USACE) has the major responsibility for

[20]Federal Register, Vol. 42, Pg. 26961, May 24, 1977, "Protection of Wetlands," <https://propertydisposal.gsa.gov/RedinetDocs/Env/EO11990.pdf>, accessed March 17, 2008.

implementing, permitting, and enforcing provisions of the Clean water Act. The USACE regulatory program is defined in 33 CFR Parts 320-330.[21]

As of June 5, 2007, the USEPA and USACE have issued guidance concerning coordination on jurisdictional area delineations under the Clean Water Act Section 404 in light of SWANCC and Rapanos Supreme Court Decisions. The new regulatory guidance (RGL 07-01)[22] is currently being interpreted and implemented by USACE field representatives. The new guidance is being field tested at this time and general interpretations should be available in the near future.

The currently accepted methods of wetland determination described in the *1987 United States Army Corps of Engineers Manual for Identifying and Delineating Wetland Areas* will be utilized. The manual states that under normal circumstances, an area must demonstrate the presence of three components to be declared a jurisdictional wetland: 1) hydrophytic vegetation, 2) hydric soils, and 3) wetland hydrology. In accordance with the three-component approach to identifying wetland areas, soils, hydrology, and vegetation will be simultaneously characterized at each observation point (sample location). The collected field data will then utilized to make a routine wetland determination. Upland/wetland boundaries will determined by proceeding away from the wetlands toward uplands and noting any changes in soil, vegetation, and hydrology. The boundaries of any wetland areas identified within the proposed projects outlined on the ALP will be flagged at the locations where hydrophytic vegetation and/or hydric soils give way to non-hydrophytic vegetation and/or non-hydric soils. When the three components test positive, a wetland designation will be assigned. The specific testing conducted at each sample location will be as follows:

- **Vegetation** – vegetation in each stratum will be examined at each sample location. Herbaceous vegetation, saplings, and shrubs will be examined within a 5-foot radius. Trees and woody vines will be examined within a 30-foot radius. Dominant plant species will be identified in each stratum. The wetland indicator status for each dominant plant was recorded using the USFWS *National List of Plant Species that Occur in Wetlands* (1996). Where greater than 50 percent of the dominant species will be identified as OBL, FAC (excluding FAC-) or FACW (including FACW- and FACW+), the sample location will be considered to have hydrophytic vegetation.

- **Soils** – excavations with a Dutch auger will be made by hand to a depth of approximately 16 inches at each sample location. Soil below the "A" horizon will be examined at a depth of 12 inches to 16 inches and compared to the following hydric soil indicators:

[21]Code of Federal Regulations, "Title 33 Navigation and Navigable Waters, Parts 320-330, U.S. Army Corps of Engineers Regulatory Program Regulations," <http://www.usace.army.mil/cw/cecwo/reg/sadmin3.htm>, accessed March 17, 2008.
[22]Clean Water Act Jurisdiction following the U.S. Supreme Court's Decision in Rapanos vs. United States and Carabell vs. United States.

- gleying (gray coloring)
- matrix chroma of two or fewer in both mottled and unmottled mineral soils
- high organic content in the upper layers
- organic streaking (sandy soils)
- iron and manganese concretions

Soil colors will be evaluated using Munsell Soil Color Charts. Additional soil characteristics, including texture, soil series, and drainage class, will also be examined at each sample location.

- **Hydrology –** each sample location will be examined for indicators of wetland hydrology, especially inundation, soil saturation of the upper 16 inches, drift lines, drainage patterns, watermarks, and sediment deposits.

Prior to development of the proposed projects outlined on the ALP on currently undeveloped areas within the RUQ property or additional property to be acquired, compliance with the Clean Water Act will be necessary, as well as coordination with appropriate federal and state agencies regarding potential wetland impacts.

5.18 WILD AND SCENIC RIVERS

There are currently four rivers, or portions thereof, in North Carolina listed as wild and scenic rivers – Horsepasture River (P.L. 99-530 – October 26, 1986), New River (Secretarial Designation – April 13, 1976), Lumber River (Secretarial Designation – September 28, 1998), and Wilson Creek (P.L. 106-261 – August 18, 2000). However, none of these rivers are in the vicinity of the proposed Aviation Research and Development Commerce Park and therefore would not be impacted by the proposed action.

In addition, North Carolina enacted the Natural and Scenic Rivers Act of 1971 (North Carolina General Statutes, Chapter 113A: Pollution Control and Environment, Article 3: Natural and Scenic Rivers System), which *includes retaining the natural and scenic conditions in some of the State's valuable rivers by maintaining them in a free-flowing state and to protect their water quality and adjacent lands by retaining these natural and scenic conditions*. Rivers or portions thereof, protected by this Act include:

- **Horsepasture River** – 4.5-mile segment in Transylvania County extending from Bohaynee Road (N.C. 281) downstream to Lake Jocassee is classified as a natural river.

- **Linville River** – 13.0-mile segment, beginning at the N.C. 183 bridge over the Linville River is classified as a natural river. The designated segment flows through the federal Linville Gorge Wilderness Area, which is part of the Pisgah National Forest.

- **Lumber River** – 115.0-mile segment, extending from Country Road 1412 in Scotland County downstream to the North Carolina/South Carolina state line, is divided into natural, scenic, and recreational segments. The Lumber River State Park has been established along the River.

- **New River** – 26.5-mile segment of the south fork of the New River extending from its confluence with Dog Creek in Ashe County downstream through Ashe and Alleghany Counties to its confluence with the north fork of the New River, and from there the main fork of the New River in Ashe and Alleghany counties downstream to the Virginia state line, is classified a scenic river.

There are no rivers listed on the National Wild and Scenic Rivers System or the North Carolina Natural and Scenic Rivers Act of 1971 located in the immediate vicinity of RUQ; therefore, compliance with the National Wild and Scenic Rivers Act will not be required for any development projects at RUQ.

The purpose of this section is to present the graphic representation of the items addressed and recommended in the Demand Capacity Analysis/Facility Requirements (page 41). The ALP drawing set components consist of the following:

- Cover Sheet
- Existing Conditions
- Airport Layout Plan
- Terminal Area Plan
- Runway 02 Inner Approach Surfaces – Plan and Profile
- Runway 20 Inner Approach Surfaces – Plan and Profile
- Airport Airspace Drawing – Plan
- Airport Airspace Drawing – Profile
- Land Use Plan
- Airport Property Map (Exhibit "A")

6.1 COVER SHEET

The cover sheet is included as the first drawing of the ALP drawing set. The cover sheet includes the following information:

- Project Title
- Airport Name
- Location
- Sponsor
- Funding Agency Project Identification Numbers
- Preparer's Project Identification Number
- Date
- Sheet Index
- Preparer
- Vicinity Map

- Location Map

6.2 EXISTING CONDITIONS PLAN

The existing conditions plan is a graphic representation, to scale, of existing airport facilities, location, and pertinent dimensional information. The existing conditions are shown on Drawing No. 2 of 8.

6.3 AIRPORT LAYOUT PLAN

The ALP drawing represents a 20-year, three-phased program, which is required to support the projected activity for RUQ. Data blocks on the drawing present pertinent information including wind coverage, airport elevations, navigational aids, pavement data, selected design standards, approach data, approach zone dimensions, runway declared distances, runway coordinates, plan drawing legends, and other data. Most important to the ALP is the design increase from B-II to C-II. This change dictates several of the plans development elements including the following:

- Extending Runway 02/20 1,000 feet
- Second parallel taxiway

Other principal plan elements are as follows:

- New terminal area
- T-Hangars and corporate hangar areas
- Apron expansion
- New automobile parking areas
- Land acquisition

The ALP is shown on Drawing No. 3 of 8 and presented at a scale of 1 inch = 400 feet and a contour interval of 5 feet, provided by aerial photography.

6.4 TERMINAL AREA PLAN

The Terminal Area Plan (TAP) is a larger-scaled representation of the ALP, focusing on development around the terminal building. The TAP includes such features as existing and proposed aprons, buildings, hangars, parking lots, etc., and their location. The various phases for each improvement project are also shown on this plan. The TAP is presented at a scale of 1 inch = 200 feet and is shown on Drawing No. 4 of 8.

The improvements represented on this drawing include the following:

- New terminal area
- T-Hangars and corporate hangar areas
- Apron expansion
- New automobile parking areas

6.5 AIRPORT AIRSPACE PROFILE AND INNER APPROACH SURFACE DRAWING

This drawing illustrates the Part 77 approaches in profile as well as approaches for displaced thresholds. The inner approach surface drawing depicts the "close-in" approach surfaces and runway protection zones. The surfaces are imposed over the existing terrain to determine the number and magnitude of any penetrations to the surfaces. The drawing includes the proposed conditions (Drawing No. 5 of 8).

6.6 AIRPORT AIRSPACE DRAWING

The airport airspace surface drawing depicts the proposed FAR Part 77 imaginary surfaces for the Airport. The drawing includes topography, which underlies the FAR Part 77 surfaces, and a graphical and tabular representation of the surfaces. The surrounding topography was taken from USGS quadrangle sheets and encompasses the area within the proposed FAR Part 77 imaginary surfaces. Beyond 3,500 feet from the runway ends, the search for possible surface penetrations was centered around manmade structures; such as towers, buildings, power lines, etc. (Drawing No. 6 of 8).

6.7 LAND USE PLAN

The land use plan is a graphic representation, to scale, of airport facilities overlaid on the current land use as provided by Rowan County and the City of Salisbury. The land uses are depicted by general land use categories (i.e., agricultural, recreational, industrial, commercial, etc.). This drawing has been developed to show both existing and recommended land use conditions (Drawing No. 7 of 8).

6.8 AIRPORT PROPERTY MAP

The airport property map (Exhibit "A") illustrates ownership or interest in each tract within the airport boundaries. How and when the airport property was obtained is noted by parcel number and described separately in tabular form. Exhibit "A" is prepared at a scale of 1 inch = 400 feet on Drawing No. 8 of 8.

6.9 CHECKLIST

In order to ensure that complete and appropriate information is included in the ALP drawing set, the following checklist provided by the FAA was utilized to construct and check the drawings included in this document.

U.S. Department of Transportation
Federal Aviation Administration
Southern Region – Airports Division
Effective Date: May 2004

Airport Layout Plan Drawing Set Checklist

Name of Airport: *Rowan County Airport*
Location of Airport: *City of Salisbury, Rowan County, North Carolina*
Date of Review: Reviewed by:

Significant Development Changes Since Previous ALP Approval/or Narrative

1. New T-Hangars
2.
3.
4.
5.

In order to protect the airspace for future conditions, complete the following information:
Future Airport Reference Point (ARP) **(if same as existing, provide existing ARP)**

Existing

ARP Latitude	N 35° 38' 45.19"	ARP Longitude	W 80° 31' 13.06"

Proposed

ARP Latitude	N 35° 38' 40.13"	ARP Longitude	W 80° 31' 14.73"

Future Rwy End Coordinates & Rwy End Elevation (if same as existing, provide existing coordinates)

Existing

Rwy End	02	Latitude	N 35° 38' 19.03"	Longitude	W 80° 31' 22.25"	Elevation	770.50'
Rwy End	20	Latitude	N 35° 39' 11.34"	Longitude	W 80° 31' 3.88"	Elevation	766.20'

Proposed

Rwy End	02	Latitude	N 35° 38' 9.53"	Longitude	W 80° 31' 25.59"	Elevation	770.50'
Rwy End	20	Latitude	N 35° 39' 11.34"	Longitude	W 80° 31' 3.88"	Elevation	766.20'

Existing and Proposed Modification of Standards (MOS)

Existing Deviation of Standard/FAA Approved MOS | FAA Approval Date (if any) | Expiration Date (if any)

1.
2.
3.

Proposed Deviation of Standard/FAA Modification of Standards

1. Parallel taxiway on east side of Runway 02/20 300' separation instead of 400' separation for C-II aircraft
2.

Runway Safety Area Re-Evaluations

( ) Concur with Runway Safety Area Determination currently on file with FAA.
( ) Reevaluation of Runway Safety Area Determination completed as part of planning document and shown on this ALP set.

	Yes	No	Comments
Narrative Report			
Report Provided	(X)	( )	
Aeronautical Forecasts	(X)	( )	
- 0-5 yrs., 6-10 yrs., 10-20 yrs	(X)	( )	
- Total annual operations	(X)	( )	
- Annual itinerant operations	(X)	( )	
- Based aircraft	(X)	( )	
- Annual instrument approaches (if applicable)	( )	( )	Not Applicable
- Annual itinerant operations by critical aircraft	(X)	( )	
- Annual itinerant operations by more demanding aircraft	(X)	( )	
Proposed Development Justification	(X)	( )	
Special Issues (MOS, etc.)	(X)	( )	
Development Schedule and Graphics	(X)	( )	
Proper Agency Coordination (sponsor, local, state)	(X)	( )	

	Yes	No	Comments
Airport Layout Drawing			
Proper Agency Approval (sponsor, local, state)	( )	( )	
Sheet Size - 24" x 36"/22" x 34"	(X)	( )	
Scale 1" = 200' - 600'	(X)	( )	
2' - 10' Labeled Contours	(X)	( )	
North Arrow			
- True & magnetic	(X)	( )	
- Declination w/annual rate of change	(X)	( )	
Wind Rose			
- Source & time period	(X)	( )	
- MPH & knots	(X)	( )	
- 10.5 Knot individual & combined coverage	(X)	( )	
- 13 Knot individual & combined coverage	(X)	( )	
Airport Reference Point (ARP)			
- Existing w/Lat./Long. (NAD 83)	(X)	( )	
- Ultimate w/Lat./Long/ (NAD 83)	(X)	( )	
Elevations (Existing & Ultimate)			
- Existing runway ends	(X)	( )	
- Displaced thresholds	( )	( )	Not Applicable
- Ultimate runway ends	(X)	( )	
- Runway intersections	( )	( )	Not Applicable
- Runway high & low points	(X)	( )	
- Touchdown zone elevation (highest RWY elevation in first 3,000' of any RWY having published or planned straight-in minima)	(X)	( )	
Drawing Lines			
- Existing property boundary	(X)	( )	
- Ultimate property boundary	(X)	( )	
- Building restriction line (both sides)	(X)	( )	
- Existing development shown as solid	(X)	( )	
- Future development shown as dashed/shaded	(X)	( )	
Runway Drawing Details (Existing & Ultimate)			
- Runway(s) depiction	(X)	( )	
- Length & width	(X)	( )	
- End numbers	(X)	( )	
- True bearing (nearest sec.)	(X)	( )	
- Markings (basic, NPI, PIR)	(X)	( )	
- Lighting (thresholds only)	(X)	( )	
- Threshold lat/long & elevations	(X)	( )	
- Displaced threshold lat/long & elevations	( )	( )	Not Applicable
- Runway safety areas & dimensions	(X)	( )	

	Yes	No	Comments
- Runway object free areas & dimensions	(X)	( )	
- Runway obstacle free zones	(X)	( )	
- Centerline w/true bearing	(X)	( )	
- Approach aids indicated (ILS, REILS, etc.)	(X)	( )	
- Lat/long & elevation for non-federal on-airport NAVAIDS (used for instrument approach procedure)	(X)	( )	
Taxiway Details (Existing & Ultimate)			
- Taxiway widths	(X)	( )	
- Designations	( )	( )	
- Separation Dimensions to:			
Runway centerline(s)	(X)	( )	
Parallel taxiway(s)	(X)	( )	
Aircraft parking area(s)	(X)	( )	
Aircraft Parking Aprons			
- Existing & ultimate aprons shown	(X)	( )	
- Dimensions	(X)	( )	
- Tie-down layout/locations	(X)	( )	
Runway protection Zones (RPZs)			
- Existing & ultimate RPZs shown	(X)	( )	
- Dimensions	(X)	( )	
- Approach slope (20:1, 34:1, 50:1)	(X)	( )	
Title & Revision Blocks			
- Name and location of airport	(X)	( )	
- Name of preparer	(X)	( )	
- Date of drawing	(X)	( )	
- Drawing title	(X)	( )	
- Revision block	(X)	( )	
- FAA disclaimer	(X)	( )	
- Sponsor approval block	(X)	( )	
Airport Data Block (Existing & Ultimate)			
- Airport elevation (MSL)	(X)	( )	
- Airport reference point (ARP) data	(X)	( )	
- Airport & terminal NAVAIDS (beacon, ILS)	(X)	( )	
- Mean maximum temperature	(X)	( )	
- Airport reference code (ARC) for each runway	(X)	( )	
- Design aircraft for each runway	(X)	( )	
- Identify GPS at airport	(X)	( )	
Runway Data Block (Existing & Ultimate)			
- % effective gradient	(X)	( )	
- % wind coverage (MPH & knots)	(X)	( )	
- Maximum elevation above MSL	(X)	( )	
- Runway length	(X)	( )	

	Yes	No	Comments
- Runway width	(X)	( )	
- Runway surface type (turf asphalt...)	(X)	( )	
- Runway strength (SWG, DWG...)	(X)	( )	
- Part 77 approach category (visual, NPI, PIR)	(X)	( )	
- Type instrument approach (ILS, GPS...)	(X)	( )	
- Approach slope (20:1, 34:1, 50:1)	(X)	( )	
- Runway lighting (HIRL, MIRL, LIRL)	(X)	( )	
- Runway marking (PIR, NPI, BCS)	(X)	( )	
- NAVAIDS & visual aids	(X)	( )	
- Runway safety area dimensions (standard and non-standard)	(X)	( )	
Miscellaneous			
- Airport facility/building list (existing & future)	(X)	( )	
- Standard legend	(X)	( )	
- Location map	( )	(X)	Cover Sheet
- Vicinity map	( )	(X)	Cover Sheet
- Roadways, traverse ways identified	(X)	( )	

Additional Comments:

Airport Airspace Drawing

Ultimate Runway Length Plan View of Surfaces	(X)	( )	
Profile View of Ultimate Runway Lengths	(X)	( )	
Obstruction Data Tables	(X)	( )	
Sheet Size Same as ALP	(X)	( )	
Plan View Scale 1" = 2,000'	(X)	( )	
Profile View Scale 1" = 1,000' Horizontal, 1" = 100' Vertical	( )	(X)	
Approach Plan View Details			
- USGS base map	(X)	( )	
- Runway end numbers shown	(X)	( )	
- Elevation contours of 50' on all slopes	(X)	( )	
- Show most demanding surface lines as solid and others as dashed	( )	( )	
- Identify penetrating objects & top elevations (for those in inner approach add note, “Refer to the inner portion of the approach surface plan view details for close-in obstructions.”)	( )	( )	
- Show PIR approach of 50,000 on separate sheet as necessary	(X)	( )	
- Note any height restriction zoning/ordinances/statutes in place	(X)	( )	

	Yes	No	Comments
Approach Profile View Details			
- Ground profile along extended centerline (highest profile elevations of width & length of approach)	(X)	( )	
- Identify significant objects (roads, rivers, etc.) w/elevations	(X)	( )	
- Existing & ultimate runway ends and approach slopes	(X)	( )	

Additional Comments:

Inner Portion of the Approach Surface Drawing

Large-Scale Plan View for Each Runway End (up to 100' height above runway end)	(X)	( )	(95')
Large-Scale Profile View for Each Runway End (up to 100' height above runway end)	(X)	( )	(95')
Sheet Size Scale 1" = 200' Horizontal, 1" = 20' Vertical	( )	(X)	1" = 300'
Title & Revision Block	(X)	( )	
Separate Approach Tables with Obstruction Data			
- Type of Approach (NPI, etc.)	(X)	( )	
- Approach slope (20:1, etc.)	(X)	( )	
- Obstruction number	( )	( )	Not Applicable
- Obstruction description	( )	( )	Not Applicable
- Approach penetration (in feet)	( )	( )	Not Applicable
- Proposed mitigation (including “none”)	( )	( )	Not Applicable
Inner Approach Plan View Details			
- Aerial photo base map	(X)	( )	Aerial Topography
- Obstructions numbered	( )	( )	Not Applicable
- Property line depicted	(X)	( )	
- Identify by numbers all traverse ways w/elevations & vertical clearances in approach (At approach edge & extended centerline)	(X)	( )	
- Depict existing & ultimate runway ends	(X)	( )	
- Ground contours shown	(X)	( )	
Inner Approach Profile View Details			
- Identify significant terrain/items in RSA	(X)	( )	
- Identify obstructions with numbers on plan view	( )	( )	Not Applicable
- Depict roads and railroads at edge of approach as dashed	(X)	( )	

Additional Comments:

	Yes	No	Comments
Terminal Area Drawing			
Large-Scale Plan View of Terminal/GA Area(s) as Needed	(X)	( )	
Show Existing & Future Buildings	(X)	( )	
Sheet Size Same as ALP	(X)	( )	
Scale 1" = 50' - 100'	(X)	( )	
Title & Revision Blocks	(X)	( )	1" = 200'
Legend	(X)	( )	
Building Data Table (Existing & Ultimate)			
- Number of facilities	(X)	( )	
- Include top elevations	(X)	( )	
- Identify obstruction marking	(X)	( )	
Additional Comments:			
Land Use Drawing (Existing & Ultimate)			
- Basic airport features/surfaces	(X)	( )	
- Property lines	(X)	( )	
- Include all land uses (industrial, residential, etc.) on & off airport (including non-aeronautical) to minimum 65 LDN	(X)	( )	
- Line of sight or runway visibility zones shown	( )	( )	Not Applicable
- Note any existing land use ordinances/statutes in place	(X)	( )	
- Noise contours as required in scope of work (60, 65 & 70 LDN)	(X)	( )	65 LDN
- Sheet size same as ALP	(X)	( )	
- Scale same as ALP	(X)	( )	
- Title & revision block	(X)	( )	
- Aerial base map	(X)	( )	
- Legend (symbols and land use descriptions)	(X)	( )	
- Identify recommended land use changes	(X)	( )	
- Identify public facilities (schools, parks, etc.)	(X)	( )	
Additional Comments:			
Airport Property Map (Existing & Ultimate)			
Property Lines (Clear & Bold)	(X)	( )	
RPZs Shown	(X)	( )	
Tracts of Land on and off Airport	(X)	( )	
Sheet Size Same as ALP	(X)	( )	
Scale Same as ALP	(X)	( )	
Title & Revision Block	(X)	( )	
Legend	(X)	( )	

	Yes	No	Comments
Airport Features (expansion, etc.)/Critical Surfaces (RSAs, etc.) Shown (to aid in determining eligible land needs)	(X)	( )	
Data Table			
- Numbering system for parcels	(X)	( )	
- date of acquisition	(X)	( )	
- Federal aid project number	( )	(X)	
- Type of ownership (fee, easement, federal surplus, etc.)	(X)	( )	
- Parcel acreage	(X)	( )	

Additional Comments:

AIRPORT LAYOUT PLAN

ROWAN COUNTY AIRPORT

SALISBURY, NORTH CAROLINA

prepared for

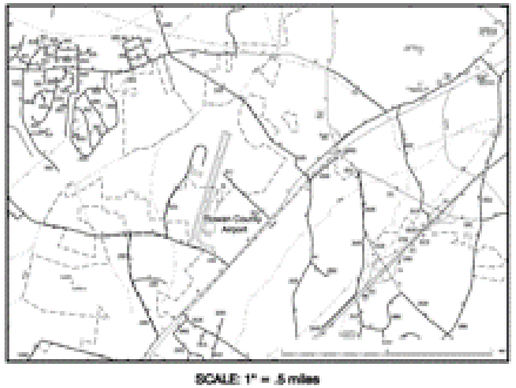
ROWAN COUNTY, NORTH CAROLINA

NCDOT, DIVISION OF AVIATION PROJECT NO. _____

TBI PROJECT NO. 3708-0502

OCTOBER 2008

VICINITY MAP



SCALE: 1" = .5 miles

SHEET INDEX

1. COVER SHEET
2. EXISTING CONDITIONS DRAWING
3. AIRPORT LAYOUT PLAN
4. TERMINAL AREA PLAN
5. INNER APPROACH PLAN AND PROFILE
6. AIRPORT AIRSPACE DRAWING
7. LAND USE PLAN
8. EXHIBIT 'A'

PREPARED BY:

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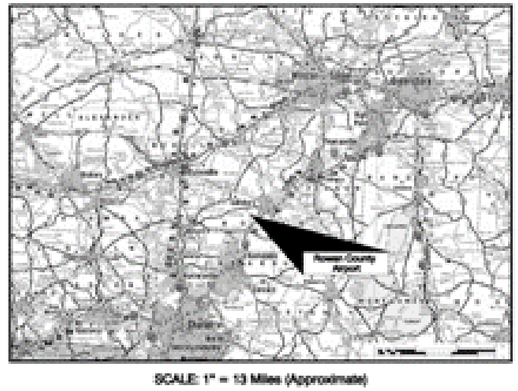
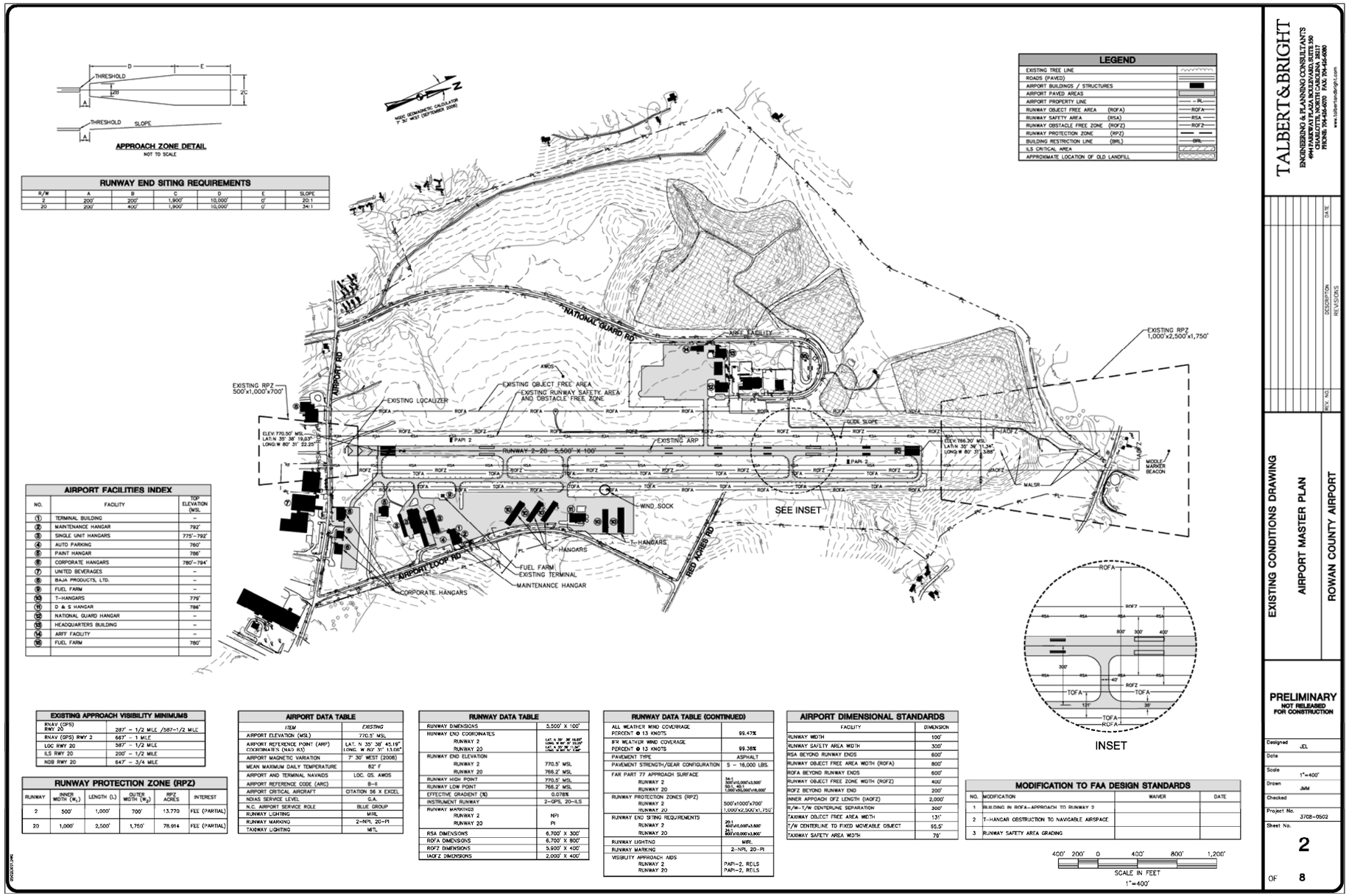
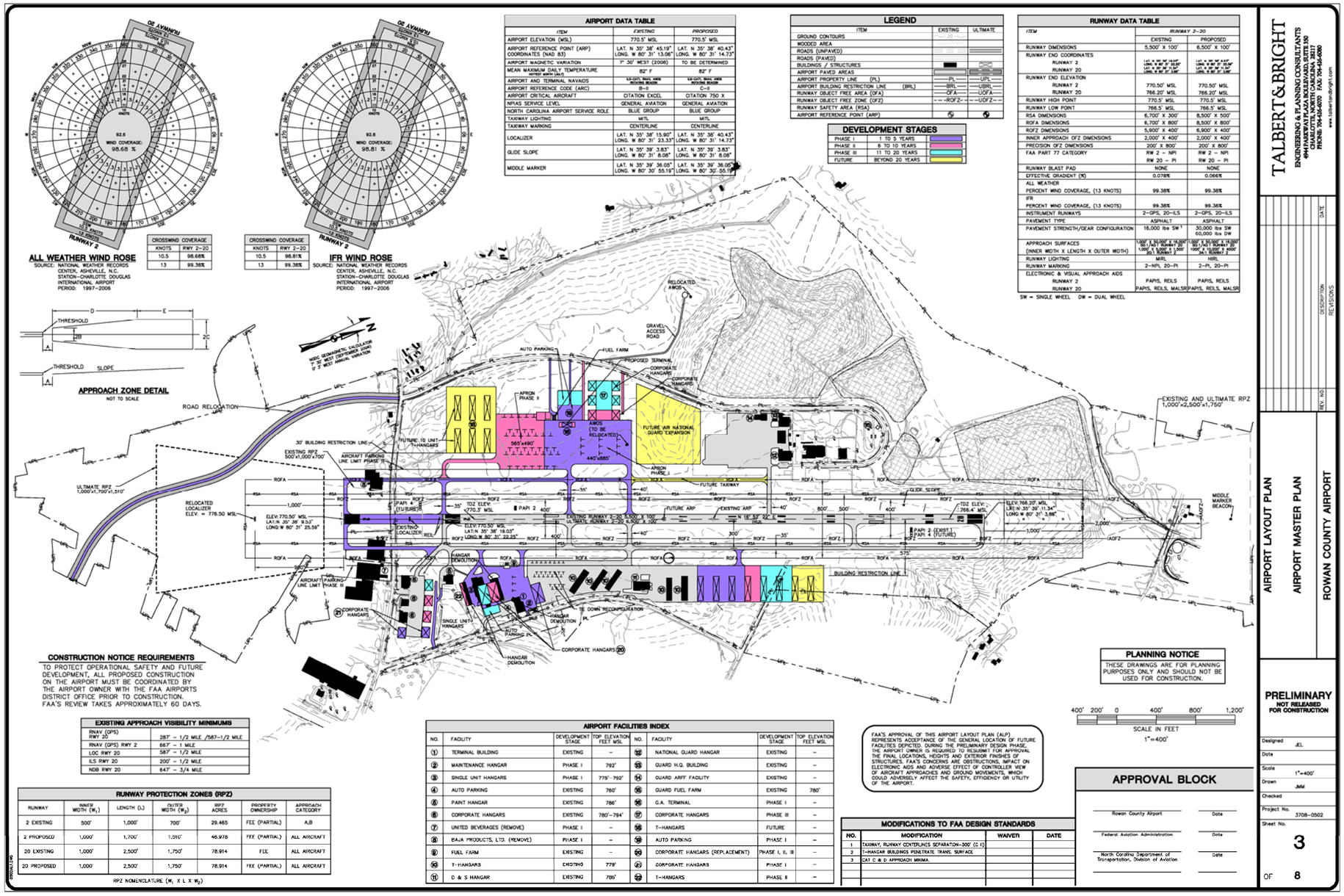
LOCATION MAP



SCALE: 1" = 13 Miles (Approximate)

DRAWING NO. 1 OF 8


D
E
THRESHOLD
A
20:1
2C
THRESHOLD
SLOPE
A
APPROACH ZONE DETAIL
NOT TO SCALE
MAGNETIC CALCULATION
7° 30' WEST (SEPTEMBER 2008)
LEGEND
EXISTING TREE LINE
ROADS (PAVED)
AIRPORT BUILDINGS / STRUCTURES
AIRPORT PAVED AREAS
AIRPORT PROPERTY LINE
RUNWAY OBJECT FREE AREA (ROFA)
RUNWAY SAFETY AREA (RSA)
RUNWAY OBSTACLE FREE ZONE (ROFZ)
RUNWAY PROTECTION ZONE (RPZ)
BUILDING RESTRICTION LINE (BRL)
ILS CRITICAL AREA
APPROXIMATE LOCATION OF OLD LANDFILL
RUNWAY END SITING REQUIREMENTS
R/W | A | B | C | D | E | SLOPE
2 | 200' | 200' | 1,900' | 10,000' | 0' | 20:1
20 | 200' | 400' | 1,900' | 10,000' | 0' | 34:1
NATIONAL GUARD RD
AIRPORT RD
ARFF FACILITY
AWOS
EXISTING RPZ
500'x1,000'x700'
EXISTING LOCALIZER
EXISTING OBJECT FREE AREA
EXISTING RUNWAY SAFETY AREA
AND OBSTACLE FREE ZONE
EXISTING RPZ
1,000'x2,500'x1,750'
GLIDE SLOPE
ELEV.770.50' MSL
LAT:N 35° 36' 19.03"
LONG:W 80° 31' 22.25"
PAPI-2
RUNWAY 2-20 5,500' X 100'
EXISTING ARP
ELEV.766.30' MSL
LAT:N 35° 36' 11.34"
LONG:W 80° 31' 3.88"
MIDDLE MARKER BEACON
MALSR
WIND SOCK
SEE INSET
T-HANGARS
T-HANGARS
RED ACRES RD
AIRPORT LOOP RD
FUEL FARM
EXISTING TERMINAL
MAINTENANCE HANGAR
CORPORATE HANGARS
ROFA
ROFZ
RSA
TOFA
INSET
AIRPORT FACILITIES INDEX
NO. | FACILITY | TOP ELEVATION (MSL)
① TERMINAL BUILDING –
② MAINTENANCE HANGAR 792'
③ SINGLE UNIT HANGARS 775'–792'
④ AUTO PARKING 760'
⑤ PAINT HANGAR 786'
⑥ CORPORATE HANGARS 780'–794'
⑦ UNITED BEVERAGES –
⑧ BAJA PRODUCTS, LTD. –
⑨ FUEL FARM –
⑩ T–HANGARS 779'
⑪ D & S HANGAR 786'
⑫ NATIONAL GUARD HANGAR –
⑬ HEADQUARTERS BUILDING –
⑭ ARFF FACILITY –
⑮ FUEL FARM 780'
EXISTING APPROACH VISIBILITY MINIMUMS
RNAV (GPS) RWY 20 287' – 1/2 MILE /587–1/2 MILE
RNAV (GPS) RWY 2 667' – 1 MILE
LOC RWY 20 587' – 1/2 MILE
ILS RWY 20 200' – 1/2 MILE
NDB RWY 20 647' – 3/4 MILE
AIRPORT DATA TABLE
ITEM | EXISTING
AIRPORT ELEVATION (MSL) 770.5' MSL
AIRPORT REFERENCE POINT (ARP) COORDINATES (NAD 83) LAT. N 35° 36' 45.19" LONG. W 80° 31' 13.08"
AIRPORT MAGNETIC VARIATION 7° 30' WEST (2008)
MEAN MAXIMUM DAILY TEMPERATURE 82° F
AIRPORT AND TERMINAL NAVAIDS LOC, GS, AWOS
AIRPORT REFERENCE CODE (ARC) B–II
AIRPORT CRITICAL AIRCRAFT CITATION 56 X EXCEL
NDIAS SERVICE LEVEL G.A.
N.C. AIRPORT SERVICE ROLE BLUE GROUP
RUNWAY LIGHTING MIRL
RUNWAY MARKING 2–NPI, 20–PI
TAXIWAY LIGHTING MITL
RUNWAY DATA TABLE
RUNWAY DIMENSIONS 5,500' X 100'
RUNWAY END COORDINATES RUNWAY 2 LAT. N 35° 36' 45.07" LONG. W 80° 31' 22.09" RUNWAY 20 LAT. N 35° 36' 11.36" LONG. W 80° 31' 3.86"
RUNWAY END ELEVATION RUNWAY 2 770.5' MSL RUNWAY 20 766.2' MSL
RUNWAY HIGH POINT 770.5' MSL
RUNWAY LOW POINT 766.2' MSL
EFFECTIVE GRADIENT (%) 0.078%
INSTRUMENT RUNWAY 2–GPS, 20–ILS
RUNWAY MARKINGS RUNWAY 2 NPI RUNWAY 20 PI
RSA DIMENSIONS 6,700' X 300'
ROFA DIMENSIONS 6,700' X 800'
ROFZ DIMENSIONS 5,900' X 400'
IAOFZ DIMENSIONS 2,000' X 400'
RUNWAY DATA TABLE (CONTINUED)
ALL WEATHER WIND COVERAGE PERCENT @ 13 KNOTS 95.47%
IFR WEATHER WIND COVERAGE PERCENT @ 13 KNOTS 99.38%
PAVEMENT TYPE ASPHALT
PAVEMENT STRENGTH/GEAR CONFIGURATION S – 16,000 LBS.
FAR PART 77 APPROACH SURFACE RUNWAY 2 34:1 500'x1,000'x3,500' 50:1 40,000'x16,000' RUNWAY 20 1,000'x2,500'x1,750'
RUNWAY PROTECTION ZONES (RPZ) RUNWAY 2 500'x1000'x700' RUNWAY 20 1,000'x2,500'x1,750'
RUNWAY END SITING REQUIREMENTS RUNWAY 2 20:1 400'x10,000'x3,600' RUNWAY 20 34:1 600'x10,000'x3,900'
RUNWAY LIGHTING MIRL
RUNWAY MARKING 2–NPI, 20–PI
VISIBILITY APPROACH AIDS RUNWAY 2 PAPI–2, REILS RUNWAY 20 PAPI–2, REILS
AIRPORT DIMENSIONAL STANDARDS
FACILITY | DIMENSION
RUNWAY WIDTH 100'
RUNWAY SAFETY AREA WIDTH 300'
RSA BEYOND RUNWAY ENDS 600'
RUNWAY OBJECT FREE AREA WIDTH (ROFA) 800'
ROFA BEYOND RUNWAY ENDS 600'
RUNWAY OBJECT FREE ZONE WIDTH (ROFZ) 400'
ROFZ BEYOND RUNWAY END 200'
INNER APPROACH OFZ LENGTH (IAOFZ) 2,000'
R/W–T/W CENTERLINE SEPARATION 300'
TAXIWAY OBJECT FREE AREA WIDTH 131'
T/W CENTERLINE TO FIXED MOVEABLE OBJECT 95.5'
TAXIWAY SAFETY AREA WIDTH 79'
MODIFICATION TO FAA DESIGN STANDARDS
NO. | MODIFICATION | WAIVER | DATE
1 BUILDING IN ROFA–APPROACH TO RUNWAY 2
2 T–HANGAR OBSTRUCTION TO NAVIGABLE AIRSPACE
3 RUNWAY SAFETY AREA GRADING
400' 200' 0 400' 800' 1,200'
SCALE IN FEET
1"=400'
TALBERT&BRIGHT
ENGINEERING & PLANNING CONSULTANTS
4815 AMOUNT ROAD, SUITE 100
CHARLOTTE, NORTH CAROLINA 28217
PHONE: 704-525-6370 FAX: 704-525-6380
www.talbertandbright.com
DESCRIPTION
REVISIONS
REV. NO.
DATE
EXISTING CONDITIONS DRAWING
AIRPORT MASTER PLAN
ROWAN COUNTY AIRPORT
PRELIMINARY
NOT RELEASED FOR CONSTRUCTION
Designed JEL
Date
Scale 1"=400'
Drawn JMM
Checked
Project No. 3708–0502
Sheet No. 2
OF 8



AIRPORT DATA TABLE		
ITEM	EXISTING	PROPOSED
AIRPORT ELEVATION (MSL)	770.5' MSL	770.5' MSL
AIRPORT REFERENCE POINT (ARP) COORDINATES (NAD 83)	LAT. N 35° 38' 45.19" LONG. W 80° 31' 13.06"	LAT. N 35° 38' 40.43" LONG. W 80° 31' 14.73"
AIRPORT MAGNETIC VARIATION	7° 30' WEST (2006)	TO BE DETERMINED
MEAN MAXIMUM DAILY TEMPERATURE (HOTTEST MONTH (JULY))	82° F	82° F
AIRPORT AND TERMINAL NAVAIDS	ILS (LOC), RNAV, AWOS, ROTATING BEACON	ILS (LOC), RNAV, AWOS, ROTATING BEACON
AIRPORT REFERENCE CODE (ARC)	B-II	C-II
AIRPORT CRITICAL AIRCRAFT	CITATION EXCEL	CITATION 750 X
NPIAS SERVICE LEVEL	GENERAL AVIATION	GENERAL AVIATION
NORTH CAROLINA AIRPORT SERVICE ROLE	BLUE GROUP	BLUE GROUP
TAXIWAY LIGHTING	MITL	MITL
TAXIWAY MARKING	CENTERLINE	CENTERLINE
LOCALIZER	LAT. N 35° 38' 15.90" LONG. W 80° 31' 23.33"	LAT. N 35° 38' 40.43" LONG. W 80° 31' 14.73"
GLIDE SLOPE	LAT. N 35° 39' 3.83" LONG. W 80° 31' 8.08"	LAT. N 35° 39' 3.83" LONG. W 80° 31' 8.08"
MIDDLE MARKER	LAT. N 35° 39' 36.05" LONG. W 80° 30' 55.19"	LAT. N 35° 39' 36.05" LONG. W 80° 30' 55.19"

LEGEND		
ITEM	EXISTING	ULTIMATE
GROUND CONTOURS		
WOODED AREA		
ROADS (UNPAVED)		
ROADS (PAVED)		
BUILDINGS / STRUCTURES		
AIRPORT PAVED AREAS		
AIRPORT PROPERTY LINE (PL)	PL	UPL
AIRPORT BUILDING RESTRICTION LINE (BRL)	BRL	UBRL
RUNWAY OBJECT FREE AREA (OFA)	OFA	UOFA
RUNWAY OBJECT FREE ZONE (OFZ)	ROFZ	UOFZ
RUNWAY SAFETY AREA (RSA)		
AIRPORT REFERENCE POINT (ARP)		

DEVELOPMENT STAGES	
PHASE I	1 TO 5 YEARS
PHASE II	6 TO 10 YEARS
PHASE III	11 TO 20 YEARS
FUTURE	BEYOND 20 YEARS

RUNWAY DATA TABLE		
ITEM	RUNWAY 2-20	
	EXISTING	PROPOSED
RUNWAY DIMENSIONS	5,500' X 100'	6,500' X 100'
RUNWAY END COORDINATES		
RUNWAY 2	LAT. N 35° 38' 19.03" LONG. W 80° 31' 22.22"	LAT. N 35° 38' 19.03" LONG. W 80° 31' 22.22"
RUNWAY 20	LAT. N 35° 39' 2.58" LONG. W 80° 31' 3.98"	LAT. N 35° 39' 2.58" LONG. W 80° 31' 3.98"
RUNWAY END ELEVATION		
RUNWAY 2	770.50' MSL	770.50' MSL
RUNWAY 20	766.20' MSL	769.20' MSL
RUNWAY HIGH POINT	770.5' MSL	770.5' MSL
RUNWAY LOW POINT	766.5' MSL	766.5' MSL
RSA DIMENSIONS	6,700' X 300'	8,500' X 500'
ROFA DIMENSIONS	6,700' X 800'	8,500' X 800'
ROFZ DIMENSIONS	5,900' X 400'	6,900' X 400'
INNER APPROACH OFZ DIMENSIONS	2,000' X 400'	2,000' X 400'
PRECISION OFZ DIMENSIONS	200' X 800'	200' X 800'
FAA PART 77 CATEGORY	RW 2 - NPI RW 20 - PI	RW 2 - NPI RW 20 - PI
RUNWAY BLAST PAD	NONE	NONE
EFFECTIVE GRADIENT (%)	0.078%	0.066%
ALL WEATHER		
PERCENT WIND COVERAGE, (13 KNOTS)	99.38%	99.38%
IFR		
PERCENT WIND COVERAGE, (13 KNOTS)	99.38%	99.38%
INSTRUMENT RUNWAYS	2-GPS, 20-ILS	2-GPS, 20-ILS
PAVEMENT TYPE	ASPHALT	ASPHALT
PAVEMENT STRENGTH/GEAR CONFIGURATION	16,000 lbs SW [1] 30,000 lbs DW	30,000 lbs SW 60,000 lbs DW
APPROACH SURFACES (INNER WIDTH X LENGTH X OUTER WIDTH)	1,000' X 10,000' X 16,000' (C/I) / ACT RUNWAY 20 1,000' X 5,000' X 1,510' (NPI) / ACT RUNWAY 2	1,000' X 10,000' X 16,000' (C/I) / ACT RUNWAY 20 1,000' X 10,000' X 4000' (NPI) / ACT RUNWAY 2
RUNWAY LIGHTING	MIRL	MIRL
RUNWAY MARKING	2-NPI, 20-PI	2-PI, 20-PI
ELECTRONIC & VISUAL APPROACH AIDS		
RUNWAY 2	PAPIS, REILS	PAPIS, REILS
RUNWAY 20	PAPIS, REILS, MALSR	PAPIS, REILS, MALSR

SW = SINGLE WHEEL DW = DUAL WHEEL

EXISTING APPROACH VISIBILITY MINIMUMS	
RNAV (GPS) RWY 20	287' - 1/2 MILE /587-1/2 MILE
RNAV (GPS) RWY 2	667' - 1 MILE
LOC RWY 20	587' - 1/2 MILE
ILS RWY 20	200' - 1/2 MILE
NDB RWY 20	647' - 3/4 MILE

RUNWAY PROTECTION ZONES (RPZ)						
RUNWAY	INNER WIDTH (W_1)	LENGTH (L)	OUTER WIDTH (W_2)	RPZ ACRES	PROPERTY OWNERSHIP	APPROACH CATEGORY
2 EXISTING	500'	1,000'	700'	29.465	FEE (PARTIAL)	A,B
2 PROPOSED	1,000'	1,700'	1,510'	48.978	FEE (PARTIAL)	ALL AIRCRAFT
20 EXISTING	1,000'	2,500'	1,750'	78.914	FEE	ALL AIRCRAFT
20 PROPOSED	1,000'	2,500'	1,750'	78.914	FEE (PARTIAL)	ALL AIRCRAFT

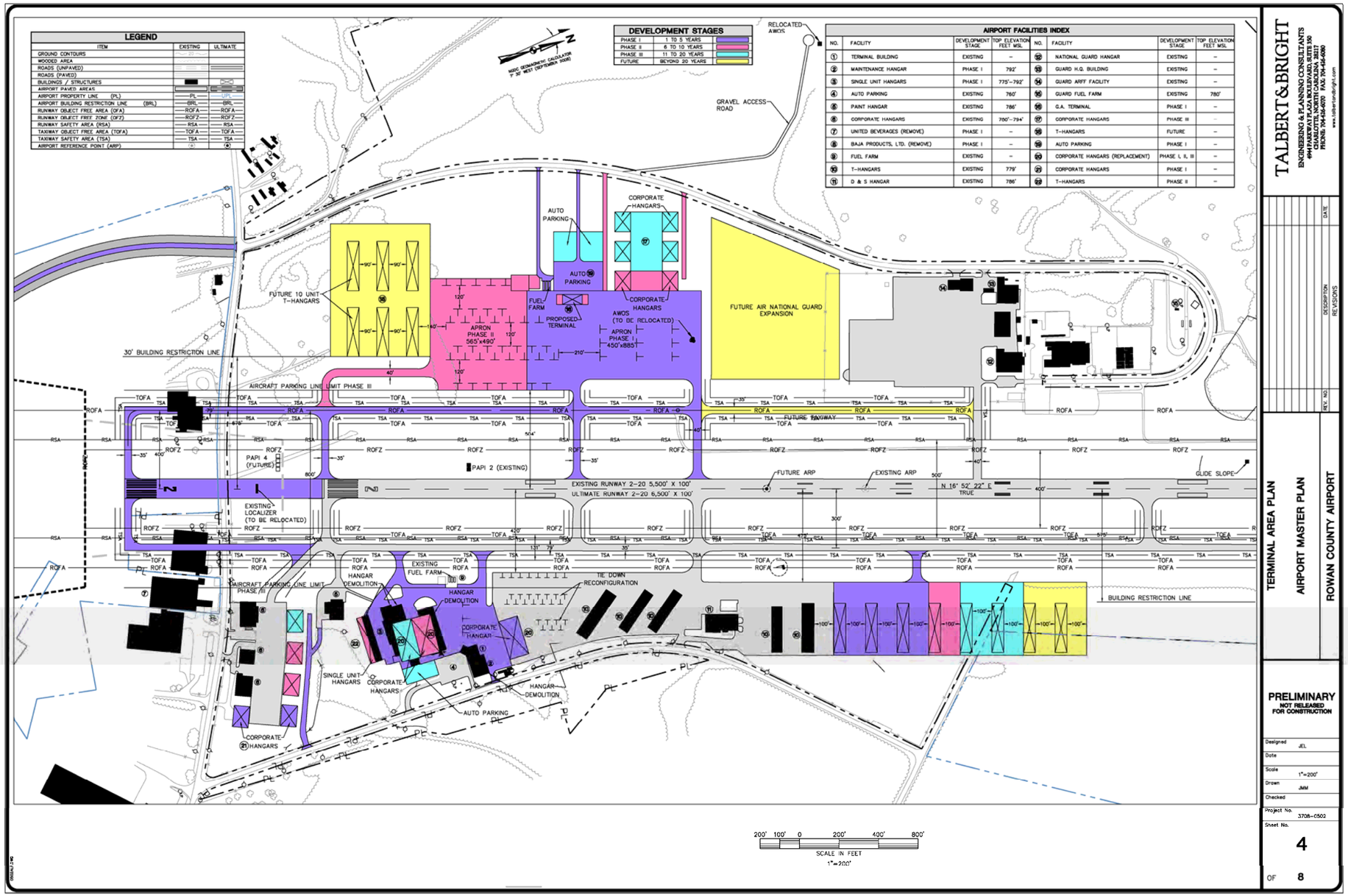
RPZ NOMENCLATURE (W_1 X L X W_2)

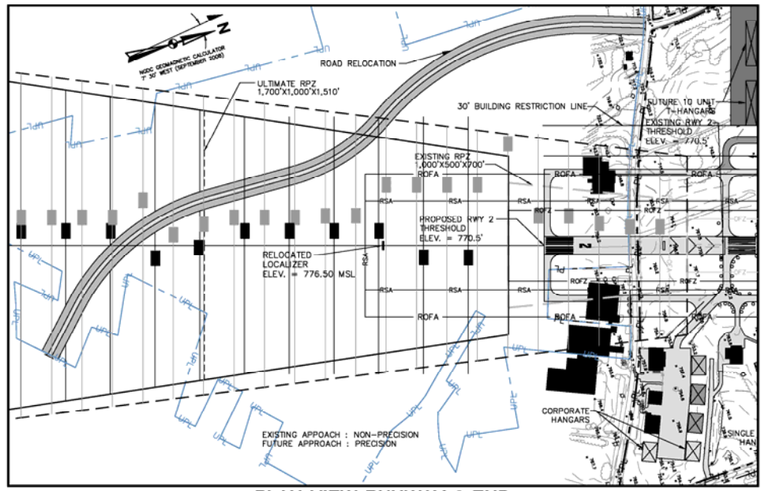
AIRPORT FACILITIES INDEX						
NO.	FACILITY	DEVELOPMENT STAGE	TOP ELEVATION FEET MSL	NO.	FACILITY	DEVELOPMENT STAGE	TOP ELEVATION FEET MSL
①	TERMINAL BUILDING	EXISTING	–	㉜	NATIONAL GUARD HANGAR	EXISTING	–
②	MAINTENANCE HANGAR	PHASE I	793'	㉝	GUARD H.Q. BUILDING	EXISTING	–
③	SINGLE UNIT HANGARS	PHASE I	775'-792'	㉞	GUARD ARFF FACILITY	EXISTING	–
④	AUTO PARKING	EXISTING	760'	㉟	GUARD FUEL FARM	EXISTING	780'
⑤	PAINT HANGAR	EXISTING	786'	㊱	G.A. TERMINAL	PHASE I	–
⑥	CORPORATE HANGARS	EXISTING	780'-794'	㊲	CORPORATE HANGARS	PHASE III	–
⑦	UNITED BEVERAGES (REMOVE)	PHASE I	–	㊳	T-HANGARS	FUTURE	–
⑧	BAJA PRODUCTS, LTD. (REMOVE)	PHASE I	–	㊴	AUTO PARKING	PHASE I	–
⑨	FUEL FARM	EXISTING	–	㊵	CORPORATE HANGARS (REPLACEMENT)	PHASE I, II, III	–
⑩	T-HANGARS	EXISTING	779'	㊶	CORPORATE HANGARS	PHASE I	–
⑪	D & S HANGAR	EXISTING	786'	㊷	T-HANGARS	PHASE II	–

FAA'S APPROVAL OF THIS AIRPORT LAYOUT PLAN (ALP) REPRESENTS ACCEPTANCE OF THE GENERAL LOCATION OF FUTURE FACILITIES DEPICTED. DURING THE PRELIMINARY DESIGN PHASE, THE AIRPORT OWNER IS REQUIRED TO RESUBMIT FOR APPROVAL THE FINAL LOCATIONS, HEIGHTS AND EXTERIOR FINISHES OF STRUCTURES. FAA'S CONCERNS ARE OBSTRUCTIONS, IMPACT ON ELECTRONIC AIDS AND ADVERSE EFFECT OF CONTROLLER VIEW OF AIRCRAFT APPROACHES AND GROUND MOVEMENTS, WHICH COULD ADVERSELY AFFECT THE SAFETY, EFFICIENCY OR UTILITY OF THE AIRPORT.

MODIFICATIONS TO FAA DESIGN STANDARDS			
NO.	MODIFICATION	WAIVER	DATE
1	TAXIWAY, RUNWAY CENTERLINES SEPARATION-300' (C II)		
2	T-HANGAR BUILDINGS PENETRATE TRANS. SURFACE.		
3	CAT C & D APPROACH MINIMA.		

REVISIONS		
REV. NO.	DESCRIPTION	DATE


LEGEND
ITEM | EXISTING | ULTIMATE
GROUND CONTOURS
WOODED AREA
ROADS (UNPAVED)
ROADS (PAVED)
BUILDINGS / STRUCTURES
AIRPORT PAVED AREAS
AIRPORT PROPERTY LINE (PL)
AIRPORT BUILDING RESTRICTION LINE (BRL)
RUNWAY OBJECT FREE AREA (OFA)
RUNWAY OBJECT FREE ZONE (OFZ)
RUNWAY SAFETY AREA (RSA)
TAXIWAY OBJECT FREE AREA (TOFA)
TAXIWAY SAFETY AREA (TSA)
AIRPORT REFERENCE POINT (ARP)
DEVELOPMENT STAGES
PHASE I 1 TO 5 YEARS
PHASE II 6 TO 10 YEARS
PHASE III 11 TO 20 YEARS
FUTURE BEYOND 20 YEARS
AIRPORT FACILITIES INDEX
NO. | FACILITY | DEVELOPMENT STAGE | TOP ELEVATION FEET MSL
1 TERMINAL BUILDING EXISTING –
2 MAINTENANCE HANGAR PHASE I 792'
3 SINGLE UNIT HANGARS PHASE I 775'–792'
4 AUTO PARKING EXISTING 760'
5 PAINT HANGAR EXISTING 786'
6 CORPORATE HANGARS EXISTING 760'–794'
7 UNITED BEVERAGES (REMOVE) PHASE I –
8 BAJA PRODUCTS, LTD. (REMOVE) PHASE I –
9 FUEL FARM EXISTING –
10 T–HANGARS EXISTING 779'
11 D & S HANGAR EXISTING 786'
50 NATIONAL GUARD HANGAR EXISTING –
51 GUARD H.Q. BUILDING EXISTING –
54 GUARD ARFF FACILITY EXISTING –
55 GUARD FUEL FARM EXISTING 780'
56 G.A. TERMINAL PHASE I –
57 CORPORATE HANGARS PHASE III –
58 T–HANGARS FUTURE –
59 AUTO PARKING PHASE I –
60 CORPORATE HANGARS (REPLACEMENT) PHASE I, II, III –
61 CORPORATE HANGARS PHASE I –
62 T–HANGARS PHASE II –
NGDC GEOMAGNETIC CALCULATION 7° 30' WEST (SEPTEMBER 2009)
RELOCATED AWOS
GRAVEL ACCESS ROAD
FUTURE 10 UNIT T–HANGARS
AUTO PARKING
CORPORATE HANGARS
FUEL FARM
PROPOSED TERMINAL
AWOS (TO BE RELOCATED)
APRON PHASE II 565'x490'
APRON PHASE I 450'x885'
FUTURE AIR NATIONAL GUARD EXPANSION
30' BUILDING RESTRICTION LINE
AIRCRAFT PARKING LINE LIMIT PHASE III
PAPI 4 (FUTURE)
PAPI 2 (EXISTING)
EXISTING RUNWAY 2–20 5,500' X 100'
ULTIMATE RUNWAY 2–20 6,500' X 100'
FUTURE ARP
EXISTING ARP
N 16° 52' 22" E TRUE
GLIDE SLOPE
EXISTING LOCALIZER (TO BE RELOCATED)
AIRCRAFT PARKING LINE LIMIT PHASE III
EXISTING FUEL FARM
HANGAR DEMOLITION
TIE DOWN RECONFIGURATION
BUILDING RESTRICTION LINE
CORPORATE HANGAR
SINGLE UNIT HANGARS
CORPORATE HANGARS
AUTO PARKING
CORPORATE HANGARS
200' 100' 0 200' 400' 800'
SCALE IN FEET
1"=200'
TALBERT&BRIGHT
ENGINEERING & PLANNING CONSULTANTS
#941 PARKWAY PLAZA BOULEVARD, SUITE 150
CHARLOTTE, NORTH CAROLINA 28217
PHONE (704) 525-6620 FAX (704) 525-6800
www.talbertbright.com
DATE
DESCRIPTION
REVISIONS
REV. NO.
TERMINAL AREA PLAN
AIRPORT MASTER PLAN
ROWAN COUNTY AIRPORT
PRELIMINARY
NOT RELEASED FOR CONSTRUCTION
Designed JEL
Date
Scale 1"=200'
Drawn JWM
Checked
Project No. 3708-0502
Sheet No. 4
OF 8



PLAN VIEW RUNWAY 2 END

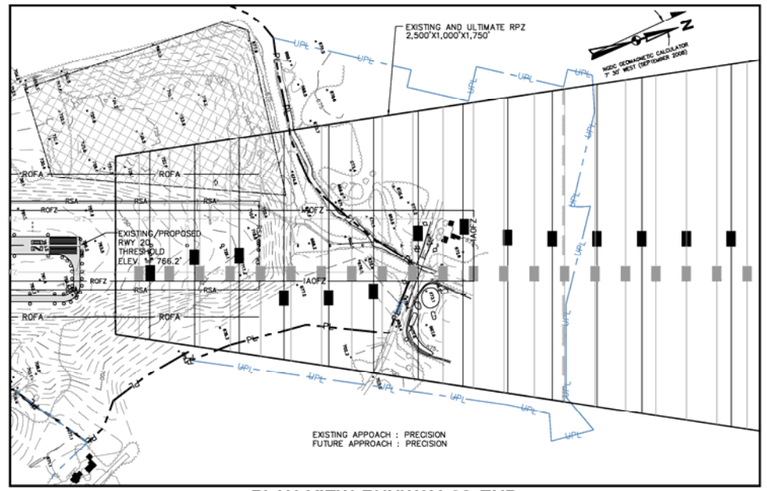
SCALE: 1"=300'

RUNWAY 2 OBSTRUCTION DATA

NO.	DESCRIPTION	ELEVATION	SURFACE ELEVATION	PENETRATION	DISTANCE FROM RUNWAY THRESHOLD	OFFSET FROM RUNWAY CENTERLINE	PROPOSED ACTION
1							
2							
3							
4							

LEGEND

APPROACH SURFACE ELEVATION (MSL)	●759
AIRPORT PROPERTY LINE	
OBJECT TOP ELEVATION (MSL)	▲98
RUNWAY OBJECT FREE AREA (ROFA)	ROFA
RUNWAY OBSTACLE FREE ZONE (ROFZ)	ROFZ
RUNWAY SAFETY AREA (RSA)	RSA
INNER APPROACH OBSTACLE FREE ZONE (IAOFZ)	IAOFZ
PRIMARY SURFACE	
OBJECT IDENTIFICATION	9 / ▼

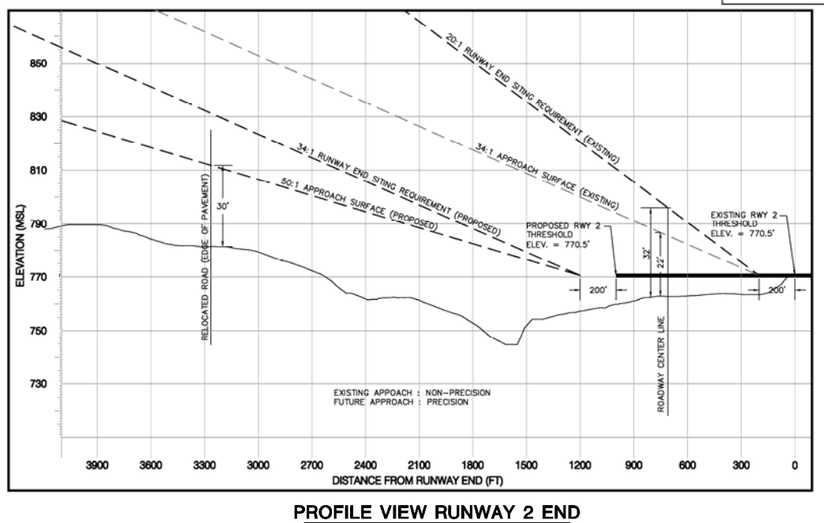


PLAN VIEW RUNWAY 20 END

SCALE: 1"=300'

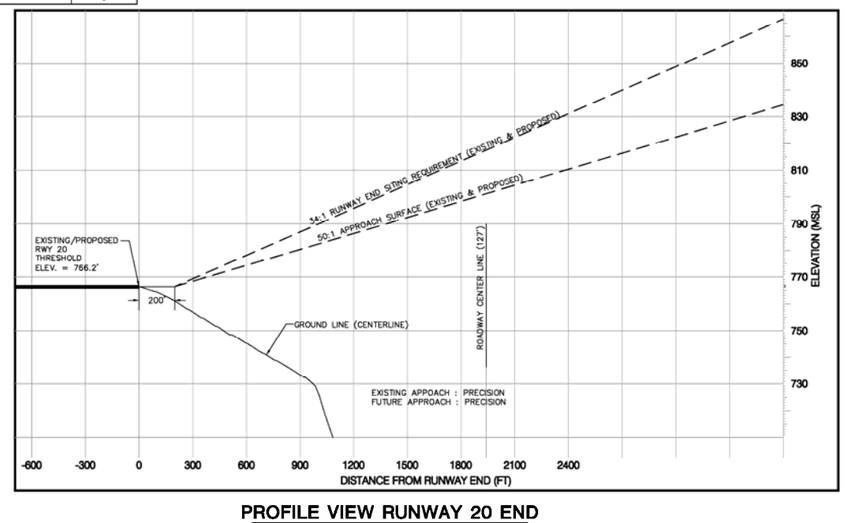
RUNWAY 20 OBSTRUCTION DATA

NO.	DESCRIPTION	ELEVATION	SURFACE ELEVATION	PENETRATION	DISTANCE FROM RUNWAY THRESHOLD	OFFSET FROM RUNWAY CENTERLINE	PROPOSED ACTION
1							
2							
3							
4							



PROFILE VIEW RUNWAY 2 END

SCALE: 1"=300' HORIZONTAL
1"=20' VERTICAL



PROFILE VIEW RUNWAY 20 END

SCALE: 1"=300' HORIZONTAL
1"=20' VERTICAL

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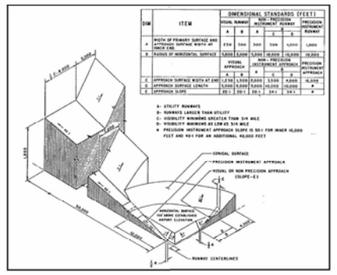
REV. NO. | DESCRIPTION | DATE
REVISIONS

INNER APPROACH PLAN & PROFILE
AIRPORT MASTER PLAN
ROWAN COUNTY AIRPORT

PRELIMINARY
NOT RELEASED FOR CONSTRUCTION

Designed	JEL
Date	
Scale	1"=300' HORZ. 1"=20' VERT.
Drawn	JMM
Checked	
Project No.	3708-0502
Sheet No.	5
OF	8



LEGEND

PART 77 SURFACE ELEVATION	250
BOUNDARY OF PART 77 SURFACE	
EXTENDED RUNWAY CENTERLINE	
GROUND ELEVATION	17
ELEVATION (TOWER, BUILDING, ETC.)	25
PENETRATION TO PART 77 SURFACE	1

NOTES:

1) REFER TO INNER APPROACH SURFACE PLAN & PROFILE FOR OBSTRUCTION DATA WITHIN ---- FEET OF THE RUNWAY THRESHOLDS.
2) TERRAIN ELEVATIONS RANGE BETWEEN 10 AND 25 FEET MSL FOR AREA WITHIN 10 STATUTE MILES OF THE AIRPORT.
3) REFER TO "INNER APPROACH SURFACE PLAN AND PROFILES" SHEET

RUNWAY 2-20 OBSTRUCTION DATA TABLE

NO.	DESCRIPTION	ELEVATION	SURFACE ELEVATION	PENETRATION	DISTANCE FROM RUNWAY THRESHOLD	OFFSET FROM RUNWAY CENTERLINE	PROPOSED ACTION

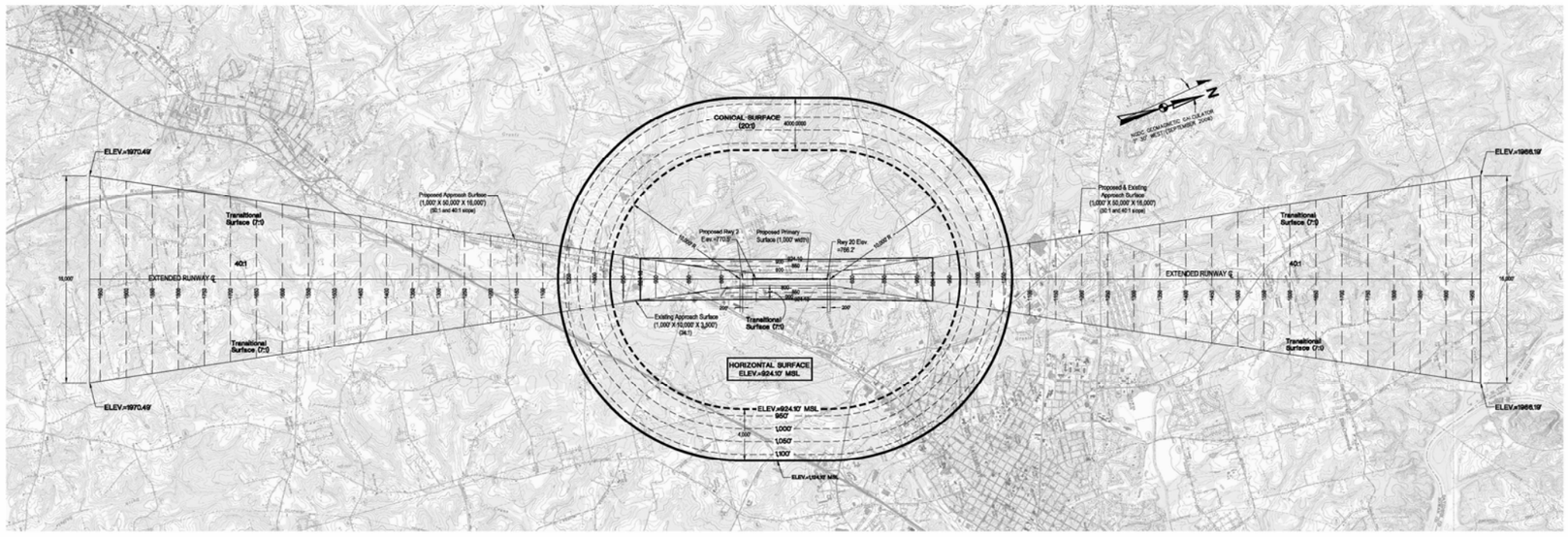
ZONING: BOTH ROWAN COUNTY AND THE CITY OF SALISBURY HAVE ENACTED AIRPORT ZONING OVERLAY, (AZO) ORDINANCE WHICH PROTECTS THE IMAGINARY SURFACES AS DEFINED IN FAR PART 77 FROM ENCROACHMENT BY BOTH NATURAL OR MANMADE OBJECT.

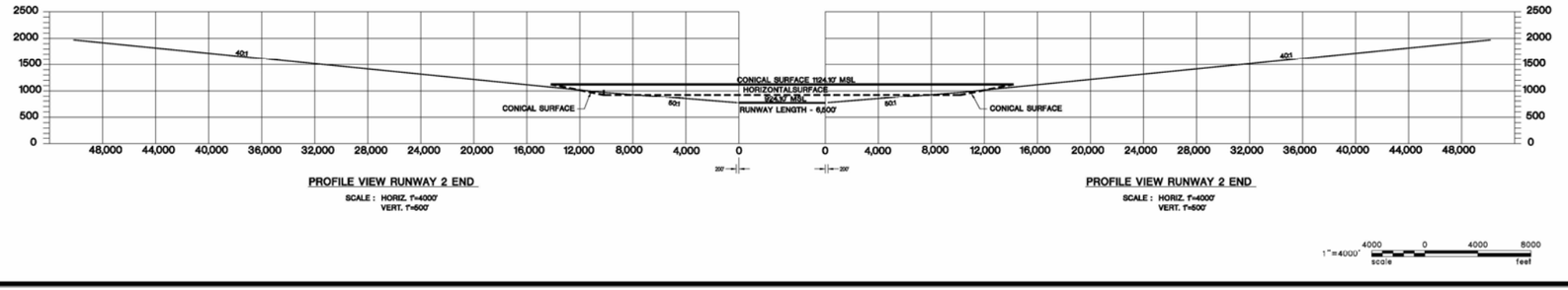
EXISTING AIRSPACE DIMENSIONAL DATA RUNWAY 2-20

		APPROACH SURFACE	EXISTING RUNWAY 2 VISUAL	EXISTING RUNWAY 20 VISUAL
APPROACH	NON-PRECISION INSTRUMENT			
RUNWAY LENGTH	5,500 FEET	INNER EDGE	1,000 FEET	1,000 FEET
AIRPORT ELEVATION	774.1 FEET MSL	OUTER EDGE	3,500 FEET	16,000 FEET
HORIZONTAL SURFACE	FEET MSL	HORIZONTAL DISTANCE	10,000 FEET	50,000 FEET
HORIZONTAL SURFACE RADII	10,000 FEET	SLOPE	34:1	50:1 AND 40:1
PRIMARY SURFACE LENGTH	FEET	ADDITIONAL HORIZONTAL DISTANCE	N/A	N/A
PRIMARY SURFACE WIDTH	1,000 FEET	SLOPE	N/A	N/A
CONICAL SURFACE WIDTH	4,000 FEET	TRANSITIONAL SURFACE SLOPE	7:1	7:1
CONICAL SURFACE SLOPE	20:1	TRANSITIONAL SURFACE EXTENSION	N/A	N/A

PROPOSED AIRSPACE DIMENSIONAL DATA RUNWAY 2-20

		APPROACH SURFACE	PROPOSED RUNWAY 2 VISUAL	PROPOSED RUNWAY 20 VISUAL
APPROACH	NON-PRECISION INSTRUMENT			
RUNWAY LENGTH	6500 FEET	INNER EDGE	1,000 FEET	1,000 FEET
AIRPORT ELEVATION	774.1 FEET MSL	OUTER EDGE	16,000 FEET	16,000 FEET
HORIZONTAL SURFACE	FEET MSL	HORIZONTAL DISTANCE	50,000 FEET	50,000 FEET
HORIZONTAL SURFACE RADII	10,000 FEET	SLOPE	50:1 AND 40:1	50:1 AND 40:1
PRIMARY SURFACE LENGTH	FEET	ADDITIONAL HORIZONTAL DISTANCE	N/A	N/A
PRIMARY SURFACE WIDTH	1,000 FEET	SLOPE	N/A	N/A
CONICAL SURFACE WIDTH	4,000 FEET	TRANSITIONAL SURFACE SLOPE	7:1	7:1
CONICAL SURFACE SLOPE	20:1	TRANSITIONAL SURFACE EXTENSION	N/A	N/A





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NO.	DESCRIPTION	DATE
	REVISIONS	

AIRPORT AIRSPACE DRAWING
AIRPORT MASTER PLAN
ROWAN COUNTY AIRPORT

PRELIMINARY
NOT RELEASED FOR CONSTRUCTION

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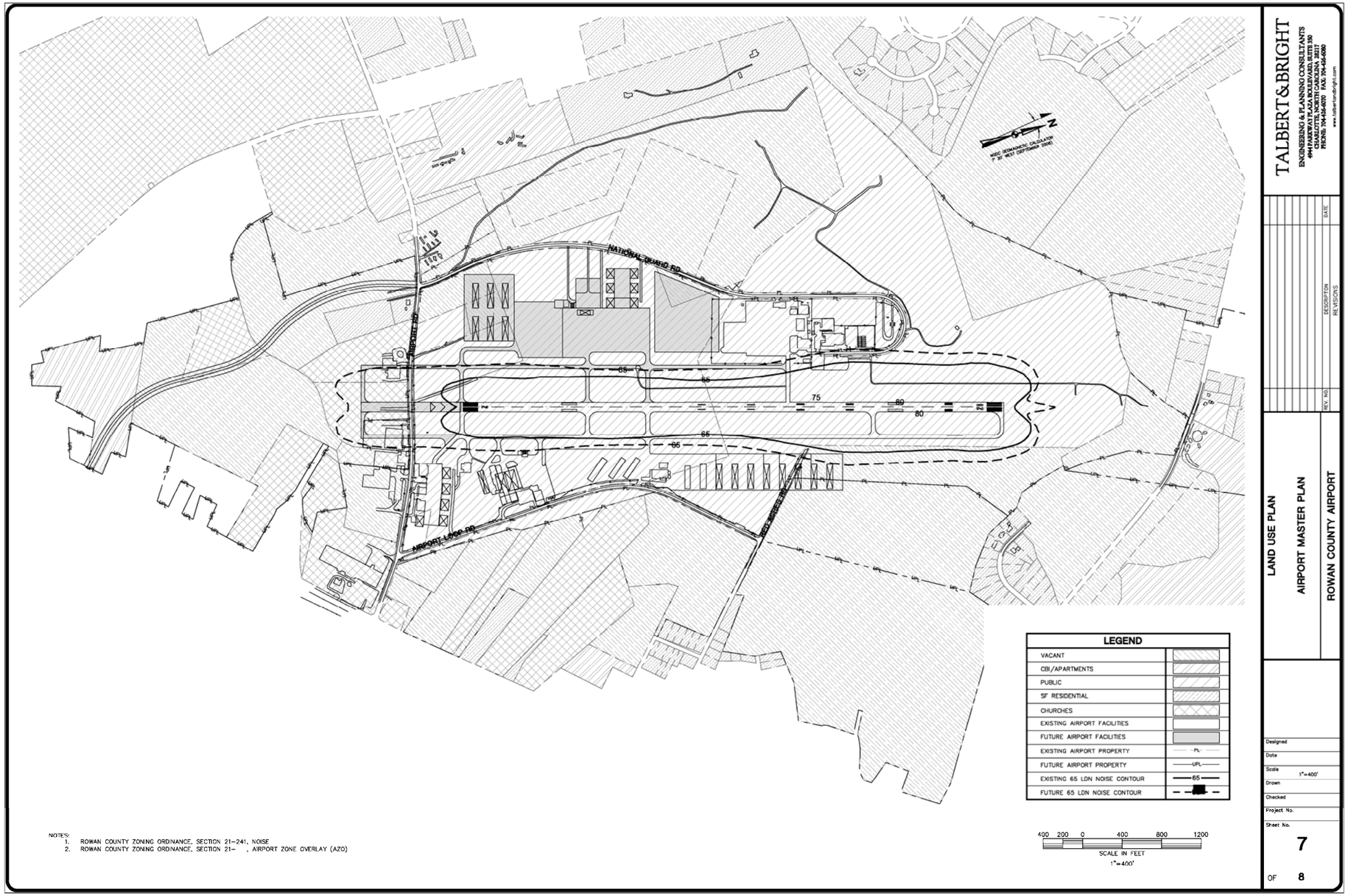
Project No.	3708-0502
Sheet No.	6
OF	8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2. ROWAN COUNTY ZONING ORDINANCE, SECTION 21- , AIRPORT ZONE OVERLAY (AZO)
LEGEND
VACANT
CBI/APARTMENTS
PUBLIC
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CHURCHES
EXISTING AIRPORT FACILITIES
FUTURE AIRPORT FACILITIES
EXISTING AIRPORT PROPERTY
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TALBERT&BRIGHT
ENGINEERING & PLANNING CONSULTANTS
4944 PARKWAY PLAZA BOULEVARD, SUITE 330
CHARLOTTE, NORTH CAROLINA 28217
PHONE 704-455-6070 FAX 704-455-6080
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REVISIONS
REV. NO.
DESCRIPTION
DATE
LAND USE PLAN
AIRPORT MASTER PLAN
ROWAN COUNTY AIRPORT
Designed
Date
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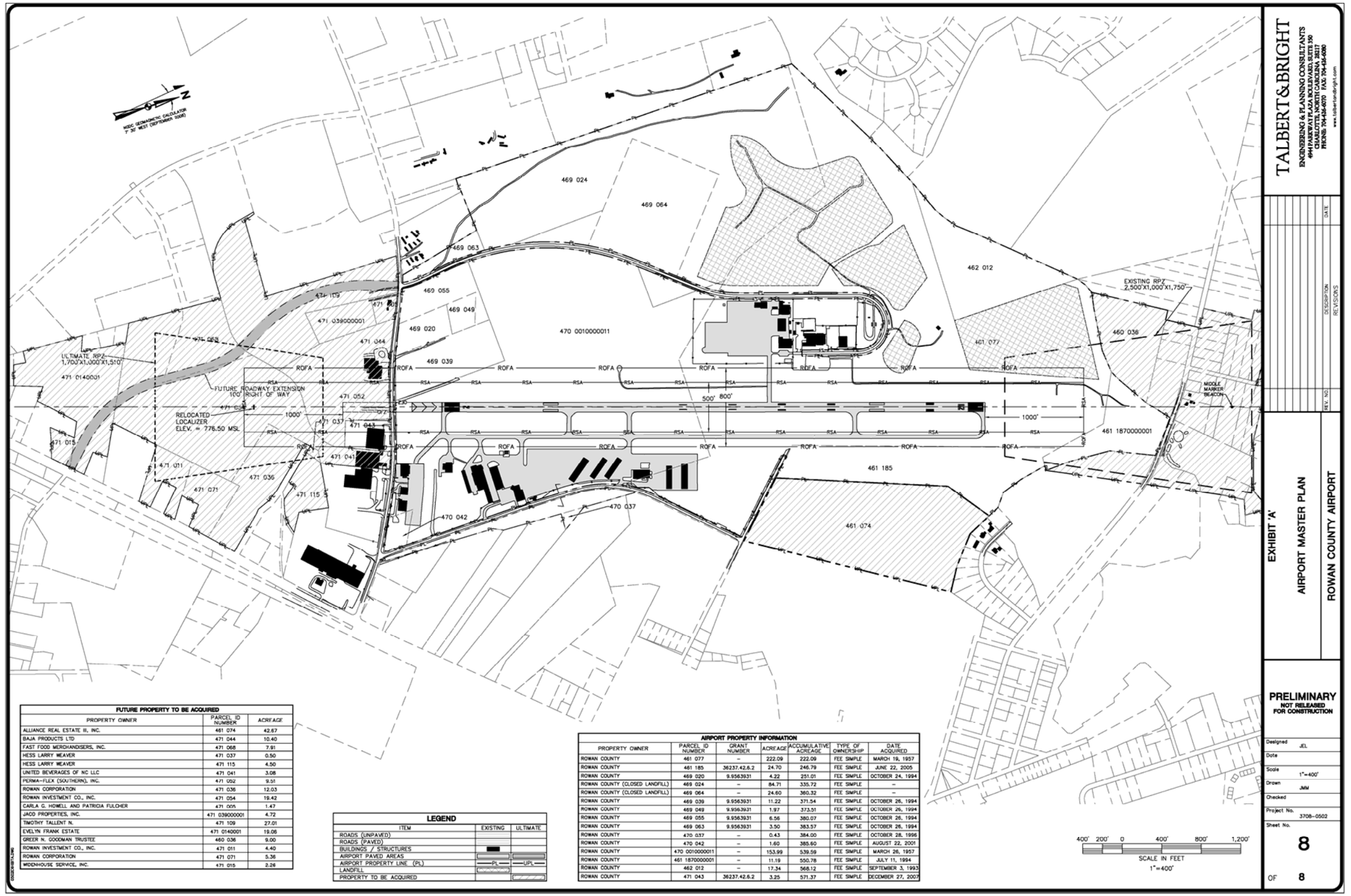
Project No.
Sheet No. 7
OF 8



FUTURE PROPERTY TO BE ACQUIRED

PROPERTY OWNER	PARCEL ID NUMBER	ACREAGE
ALLIANCE REAL ESTATE II, INC.	461 074	42.67
BAJA PRODUCTS LTD	471 044	10.40
FAST FOOD MERCHANDISERS, INC.	471 068	7.91
HESS LARRY WEAVER	471 037	0.50
HESS LARRY WEAVER	471 115	4.50
UNITED BEVERAGES OF NC LLC	471 041	3.08
PERMA-FLEX (SOUTHERN), INC.	471 052	9.51
ROWAN CORPORATION	471 036	12.03
ROWAN INVESTMENT CO., INC.	471 054	19.42
CARLA C. HOWELL AND PATRICIA FULCHER	471 005	1.47
JACO PROPERTIES, INC.	471 039000001	4.72
TIMOTHY TALLENT N.	471 109	27.01
EVELYN FRANK ESTATE	471 0140001	19.08
GREER N. GOODMAN TRUSTEE	460 036	9.00
ROWAN INVESTMENT CO., INC.	471 011	4.40
ROWAN CORPORATION	471 071	5.36
WIDENHOUSE SERVICE, INC.	471 015	2.26

LEGEND

ITEM	EXISTING	ULTIMATE
ROADS (UNPAVED)		
ROADS (PAVED)		
BUILDINGS / STRUCTURES		
AIRPORT PAVED AREAS		
AIRPORT PROPERTY LINE (PL)	PL	UPL
LANDFILL		
PROPERTY TO BE ACQUIRED		

AIRPORT PROPERTY INFORMATION

PROPERTY OWNER	PARCEL ID NUMBER	GRANT NUMBER	ACREAGE	ACCUMULATIVE ACREAGE	TYPE OF OWNERSHIP	DATE ACQUIRED
ROWAN COUNTY	461 077	–	222.09	222.09	FEE SIMPLE	MARCH 19, 1957
ROWAN COUNTY	461 185	36237.42.6.2	24.70	246.79	FEE SIMPLE	JUNE 22, 2005
ROWAN COUNTY	469 020	9.9563931	4.22	251.01	FEE SIMPLE	OCTOBER 24, 1994
ROWAN COUNTY (CLOSED LANDFILL)	469 024	–	84.71	335.72	FEE SIMPLE	–
ROWAN COUNTY (CLOSED LANDFILL)	469 064	–	24.60	360.32	FEE SIMPLE	–
ROWAN COUNTY	469 039	9.9563931	11.22	371.54	FEE SIMPLE	OCTOBER 26, 1994
ROWAN COUNTY	469 049	9.9563931	1.97	373.51	FEE SIMPLE	OCTOBER 26, 1994
ROWAN COUNTY	469 055	9.9563931	6.56	380.07	FEE SIMPLE	OCTOBER 26, 1994
ROWAN COUNTY	469 063	9.9563931	3.50	383.57	FEE SIMPLE	OCTOBER 26, 1994
ROWAN COUNTY	470 037	–	0.43	384.00	FEE SIMPLE	OCTOBER 28, 1996
ROWAN COUNTY	470 042	–	1.60	385.60	FEE SIMPLE	AUGUST 22, 2001
ROWAN COUNTY	470 0010000011	–	153.99	539.59	FEE SIMPLE	MARCH 26, 1957
ROWAN COUNTY	461 1870000001	–	11.19	550.78	FEE SIMPLE	JULY 11, 1994
ROWAN COUNTY	462 012	–	17.34	568.12	FEE SIMPLE	SEPTEMBER 3, 1993
ROWAN COUNTY	471 043	36237.42.6.2	3.25	571.37	FEE SIMPLE	DECEMBER 27, 2007

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PHONE: 704-424-4700 FAX: 704-424-4580
www.talbertandbright.com

DATE
DESCRIPTION
REVISIONS
REV. NO.

EXHIBIT 'A'
AIRPORT MASTER PLAN
ROWAN COUNTY AIRPORT

PRELIMINARY
NOT RELEASED FOR CONSTRUCTION

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Project No.	3708-0502
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OF	8

This chapter details the various projects required for continued improvement and operation of Rowan County Airport for a period of 20 years (2008-2027). These projects, by phase (time period), include estimates of probable construction costs in constant 2008 dollars. These planning cost estimates are intended as order of magnitude costs only. More detailed project definitions and associated estimates must be developed prior to implementation of any project identified herein.

The 20-year airport improvement program is broken into one of the three following development phases:

- Phase I (2008-2012)
- Phase II (2013-2017)
- Phase III (2018-2027).

A brief description of each improvement is provided for each development phase, as illustrated on the ALP. The recommended staging is not absolute, and changes in demand, priorities, economy, or funding may alter the need or timing of each proposed development.

The following sections include various equipment, construction, and development items scheduled for each phase, along with estimated costs at 2008 constant dollars. These costs should be periodically reviewed and updated to account for inflation and other changing conditions. Each figure represents an order of magnitude estimate of the total project cost for each item, including not only construction, but also incidental expenses such as engineering, planning, construction administration, surveying, and testing. Since these are preliminary order of magnitude estimates for planning purposes, a contingency amount was added to each cost item to cover unforeseen conditions, which may occur during actual development. This approach is an industry standard used to prepare preliminary planning estimates and, though somewhat conservative, reduces the likelihood of budget overruns when detailed design is completed and bids received.

This chapter also includes a funding analysis based on typical funding sources. Four primary funding sources were used for airport improvement projects at Rowan County Airport. These four funding sources include the FAA, NCDOA, Owner, and private developers. The following sections describe funding sources and eligibility criteria.

7.1 FAA FUNDING

To promote the development of airports to meet the nation's needs, the federal government embarked on a Grants-In-Aid Program to units of state and local government after the end of World War II. This early program, the Federal-Aid Airport Program (FAAP) was authorized by the Federal Treasury Act of 1946 and provided funding from the Treasury (Table 7.1-1).

Table 7.1-1
Milestones in Federal Aid to Airports
Rowan County Airport

Year	Federal Aid Program
May 13, 1946	Federal Airport Act established the Federal-Aid Airport Program (FAAP), the first peacetime program of financial aid aimed exclusively at promoting development of the nation's civil airports. Except for a lapse in new funding during fiscal 1954, the program continued for 24 years.
May 21, 1970	Airport and Airway Development Act of 1970 and Airport and Airway Revenue Act of 1970 replaced FAAP by an Airport Development-Aid Program (ADAP) with greatly increased funding drawn from a new Airport and Airway Trust Fund.
June 18, 1973	Airport Development Acceleration Act of 1973 increased the annual funding level of the ADAP.
July 12, 1976	Airport and Airway Development Act Amendments of 1976 ended a one-year lapse in authorization for grants under ADAP, raised the program's funding level, increased the federal share of grants, and expanded the types of projects eligible.
September 3, 1982	Airport and Airway Improvement Act of 1982 reestablished FAA's airport grants program, which had been inactive since the end of fiscal 1981, and renamed it the Airport Improvement Program (AIP).
May 26, 1994	AIP Temporary Extension Act of 1994 renewed FAA's authority to award AIP grants, which had lapsed on September 30, 1993. Subsequently, the Federal Aviation Administration Authorization Act of 1994 continued the program's authorization through fiscal 1996.
October 9, 1996	Federal Aviation Reauthorization Act of 1996
August 5, 1997	Taxpayer Relief Act of 1997
April 6, 2000	Wendell H. Ford Aviation Investment and Reform Act for the 21st Century, known as AIR 21. This four-year reauthorization bill covered fiscal years 2000 through 2003. The AIP and Facilities and Equipment program were funded through a series of extensions during fiscal years 1998-99. AIR 21 provided a substantial increase in aviation funding and provided a guarantee that funds received into the Airport and Airway Trust Fund would be used for aviation purposes.
December 12, 2004	Vision 100 – Century of Aviation Reauthorization Act of 2003; reauthorization of AIP through fiscal year 2007.
February 29, 2008	Airport and Airway Extension Act of 2008 gave FAA nine months of AIP program authority.
As of June 5, 2008	H.R.2881 – FAA Reauthorization Act of 2007/S. 1300 – Aviation Investment and Modernization Act of 2007. The U.S. House of Representatives has completed its actions on a proposed reauthorization bill. The U.S. Senate has not completed its actions, and is unlikely to do so before the November 2008 elections. The House and Senate versions are not the same and will require conference committee resolution.

Source: FAA Office of Public Affairs

In 1970, a more comprehensive program was established with the passage of the Airport and Airway Development Act of 1970. This Act provided grants for airport planning under the Planning Grant Program (PGP) and for airport development under the Airport Development-Aid Program (ADAP). These programs were funded from the Airport and Airway Trust Fund, which received income from taxes on airline tickets, airfreight, and aviation fuel. The authority to issue grants under these two programs expired on September 30, 1981. During this 11-year period, a total of 8,809 grants were awarded for a total of $4.5 billion for airport planning and development.

The Airport Improvement Program (AIP), established by the Airport and Airway Improvement Act of 1982, initially provided funding legislation through fiscal year 1992. Since then, the AIP has been authorized and appropriated on a yearly basis. Based on the Taxpayer Relief Act of 1997, funding for this program is generated from:[23]

- 7.5% ad valorem tax on airline tickets
- $3.40 per passenger per segment domestic flight segment tax
- $7.50 international facilities tax and applicable domestic tax rate for flights between the continental U.S. and Hawaii and Alaska
- $15.10 international departure and arrival fee
- 7.5% ad valorem tax on value of frequent flier miles
- 6.25% tax on freight-way bills
- $0.043 per gallon commercial fuel tax
- $0.193 per gallon tax on general aviation fuel
- $0.218 per gallon tax on jet fuel

The federal government currently provides 95 percent funding at most airports for eligible items under the AIP. Unfortunately, the federal government has not matched expenditures with revenues collected at this time so that the trust fund has a total surplus not being spent for airport development.

Federal airport improvement funds must be spent on FAA eligible projects as defined in FAA *Order 5100.38 Airport Improvement Program (AIP) Handbook*. In general, the handbook states that:

- an Airport must be in the currently approved NPIAS.
- most public use airport improvements are eligible for 95 percent federal funding

[23]Federal Aviation Administration, "Current Aviation Excise Tax Structure," <http://www.faa.gov/airports_airtraffic/trust_fund/ >, accessed March 18, 2008.

- general aviation terminal buildings, T- and corporate hangars, and other private use facilities are not eligible for federal funding until all other projects are complete
- the AIP must be depicted on an FAA approved ALP

Until 1989, federal assistance to local airports had been from the FAA directly to cities, counties, and airport authorities. Unlike the federal highway and mass transit programs, there was very little formal state involvement in the process. There was growing concern on the part of states that this approach did very little to help states develop an effective airport system meeting the goals and needs of their citizens and industries. In many cases FAA priorities were almost directly opposed to the priorities states felt were important in developing and upgrading their state systems. To explore the possibility of an increased state role, Congress passed the State Block Grant Program in 1989 to allow a limited number of states to administer at least some of the federal aid funds provided to their airports. As approved, and still operated currently, Block Grant participant states administer funds for

(1) general aviation airports
(2) airports designated as reliever general aviation
(3) non-primary commercial airline airports (those with less than 10,000 annual enplaned passengers)

The larger airline airports in the participating states continue to work directly with FAA for their funds.

The current Block Grant states are:

- Illinois (1989)
- Missouri (1990)
- Michigan (1993)
- Texas (1993)
- Wisconsin (1993)
- North Carolina (1994)
- Tennessee (1997)
- Pennsylvania (2002)
- New Hampshire (2008)
- Georgia (2008)

New Jersey became a Block Grant state in 1993 but withdrew from the program in 2005.

The primary requirement for Block Grant eligibility is a federal regulation, which stipulates that an airport must be listed in NPIAS in order to receive federal funds. Rowan County Airport is listed in NPIAS.

7.2 NCDOA FUNDING

State Aid to Airports Grant Agreement is the basic airport aid program of NCDOT. Under the terms of North Carolina General Statutes Chapter 63,

> *"the Department of Transportation is hereby authorized…to provide state aid in the forms of loans and grants to cities, counties, and public airport authorities for the purpose of planning, acquiring, constructing, or improving municipal, county, and other publicly owned or controlled airport facilities, and to authorize related programs of aviation safety, promotions, and long-range planning."*

Wherever possible, state funds are allocated through the annual update of the Transportation Improvement Program (TIP). Briefly, each fall, airport sponsors are requested to provide their needs for airport development grants for review by NCDOT. After a six-month review process, the approved airport projects are combined with those of all other NCDOT modal responsibilities and published in the annual TIP update, usually in June. The update is on an annual basis for a three-year plan, thus the first two years of each update are reconfirmations and revisions of previous plans, while the third year consists entirely of new allocations.

During the fiscal year, a modest amount of returned state funds are available for funding projects outside of TIP process. These funds result from closings of projects with excess funds and cancellations usually by the sponsor of projects that were not initiated. Funding available during the year vary, are usually limited, and normally may be made available only to high priority safety or airport preservation projects. Table 7.2-1 illustrates the recommended projects for Rowan County Airport for fiscal years 2008 and 2009.

Table 7.2-1
State Transportation Improvement Program – Aviation Program
Rowan County Airport

		Funding Source		
Fiscal Year	**Description**	**Federal**	**State**	**Local**
2008	Rehabilitate Apron Pavement - Phase 1	$500,000	$0	$55,556
2009	Rehabilitate Apron Pavement - Phase 2	$500,000	$0	$55,556

Source: North Carolina Department of Transportation, "2007-2013 State Transportation Improvement Program, Aviation Program," <http://www.ncdot.org/planning/development/TIP/tip07/pdf/2007-2013_STIP.pdf>, accessed March 18, 2008

Funding under state aid to airports is dependent on a number of factors and can range from 50% of the non-federal share to 90% of the non-federal share. The term "non-federal" share does not require that federal aid be in a project, but rather the total amount of the project, less any federal funds, be used to calculate the non-federal percentage of the project. Current percentages and the eligible work elements are:

- **50% Non-Federal Share** – This is the basic state aid to airports' percentage. In the event an eligible work element is not specified as being eligible for a different percentage, it can receive a grant of 50% of the non-federal share of eligible, approved work elements. This 50% share is for projects constructed as state-local or as the state share of an AIP grant from the FAA.

- **90% Non-Federal Share** – Aviation safety enhancement involves only projects built without any form of federal aid. This funding results in projects of this nature requiring only a 10% local match, the same as a Block Grant, and makes it more financially feasible for local government to obtain its local share. However, not all projects eligible for state aid to airports are eligible for the 90% match.

- **80% Non-Federal Share (New Airports Only)** – A special funding rate was introduced in the North Carolina Airport System Plan to provide an 80% state share for basic construction of a new airport. This share is valid both for state-local projects, resulting in 80% state-20% local or for federal projects (currently 80% federal-16% state-4% local for Block Grant airports). Projects eligible for 80% funding are limited to planning and environmental assessments, land acquisition, and basic construction of runways, taxiways, aprons, and lighting systems.

Additionally, Block Grant participant states administer funds for:

- General aviation airports
- Airports designated as reliever general aviation
- Non-primary commercial airline airports (those with less than 10,000 annual enplaned passengers)

The larger airline airports in the participating states continue to work directly with the FAA for their funds. In North Carolina, this results in 65 of the 74 publicly owned airports being part of the Block Grant process, while the remaining nine commercial service airports continue to work directly with the FAA's Atlanta Airports District Office on their grants.

7.3 LOCAL FUNDING

Local funding of capital projects for the Rowan County Airport is currently provided by the Rowan County. The Airport Manager is employed by the County, and the County Administrator represents RUQ it on all grants.

At both state and federal levels, receipt of funds carries with it an obligation on the part of the local government to operate and maintain the airport in an acceptable manner. Since public funds are used for many projects, the general public has a right to expect that the resulting projects will be available without unfair discrimination and will be operated and maintained in an acceptable manner. Because of the dominance of federally obligated airports, the State Aid to Airports Grant Agreement has used a simple assurance, which stipulates:

> *"The sponsor agrees to operate the airport for the use and benefit of the general public and shall not deny reasonable access to public facilities by the general public."*
>
> *"The sponsor agrees to operate, maintain, and control the airport in a safe and serviceable condition for a minimum of twenty (20) years following the date of (the grant) Agreement and shall immediately undertake, or cause to be undertaken, such action to correct safety deficiencies as may be brought to its attention by the Department (of Transportation)."*

The State Grant Agreement also has language similar to the FAA in requiring state concurrence with sale of land acquired with state funds, plus requires a diligent effort on the part of the sponsor to implement compatible land use planning around the airport to protect both the airport and local citizens from adverse effects of development.

7.4 AIRPORT DEVELOMENT PROGRAM

This section lists each future airport improvement project by stage for the 20-year planning period (2008-2027). Planning estimates of probable construction cost are listed on Table 7.4-1 (page 136), as well as a breakdown of potential FAA, state, local, and other funding sources with a funding summary.

Table 7.4-1
Preliminary Opinion of Probable Cost
Summary
Rowan County Airport

Description	Total (2008 $)	Federal	State	Local
Phase I (0-5 years)				
Benefit Cost Analysis/Environmental Documentation	$375,000.00	$337,500.00	$0.00	$37,500.00
Land Acquisition	$11,107,350.00	$9,996,615.00	$0.00	$1,110,735.00
Airport Road Relocation	$2,633,155.00	$0.00	$1,316,577.50	$1,316,577.50
1,000-Foot Runway 02 and Parallel Taxiway Extension (East Side)	$8,391,262.50	$7,552,136.25	$0.00	$839,126.25
Parallel-Stub Taxiways (West Side)	$7,932,038.75	$7,138,834.88	$0.00	$793,203.88
Runway 02/20 Strengthening and Grooving	$1,650,020.00	$1,485,018.00	$0.00	$165,002.00
Apron Rehabilitation (Existing Terminal Area)	$705,157.00	$634,641.30	$0.00	$70,515.70
New T-Hangars (3) (North of Existing Apron on East Side)	$4,352,591.88	$2,769,832.69*	$0.00	$1,582,759.19
New Terminal Apron (West Side)	$10,053,242.50	$9,047,918.25	$0.00	$1,005,324.25
New Terminal Parking and Access Road (West Side)	$2,584,941.25	$2,326,447.13	$0.00	$258,494.13
New Terminal (West Side)	$1,417,547.50	$0.00	$708,773.75	$708,773.75
Fuel Farm (West Side)	$1,900,093.25	$1,710,083.93	$0.00	$190,009.33
Corporate Hangar Access Road (East Side)	$166,405.00	$149,764.50*	$0.00	$16,640.50
Corporate Hangars (2) (East Side)	$2,283,859.75	$615,473.78*	$0.00	$1,668,385.98
Corporate Hangars (Adjacent to Old Terminal)	$2,345,292.75	$670,763.48*	$0.00	$1,674,529.28
	$57,897,957.13	$44,435,029.16	$2,025,351.25	$11,437,576.71
Phase II (6-10 years)				
T-Hangar (Adjacent to Old Terminal)	$767,179.23	$288,432.61*	$0.00	$478,746.62
New T-Hangar (1) (North of Existing Apron on East Side)	$2,005,600.54	$1,316,862.79*	$0.00	$688,737.75
New Terminal Apron and Taxiway (West Side)	$10,648,923.24	$9,584,030.91	$0.00	$1,064,892.32
New Terminal Expansion (West Side)	$1,095,545.74	$0.00	$547,772.87	$547,772.87
Corporate Hangars (2) (East Side)	$2,953,207.05	$820,040.90*	$0.00	$2,133,166.16
Corporate Hangar (Adjacent to Old Terminal)	$2,965,484.56	$831,090.66*	$0.00	$2,134,393.91
Corporate Hangars (2) and Apron (West Side)	$3,775,132.38	$1,927,342.78*	$0.00	$1,847,789.60
Corporate Hangar Access Roads (West Side)	$1,324,290.49	$1,191,861.44	$0.00	$132,429.05
Subtotal	$25,535,363.22	$15,959,662.08	$547,772.87	$9,027,928.27
Phase III (11-20 years)				
New T-Hangars (2) (North of Existing Apron on East Side)	$6,492,892.08	$4,597,498.48*	$0.00	$1,895,393.60
Corporate Hangars (1) (East Side)	$1,922,401.08	$557,356.84*	$0.00	$1,365,044.24
Corporate Hangar (Adjacent to Old Terminal)	$3,844,474.34	$1,114,418.64*	$0.00	$2,730,055.70
Corporate Hangars (4) and Apron (West Side)	$10,546,699.74	$5,739,056.54*	$0.00	$4,807,643.19
New Terminal Parking Lot Expansion (West Side)	$1,889,760.07	$1,700,784.06	$0.00	$188,976.01
Old Terminal Parking Lot Expansion (East Side)	$370,899.31	$333,809.38	$0.00	$37,089.93
Subtotal	$25,067,126.60	$14,042,923.94	$0.00	$11,024,202.66
Total	$108,500,446.94	$74,437,615.19	$2,573,124.12	$31,489,707.64

* - Assumes participation in site preparation and taxiway access but not in hangar construction
Source: Talbert & Bright, Inc. (October 2008)

7.5 SUMMARY

The value of Rowan County Airport to the local community is significant as it plays an important part in the economic health of the region. The importance of an airport with modern, up-to-date facilities that provides convenient air access to area businesses should not be underestimated. Air transportation increases and improves communication by bringing people together for business, social, recreational, and cultural purposes. Exchanges of ideas and exposure to business opportunities substantially add to the vitality and vibrancy of a growing area such as Rowan County.

The existence of a dependable all-weather public airport is a definite asset in attracting new industry and commercial business to the area. Business, with its increasing reliance on air transportation, places airport facilities high on its list of desirable community characteristics when selecting a site to initiate a new venture or relocate an existing operation.

The Airport Master Plan recommendations, if followed, will allow Rowan County Airport to continue to prosper and accommodate the region's need for safe and efficient air service.

GLOSSARY AND ABBREVIATIONS

Actual Runway Length The length of full width, usable runway from end to end or full strength pavement where those runways are paved.

ADF Automatic Direction Finder

Advisory Circular (AC) A series of FAA publications consisting of all non-regulatory material of a policy, guidance, and informational nature.

Aeronautical Chart A map representing a portion of the earth made especially for use in air navigation.

AIP Airport Improvement Program

Aircraft Design Group (ADG) A grouping of airplanes based on wingspan.

Aircraft Mix The numerical or percentage breakdown of aircraft based at or using an airport into categories by aircraft type.

Aircraft Operation An aircraft arrival or departure, including touch-and-go operations.

Aircraft Tie-down Positions on the ground surface that is available for securing aircraft.

Air Pollution The presence of contaminants in the air in concentrations that prevent the normal dispersive ability of the air, and that interferes directly or indirectly with man's health, safety or comfort, or with the full use and enjoyment of his property.

Airport An area of land or water that is used or intended to be used for the landing and takeoff of aircraft, including its buildings and facilities. (FAR Part 1)

Airport Classification

- **Local Service (LO)** Have known forecasted development limitations for expansion constraints. These include environmental, air space topography, proximity of similar services, land use incompatibility, ownership status, financial infeasibility, surrounding development strangulation, and low activity projections.

- **Basic Utility (BU)** Accommodate approximately 95 percent of the general aviation propeller fleet under 12,500 pounds. There are no special activity criteria required for these types of airports.

- **General Utility (GU)** Accommodate all general aircraft under 12,500 pounds and require at least 500 annual itinerant operations of aircraft between 8,000 and 12,000 pounds.

- **Basic Transport (BT)** Accommodates all general aviation aircraft up to 60,000 pounds. Maximum Gross Weight, including business jets and propeller transports (commuter aircraft). Basic transport airports must have at least 500 annual itinerant operations (existing or forecasted) by aircraft between 12,500 and 60,000 pounds. (MGW).

- **Air Carrier (AC)** Provide air commuter and/or scheduled air carrier service to communities in vicinity of an airport.

Airport Elevation The highest point of an airport's usable runways expressed in feet above mean sea level (MSL).

Airport Layout Plan (ALP) The plan for an airport showing the layout of existing and proposed airport facilities and structures.

Airport Master Plan Appropriate documents and drawings concerning the development of a specific airport form a physical, economic, social, and political jurisdictional perspective. The airport layout plan is a part of this plan.

Airport Operation A landing or a takeoff at an airport. (A low approach below traffic pattern altitude or a touch-and-go operation is counted as both a landing and a takeoff, i.e., two operations.)

Airport Service Area The area that generates demand for aviation surfaces.

Airport Surveillance Radar (ASR) A navigation instrument used to control air traffic within the immediate airport traffic areas.

Airspace The space above the ground in which aircraft travel. It is divided into corridors, routes, and restricted zones for the control and safety of traffic.

Air Taxi The transport of people or property for compensation by the holder of an Air Taxi Operating Certificate.

ALS Approach Lighting System.

Ambient The sum total of existing environmental conditions for any given impact category.

Ambient Air Quality The existing quality of the air.

Approach Slope The angle of descent to a runway.

Approach Surface An imaginary inclined surface longitudinally centered on the extended centerline of a runway, extending outward and upward from the runway and of specified size and gradient. It has shallower gradient that the corresponding glide slope.
Apron An area on an airport designated for the parking, loading, fueling, or servicing of aircraft.

ARFF Airfield Rescue and Fire Fighting.

ARTCC Air Route Traffic Control Center.

ASV Annual Service Volume.

ATC Air Traffic Control.

ATCT Air Traffic Control Tower.

Avigation Easement A form of legal land-use control prohibiting incompatible development of areas required for airports or aviation-related purposes.

Based Aircraft Aircraft stationed at the airport on a permanent basis.

Building Restriction Line (BRL) A line shown on the airport layout plan beyond which airport buildings must not be positioned in order to limit their proximity to aircraft movement areas and impact on airport imaginary surfaces.

CBD Central Business District.

Conical Surface A surface extending outward and upward from the periphery of the horizontal surface at a slope of 20 to 1 for a horizontal distance of 4,000 feet and extending to a height of 350 feet above the airport elevation.

Critical Aircraft The user aircraft, which requires the most sophisticated facilities at the airport; the aircraft for which facilities are designed.

Critical Habitat An entire habitat, or portion thereof, having any consistent element that is necessary to the normal needs or survival of an endangered or threatened species.

Crosswind A wind blowing across the line of flight of an aircraft.

Decibel (dB) A unit of measurement used to describe the sound pressure level. It is a dimensionless unit, which is commonly expressed as one-tenth of the logarithm of the ratio between two power levels, one of which is nominally a reference level. The human auditory response to a given increase in sound pressure is approximately proportional to the increase in sound pressure in comparison to the pressure already present.

Displaced Threshold Actual touchdown point on specific runways designated due to obstructions, which make it impossible to use the actual physical runway end.

DME Distance Measuring Equipment is an airborne instrument, which indicates the distance the aircraft is from a point usually a VOR station.

DOT U.S. Department of Transportation.

Draft Environmental Impact Statement FAA's initial evaluation of the environmental impact of a proposed action when coordinated pursuant to Section 102(20C) on NEPA is initiated.

Ecology The science or study of the relationship between an organism and its environment.

Ecosystem An ecological community together with its physical environment considered as a unit.

Effective Runway Gradient The maximum difference between runway centerline elevations divided by the runway length.

Endangered Species Those species in danger of extinction throughout all or a significant portion of their range.

Enroute Airways The route a flight follows from departure point to destination.

Environmental Assessment (EA) Report prepared by the sponsor of an action analyzing the environmental impact of a proposed action for which Federal financial assistance is being requested. This report may serve as the basis for the FAA's draft environmental impact statement or negative declaration.

FAA Federal Aviation Administration.

FAR Federal Aviation Regulation.

Fauna A collective term for the animal specified present in an ecosystem.

FIS Federal Inspection Service.

Fixed Based Operator (FBO) A private enterprise engaged in services related to general aviation, such as fuel sales, aircraft maintenance, hangar and apron parking, aircraft rental and sales, flight instruction and crop dusting.

Fleet Mix See Aircraft Mix.

Flight Service Station (FSS) FAA facility used for pilot briefings on weather, airports, altitudes, routes, and other flight planning data.

Flora A collective term for the plant species present in an ecosystem.
Floodplain That area that would be inundated by storm runoff which would occur under a given recurrent frequency flood condition.

Freight Property other than express, mail, and passenger baggage transported by air.

General Aviation (GA) All aviation except that classified as commercial air carrier or military.

General Aviation Aircraft All civil aircraft except those owned by and classified as air carrier.

Glide Slope (GS) An ILS navigation facility providing vertical guidance for aircraft during approach and landing.

Habitat An area possessing uniformity of physiography, vegetation, climate, or other qualities important for species survival.

Heliports Airports used for the landing and takeoff of helicopters.

Highly Restricted Airspace One common path out of an airport where aircraft must follow one another for one to five miles.

HIRL High Intensity Runway Lights.

Horizontal Surface A horizontal plane 150 feet above the established airport elevation, the perimeter of which is constructed by swinging arcs of specified radii from the center of each end of the primary surface of each runway and connecting the adjacent arcs by tangent lines.

IFR Airport An airport with an authorized approach procedure.

IFR Conditions Weather conditions below the minimum prescribed for flight under VFR.

Indirect Source A facility, building, structure, or installation, which attracts mobile air pollution source activity that results in emissions of a pollutant for which there is a national standard.

INM Integrated Noise Model.

Instrument Approach An approach to an airport with intent to land when the visibility is less than 3 miles and/or when the ceiling is at or below the minimum initial altitude.

Instrument Landing System (ILS) A landing approach system with an established course and descent path to align an aircraft with a runway for final approach.

Instrument Operations An aircraft operation in accordance with an IFR flight plan or an operation where IFR separation between aircraft is provided by a terminal control facility of air route traffic control center.

Itinerant Operations (ITI) Arrivals and departures of aircraft to or from an area greater than 20 miles from the airport. Itinerant operations may involve an aircraft based at that airport or an aircraft from another airport.

Landing Strips Landing facilities smaller than basic utility airports.

Large Airplane An airplane of more than 12,500 pounds maximum certified takeoff weight.

LDN Day/Night Average Sound Level.

Localizer (LOC) An electronic instrument that is part of an ILS and emits radio signals, which provide the pilot with course guidance to the runway centerline.

Local Operations (LCL) Operations performed by aircraft which (1) operate in the local traffic pattern for within sight of the tower; (2) are known to be departing for or arriving from flight in local practice areas within a 20 mile radius of the control tower; and (3) execute simulated instrument approached of low passes at the airport.

Low Altitude Airway The airways serving aircraft operations up to but not including 18,000 feet MSL.

MALS Medium Intensity Approach Lights.

MALSR Minimum Descent Altitude - the lowest altitude, expressed in feet above mean sea level (MSL), to which descent is authorized on final approach or during circling-to-land maneuvering in execution of a standard instrument approach procedure where no electronic glide slope is provided.

Military Operations An operation by military aircraft.

MIRL Medium Intensity Runway Lights.

MOA Military Operations Area.

MSL Mean Sea Level used as an elevation datum.

NAVAID Any facility used in aid of air navigation, including lights, equipment for disseminating weather information, for signaling, for radio direction finding, or for radio or other electronic communication, and any other structure or mechanism having a similar purpose for guiding or controlling flight in the air of the landing or take-off of aircraft.

NDB Non-directional Beacon.

Noise Contour A line connecting points of equal noise exposure.

Non-Precision Approach Procedure A standard instrument approach procedure in which no electronic glide slope is provided.

Non-Precision Instrument Runway A runway having only horizontal navigation guidance for which a straight-in, non-precision instrument approach procedure has been approved.

Non-Scheduled Service Revenue flights that are not operated in regular scheduled service, such as charter flights, and all non-revenue flights incident to such flights.

Normal Airspace Where aircraft can be fanned out over three basic directions.

NPI Non-Precision Instrument.

NPIAS National Plan of Integrated Airport System.

NWS National Weather Service.

Obstacle Free Area (OFA) A two-dimensional ground area surrounding runways, taxiways, and taxilanes which are clear of objects except for whose location is fixed by function.

Obstacle Free Zone (OFZ) The airspace centered about the runway that is clear of object penetrations other than frangible NAVAIDS.

OC Obstruction Chart.

ODAL Omni Directional Approach Lighting System.

OFA Object Free Area.

OM Outer Marker.

OPBA Operations Per Based Aircraft.

Operation Any airborne arrival or departure of an aircraft at or from an airport. Touch-and-go practice landings are considered as two operations.

Origination The initial enplanement of any passengers and cargo; total origination include all enplanements except transfers and stopovers.

Peak Hour Represents the highest number of operations or passengers during the busiest hour of an average day of a peak month.

Pollutant An introduced gas, liquid, or solid that makes a resource unfit for a specific purpose.

Precision Approach Procedure A standard instrument approach procedure in which an electronic glide slope is provided, such as ILS or PAR. (FAR Part 1)

Precision Instrument The term used to describe an approach using both horizontal and vertical guidance. This term also describes the runway with this type of approach and the markings on the runway.

Primary Runway That runway which provides the best wind coverage. This is the runway that receives the most usage at an airport.

Primary Surface A surface longitudinally centered on the runway. When the runway has a specially prepared surface, the primary surface extends 200 feet beyond each runway end. When there is no hard surface or planned hard surface, the primary surface ends at the end of the runway. The width on the primary surface will be that width prescribed in FAA Part 77 for the most precise existing or planned approach to that runway end.

RNAV Area Navigation.

Rotating Beacon A navigational aid emitting alternating white and green flashes to indicate a lighted airport or white flashes only for an unlighted airport.

Runway (R/W) A defined area on an airport prepared for landing and takeoff of aircraft along its length.

Runway End Identification Lights (REIL) An airport lighting facility that consists of a single flashing high intensity white light installed at each approach end corner of a runway and directed toward the approach zone, enabling the pilot to identify the threshold of a usable runway.

Runway Gradient (effective) The average difference in elevation of the two ends of the runway divided by the runway length if no intervening point lies more than five feet above or below a straight like joining the two ends of the runway. If the criteria are not met, the

runway profile will be segmented and aircraft data will be applied for each segment separately.

Runway Protection Zone (RPZ) An area (formerly referred to as the clear zone) used to enhance the safety of aircraft operations.

Runway Safety Area (RSA) A defined surface surrounding the runway prepared or suitable for reducing risk of damage to airplanes in the event on an undershoot, overshoot, or excursion from the runway.

Runway Strength The ability of a runway to support aircraft of a designated gross weight for single wheel, dual wheel, and dual tandem wheel gear types.

RVR Runway Visual Range.

Segmented Circle An airport aid identifying the traffic pattern direction.

Small Airplane An airplane of 12,500 pounds or less maximum certificated takeoff weight.

Socioeconomic Data Pertains to the population and economic characteristics of a region.

Special VFR Operations Aircraft operating in accordance with clearances within certain control zones in weather conditions less than the basic VFR weather minimums.

Straight-In Approach An instrument approach wherein the final approach is commenced without first having executed a procedure turn (not necessarily completed with a straight-in landing.)

Student Activity Any aviation activity by student pilots.

TACAN Tactical Air Navigation.

TAP Terminal Area Plan.

Taxilane The portion of the aircraft parking area used for access between taxiways and aircraft parking positions.

Taxiway A defined area on an airport prepared for the surface movement of aircraft to and from the runway.

TCA Terminal Control Area.

Terminal Airspace The controlled airspace normally associated with aircraft departure and arrival patterns to or from airports within a terminal system.

Terminal Building That building on an airport, which is used in making the transition between surface transportation and air transportation.

Terminal Facilities The airport facilities providing services for air carrier operations that serve as a center for the transfer of passengers and baggage between surface and air transportation.

Threshold The designated beginning of the runway that is available and suitable for the landing of aircraft. When the threshold is located at a point other than at the beginning of the pavement, it is referred to as either a displaced threshold or a relocated threshold depending on how the pavement behind the threshold may be used.

Transient Operations All operations conducted by aircraft not based at the Home Airport.

Ultimate Refers to development, which will occur beyond the twenty-year planning period.

Unicom Frequencies authorized for aeronautical advisory services to private aircraft.

Unrestricted Airspace Implies that no restrictions in noise procedures, other airport traffic, or geographical limitations are present.

VFR Airport An airport without an authorized or planned instrument approach procedure.

Victor Airway Phonetic designation of VOR airways.

Visual Approach An approach wherein an aircraft having an air traffic control authorization may deviate from the prescribed instrument approach procedure and proceed to the airport of destination, served by an operational control tower, by visual reference to the ground.

Visual Approach Slope Indicator (VASI) An airport lighting facility that provides vertical visual guidance to aircraft during approach and landing, by radiating a directional pattern of high intensity red and white focused light beams.

Visual Flight Rules (VFR) Rules that govern the procedures for conduction flight under visual conditions (FAR Part 91).

VOR Very high frequency omni-directional range air navigation aid, which provides bearing information to aircraft.

VOR/DME A VOR to which a specific kind of distance measuring device has been added. (See VORTAC)

VORTAC VOR with TACAN.

Wind Cone (Sock) A free rotating fabric cone that indicates wind direction and wind force.

Wind Coverage Refers to orientation of runway in relationship to direction of prevailing winds (concerns usability of runway for takeoffs and landings).

Wind Rose A diagram for a given location showing relative frequency and velocity of wind from all compass directions.

Wind Tee A tee-shaped free rotating device that indicates wind direction.

INSTRUMENT FLIGHT RULES OPERATIONS

Single Engine Aircraft

Abbreviation	Manufacturer	Model
A28A	Cessna	172RG Skyhawk
AA1	Grumman	AA1 Yankee
AA5	Grumman	AA5 Tiger
AA5A	Grumman	AA5A Cheetah
AA5B	Grumman	AA5B Tiger
AC11	Rockwell	AC-11 Commander
AC14	Rockwell	114 Commander
B36	Beechcraft	36 Bonanza
BE19	Beechcraft	B36TC Bonanza
BE23	Piper	PA-28R Cherokee Arrow
BE24	Beechcraft	F33 Bonanza
BE33	Beechcraft	A36 Bonanza
BE35	Piper	PA-46 Malibu Mirage
BE36	Piper	PA-26 Dakota
BL17	Piper	PA-28 Archer
BL8	Velocity	XLRG
C10T	Cessna	210T Centurion
C150	Cessna	150
C152	Cessna	152
C172	Cessna	172 Skyhawk
C177	Cessna	177 Cardinal
C180	Cessna	180 Skywagon
C182	Cessna	182 Skylane
C185	Cessna	185 Skywagon
C195	Cessna	195
C205	Cessna	205 Super Skywagon
C206	Cessna	206 Stationair
C207	Cessna	207 Skywagon
C210	Cessna	210 Centurion
C72R	Cessna	172R Skyhawk
C77R	Cessna	177 Cardinal
C82	Cessna	182 Skylane
C82R	Cessna	182R Skylane
C82T	Cessna	182T Skylane
CH2T	Zenair	CH2T
COL3	Cirrus	SR22
COL4	Cessna	172S Skyhawk
COUR	Helio	H-295 Courier
DA40	Diamond	DA40 Katana
E400	Extra	E400
F33A	Beechcraft	F33A Bonanza
GA8	Gippsland	GA8 Airvan
GLAS	Glasair	III
HUSK	Aviat	A-1 Husky
HXB	Experimental Aircraft	Cruise IAS > 100 and < 201 Kt.

Single Engine Aircraft

Abbreviation	Manufacturer	Model
LA4	Lake	LA-4 Buccaneer
LA25	Lake	LA-250 Renegade
LANC	Lancair	IV
LC42	Columbia	400
LNC2	Lancair	200
LNC4	Lancair	4
M20	Mooney	M20
M20A	Mooney	M20A
M20C	Mooney	M20C
M20F	Mooney	M20F
M20J	Mooney	M20J
M20K	Mooney	M20K
M20M	Mooney	M20M Bravo
M20P	Mooney	M20P
M20R	Mooney	M20R Ovation
M20T	Mooney	M20T Acclaim
M7	Maule	M7
MO20	Mooney	M20F
NAV	Ryan	L-17 Navion
NAV1	Ryan	L-17 Navion
P210	Cessna	P210 Centurion
P28	Piper	PA-28 Cherokee
P28A	Piper	PA-28A Cherolee
P28B	Piper	PA-28B Dakota
P28P	Piper	PA-28B Dakota
P28R	Piper	PA-28R Cherokee Arrow
P28T	Piper	PA-28T
P32A	Piper	PA-32A Cherokee Six
P32R	Piper	PA-32R Lance
P32T	Piper	PA-32T Lance
P46T	Piper	PA-46T Malibu Meridian
PA2	Piper	PA-2 Super Cruiser
PA22	Piper	PA-22 Tri-Pacer
PA24	Piper	PA-24 Commanche
PA28	Piper	PA-28 Cherokee
PA32	Piper	PA-32 Saratoga
PA46	Piper	PA-46 Malibu
PARO	Beechcraft	F33A Bonanza
PA2T	Piper	PA-2T Archer II
R90R	Ruschmeyer	R90R
RANG	Cessna	182P Skylane
RV6	Van's	RV-6
RV7	Van's	RV-7
RV8	Van's	RV-8
SR20	Cirrus	SR20
SR22	Cirrus	SR22

Single Engine Aircraft

Abbreviation	Manufacturer	Model
SYMP	Symphony	OMF
T34	Beechcraft	T-34 Mentor
TB10	Socata	TB10 Tobago
TB20	Socata	TB20 Trinidad
TOBA	Socata	TB10 Tobago
TRIN	Socata	TB20 Trinidad
VELO	Velocity	XL
Z43	Zlin	Z-43

Multi-Engine Piston Aircraft

Abbreviation	Manufacturer	Model
AC50	Piper	PA-30 Twin Commanche
AC6L	Beechcraft	58 Baron
AEST	Beechcraft	E55 Baron
BE50	Piper	PA-31 Navajo
BE55	Beechcraft	E55 Baron
BE56	Beechcraft	56 Baron
BE58	Beechcraft	58 Baron
BE60	Beechcraft	58P Baron
BE65	Beechcraft	65 Queen Air
BE76	Beechcraft	76 Duchess
BE95	Beechcraft	95 Travel Air
BE99	Beechcraft	99 Airliner
C303	Cessna	303 Crusader
C310	Cessna	310
C320	Cessna	320 Skynight
C335	Cessna	335
C337	Cessna	337 Skymaster
C340	Cessna	340
C401	Cessna	401
C402	Cessna	402 Utililiner
C404	Cessna	404 Titan
C414	Cessna	414
C421	Cessna	421 Golden Eagle
DA42	Diamond	DA-42 Twin Star
GA7	Grumman	GA-7 Cougar
P34	Piper	PA-34 Seneca
P68	Partenavia	P68 Observer
PA23	Piper	PA-23 Appache/Aztec
PA27	Piper	PA-27 Aztec
PA30	Piper	PA-30 Twin Comanche
PA31	Piper	PA-31 Chieftain
PA34	Piper	PA-34 Seneca
PA44	Piper	PA-44 Seminole

Multi-Engine Piston Aircraft

Abbreviation	Manufacturer	Model
PA60	Piper	PA-60 Aerostar
T303	Cessna	T303 Crusader

Multi-Engine Turbo Aircraft

Abbreviation	Manufacturer	Model
AC90	Beechcraft	B200 King Air
AT42	Alenia	ATR-42
AT72	Alenia	ATR-72
B200	Beechcraft	B200 King Air
B300	Beechcraft	B300 King Air
B350	Beechcraft	B350 King Air
B10	Beechcraft	B200 King Air
BE9	Beechcraft	B200 King Air
BE10	Mitsubishi	MU-2 Marquis
BE20	Beechcraft	B200 King Air
BE30	Beechcraft	B200 King Air
BE90	Beechcraft	B200 King Air
BE9L	Beechcraft	C90 King Air
BE9T	Beechcraft	B300 King Air
C2	Grumman	C-2 Greyhound
C130	Lockheed	C-130 Hercules
C208	Cessna	208 Caravan
C425	Piper	PA-31 Navajo
C441	Cessna	441 Conquest
CVLT	Convair	CV-580
CN35	Casa	CN-235
D328	Dornier	DO-328
DH8A	DeHavilland (Bombardier)	DH8A Dash 8
DH8B	DeHavilland (Bombardier)	DH8A Dash 8
DH8C	DeHavilland (Bombardier)	DH8A Dash 8
DHC6	DeHavilland (Bombardier)	DHC-6 Twin Otter
DO28	Dornier	DO-228
DO32	Dornier	DO-328
E110	Embraer	EMB-110 Bandeirante
E120	Embraer	EMB-120 Brasilia
E2	Grumman	E-2 Hawkeye
E2C	Grumman	E-2C Hawkeye
F27	Fairchild	F-27 Freindship
F406	Reims	F-406
F50	Fokker	F50
JS31	Bae	JS-31 Jetstream
MU2	Mitsubishi	MU-2 Marquis

Multi-Engine Piston Aircraft

Abbreviation	Manufacturer	Model
P3	Lockheed	P-3 Orion
P180	Piaggio	P180 Avanti
PAY1	Piper	Cheyenne 1
PAY2	Piper	Cheyenne 2
PAY3	Piper	Cheyenne 3
PAY4	Piper	Cheyenne 400
PAYE	Bae	JS-31 Jetstream
PC6T	Pilatus	PC-6T Porter
PC12	Pilatus	PC-12
RC70	Beechcraft	E90 King Air
SC7	Shorts	SC-7 Skyvan
SH33	Shorts	330 Sherpa
SH36	Shorts	360
SW3	Fairchild	Metro III
SW4	Fairchild	Merlin
T34P	Beechcraft	T-34 Turbo Mentor
T34T	Beechcraft	T-34 Turbo Mentor
T6	Beechcraft	T-6 Texan II
TBM7	Socata	TBM-700
TEX2	Beechcraft	T-6 Texan II

Jet Aircraft

Abbreviation	Manufacturer	Model
A10	Fairchild-Republic	A-10
A306	Airbus	A300
A318	Airbus	A318
A319	Airbus	A319
A320	Airbus	A320
A321	Airbus	A321
AS65	Hawker Beechcraft	Beechjet 400A
ASTR	Astra	SPX
B703	Boeing	707-300
B712	Boeing	717-200
B721	Boeing	727-100
B72Q	Boeing	727-100(QF)
B732	Boeing	737-200
B733	Boeing	737-300
B734	Boeing	737-400
B735	Boeing	737-500
B737	Boeing	737-700
B738	Boeing	737-800
B73Q	Boeing	737-200

Jet Aircraft

Abbreviation	Manufacturer	Model
B742	Boeing	747-200
B744	Boeing	747-400
B752	Boeing	757-200
B753	Boeing	757-300
B763	Boeing	767-300
BE40	Hawker Beechcraft	Beechjet 400
C17	McDonnell Douglas (Boeing)	C-17
C21	Bombardier (Learjet)	35A
C25A	Cessna	CitationJet CJ2
C25B	Cessna	CitationJet CJ3
C40	Boeing	737-700
C500	Cessna	Citation 1
C501	Cessna	Citation 1-SP
C525	Cessna	CitationJet CJ1
C526	Cessna	CitationJet CJ1
C550	Cessna	Citation 2 Bravo
C551	Cessna	Citation 2-SP
C560	Cessna	Citaion 5 Ultra
C56X	Cessna	Citation Excel
C650	Cessna	Citation 3/6/7
C680	Cessna	Citation Sovereign
C750	Dassault	Falcon 50
CL30	Bombardier	Challenger 300
CL60	Bombardier	Challenger 600
CRJ	Bombardier (Canadair)	Regional Jet
CRJ1	Bombardier (Canadair)	CRJ-100
CRJ2	Bombardier (Canadair)	CRJ-200
CRJ7	Bombardier (Canadair)	CRJ-700
CRJ9	Bombardier (Canadair)	CRJ-900
DC86	Douglas	DC-8-60
DC87	Douglas	DC-8-70
DC9	Douglas	DC-9
DC93	Douglas	DC-9-30
DC94	Douglas	DC-9-40
DC95	Douglas	DC-9-50
DC10	Douglas	DC-10
E135	Embraer	ERJ-135
E145	Embraer	ERJ-145
E170	Embraer	ERJ-170
E45X	Embraer	ERJ-145 XR
E6	Boeing	707-320
EA6	Grumman	EA-6B Prowler
F15	McDonnell Douglas (Boeing)	F-15 Eagle
F16	General Dynamics (Lockheed Martin)	F-16 Fighting Falcon
F18	McDonnell Douglas (Boeing)	F/A-18 Hornet

Jet Aircraft

Abbreviation	Manufacturer	Model
F900	Dassault	Falcon 900
FA10	Dassault	Falcon 10
FA18	McDonnell Douglas (Boeing)	F/A-18 Hornet
FA20	Dassault	Falcon 20
FA50	Dassault	Falcon 50
G2	Gulfstream	G-II
G4	Gulfstream	G-IV
GALX	Gulfstream	G200
GLEX	Bombardier	Global Express
GLF2	Gulfstream	G-II
GLF3	Gulfstream	G-III
GLF4	Gulfstream	G-IV
GLF5	Gulfstream	G-V
H25A	Hawker Siddeley	HS25A
H25B	Hawker Siddeley	HS25B
H25C	Hawker Siddeley	HS25C
HS25	Hawker Siddeley	HS25A
HAR	McDonnell Douglas	AV-8B Harrier
J328	Dornier	Do-328 Jet
JET	Generic Jet	Generic Jet
K35R	Boeing	KC-135R Stratotanker
L39	Aero	L-39 Albatros
LJ24	Bombardier (Learjet)	24
LJ25	Bombardier (Learjet)	25
LJ31	Bombardier (Learjet)	31
LJ35	Bombardier (Learjet)	35
LJ40	Bombardier (Learjet)	40
LJ45	Bombardier (Learjet)	45
LJ55	Bombardier (Learjet)	55
LJ60	Bombardier (Learjet)	60
MD80	McDonnell Douglas (Boeing)	MD-80
MD82	McDonnell Douglas (Boeing)	MD-82
MD83	McDonnell Douglas (Boeing)	MD-83
MD88	McDonnell Douglas (Boeing)	MD-88
MU30	Mitsubishi	MU300
T1	Hawker Beechcraft	Beechjet 400A
T2	North American	T-2 Buckeye
T2P	North American	T-2 Buckeye
T37	Cessna	T-37 Tweet
T38	Northrop	T-38 Talon
WW24	IAI	1124 Westwind

Rotorcraft

Abbreviation	Manufacturer	Model
AS33	Eurocopter	AS-350 Astar
UH60	Sikorsky	UH-60 Blackhawk
H47	Boeing	CH-47 Chinook
H60	Sikorsky	UH-60 Blackhawk
V22	Bell/Boeing	V-22 Osprey
HU65	Eurocopter	HU-65 Dolphin
A109	Agusta	A-109
B06	Kawasaki	BK117
HELO	Generic	Generic

Instrument Flight Rules Operations – Year 2007 (Through July)
Rowan County Airport (RUQ)

Single-Engine Piston						Multi-Engine Piston				Multi-Engine Turboprop			
A28A	0	GLAS	0	RV6	4	AC50	0	PA31	19	AC90	0	PAY1	8
AA1	0	HUSK	0	RV7	2	AC6L	0	PA34	4	B200	0	PAY2	5
AA5	12	HXB	0	RV8	0	AEST	6	PA39	0	B300	0	PAY3	0
AA5A	0	LA4	0	R20	0	BE50	0	PA43	0	B350	70	PAY4	0
AA5B	0	LA25	0	SR22	29	BE55	47	PA44	1	B10	0	PAYE	0
AC11	1	LANC	0	SYMP	0	BE56	0	PA58	0	BE20	109	RC70	0
AC14	0	LC40	0	T34MIL	0	BE58	93	PA60	1	BE30	8	SC7	0
AC23	0	LC42	0	TB10	0	BE60	31	PASE	0	BE90	1	SH33	0
B36	0	LNC2	0	TB20	0	BE65	1	T303	0	BE9L	65	SH36	0
BE19	0	M20	0	TOBA	0	BE76	0			BE9T	10	SW4	4
BE23	0	M20A	0	TRIN	3	BE95	0			BL9	0	T34PMIL	0
BE24	5	M20C	0	VELO	0	BE99	0			C130MIL	0	T34TMIL	0
BE33	21	M20F	0	SR20	4	C303	0			C208	2	T6	2
BE35	54	M20J	0	NAV	0	C310	17			C425	1	TBM7	8
BE36	141	M20K	0	Z43	0	C320	0			C441	0	TEX2MIL	0
BL17	0	M20M	0	P32R	13	C335	0			CVLT	2		0
BL8	0	M20P	20	M5	0	C337	0			CN35MIL	0	F406	0
C10T	0	M20R	0	GLST	0	C340	7			D328	0	PC12	8
C150	0	M20T	2	T41	0	C401	0			DH8A	0	PC6T	0
C152	0	M7	0	BT6S	0	C402	2			DH8B	0	BE10	0
C172	73	MO20	2	C72	0	C404	0			DH8C	0	BE9	0
C177	7	NAV1	0			C414	6			DHC6	0		
C180	1	P210	0			C421	15			E110	3		
C182	54	P28	2			DA42	2			E120	0		
C185	12	P28A	19			DEF1	0			E2	0		
C195	0	P28B	4			GA7	0			E2CMIL	0		
C205	0	P28P	0			P34	0			F27	0		
C206	3	P28R	16			P68	0			F50	0		
C207	0	P28T	0			PA23	0			JS31	0		
C210	34	P32A	0			PA27	5			MU2	0		
C72R	0	P32R	13			PA30	3			P3MIL	0		
C77R	2	P32T	0							P180	0		
C82	0	P46T	0										
C82R	4	PA2	0										
C82T	3	PA22	0										
CH2T	0	PA24	8										
COL3	13	PA28	4										
COL4	0	PA32	75										
COUR	0	PA46	4										
DA40	4	PARO	0										
E400	0	PA2T	0										
F33A	0	R90R	0										
GA8	0	RANG	0										
				TOTAL	668			TOTAL	260			TOTAL	306

Instrument Flight Rules Operations – Year 2007 (Through July)
Rowan County Airport (RUQ)

Jet Aircraft						Helicopters	
A10	0	EA6MIL	0	LJ40	0	AS33	0
AC95	0	F15MIL	0	LJ45	10	C212	0
AS65	0	F16MIL	0	LJ55	0	UH60MIL	0
ASTR	0	F18MIL	0	LJ60	0	H47MIL	0
B190	0	F2TH	0	MU30	0	H60MIL	0
B230	0	F900	4	PRM1	0	V22MIL	0
B735	0	FA10	4	SB20	0	HU65MIL	0
BE40	42	FA20	4	SBR1	2	A109MIL	0
C17MIL	0	FA50	2	SBR2	0	B06	0
C21	0	G2	0	T1MIL	0	HELO	0
C25A	3	G4	0	T2MIL	0		
C25B	0	GALX	2	T2P	0		
C500	2	GLEX	0	T37MIL	0		
C501	2	GLF2	4	T38MIL	0		
C525	29	GLF3	0	WW24	0		
C526	0	GLF4	2	XL2	0		
C550	21	GLF5	0	JET ?	0		
C551	0	H25A	0				
C560	56	H25B	19				
C56X	657	H25C	0	F260	0		
C650	18	HS25	0	MD80	0		
C680	2	J328	0	MD83	0		
C722	0	K35RMIL	0	B752	0		
C750	6	LGE2	0	DC94	0		
CH35	0	LJ24	2	DC93	0		
CL30	0	LJ25	2	E145	0		
CL60	4	LJ31	3	CRJ1	0		
CRJ2	0	LJ35	4	E45X	0		
CRJ7	0	L39	0	DC10	0		
CRJ9	0			B73Q	0		
DC9	0			B732	0		
E135	0			A306	0		
				B721	0		
				DC87	0		
				B763	0		
				B733	0		
				B737	0		
				C40	0		
				MD88	0		
				DC86	0		
				B72Q	0		
				TOTAL	906	TOTAL	0

Instrument Flight Rules Operations – Year 2006
Rowan County Airport (RUQ)

Single-Engine Piston						Multi-Engine Piston				Multi-Engine Turboprop			
A28A	0	GLAS	0	RV6	2	AC50	0	PA31	30	AC90	0	PAY1	22
AA1	0	HUSK	0	RV7	0	AC6L	6	PA34	14	B200	0	PAY2	20
AA5	2	HXB	1	RV8	0	AEST	4	PA39	0	B300	0	PAY3	0
AA5A	0	LA4	0	R20	0	BE50	0	PA43	0	B350	88	PAY4	0
AA5B	0	LA25	3	SR22	68	BE55	40	PA44	5	B10	0	PAYE	1
AC11	8	LANC	0	SYMP	2	BE56	0	PA58	0	BE20	152	RC70	0
AC14	0	LC40	0	T34MIL	0	BE58	266	PA60	0	BE30	15	SC7	0
AC23	0	LC42	0	TB10	0	BE60	51	PASE	2	BE90	3	SH33	0
B36	0	LNC2	0	TB20	0	BE65	0	T303	0	BE9L	150	SH36	0
BE19	0	M20	5	TOBA	0	BE76	1			BE9T	30	SW4	0
BE23	0	M20A	0	TRIN	4	BE95	1			BL9	0	T34PMIL	0
BE24	0	M20C	0	VELO	0	BE99	0			C130MIL	0	T34TMIL	0
BE33	33	M20F	0	SR20	23	C303	0			C208	6	T6	0
BE35	117	M20J	0	NAV	0	C310	35			C425	2	TBM7	10
BE36	287	M20K	0	Z43	0	C320	1			C441	2	TEX2MIL	0
BL17	0	M20M	0	P32R	28	C335	0			CVLT	4		
BL8	0	M20P	45	M5	0	C337	8			CN35MIL	0	F406	0
C10T	0	M20R	0	GLST	0	C340	9			D328	2	PC12	23
C150	6	M20T	6	T41	0	C401	0			DH8A	0	PC6T	0
C152	0	M7	4	BT6S	0	C402	0			DH8B	0	BE10	14
C172	123	MO20	2	C72	1	C404	0			DH8C	0	BE9	0
C177	15	NAV1	1			C414	16			DHC6	0		
C180	2	P210	0			C421	12			E110	6		
C182	94	P28	2			DA42	0			E120	51		
C185	11	P28A	40			DEF1	0			E2	0		
C195	0	P28B	3			GA7	0			E2CMIL	0		
C205	0	P28P	0			P34	0			F27	0		
C206	4	P28R	17			P68	0			F50	0		
C207	0	P28T	0			PA23	2			JS31	0		
C210	67	P32A	3			PA27	6			MU2	5		
C72R	4	P32R	28			PA30	3			P3MIL	0		
C77R	8	P32T	4							P180	6		
C82	0	P46T	2										
C82R	6	PA2	0										
C82T	2	PA22	0										
CH2T	0	PA24	5										
COL3	37	PA28	19										
COL4	0	PA32	151										
COUR	0	PA46	6										
DA40	2	PARO	0										
E400	0	PA2T	0										
F33A	0	R90R	0										
GA8	0	RANG	0										
				TOTAL	1303			TOTAL	512			TOTAL	612

Instrument Flight Rules Operations – Year 2006
Rowan County Airport (RUQ)

Jet Aircraft						Helicopters	
A10	0	EA6MIL	0	LJ40	6	AS33	0
AC95	0	F15MIL	0	LJ45	36	C212	0
AS65	0	F16MIL	0	LJ55	0	UH60MIL	0
ASTR	6	F18MIL	0	LJ60	10	H47MIL	0
B190	2	F2TH	0	MU30	2	H60MIL	0
B230	0	F900	0	PRM1	4	V22MIL	0
B735	0	FA10	4	SB20	0	HU65MIL	0
BE40	48	FA20	24	SBR1	0	A109MIL	0
C17MIL	0	FA50	9	SBR2	0	B06	0
C21	0	G2	0	T1MIL	0	HELO	0
C25A	2	G4	0	T2MIL	0		
C25B	1	GALX	6	T2P	0		
C500	2	GLEX	0	T37MIL	0		
C501	8	GLF2	4	T38MIL	0		
C525	22	GLF3	0	WW24	0		
C526	0	GLF4	16	XL2	0		
C550	24	GLF5	4	JET ?	0		
C551	0	H25A	0				
C560	86	H25B	23				
C56X	1225	H25C	0	F260	0		
C650	49	HS25	1	MD80	0		
C680	4	J328	2	MD83	0		
C722	0	K35RMIL	0	B752	0		
C750	6	LGE2	0	DC94	0		
CH35	0	LJ24	7	DC93	0		
CL30	0	LJ25	15	E145	1		
CL60	8	LJ31	39	CRJ1	0		
CRJ2	0	LJ35	11	E45X	0		
CRJ7	0	L39	0	DC10	0		
CRJ9	0			B73Q	0		
DC9	0			B732	0		
E135	0			A306	0		
				B721	0		
				DC87	0		
				B763	0		
				B733	0		
				B737	1		
				C40	0		
				MD88	0		
				DC86	0		
				B72Q	0		
				TOTAL	1718	TOTAL	0

Instrument Flight Rules Operations – Year 2005
Rowan County Airport (RUQ)

Single-Engine Piston						Multi-Engine Piston				Multi-Engine Turboprop			
A28A	0	GLAS	0	RV6	3	AC50	0	PA31	50	AC90	0	PAY1	19
AA1	0	HUSK	0	RV7	0	AC6L	0	PA34	9	B200	0	PAY2	9
AA5	1	HXB	0	RV8	0	AEST	4	PA39	0	B300	0	PAY3	6
AA5A	0	LA4	0	R20	0	BE50	0	PA43	0	B350	75	PAY4	0
AA5B	0	LA25	0	SR22	32	BE55	100	PA44	7	B10	0	PAYE	0
AC11	1	LANC	0	SYMP	0	BE56	0	PA58	0	BE20	172	RC70	0
AC14	0	LC40	2	T34MIL	0	BE58	165	PA60	0	BE30	10	SC7	0
AC23	0	LC42	23	TB10	0	BE60	49	PASE	0	BE90	2	SH33	0
B36	0	LNC2	0	TB20	0	BE65	0	T303	0	BE9L	119	SH36	0
BE19	0	M20	2	TOBA	0	BE76	0			BE9T	35	SW4	2
BE23	1	M20A	0	TRIN	5	BE95	2			BL9	0	T34PMIL	0
BE24	1	M20C	0	VELO	0	BE99	0			C130MIL	0	T34TMIL	0
BE33	21	M20F	0	SR20	4	C303	0			C208	10	T6	0
BE35	126	M20J	2	NAV	0	C310	30			C425	2	TBM7	6
BE36	284	M20K	1	Z43	0	C320	0			C441	3	TEX2MIL	0
BL17	2	M20M	0	P32R	16	C335	0			CVLT	6		
BL8	0	M20P	22	M5	0	C337	2			CN35MIL	0	F406	0
C10T	0	M20R	0	GLST	0	C340	3			D328	0	PC12	7
C150	1	M20T	1	T41	0	C401	0			DH8A	0	PC6T	0
C152	0	M7	2	BT6S	0	C402	12			DH8B	0	BE10	10
C172	120	MO20	0	C72	0	C404	0			DH8C	0	BE9	1
C177	11	NAV1	0			C414	79			DHC6	0		
C180	4	P210	0			C421	21			E110	4		
C182	38	P28	2			DA42	0			E120	0		
C185	0	P28A	28			DEF1	0			E2	0		
C195	0	P28B	3			GA7	0			E2CMIL	0		
C205	0	P28P	0			P34	0			F27	0		
C206	2	P28R	17			P68	0			F50	0		
C207	0	P28T	0			PA23	3			JS31	0		
C210	49	P32A	8			PA27	10			MU2	9		
C72R	1	P32R	16			PA30	10			P3MIL	0		
C77R	21	P32T	0							P180	0		
C82	2	P46T	1										
C82R	1	PA2	0										
C82T	0	PA22	0										
CH2T	0	PA24	2										
COL3	58	PA28	17										
COL4	5	PA32	161										
COUR	0	PA46	24										
DA40	0	PARO	0										
E400	0	PA2T	0										
F33A	0	R90R	0										
GA8	0	RANG	0										
				TOTAL	1144			TOTAL	556			TOTAL	507

Instrument Flight Rules Operations – Year 2005
Rowan County Airport (RUQ)

Jet Aircraft						Helicopters	
A10	0	EA6MIL	0	LJ40	0	AS33	0
AC95	0	F15MIL	0	LJ45	10	C212	0
AS65	0	F16MIL	0	LJ55	0	UH60MIL	0
ASTR	2	F18MIL	0	LJ60	1	H47MIL	0
B190	4	F2TH	2	MU30	4	H60MIL	0
B230	0	F900	2	PRM1	0	V22MIL	0
B735	0	FA10	52	SB20	0	HU65MIL	0
BE40	700	FA20	14	SBR1	2	A109MIL	0
C17MIL	0	FA50	4	SBR2	0	B06	0
C21	0	G2	0	T1MIL	0	HELO	0
C25A	4	G4	0	T2MIL	0		
C25B	0	GALX	14	T2P	0		
C500	2	GLEX	0	T37MIL	0		
C501	11	GLF2	0	T38MIL	0		
C525	34	GLF3	6	WW24	0		
C526	0	GLF4	18	XL2	0		
C550	35	GLF5	0	JET ?	0		
C551	0	H25A	0				
C560	50	H25B	42				
C56X	446	H25C	4	F260	0		
C650	39	HS25	0	MD80	0		
C680	2	J328	0	MD83	0		
C722	0	K35RMIL	0	B752	0		
C750	6	LGE2	0	DC94	0		
CH35	0	LJ24	6	DC93	0		
CL30	2	LJ25	18	E145	0		
CL60	0	LJ31	18	CRJ1	0		
CRJ2	0	LJ35	4	E45X	0		
CRJ7	0	L39	0	DC10	0		
CRJ9	0			B73Q	0		
DC9	0			B732	0		
E135	4			A306	0		
				B721	0		
				DC87	0		
				B763	0		
				B733	0		
				B737	0		
				C40	0		
				MD88	0		
				DC86	0		
				B72Q	0		
				TOTAL	1562	TOTAL	0

Instrument Flight Rules Operations – Year 2004
Rowan County Airport (RUQ)

Single-Engine Piston						Multi-Engine Piston				Multi-Engine Turboprop			
A28A	0	GLAS	0	RV6	2	AC50	0	PA31	84	AC90	4	PAY1	32
AA1	0	HUSK	1	RV7	0	AC6L	2	PA34	18	B200	0	PAY2	11
AA5	4	HXB	0	RV8	0	AEST	6	PA39	0	B300	0	PAY3	1
AA5A	0	LA4	0	R20	0	BE50	0	PA43	0	B350	73	PAY4	8
AA5B	3	LA25	0	SR22	1	BE55	133	PA44	2	B10	0	PAYE	0
AC11	0	LANC	0	SYMP	0	BE56	0	PA58	0	BE20	133	RC70	0
AC14	0	LC40	5	T34MIL	0	BE58	61	PA60	0	BE30	23	SC7	0
AC23	0	LC42	48	TB10	0	BE60	34	PASE	0	BE90	6	SH33	0
B36	5	LNC2	1	TB20	0	BE65	0	T303	0	BE9L	129	SH36	0
BE19	0	M20	2	TOBA	0	BE76	2			BE9T	17	SW4	0
BE23	6	M20A	0	TRIN	0	BE95	0			BL9	0	T34PMIL	0
BE24	19	M20C	1	VELO	0	BE99	0			C130MIL	0	T34TMIL	0
BE33	16	M20F	0	SR20	0	C303	0			C208	2	T6	0
BE35	139	M20J	1	NAV	0	C310	20			C425	0	TBM7	11
BE36	235	M20K	0	Z43	0	C320	0			C441	16	TEX2MIL	0
BL17	0	M20M	0	P32R	36	C335	0			CVLT	2		
BL8	0	M20P	20	M5	0	C337	0			CN35MIL	0	F406	0
C10T	0	M20R	0	GLST	0	C340	6			D328	0	PC12	6
C150	1	M20T	9	T41	0	C401	0			DH8A	0	PC6T	0
C152	0	M7	0	BT6S	0	C402	14			DH8B	0	BE10	44
C172	141	MO20	3	C72	5	C404	0			DH8C	0	BE9	0
C177	15	NAV1	0			C414	14			DHC6	0		
C180	4	P210	0			C421	23			E110	16		
C182	49	P28	1			DA42	0			E120	0		
C185	0	P28A	28			DEF1	0			E2	0		
C195	0	P28B	5			GA7	0			E2CMIL	0		
C205	0	P28P	0			P34	0			F27	0		
C206	7	P28R	29			P68	0			F50	0		
C207	0	P28T	3			PA23	9			JS31	0		
C210	30	P32A	4			PA27	12			MU2	0		
C72R	1	P32R	36			PA30	11			P3MIL	0		
C77R	24	P32T	0							P180	0		
C82	1	P46T	5										
C82R	0	PA2	0										
C82T	0	PA22	0										
CH2T	0	PA24	12										
COL3	83	PA28	24										
COL4	0	PA32	184										
COUR	0	PA46	10										
DA40	2	PARO	0										
E400	0	PA2T	0										
F33A	0	R90R	0										
GA8	0	RANG	0										
				TOTAL	1261			TOTAL	451			TOTAL	534

Instrument Flight Rules Operations – Year 2004
Rowan County Airport (RUQ)

Jet Aircraft						Helicopters	
A10	0	EA6MIL	0	LJ40	0	AS33	0
AC95	4	F15MIL	0	LJ45	7	C212	0
AS65	0	F16MIL	0	LJ55	6	UH60MIL	0
ASTR	17	F18MIL	0	LJ60	4	H47MIL	0
B190	0	F2TH	0	MU30	4	H60MIL	0
B230	1	F900	2	PRM1	0	V22MIL	0
B735	0	FA10	3	SB20	0	HU65MIL	0
BE40	1045	FA20	15	SBR1	2	A109MIL	0
C17MIL	0	FA50	4	SBR2	0	B06	0
C21	0	G2	0	T1MIL	0	HELO	0
C25A	2	G4	0	T2MIL	0		
C25B	0	GALX	0	T2P	0		
C500	6	GLEX	0	T37MIL	0		
C501	2	GLF2	0	T38MIL	0		
C525	22	GLF3	3	WW24	4		
C526	0	GLF4	8	XL2	0		
C550	24	GLF5	2	JET ?	0		
C551	0	H25A	2				
C560	26	H25B	24				
C56X	20	H25C	0	F260	0		
C650	15	HS25	0	MD80	0		
C680	0	J328	0	MD83	0		
C722	0	K35RMIL	0	B752	0		
C750	16	LGE2	0	DC94	0		
CH35	0	LJ24	6	DC93	0		
CL30	0	LJ25	4	E145	0		
CL60	4	LJ31	15	CRJ1	0		
CRJ2	1	LJ35	4	E45X	0		
CRJ7	0	L39	0	DC10	0		
CRJ9	0			B73Q	0		
DC9	0			B732	0		
E135	0			A306	0		
				B721	0		
				DC87	0		
				B763	0		
				B733	0		
				B737	0		
				C40	0		
				MD88	0		
				DC86	0		
				B72Q	0		
				TOTAL	1324	TOTAL	0

Instrument Flight Rules Operations – Year 2003
Rowan County Airport (RUQ)

Single-Engine Piston						Multi-Engine Piston				Multi-Engine Turboprop			
A28A	0	GLAS	0	RV6	0	AC50	0	PA31	87	AC90	0	PAY1	16
AA1	0	HUSK	0	RV7	0	AC6L	0	PA34	17	B200	0	PAY2	4
AA5	2	HXB	0	RV8	0	AEST	6	PA39	0	B300	0	PAY3	2
AA5A	0	LA4	0	R20	0	BE50	0	PA43	0	B350	72	PAY4	2
AA5B	2	LA25	0	SR22	0	BE55	67	PA44	3	B10	0	PAYE	0
AC11	0	LANC	0	SYMP	0	BE56	0	PA58	0	BE20	69	RC70	0
AC14	2	LC40	71	T34MIL	0	BE58	85	PA60	0	BE30	4	SC7	0
AC23	0	LC42	2	TB10	0	BE60	21	PASE	0	BE90	19	SH33	0
B36	3	LNC2	0	TB20	0	BE65	0	T303	0	BE9L	140	SH36	0
BE19	0	M20	8	TOBA	0	BE76	0			BE9T	10	SW4	0
BE23	5	M20A	0	TRIN	0	BE95	0			BL9	0	T34PMIL	0
BE24	11	M20C	1	VELO	0	BE99	0			C130MIL	0	T34TMIL	0
BE33	29	M20F	1	SR20	0	C303	8			C208	1	T6	0
BE35	103	M20J	5	NAV	0	C310	19			C425	1	TBM7	1
BE36	222	M20K	1	Z43	0	C320	1			C441	29	TEX2MIL	0
BL17	0	M20M	0	P32R	40	C335	8			CVLT	1		
BL8	0	M20P	21	M5	0	C337	2			CN35MIL	0	F406	0
C10T	0	M20R	0	GLST	0	C340	5			D328	0	PC12	5
C150	6	M20T	0	T41	0	C401	0			DH8A	0	PC6T	0
C152	0	M7	0	BT6S	0	C402	12			DH8B	0	BE10	63
C172	127	MO20	5	C72	2	C404	0			DH8C	0	BE9	0
C177	9	NAV1	0			C414	34			DHC6	0		
C180	3	P210	0			C421	19			E110	0		
C182	53	P28	1			DA42	0			E120	0		
C185	0	P28A	27			DEF1	0			E2	0		
C195	0	P28B	4			GA7	0			E2CMIL	0		
C205	0	P28P	0			P34	0			F27	0		
C206	4	P28R	49			P68	0			F50	0		
C207	0	P28T	5			PA23	1			JS31	0		
C210	30	P32A	4			PA27	3			MU2	2		
C72R	0	P32R	40			PA30	15			P3MIL	0		
C77R	14	P32T	0							P180	2		
C82	1	P46T	5										
C82R	0	PA2	0										
C82T	0	PA22	0										
CH2T	0	PA24	11										
COL3	7	PA28	18										
COL4	0	PA32	277										
COUR	0	PA46	0										
DA40	0	PARO	2										
E400	0	PA2T	0										
F33A	0	R90R	0										
GA8	0	RANG	0										
				TOTAL	1233			TOTAL	413			TOTAL	443

Instrument Flight Rules Operations – Year 2003
Rowan County Airport (RUQ)

Jet Aircraft						Helicopters	
A10	0	EA6MIL	0	LJ40	0	AS33	0
AC95	0	F15MIL	0	LJ45	9	C212	0
AS65	0	F16MIL	0	LJ55	7	UH60MIL	0
ASTR	4	F18MIL	0	LJ60	9	H47MIL	0
B190	0	F2TH	4	MU30	1	H60MIL	0
B230	0	F900	0	PRM1	0	V22MIL	0
B735	0	FA10	0	SB20	0	HU65MIL	0
BE40	1026	FA20	14	SBR1	28	A109MIL	0
C17MIL	0	FA50	6	SBR2	0	B06	0
C21	0	G2	1	T1MIL	0	HELO	0
C25A	0	G4	0	T2MIL	0		
C25B	0	GALX	14	T2P	0		
C500	2	GLEX	0	T37MIL	0		
C501	15	GLF2	1	T38MIL	0		
C525	14	GLF3	3	WW24	0		
C526	0	GLF4	0	XL2	0		
C550	33	GLF5	0	JET ?	0		
C551	0	H25A	0				
C560	55	H25B	24				
C56X	24	H25C	0	F260	0		
C650	10	HS25	0	MD80	0		
C680	0	J328	0	MD83	0		
C722	0	K35RMIL	0	B752	0		
C750	0	LGE2	0	DC94	0		
CH35	0	LJ24	1	DC93	0		
CL30	0	LJ25	6	E145	0		
CL60	8	LJ31	14	CRJ1	0		
CRJ2	0	LJ35	16	E45X	0		
CRJ7	0	L39	0	DC10	0		
CRJ9	0			B73Q	0		
DC9	0			B732	0		
E135	0			A306	0		
				B721	0		
				DC87	0		
				B763	0		
				B733	0		
				B737	0		
				C40	0		
				MD88	0		
				DC86	0		
				B72Q	0		
				TOTAL	1349	TOTAL	0

Instrument Flight Rules Operations – Year 2002
Rowan County Airport (RUQ)

Single-Engine Piston						Multi-Engine Piston				Multi-Engine Turboprop			
A28A	0	GLAS	0	RV6	0	AC50	0	PA31	85	AC90	2	PAY1	37
AA1	0	HUSK	0	RV7	0	AC6L	0	PA34	15	B200	0	PAY2	5
AA5	4	HXB	0	RV8	0	AEST	4	PA39	0	B300	0	PAY3	8
AA5A	0	LA4	0	R20	0	BE50	0	PA43	0	B350	87	PAY4	6
AA5B	7	LA25	0	SR22	4	BE55	82	PA44	2	B10	0	PAYE	1
AC11	1	LANC	0	SYMP	0	BE56	0	PA58	0	BE20	76	RC70	0
AC14	0	LC40	105	T34MIL	0	BE58	123	PA60	0	BE30	23	SC7	0
AC23	0	LC42	0	TB10	0	BE60	44	PASE	0	BE90	36	SH33	0
B36	5	LNC2	0	TB20	0	BE65	1	T303	0	BE9L	118	SH36	0
BE19	0	M20	3	TOBA	0	BE76	1			BE9T	28	SW4	2
BE23	4	M20A	0	TRIN	3	BE95	1			BL9	0	T34PMIL	0
BE24	6	M20C	2	VELO	0	BE99	0			C130MIL	0	T34TMIL	0
BE33	48	M20F	0	SR20	0	C303	0			C208	5	T6	0
BE35	52	M20J	2	NAV	0	C310	38			C425	9	TBM7	0
BE36	207	M20K	0	Z43	0	C320	0			C441	22	TEX2MIL	0
BL17	2	M20M	1	P32R	36	C335	0			CVLT	2		
BL8	0	M20P	7	M5	0	C337	4			CN35MIL	0	F406	0
C10T	0	M20R	0	GLST	0	C340	13			D328	0	PC12	3
C150	0	M20T	3	T41	0	C401	0			DH8A	0	PC6T	0
C152	0	M7	1	BT6S	0	C402	13			DH8B	0	BE10	101
C172	166	MO20	4	C72	3	C404	0			DH8C	0	BE9	2
C177	11	NAV1	0			C414	26			DHC6	0		
C180	2	P210	2			C421	18			E110	0		
C182	70	P28	4			DA42	0			E120	0		
C185	1	P28A	53			DEF1	0			E2	0		
C195	0	P28B	2			GA7	0			E2CMIL	0		
C205	0	P28P	0			P34	0			F27	0		
C206	8	P28R	43			P68	0			F50	0		
C207	0	P28T	2			PA23	1			JS31	0		
C210	24	P32A	5			PA27	8			MU2	7		
C72R	0	P32R	36			PA30	23			P3MIL	0		
C77R	12	P32T	0							P180	0		
C82	1	P46T	14										
C82R	1	PA2	0										
C82T	0	PA22	0										
CH2T	0	PA24	8										
COL3	1	PA28	23										
COL4	0	PA32	249										
COUR	0	PA46	5										
DA40	0	PARO	0										
E400	0	PA2T	0										
F33A	0	R90R	0										
GA8	0	RANG	0										
				TOTAL	1253			TOTAL	502			TOTAL	580

Instrument Flight Rules Operations – Year 2002
Rowan County Airport (RUQ)

Jet Aircraft						Helicopters	
A10	0	EA6MIL	0	LJ40	0	AS33	0
AC95	0	F15MIL	0	LJ45	10	C212	0
AS65	0	F16MIL	0	LJ55	6	UH60MIL	0
ASTR	12	F18MIL	0	LJ60	2	H47MIL	0
B190	1	F2TH	2	MU30	0	H60MIL	0
B230	0	F900	0	PRM1	0	V22MIL	0
B735	0	FA10	0	SB20	0	HU65MIL	0
BE40	869	FA20	8	SBR1	37	A109MIL	0
C17MIL	0	FA50	3	SBR2	0	B06	0
C21	0	G2	0	T1MIL	0	HELO	0
C25A	0	G4	0	T2MIL	0		
C25B	0	GALX	7	T2P	0		
C500	3	GLEX	0	T37MIL	0		
C501	2	GLF2	3	T38MIL	0		
C525	25	GLF3	5	WW24	8		
C526	0	GLF4	4	XL2	0		
C550	55	GLF5	5	JET ?	0		
C551	0	H25A	0				
C560	41	H25B	18				
C56X	11	H25C	0	F260	0		
C650	9	HS25	0	MD80	0		
C680	0	J328	0	MD83	0		
C722	0	K35RMIL	0	B752	0		
C750	6	LGE2	0	DC94	0		
CH35	0	LJ24	2	DC93	0		
CL30	0	LJ25	6	E145	0		
CL60	4	LJ31	24	CRJ1	0		
CRJ2	0	LJ35	12	E45X	0		
CRJ7	0	L39	0	DC10	0		
CRJ9	0			B73Q	0		
DC9	0			B732	0		
E135	0			A306	0		
				B721	0		
				DC87	0		
				B763	0		
				B733	0		
				B737	0		
				C40	0		
				MD88	0		
				DC86	0		
				B72Q	0		
				TOTAL	1200	TOTAL	0

Instrument Flight Rules Operations – Year 2001
Rowan County Airport (RUQ)

Single-Engine Piston						Multi-Engine Piston				Multi-Engine Turboprop			
A28A	0	GLAS	0	RV6	0	AC50	3	PA31	71	AC90	0	PAY1	12
AA1	0	HUSK	0	RV7	0	AC6L	0	PA34	18	B200	0	PAY2	10
AA5	1	HXB	0	RV8	0	AEST	10	PA39	2	B300	0	PAY3	10
AA5A	0	LA4	0	R20	0	BE50	2	PA43	0	B350	42	PAY4	10
AA5B	1	LA25	0	SR22	0	BE55	106	PA44	4	B10	0	PAYE	0
AC11	2	LANC	0	SYMP	0	BE56	0	PA58	0	BE20	92	RC70	0
AC14	0	LC40	1	T34MIL	0	BE58	182	PA60	1	BE30	20	SC7	0
AC23	0	LC42	0	TB10	0	BE60	105	PASE	0	BE90	15	SH33	0
B36	0	LNC2	2	TB20	0	BE65	10	T303	0	BE9L	63	SH36	0
BE19	0	M20	3	TOBA	0	BE76	38			BE9T	14	SW4	0
BE23	8	M20A	0	TRIN	4	BE95	5			BL9	0	T34PMIL	0
BE24	13	M20C	0	VELO	0	BE99	0			C130MIL	0	T34TMIL	0
BE33	22	M20F	0	SR20	0	C303	0			C208	5	T6	0
BE35	109	M20J	1	NAV	0	C310	45			C425	6	TBM7	1
BE36	256	M20K	1	Z43	0	C320	0			C441	23	TEX2MIL	0
BL17	6	M20M	0	P32R	13	C335	0			CVLT	0		
BL8	0	M20P	10	M5	0	C337	0			CN35MIL	0	F406	0
C10T	0	M20R	0	GLST	0	C340	3			D328	0	PC12	9
C150	2	M20T	6	T41	0	C401	0			DH8A	0	PC6T	0
C152	0	M7	0	BT6S	0	C402	13			DH8B	0	BE10	17
C172	218	MO20	2	C72	3	C404	0			DH8C	0	BE9	1
C177	27	NAV1	0			C414	24			DHC6	0		
C180	2	P210	0			C421	28			E110	0		
C182	74	P28	8			DA42	0			E120	0		
C185	0	P28A	81			DEF1	0			E2	0		
C195	0	P28B	4			GA7	0			E2CMIL	0		
C205	1	P28P	0			P34	0			F27	0		
C206	8	P28R	14			P68	0			F50	0		
C207	0	P28T	1			PA23	1			JS31	0		
C210	23	P32A	5			PA27	4			MU2	0		
C72R	1	P32R	13			PA30	7			P3MIL	0		
C77R	15	P32T	0							P180	0		
C82	0	P46T	34										
C82R	2	PA2	0										
C82T	0	PA22	0										
CH2T	0	PA24	11										
COL3	0	PA28	69										
COL4	0	PA32	191										
COUR	0	PA46	5										
DA40	0	PARO	2										
E400	0	PA2T	0										
F33A	0	R90R	0										
GA8	0	RANG	0										
				TOTAL	1275			TOTAL	682			TOTAL	350

Instrument Flight Rules Operations – Year 2001
Rowan County Airport (RUQ)

Jet Aircraft						Helicopters	
A10	0	EA6MIL	0	LJ40	0	AS33	0
AC95	0	F15MIL	0	LJ45	2	C212	0
AS65	0	F16MIL	0	LJ55	5	UH60MIL	0
ASTR	17	F18MIL	0	LJ60	23	H47MIL	0
B190	0	F2TH	4	MU30	4	H60MIL	0
B230	0	F900	7	PRM1	0	V22MIL	0
B735	0	FA10	11	SB20	0	HU65MIL	0
BE40	805	FA20	3	SBR1	62	A109MIL	0
C17MIL	0	FA50	0	SBR2	0	B06	0
C21	0	G2	1	T1MIL	0	HELO	0
C25A	0	G4	0	T2MIL	0		
C25B	0	GALX	3	T2P	0		
C500	4	GLEX	0	T37MIL	0		
C501	6	GLF2	7	T38MIL	0		
C525	13	GLF3	4	WW24	2		
C526	0	GLF4	4	XL2	0		
C550	40	GLF5	0	JET ?	0		
C551	0	H25A	0				
C560	52	H25B	16				
C56X	3	H25C	0	F260	0		
C650	9	HS25	0	MD80	0		
C680	0	J328	0	MD83	0		
C722	0	K35RMIL	0	B752	0		
C750	4	LGE2	0	DC94	0		
CH35	0	LJ24	2	DC93	0		
CL30	0	LJ25	2	E145	0		
CL60	0	LJ31	4	CRJ1	0		
CRJ2	0	LJ35	4	E45X	0		
CRJ7	0	L39	0	DC10	0		
CRJ9	0			B73Q	0		
DC9	0			B732	0		
E135	0			A306	0		
				B721	0		
				DC87	0		
				B763	0		
				B733	0		
				B737	0		
				C40	0		
				MD88	0		
				DC86	0		
				B72Q	0		
				TOTAL	1123	TOTAL	0

Instrument Flight Rules Operations – Year 2000
Rowan County Airport (RUQ)

Single-Engine Piston						Multi-Engine Piston				Multi-Engine Turboprop			
A28A	0	GLAS	0	RV6	0	AC50	3	PA31	63	AC90	2	PAY1	6
AA1	0	HUSK	0	RV7	0	AC6L	0	PA34	22	B200	0	PAY2	10
AA5	2	HXB	0	RV8	0	AEST	9	PA39	2	B300	0	PAY3	8
AA5A	0	LA4	0	R20	0	BE50	0	PA43	0	B350	0	PAY4	0
AA5B	0	LA25	0	SR22	0	BE55	103	PA44	7	B10	0	PAYE	0
AC11	20	LANC	0	SYMP	0	BE56	0	PA58	0	BE20	164	RC70	0
AC14	2	LC40	0	T34MIL	0	BE58	178	PA60	0	BE30	57	SC7	0
AC23	0	LC42	0	TB10	0	BE60	38	PASE	0	BE90	25	SH33	0
B36	0	LNC2	0	TB20	7	BE65	39	T303	0	BE9L	120	SH36	0
BE19	0	M20	2	TOBA	0	BE76	40			BE9T	5	SW4	1
BE23	4	M20A	0	TRIN	0	BE95	2			BL9	0	T34PMIL	0
BE24	6	M20C	1	VELO	0	BE99	0			C130MIL	0	T34TMIL	0
BE33	49	M20F	0	SR20	0	C303	0			C208	6	T6	0
BE35	125	M20J	1	NAV	0	C310	19			C425	2	TBM7	2
BE36	204	M20K	0	Z43	0	C320	0			C441	119	TEX2MIL	0
BL17	5	M20M	0	P32R	2	C335	0			CVLT	0		
BL8	0	M20P	9	M5	0	C337	2			CN35MIL	0	F406	0
C10T	0	M20R	2	GLST	0	C340	10			D328	0	PC12	221
C150	0	M20T	2	T41	0	C401	0			DH8A	0	PC6T	0
C152	0	M7	0	BT6S	0	C402	13			DH8B	0	BE10	9
C172	87	MO20	8	C72	0	C404	0			DH8C	0	BE9	0
C177	28	NAV1	0			C414	13			DHC6	0		
C180	5	P210	0			C421	30			E110	0		
C182	30	P28	13			DA42	0			E120	0		
C185	0	P28A	91			DEF1	0			E2	0		
C195	0	P28B	5			GA7	0			E2CMIL	0		
C205	0	P28P	0			P34	0			F27	0		
C206	8	P28R	7			P68	0			F50	0		
C207	0	P28T	2			PA23	6			JS31	0		
C210	10	P32A	0			PA27	5			MU2	2		
C72R	0	P32R	2			PA30	0			P3MIL	0		
C77R	17	P32T	0							P180	0		
C82	0	P46T	13										
C82R	0	PA2	0										
C82T	0	PA22	0										
CH2T	0	PA24	1										
COL3	0	PA28	80										
COL4	0	PA32	26										
COUR	0	PA46	17										
DA40	0	PARO	0										
E400	0	PA2T	0										
F33A	0	R90R	0										
GA8	0	RANG	0										
				TOTAL	893			TOTAL	604			TOTAL	759

Instrument Flight Rules Operations – Year 2000
Rowan County Airport (RUQ)

Jet Aircraft						Helicopters	
A10	0	EA6MIL	0	LJ40	0	AS33	0
AC95	0	F15MIL	0	LJ45	1	C212	1
AS65	0	F16MIL	0	LJ55	9	UH60MIL	0
ASTR	14	F18MIL	0	LJ60	4	H47MIL	0
B190	0	F2TH	2	MU30	1	H60MIL	0
B230	0	F900	0	PRM1	0	V22MIL	0
B735	0	FA10	2	SB20	0	HU65MIL	0
BE40	742	FA20	2	SBR1	39	A109MIL	0
C17MIL	0	FA50	0	SBR2	0	B06	1
C21	0	G2	3	T1MIL	0	HELO	0
C25A	0	G4	0	T2MIL	0		
C25B	0	GALX	0	T2P	0		
C500	6	GLEX	0	T37MIL	0		
C501	20	GLF2	4	T38MIL	0		
C525	19	GLF3	0	WW24	7		
C526	0	GLF4	10	XL2	0		
C550	66	GLF5	0	JET ?	0		
C551	0	H25A	0				
C560	63	H25B	19				
C56X	0	H25C	2	F260	0		
C650	13	HS25	0	MD80	0		
C680	0	J328	0	MD83	0		
C722	0	K35RMIL	0	B752	0		
C750	6	LGE2	0	DC94	0		
CH35	0	LJ24	2	DC93	0		
CL30	0	LJ25	1	E145	0		
CL60	2	LJ31	6	CRJ1	0		
CRJ2	0	LJ35	10	E45X	0		
CRJ7	0	L39	0	DC10	0		
CRJ9	0			B73Q	0		
DC9	0			B732	0		
E135	0			A306	0		
				B721	0		
				DC87	0		
				B763	0		
				B733	1		
				B737	0		
				C40	0		
				MD88	0		
				DC86	0		
				B72Q	0		
				TOTAL	1076	TOTAL	2

RUNWAY EXTENSION JUSTIFICATION STUDY


TALBERT & BRIGHT
ROWAN COUNTY
AIRPORT
RUNWAY EXTENSION
JUSTIFICATION
STUDY

Table of Contents

Appendices

Tables

Figures

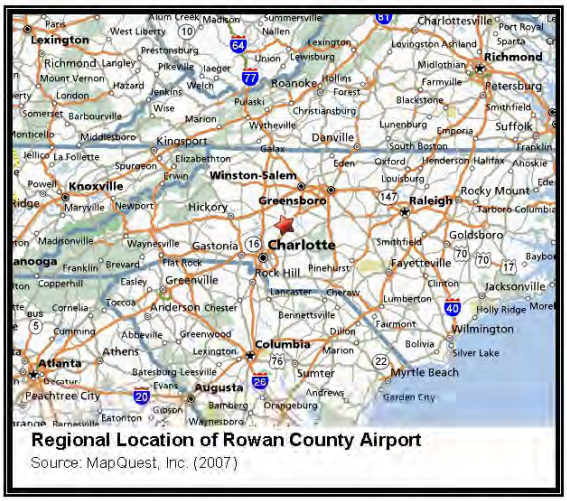
1.0 INTRODUCTION

Rowan County Airport (RUQ or the Airport) in Salisbury, North Carolina is a general aviation facility that serves a vital role in the regional economy of the Interstate 85 (I-85) corridor. The purpose of this study is to provide justification for the extension of Runway 02/20 from 5,500 feet to 6,500 feet at the Rowan County Airport. This study will document conditions for the runway extension justification as of June 2008.

2.0 AIRPORT SETTING

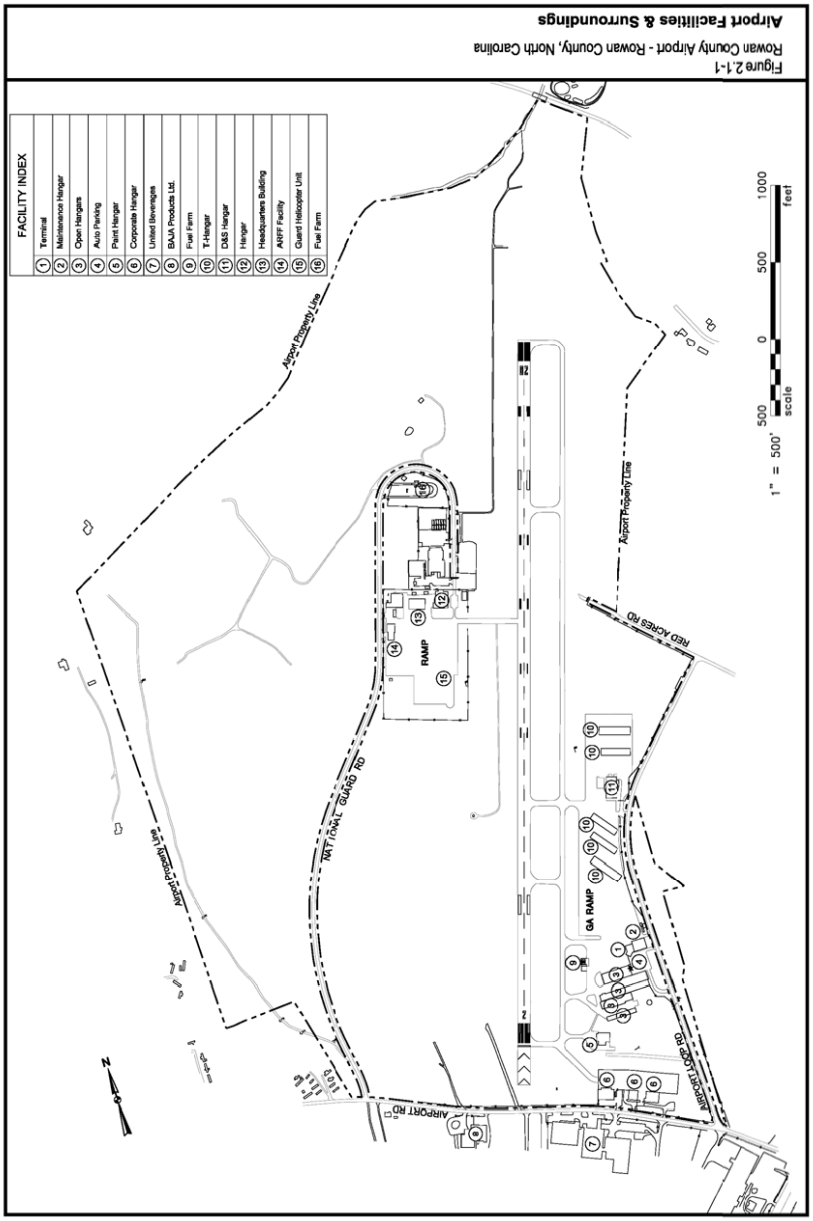
The Airport setting and location with respect to competing airports is essential.

2.1 Location and Setting



RUQ is a public airport located three miles southwest of Salisbury, North Carolina off Airport Loop Road. Rowan County is located in the vastly growing Piedmont region of North Carolina along I-85 between the exploding Charlotte metropolitan area and Winston-Salem, Greensboro, and High Point markets.

RUQ is owned and operated by Rowan County and is within the city limits of Salisbury. RUQ encompasses approximately 527 acres and is generally bounded by Airport Loop Road to the east, Airport Road to the south, National Guard Road to the west, and Rowan Mills Road to the north. The elevation of the airport is 773 feet above mean sea level (MSL). A 100-foot by 5,500-foot runway and parallel taxiway is provided. A general aviation terminal is located in the southeast quadrant of the airport. National Guard facilities are located in the northwest quadrant of RUQ (Figure 2.1-1, page 2).


Airport Facilities & Surroundings
Rowan County Airport - Rowan County, North Carolina
Figure 2.1-1
FACILITY INDEX
1 Terminal
2 Maintenance Hangar
3 Open Hangars
4 Auto Parking
5 Paint Hanger
6 Corporate Hangar
7 United Beverages
8 BAJA Products Ltd.
9 Fuel Farm
10 T-Hangar
11 D&S Hangar
12 Hangar
13 Headquarters Building
14 ARFF Facility
15 Guard Helicopter Unit
16 Fuel Farm
Airport Property Line
NATIONAL GUARD RD
RAMP
GA RAMP
AIRPORT RD
RED ACRES RD
SPROCKET LOOP RD
1" = 500' scale
500 0 500 1000 feet
N

2.2 Adjacent Airports

A review of area airports is illustrated by Figure 2.2-1 (page 4) and summarized in Table 2.2-1 (page 5). As illustrated in Table 2.2-1 (page 5), a substantial number of aircraft are based in the growth corridors radiating from the Charlotte metropolitan area. Key comparisons are:

Airport	Based Aircraft	Operations
Rowan County	99	31,000
Concord Regional	177	67,513
Monroe Regional	91	56,000
Rock Hill/York County	92	42,500
Statesville Regional	67	31,200

Each of these airports has a precision runway of 5,500 feet or more and more than one based jet aircraft (except Rock Hill/York County Airport, which has no based jets). Of note is the intensity of itinerant general aviation activity (67,513 operations) at nearby Concord Regional Airport.

3.0 NEED FOR A 1,000-FOOT EXTENSION TO RUNWAY 02/20

In order for the Rowan County Airport to meet both existing and future needs, in addition to the growing trend in aviation of corporate jet use, effective growth greatly depends on the ability of Runway 02/20 to accommodate long-range jet traffic. The existing 5,500-foot runway is proposed to be extended 1,000 feet to achieve this objective.

4.0 SURVEYS

Three surveys were conducted between October 2007 and May 2008 as part of the runway extension justification study. The surveys are as follows:

- Aircraft operational counts for nine days
- Pilot survey
- Airport user survey

Figure 2.2-1
Rowan County Airport

Area Airports and Selected Vicinity Obstructions

Table 2.2-1
Selected FAA 5010 Form Comparisons
Rowan County Airport

Airport	Based Aircraft							Runway Data			Services		Operations				
	Single Engine	Multi Engine	Jet	Helicopter	Ultra Light	Military	Glider	TOTAL	Length	Surface	Marking	Fuel	Instruction	Maintenance	Air Carrier	Air Taxi	General Aviation Local	General Aviation Itinerant	Military	TOTAL
Rowan County	60	10	5	3	2	19		99	5,500'	Asphalt	Precision	100LL A1+	Yes	Minor	0	1,000	12,000	9,000	9,000	31,000
Davidson County	46	10	2					58	5000'	Asphalt	Basic	100LL A	Yes	Minor	0	500	5,000	3,000	500	9,000
Concord Regional	124	37	10	6				177	7,400'	Asphalt	Precision	100LL AA1+	Yes	Major	0	9,260	13,723	44,262	248	67,513
Stanly County	30	4						34	5,500'	Asphalt	Precision	100LL A1+	Yes	Major	0	3,000	8,000	13,000	7,000	31,000
Anson County	21	2	0		8		1	32	5,498'	Asphalt	Non-Precision	100LL	None	Minor	0	500	2,500	4,000	200	7,200
Statesville Regional	46	15	6					67	7,006	Asphalt	Precision	100LL A	None	Major	0	1,000	16,000	14,000	200	31,200
Gastonia Municipal	48	5	2					55	3770	Asphalt	Non-Precision	100LL A1+	Yes	Minor	0	1,000	40,000	9,000	40	50,040
Lincoln-Lincoln Co. Regional	55	13	1	1				70	5,500'	Asphalt	Non-Precision	100LL A1+	Yes	Major	0	1,300	14,300	16,800	900	33,400
Monroe Regional	68	16	4	3				91	5,500'	Asphalt	Precision	100LL A	Yes	Major	0	4,100	30,500	20,500	1,000	56,100
Rock Hill/York County	101	3						104	5,500'	Asphalt	Precision	100LL A	Yes	Major	0	400	29,500	12,500	100	42,500
Twin Lakes (Mocksville Pvt.)	81	9	0	1			1	92	2,943'	Asphalt	Basic	100LL	Yes	Major	0	0	24,000	5,000	1,000	30,000
Willgrove Air Park (Pvt.)	50	3	0					53	2,836'	Asphalt	NSTD	100LL	Yes	Minor	0	0	10,500	4,000	100	14,600
Lake Norman Airpark (Pvt.)	35	11		2				48	3,147'	Asphalt	NSTD	100LL	Yes	Major	0	0	9,000	1,000	0	10,000
Sugar Valley (Mocksville Pvt.)	15							15	2,424'	Asphalt	NSTD	100LL	Yes	Major	0	0	8,000	1,200	100	9,300
Goose Creek (Pvt.)	14				7			21	2,350'	Asphalt	Basic	100LL	Yes	Minor	0	20	2,500	500	50	3,070

Source: FAA 5010 Forms (2007)

4.1 Aircraft Operational Nine-Day Count

Aircraft operations were surveyed between October and November 2007 at RUQ. A total of 44 hours of surveying was conducted as documented by Table 4.1-1 (page 7). The counts encompassed a judgment of aircraft type, as well as local versus itinerant operations. Touch-and-go operations were also calculated. Local aircraft operations are those operations that originate at RUQ and extend 20 miles or less from RUQ. For survey purposes, all touch-and-go operations, as well as operations of short duration, were considered to be local. With this procedure of classifying local operations, some room for small under counting does exist.

As shown by Table 4.1-1 (page 7), most itinerant multi-engine turboprop and itinerant jet operations appear to occur during the weekday time-period. Table 4.1-2 provides a summary of weekday versus weekend operations, as derived from the survey.

Table 4.1-2
Summary of Daily Survey of Aircraft Operations
Rowan County Airport

	Average Weekday Counts		Average Weekend Counts		Total Annual Counts	
Aircraft Type	Itinerant	Local	Itinerant	Local	Itinerant	Local
Single Engine	42.2	10.9	61.0	21.5	19,319	5,090
Multi Engine Piston	1.5	5.3	7.5	1.0	1,157	1,482
Multi Engine Turboprop	2.7	0	2.5	0	970	0
Helicopter	0.5	14.3	0	28.5	130	6,677
Jet	9.7	0.3	0.5	1.5	2,577	234
Total	**56.6**	**30.8**	**71.5**	**52.5**	**22,153**	**13,463**

Note: Excludes night counts (4:00 p.m. to 8:00 a.m.)
Source: Talbert & Bright, Inc., (2007), October and November Surveys

4.2 Pilot Survey

Between March and May 2008, a survey was conducted of transient pilots as they signed in at the airport reception desk. A copy of the survey notice for the runway survey and runway extension surveys received are provided in Appendix B.

The most important information derived from the survey was statements from operators of multi-engine and jet aircraft that the proposed runway extension would allow for a larger fuel load. Table 4.2-1 (page 10) lists these fuel load responses by aircraft type.

Table 4.1-1
Surveyed Aircraft Operational Counts
Rowan County Airport

Beginning Hour/ Aircraft Type	8am	9am	10am	11am	12noon	1pm	2pm	3pm	4pm	5pm	6pm	7pm	8pm
Monday 10/15/07 (clear weather)													
Single Engine							4	6	3	7	2 8 6	4	1
Multi Engine Piston								3					
Multi Engine Turboprop							1						
Helicopter							1	3		1	2		
Jet							1		4		2 1	2	1
Tuesday 10/16/07 (slightly overcast with clearing by 12:00 noon)													
Single Engine					1	1	6						
Multi Engine Piston													
Multi Engine Turboprop		2	1				2						
Helicopter	2		2		3	3							
Jet	1			1		1	1						
					Blimp-1								
Wednesday 10/17/07 (high clouds)													
Single Engine	1	1	2	2									
Multi Engine Piston													
Multi Engine Turboprop													
Helicopter		3	2										
Jet	1	1											

Table 4.1-1
Surveyed Aircraft Operational Counts
Rowan County Airport

Beginning Hour/ Aircraft Type	8am	9am	10am	11am	12noon	1pm	2pm	3pm	4pm	5pm	6pm	7pm	8pm
Wednesday 10/31/07 (clear weather)													
Single Engine						3 7	8	3 6	8				
Multi Engine Piston							1						
Multi Engine Turboprop								1					
Helicopter						2	2	3	1				
Jet								1	3				
Thursday 11/01/07 (clear to partly cloudy)													
Single Engine	2 1	3 1	4 2	1	2	4	3	7	2				
Multi Engine Piston								6 1	2				
Multi Engine Turboprop				2			1						
Helicopter			3	5	3			4	3				
Jet	1			1				1	2				
Friday 11/02/07 (clear, cold 56°F)													
Single Engine			2	2 3	2	2	5	-	4		12		
Multi Engine Piston								-	1	1 3	1		
Multi Engine Turboprop								-	1				
Helicopter							1	-			1		
Jet								-	1		1		

Table 4.1-1
Surveyed Aircraft Operational Counts
Rowan County Airport

Beginning Hour/ Aircraft Type	8am	9am	10am	11am	12noon	1pm	2pm	3pm	4pm	5pm	6pm	7pm	8pm
Saturday 11/03/07 (clear, cold)													
Single Engine		2	3	10 5	6								
Multi Engine Piston				1	1								
Multi Engine Turboprop	1		1										
Helicopter	3	4	2	3	11								
Jet													
Saturday 11/17/07 (clear, high clouds)													
Single Engine						6 4	9 5	9 9	5 4	2			
Multi Engine Piston						1	1	2					
Multi Engine Turboprop													
Helicopter						2	5	4	2				
Jet													
Sunday 11/18/07 (clear, cold 38°F)													
Single Engine	3 7	no counts			5	9	10 4	8	11	7	1		
Multi Engine Piston					1	1 2			5	1			
Multi Engine Turboprop					2								
Helicopter	1				2	1		6	4	1			
Jet								1					

KEY
6 - Itinerant Operations
5 - Local Operations
4 - Local Touch and Go Operation
Source: Talbert & Bright, Inc. (October and November 2007)

Table 4.2-1
Selected Questions
Transient Aircraft Survey 2008
Rowan County Airport

	Flight Frequency	Less People Today	Less People Ever	Current Useful Load	Comments
Multi-Engine Piston					
Baron BE 58	1st	No	No	70%	bigger aircraft
Beech Duke	1st	No	No	80%	
Baron BE 58	3	No	No	90%	
Piper Navajo	1st	No	No	80%	
Piper 34 Seneca	12	Yes	Yes	70%	need 6,500'/more fuel
Multi-Engine Turboprop					
Fairchild SW 4	20	Yes	Yes (20)	50%	larger fuel load
PA-39 Comanche	52	No	No	90%	if in Lear carry less
Beech C-90 (BE9L)	1st	No	No	90%	extra safety margin
Cessna 421	2	No	No	90%	
Piper 28	1st	No	No	70%	Would use other aircraft
King Air 90		No	No	90%	
Small Turbofan					
Citation 525	20	Yes	Yes (8)	80%	more use other aircraft
ASTRA	1st	No	No	80%	restricted wet landing
C 525 A	2	No	No	90%	usage
Beechjet BE 400A	20	No	Yes (15)	60%	6,000' runway plus
Falcon 10/Lear 35	6	Yes	Yes	80%	24 more stops if new runway
Citation Encore	1st	No	No	80%	
Beechjet BE 400	3	No	Yes	90%	use other jet/more fuel
Large Turbofan					
Hawker 800	2	No	No	60%	more usage if longer
Challenger 604	6	No	Yes	60%	larger fuel load
Canadair	10	Yes	Yes	50%	when wet, more fuel
Hawker 800	1st	Yes	Yes	50%	cut grooves and lengthen
Hawker 800	3	No	No	50%	runway wet/contaminated
Cessna 650	24	No	Yes (6)	80%	fuel departure problem
Citation 650	2	No	No	80%	more frequent use
Citation 10	5	Yes	Yes	60%	fuel load
Challenger 600	2	Yes	Yes	60%	larger fuel load

Source: Transient Pilot and User Surveys (Appendices B and C)

4.3 Airport User Survey

The third survey consisted of issuing a questionnaire to users of the airport. Responses received are provided in Appendix C.

5.0 RUNWAY EXTENSION JUSTIFICATION

5.1 Airport Reference Code (ARC)

The airport reference code (ARC) is a code system used to relate airport design criteria to the operational and physical characteristics of the airplanes intended to operate at the airport. The reference code has two components. The first component, depicted by a letter, is the aircraft approach category and relates to aircraft approach speed. The second component, depicted by a Roman numeral is the airplane design group and relates to airplane wingspan or tail height, whichever is the most restrictive.

5.1.1 Aircraft Approach Category

By definition the aircraft approach category is a grouping of aircraft based on 1.3 times their stall speed in their landing configuration at the certificated maximum flap setting and maximum landing weight at standard atmospheric conditions. The categories are as follows:

- Category A – speed less than 91 knots
- Category B – speed 91 knots or more but less than 121 knots
- Category C – speed 121 knots or more but less than 141 knots
- Category D – speed 141 knots or more but less than 166 knots
- Category E – speed 166 knots or more

5.1.2 Airplane Design Group

The airplane design group is a grouping of airplanes based on wingspan or tail height. The groups are as follows:

- Group I – up to but not including 49 feet wingspan or tail height up to but not including 20 feet.
- Group II – 49 feet up to but not including 79 feet wingspan or tail height from 20 feet up to but not including 30 feet.
- Group III – 79 feet up to but not including 118 feet wingspan or tail height from 30 feet up to but not including 45 feet.
- Group IV – 118 feet up to but not including 171 feet wingspan or tail height from 45 feet up to but not including 60 feet.
- Group V – 171 feet up to but not including 214 feet wingspan or tail height from 60 feet up to but not including 66 feet.
- Group VI – 214 feet up to but not including 262 feet wingspan or tail height from 66 feet up to but not including 80 feet.

5.2 Critical Aircraft

Federally funded projects require that airports be designed to standards for aircraft that exhibit substantial use of the airport. This standard is called the "Critical Aircraft Standard." It requires that the critical airplanes have at least 500 or more annual itinerant operations at the airport (landings and takeoffs are considered as separate operations) for an individual airplane or a group of airplanes. Critical aircraft standards will be developed for current aircraft usage and for projected aircraft usage. The weight, wingspan, and performance characteristics of these aircraft, in conjunction with site-specific conditions, determine an airport's geometry in terms of runway/taxiway configurations, lengths, and separations. Table 5.2-1 describes the existing and future critical aircraft for the Rowan County Airport.

Table 5.2-1
Critical Aircraft
Rowan County Airport

Criteria	Citation Excel	Citation 750 X
Time Frame/Phase	Existing/Phase I	Phase II/Phase III
Airport Reference Code	B-II	C-II
Wingspan (feet)	55.8	63.9
Approach Speed (mph)	117 (101.6 knots)[1]	151 (131 knots)
Maximum Takeoff Weight (lbs)	20,000	36,100
Number of Engines	2	2
Gear Configuration	Dual	Dual

[1]Estimated from stall speed of 90 knots from published Cessna specifications and descriptions
Source: *Aviation Week* (January 2007)
Talbert & Bright, Inc. (April 2008)

5.2.1 Critical Aircraft Support

In order to establish the most appropriate critical aircraft as defined by the Federal Aviation Administration (FAA), information was obtained from the sign-in survey conducted by the Rowan County Airport and from selected FAA annual tabulations of instrument flight rules (IFR) operations for the Rowan County Airport. A summary of the turbofan sign-in survey flights is provided by Table 5.2.1-1 (page 13).

Table 5.2.1-2 (page 13) documents the IFR operations from January 2000 through July 2007.

Table 5.2.1-1
Sign-In Survey of Turbofan Aircraft
June 26, 2006 through June 25, 2007
Rowan County Airport

Aircraft with FAA Takeoff Distance between 3,200' and 4,000'		Aircraft with FAA Takeoff Distance Above 4,000'		
Type of Aircraft	No. of Visits	Type of Aircraft	No. of Visits	Takeoff Distance
Citation	2	Falcon 10	2	4,500'
Citation 500	2	Falcon 50	5	4,890'
Citation 501	1	Lear Jet 35	2	4,972'
Citation 525	16	Lear Jet 45	7	4,350'
Citation 550	8	Hawker 125	3	5,088'
Citation 560	41	Hawker	1	–
Citation 650	6	Gulfstream G4	2	5,280'
Beech 400	15			
Lear 31	1			
Total	92	Total	22	

Notes: FAA takeoff distance assumes standard day temperature (STD-59°F), sea level, ideal weather, and equipment, plus zero runway gradient
The sign-in survey is estimated to be approximately 14 percent of the yearly turbofan flights as measured by the October 2007 and November 2007 on site air traffic counts
Estimated yearly flights of aircraft with above 4,000' FAA takeoff distance equals 157
Estimated yearly operations of aircraft with above 4,000' FAA takeoff distance equals 314
Source: Rowan County Airport Administration (2007), Desk Survey
Talbert & Bright, Inc. (April 2008)

Table 5.2.1-2
Instrument Flight Rules Operations
Rowan County Airport
Turbofan Powered Aircraft

Aircraft Type	No. of Aircraft	Aircraft Type	No. of Aircraft	Aircraft Type	No. of Aircraft
2000					
ASTR Astra	14	FA 20 Falcon	2	LJ 60 Learjet	4
BE 40 Beech Jet 400	742	G 2 Gulfstream	3	MU 30 Mitsubishi	1
C 500 Citation 1	6	GLF 2 Gulfstream	4	SBR1 Saberliner	39
C 501 Citation 1-SP	20	GLF 4 Gulfstream	10	WW 24 Westwind	7
C 525 (CJ-1)	19	H25B Hawker	19		
C 550 Citation Bravo	66	H25C Hawker	2		

Table 5.2.1-2
Instrument Flight Rules Operations
Rowan County Airport
Turbofan Powered Aircraft

Aircraft Type	No. of Aircraft	Aircraft Type	No. of Aircraft	Aircraft Type	No. of Aircraft
C 560 Citation Encore	63	LJ 24 Learjet	2		
C 650 Citation VII	13	LJ 25 Learjet	1		
C 750 Citation X	6	LJ 31 Learjet	6		
CL 60 Challenger 600	2	LJ 35 Learjet	10		
F2TH	2	LJ 45 Learjet	1		
FA 10 Falcon	2	LJ 55 Learjet	9		
				2000 Total	1,075
				Red Numbers	1,021
				Blue Numbers	35
2001					
ASTR Astra	17	FA 10 Falcon	11	LJ 45 Learjet	2
BE 40 Beech Jet 400	805	FA 20 Falcon	3	LJ 55 Learjet	5
C 500 Citation I	4	G 2 Gulfstream	1	LJ 60 Learjet	23
C 501 Citation 1-SP	6	GALX Galaxy	3	MU 30 Mitsubishi 300	4
C 525 (CJ-1)	13	GLF 2 Gulfstream	7	SBR1 Saberliner	62
C 550 Citation Bravo	40	GLF 3 Gulfstream	4	WW 24 Westwind	2
C 560 Citation Encore	52	GLF 4 Gulfstream	4		
C56X Excel	3	H25B Hawker	16		
C 650 Citation VII	9	LJ 24 Learjet	2		
C 750 Citation X	4	LJ 25 Learjet	2		
F2TH	4	LJ 31 Learjet	4		
F 900 Falcon 900	7	LJ 35 Learjet	4		
				2001 Total	1,123
				Red Numbers	1,044
				Blue Numbers	59
2002					
ASTR Astra	12	F2TH	2	LJ 35 Learjet	12
B 190	1	FA 20 Falcon	8	LJ 45 Learjet	10
BE 40 Beech Jet 400	869	FA 50 Falcon	3	LJ 55 Learjet	6
C 500 Citation I	3	GALX Galaxy	7	LJ 60 Learjet	2
C 501 Citation 1-SP	2	GLF 2 Gulfstream	3	SBR1 Saberliner	37
C 525 (CJ-1)	25	GLF 3 Gulfstream	5	WW24 Westwind	8
C 550 Citation Bravo	55	GLF 4 Gulfstream	4		
C 560 Citation Encore	41	GLF 5 Gulfstream	5		
C56X Excel	11	H25B Hawker	18		
C 650 Citation VII	9	LJ 24 Learjet	2		
C 750 Citation X	6	LJ 25 Learjet	6		

Table 5.2.1-2
Instrument Flight Rules Operations
Rowan County Airport
Turbofan Powered Aircraft

Aircraft Type	No. of Aircraft	Aircraft Type	No. of Aircraft	Aircraft Type	No. of Aircraft
CL 60 Challenger 600	4	LJ 31 Learjet	24		
				2002 Total	1,200
				Red Numbers	1,143
				Blue Numbers	37
2003					
ASTR Astra	4	FA 50 Falcon	6	LJ 60 Learjet	9
BE 40 Beech Jet 400	1,026	G 2 Gulfstream	1	MU 30 Mitsubishi 300	1
C 500 Citation I	2	GALX Galaxy	14	SBR 1 Saberliner	28
C 501 Citation 1-SP	15	GLF 2 Gulfstream	1		
C 525 (CJ-1)	14	GLF 3 Gulfstream	3		
C 550 Citation Bravo	33	H25B Hawker	24		
C 560 Citation Encore	55	LJ 24 Learjet	1		
C56X Excel	24	LJ 25 Learjet	6		
C 650 Citation VII	10	LJ 31 Learjet	14		
CL 60 Challenger 600	8	LJ 35 Learjet	16		
F2TH	4	LJ 45 Learjet	9		
FA 20 Falcon	14	LJ 55 Learjet	7		
				2003 Total	1,349
				Red Numbers	1,298
				Blue Numbers	42
2004					
AC 95	4	C 750 Citation X	16	LJ 24 Learjet	6
ASTR Astra	17	CL 60 Challenger 600	4	LJ 25 Learjet	4
B 230	1	CRJ2	1	LJ 31 Learjet	15
BE 40 Beech Jet 400	1,045	F 900 Falcon 900	2	LJ 35 Learjet	4
C25A (CJ2)	2	FA 10 Falcon	3		
C 500 Citation 500	6	FA 20 Falcon	15		
C 501 Citation 501 Sp	2	FA 50 Falcon	4		
C 525 (CJ-1)	22	GLF 3 Gulfstream	3		
C 550 Citation Bravo	24	GLF 4 Gulfstream	8		
C 560 Citation Encore	26	GLF 5 Gulfstream	2		
C56X Excel	20	H25A Hawker	2		
C 650 Citation III/IV	15	H25B Hawker	24		
				2004 Total	1,324
				Red Numbers	1,266
				Blue Numbers	39

Table 5.2.1-2
Instrument Flight Rules Operations
Rowan County Airport
Turbofan Powered Aircraft

Aircraft Type	No. of Aircraft	Aircraft Type	No. of Aircraft	Aircraft Type	No. of Aircraft
2005					
ASTR Astra	2	C 750 Citation X	6	LJ 24 Learjet	6
B 190	4	CL 30 Challenger 300	2	LJ 25 Learjet	18
BE 40 Beech Jet 400	700	C 135	4	LJ 31 Learjet	18
C25A (CJ 2)	4	F2TH	2	LJ 35 Learjet	4
C 500 Citation I	2	F 900 Falcon 900	2	LJ 45 Learjet	10
C 501 Citation 1-SP	11	FA 10 Falcon	52	LJ60 Learjet	1
C 525 (CJ1)	34	FA 20 Falcon	14	MU 30 Mitsubishi 300	4
C 550 Citation Bravo	35	FA 50 Falcon	4	SBR1 Saberliner	2
C 560 Citation Encore	50	GALX Gulfstream 2	14		
C56X Excel	446	GLF 4	18		
C 650 Citation III/IV	39	H25B Hawker	42		
C 680 Sovereign	2	H25C Hawker	4		
				2005 Total	1,562
				Red Numbers	1,509
				Blue Numbers	25
2006					
BE -40 Beech Jet 400	48	FA 10 Falcon	4	ASTR Astra	6
C25A (CJ2)	2	FA 20 Falcon	24	B-190	2
C25B (CJ3)	1	FA 50 Falcon	9	C 501 Citation 1-SP	8
C 525 (CJ-1)	22	GLF 4 Gulfstream	16	C 560 Citation Encore	86
C 550 Citation Bravo	24	GLF 5 Gulfstream	4	C 650 Citation III/IV	49
C56X Excel	1,225	H25B Hawker	23	GLF 2 Gulfstream	4
CL 60 Challenger 600	8	HS 25 Hawker	3	LJ 24 Learjet	7
LJ 31 Learjet	39	J 328 Doriner Jet	2	LJ 25 Learjet	15
PRM 1 Premier I	4	LJ 35 Learjet	11	MU 30 Mitsubishi 300	2
C 500 Citation 1	2	LJ 45 Learjet	36	B-737	1
C 680 Sovereign	4	LJ 60 Learjet	10		
C750 Citation X	6	E 145 Embraer	1		
				2006 Total	1,708
				Red Numbers	1,599
				Blue Numbers	79
2007 (7 months)					
BE 40 Beech Jet 400	42	C 680 Sovereign	2	GLF 4 Gulfstream	2
C25A Citation II	3	C 750 Citation X	6	H25B Hawker	19
C 500 Citation I	2	CL 60 Challenger 600	4	LJ 24 Learjet	2
C 501 Citation 1-SP	2	F 900 Falcon 900	4	LJ 25 Learjet	2

Table 5.2.1-2
Instrument Flight Rules Operations
Rowan County Airport
Turbofan Powered Aircraft

Aircraft Type	No. of Aircraft	Aircraft Type	No. of Aircraft	Aircraft Type	No. of Aircraft
C 525 (CJ-1)	29	FA 10 Falcon	4	LJ 31 Learjet	3
C 550 Citation Bravo	21	FA 20 Falcon	4	LJ 35 Learjet	4
C560 Citation Encore	56	FA 50 Falcon	2	LJ 45 Learjet	10
C56X Excel	657	GALX Galaxy	2	SBR1 Saberline	2
C 650 Citation VII	18	GLF 2 Gulfstream	4		
				2007 (7 months) Total	904
				Red Numbers	884
				Blue Numbers	14

Note: Red numbers are aircraft listed under Table 3-1 Airplanes that Make Up 75 Percent of the Fleet in *Advisory Circular 150/5325-4B – Runway Length Requirements for Airport Design*
Blue numbers are aircraft listed under Table 3-2 Remaining 25 Percent of Airplanes that Make Up 100 Percent of Fleet in *Advisory Circular 150/5325-4B – Runway Length Requirements for Airport Design*
Source: FAA (January 2000 through July 2007), Instrument Flight Rules Operations Data

As shown in Table 5.2.1-1 (page 13), turbofan sign-in data, an array of Cessna Citation aircraft are transient visitors to the Rowan County Airport, as well as occasional higher performance aircraft including: Learjets, Hawkers, Falcons, and Gulfstreams.

Most significant to the determination of the critical aircraft are the IFR operations data from January 2000 through July 2007. As shown in the Table 5.2.1-2 (page 13), Beechjet 400 aircraft were the dominate Rowan County Airport turbofan aircraft through 2005. However, beginning in 2005, Citation Excels began to also utilize the airport in significant numbers. The 2005 split between these two aircraft was 700 Beechjet operations and 446 Citation Excel operations. In 2006, Citation Excel operations totaled 1,225. In 2007 (7 months), a total of 657 Citation Excel operations were tabulated. Given these tabulations, the Citation Excel was selected as the critical aircraft for the existing and Phase I design years of the Rowan County Airport Master Plan.

A review of each of IFR operations indicates several higher performance aircraft with the Citation 750X appearing in most of the years. With the evidence of higher performance aircraft showing a usage of the airport, the Citation 750 was selected as the design standard for Phases II and III of the Rowan County Airport Master Plan.

5.3 Airport Capacity

Airport capacity was calculated using airport capacity and delay calculations from Chapter 2 of FAA *Advisory Circular 150/5060-5 – Airport Capacity and Delay* (as amended). This chapter contains calculations for determining hourly airport capacity, annual service volume (ASV), and aircraft delay for long-range planning. To utilize this methodology the airport operational characteristics must in essence meet the following assumptions.

A. Runway use configuration – must approximate depicted configurations

B. Percent arrivals – arrivals equal departures

C. Percent touch and go's – 0-50

D. Taxiways – full-length parallel taxiway, ample runway entrance/exit taxiways, and no taxiway crossing

E. Airspace limitations – no airspace limitations which would adversely impact flight operations. Missed approach protection is assured for all converging operations in IFR weather

F. Runway Instrumentation – one runway equipped with an ILS and has the necessary ATC facilities and services to carry out operations in a radar environment

5.3.1 Annual Service Volume Assumptions (ASV)

A. Assumptions of Table 2-1 (page 5) and Figure 2-1 (page 7) of FAA *Advisory Circular 150/5060-5 – Airport Capacity and Delay* (as amended)

			Demand Ratios	
Mix Index % (C+3D)	Percent Arrivals	Percent Touch & Go	Annual Demand/Average Daily Demand	Average Daily Demand/Average Peak Hour Demand*
0-20	50	0-50	290	9

*In the peak month

Note: C = aircraft 12,500 lbs. to 300,000 lbs. maximum certified takeoff weight
D = aircraft over 300,000 lbs. maximum certified takeoff weight

B. Weather – IFR weather conditions occur roughly 10 percent of the time

C. Runway Use Configuration – Roughly 80 percent of the time the airport is operated with the runway-use configuration, which produces the greatest hourly capacity

Given the determination that the Rowan County Airport meets or exceeds the assumption parameters, the following capacity and service volume limits were generated.

Diagram Number 1 Hourly Capacity Annual Service Volume	Hourly Capacity (Operations/Hour) VFR	IFR	ASV Operations/Year
Chapter 2 FAA *Advisory Circular 150/5060-5 – Airport Capacity and Delay* (as amended) (page 7)	98	59	230,000

Utilizing the selected forecast of 2027 operations of 78,200, it is clear that the Rowan County Airport is not projected to reach its capacity or service volume limits within the 20-year long-range planning time frame.

5.4 Runway Requirements

Determination of runway length requirements is dictated by FAA *Advisory Circular 150/5325-4B – Runway Length Requirements for Airport Design.* Use of these guidelines is mandatory for federal funding.

Various factors govern the suitability of available runway lengths, most notably airport elevation above mean sea level, temperature, wind velocity, airplane operating weights, takeoff and landing flap settings, runway surface condition (dry or wet), effective runway gradient, presence of obstructions in the vicinity of the airport, and, if any, locally imposed noise abatement restrictions or other prohibitions. It is the goal, considering the above factors, to construct an available runway length suitable for the existing and forecasted critical design airplanes. The critical design airplanes are required to have a substantial use of a selected runway. This substantial use is defined as at least 500 or more of annual itinerant operations for an individual airplane or a family grouping of airplanes.

5.4.1 Procedure for Runway Length Determination

The determination of the appropriate Rowan County runway length utilizes Chapter 3 of FAA *Advisory Circular 150/5325-4B – Runway Length Requirements for Airport Design,* i.e., "Runway Lengths For Airplanes Within A Maximum Certificated Takeoff Weight Of More Than 12,500 Pounds (5,670 KG) Up To And Including 60,000 Pounds (27,200 KG)."

The recommended runway length for this weight category of airplanes is based on performance curves (FAA Figures 3-1 and 3-2) developed from FAA-approved airplane flight manuals. To determine which of the performance curves to apply, Tables 5.4.1-1 (page 20) and 5.4.1-2 (page 20) outline the critical aircraft previously identified, as well as the mix of aircraft shown by IFR operations for January 2000 through July 2007 at RUQ.

Table 5.4.1-1
Airplanes that Make Up 75 Percent of the Fleet
Rowan County Airport

Manufacturer	Model	Manufacturer	Model
Aerospatiale	Sn-601 Corvette	Dassault	Falcon 10
BAE	125-700	Dassault	Falcon 20
Beech Jet	400A	Dassault	Falcon 50/50 EX
Beech Jet	Premier I	Dassault	Falcon 900/900B
Beech Jet	2000 Starship	Israel Aircraft Industries (IAI)	Jet Commander 1121
Bombardier	Challenger 300	IAI	Westwind 1123/1124
Cessna	500 Citation/501Citation Sp	Learjet	20 Series
Cessna	Citation I/II/III	Learjet	31/31A/31A ER
Cessna	525A Citation II (CJ-2)	Learjet	35/35A/36/36A
Cessna	550 Citation Bravo	Learjet	40/45
Cessna	550 Citation II	Mitsubishi	Mu-300 Diamond
Cessna	551 Citation II/Special	Raytheon	390 Premier
Cessna	552 Citation	Raytheon Hawker	400/400 XP
Cessna	560 Citation Encore	Raytheon Hawker	600
Cessna	560/560 XL Citation Excel	Sabreliner	40/60
Cessna	560 Citation V Ultra	Sabreliner	75A
Cessna	650 Citation VII	Sabreliner	80
Cessna	680 Citation Sovereign	Sabreliner	T-39

Source: FAA *Advisory Circular 150/5325-4B – Runway Length Requirements for Airport Design* (July 1, 2005) – Table 3-1, page 14

Table 5.4.1-2
Remaining 25 Percent of Airplanes that
Make Up 100 Percent of Fleet
Rowan County Airport

Manufacturer	Model
BAE	Corporate 800/1000
Bombardier	600 Challenger
Bombardier	601/601-3A/3ER Challenger
Bombardier	604 Challenger
Bombardier	BD-100 Continental
Cessna	S550 Citation S/II
Cessna	650 Citation III/IV
Cessna	750 Citation X
Dassault	Falcon 900C/900EX
Dassault	Falcon 2000/2000EX
Israel Aircraft Industries (IAI)	Astra 1125
IAI	Galaxy 1126

Table 5.4.1-2
Remaining 25 Percent of Airplanes that Make Up 100 Percent of Fleet
Rowan County Airport

Manufacturer	Model
Learjet	45 XR
Learjet	55/55B/55C
Learjet	60
Raytheon/Hawker	Horizon
Raytheon/Hawker	800/800 XP
Raytheon/Hawker	1000
Sabreliner	65/75

Note:
Airplanes in Tables 4.5.1-1 (page 50) and 4.5.1-2 combine to comprise 100 percent of the fleet
Source: FAA *Advisory Circular 150/5325-4B – Runway Length Requirements for Airport Design* (July 1, 2005) – Table 3-2, page 15

Review of Tables Table 5.2.1-2 (page 13), 5.4.1-1 (page 20) and 5.4.1-2 (page 20) reveals the following shown on Table 5.4.1-3.

Table 5.4.1-3
Selected Summary of Aircraft Operations
Rowan County Airport

Table 5.2.1-2 (page 13)							
2007 (7 months) IFR Operations				2006 IFR Operations			
On Table 5.4.1-1 (page 20)		On Table 5.4.1-2 (page 20)		On Table 5.4.1-1 (page 20)		On Table 5.4.1-2 (page 20)	
Beechjet 400	42	C750 X6	6	Beechjet 400	48	CL 60	8
C525 CJ-1	29	CL 60	4	C525 CJ-1	22	C750 X6	4
C 550 Bravo	21	Falcon 900	4	C550 Bravo	24	Learjet 60	10
C 560 Encore	56	Sub Total	14	C56X Excel	1,225	Astra	6
C56X Excel	657	All Operations	16	C560 Encore	86	Sub Total	28
H25B Hawker	19			C-650 Citation VI	49	All Operations	30
Sub Total	824			Learjet 31	39		
All Operations	884			Learjet 45	36		
				Sub Total	1,529		
				All Operations	1,648		

Source: Talbert & Bright, Inc. (April 2008)

5.4.2 Runway Length Measurement

As shown in Table 5.4.1-3 (page 21), substantial operations of itinerant turbofan aircraft frequent the Rowan County Airport to justify usage of Table 5.4.1-1(page 20) in the determination of appropriate runway length. The corresponding runway length graphs are found in Figure 5.4.2-1 (page 23). In Figure 5.4.2-1 (page 23) two options are provided; i.e., 75 percent of fleet at 60 percent useful load or 75 percent of fleet at 90 percent load. The 90 percent load graph has been selected based on the fact that the majority of the C56X Excel flights (1,225 in 2006) from the Rowan County Airport are conducted by the Food Lion Citations based at the airport. This runway user has dedicated fuel supplies at the Airport, which encourages this user to fill airplane tanks to the maximum for cost saving reasons. Runway length measurement calculations for 75 percent of the fleet at both 60 percent load and 90 percent load are shown in Table 5.4.2-1.

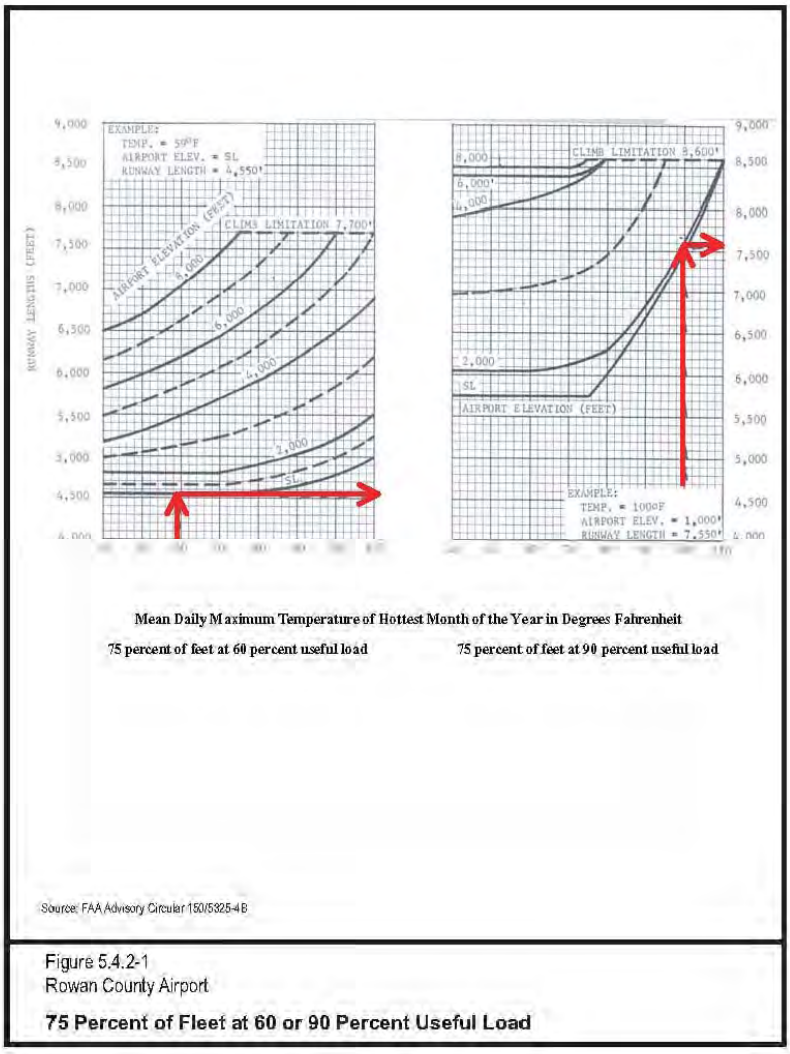
Table 5.4.2-1
Calculations for 75 Percent of Fleet
Rowan County Airport

60 Percent Useful Load		90 Percent Useful Load	
Measurement	4,700'	Measurement	6,200'
15% adjustment*	705'	15% adjustment*	930'
Runway Length	5,405'	Runway Length	7,130'

Input variables: 1) 82°F mean daily temperature hottest month
2) airport elevation 773'
*15% adjustment is for wet runway conditions
Source: Talbert & Bright, Inc. (April 2008)

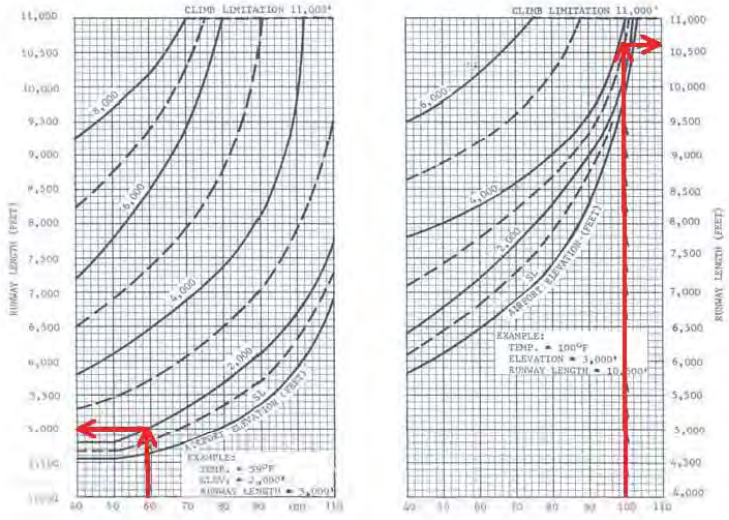
Based on the runway lengths generated, it has been determined that the minimum runway length for the Rowan County Airport should be between 6,300 feet and 7,130 feet. Looking ahead to possible future runway length needs, the runway graphs for 100 percent of the fleet are presented (Figure 5.4.2-2, page 24). It should be noted from these graphs that the minimum runway length suggested is 6,095 feet at 60 percent useful load. This length assumes adjustment for wet runway conditions.

Previous analyses have shown the construction feasibility for a 6,500-foot runway. Given the existing Phase I need for a longer runway and the potential demand from higher performance aircraft, it has been determined that a runway length of 6,500 feet is appropriate for Phase I development at Rowan County Airport.



Source: FAA Advisory Circular 150/5325-4B

Figure 5.4.2-1
Rowan County Airport
75 Percent of Fleet at 60 or 90 Percent Useful Load



Source: FAA Advisory Circular 150/5325-4B

Figure 5.4.2-2
Rowan County Airport
100 Percent of Fleet at 60 or 90 Percent Useful Load

6.0 RUNWAY 02/20 EXTENSION ALTERNATIVES ANALYSIS

In 2003, Rowan County determined that because of the continued increase in aircraft operations, along with the need to upgrade the facility to meet FAA regulations, airfield improvement projects were vital to the safe and efficient operation of the facility. The improvements included a 1,000-foot extension to the existing 5,500-foot runway, an upgraded runway safety area (RSA) to Runway 02, and taxiway lighting. In addition, the extension of Runway 02-20 and upgrade of the Runway 02 RSA to meet current FAA regulations would result in the relocation of Airport Road; therefore requiring the acquisition of several properties.

Due to physical and economical constraints of the surrounding area, the project would consist of one of the following three options:

- 500-foot extension to the north (Runway 20) and 500-foot extension to the south (Runway 02)
- 1,000-foot extension to the south (Runway 02)
- 1,000-foot extension to the north (Runway 20)

6.1 Option 1 – 500-foot Extension to Runway 20 (north) and 500-foot Extension to Runway 02 (south)

Option 1 consists of extending Runway 02/20 by 500 feet on either end for an overall 1,000-foot extension (Figure 6.1-1, page 26). Extending the runway to the north would require a substantial amount of fill material be placed for achieving proper grades for the runway and surrounding slopes. In addition, adjacent land to the northeast and northwest of the runway, which would be in the RPZ, is recommended to be acquired through fee simple purchase. This land abuts Rowan Mills Road to the north of the runway. Extending the runway to the south would require the acquisition of several commercial/industrial businesses through fee simple purchase.

Table 6.1-1 (page 27) illustrates the estimated cost probable cost for the runway extension in 2003.

Figure 6.1-1
Rowan County Airport
500 Foot Extension Each End

Table 6.1-1
Preliminary Opinion of Probable Cost
500-foot Runway 02/20 and Parallel Taxiway Extension (Both Ends)
Rowan County Airport

Spec. No.	Description	Quantity	Unit	Unit Price	Total
P-150	Mobilization (Shall Not Exceed 3%)	1	LS	$156,000.00	$156,000.00
P-151	Clearing And Grubbing Project Area	8	AC	$5,000.00	$40,000.00
P-152	Embankment In Place	1,100,000	CY	$4.00	$4,400,000.00
P-156	Miscellaneous Erosion Control	1	LS	$15,000.00	$15,000.00
P-209	Crushed Aggregate Base Course	3,000	CY	$27.00	$81,000.00
P-401	Bituminous Concrete Surface Course	2,300	TN	$42.00	$96,600.00
P-602	Bituminous Prime Coat	3,000	GAL	$1.50	$4,500.00
P-603	Bituminous Tack Coat	1,000	GAL	$1.50	$1,500.00
P-620	Airfield Pavement Marking	40,000	SF	$1.00	$40,000.00
D-701	Miscellaneous Storm Drainage	1	LS	$60,000.00	$60,000.00
T-901	Seeding	32	AC	$800.00	$25,600.00
T-908	Mulching	32	AC	$500.00	$16,000.00
L-108	Miscellaneous Electrical	1	LS	$25,000.00	$25,000.00
L-125	L-862 HIRL's	6	EA	$620.00	$3,720.00
L-125	L-862-E HIRLs Threshold	8	EA	$750.00	$6,000.00
L-125	L-861t MITL's	21	EA	$600.00	$12,600.00
L-125	PAPI Relocation	1	LS	$12,000.00	$12,000.00
L-125	Glide Slope Relocation	1	LS	$150,000.00	$150,000.00
L-125	Middle Marker Relocation	1	LS	$85,000.00	$85,000.00
L-125	MALSR Relocation	1	LS	$100,000.00	$100,000.00
L-125	Relocate Threshold Lights	1	LS	$30,000.00	$30,000.00
L-127	Electrical Manholes	4	EA	$5,000.00	$20,000.00
	Contingency (5%)	1	EA	$269,000.00	$269,000.00
	Construction Total:				**$5,649,520.00**
	Engineering, Construction Administration, RPR, Testing (15%):				**$847,430.00**
	Total (2003 $):				**$6,496,950.00**

Source: Talbert & Bright, Inc. (January 2003)

6.2 Option 2 – 1,000-foot Extension to Runway 02 (south)

Option 2 consists of extending Runway 02 by 1,000 feet (Figure 6.2-1, page 28). Elements of this extension are complex due to the presence of infrastructure including a railroad spur and existing commercial/industrial business. Several parcels of land that would be within the newly established runway safety area (RSA) and RPZ would have to be acquired through fee simple purchase to accommodate this improvement.

Table 6.2-1 (page 29) illustrates the estimated cost probable cost for the runway extension in 2003.

Figure 6.2-1
Rowan County Airport
1,000 Foot Extension South End

Table 6.2-1
Preliminary Opinion of Probable Cost
1,000-foot Runway 02 and Parallel Taxiway Extension (South End)
Rowan County Airport

Spec. No.	Description	Quantity	Unit	Unit Price	Total
P-150	Mobilization (Shall Not Exceed 3%)	1	LS	$90,000.00	$90,000.00
P-151	Clearing And Grubbing Project Area	5	AC	$4,000.00	$20,000.00
P-152	Embankment In Place	300,000	CY	$7.00	$2,100,000.00
P-156	Miscellaneous Erosion Control	1	LS	$40,000.00	$40,000.00
REP	Remove Existing Pavement (not including Airport Road)	7,000	SY	$8.00	$56,000.00
REP	Remove Existing Railroad	3,600	LF	$12.00	$43,200.00
P-209	Crushed Aggregate Base Course	5,500	CY	$27.00	$148,500.00
P-401	Bituminous Concrete Surface Course	4,100	TN	$42.00	$172,200.00
P-602	Bituminous Prime Coat	5,400	GAL	$1.50	$8,100.00
P-603	Bituminous Tack Coat	1,800	GAL	$1.50	$2,700.00
P-620	Airfield Pavement Marking	45,000	SF	$1.00	$45,000.00
D-701	Miscellaneous Storm Drainage	1	LS	$150,000.00	$150,000.00
T-901	Seeding	25	AC	$1,000.00	$25,000.00
T-908	Mulching	25	AC	$800.00	$20,000.00
L-108	Miscellaneous Electrical	1	LS	$50,000.00	$50,000.00
L-125	L-862 MIRL's	12	EA	$620.00	$7,440.00
L-125	L-862-E MIRL's Threshold	8	EA	$750.00	$6,000.00
L-125	L-861t MITL's	42	EA	$600.00	$25,200.00
L-125	PAPI Relocation	1	LS	$12,000.00	$12,000.00
L-125	Localizer Relocation	1	LS	$50,000.00	$50,000.00
L-127	Electrical Manholes	8	EA	$5,000.00	$40,000.00
	Contingency (10%)	1	LS	$311,000.00	$311,000.00
	Construction Total:				$3,422,340.00
	Engineering, Construction Administration, RPR, Testing (15%):				$328,545.00
	Total (2003 $):				**$3,750,885.00**

Source: Talbert & Bright, Inc. (January 2003)

6.3 Option 3 – 1,000-foot Extension to Runway 20 (north)

Option 3 consists of extending Runway 20 by 1,000 feet (Figure 6.3-1, page 30). Extending the runway to the north would require a significant amount of fill material be placed for achieving proper grades for the runway and surrounding slopes. In addition, adjacent land to the northeast and northwest of the runway, which would be in the RPZ, is recommended to be acquired through fee simple purchase. This land abuts Rowan Mills Road to the north of the runway.

Table 6.3-1 (page 31) illustrates the estimated cost probable cost for the runway extension in 2003.

Figure 6.3-1
Rowan County Airport
1,000 Foot Extension North

Table 6.3-1
Preliminary Opinion of Probable Cost
1,000-foot Runway 20 and Parallel Taxiway Extension (North End)
Rowan County Airport

Spec. No.	Description	Quantity	Unit	Unit Price	Extended Total
P-150	Mobilization	1	LS	$519,000.00	$519,000.00
P-151	Clearing and Grubbing Project Area	20	AC	$5,000.00	$100,000.00
P-152	Embankment in Place	2,000,000	CY	$8.00	$16,000,000.00
P-156	Miscellaneous Erosion Control	1	LS	$65,000.00	$65,000.00
P-209	Crushed Aggregate Base Course	8,000	CY	$27.00	$216,000.00
P-401	Bituminous Concrete Surface Course	4,200	TN	$42.00	$176,400.00
P-602	Bituminous Prime Coat	5,500	GAL	$1.50	$8,250.00
P-603	Bituminous Tack Coat	1,800	GAL	$1.50	$2,700.00
P-620	Airfield Pavement Marking	50,000	SF	$1.00	$50,000.00
D-701	Miscellaneous Storm Drainage	1	LS	$300,000.00	$300,000.00
T-901	Seeding	45	AC	$800.00	$36,000.00
T-908	Mulching	45	AC	$500.00	$22,500.00
L-108	Miscellaneous Electrical	1	LS	$50,000.00	$50,000.00
L-125	L-862 HIRL'S	12	EA	$500.00	$6,000.00
L-125	L-862-E HIRL'S Threshold	8	EA	$500.00	$4,000.00
L-125	L-861T MITL'S	45	EA	$450.00	$20,250.00
L-125	PAPI Relocation	1	LS	$12,000.00	$12,000.00
L-125	Middle Marker Relocation	1	LS	$85,000.00	$85,000.00
L-125	MALSR Relocation	1	LS	$100,000.00	$100,000.00
L-125	Relocate Threshold Lights	1	LS	$30,000.00	$30,000.00
L-127	Electrical Manholes	4	EA	$5,000.00	$20,000.00
	Contingency (10%)	1	EA	$1,782,000.00	$1,782,000.00
	Construction Total:				$19,605,100.00
	Engineering, Construction Administration, RPR, Testing (15%):				$2,940,770.00
	Total (2003 $):				**$22,545,870.00**

Source: Talbert & Bright, Inc. (January 2003)

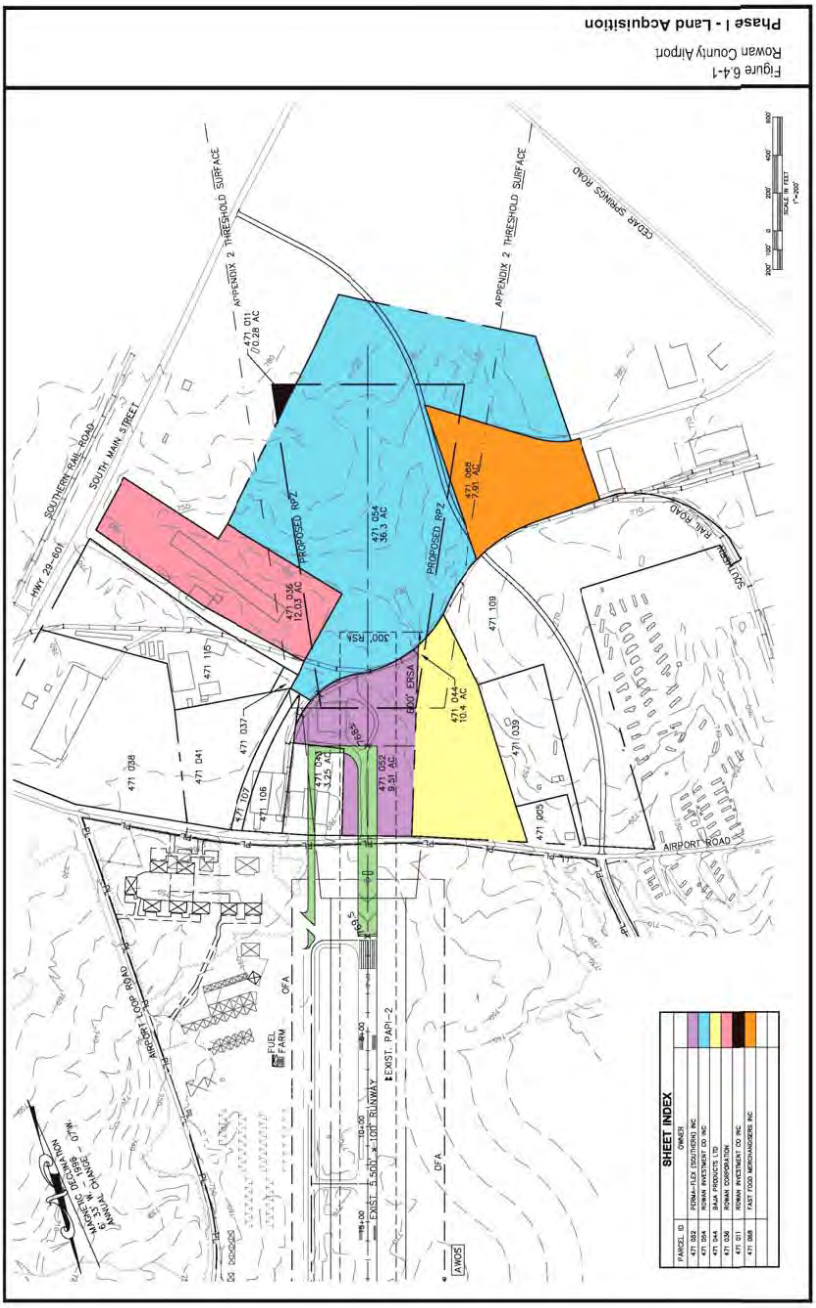
6.4 Preferred Alternative

Rowan County has begun receiving funding and is purchasing property in the existing Runway 02 runway protection zone (RPZ). To date, they have purchased one parcel of property (Parcel 471 043 – JGL, Inc.) for $1.25 million. In the current land acquisition program for the proposed Runway 02 extension, it is anticipated that the County will also need to purchase five entire parcels and a portion of one other parcel. The estimated total cost based on tax values is $5.2 million. Based on this total purchase cost for land acquisition, the fees associated with the purchases (such as surveys, appraisals, legal fees, recording fees, etc.) are estimated at $1.0 million. The land acquisition will provide necessary land for the proposed extension of the runway, including acquiring the land within the proposed RPZ. However, in some cases a portion of the parcel may be acquired in lieu of the entire parcel in order to reduce costs. Also, an avigation easement may be a less costly alternative for some of the parcels that penetrate into the proposed RPZ.

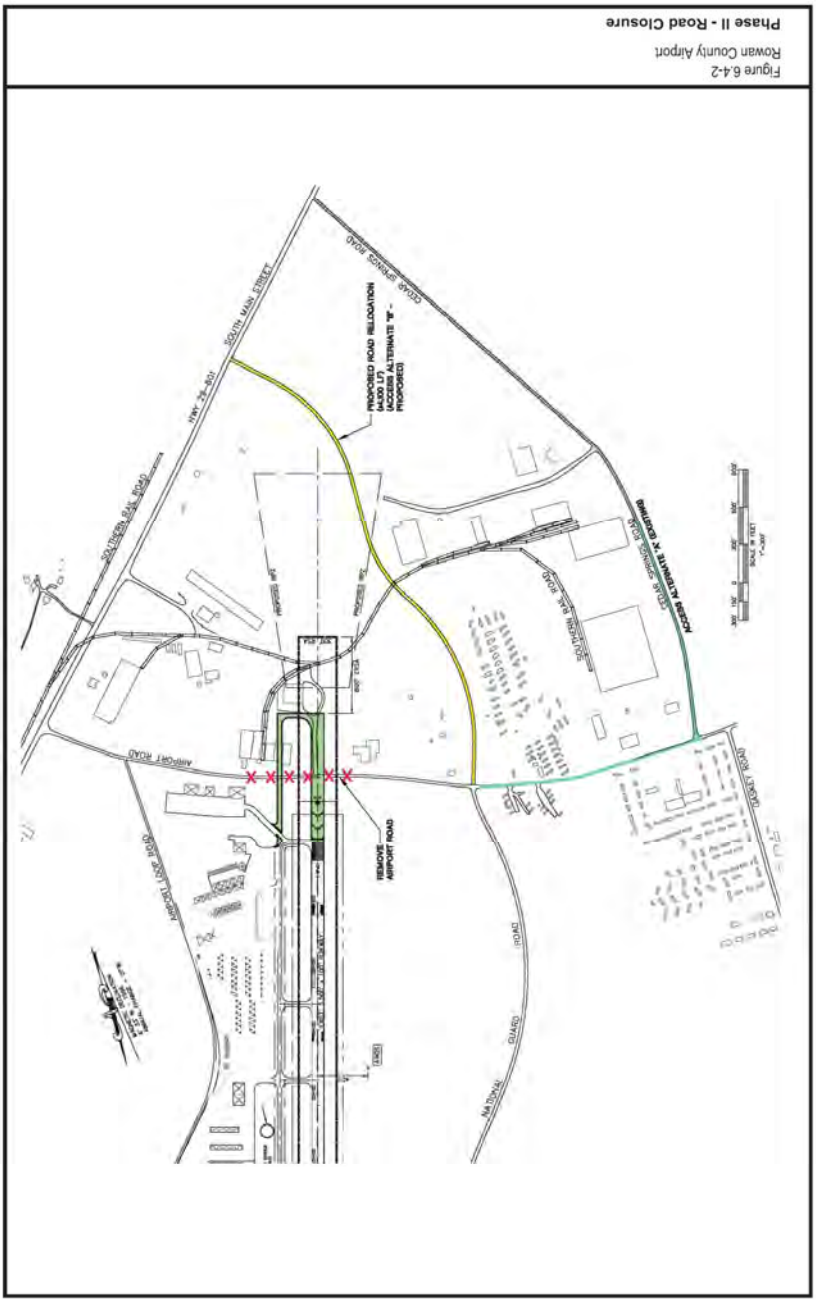
The proposed runway extension will require a portion of Airport Road to be closed. This road closure can be accomplished with little impact to area residences and businesses since Cedar Springs Road provides an alternate route to serve vehicular traffic on the south side of the airport and for access to US-29. The businesses and residences on the south side of the airport can be served by the remaining segment of Airport Road north of the proposed runway extension.

Currently, there is a plan to extend Peach Orchard Road across US-29 and tie it into the existing intersection of National Guard Road and Airport Road. This road extension is proposed to be two lanes with a length of approximately 4,100 linear feet. The estimate of probable cost for this road is approximately $2.2 million. However, it appears that Cedar Springs Road can be utilized as discussed above for current vehicular traffic volumes.

The design and construction of the runway extension project is divided into four phases (Figures 6.4-1 [page 33], 6.4-2 [page 34], 6.4-3 [page 35], and 6.4-4 [page 36]). Each phase and the corresponding estimated cost are in Table 6.4-1 (page 37). The total cost for the runway extension, including these four phases, and the additional costs is: $22.5 million. This number may be reduced based on purchasing less land and not building the additional Peach Orchard Road extension.


Phase I - Land Acquisition
Rowan County Airport
Figure 6.4-1
SHEET INDEX
PARCEL ID
OWNER
471 002
ROWA-FLEX SOUTHERN, INC
471 004
ROWAN INVESTMENT CO. INC
471 044
BAJA PRODUCTS LTD
471 034
ROWAN CORPORATION
471 035
ROWAN AVIATION CO. INC
471 001
FAST FOOD MERCHANDISERS, INC
APPENDIX 2 THRESHOLD SURFACE
CEDAR SPRINGS ROAD
SOUTHERN RAILROAD
SOUTH MAIN STREET
HWY 29-601
PROPOSED RPZ
471 011
10.28 AC
471 054
30.1 AC
471 055
7.91 AC
471 036
12.03 AC
471 044
10.4 AC
471 052
8.91 AC
471 034
3.25 AC
300' RSA
600' ERSA
AIRPORT ROAD
AIRPORT LOOP ROAD
FUEL FARM
EXIST. PAPI-2
DOSET
5,501' x 100' RUNWAY
OFA
ANGS
471 109
471 115
471 037
471 041
471 038
471 102
471 106
471 039
471 005

ROWAN COUNTY AIRPORT
RUNWAY EXTENSION JUSTIFICATION STUDY



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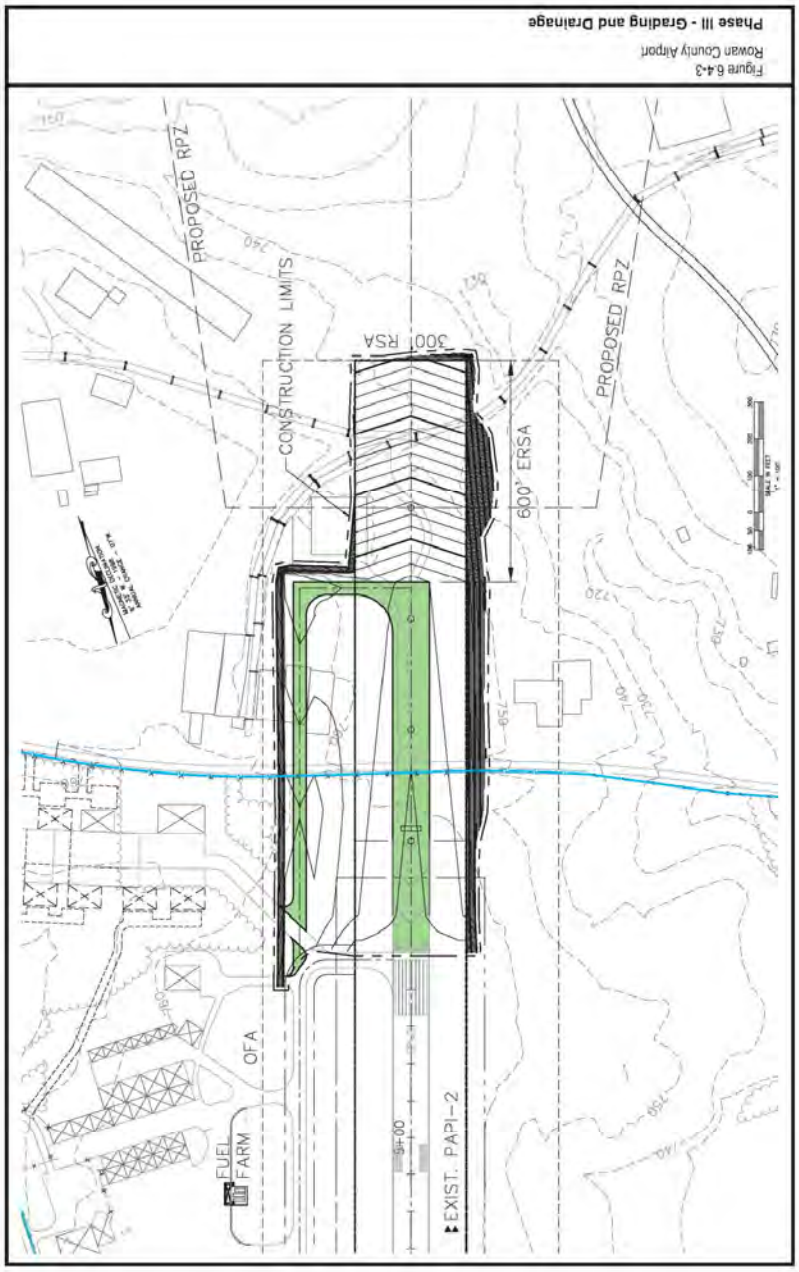
Phase III - Grading and Drainage
Rowan County Airport
Figure 6.4-3
PROPOSED RPZ
CONSTRUCTION LIMITS
300' RSA
600' ERSA
PROPOSED RPZ
OFA
FUEL FARM
EXIST. PAPI-2
9-27
09-45

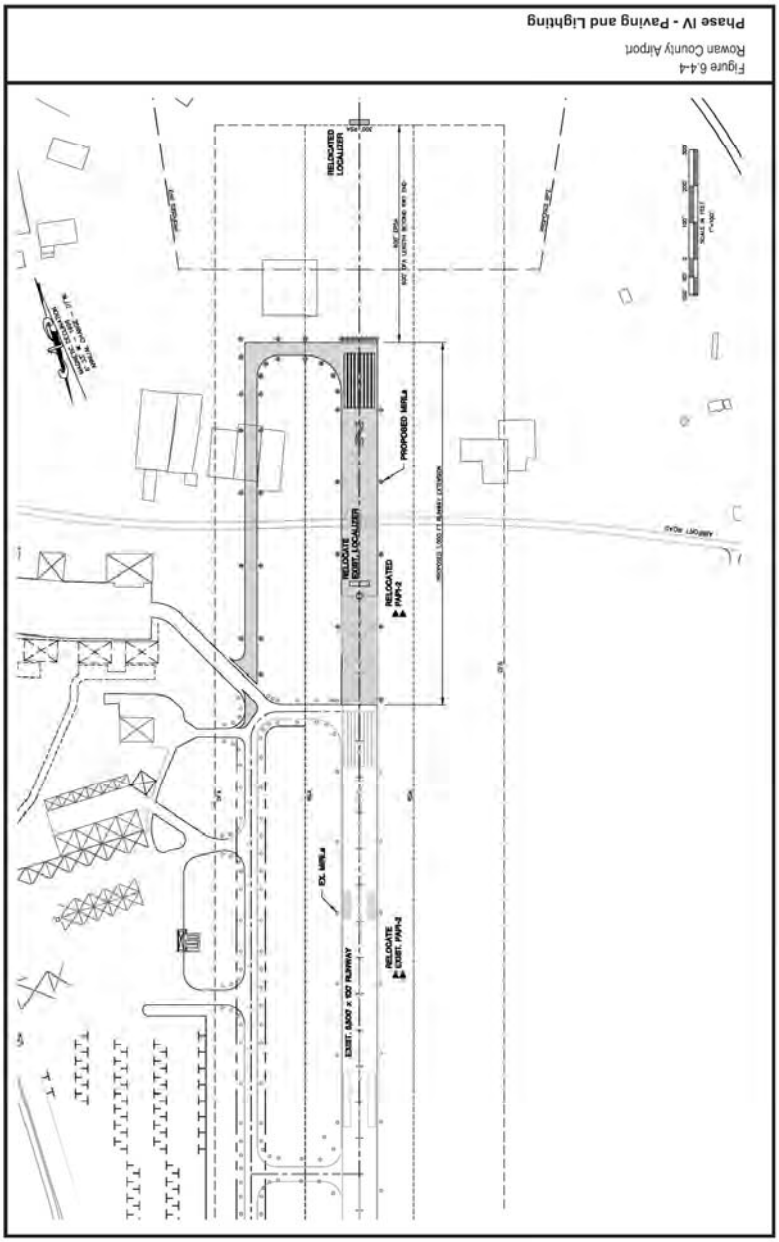
Phase IV - Paving and Lighting
Rowan County Airport
Figure 6.4-4
RELOCATED LOCALIZER
PROPOSED MIRL
RELOCATE EXIST. LOCALIZER
RELOCATED PAPI-2
RELOCATE EXIST. PAPI-2
EXIST. 6,300' x 100' RUNWAY
EXIST. MIRL
AIRPORT ROAD

Table 6.4-1
Preliminary Opinion of Probable Cost
1,000-foot Runway 02 and Parallel Taxiway Extension (South End)
Rowan County Airport

Parcel No./ Spec No.	Owner/Description	Acres/ Quantity	Unit	Unit Price	Total
Preliminary Engineering					
	Benefit Cost Analysis	1	LS	$125,000.00	$125,000.00
	Environmental Documentation	1	LS	$250,000.00	$250,000.00
	Contingency	1	LS	$550,000.00	$550,000.00
	TOTAL:				**$925,000.00**
Land Acquisition					
	Runway Extension				
471 011	Rowan Investment Co., Inc.	4.4	LS	$138,000.00	$138,000.00
471 036	Rowan Corporation	12.03	LS	$709,000.00	$709,000.00
471 037	Hess, Larry Weaver	0.5	LS	$17,000.00	$17,000.00
471 039	Jaco Properties, Inc.	0.14	LS	$6,000.00	$6,000.00
471 041	United Beverages of NC LLC	3.08	LS	$2,902,000.00	$2,902,000.00
471 044	Baja Products Ltd.	10.4	LS	$819,000.00	$819,000.00
471 052	Perma-Flex (Southern Inc.)	9.51	LS	$699,000.00	$699,000.00
471 054	Rowan Investment Co., Inc.	17.68	LS	$255,000.00	$255,000.00
471 068	Fast Food Merchandisers, Inc.	6.42	LS	$1,980,000.00	$1,980,000.00
471 071	Rowan Corporation	5.36	LS	$180,000.00	$180,000.00
471 109	Tallent Timothy N.	22.93	LS	$326,000.00	$326,000.00
471 115	Hess, Larry Weaver	0.29	LS	$55,000.00	$55,000.00
	Subtotal:				$8,086,000.00
	Road Relocation				
471 005	Howell, Carla G. and Fulcher, Patricia et al	0	LS	$0.00	$0.00
471 0140001	Franks, Evelyn Estate	1.08	LS	$7,000.00	$7,000.00
471 015	Widenhouse Service	2.26	LS	$153,000.00	$153,000.00
471 039000001	Jaco Properties, Inc.	0	LS	$0.00	$0.00
471 054	Rowan Investment Co., Inc.	1.72	LS	$25,000.00	$25,000.00
471 068	Fast Food Merchandisers, Inc.	1.49	LS	$460,000.00	$460,000.00
471 109	Tallent, Timothy N.	4.08	LS	$58,000.00	$58,000.00
	Subtotal:				$703,000.00
	Land Acquisition TOTAL:				$8,789,000.00
	Contingency :				$1,318,350.00
	Land Acquisition Fees:				$1,000,000.00
	TOTAL:				**$11,107,350.00**
Airport Road Relocation (Construction Phase)					
800	Mobilization	1	LS	$189,000.00	$189,000.00
200	Clearing and Grubbing Project Area	10	AC	$4,000.00	$40,000.00
225	Unclassified Excavation	75,000	CY	$12.00	$900,000.00
225	Unsuitable Excavation	8,000	CY	$20.00	$160,000.00
250	Removal of Existing Pavement	5,000	SY	$8.00	$40,000.00
520	Aggregate Base Course	3,400	CY	$60.00	$204,000.00
600	Bituminous Prime Coat	4,000	GAL	$1.75	$7,000.00
605	Bituminous Tack Coat	1,200	GAL	$1.75	$2,100.00

Table 6.4-1
Preliminary Opinion of Probable Cost
1,000-foot Runway 02 and Parallel Taxiway Extension (South End)
Rowan County Airport

Parcel No./ Spec No.	Owner/Description	Acres/ Quantity	Unit	Unit Price	Total
640	Bituminous Binder Course	1,400	TN	$98.00	$137,200.00
645	Bituminous Surface Course	1,400	TN	$98.00	$137,200.00
900	Miscellaneous Signage	1	LS	$5,000.00	$5,000.00
1205	Pavement Marking	6,000	SF	$2.20	$13,200.00
1660	Seeding and Mulching	15	AC	$1,800.00	$27,000.00
STS-1	Miscellaneous Drainage	1	LS	$175,000.00	$175,000.00
STS-2	Miscellaneous Erosion and Sediment Control	1	LS	$45,000.00	$45,000.00
STS-3	Contingency	1	LS	$208,000.00	$208,000.00
	Construction Total:				$2,289,700.00
	Engineering, Construction Administration, RPR, Testing (15%):				$343,455.00
	TOTAL:				**$2,633,155.00**
Grading and Drainage Phase					
P-150	Mobilization	1	LS	$355,000.00	$355,000.00
P-151	Clearing and Grubbing Project Area	50	AC	$4,000.00	$200,000.00
P-152	Embankment in Place	300,000	CY	$12.00	$3,600,000.00
P-156	Miscellaneous Erosion Control	1	LS	$85,000.00	$85,000.00
REP	Remove Existing Pavement (not including Airport Road)	7,000	SY	$8.00	$56,000.00
REP	Remove Existing Railroad	3,600	LF	$45.00	$162,000.00
D-701	Miscellaneous Storm Drainage	1	LS	$215,000.00	$215,000.00
F-162	Remove Existing Fence	1,000	LF	$7.00	$7,000.00
F-162	6' Chain-Link Fence with Barbed Wire	4,000	LF	$18.00	$72,000.00
T-901	Seeding	25	AC	$1,000.00	$25,000.00
T-908	Mulching	25	AC	$800.00	$20,000.00
	Contingency (10%)	1	LS	$480,000.00	$480,000.00
	Construction Total:				$5,277,000.00
	Engineering, Construction Administration, RPR, Testing (15%):				$791,550.00
	TOTAL:				**$6,068,550.00**
Paving and Lighting Phase					
P-150	Mobilization	1	LS	$136,000.00	$136,000.00
P-152	Unclassified Excavation	5,000	CY	$15.00	$75,000.00
P-156	Miscellaneous Erosion Control	1	LS	$12,000.00	$12,000.00
P-209	Crushed Aggregate Base Course	12,000	CY	$60.00	$720,000.00
P-401	Bituminous Concrete Surface Course	4,100	TN	$98.00	$401,800.00
P-602	Bituminous Prime Coat	5,400	GAL	$2.50	$13,500.00
P-603	Bituminous Tack Coat	1,800	GAL	$2.50	$4,500.00
P-620	Airfield Pavement Marking	60,000	SF	$1.75	$105,000.00
P-620	Airfield Pavement Marking Removal	50,000	SF	$0.75	$37,500.00
T-901	Seeding	25	AC	$1,000.00	$25,000.00
T-908	Mulching	25	AC	$800.00	$20,000.00

Table 6.4-1
Preliminary Opinion of Probable Cost
1,000-foot Runway 02 and Parallel Taxiway Extension (South End)
Rowan County Airport

Parcel No./ Spec No.	Owner/Description	Acres/ Quantity	Unit	Unit Price	Total
L-108	Miscellaneous Electrical	1	LS	$56,000.00	$56,000.00
L-125	L-862 MIRL's	12	EA	$675.00	$8,100.00
L-125	L-862-E MIRL's Threshold	8	EA	$750.00	$6,000.00
L-125	L-861T MITL's	42	EA	$675.00	$28,350.00
L-125	L-858 Airfield Guidance Sign	2	EA	$5,500.00	$11,000.00
L-125	L-858 Distance Remaining Sign	1	EA	$6,000.00	$6,000.00
L-125	PAPI Relocation	1	LS	$18,000.00	$18,000.00
L-125	REIL Relocation	1	LS	$12,000.00	$12,000.00
L-125	Localizer Relocation	1	LS	$100,000.00	$100,000.00
L-127	Electrical Manholes	8	EA	$5,000.00	$40,000.00
	Contingency (10%)	1	LS	$184,000.00	$184,000.00
	Construction Total:				$2,019,750.00
	Engineering, Construction Administration, RPR, Testing (15%):				$302,962.50
	TOTAL:				$2,322,712.50
	TOTAL ESTIMATED PROJECT COST:				$23,056,767.50

Source: Talbert & Bright, Inc. (January 2008)

7.0 BENEFIT/COST ANALYSES

For major government projects benefit/cost analyses are often mandated to support government decisions to initiate the program when benefits have quantifiable components. The procedure uses standard discount cash flow techniques as outlined by the Office of Management and Budget *Circular No. A-94 Guidelines and Discount Rates for Benefit-Cost Analyses of Federal Programs.*

7.1 Runway Extension Justifications

Historically runway extension projects have been justified based on the needs of existing aircraft or firmly projected future aircraft. These justifications are presented in Sections 3 through 6. However, in this section quantification of selected runway user costs are tested against the estimated cost of the runway extension project. The tests used are benefit/cost analyses of savings in fuel and time as a single justification for the runway extension construction.

7.2 Benefit/Cost Analysis Theory

The theory of benefit/cost analyses centers on the calculation of quantifiable project benefits and costs each discounted to a common study year and a ratio of benefits to cost computed. The discount rate is a critical element in establishing the net present value of benefits and costs. The real interest rate excludes actual inflation and is the preferred rate for constant dollar analyses. Nominal interest rate usage includes the effects of general price inflation.

FAA guidelines include the cost measurements of project planning, construction, land acquisition, and operations and maintenance over a 20-year project life. Where appropriate, the FAA includes costs to airlines and the public due to operative delays caused by construction of the project and any costs to the community stemming from environmental impacts resulting from the project. Costs and benefits are input to the analyses in the years that they occur. Residual or salvage values can be computed as benefits at the conclusion of the benefits analysis stream.

Benefits quantification is defined as the savings generated by the project, i.e., the difference between costs generated without the project and cost with the project.

The end objective is to calculate and compare the net present value of benefits and costs and to determine a ratio of costs to benefits. The following is a discussion of net present value and discount rate policy from the Office of Management and Budget *Circular No. A-94 Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs.*

7.2.1 Net Present Value and Related Outcome Measures

The standard criterion for deciding whether a government program can be justified on economic principles is net present value – the discounted monetized value of expected net benefits (i.e., benefits minus costs). Net present value is computed by assigning monetary values to benefits and costs, discounting future benefits and costs using an appropriate discount rate, and subtracting the sum total of discounted costs from the sum total of discounted benefits. Discounting benefits and costs transforms gains and losses occurring in different time periods to a common unit of measurement. Programs with positive net present value increase social resources and are generally preferred. Programs with negative net present value should generally be avoided.

7.2.2 Discount Rate Policy

In order to compute net present value, it is necessary to discount future benefits and costs. This discounting reflects the time value of money. Benefits and costs are worth more if they are experienced sooner. Future benefits and costs, including non-monetized benefits and costs, should be discounted. The higher the discount rate, the lower is the present value of future cash flows. For typical investments, with costs concentrated in early periods and benefits following in later periods, raising the discount rate tends to reduce the net present value.

7.3 Rowan County Runway Extension Benefit/Cost Analyses

Utilizing the Office of Management and Budget guidelines, benefit/cost analyses were conducted to assist in the evaluation of the proposed 1,000-foot runway/taxiway extension at RUQ.

7.3.1 Fuel Saving and Time

Two quantifiable elements of aircraft activity are utilized in the benefit/cost analyses; i.e., fuel savings realized when extra in-transit fuel stops are avoided and time savings realized from avoidance of these same extra stops. Table 7.3.1-1 documents the fuel and time components incorporated into the analyses per each extra stop. The units used were derived from discussions with fixed based operators/aircraft dealers and corporate aircraft users.

Table 7.3.1-1
Fuel and Time Per In-Flight Stop
Rowan County Airport

Aircraft Type	Fuel Use		Time Used
Multi-Engine	15 gals.	from altitude	15 min.
Turboprop	5 gals.	taxing to terminal	15 min.
example:	5 gals.	taxing from terminal	15 min.
King Air 200	20 gals.	to altitude	15 min.
	45 Total gals.	per stop	60 Total min. per stop
Small Jets	30 gals.	from altitude	20 min.
example:	10 gals.	taxing to terminal	15 min.
Citation Excel 560	10 gals.	taxing from terminal	15 min.
	50 gal	to altitude	20 min.
	100 Total gals.	per stop	70 Total min. per stop
Medium/Large Jets	40 gals.	from altitude	20 min.
examples:	10 gals.	taxing to terminal	15 min.
Gulfstream 100	10 gals.	taxing from terminal	15 min.
Hawker 700	60 gals.	to altitude	20 min.
	120 Total gals.	per stop	70 Total min. per stop

Sources: Rowan County Airport (June 2008)
Talbert & Bright, Inc. (June 2008)

The time factor is ultimately quantified by hourly income of aircraft passengers and pilots. It is projected that the time used in the extra aircraft stop could have been used in a more productive job related use without the stop hence a quantifiable savings will occur without the extra stop. Use of job related time as a cost factor is a standard analyses input. Uses of other time e.g. shopping, leisure, education, etc. are more tentative and used sparingly.

7.3.2 Forecasts of Extra Stops

Quantification of extra aircraft stops begins with estimation of annual itinerant aircraft operations by aircraft type and the selection of multi-engine turboprop and jet (turbofan) aircraft Table 7.3.2-1. From these selected aircraft operations aircraft flights and stops are estimated see Table 7.3.2-2 (page 43). The percentage of operations subject to aircraft stops was estimated from Table 4.2-1 (page 10).

Table 7.3.2-1
Forecasts of Itinerant Aircraft Operations
by Type of Aircraft
Rowan County Airport

Aircraft Category	Year	Itinerant	Local	Operations	Total All Operations
Percent		**63.4%**	**36.6%**	**100.0%**	
Single-Engine	2007	17,308	9,992	27,300	43,000
	2012	20,985	12,115	33,100	53,200
	2017	22,887	13,213	36,100	61,500
	2027	30,178	17,422	47,600	78,200
Percent		**61.0%**	**39.0%**	**100.0%**	
Multi-Engine Piston	2007	1,647	1,053	2,700	43,000
	2012	1,952	1,248	3,200	53,200
	2017	1,830	1,170	3,000	61,500
	2027	1,830	1,170	3,000	78,200
Percent		**100.0%**	**0.0%**	**100.0%**	
Multi-Engine Turboprop	2007	1,000	0	1,000	43,000
	2012	2,000	0	2,000	53,200
	2017	3,600	0	3,600	61,500
	2027	6,400	0	6,400	78,200
Percent		**87.9%**	**12.1%**	**100.0%**	
Jet (Adjusted for local antique jet)*	2007	2,813	387	3,200	43,000
	2012	3,613	387	4,000	53,200
	2017	4,413	387	4,800	61,500
	2027	6,013	397	6,400	78,200
Percent		**37.5%**	**62.5%**	**100.0%**	
Helicopters (includes military)	2007	3,300	5,500	8,800	43,000
	2012	4,088	6,812	10,900	53,200
	2017	5,250	8,750	14,000	61,500
	2027	5,550	9,250	14,000	78,200

*Local jet operations are from a historic restored Russian type trainer based at Rowan and flown in local test flights. The 12.1 percent applies to 2007 counts only.
Red numbers used in benefit/cost analyses (Table 7.3.2-2, page 43)
Source: Table 2.1-1 (page 5) and Table 3.4-4 (page 37) of Rowan County Airport Master Plan and Runway Extension Justification
Talbert & Bright, Inc. (June 2008)

Table 7.3.2-2
Forecast of Itinerant Aircraft Operations

by Aircraft Mix and Fuel Stops

Year	Operations/ Flights/ Fuel and Diversion Stops*	Multi-Engine Turboprops	Small/ Medium Jets	Large Jets	Total Jets	Percent Large Jets
2007	Operations	1,000	2,672	141	2,813	
	Flights	500	1,336	71	1,407	5%
	Stops	65 (13%)	334 (25%)	64 (90%)	398	
2012	Operations	2,000	2,890	723	3,613	
	Flights	1,000	1,445	362	1,807	20%
	Stops	130 (13%)	361 (25%)	326 (90%)	687	
2017	Operations	3,600	3,310	1,103	4,413	
	Flights	1,800	1,655	552	2,207	25%
	Stops	234 (13%)	414 (25%)	497 (90%)	911	
2027	Operations	6,400	3,908	2,105	6,013	
	Flights	3,200	1,504	1,053	3,007	35%
	Stops	416 (13%)	376 (25%)	947 (90%)	1,323	

*Diversion stops are due to wet runway conditions at the Rowan County Airport
Red numbers from Table 7.3.2-1 (page 42)
Source: Talbert & Bright, Inc. (June 2008)

7.3.3 Benefit Cost Analysis I

The initial benefit/cost analysis utilizes the stops defined by Table 7.3.2-2 and calculates fuel savings as shown by Table 7.3.3-1 (page 44) and time savings as shown by Table 7.3.3-2 (page 45). The project construction, land value, and planning/engineering costs are taken from Table 6.4-1 (page 37) minus contingency costs.

Table 7.3.3-1
Fuel Savings – Benefit/Cost Analysis I
Rowan County Airport

Year	Trips/Yr*	Extra Gallons per Landing	Total Gallons	Price per Gallon	Total Cost/Yr.
2007					
Turboprops	65	45	2,925	$5.60	$16,380
Small Jets	334	100	33,400	$5.60	$187,040
Med./Large Jets	64	120	7,680	$5.60	$43,008
Total					**$246,428**
2012					
Turboprops	130	45	5,850	$5.60	$32,760
Small Jets	361	100	36,100	$5.60	$202,160
Med./Large Jets	326	120	39,120	$5.60	219,072
Total					**$453,992**
2017					
Turboprops	234	45	10,530	$5.60	$58,968
Small Jets	414	100	41,400	$5.60	$231,840
Med./Large Jets	497	120	59,640	$5.60	$333,984
Total					**$624,792**
2027					
Turboprops	416	45	18,720	$5.60	$104,832
Small jets	376	100	37,600	$5.60	$210,560
Med./Large Jets	947	120	113,640	$5.60	$636,384
Total					**$951,776**

*Initial year 2007 trips per year from pilot surveys March 2008 through June 2008
Trips per year are from flights that could take on extra fuel and save an in-flight fuel stop
Year 2012, 2017, 2027 trips per/yr., based on assumed percentage of flights applied to 2007 Master Plan forecasts.
Source: Talbert & Bright, Inc. (June 2008)

Table 7.3.3-2
Time Savings – Benefit/Cost Analysis I
Rowan County Airport

Year	Trips/ Year	Persons/ Trip	Total Person Trips	Time per Trip	Hourly Rate	Time Savings
2007						
Turboprops						
Passengers	65	7.0	455	1 hr.	$43.27	$19,688
Pilots	65	2.0	130	1 hr.	$43.27	$5,625
Small Jets						
Passengers	334	8.0	2,672	1.2 hr	$48.08	$154,164
Pilots	334	2.0	668	1.2 hr.	$43.27	$34,685
Med./Large Jets						
Passengers	64	12.0	768	1.2 hr.	$52.89	$48,743
Pilots	64	2.0	124	1.2 hr.	$48.08	$7,154
						$270,059
2012						
Turboprops						
Passengers	130	7.0	910	1 hr.	$43.27	$39,376
Pilots	130	2.0	260	1 hr.	$43.27	$11,250
Small Jets						
Passengers	361	8.0	2,888	1.2 hr.	$48.08	$166,626
Pilots	361	2.0	722	1.2 hr.	$43.27	$37,489
Med./Large Jets						
Passengers	326	12.0	3,912	1.2 hr.	$52.89	$248,286
Pilots	326	2.0	652	1.2 hr.	$48.08	$37,617
						$540,644
2017						
Turboprops						
Passengers	234	7.0	1,638	1 hr.	$43.27	$70,876
Pilots	234	2.0	468	1 hr.	$43.27	$20,250
Small Jets						
Passengers	414	8.0	3,312	1.2 hr	$48.08	$191,089
Pilots	414	2.0	828	1.2 hr.	$43.27	$42,993
Med./Large Jets						
Passengers	497	12.0	5,964	1.2 hr.	$52.89	$378,523
Pilots	497	2.0	994	1.2 hr.	$48.08	$57,350
						$761,081
2027						
Turboprops						
Passengers	416	7.0	2,912	1 hr.	$43.27	$126,002
Pilots	416	2.0	832	1 hr.	$43.27	$36,000
Small Jets						
Passengers	376	8.0	3,008	1.2 hr.	$48.08	$173,550
Pilots	376	2.0	752	1.2 hr.	$43.27	$39,047
Med./Large Jets						
Passengers	947	12.0	11,364	1.2 hr.	$52.89	$721,250
Pilots	947	2.0	1,894	1.2 hr.	$48.08	$109,276

Table 7.3.3-2
Time Savings – Benefit/Cost Analysis I
Rowan County Airport

Year	Trips/ Year	Persons/ Trip	Total Person Trips	Time per Trip	Hourly Rate	Time Savings
						$1,205,125

Wage Rates Per Hour

Annual Salary	Days	Dollars Per Hour	
$90,000	2080	$43.27	Turboprop Passenger
$90,000	2080	$43.27	Turboprop Pilot
$100,000	2080	$48.08	Small Jet Passenger
$90,000	2080	$43.27	Small Jet Pilot
$110,000	2080	$52.89	Med. Large Jet Passenger
$100,000	2080	$48.08	Med./Large Jet Pilot

Source: Talbert & Bright, Inc. (June 2008)

Table 7.3.3-3 utilizes these cost and savings units to calculate benefit/cost ratios.

Table 7.3.3-3
Benefit/Cost Analysis I – 2.8 Percent Discount Rate
Constant Year 2008 Dollars
Rowan County Airport

		Runway/Taxiway		Land-Building		Fuel Savings		Time Savings	
Year		Cost $	PV $	Cost $	PV $	Cost $	PV $	Cost $	PV $
2009	Plan/Eng.	1,000,000	972,763	9,789,000	9,522,374				
2010	Constr./Admin.	4,763,709	4,507,741						
2011	Constr./Admin.	4,763,709	4,384,963						
2012						453,992	406,514	540,644	484,104
2013						483,933	421,521	578,916	504,255
2014						515,849	437,083	619,898	525,245
2015						549,870	453,219	663,780	547,107
2016						586,135	469,952	710,769	569,880
2017						624,792	487,301	761,081	593,599
2018						651,652	494,407	796,875	604,587
2019						679,666	501,616	834,352	615,779
2020						708,885	508,930	873,591	627,178
2021	Overlay	200,000	139,675			739,360	516,352	914,676	638,788
2022						771,145	523,881	957,693	650,613
2023						804,297	531,520	1,002,734	662,657
2024						838,873	539,270	1,049,892	674,924
2025						874,937	547,134	1,099,269	687,418
2026						912,550	555,112	1,150,967	700,143
2027						951,776	563,204	1,205,125	713,120
2028						992,693	571,416	1,261,802	726,322

Table 7.3.3-3
Benefit/Cost Analysis I – 2.8 Percent Discount Rate
Constant Year 2008 Dollars
Rowan County Airport

	Runway/Taxiway		Land-Building		Fuel Savings		Time Savings	
Year	Cost $	PV $	Cost $	PV $	Cost $	PV $	Cost $	PV $
2029					1,035,369	579,749	1,321,145	739,767
2030			Less	Salvage	1,079,879	588,202	1,383,278	753,461
2031			Buildings	Value	1,126,303	596,779	1,448,334	767,409
2032			2,297,182	1,184,024				
Total	10,727,418	10,005,142	9,789,000	9,522,374				
	Total Benefits		24,263,542		B/C Ratio: 1.24			
	Total Costs		19,527,516					

Notes: Benefits calculated from base aviation activity forecasts
Contingency costs have been omitted due to constant dollar approach that rejects inflation elements
Land costs less buildings are estimated from Table 6.4-1 (page 37)
An overlay cost has been added to cover project life total costs
Economic development benefits not included in B/C ratio
Source: Talbert & Bright Inc., June 2008

A large portion of the planning and engineering costs are placed in 2009 with the bulk of the construction costs programmed for 2010 and 2011. Land and building purchases are listed in 2009. Runway maintenance costs are covered by placing a runway overlay in 2021. A final land value cost is listed in 2032 from which a salvage value can be estimated.

Project savings are determined by inputting the fuel and time saving from Tables 7.3.3-1 (page 44) and Table 7.3.3-2 (page 45) in 2012, 2017, and 2027. Fuel and time savings between these years are interpolated with fuel and time savings to 2031 projected at the same rate as shown between 2017 and 2027.

The present values of all cost and savings are discounted to 2008 at a real discount rate of 2.8 percent. The real discount rate is dictated by the Office of Management and Budget see Appendix C in the Revised January 2008 Office of Management and Budget *Circular No. A-94 Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs* (Appendix D, page D-1).

The Benefit/Cost Analysis I calculates a positive ratio of 1.24

7.3.4 Benefit Cost Analysis II

Given a possibility that the base forecasted aviation activity for the Rowan County is conservative, a sensitivity analysis was conducted. For this analysis a 30 percent increase in aviation activity was input to the affected aircraft with fuel savings and time savings recalculated as shown by Tables 7.3.4-1 (page 48) and 7.3.4-2 (page 49). These savings were input to Table 7.3.4-3 (page 49) and a second calculation of benefits and costs generated. As shown by Table 7.3.4-3 (page 49), the Benefit/Cost Analysis II ratio is a positive 1.60.

Table 7.3.4-1
Fuel Savings – Benefit/Cost Analysis II
Rowan County Airport

Year	Trips/Yr*	Extra Gallons per Landing	Total Gallons	Price per Gallon	Total Cost/Yr.
2007					
Turboprops	85	45	3,825	$5.60	$21,420
Small Jets	434	100	43,400	$5.60	$243,040
Med./Large Jets	83	120	9,960	$5.60	$55,776
					$320,236
2012					
Turboprops	169	45	7,605	$5.60	$42,588
Small Jets	469	100	46,900	$5.60	$262,640
Med./Large Jets	424	120	50,880	$5.60	284,928
					$590,156
2017					
Turboprops	304	45	13,680	$5.60	$76,608
Small Jets	538	100	53,800	$5.60	$301,280
Med./Large Jets	646	120	77,520	$5.60	$434,112
					$812,000
2027					
Turboprops	541	45	24,345	$5.60	$136,332
Small jets	489	100	48,900	$5.60	$273,840
Med./Large Jets	1,231	120	147,720	$5.60	$827,232
					$1,237,404

*Initial 2007 trips per year from pilot surveys March 2008 through June 2008
Trips per year are from flights that could take on extra fuel and save an in-flight fuel stop
Year 2012, 2017, 2027 trips per/yr., based on assumed percentage of flights applied to 2007 Master Plan forecasts plus 30% increase in turboprop, and jet activity.
Source: Talbert & Bright, Inc. (June 2008)

Table 7.3.4-2
Time Savings – Benefit/Cost Analysis II
Rowan County Airport

Year	Trips/ Year	Persons/ Trip	Total Person Trips	Time per Trip	Hourly Rate	Time Savings
2007						
Turboprops						
Passengers	85	7.0	595	1 hr.	$43.27	$25,746
Pilots	85	2.0	170	1 hr.	$43.27	$7,356
Small Jets						
Passengers	434	8.0	3,472	1.2 hr	$48.08	$200,321
Pilots	434	2.0	868	1.2 hr.	$43.27	$45,070
Med./Large Jets						
Passengers	83	12.0	996	1.2 hr.	$52.89	$48,743
Pilots	83	2.0	166	1.2 hr.	$48.08	$9,578
Total						$336,814
2012						
Turboprops						
Passengers	169	7.0	1,183	1 hr.	$43.27	$51,188
Pilots	169	2.0	338	1 hr.	$43.27	$14,625
Small Jets						
Passengers	469	8.0	3,752	1.2 hr.	$48.08	$216,475
Pilots	469	2.0	938	1.2 hr.	$43.27	$48,705
Med./Large Jets						
Passengers	424	12.0	5,088	1.2 hr.	$52.89	$322,925
Pilots	424	2.0	848	1.2 hr.	$48.08	$48,926
Total						$702,844
2017						
Turboprops						
Passengers	304	7.0	2,128	1 hr.	$43.27	$92,079
Pilots	304	2.0	608	1 hr.	$43.27	$26,308
Small Jets						
Passengers	538	8.0	4,304	1.2 hr	$48.08	$248,324
Pilots	538	2.0	1,076	1.2 hr.	$43.27	$55,870
Med./Large Jets						
Passengers	646	12.0	7,752	1.2 hr.	$52.89	$492,004
Pilots	646	2.0	1,292	1.2 hr.	$48.08	$74,543
Total						$989,128
2027						
Turboprops						
Passengers	541	7.0	3,787	1 hr.	$43.27	$163,863
Pilots	541	2.0	1,082	1 hr.	$43.27	$46,826
Small Jets						
Passengers	489	8.0	3,912	1.2 hr.	$48.08	$225,707
Pilots	489	2.0	978	1.2 hr.	$43.27	$50,782
Med./Large Jets						
Passengers	1,231	12.0	14,772	1.2 hr.	$52.89	$937,549
Pilots	1,231	2.0	2,462	1.2 hr.	$48.08	$142,048

Table 7.3.4-2
Time Savings – Benefit/Cost Analysis II
Rowan County Airport

Year	Trips/ Year	Persons/ Trip	Total Person Trips	Time per Trip	Hourly Rate	Time Savings
Total						$1,566,775

Wage Rates Per Hour

Annual Salary	Days	Dollars Per Hour	
$90,000	2080	$43.27	Turboprop Passenger
$90,000	2080	$43.27	Turboprop Pilot
$100,000	2080	$48.08	Small Jet Passenger
$90,000	2080	$43.27	Small Jet Pilot
$110,000	2080	$52.89	Med. Large Jet Passenger
$100,000	2080	$48.08	Med./Large Jet Pilot

Source: Talbert & Bright, Inc. (June 2008)

Table 7.3.4-3
Benefit/Cost Analysis II – 2.8 Percent Discount Rate
Constant Year 2008 Dollars
Rowan County Airport

		Runway/Taxiway		Land-Building		Fuel Savings		Time Savings	
Year		Cost $	PV $	Cost $	PV $	Cost $	PV $	Cost $	PV $
2008									
2009	Plan/Eng.	1,000,000	972,763	9,789,000	9,522,374				
2010	Constr./Admin.	4,763,709	4,507,741						
2011	Constr./Admin.	4,763,709	4,384,963						
2012						590,156	528,438	702,844	629,342
2013						629,049	547,922	752,554	655,499
2014						670,505	568,124	805,780	682,744
2015						714,694	587,072	862,770	711,121
2016						761,795	610,792	923,791	740,677
2017						812,000	633,312	989,128	771,462
2018						846,938	642,570	1,035,686	785,773
2019						883,379	651,963	1,084,435	800,349
2020						921,388	661,493	1,135,479	815,195
2021	Overlay	200,000	139,675			961,033	671,162	1,188,925	830,317
2022						1,002,384	680,974	1,244,887	845,719
2023						1,045,514	690,929	1,303,483	861,408
2024						1,090,500	701,029	1,364,837	977,387
2025						1,137,421	711,276	1,429,079	893,662
2026						1,186,361	721,674	1,496,345	910,239
2027						1,237,407	732,223	1,566,775	927,123
2028						1,290,649	742,927	1,640,522	944,321
2029						1,346,182	753,787	1,717,740	961,838
2030				Less	Salvage	1,404,105	764,806	1,798,593	979,680

Table 7.3.4-3
Benefit/Cost Analysis II – 2.8 Percent Discount Rate
Constant Year 2008 Dollars
Rowan County Airport

	Runway/Taxiway		Land-Building		Fuel Savings		Time Savings	
Year	Cost $	PV $	Cost $	PV $	Cost $	PV $	Cost $	PV $
2031			Buildings	Value	1,464,520	775,986	1,883,252	997,854
2032			2,297,182	1,184,024				
Totals	10,727,418	10,005,142	9,789,000	9,522,374				
	Total Benefits		31,186,193		B/C Ratio: 1.60			
	Total Costs		19,527,516					

Notes: Benefits calculated from 30% increase in turboprop and jet base aircraft activity forecasts
Contingency costs have been omitted due to constant dollar approach that rejects inflation elements
Land costs less buildings are estimated from Table 6.4-1 (page 37)
An overlay cost has been added to cover project life total costs
Economic development benefits not included in B/C ratio
Source: Talbert & Bright Inc., June 2008

7.4 Benefit/Cost Analyses Conclusions

While some of the input parameters to the benefit/cost analyses have subjective elements, the benefit/costs analyses presented imply that the runway extension project being contemplated is justified on user savings alone. Any reduction in land/building purchase price or increases in aviation activity advances these conclusions. These user cost savings justifications are in addition to added safety, area airport capacity, and industrial development justifications.

8.0 CONCLUSION

From the analyses, it is concluded that an extension of Runway 02/20 at RUQ is justified in the Phase I plans of the airport for the following reasons:

- Dramatic increased turbofan aircraft activity
- Both aircraft groups that comprise the FAA 75 percent and 100 percent fleet mix of more than 12,500 pounds and 60,000 pounds are active at RUQ
- A positive benefit/cost ratio of 1.28 generated by the benefit/cost analysis
- Strong response by airport users to the desire for an extended runway
- Superior airport management and services

- Existing high-quality airport physical plant:
  - Good MALSR approach
  - Runway in excellent condition
  - Taxiway, aprons, lighting , marking to standards
  - High-quality terminal

CORRESPONDENCE

DELHAIZE AMERICA

APR 2 4 2008

March 31, 2008

Mr. Ken Deal
130 West Innes Street
Salisbury, NC 28144

Dear. Mr. Deal:

Please be advised that we have an immediate need to have the runway at the Rowan County Airport lengthened and improved.

When the present runway is wet or contaminated, we find that it is not suitable for some of our flight operations. It is our recommendation that the length be increased to 7000 feet and the runway crowned and grooved.

Presently we operate Cessna Citation XLS (C56X) and our partners at Netjets operate Cessna Citations and Gulfstream IV (GLF4) aircraft on our behalf. Our aircraft operate at 90% of gross take-off weight and the current runway limits our operation. We expect to make approximately 600 IFR operations from the Rowan County Airport with calendar year 2008.

Upon completion of the above mentioned items, this will allow almost all of our day-to-day operations and will help our partners at Netjets as well as many of our business associates who fly into the Rowan County Airport.

In addition to the runway improvements, we would like to see our county work with the F.A.A. to lower the minimums for our GPS RWY 02 approach. The present approach will bring aircraft to 667 feet AGL (Above Ground Level) while our GPS RWY 20 will bring us down to 287 AGL. This difference of 380 feet forces our aircraft and many other aircraft to land with a possible tail wind when the ceiling is below 700 AGL.

Your assistance with these projects will help improve the overall safety and improve conditions when weather conditions are less than favorable

Warmest regards,

Thomas L. Greene
Director of Aviation

CC: Rowan County Board of Commissions
130 West Innes Street,
Salisbury, NC 28144

Judith Elder-Lincke
Engineering & Planning Consultants
1201 Main Street, Suite 1460
Columbia, SC 29201

P.O. Box 1330
Salisbury, NC 28145-1330
704.633.8250

EXTENSION SURVEY

RUNWAY SURVEY

As a visitor user of the Rowan County Airport, please consider filling out our survey form. This survey is in connection with the justification for extension of runway 02/20. All answers are optional and individual confidentiality will be maintained.

Thank you,

The Rowan County Airport

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) C-172

Airport or city where your aircraft is based: KSIF

Frequency of Flights to Rowan: (flights per year to Rowan) 15-20

Aircraft Usage: (percent) Pleasure X Business X Training ____
Military ____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ____ No X

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ____ How many times per year? ____
No X

Maximum range (miles or nautical miles) **of your aircraft fully loaded**: ____

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20**: (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
—	—	X	—	—	—	—

How far is your next stop? Distance or Location 300 nm

Specific help the new runway length could be: Allow Usage of Different Aircraft
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments: Additional hangers would encourage me to base my aircraft here.

Title of Survey Responder: (pilot, owner, etc.) Owner

Aircraft Owner: (optional) ____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) Hawker 800

Airport or city where your aircraft is based: ATLANTA PDK

Frequency of Flights to Rowan: (flights per year to Rowan) ~~3~~ 2

Aircraft Usage: (percent) Pleasure____ Business ✓ Training____
Military____ Other____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes____ No ✓

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes___ How many times per year?___
No ✓

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 2200 NM

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	✓	___	___	___	___

How far is your next stop? Distance or Location 300 NM

Specific help the new runway length could be:_____
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) PILOT

Aircraft Owner: (optional) SKYTRAVEL, LLC

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) BARON BE 58

Airport or city where your aircraft is based: ALMA, GA - KAMG

Frequency of Flights to Rowan: (flights per year to Rowan) FIRST

Aircraft Usage: (percent) Pleasure____ Business X Training____
Military____ Other____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes____ No X

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes___ How many times per year?___
No X

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 1,000 KM

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20**: (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	X	___	___	___

How far is your next stop? Distance or Location 360 KM

Specific help the new runway length could be: BIGGER A/C.
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) Daniel Waller Pilot

Aircraft Owner: (optional) F.B. of Ga, LLC

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) C525A

Airport or city where your aircraft is based: UMP

Frequency of Flights to Rowan: (flights per year to Rowan) 2

Aircraft Usage: (percent) Pleasure____ Business X Training____
Military____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes____ No X

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes___ How many times per year?___
No X

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 1400

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	___	___	___	X

How far is your next stop? Distance or Location GSO

Specific help the new runway length could be: USAGE
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) KEITH ROWE

Aircraft Owner: (optional)_____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

10

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) FAIRCHILD SW 4

Airport or city where your aircraft is based: RDU

Frequency of Flights to Rowan: (flights per year to Rowan) 20

Aircraft Usage: (percent) Pleasure____ Business____ Training____
Military ✓ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ✓ No____

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ✓ How many times per year? 20
No____

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 1200

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	(50%)	60%	70%	80%	90%	90%+
___	___	___	___	___	___	___

How far is your next stop? Distance or Location KNBC

Specific help the new runway length could be: LARGER FUEL LOAD
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) PILOT

Aircraft Owner: (optional)_____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) Citation 525

Airport or city where your aircraft is based: SVH

Frequency of Flights to Rowan: (flights per year to Rowan) 20

Aircraft Usage: (percent) Pleasure____ Business 100% Training____
Military____ Other____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ✓ No____

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ✓ How many times per year? 8
No____

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 1,400 NM

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20**: (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	___	✓	___	___

How far is your next stop? Distance or Location 800 miles

Specific help the new runway length could be: more utilization of different types of A/C
Examples: Larger fuel load More frequent usage Go limitation of payload
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) pilot

Aircraft Owner: (optional) Stratos Man

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) Beechcraft Duke

Airport or city where your aircraft is based: ITH, Ithaca, NY

Frequency of Flights to Rowan: (flights per year to Rowan) 1 (so far)

Aircraft Usage: (percent) Pleasure 100 Business ____ Training ____
Military ____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ____ No ✓

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ___ How many times per year? ___
No ✓

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 1000 NM

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
—	—	—	—	✓	—	—

How far is your next stop? Distance or Location OED, ≈ 500 nm

Specific help the new runway length could be: ____
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) owner/pilot

Aircraft Owner: (optional) Greg Branche

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) Bonanza V35

Airport or city where your aircraft is based: IFP 10

Frequency of Flights to Rowan: (flights per year to Rowan) 50

Aircraft Usage: (percent) Pleasure X Business X Training ____
Military ____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ____ No X

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ____ How many times per year? ____
No X

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 4 hrs 40 min

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	___	___	___	___

How far is your next stop? Distance or Location Coon M

Specific help the new runway length could be: ____
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) Pilot

Aircraft Owner: (optional) ____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) CL 604

Airport or city where your aircraft is based: Addison (KADS)

Frequency of Flights to Rowan: (flights per year to Rowan) 6

Aircraft Usage: (percent) Pleasure____ Business ✓ Training____
Military____ Other____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes____ No ✓

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ✓ How many times per year?___
No____

Maximum range (miles or nautical miles) **of your aircraft fully loaded**: 2600 s.m.

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20**: (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	✓	___	___	___	___

How far is your next stop? Distance or Location 900 n.m.

Specific help the new runway length could be: Larger Fuel Upload
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) Senior Captain

Aircraft Owner: (optional) Pepsico Aviation

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) CANADAIR CHALLENGER 601

Airport or city where your aircraft is based: ATLANTA

Frequency of Flights to Rowan: (flights per year to Rowan) 10

Aircraft Usage: (percent) Pleasure____ Business X Training____
Military____ Other____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes X No____

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes X How many times per year? WHEN RUNWAY IS WET
No____

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 5000

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	X	___	___	___	___	___

How far is your next stop? Distance or Location 300 NM

Specific help the new runway length could be: MORE FREQ USAGE, LARGER FUEL LOAD
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) R PARKS, PILOT

Aircraft Owner: (optional) KIMBERLY-CLARK CORP

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) Piper Warrior

Airport or city where your aircraft is based: KROA (Roanoke)

Frequency of Flights to Rowan: (flights per year to Rowan) 5

Aircraft Usage: (percent) Pleasure ~ Business ____ Training ____
Military ____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ✓ No ~~✓~~

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ✓ How many times per year? ____
No ~~✓~~

Maximum range (miles or nautical miles) **of your aircraft fully loaded**: ____

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20**: (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	___	✓	___	___

How far is your next stop? Distance or Location 70 nm

Specific help the new runway length could be: How frequent usage
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) Pilot

Aircraft Owner: (optional) ____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) PA-39 TWIN COMANCHE

Airport or city where your aircraft is based: AKRON OH

Frequency of Flights to Rowan: (flights per year to Rowan) 1/WEEK

Aircraft Usage: (percent) Pleasure 40 Business 60 Training____
Military____ Other____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes____ No ✓
BUT I WOULD HAVE IF I HAD BEEN IN MY LEAR

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes___ How many times per year?___
No____

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 900NM

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
—	—	—	—	—	—	✓

How far is your next stop? Distance or Location 400NM

Specific help the new runway length could be:_____
Examples: ~~Larger fuel load~~ More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) PILOT/OWNER

Aircraft Owner: (optional)_____

[redacted]

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) HAWKER 800 XP

Airport or city where your aircraft is based: CMH

Frequency of Flights to Rowan: (flights per year to Rowan) _____

Aircraft Usage: (percent) Pleasure____ Business X Training____
Military____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes X No____

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes X How many times per year?____
No____

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 3,000 MILES

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20**: (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
X						

How far is your next stop? Distance or Location PDK 300

Specific help the new runway length could be: ALL OF THE BELOW
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments: CUT GROOVES IN PAVEMENT AND LENGTHEN. GROOVED PAVEMENT ALLOWS FOR DRY RUNWAY PERFORMANCE.

Title of Survey Responder: (pilot, owner, etc.) PILOT

Aircraft Owner: (optional) NET JETS, INC.

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) BEECHCRAFT C-90 (BE9L)

Airport or city where your aircraft is based: MARTINSBURG, WV.

Frequency of Flights to Rowan: (flights per year to Rowan) ?

Aircraft Usage: (percent) Pleasure____ Business____ Training____
Military____ Other CHARTER 100%

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes____ No X

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes___ How many times per year?___
No X

Maximum range (miles or nautical miles) **of your aircraft fully loaded:**____

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	___	___	√	___

How far is your next stop? Distance or Location 255 NM

Specific help the new runway length could be: EXTRA SAFETY MARGINS
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) PILOT

Aircraft Owner: (optional) ARCADIA AVIATION

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) Hawker 800

Airport or city where your aircraft is based: M54 Lebanon TN

Frequency of Flights to Rowan: (flights per year to Rowan) 3

Aircraft Usage: (percent) Pleasure____ Business 100% Training____
Military____ Other____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes____ No X

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes___ How many times per year?___
No X

Maximum range (miles or nautical miles) **of your aircraft fully loaded**: 2700 nm.

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20**: (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	___	___	___	___

How far is your next stop? Distance or Location 175 nm

Specific help the new runway length could be: none unless runway is contaminated
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments: longer runway nice when wet or snow-covered

Title of Survey Responder: (pilot, owner, etc.) chief pilot Cracker Barrel

Aircraft Owner: (optional)_____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) BE 58/A

Airport or city where your aircraft is based: KMQY

Frequency of Flights to Rowan: (flights per year to Rowan) 3

Aircraft Usage: (percent) Pleasure____ Business ✓ Training____
Military____ Other ___

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes____ No X

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes___ How many times per year?___
No X

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 1000 nm

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	___	___	✓	___

How far is your next stop? Distance or Location 40 min

Specific help the new runway length could be: Use other A/C
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) pilot

Aircraft Owner: (optional)_____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) PIPER NAVAJO PA 31

Airport or city where your aircraft is based: AUBURN, AL

Frequency of Flights to Rowan: (flights per year to Rowan) 1

Aircraft Usage: (percent) Pleasure____ Business X Training____
Military____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes____ No X

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes___ How many times per year?___
No X

Maximum range (miles or nautical miles) **of your aircraft fully loaded**: 500

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20**: (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	___	X	___	___

How far is your next stop? Distance or Location 180 miles LMS

Specific help the new runway length could be:_____
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) Pilot

Aircraft Owner: (optional)_____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) Cessna Cardinal RG

Airport or city where your aircraft is based: Gold Hill, NC25

Frequency of Flights to Rowan: (flights per year to Rowan) 25 +

Aircraft Usage: (percent) Pleasure 90 Business 10 Training ____
Military ____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ____ No ✓

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ____ How many times per year? ____
No ✓

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 600 nm

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	___	___	___	✓

How far is your next stop? Distance or Location NC25

Specific help the new runway length could be: ____
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) ~~Brian M~~ owner

Aircraft Owner: (optional) Brian M. Cook

Runway Extension Survey

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Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) BE33

Airport or city where your aircraft is based: 44A

Frequency of Flights to Rowan: (flights per year to Rowan) 10

Aircraft Usage: (percent) Pleasure____ Business X Training____ Military____ Other____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes X No____

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes___ How many times per year?___ No X

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 1100

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	___	___	X	___

How far is your next stop? Distance or Location 20 nm

Specific help the new runway length could be: Good

Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) owner

Aircraft Owner: (optional)_____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) BELLANCA 7KCAB C. TAERIA

Airport or city where your aircraft is based: KRUQ

Frequency of Flights to Rowan: (flights per year to Rowan) ONCE A WEEK

Aircraft Usage: (percent) Pleasure ✓ Business ____ Training ____
Military ____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ____ No X

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ___ How many times per year? ___
No X

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 450 nm

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20**: (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
✓						

How far is your next stop? Distance or Location 185 nm

Specific help the new runway length could be: ____
Examples: Larger fuel load (More frequent usage)
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) PILOT

Aircraft Owner: (optional) ____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) PIPER TRIDACER PA-22

Airport or city where your aircraft is based: MONROE FIELD

Frequency of Flights to Rowan: (flights per year to Rowan) 30

Aircraft Usage: (percent) Pleasure X Business ____ Training ____
Military ____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ____ No X

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ___ How many times per year? ___
No X

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 375 NM

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	___	___	___	___

How far is your next stop? Distance or Location ____

Specific help the new runway length could be: ____
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) PILOT / OWNER

Aircraft Owner: (optional) ____

Runway Extension Survey

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Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) V-35B BONANZA

Airport or city where your aircraft is based: WINSTON-SALEM

Frequency of Flights to Rowan: (flights per year to Rowan) 10

Aircraft Usage: (percent) Pleasure ____ Business X Training ____
Military ____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ____ No X

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ___ How many times per year? ___
No X BUT NEED MORE RUNWAY

Maximum range (miles or nautical miles) **of your aircraft fully loaded**: 820

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20**: (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	X	___	___	___	___

How far is your next stop? Distance or Location 120 KM

Specific help the new runway length could be: ✓
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments: → MORE COMFORTABLE —

Title of Survey Responder: (pilot, owner, etc.) M.B. CROTTS

Aircraft Owner: (optional) CROTTS & SAUNDERS 4/12/08

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) RV-8

Airport or city where your aircraft is based: Concord

Frequency of Flights to Rowan: (flights per year to Rowan) 15

Aircraft Usage: (percent) Pleasure 100 Business____ Training____
Military____ Other____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes____ No ✓

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes___ How many times per year?___
No ✓

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 500

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
—	—	—	—	—	—	✓

How far is your next stop? Distance or Location 105 NM

Specific help the new runway length could be:_____
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) PILOT/OWNER

Aircraft Owner: (optional) Mike Munn

Runway Extension Survey

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Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) ASTRA 1121 1125

Airport or city where your aircraft is based: ADDISON TX

Frequency of Flights to Rowan: (flights per year to Rowan) < 1

Aircraft Usage: (percent) Pleasure ____ Business X Training ____
Military ____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ____ No X

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ____ How many times per year? ____
No X

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 2700NM

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
—	—	—	—	X	—	—

How far is your next stop? Distance or Location ADDISON TX

Specific help the new runway length could be: ____
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments: WE USE 5000' AS A MINIMUM RUNWAY LENGTH. 5500' HERE RESTRICTS US ON LANDING, ESPECIALLY IF THE RUNWAY IS WET OR IS CONTAMINATED WITH FROZEN PRECIPITATION.

Title of Survey Responder: (pilot, owner, etc.) PILOT

Aircraft Owner: (optional) PEPSICO

6500' WOULD ALLOW US ALMOST UNRESTRICTED OPERATIONS INTO THIS AIRPORT. I WOULD RECOMMEND THE RUNWAY EXTENSION, ESPECIALLY IF YOU WANT TO ATTRACT CORPORATE →

JET OPERATORS WITH LARGE EQUIPMENT.

MIKE NUTTERFIELD
PEPSICO AVIATION
214-683-5366

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) Cessna 650

Airport or city where your aircraft is based: MDT

Frequency of Flights to Rowan: (flights per year to Rowan) 2 X Month

Aircraft Usage: (percent) Pleasure____ Business X Training____
Military____ Other____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes____ No X

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes X How many times per year? 6 X
No____

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 1200 ± miles

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
—	—	—	—	X	—	—

How far is your next stop? Distance or Location 450 nm

Specific help the new runway length could be: Fuel
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments: Biggest frustration is when departing Rwy 20 CLT Apprch Vectors us south and SE, often south of CLT airport before turning us North bound or NW bound. Adds ± 15-20 mins per Flt.

Title of Survey Responder: (pilot, owner, etc.) Chief Pilot

Aircraft Owner: (optional) Mi Windows and Doors Inc.

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) Cessna 421

Airport or city where your aircraft is based: FSM

Frequency of Flights to Rowan: (flights per year to Rowan) 2.

Aircraft Usage: (percent) Pleasure____ Business ✓ Training____
Military____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes____ No ✓

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes___ How many times per year?___
No ✓

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 900

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	___	___	___	✓

How far is your next stop? Distance or Location 300

Specific help the new runway length could be:_____
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) Pilot

Aircraft Owner: (optional)_____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) Cessna 172

Airport or city where your aircraft is based: SALISBURY

Frequency of Flights to Rowan: (flights per year to Rowan) 75

Aircraft Usage: (percent) Pleasure X Business ____ Training ____
Military ____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ____ No X

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ____ How many times per year? ____
No X

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 400 mi.

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	X	___	___	___

How far is your next stop? Distance or Location 100 mi.

Specific help the new runway length could be: ____
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments: NEED MORE CUT-OFFS BETWEEN RUNWAY AND TAXIWAYS

Title of Survey Responder: (pilot, owner, etc.) PILOT

Aircraft Owner: (optional) ____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) CITATION 650 AND 750

Airport or city where your aircraft is based: MSP

Frequency of Flights to Rowan: (flights per year to Rowan) 2

Aircraft Usage: (percent) Pleasure____ Business X Training____
Military____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes____ No X

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes___ How many times per year?___
No____

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 2800 NM

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20**: (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	___	X	___	___

How far is your next stop? Distance or Location MSP 850 NM

Specific help the new runway length could be: MORE FREQUENT USE

Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) PILOT

Aircraft Owner: (optional) MASON FOOD CO.

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) Cessna CITATION 10

Airport or city where your aircraft is based: MSP

Frequency of Flights to Rowan: (flights per year to Rowan) 5

Aircraft Usage: (percent) Pleasure____ Business X Training____
Military____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes X No____

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes X How many times per year? 2
No____

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 3100

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20**: (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	X	___	___	___	___

How far is your next stop? Distance or Location 900

Specific help the new runway length could be: fuel load
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) Pilot

Aircraft Owner: (optional) General Mills Inc.

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) PIPER TRIPACER PA-22

Airport or city where your aircraft is based: Lexington

Frequency of Flights to Rowan: (flights per year to Rowan) 15

Aircraft Usage: (percent) Pleasure X Business ____ Training ____
Military ____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ____ No X

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes X How many times per year? 1-2
No ____

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 400 nm

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20**: (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	___	___	X	___

How far is your next stop? Distance or Location VARIABLE

Specific help the new runway length could be: ____
Examples: Larger fuel load More frequent usage
(Use other aircraft) etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) PILOT

Aircraft Owner: (optional) [redacted]

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) P-172 Skyhawk

Airport or city where your aircraft is based: [illegible]

Frequency of Flights to Rowan: (flights per year to Rowan) [illegible]

Aircraft Usage: (percent) Pleasure ✓ Business ____ Training ____
Military ✓ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ✓ No ____

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ✓ How many times per year? [illegible]
No ____

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** [illegible]

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20**: (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	✓	___	___	___

How far is your next stop? Distance or Location EGEH [illegible]

Specific help the new runway length could be: ____
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) [illegible]

Aircraft Owner: (optional) ____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) Beech Jet – BE400A

Airport or city where your aircraft is based: CGF / Cuyahoga County Apt

Frequency of Flights to Rowan: (flights per year to Rowan) ≥ 20

Aircraft Usage: (percent) Pleasure ____ Business ✓ Training ____
Military ____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ____ No ✓

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ✓ How many times per year? 15 ?
No ____

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 700 nm

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	✓	___	___	___	___

How far is your next stop? Distance or Location 120 nm

Specific help the new runway length could be: 6000 feet or greater
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) Rick Isenbarker

Aircraft Owner: (optional) _____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) CIRRUS SR22

Airport or city where your aircraft is based: SUMMERVILLE SC

Frequency of Flights to Rowan: (flights per year to Rowan) FIRST ONE

Aircraft Usage: (percent) Pleasure____ Business ✓ Training____ Military____ Other____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes____ No ✓

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes___ How many times per year?___ No ✓

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 750 NM

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
—	—	—	✓	—	—	—

How far is your next stop? Distance or Location DYB

Specific help the new runway length could be: (LARGER A/C + LOAD)
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) PILOT

Aircraft Owner: (optional)_____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) Diamond DA-40

Airport or city where your aircraft is based: KCPK

Frequency of Flights to Rowan: (flights per year to Rowan) Several

Aircraft Usage: (percent) Pleasure____ Business X Training____
Military____ Other____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes____ No X

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes___ How many times per year?___
No X

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 900 nm

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20**: (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
__	__	__	__	__	__	✓

How far is your next stop? Distance or Location 150 miles

Specific help the new runway length could be:_____
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) Pilot

Aircraft Owner: (optional)_____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) Cessna C-172

Airport or city where your aircraft is based: Nashville

Frequency of Flights to Rowan: (flights per year to Rowan) 1

Aircraft Usage: (percent) Pleasure ✓ Business ____ Training ____
Military ____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ____ No ✓

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ___ How many times per year? ___
No ✓

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 450

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	___	___	___	X

How far is your next stop? Distance or Location Manteo, NC

Specific help the new runway length could be: ____
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) Pilot : Owner

Aircraft Owner: (optional) Bill Jayne

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) CESSNA SKYHAWK

Airport or city where your aircraft is based: CONCORD, NC

Frequency of Flights to Rowan: (flights per year to Rowan) 100

Aircraft Usage: (percent) Pleasure____ Business____ Training X
Military____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes____ No X

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes___ How many times per year?___
No X

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 360

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	✓	___	___	___

How far is your next stop? Distance or Location 15 NM

Specific help the new runway length could be: LARGER FUEL LOAD / LARGER PASS. LOAD
Examples: Larger fuel load More frequent usage
Use other aircraft **etc.**

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) PILOT

Aircraft Owner: (optional)_____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) Pilatus PC12, Falcon 10, Beron 58, Learj 35 25 40

Airport or city where your aircraft is based: HTW, FAR, GSO

Frequency of Flights to Rowan: (flights per year to Rowan) 6 now 12 est. w/ext.

Aircraft Usage: (percent) Pleasure____ Business ✓ Training____
Military____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ✓ No____

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ✓ How many times per year?___
No____

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 1000

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	___	✓	___	___

How far is your next stop? Distance or Location HTW

Specific help the new runway length could be: ~~more~~ Loads, Frequency
Examples: Larger fuel load More frequent usage Destination Selectivity
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) Owner

Aircraft Owner: (optional) Lifetime Beech Beech

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) Citation Encore

Airport or city where your aircraft is based: MCI

Frequency of Flights to Rowan: (flights per year to Rowan) 1

Aircraft Usage: (percent) Pleasure____ Business ✓ Training____
Military____ Other ___

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes____ No ✓

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes___ How many times per year?___
No ✓

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 1500

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	___	✓	___	___

How far is your next stop? Distance or Location 800

Specific help the new runway length could be:_____
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.)_____

Aircraft Owner: (optional)_____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) Cessna 172R

Airport or city where your aircraft is based: TRI

Frequency of Flights to Rowan: (flights per year to Rowan) 1

Aircraft Usage: (percent) Pleasure ✓ Business ✓ Training ✓
Military ____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ____ No ✓

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ____ How many times per year? ____
No ✓

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 300

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	(80%)	90%	90%+
____	____	____	____	____	____	____

How far is your next stop? Distance or Location 100nm

Specific help the new runway length could be: USE other Aircrafts
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) Pilot

Aircraft Owner: (optional) ____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) PA-34

Airport or city where your aircraft is based: KCLT

Frequency of Flights to Rowan: (flights per year to Rowan) 12

Aircraft Usage: (percent) Pleasure Y Business 0 Training 0
Military ____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes 0 No ____

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes 0 How many times per year? 2
No ____

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 3,000

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	0	___	___	___

How far is your next stop? Distance or Location CLT

Specific help the new runway length could be: 6,500
Examples: ~~Larger fuel load~~ More frequent usage ~~Use other aircraft~~ etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) Pilot

Aircraft Owner: (optional) KEVIN FARROW

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) PA 28

Airport or city where your aircraft is based: SAC

Frequency of Flights to Rowan: (flights per year to Rowan) 1

Aircraft Usage: (percent) Pleasure ✓ Business ____ Training ____
Military ____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ____ No ✓

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ___ How many times per year? ___
No ✓

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** ____

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	X	___	___	___

How far is your next stop? Distance or Location ____

Specific help the new runway length could be: ____
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) ____

Aircraft Owner: (optional) ____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) Piper Cub

Airport or city where your aircraft is based: W03 Wilson, NC

Frequency of Flights to Rowan: (flights per year to Rowan) 6

Aircraft Usage: (percent) Pleasure X Business ____ Training ____
Military ____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes X No ____

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes X How many times per year? 3
No ____

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 400nm

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	X	___	___	___

How far is your next stop? Distance or Location 80 nm

Specific help the new runway length could be: Greater Safety margin
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:
A longer Rwy will bring larger a/c + w/it more business for Rowan Co.

Title of Survey Responder: (pilot, owner, etc.) Pilot

Aircraft Owner: (optional) ____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) Exp. Van's RV6

Airport or city where your aircraft is based: FD04, Ocala, FL

Frequency of Flights to Rowan: (flights per year to Rowan) Seldom - 1 or 2

Aircraft Usage: (percent) Pleasure X Business ____ Training ____
Military ____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ____ No X

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ___ How many times per year? ___
No X

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 500

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	___	___	___	X

How far is your next stop? Distance or Location 375

Specific help the new runway length could be: ____
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) Navigator

Aircraft Owner: (optional) Richard Dayton, Pilot

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) DA 40 Diamondstar

Airport or city where your aircraft is based: KGMU

Frequency of Flights to Rowan: (flights per year to Rowan) 5

Aircraft Usage: (percent) Pleasure 40 Business 60 Training ____
Military ____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ____ No X

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ____ How many times per year? ____
No X

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 800

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20**: (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	___	___	___	X

How far is your next stop? Distance or Location 115 nmi

Specific help the new runway length could be: Use other aircraft
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) Owner

Aircraft Owner: (optional) _____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) CHALLENGER 600

Airport or city where your aircraft is based: KFYC

Frequency of Flights to Rowan: (flights per year to Rowan) 2

Aircraft Usage: (percent) Pleasure____ Business X Training____
Military____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes X No____

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes X How many times per year?___
No____

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 2900NM

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	X	___	___	___	___

How far is your next stop? Distance or Location 800NM

Specific help the new runway length could be:____
Examples: (Larger fuel load) More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) Pilot

Aircraft Owner: (optional)____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) C-90 KING AIR

Airport or city where your aircraft is based: PIB (MISSISSIPPI)

Frequency of Flights to Rowan: (flights per year to Rowan) UNK

Aircraft Usage: (percent) Pleasure____ Business X Training____
Military____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes____ No X

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes___ How many times per year?___
No X

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 1000

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
—	—	—	—	—	—	—

How far is your next stop? Distance or Location FTY (DROP OFF) THEN OCA

Specific help the new runway length could be:_____
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) PILOT

Aircraft Owner: (optional)_____

COPY

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) BEECH JET 400

Airport or city where your aircraft is based: SALEM, OREGON

Frequency of Flights to Rowan: (flights per year to Rowan) 3

Aircraft Usage: (percent) Pleasure____ Business 100 Training____
Military____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes____ No X

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes X How many times per year?___
No____

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 1400

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20**: (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	___	___	X	___

How far is your next stop? Distance or Location 300

Specific help the new runway length could be: OTHER JET + MORE FUEL
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) PILOT

Aircraft Owner: (optional) CURRY ARCHITECTURE

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) Pilatus PC12

Airport or city where your aircraft is based: Statesville NC

Frequency of Flights to Rowan: (flights per year to Rowan) 25

Aircraft Usage: (percent) Pleasure 30 Business 70 Training ____
Military ____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ____ No X

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ___ How many times per year? ___
No X

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 1700

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	___	___	___	___

How far is your next stop? Distance or Location Myers Stella Maris Bahamas

Specific help the new runway length could be: ____
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) Pilot

Aircraft Owner: (optional) ____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) CE 750 Citation X

Airport or city where your aircraft is based: KGRR Grand Rapids MI

Frequency of Flights to Rowan: (flights per year to Rowan) 10 - 15

Aircraft Usage: (percent) Pleasure____ Business 100% Training____
Military____ Other ___

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes____ No____ Not today

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes X How many times per year? 4 - 5
No____

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 3000

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	___	___	___	___

How far is your next stop? Distance or Location Changes, usually gonna

Specific help the new runway length could be: More fuel loads
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments: Probably won't often change our fuel uplift, but would increase use do to increased safety of ops

Title of Survey Responder: (pilot, owner, etc.) Pilot

Aircraft Owner: (optional) Universal Forest Products INC

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) N31JB C550B

Airport or city where your aircraft is based: Concord NC

Frequency of Flights to Rowan: (flights per year to Rowan) 1

Aircraft Usage: (percent) Pleasure____ Business ✓ Training____ Military____ Other ___

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes____ No ✓

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes___ How many times per year?___ No ✓

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 1500

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20**: (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
—	—	—	—	—	—	✓

How far is your next stop? Distance or Location 160

Specific help the new runway length could be:_____
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) Pilot

Aircraft Owner: (optional)_____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) BE55

Airport or city where your aircraft is based: _____

Frequency of Flights to Rowan: (flights per year to Rowan) 4-5

Aircraft Usage: (percent) Pleasure 50 Business 50 Training _____
Military _____ Other _____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes _____ No ✓

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ___ How many times per year? ___
No ✓

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 1000Mi

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
—	—	—	—	—	—	✓

How far is your next stop? Distance or Location 300 NM

Specific help the new runway length could be: _____
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) Pilot & Owner

Aircraft Owner: (optional) _____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) Skyhawk 172

Airport or city where your aircraft is based: Culpeper VA

Frequency of Flights to Rowan: (flights per year to Rowan) < 1

Aircraft Usage: (percent) Pleasure ↘ Business ____ Training ____
Military ____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ____ No ↘

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ___ How many times per year? ___
No ↘

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 3hrs

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
—	—	—	—	—	—	↘

How far is your next stop? Distance or Location 250

Specific help the new runway length could be: ____
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) owner/pilot

Aircraft Owner: (optional) ____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) CESSNA T210N

Airport or city where your aircraft is based: ARB

Frequency of Flights to Rowan: (flights per year to Rowan) 1

Aircraft Usage: (percent) Pleasure X Business ____ Training ____
Military ____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ____ No X

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ___ How many times per year? ___
No X

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** ~750 NM

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	X	___	___	___	___

How far is your next stop? Distance or Location 450 NM

Specific help the new runway length could be: ____
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) PILOT/OWNER

Aircraft Owner: (optional) ____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) #25 HAWKER 900

Airport or city where your aircraft is based: CMH

Frequency of Flights to Rowan: (flights per year to Rowan) FIRST TIME

Aircraft Usage: (percent) Pleasure____ Business X Training____ Military____ Other ___

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes X No____

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes X How many times per year?___ No____

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 2100 NM

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20**: (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
—	—	X	—	—	—	—

How far is your next stop? Distance or Location ~~[illegible]~~ 400 NM

Specific help the new runway length could be: LARGER PAYLOAD

Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.)_____

Aircraft Owner: (optional) NETJETS

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) Boeing 727-22(F)

Airport or city where your aircraft is based: KGSO

Frequency of Flights to Rowan: (flights per year to Rowan) 1

Aircraft Usage: (percent) Pleasure ____ Business ____ Training X
Military ____ Other X

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ____ No X

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ___ How many times per year? ___
No X

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 2,700 nm

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	___	___	___	X

How far is your next stop? Distance or Location KGSO

Specific help the new runway length could be: None
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) Pilot

Aircraft Owner: (optional) N/A

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) CE-650

Airport or city where your aircraft is based: MDT

Frequency of Flights to Rowan: (flights per year to Rowan) 8-10

Aircraft Usage: (percent) Pleasure____ Business X Training____
Military____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes X No____

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes X How many times per year? 8-10
No____

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 1500

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
—	—	—	—	—	—	—

How far is your next stop? Distance or Location 400 NM

Specific help the new runway length could be:_____
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) Chief Pilot

Aircraft Owner: (optional) Mi Windows.

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) DA-20

Airport or city where your aircraft is based: KPTK

Frequency of Flights to Rowan: (flights per year to Rowan) unk.

Aircraft Usage: (percent) Pleasure____ Business X Training____ Military____ Other____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes X No____

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes___ How many times per year?___ No X

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 1200

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
				X		

How far is your next stop? Distance or Location 100 NM

Specific help the new runway length could be: 6500

Examples: Larger fuel load / Use other aircraft More frequent usage etc.

Other Comments: Part 135 Auto Parts cargo

Title of Survey Responder: (pilot, owner, etc.) Pilot

Aircraft Owner: (optional)____

Runway Extension Survey

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Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) Cessna Citation II

Airport or city where your aircraft is based: ORM

Frequency of Flights to Rowan: (flights per year to Rowan) 1

Aircraft Usage: (percent) Pleasure ____ Business ✓ Training ____
Military ____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ____ No ✓

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ___ How many times per year? ___
No ✓

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 1200

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	✓	___	___	___

How far is your next stop? Distance or Location 430 NM

Specific help the new runway length could be: more useful load
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments: Nice Runway & facility

Title of Survey Responder: (pilot, owner, etc.) Pilot

Aircraft Owner: (optional) _____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) N3325F C182

Airport or city where your aircraft is based: New Bern KEWN

Frequency of Flights to Rowan: (flights per year to Rowan) 2

Aircraft Usage: (percent) Pleasure 50 Business 50 Training ____
Military ____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes X No ____

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes X How many times per year? 2
No ____

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 550

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
—	—	—	—	X	—	—

How far is your next stop? Distance or Location New Bern NC

Specific help the new runway length could be: ____
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) pilot/owner

Aircraft Owner: (optional) Daniel Lynch

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) BEECH JET 400

Airport or city where your aircraft is based: SALEM, OREGON

Frequency of Flights to Rowan: (flights per year to Rowan) 3

Aircraft Usage: (percent) Pleasure____ Business100 Training____
Military____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes____ No X

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes X How many times per year? ___
No____

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 1400

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	___	___	X	___

How far is your next stop? Distance or Location 300

Specific help the new runway length could be: OTHER JET & MORE FUEL
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) PILOT

Aircraft Owner: (optional) CURRY ARCHITECTURE

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) Beechcraft Premier I

Airport or city where your aircraft is based: RICHMOND

Frequency of Flights to Rowan: (flights per year to Rowan) 10

Aircraft Usage: (percent) Pleasure____ Business X Training____
Military____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes____ No X

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes___ How many times per year?___
No X

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 1300 nm

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20**: (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
—	—	X	—	—	—	—

How far is your next stop? Distance or Location 300 nm

Specific help the new runway length could be: Safer
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.)

Aircraft Owner: (optional)

Runway Extension Survey

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Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) LEAR 45

Airport or city where your aircraft is based: DAL, ORD, TEB

Frequency of Flights to Rowan: (flights per year to Rowan) 12

Aircraft Usage: (percent) Pleasure____ Business X Training____ Military____ Other ___

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes X No____

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes X How many times per year? 6 No____

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 1800

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
—	—	✓	—	—	—	—

How far is your next stop? Distance or Location GSO

Specific help the new runway length could be: USE OTHER AIRCRAFT
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) PILOT

Aircraft Owner: (optional)_____

Runway Extension Survey

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Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) Piper Cheyenne

Airport or city where your aircraft is based: Amy

Frequency of Flights to Rowan: (flights per year to Rowan) 5 ?

Aircraft Usage: (percent) Pleasure ✓ Business ____ Training ____
Military ____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ✓ No ____

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ___ How many times per year? ___
No ____

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 720

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	___	✓	___	___

How far is your next stop? Distance or Location Amy

Specific help the new runway length could be: 7000
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) pilot

Aircraft Owner: (optional) ____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) Beech 400

Airport or city where your aircraft is based: C/E

Frequency of Flights to Rowan: (flights per year to Rowan) Many

Aircraft Usage: (percent) Pleasure____ Business X Training____ Military____ Other ___

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes X No____

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes X How many times per year?___ No____

Maximum range (miles or nautical miles) **of your aircraft fully loaded**:____

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20**: (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
—	—	—	—	—	—	—

How far is your next stop? Distance or Location JAX

Specific help the new runway length could be: 6500+

Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) PIC

Aircraft Owner: (optional) Flight Options

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) Cessna 150

Airport or city where your aircraft is based: Davidson County

Frequency of Flights to Rowan: (flights per year to Rowan) 25+

Aircraft Usage: (percent) Pleasure ✓ Business ____ Training ✓
Military ____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ____ No ✓

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ___ How many times per year? ___
No ✓

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 150sm

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	✓	___	___	___	___	___

How far is your next stop? Distance or Location 15 mi

Specific help the new runway length could be: Better Surface
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) Pilot

Aircraft Owner: (optional) ____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) Van's RV6 Experimental

Airport or city where your aircraft is based: FD04, Leeward @ Ocala, FL

Frequency of Flights to Rowan: (flights per year to Rowan) 2 +

Aircraft Usage: (percent) Pleasure 100% Business ____ Training ____
Military ____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ____ No X

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ___ How many times per year? ___
No X

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 600

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	___	___	X	___

How far is your next stop? Distance or Location 400 NM

Specific help the new runway length could be: ____
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments: Good fuel stop for us between Syracuse, NY and Ocala, FL.

Title of Survey Responder: (pilot, owner, etc.) Pilot

Aircraft Owner: (optional) Richard Dayton

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) BOMBARDIER CHALLENGER 601 / LEARJET 60

Airport or city where your aircraft is based: KOAK

Frequency of Flights to Rowan: (flights per year to Rowan) 5-10

Aircraft Usage: (percent) Pleasure____ Business 100% Training____
Military____ Other ___

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes____ No Y

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes Y How many times per year?___
No____

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 3200 NM

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20**: (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
—	—	—	—	Y	—	—

How far is your next stop? Distance or Location OAK - 330 NM

Specific help the new runway length could be: OTHER A/C, MORE USAGE
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) PILOT

Aircraft Owner: (optional)_____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) Yak-52

Airport or city where your aircraft is based: MSY

Frequency of Flights to Rowan: (flights per year to Rowan) 2

Aircraft Usage: (percent) Pleasure____ Business ✓ Training____ Military____ Other____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes____ No ✓

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes___ How many times per year?___ No ✓

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 300

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20**: (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
—	—	—	—	✓	—	—

How far is your next stop? Distance or Location SU

Specific help the new runway length could be: N/a
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.)_____

Aircraft Owner: (optional)_____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) PA 28 - 260

Airport or city where your aircraft is based: 14A

Frequency of Flights to Rowan: (flights per year to Rowan) 20

Aircraft Usage: (percent) Pleasure ✓ Business ✓ Training ____
Military ____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ____ No ✓

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ___ How many times per year? ___
No ✓

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 500

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	___	___	___	✓

How far is your next stop? Distance or Location 100

Specific help the new runway length could be: ____
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) ____

Aircraft Owner: (optional) ____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) BEECHJET

Airport or city where your aircraft is based: WESTHAMPTON BEACH, N.Y.

Frequency of Flights to Rowan: (flights per year to Rowan) 12

Aircraft Usage: (percent) Pleasure____ Business X Training____
Military____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes____ No X

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes X How many times per year? 2
No____

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 1500

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
				X		

How far is your next stop? Distance or Location 600 NM

Specific help the new runway length could be:_____
Examples: ~~Larger fuel load~~ More frequent usage
~~Use other aircraft~~ etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) CHIEF PILOT / AMPCO

Aircraft Owner: (optional)_____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) BE35

Airport or city where your aircraft is based: Durham

Frequency of Flights to Rowan: (flights per year to Rowan) 12

Aircraft Usage: (percent) Pleasure ✓ Business ✓ Training_____
Military_____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ✓ No_____

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ✓ How many times per year? 3
No_____

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 600

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
—	—	—	—	✓	—	—

How far is your next stop? Distance or Location 200 mi

Specific help the new runway length could be:_____
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) Pilot Owner

Aircraft Owner: (optional)_____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) CESSNA CENTURION 210T

Airport or city where your aircraft is based: TRI

Frequency of Flights to Rowan: (flights per year to Rowan) 6

Aircraft Usage: (percent) Pleasure____ Business ✓ Training____ Military____ Other____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes____ No ✓

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ✓ How many times per year? 2 No____

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 870

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
—	—	—	—	—	—	—

How far is your next stop? Distance or Location _____

Specific help the new runway length could be: _____
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) OWNER

Aircraft Owner: (optional) _____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) Cessna 560 XL

Airport or city where your aircraft is based: CMH

Frequency of Flights to Rowan: (flights per year to Rowan) Unknown

Aircraft Usage: (percent) Pleasure ____ Business X Training ____
Military ____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes X No ____

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes X How many times per year? Various
No ____

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 2200

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	X	___	___	___	___

How far is your next stop? Distance or Location COD

Specific help the new runway length could be: ____
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) ____

Aircraft Owner: (optional) Net Jets

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) CJ2

Airport or city where your aircraft is based: SUGAR LAND, TX

Frequency of Flights to Rowan: (flights per year to Rowan)_____

Aircraft Usage: (percent) Pleasure____ Business ✓ Training____
Military____ Other ___

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ✓ No____

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ✓ How many times per year? 3+
No____

Maximum range (miles or nautical miles) **of your aircraft fully loaded:**____

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
—	—	—	—	✓	—	—

How far is your next stop? Distance or Location _____

Specific help the new runway length could be: 7000
Examples: Larger fuel load ✓ More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) Corp Pilot

Aircraft Owner: (optional)_____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) BE 300

Airport or city where your aircraft is based: FTY

Frequency of Flights to Rowan: (flights per year to Rowan)_____

Aircraft Usage: (percent) Pleasure____ Business____ Training____
Military____ Other ✓

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes____ No ✓

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes___ How many times per year?___
No ✓

Maximum range (miles or nautical miles) **of your aircraft fully loaded:**____

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20**: (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
—	—	—	—	—	—	—

How far is your next stop? Distance or Location 20 NM

Specific help the new runway length could be: None
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) Pilot - FAA

Aircraft Owner: (optional) FAA N79

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) BARON 58

Airport or city where your aircraft is based: RUQ

Frequency of Flights to Rowan: (flights per year to Rowan) 150

Aircraft Usage: (percent) Pleasure ✓ Business ✓ Training ___
Military ___ Other ___

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ___ No ✓

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ___ How many times per year? ___
No ✓

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 1000 n.m.

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
—	—	—	—	✓	—	—

How far is your next stop? Distance or Location 250 n.m.

Specific help the new runway length could be: NONE
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) PILOT

Aircraft Owner: (optional) ___

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) BEECH KING AIR 90

Airport or city where your aircraft is based: KHAR

Frequency of Flights to Rowan: (flights per year to Rowan) ?

Aircraft Usage: (percent) Pleasure____ Business ✓ Training____
Military____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes____ No ✓

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes___ How many times per year?___
No ✓

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 1,000 nm

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20**: (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	___	___	___	✓

How far is your next stop? Distance or Location 210 nm

Specific help the new runway length could be:____
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) PILOT

Aircraft Owner: (optional)____

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) BEECHCRAFT KING AIR 90

Airport or city where your aircraft is based: JAX

Frequency of Flights to Rowan: (flights per year to Rowan) 12

Aircraft Usage: (percent) Pleasure ____ Business X Training ____
Military ____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ____ No ✓

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes ___ How many times per year? ___
No ✓

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 1500

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	✓	___	___	___	___	___

How far is your next stop? Distance or Location 290 MI

Specific help the new runway length could be: Could bring our Hawker 800
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) Michele LA Vigna

Aircraft Owner: (optional) Heritage Aviation LLC

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) HAWKER 1000

Airport or city where your aircraft is based: TEB

Frequency of Flights to Rowan: (flights per year to Rowan)_____

Aircraft Usage: (percent) Pleasure____ Business ✓ Training____
Military____ Other___

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes ✓✓✓ No____

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes___ How many times per year?___
No___

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 2

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
			✓			

How far is your next stop? Distance or Location MIEC

Specific help the new runway length could be: LONGER RANGE / CAN CARRY MORE FU
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) Captain

Aircraft Owner: (optional) Pegasus Elite Aviation

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) KING AIR 350

Airport or city where your aircraft is based: KILM

Frequency of Flights to Rowan: (flights per year to Rowan) 1

Aircraft Usage: (percent) Pleasure____ Business X Training____ Military____ Other ___

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes____ No X

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes How many times per year?___ No X

Maximum range (miles or nautical miles) **of your aircraft fully loaded:** 1,500

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20:** (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
—	—	—	X	—	—	—

How far is your next stop? Distance or Location 40

Specific help the new runway length could be: FUEL + OTHER AIRCRAFT
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.) PILOT

Aircraft Owner: (optional) BISTMARK TRANSPORTATION

Runway Extension Survey

The Rowan County Airport is currently conducting an FAA sponsored study to determine the justification for the extension of runway 02/20 from 5,500 feet to 6,500 feet. As a user of the airport we would appreciate your comments. Some of the information we would like to have is listed below. Individual confidentiality will be maintained. **Thank You**

Type of aircraft flown to/from the Rowan County Airport: (Aircraft name and type) C182

Airport or city where your aircraft is based: WEST MEMPHIS, AR

Frequency of Flights to Rowan: (flights per year to Rowan) 1

Aircraft Usage: (percent) Pleasure ✓ Business____ Training____
Military____ Other ____

Are you carrying less people or fuel today because of runway's 02/20's length of 5,500 feet? Yes____ No X

Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet? Yes___ How many times per year?___
No X

Maximum range (miles or nautical miles) **of your aircraft fully loaded**: 800

Estimate current useful load (fuel, passengers, baggage/cargo) **of your aircraft when you depart today on runway 02/20**: (check one)

Less than 50%	50%	60%	70%	80%	90%	90%+
___	___	___	___	___	___	✓

How far is your next stop? Distance or Location 500

Specific help the new runway length could be: 7500+
Examples: Larger fuel load More frequent usage
Use other aircraft etc.

Other Comments:

Title of Survey Responder: (pilot, owner, etc.)_____

Aircraft Owner: (optional)_____

AIRPORT USER SURVEY

ROWAN COUNTY AIRPORT SURVEY

1. **Type of aircraft based at Rowan County?** (Aircraft name and type)
   CESSNA T182T SKYLANE

2. **Frequency of Flights from Rowan?** (Flights per yr. per aircraft) 30 30

3. **Aircraft Usage?** (%) Pleasure 20 Business 70 Training 10 Other ____

4. **Are there any facilities or services you would like to see developed or improved at the Rowan County Airport?** RUNWAY LIGHTS(LED), IMPROVED HANGARS, IMPROVED TERMINAL, WAAS

5. **Are there any safety or security concerns about the airport?**
   PERIMETER FENCE (NEEDED)

6. **Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet?**
   Yes ✓ (How many times per year? 6) **No** ____

7. **What is your normal aircraft- load compared to Maximum full load. %** 75

8. **What is the Maximum range of your aircraft fully loaded?** 750 NM

9. **Runway Comments.** (condition, need for more length, etc.)
   CONDITION IS GOOD, BUT LENGTH- NEEDS IMPROVEMENT (EXTRA 1000') - LIGHTING COULD BE IMPROVED.

ROWAN COUNTY AIRPORT SURVEY

1. **Type of aircraft based at Rowan County?** (Aircraft name and type)
   Cessna 172P _____

2. **Frequency of Flights from Rowan?** (Flights per yr. per aircraft) 120 ____

3. **Aircraft Usage?** (%) Pleasure 95 Business 5 Training ____ Other ____

4. **Are there any facilities or services you would like to see developed or improved at the Rowan County Airport?** _____

5. **Are there any safety or security concerns about the airport?**
   We've had fuel stolen from our plane 2 times

6. **Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet?**
   Yes _____(How many times per year?_____) **No** ✓

7. **What is your normal aircraft- load compared to Maximum full load. %** 90

8. **What is the Maximum range of your aircraft fully loaded?** 450 nm

9. **Runway Comments.** (condition, need for more length, etc.)
   Could use another turn off of 20 at ~ 2000' mark

ROWAN COUNTY AIRPORT SURVEY

1. **Type of aircraft based at Rowan County?** (Aircraft name and type)
   CESSNA C210

2. **Frequency of Flights from Rowan?** (Flights per yr. per aircraft) 150

3. **Aircraft Usage?** (%) Pleasure 20 Business 80 Training ___ Other ___

4. **Are there any facilities or services you would like to see developed or improved at the Rowan County Airport?**
   GOOD SMALL AIRPORT - (FBO AFTER HRS. ENTRY FOR WEATHER + BATHROOMS)

5. **Are there any safety or security concerns about the airport?**
   DIFFERENT ENTRY CODES FOR EVERY AIRCRAFT OWNER

6. **Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet?**
   Yes _____ (How many times per year? _____) **No** X

7. **What is your normal aircraft- load compared to Maximum full load. %** 75

8. **What is the Maximum range of your aircraft fully loaded?** 0600 HRS.

9. **Runway Comments.** (condition, need for more length, etc.)
   GOOD FOR ME.

ROWAN COUNTY AIRPORT SURVEY

1. **Type of aircraft based at Rowan County?** (Aircraft name and type)
   Beechcraft Debonair N471F

2. **Frequency of Flights from Rowan?** (Flights per yr. per aircraft) 50

3. **Aircraft Usage?** (%) Pleasure 50 Business 50 Training ___ Other ___

4. **Are there any facilities or services you would like to see developed or improved at the Rowan County Airport?** We would like to see an improved or new transit ramp and F.B.O.

5. **Are there any safety or security concerns about the airport?**
   Yes, Improve the regular patrols by the Salisbury city police or Sheriff's office.

6. **Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet?**
   Yes _____(How many times per year?_____) No X

7. **What is your normal aircraft- load compared to Maximum full load. %** 75

8. **What is the Maximum range of your aircraft fully loaded?** 800 NM

9. **Runway Comments.** (condition, need for more length, etc.)

ROWAN COUNTY AIRPORT SURVEY

1. **Type of aircraft based at Rowan County?** (Aircraft name and type)
   CESSNA Citation XLS N75XL

2. **Frequency of Flights from Rowan?** (Flights per yr. per aircraft) 500 X

3. **Aircraft Usage?** (%) Pleasure___ Business X Training___ Other___

4. **Are there any facilities or services you would like to see developed or improved at the Rowan County Airport?** WE would like to see an increase in the transix ramp.

5. **Are there any safety or security concerns about the airport?**
   Increasing Regular ~~pol presents~~ presence of the Rowan City police or Sherriff cruisers.

6. **Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet?**
   Yes X (How many times per year? 50) **No**_____

7. **What is your normal aircraft- load compared to Maximum full load. %** 60

8. **What is the Maximum range of your aircraft fully loaded?** 2000 NM

9. **Runway Comments.** (condition, need for more length, etc.)
   We need additional length to comply with the FAR 60% rule when this runway is wet or contaminated.
   We also need the markings repainted as the taxiway and touchdown markings are almost non-existed.
   TOM [illegible]

ROWAN COUNTY AIRPORT SURVEY

1. **Type of aircraft based at Rowan County?** (Aircraft name and type)
   CESSNA Citation XLS N70XL

2. **Frequency of Flights from Rowan?** (Flights per yr. per aircraft) 500 X

3. **Aircraft Usage?** (%) Pleasure___ Business X Training___ Other___

4. **Are there any facilities or services you would like to see developed or improved at the Rowan County Airport?** WE WOULD LIKE TO SEE AN INCREASE IN THE TRANSIX RAMP.

5. **Are there any safety or security concerns about the airport?**
   INCREASING REGULAR ~~NOT PRESENT~~ PRESENCE OF THE ROWAN CIVIL POLICE OR SHERRIFF CRUISERS.

6. **Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet?**
   Yes X (How many times per year? 50) No_____

7. **What is your normal aircraft- load compared to Maximum full load. %** 60

8. **What is the Maximum range of your aircraft fully loaded?** 2000 NM

9. **Runway Comments.** (condition, need for more length, etc.)
   WE NEED ADDITIONAL LENGTH TO COMPLY WITH THE FAR 60% RULE WHEN THIS RUNWAY IS WET OR CONTAMINATED. WE ALSO NEED THE MARKINGS REPAINTED AS THE TAXIWAY AND TOUCHDOWN MARKINGS ARE ALMOST NON-EXISTED.

   TOM GREEN

ROWAN COUNTY AIRPORT SURVEY

1. **Type of aircraft based at Rowan County?** (Aircraft name and type)
   Piper Cherokee PA28140c

2. **Frequency of Flights from Rowan?** (Flights per yr. per aircraft) 40

3. **Aircraft Usage?** (%) Pleasure 100% Business___ Training___ Other___

4. **Are there any facilities or services you would like to see developed or improved at the Rowan County Airport?** Electricity in hangar

5. **Are there any safety or security concerns about the airport?**
   No

6. **Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet?**
   Yes V (How many times per year? 20) No_____

7. **What is your normal aircraft- load compared to Maximum full load. %** 60%

8. **What is the Maximum range of your aircraft fully loaded?** 6 hr.

9. **Runway Comments.** (condition, need for more length, etc.)
   Longer Runways are always better in high Temp. conditions or engine Failure at Takeoff

Thanks to:
Kathy + Greg Bove for a great Job.
Wayne

ROWAN COUNTY AIRPORT SURVEY

1. **Type of aircraft based at Rowan County?** (Aircraft name and type)
   Cozy MK IV Exp.

2. **Frequency of Flights from Rowan?** (Flights per yr. per aircraft) varies

3. **Aircraft Usage?** (%) Pleasure 100 Business ___ Training ___ Other ___

4. **Are there any facilities or services you would like to see developed or improved at the Rowan County Airport?** Airport needs a WASH POINT WHICH DOESN'T INTERFERE WITH ACCESS TO MAINTENANCE HANGAR AND CAROLINA AVIONICS.

5. **Are there any safety or security concerns about the airport?**
   ~~NO~~ I sometimes see loose rock on the TAXIWAY approximately 2000' feet from the NORTH end, where vehicles have an access point

6. **Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet?**
   Yes _____(How many times per year?_____) No ✓

7. **What is your normal aircraft- load compared to Maximum full load. %** 35

8. **What is the Maximum range of your aircraft fully loaded?** 1000 Nm

9. **Runway Comments.** (condition, need for more length, etc.)
   —

ROWAN COUNTY AIRPORT SURVEY

1. **Type of aircraft based at Rowan County?** (Aircraft name and type)
   Cessna 172

2. **Frequency of Flights from Rowan?** (Flights per yr. per aircraft) _____ _____

3. **Aircraft Usage?** (%) Pleasure 50 Business ___ Training 50 Other ___

4. **Are there any facilities or services you would like to see developed or improved at the Rowan County Airport?** _____

5. **Are there any safety or security concerns about the airport?**
   No

6. **Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet?**
   Yes _____(How many times per year?_____) **No** ✓

7. **What is your normal aircraft- load compared to Maximum full load. %** 50

8. **What is the Maximum range of your aircraft fully loaded?** 400 Kt

9. **Runway Comments.** (condition, need for more length, etc.)

ROWAN COUNTY AIRPORT SURVEY

1. **Type of aircraft based at Rowan County?** (Aircraft name and type)
Piper Lance PA 32 - BE60 Beech Duke

2. **Frequency of Flights from Rowan?** (Flights per yr. per aircraft) * Total: 290

3. **Aircraft Usage?** (%) Pleasure 5 Business 95 Training ___ Other ___

4. **Are there any facilities or services you would like to see developed or improved at the Rowan County Airport?**
Better location and availability of Weather & Computer access

5. **Are there any safety or security concerns about the airport?**
Tie down ropes need to be maintained better.
Improve runway lighting

6. **Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet?**
Yes ___ (How many times per year? ___) No X

7. **What is your normal aircraft- load compared to Maximum full load, %** 85

8. **What is the Maximum range of your aircraft fully loaded?** 1000 miles

9. **Runway Comments.** (condition, need for more length, etc.)
Improve taxiway lights.

ROWAN COUNTY AIRPORT SURVEY

1. **Type of aircraft based at Rowan County?** (Aircraft name and type)
   Cessna 172

2. **Frequency of Flights from Rowan?** (Flights per yr. per aircraft) 80-90

3. **Aircraft Usage?** (%) Pleasure 100 Business ___ Training ___ Other ___

4. **Are there any facilities or services you would like to see developed or improved at the Rowan County Airport?** Need new "Do Not Block Taxiway" signs. Need vehicle parking for hangars 18-27. Need taxiway between B+H taxiways. Need 2-3 more taxiway lights @ turn off beside fuel farm.

5. **Are there any safety or security concerns about the airport?**
   I think cards should be issued & used to enter the gate instead of a code that anyone can get.

6. **Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet?**
   Yes _____ (How many times per year? _____) No ✓

7. **What is your normal aircraft- load compared to Maximum full load. %** 80

8. **What is the Maximum range of your aircraft fully loaded?** 425 nm

9. **Runway Comments.** (condition, need for more length, etc.)

ROWAN COUNTY AIRPORT SURVEY

1. **Type of aircraft based at Rowan County?** (Aircraft name and type)
   Saratoga PA32R

2. **Frequency of Flights from Rowan?** (Flights per yr. per aircraft) 40

3. **Aircraft Usage?** (%) Pleasure ✓ Business ✓ Training ___ Other ___

4. **Are there any facilities or services you would like to see developed or improved at the Rowan County Airport?**
   Apply for LPV RNAV approach

5. **Are there any safety or security concerns about the airport?**

6. **Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet?**
   Yes _____(How many times per year?_____) No ✓

7. **What is your normal aircraft- load compared to Maximum full load. %** 50

8. **What is the Maximum range of your aircraft fully loaded?** 900

9. **Runway Comments.** (condition, need for more length, etc.) OK

ROWAN COUNTY AIRPORT SURVEY

1. **Type of aircraft based at Rowan County?** (Aircraft name and type)
Piper Lance PA 32 - BE60 BEECH DUKE

2. **Frequency of Flights from Rowan?** (Flights per yr. per aircraft) ~~290~~ Total: 290

3. **Aircraft Usage?** (%) Pleasure 5 Business 95 Training ___ Other ___

4. **Are there any facilities or services you would like to see developed or improved at the Rowan County Airport?**
Better location and availability of Weather Computer access.

5. **Are there any safety or security concerns about the airport?**
Tie down ropes need to be maintained better.
Improve runway lighting

6. **Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet?**
Yes ___ (How many times per year? ___) No X

7. **What is your normal aircraft- load compared to Maximum full load. %** 85

8. **What is the Maximum range of your aircraft fully loaded?** 1000 miles

9. **Runway Comments.** (condition, need for more length, etc.)
Improve taxiway lights.

6/27/2019

ROWAN COUNTY AIRPORT SURVEY

1. **Type of aircraft based at Rowan County?** (Aircraft name and type)
   Cessna 172 k

2. **Frequency of Flights from Rowan?** (Flights per yr. per aircraft) 86 ____

3. **Aircraft Usage?** (%) Pleasure 90% Business ___ Training 10% Other ___

4. **Are there any facilities or services you would like to see developed or improved at the Rowan County Airport?** Restaurant

5. **Are there any safety or security concerns about the airport?**
   no

6. **Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet?**
   Yes _____(How many times per year?_____) **No** ✓

7. **What is your normal aircraft- load compared to Maximum full load. %** 60%

8. **What is the Maximum range of your aircraft fully loaded?** 500 miles

9. **Runway Comments.** (condition, need for more length, etc.)

ROWAN COUNTY AIRPORT SURVEY

1. **Type of aircraft based at Rowan County?** (Aircraft name and type)
   Piper Chrokee 6 260

2. **Frequency of Flights from Rowan?** (Flights per yr. per aircraft) 8-10

3. **Aircraft Usage?** (%) Pleasure ✓ Business___ Training___ Other___

4. **Are there any facilities or services you would like to see developed or improved at the Rowan County Airport?** _____
   Toilet Closer to New Hangers

5. **Are there any safety or security concerns about the airport?**
   None

6. **Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet?**
   Yes _____(How many times per year?_____) No ✓

7. **What is your normal aircraft- load compared to Maximum full load. %** 4-5 People

8. **What is the Maximum range of your aircraft fully loaded?** 500 Miles

9. **Runway Comments.** (condition, need for more length, etc.)

ROWAN COUNTY AIRPORT SURVEY

1. **Type of aircraft based at Rowan County?** (Aircraft name and type)
   Queen Air BE-65 Bonanza G-35

2. **Frequency of Flights from Rowan?** (Flights per yr. per aircraft) 40 ____

3. **Aircraft Usage?** (%) Pleasure 2 Business 98 Training ___ Other ___

4. **Are there any facilities or services you would like to see developed or improved at the Rowan County Airport?** none

5. **Are there any safety or security concerns about the airport?** none

6. **Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet?**
   Yes _____(How many times per year?_____) No ✓

7. **What is your normal aircraft- load compared to Maximum full load. %** 90

8. **What is the Maximum range of your aircraft fully loaded?** 800 nm

9. **Runway Comments.** (condition, need for more length, etc.) none

ROWAN COUNTY AIRPORT SURVEY

1. **Type of aircraft based at Rowan County?** (Aircraft name and type)
   Mooney 231 Rocket

2. **Frequency of Flights from Rowan?** (Flights per yr. per aircraft) 10 ____

3. **Aircraft Usage?** (%) Pleasure X Business ____ Training ____ Other ____

4. **Are there any facilities or services you would like to see developed or improved at the Rowan County Airport?** ✓

5. **Are there any safety or security concerns about the airport?** ✓

6. **Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet?**
   Yes _____(How many times per year?_____) No ✓

7. **What is your normal aircraft- load compared to Maximum full load. %** ✓

8. **What is the Maximum range of your aircraft fully loaded?** 600 NM

9. **Runway Comments.** (condition, need for more length, etc.)

ROWAN COUNTY AIRPORT SURVEY

1. **Type of aircraft based at Rowan County?** (Aircraft name and type)
   EURO FOX N4760

2. **Frequency of Flights from Rowan?** (Flights per yr. per aircraft) 50 - 60

3. **Aircraft Usage?** (%) Pleasure 85 Business 15 Training ___ Other ___

4. **Are there any facilities or services you would like to see developed or improved at the Rowan County Airport?**
   Service Hangar doors regularly

5. **Are there any safety or security concerns about the airport?**
   2 runway incursions by Cirrus + Skyhawk

6. **Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet?**
   Yes _____(How many times per year?_____) No ✓

7. **What is your normal aircraft- load compared to Maximum full load. %** 75

8. **What is the Maximum range of your aircraft fully loaded?** 450 SM

9. **Runway Comments.** (condition, need for more length, etc.)

ROWAN COUNTY AIRPORT SURVEY

1. **Type of aircraft based at Rowan County?** (Aircraft name and type)
   Mooney M20C _____

2. **Frequency of Flights from Rowan?** (Flights per yr. per aircraft) 30 ____

3. **Aircraft Usage?** (%) Pleasure X Business ___ Training ___ Other ___

4. **Are there any facilities or services you would like to see developed or improved at the Rowan County Airport?** _____

5. **Are there any safety or security concerns about the airport?**

6. **Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet?**
   Yes _____(How many times per year?_____) No ✓

7. **What is your normal aircraft- load compared to Maximum full load. %** 60

8. **What is the Maximum range of your aircraft fully loaded?** 980 NM

9. **Runway Comments.** (condition, need for more length, etc.)

ROWAN COUNTY AIRPORT SURVEY

1. **Type of aircraft based at Rowan County?** (Aircraft name and type)

   A-75 STEARMAN

2. **Frequency of Flights from Rowan?** (Flights per yr. per aircraft) — —

3. **Aircraft Usage?** (%) Pleasure ✓ Business ___ Training ___ Other ___

4. **Are there any facilities or services you would like to see developed or improved at the Rowan County Airport?** N/A

5. **Are there any safety or security concerns about the airport?**

   N/A

6. **Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet?**

   Yes _____(How many times per year?_____) **No** ✓

7. **What is your normal aircraft- load compared to Maximum full load. %** N/A

8. **What is the Maximum range of your aircraft fully loaded?** N/A.

9. **Runway Comments.** (condition, need for more length, etc.)

ROWAN COUNTY AIRPORT SURVEY

1. **Type of aircraft based at Rowan County?** (Aircraft name and type)
   Cessna 150, 152 & 172 - Archer PA28-181, Arrow PA28-R200

2. **Frequency of Flights from Rowan?** (Flights per yr. per aircraft) Between 1200 to 1500 FLTS per Yr.

3. **Aircraft Usage?** (%) Pleasure___ Business___ Training ✓ Other Rentals

4. **Are there any facilities or services you would like to see developed or improved at the Rowan County Airport?** Along with extended Runway, this airport should expand and update the FBO Terminal. Also larger hangers would be nice, possible restaurant and open sided aircraft Parking Ramp Shelters

5. **Are there any safety or security concerns about the airport?**
   No

6. **Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet?**
   Yes _____(How many times per year?_____) No ✓

7. **What is your normal aircraft- load compared to Maximum full load. %** 85 %

8. **What is the Maximum range of your aircraft fully loaded?** 500 Nm

9. **Runway Comments.** (condition, need for more length, etc.)
   Need for more length is strictly to bring in more corporate and general aviation business to this airport and to the county.

ROWAN COUNTY AIRPORT SURVEY

1. **Type of aircraft based at Rowan County?** (Aircraft name and type)
   Diamond Twin Star DA 42

2. **Frequency of Flights from Rowan?** (Flights per yr. per aircraft) 30/Year

3. **Aircraft Usage?** (%) Pleasure 40 Business 20 Training 40 Other ____

4. **Are there any facilities or services you would like to see developed or improved at the Rowan County Airport?** NO

5. **Are there any safety or security concerns about the airport?**
   NO

6. **Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet?**
   Yes _____(How many times per year?_____) **No** ✓

7. **What is your normal aircraft- load compared to Maximum full load. %** 60

8. **What is the Maximum range of your aircraft fully loaded?** 500NM

9. **Runway Comments.** (condition, need for more length, etc.)
   NONE

ROWAN COUNTY AIRPORT SURVEY

1. **Type of aircraft based at Rowan County?** (Aircraft name and type)
   Mooney M20F

2. **Frequency of Flights from Rowan?** (Flights per yr. per aircraft) >10

3. **Aircraft Usage?** (%) Pleasure ✓ Business ___ Training ___ Other ___

4. **Are there any facilities or services you would like to see developed or improved at the Rowan County Airport?** _____

5. **Are there any safety or security concerns about the airport?**
   N/A

6. **Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet?**
   Yes _____(How many times per year?_____) No ✓

7. **What is your normal aircraft- load compared to Maximum full load. %** 70

8. **What is the Maximum range of your aircraft fully loaded?** 900 Miles

9. **Runway Comments.** (condition, need for more length, etc.)

ROWAN COUNTY AIRPORT SURVEY

1. **Type of aircraft based at Rowan County?** (Aircraft name and type)
   35-B33 Debonair SEL

2. **Frequency of Flights from Rowan?** (Flights per yr. per aircraft) 30+

3. **Aircraft Usage?** (%) Pleasure 5 Business 95 Training ___ Other ___

4. **Are there any facilities or services you would like to see developed or improved at the Rowan County Airport?** Resurface tarmac

5. **Are there any safety or security concerns about the airport?**
   No, not that I am aware

6. **Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet?**
   Yes _____(How many times per year?_____) **No** X

7. **What is your normal aircraft- load compared to Maximum full load. %** 75

8. **What is the Maximum range of your aircraft fully loaded?** 4.5-5.5 Hrs

9. **Runway Comments.** (condition, need for more length, etc.)
   Extra length always a plus!

ROWAN COUNTY AIRPORT SURVEY

1. **Type of aircraft based at Rowan County?** (Aircraft name and type)
   EURO FOX N4760

2. **Frequency of Flights from Rowan?** (Flights per yr. per aircraft) 50 - 60

3. **Aircraft Usage?** (%) Pleasure 85 Business 15 Training ___ Other ___

4. **Are there any facilities or services you would like to see developed or improved at the Rowan County Airport?** ~~No~~
   SERVICE HANGAR DOORS REGULARLY

5. **Are there any safety or security concerns about the airport?**
   ~~No~~ 2 RUNWAY INCURSIONS BY CITATION & STATIONAIRE

6. **Have you ever carried fewer people/fuel when using this airport because of the runway length of 5,500 feet?**
   Yes _____(How many times per year?_____) No ✓

7. **What is your normal aircraft- load compared to Maximum full load. %** 75

8. **What is the Maximum range of your aircraft fully loaded?** 450 SM

9. **Runway Comments.** (condition, need for more length, etc.)

OFFICE OF MANAGEMENT AND BUDGET DISCOUNT RATES

OFFICE OF MANAGEMENT AND BUDGET

OMB Circular No. A-94

APPENDIX C
Revised January 2008

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DISCOUNT RATES FOR COST-EFFECTIVENESS, LEASE PURCHASE, AND RELATED ANALYSES

Effective Dates. This appendix is updated annually around the time of the President's budget submission to Congress. This version of the appendix is valid for calendar year 2008. A copy of the updated appendix can be obtained in electronic form through the OMB home page at http://www.whitehouse.gov/omb/circulars/a094/a94_appx-c.html, the text of the main body of the Circular is found at http://www.whitehouse.gov/omb/circulars/a094/a094.html, and a table of past years' rates is located at http://www.whitehouse.gov/omb/circulars/a094/dischist.pdf. Updates of the appendix are also available upon request from OMB's Office of Economic Policy (202-395-3381).

Nominal Discount Rates. A forecast of nominal or market interest rates for 2008 based on the economic assumptions for the 2009 Budget are presented below. These nominal rates are to be used for discounting nominal flows, which are often encountered in lease-purchase analysis.

Nominal Interest Rates on Treasury Notes and Bonds of Specified Maturities (in percent)

3-Year	5-Year	7-Year	10-Year	20-Year	30-Year
4.1	4.3	4.4	4.6	4.9	4.9

Real Discount Rates. A forecast of real interest rates from which the inflation premium has been removed and based on the economic assumptions from the 2009 Budget is presented below. These real rates are to be used for discounting constant-dollar flows, as is often required in cost-effectiveness analysis.

Real Interest Rates on Treasury Notes and Bonds of Specified Maturities (in percent)

3-Year	5-Year	7-Year	10-Year	20-Year	30-Year
2.1	2.3	2.4	2.6	2.8	2.8

Analyses of programs with terms different from those presented above may use a linear interpolation. For example, a four-year project can be evaluated with a rate equal to the average of the three-year and five-year rates. Programs with durations longer than 30 years may use the 30-year interest rate.

Other Documents

Text of OMB Circular No. A-94 in HTML or PDF (22 pages, 269 kb)

Table of Past Years Discount Rates from Appendix C of OMB Circular No. A-94 (2 pages, 31 kb)

Memorandum M-08-08, 2008 Discount Rates for OMB Circular No. A-94 (2 pages, 55 kb)

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PRELIMINARY OPINION OF PROBABLE COST

Preliminary Opinion of Probable Cost
Summary
Rowan County Airport

Description	Total (2008 $)	Federal	State	Local
Phase I (0-5 years)				
Benefit Cost Analysis/Environmental Documentation	$375,000.00	$337,500.00	$0.00	$37,500.00
Land Acquisition	$11,107,350.00	$9,996,615.00	$0.00	$1,110,735.00
Airport Road Relocation	$2,633,155.00	$0.00	$1,316,577.50	$1,316,577.50
1,000-Foot Runway 02 And Parallel Taxiway Extension (East Side)	$8,391,262.50	$7,552,136.25	$0.00	$839,126.25
Parallel-Stub Taxiways (West Side)	$7,932,038.75	$7,138,834.88	$0.00	$793,203.88
Runway 02/20 Strengthening And Grooving	$1,650,020.00	$1,485,018.00	$0.00	$165,002.00
Apron Rehabilitation (Existing Terminal Area)	$705,157.00	$634,641.30	$0.00	$70,515.70
New T-Hangars (3) (North Of Existing Apron On East Side)	$4,352,591.88	$2,769,832.69	$0.00	$1,582,759.19
New Terminal Apron (West Side)	$10,053,242.50	$9,047,918.25	$0.00	$1,005,324.25
New Terminal Parking And Access Road (West Side)	$2,584,941.25	$2,326,447.13	$0.00	$258,494.13
New Terminal (West Side)	$1,417,547.50	$0.00	$708,773.75	$708,773.75
Fuel Farm (West Side)	$1,900,093.25	$1,710,083.93	$0.00	$190,009.33
Corporate Hangar Access Road (East Side)	$166,405.00	$149,764.50	$0.00	$16,640.50
Corporate Hangars (2) (East Side)	$2,283,859.75	$615,473.78	$0.00	$1,668,385.98
Corporate Hangars (Adjacent To Old Terminal)	$2,345,292.75	$670,763.48	$0.00	$1,674,529.28
	$57,897,957.13	$44,435,029.16	$2,025,351.25	$11,437,576.71
Phase II (6-10 years)				
T-Hangar (Adjacent To Old Terminal)	$767,179.23	$289,432.61	$0.00	$478,746.62
New T-Hangar (1) (North Of Existing Apron On East Side)	$2,005,600.54	$1,316,862.79	$0.00	$688,737.75
New Terminal Apron And Taxiway (West Side)	$10,648,923.24	$9,584,030.91	$0.00	$1,064,892.32
New Terminal Expansion (West Side)	$1,095,545.74	$0.00	$547,772.87	$547,772.87
Corporate Hangars (2) (East Side)	$2,953,207.05	$820,040.90	$0.00	$2,133,166.16
Corporate Hangar (Adjacent To Old Terminal)	$2,965,484.56	$831,090.66	$0.00	$2,134,393.91
Corporate Hangars (2) And Apron (West Side)	$3,775,132.38	$1,927,342.78	$0.00	$1,847,789.60
Corporate Hangar Access Roads (West Side)	$1,324,290.49	$1,191,861.44	$0.00	$132,429.05
Subtotal	$25,535,363.22	$15,959,662.08	$547,772.87	$9,027,928.27
Phase III (11-20 years)				
New T-Hangars (2) (North Of Existing Apron On East Side)	$6,492,892.08	$4,597,498.48	$0.00	$1,895,393.60
Corporate Hangars (1) (East Side)	$1,922,401.08	$557,356.84	$0.00	$1,365,044.24
Corporate Hangar (Adjacent To Old Terminal)	$3,844,474.34	$1,114,418.64	$0.00	$2,730,055.70
Corporate Hangars (4) And Apron (West Side)	$10,546,699.74	$5,739,056.54	$0.00	$4,807,643.19
New Terminal Parking Lot Expansion (West Side)	$1,889,760.07	$1,700,784.06	$0.00	$188,976.01
Old Terminal Parking Lot Expansion (East Side)	$370,899.31	$333,809.38	$0.00	$37,089.93
Subtotal	$25,067,126.60	$14,042,923.94	$0.00	$11,024,202.66
Total	$108,500,446.94	$74,437,615.19	$2,573,124.12	$31,489,707.64

* - Assumes participation in site preparation and taxiway access but not in hangar construction

Preliminary Opinion of Probable Cost
Benefit Cost Analysis/Environmental Documentation
Phase I (0-5 years)
Rowan County Airport

Spec No.	Description	Acres/ Quantity	Unit	Unit Price	Total
	Benefit Cost Analysis	1	LS	$125,000.00	$125,000.00
	Environmental Documentation	1	LS	$250,000.00	$250,000.00
	TOTAL:			$15,000.00	$375,000.00

Preliminary Opinion of Probable Cost
Land Acquisition
Phase I (0-5 years)
Rowan County Airport

Parcel No.	Owner	Acres	Unit	Unit Price	Total
Runway Extension					
471 011	Rowan Investment Co., Inc.	4.4	LS	$ 138,000.00	$ 138,000.00
471 036	Rowan Corporation	12.03	LS	$ 709,000.00	$ 709,000.00
471 037	Hess Larry Weaver	0.5	LS	$ 17,000.00	$ 17,000.00
471 039	Jaco Properties, Inc.	0.14	LS	$ 6,000.00	$ 6,000.00
471 041	United Beverages of NC LLC	3.08	LS	$ 2,902,000.00	$ 2,902,000.00
471 044	Baja Products Ltd.	10.4	LS	$ 819,000.00	$ 819,000.00
471 052	Perma-Flex (Southern Inc.)	9.51	LS	$ 699,000.00	$ 699,000.00
471 054	Rowan Investment Co., Inc.	17.68	LS	$ 255,000.00	$ 255,000.00
471 068	Fast Food Merchandisers, Inc.	6.42	LS	$ 1,980,000.00	$ 1,980,000.00
471 071	Rowan Corporation	5.36	LS	$ 180,000.00	$ 180,000.00
471 109	Tallent Timothy N.	22.93	LS	$ 326,000.00	$ 326,000.00
471 115	Hess Larry Weaver	0.29	LS	$ 55,000.00	$ 55,000.00
	Subtotal:				$ 8,086,000.00
Road Relocation					
471 005	Patricia et al	0	LS	$ -	$0.00
471 0140001	Franks Evelyn Estate	1.08	LS	$ 7,000.00	$7,000.00
471 015	Widenhouse Service	2.26	LS	$ 153,000.00	$153,000.00
039000001	Jaco Properties, Inc.	0	LS	$ -	$0.00
471 054	Rowan Investment Co., Inc.	1.72	LS	$ 25,000.00	$25,000.00
471 068	Fast Food Merchandisers, Inc.	1.49	LS	$ 460,000.00	$460,000.00
471 109	Tallent Timothy N.	4.08	LS	$ 58,000.00	$58,000.00
	Subtotal:				$703,000.00
	Land Acquisition TOTAL:				$8,789,000.00
	Contingency :				$1,318,350.00
	Land Acquisition Fees:				$1,000,000.00
	TOTAL:				$11,107,350.00

Preliminary Opinion of Probable Cost
Airport Road Relocation
Phase I (0-5 years)
Rowan County Airport

Spec No.	Owner/Description	Acres/ Quantity	Unit	Unit Price	Total
800	MOBILIZATION	1	LS	$189,000.00	$189,000.00
200	CLEARING AND GRUBBING PROJECT AREA	10	AC	$4,000.00	$40,000.00
225	UNCLASSIFIED EXCAVATION	75,000	CY	$12.00	$900,000.00
225	UNSUITABLE EXCAVATION	8,000	CY	$20.00	$160,000.00
250	REMOVAL OF EXISTING PAVEMENT	5,000	SY	$8.00	$40,000.00
520	AGGREGATE BASE COURSE	3,400	CY	$60.00	$204,000.00
600	BITUMINOUS PRIME COAT	4,000	GAL	$1.75	$7,000.00
605	BITUMINOUS TACK COAT	1,200	GAL	$1.75	$2,100.00
640	BITUMINOUS BINDER COURSE	1,400	TN	$98.00	$137,200.00
645	BITUMINOUS SURFACE COURSE	1,400	TN	$98.00	$137,200.00
900	MISCELLANEOUS SIGNAGE	1	LS	$5,000.00	$5,000.00
1205	PAVEMENT MARKING	6,000	SF	$2.20	$13,200.00
1660	SEEDING AND MULCHING	15	AC	$1,800.00	$27,000.00
STS-1	MISCELLANEOUS DRAINAGE	1	LS	$175,000.00	$175,000.00
STS-2	MISCELLANEOUS EROSION AND SEDIMENT CONTROL	1	LS	$45,000.00	$45,000.00
STS-3	CONTINGENCY	1	LS	$208,000.00	$208,000.00
			CONSTRUCTION TOTAL:		$2,289,700.00
	ENGINEERING, CONSTRUCTION ADMIN, RPR, TESTING (15%):				$343,455.00
			TOTAL:		$2,633,155.00

Preliminary Opinion of Probable Cost
1,000-foot Runway 02 and Parallel Taxiway Extension (East Side)
Phase I (0-5 years)
Rowan County Airport

Spec No.	Owner/Description	Acres/ Quantity	Unit	Unit Price	Total
GRADING AND DRAINAGE PHASE					
P-150	MOBILIZATION	1	LS	$355,000.00	$355,000.00
P-151	CLEARING AND GRUBBING PROJECT AREA	50	AC	$4,000.00	$200,000.00
P-152	EMBANKMENT IN PLACE	300,000	CY	$12.00	$3,600,000.00
P-156	MISCELLANEOUS EROSION CONTROL	1	LS	$85,000.00	$85,000.00
REP	REMOVE EXISTING PAVEMENT (Not including Airport Road)	7,000	SY	$8.00	$56,000.00
REP	REMOVE EXISTING RAILROAD	3,600	LF	$45.00	$162,000.00
D-701	MISCELLANEOUS STORM DRAINAGE	1	LS	$215,000.00	$215,000.00
F-162	REMOVE EXISTING FENCE	1,000	LF	$7.00	$7,000.00
F-162	6' CHAIN-LINK FENCE WITH BARBED WIRE	4,000	LF	$18.00	$72,000.00
T-901	SEEDING	25	AC	$1,000.00	$25,000.00
T-908	MULCHING	25	AC	$800.00	$20,000.00
	CONTINGENCY (10%)	1	LS	$480,000.00	$480,000.00
			CONSTRUCTION TOTAL:		$5,277,000.00
	ENGINEERING, CONSTRUCTION ADMIN, RPR, TESTING (15%):				$791,550.00
			TOTAL:		$6,068,550.00
PAVING AND LIGHTING PHASE					
P-150	MOBILIZATION	1	LS	$136,000.00	$136,000.00
P-152	UNCLASSIFIED EXCAVATION	5,000	CY	$15.00	$75,000.00
P-156	MISCELLANEOUS EROSION CONTROL	1	LS	$12,000.00	$12,000.00
P-209	CRUSHED AGGREGATE BASE COURSE	12,000	CY	$60.00	$720,000.00
P-401	BITUMINOUS CONCRETE SURFACE COURSE	4,100	TN	$98.00	$401,800.00
P-602	BITUMINOUS PRIME COAT	5,400	GAL	$2.50	$13,500.00
P-603	BITUMINOUS TACK COAT	1,800	GAL	$2.50	$4,500.00
P-620	AIRFIELD PAVEMENT MARKING	60,000	SF	$1.75	$105,000.00
P-620	AIRFIELD PAVEMENT MARKING REMOVAL	50,000	SF	$0.75	$37,500.00
T-901	SEEDING	25	AC	$1,000.00	$25,000.00
T-908	MULCHING	25	AC	$800.00	$20,000.00
L-108	MISCELLANEOUS ELECTRICAL	1	LS	$56,000.00	$56,000.00
L-125	L-862 MIRL'S	12	EA	$675.00	$8,100.00
L-125	L-862-E MIRL'S THRESHOLD	8	EA	$750.00	$6,000.00
L-125	L-861T MITL'S	42	EA	$675.00	$28,350.00
L-125	L-858 AIRFIELD GUIDANCE SIGN	2	EA	$5,500.00	$11,000.00
L-125	L-858 DISTANCE REMAINING SIGN	1	EA	$6,000.00	$6,000.00
L-125	PAPI RELOCATION	1	LS	$18,000.00	$18,000.00
L-125	REIL RELOCATION	1	LS	$12,000.00	$12,000.00
L-125	LOCALIZER RELOCATION	1	LS	$100,000.00	$100,000.00
L-127	ELECTRICAL MANHOLES	8	EA	$5,000.00	$40,000.00
	CONTINGENCY (10%)	1	LS	$184,000.00	$184,000.00
			CONSTRUCTION TOTAL:		$2,019,750.00
	ENGINEERING, CONSTRUCTION ADMIN, RPR, TESTING (15%):				$302,962.50
			TOTAL:		$2,322,712.50
	TOTAL ESTIMATED PROJECT COST:				$8,391,262.50

Preliminary Opinion of Probable Cost
Parallel-Stub Taxiways (West Side)
Phase I (0-5 years)
Rowan County Airport

Spec No.	Owner/Description	Quantity	Unit	Unit Price	Total
P-150	MOBILIZATION	1	LS	$298,600.00	$298,600.00
P-152	EMBANKMENT IN PLACE	375,000	CY	$12.00	$4,500,000.00
P-156	MISCELLANEOUS EROSION CONTROL	1	LS	$60,000.00	$60,000.00
P-209	CRUSHED AGGREGATE BASE COURSE	9,500	CY	$60.00	$570,000.00
P-401	BITUMINOUS CONCRETE SURFACE COURSE	5,000	TN	$98.00	$490,000.00
P-602	BITUMINOUS PRIME COAT	6,300	GAL	$2.50	$15,750.00
P-603	BITUMINOUS TACK COAT	2,100	GAL	$2.50	$5,250.00
P-620	AIRFIELD PAVEMENT MARKING	2,500	SF	$1.75	$4,375.00
D-701	DRAINAGE SYSTEM	1	LS	$110,000.00	$110,000.00
T-901	SEEDING	40	AC	$1,200.00	$48,000.00
T-908	MULCHING	40	AC	$800.00	$32,000.00
L-108	MISCELLANEOUS ELECTRICAL	1	LS	$50,000.00	$50,000.00
L-125	L-861T MITL'S	54	EA	$675.00	$36,450.00
L-127	ELECTRICAL MANHOLES	10	EA	$5,000.00	$50,000.00
	CONTINGENCY (10%)	1	LS	$627,000.00	$627,000.00
			CONSTRUCTION TOTAL:		$6,897,425.00
			ENGINEERING, CONSTRUCTION ADMIN, RPR, TESTING (15%):		$1,034,613.75
			TOTAL:		$7,932,038.75

Preliminary Opinion of Probable Cost
Runway 02/20 Strengthening and Grooving
Phase I (0-5 years)
Rowan County Airport

Spec No.	Owner/Description	Quantity	Unit	Unit Price	Total
P-150	MOBILIZATION	1	LS	$0.00	$0.00
P-152	EMBANKMENT IN PLACE	2,000	CY	$12.00	$24,000.00
P-156	MISCELLANEOUS EROSION CONTROL	1	LS	$15,000.00	$15,000.00
P-160	PAVEMENT MILLING	1,500	SY	$6.00	$9,000.00
P-401	BITUMINOUS CONCRETE SURFACE COURSE	9,500	TN	$98.00	$931,000.00
P-401	RUNWAY GROOVING	64,500	SY	$1.25	$80,625.00
P-603	BITUMINOUS TACK COAT	8,200	GAL	$2.50	$20,500.00
P-605	CRACK REPAIR	600	LF	$5.00	$3,000.00
P-609	BITUMINOUS SURFACE TREATMENT	64,500	SY	$2.75	$177,375.00
P-620	AIRFIELD PAVEMENT MARKING	90,000	SF	$1.75	$157,500.00
T-901	SEEDING	3	AC	$1,200.00	$3,600.00
T-908	MULCHING	3	AC	$800.00	$2,400.00
L-108	ADJUST STAKE-MOUNTED LIGHTS	36	EA	$300.00	$10,800.00
	CONTINGENCY (10%)	1	LS	$0.00	$0.00
			CONSTRUCTION TOTAL:		$1,434,800.00
			ENGINEERING, CONSTRUCTION ADMIN, RPR, TESTING (15%):		$215,220.00
			TOTAL:		$1,650,020.00

Preliminary Opinion of Probable Cost
Apron Rehabilitation (Existing Terminal Area)
Phase I (0-5 years)
Rowan County Airport

Spec No.	Owner/Description	Quantity	Unit	Unit Price	Total
P-150	MOBILIZATION	1	LS	$41,280.00	$41,280.00
P-160	PAVEMENT MILLING	3,000	SY	$8.00	$24,000.00
P-401	BITUMINOUS CONCRETE SURFACE COURSE	4,000	TN	$98.00	$392,000.00
P-603	BITUMINOUS TACK COAT	2,500	GAL	$2.50	$6,250.00
P-609	BITUMINOUS SURFACE TREATMENT	23,050	SY	$4.00	$92,200.00
P-620	AIRFIELD PAVEMENT MARKING	1,000	SF	$1.75	$1,750.00
	CONTINGENCY (10%)	1	LS	$55,700.00	$55,700.00
			CONSTRUCTION TOTAL:		$613,180.00
		ENGINEERING, CONSTRUCTION ADMIN, RPR, TESTING (15%):			$91,977.00
			TOTAL:		$705,157.00

Preliminary Opinion of Probable Cost
New T-Hangars (3) (North of Existing Apron on East Side)
Phase I (0-5 years)
Rowan County Airport

Spec No.	Owner/Description	Quantity	Unit	Unit Price	Total
P-150	MOBILIZATION	1	LS	$163,850.00	$163,850.00
P-152	EMBANKMENT IN PLACE	88,000	CY	$12.00	$1,056,000.00
P-156	MISCELLANEOUS EROSION CONTROL	1	LS	$35,000.00	$35,000.00
P-209	CRUSHED AGGREGATE BASE COURSE	6,000	CY	$60.00	$360,000.00
P-401	BITUMINOUS CONCRETE SURFACE COURSE	4,000	TN	$98.00	$392,000.00
P-602	BITUMINOUS PRIME COAT	5,200	GAL	$2.50	$13,000.00
P-603	BITUMINOUS TACK COAT	1,750	GAL	$2.50	$4,375.00
P-620	AIRFIELD PAVEMENT MARKING	650	SF	$1.75	$1,137.50
D-701	DRAINAGE SYSTEM	1	LS	$100,000.00	$100,000.00
T-901	SEEDING	10	AC	$1,200.00	$12,000.00
T-908	MULCHING	10	AC	$800.00	$8,000.00
L-108	MISCELLANEOUS ELECTRICAL	1	LS	$10,000.00	$10,000.00
L-125	L-861T MITL'S	8	EA	$675.00	$5,400.00
L-127	ELECTRICAL MANHOLES	1	EA	$5,000.00	$5,000.00
	10 UNIT T-HANGAR	3	EA	$425,000.00	$1,275,000.00
	CONTINGENCY (10%)	1	LS	$344,100.00	$344,100.00
			CONSTRUCTION TOTAL:		$3,784,862.50
			ENGINEERING, CONSTRUCTION ADMIN, RPR, TESTING (15%):		$567,729.38
			TOTAL:		$4,352,591.88

Preliminary Opinion of Probable Cost
New Terminal Apron (West Side)
Phase I (0-5 years)
Rowan County Airport

Spec No.	Owner/Description	Quantity	Unit	Unit Price	Total
P-150	MOBILIZATION	1	LS	$378,450.00	$378,450.00
P-152	EMBANKMENT IN PLACE	400,000	CY	$12.00	$4,800,000.00
P-156	MISCELLANEOUS EROSION CONTROL	1	LS	$50,000.00	$50,000.00
P-209	CRUSHED AGGREGATE BASE COURSE	23,000	CY	$60.00	$1,380,000.00
P-401	BITUMINOUS CONCRETE SURFACE COURSE	12,000	TN	$98.00	$1,176,000.00
P-602	BITUMINOUS PRIME COAT	15,000	GAL	$2.50	$37,500.00
P-603	BITUMINOUS TACK COAT	5,000	GAL	$2.50	$12,500.00
P-620	AIRFIELD PAVEMENT MARKING	1,000	SF	$2.00	$2,000.00
D-701	DRAINAGE SYSTEM	1	LS	$60,000.00	$60,000.00
T-901	SEEDING	10	AC	$1,200.00	$12,000.00
T-908	MULCHING	10	AC	$800.00	$8,000.00
L-108	MISCELLANEOUS ELECTRICAL	1	LS	$10,000.00	$10,000.00
L-125	L-861T MITL'S	16	EA	$675.00	$10,800.00
L-127	ELECTRICAL MANHOLES	2	EA	$5,000.00	$10,000.00
	CONTINGENCY (10%)	1	LS	$794,700.00	$794,700.00
			CONSTRUCTION TOTAL:		$8,741,950.00
	ENGINEERING, CONSTRUCTION ADMIN, RPR, TESTING (15%):				$1,311,292.50
			TOTAL:		$10,053,242.50

Preliminary Opinion of Probable Cost
New Terminal Parking and Access Road (West Side)
Phase I (0-5 years)
Rowan County Airport

Spec No.	Owner/Description	Quantity	Unit	Unit Price	Total
P-150	MOBILIZATION	1	LS	$142,575.00	$142,575.00
P-152	EMBANKMENT IN PLACE	130,000	CY	$12.00	$1,560,000.00
P-156	MISCELLANEOUS EROSION CONTROL	1	LS	$30,000.00	$30,000.00
P-209	CRUSHED AGGREGATE BASE COURSE	2,000	CY	$60.00	$120,000.00
P-401	BITUMINOUS CONCRETE SURFACE COURSE	1,300	TN	$98.00	$127,400.00
P-602	BITUMINOUS PRIME COAT	1,650	GAL	$2.50	$4,125.00
P-603	BITUMINOUS TACK COAT	550	GAL	$2.50	$1,375.00
P-620	PAVEMENT MARKING	1,000	SF	$2.00	$2,000.00
D-701	DRAINAGE SYSTEM	1	LS	$30,000.00	$30,000.00
T-901	SEEDING	3	AC	$1,200.00	$3,600.00
T-908	MULCHING	3	AC	$800.00	$2,400.00
L-108	MISCELLANEOUS ELECTRICAL	1	LS	$10,000.00	$10,000.00
L-127	ELECTRICAL MANHOLES	2	EA	$5,000.00	$10,000.00
	CONTINGENCY (10%)	1	LS	$204,300.00	$204,300.00
			CONSTRUCTION TOTAL:		$2,247,775.00
			ENGINEERING, CONSTRUCTION ADMIN, RPR, TESTING (15%):		$337,166.25
			TOTAL:		$2,584,941.25

Preliminary Opinion of Probable Cost
New Terminal (West Side)
Phase I (0-5 years)
Rowan County Airport

Spec No.	Owner/Description	Quantity	Unit	Unit Price	Total
P-150	MOBILIZATION	1	LS	$78,150.00	$78,150.00
P-152	UNCLASSIFIED EXCAVATION	200	CY	$12.00	$2,400.00
P-156	MISCELLANEOUS EROSION CONTROL	1	LS	$15,000.00	$15,000.00
	MISCELLANEOUS DEMOLITION	1	LS	$10,000.00	$10,000.00
D-701	DRAINAGE SYSTEM	1	LS	$15,000.00	$15,000.00
	TERMINAL BUILDING (5,000 SF)	1	LS	$1,000,000.00	$1,000,000.00
	CONTINGENCY (10%)	1	LS	$112,100.00	$112,100.00
			CONSTRUCTION TOTAL:		$1,232,650.00
			ENGINEERING, CONSTRUCTION ADMIN, RPR, TESTING (15%):		$184,897.50
			TOTAL:		$1,417,547.50

Preliminary Opinion of Probable Cost
Fuel Farm (West Side)
Phase I (0-5 years)
Rowan County Airport

Spec No.	Owner/Description	Quantity	Unit	Unit Price	Total
P-150	MOBILIZATION	1	LS	$98,280.00	$98,280.00
P-152	EMBANKMENT IN PLACE	60,000	CY	$12.00	$720,000.00
P-156	MISCELLANEOUS EROSION CONTROL	1	LS	$30,000.00	$30,000.00
P-209	CRUSHED AGGREGATE BASE COURSE	600	CY	$60.00	$36,000.00
P-401	BITUMINOUS CONCRETE SURFACE COURSE	300	TN	$98.00	$29,400.00
P-602	BITUMINOUS PRIME COAT	400	GAL	$2.50	$1,000.00
P-603	BITUMINOUS TACK COAT	150	GAL	$2.50	$375.00
P-620	PAVEMENT MARKING	500	SF	$2.00	$1,000.00
D-701	DRAINAGE SYSTEM	1	LS	$30,000.00	$30,000.00
T-901	SEEDING	3	AC	$1,200.00	$3,600.00
T-908	MULCHING	3	AC	$800.00	$2,400.00
	FUEL FARM (3 TANKS)	1	LS	$550,000.00	$550,000.00
	CONTINGENCY (10%)	1	LS	$150,200.00	$150,200.00
			CONSTRUCTION TOTAL:		$1,652,255.00
			ENGINEERING, CONSTRUCTION ADMIN, RPR, TESTING (15%):		$247,838.25
			TOTAL:		$1,900,093.25

Preliminary Opinion of Probable Cost
Corporate Hangar Access Road (East Side)
Phase I (0-5 years)
Rowan County Airport

Spec No.	Owner/Description	Quantity	Unit	Unit Price	Total
P-150	MOBILIZATION	1	LS	$9,150.00	$9,150.00
P-152	EMBANKMENT IN PLACE	500	CY	$15.00	$7,500.00
P-156	MISCELLANEOUS EROSION CONTROL	1	LS	$15,000.00	$15,000.00
P-209	CRUSHED AGGREGATE BASE COURSE	350	CY	$60.00	$21,000.00
P-401	BITUMINOUS CONCRETE SURFACE COURSE	575	TN	$98.00	$56,350.00
P-602	BITUMINOUS PRIME COAT	750	GAL	$2.50	$1,875.00
P-603	BITUMINOUS TACK COAT	250	GAL	$2.50	$625.00
P-620	PAVEMENT MARKING	500	SF	$2.00	$1,000.00
D-701	DRAINAGE SYSTEM	1	LS	$5,000.00	$5,000.00
T-901	SEEDING	2	AC	$1,200.00	$2,400.00
T-908	MULCHING	2	AC	$800.00	$1,600.00
	GATE AND FENCE MODIFIATIONS	1	LS	$10,000.00	$10,000.00
	CONTINGENCY (10%)	1	LS	$13,200.00	$13,200.00
			CONSTRUCTION TOTAL:		$144,700.00
		ENGINEERING, CONSTRUCTION ADMIN, RPR, TESTING (15%):			$21,705.00
			TOTAL:		$166,405.00

Preliminary Opinion of Probable Cost
Corporate Hangars (2) (East Side)
Phase I (0-5 years)
Rowan County Airport

Spec No.	Owner/Description	Quantity	Unit	Unit Price	Total
P-150	MOBILIZATION	1	LS	$118,090.00	$118,090.00
P-152	UNCLASSIFIED EXCAVATION	500	CY	$12.00	$6,000.00
P-156	MISCELLANEOUS EROSION CONTROL	1	LS	$10,000.00	$10,000.00
P-209	CRUSHED AGGREGATE BASE COURSE	450	CY	$60.00	$27,000.00
P-401	BITUMINOUS CONCRETE SURFACE COURSE	400	TN	$98.00	$39,200.00
P-602	BITUMINOUS PRIME COAT	500	GAL	$2.50	$1,250.00
P-603	BITUMINOUS TACK COAT	170	GAL	$2.50	$425.00
P-620	AIRFIELD PAVEMENT MARKING	750	SF	$2.00	$1,500.00
T-901	SEEDING	1	AC	$1,200.00	$1,200.00
T-908	MULCHING	1	AC	$800.00	$800.00
	CORPORATE HANGAR	2	EA	$800,000.00	$1,600,000.00
	CONTINGENCY (10%)	1	LS	$180,500.00	$180,500.00
			CONSTRUCTION TOTAL:		$1,985,965.00
			ENGINEERING, CONSTRUCTION ADMIN, RPR, TESTING (15%):		$297,894.75
			TOTAL:		$2,283,859.75

Preliminary Opinion of Probable Cost
Corporate Hangars (Adjacent to Old Terminal)
Phase I (0-5 years)
Rowan County Airport

Spec No.	Owner/Description	Quantity	Unit	Unit Price	Total
P-150	MOBILIZATION	1	LS	$121,310.00	$121,310.00
P-152	UNCLASSIFIED EXCAVATION	1,000	CY	$15.00	$15,000.00
P-156	MISCELLANEOUS EROSION CONTROL	1	LS	$10,000.00	$10,000.00
	MISCELLANEOUS DEMOLITION	1	LS	$8,000.00	$8,000.00
P-209	CRUSHED AGGREGATE BASE COURSE	650	CY	$60.00	$39,000.00
P-401	BITUMINOUS CONCRETE SURFACE COURSE	350	TN	$98.00	$34,300.00
P-602	BITUMINOUS PRIME COAT	400	GAL	$2.50	$1,000.00
P-603	BITUMINOUS TACK COAT	150	GAL	$2.50	$375.00
D-701	DRAINAGE SYSTEM	1	LS	$25,000.00	$25,000.00
	CORPORATE HANGAR	1	LS	$1,600,000.00	$1,600,000.00
	CONTINGENCY (10%)	1	LS	$185,400.00	$185,400.00
			CONSTRUCTION TOTAL:		$2,039,385.00
	ENGINEERING, CONSTRUCTION ADMIN, RPR, TESTING (15%):				$305,907.75
			TOTAL:		$2,345,292.75

Preliminary Opinion of Probable Cost
T-Hangar (Adjacent to Old Terminal)
Phase II (6-10 years)
Rowan County Airport

Spec No.	Owner/Description	Quantity	Unit	Unit Price	Total
P-150	MOBILIZATION	1	LS	$43,200.00	$43,200.00
P-152	EMBANKMENT IN PLACE	3,000	CY	$15.00	$45,000.00
P-156	MISCELLANEOUS EROSION CONTROL	1	LS	$20,000.00	$20,000.00
	MISCELLANEOUS DEMOLITION	1	LS	$15,000.00	$15,000.00
T-901	SEEDING	1	AC	$1,200.00	$1,200.00
T-908	MULCHING	1	AC	$800.00	$800.00
	T-HANGAR	1	EA	$350,000.00	$350,000.00
	CONTINGENCY (10%)	1	LS	$47,500.00	$47,500.00
			CONSTRUCTION TOTAL:		$522,700.00
			ENGINEERING, CONSTRUCTION ADMIN, RPR, TESTING (15%):		$78,405.00
			TOTAL:		$601,105.00
			ESCALATION (5%/YEAR):		$767,179.23

Preliminary Opinion of Probable Cost
New T-Hangar (1) (North of Existing Apron on East Side)
Phase II (6-10 years)
Rowan County Airport

Spec No.	Owner/Description	Quantity	Unit	Unit Price	Total
P-150	MOBILIZATION	1	LS	$81,270.00	$81,270.00
P-152	EMBANKMENT IN PLACE	35,000	CY	$12.00	$420,000.00
P-156	MISCELLANEOUS EROSION CONTROL	1	LS	$35,000.00	$35,000.00
P-209	CRUSHED AGGREGATE BASE COURSE	1,850	CY	$60.00	$111,000.00
P-401	BITUMINOUS CONCRETE SURFACE COURSE	1,250	TN	$98.00	$122,500.00
P-602	BITUMINOUS PRIME COAT	1,650	GAL	$2.50	$4,125.00
P-603	BITUMINOUS TACK COAT	550	GAL	$2.50	$1,375.00
D-701	DRAINAGE SYSTEM	1	LS	$40,000.00	$40,000.00
T-901	SEEDING	1	AC	$1,200.00	$1,200.00
T-908	MULCHING	1	AC	$800.00	$800.00
	10 UNIT T-HANGAR	1	EA	$425,000.00	$425,000.00
	CONTINGENCY (10%)	1	LS	$124,200.00	$124,200.00
			CONSTRUCTION TOTAL:		$1,366,470.00
			ENGINEERING, CONSTRUCTION ADMIN, RPR, TESTING (15%):		$204,970.50
			TOTAL:		$1,571,440.50
			ESCALATION (5%/YEAR):		$2,005,600.54

Preliminary Opinion of Probable Cost
New Terminal Apron and Taxiway (West Side)
Phase II (6-10 years)
Rowan County Airport

Spec No.	Owner/Description	Quantity	Unit	Unit Price	Total
P-150	MOBILIZATION	1	LS	$342,650.00	$342,650.00
P-152	EMBANKMENT IN PLACE	350,000	CY	$12.00	$4,200,000.00
P-156	MISCELLANEOUS EROSION CONTROL	1	LS	$50,000.00	$50,000.00
P-209	CRUSHED AGGREGATE BASE COURSE	16,250	CY	$60.00	$975,000.00
P-401	BITUMINOUS CONCRETE SURFACE COURSE	8,400	TN	$98.00	$823,200.00
P-602	BITUMINOUS PRIME COAT	11,000	GAL	$2.50	$27,500.00
P-603	BITUMINOUS TACK COAT	3,700	GAL	$2.50	$9,250.00
P-620	AIRFIELD PAVEMENT MARKING	1,000	SF	$2.00	$2,000.00
D-701	DRAINAGE SYSTEM	1	LS	$100,000.00	$100,000.00
T-901	SEEDING	10	AC	$1,200.00	$12,000.00
T-908	MULCHING	10	AC	$800.00	$8,000.00
L-108	MISCELLANEOUS ELECTRICAL	1	LS	$10,000.00	$10,000.00
L-125	L-861T MITL'S	24	EA	$675.00	$16,200.00
L-127	ELECTRICAL MANHOLES	4	EA	$5,000.00	$20,000.00
	CONTINGENCY (10%)	1	LS	$659,600.00	$659,600.00
			CONSTRUCTION TOTAL:		$7,255,400.00
			ENGINEERING, CONSTRUCTION ADMIN, RPR, TESTING (15%):		$1,088,310.00
			TOTAL:		$8,343,710.00
			ESCALATION (5%/YEAR):		$10,648,923.24

Preliminary Opinion of Probable Cost
New Terminal Expansion (West Side)
Phase II (6-10 years)
Rowan County Airport

Spec No.	Owner/Description	Quantity	Unit	Unit Price	Total
P-150	MOBILIZATION	1	LS	$47,325.00	$47,325.00
P-152	UNCLASSIFIED EXCAVATION	100	CY	$12.00	$1,200.00
P-156	MISCELLANEOUS EROSION CONTROL	1	LS	$15,000.00	$15,000.00
	MISCELLANEOUS DEMOLITION	1	LS	$15,000.00	$15,000.00
	TERMINAL BUILDING EXPANSION (3,000 SF)	1	LS	$600,000.00	$600,000.00
	CONTINGENCY (10%)	1	LS	$67,900.00	$67,900.00
			CONSTRUCTION TOTAL:		$746,425.00
	ENGINEERING, CONSTRUCTION ADMIN, RPR, TESTING (15%):				$111,963.75
			TOTAL:		$858,388.75
			ESCALATION (5%/YEAR):		$1,095,545.74

Preliminary Opinion of Probable Cost
Corporate Hangars (2) (East Side)
Phase II (6-10 years)
Rowan County Airport

Spec No.	Owner/Description	Quantity	Unit	Unit Price	Total
P-150	MOBILIZATION	1	LS	$119,700.00	$119,700.00
P-152	UNCLASSIFIED EXCAVATION	500	CY	$12.00	$6,000.00
P-156	MISCELLANEOUS EROSION CONTROL	1	LS	$10,000.00	$10,000.00
P-209	CRUSHED AGGREGATE BASE COURSE	650	CY	$60.00	$39,000.00
P-401	BITUMINOUS CONCRETE SURFACE COURSE	500	TN	$98.00	$49,000.00
P-602	BITUMINOUS PRIME COAT	600	GAL	$2.50	$1,500.00
P-603	BITUMINOUS TACK COAT	200	GAL	$2.50	$500.00
P-620	AIRFIELD PAVEMENT MARKING	750	SF	$2.00	$1,500.00
T-901	SEEDING	1	AC	$1,200.00	$1,200.00
T-908	MULCHING	1	AC	$800.00	$800.00
	CORPORATE HANGAR	2	EA	$800,000.00	$1,600,000.00
	CONTINGENCY (10%)	1	LS	$182,900.00	$182,900.00
			CONSTRUCTION TOTAL:		$2,012,100.00
			ENGINEERING, CONSTRUCTION ADMIN, RPR, TESTING (15%):		$301,815.00
			TOTAL:		$2,313,915.00
			ESCALATION (5%/YEAR):		$2,953,207.05

Preliminary Opinion of Probable Cost
Corporate Hangar (Adjacent to Old Terminal)
Phase II (6-10 years)
Rowan County Airport

Spec No.	Owner/Description	Quantity	Unit	Unit Price	Total
P-150	MOBILIZATION	1	LS	$120,190.00	$120,190.00
P-152	UNCLASSIFIED EXCAVATION	500	CY	$12.00	$6,000.00
P-156	MISCELLANEOUS EROSION CONTROL	1	LS	$5,000.00	$5,000.00
	MISCELLANEOUS DEMOLITION	1	LS	$20,000.00	$20,000.00
P-209	CRUSHED AGGREGATE BASE COURSE	500	CY	$60.00	$30,000.00
P-401	BITUMINOUS CONCRETE SURFACE COURSE	300	TN	$98.00	$29,400.00
P-602	BITUMINOUS PRIME COAT	350	GAL	$2.50	$875.00
P-603	BITUMINOUS TACK COAT	120	GAL	$2.50	$300.00
D-701	DRAINAGE SYSTEM	1	LS	$25,000.00	$25,000.00
	CORPORATE HANGAR	1	EA	$1,600,000.00	$1,600,000.00
	CONTINGENCY (10%)	1	LS	$183,700.00	$183,700.00
			CONSTRUCTION TOTAL:		$2,020,465.00
		ENGINEERING, CONSTRUCTION ADMIN, RPR, TESTING (15%):			$303,069.75
			TOTAL:		$2,323,534.75
			ESCALATION (5%/YEAR):		$2,965,484.56

Preliminary Opinion of Probable Cost
Corporate Hangars (2) and Apron (West Side)
Phase II (6-10 years)
Rowan County Airport

Spec No.	Owner/Description	Quantity	Unit	Unit Price	Total
P-150	MOBILIZATION	1	LS	$195,500.00	$195,500.00
P-152	EMBANKMENT IN PLACE	45,000	CY	$12.00	$540,000.00
P-156	MISCELLANEOUS EROSION CONTROL	1	LS	$15,000.00	$15,000.00
P-209	CRUSHED AGGREGATE BASE COURSE	900	CY	$60.00	$54,000.00
P-401	BITUMINOUS CONCRETE SURFACE COURSE	450	TN	$98.00	$44,100.00
P-602	BITUMINOUS PRIME COAT	600	GAL	$2.50	$1,500.00
P-603	BITUMINOUS TACK COAT	200	GAL	$2.50	$500.00
D-701	DRAINAGE SYSTEM	1	LS	$25,000.00	$25,000.00
T-901	SEEDING	3	AC	$1,200.00	$3,600.00
T-908	MULCHING	3	AC	$800.00	$2,400.00
	CORPORATE HANGAR	2	EA	$640,000.00	$1,280,000.00
	CONTINGENCY (10%)	1	LS	$410,500.00	$410,500.00
			CONSTRUCTION TOTAL:		$2,572,100.00
			ENGINEERING, CONSTRUCTION ADMIN, RPR, TESTING (15%):		$385,815.00
			TOTAL:		$2,957,915.00
			ESCALATION (5%/YEAR):		$3,775,132.38

Preliminary Opinion of Probable Cost
Corporate Hangar Access Roads (West Side)
Phase II (6-10 years)
Rowan County Airport

Spec No.	Owner/Description	Quantity	Unit	Unit Price	Total
P-150	MOBILIZATION	1	LS	$54,575.00	$54,575.00
P-152	EMBANKMENT IN PLACE	40,000	CY	$15.00	$600,000.00
P-156	MISCELLANEOUS EROSION CONTROL	1	LS	$25,000.00	$25,000.00
P-209	CRUSHED AGGREGATE BASE COURSE	1,100	CY	$60.00	$66,000.00
P-401	BITUMINOUS CONCRETE SURFACE COURSE	600	TN	$98.00	$58,800.00
P-602	BITUMINOUS PRIME COAT	750	GAL	$2.50	$1,875.00
P-603	BITUMINOUS TACK COAT	250	GAL	$2.50	$625.00
P-620	PAVEMENT MARKING	500	SF	$2.00	$1,000.00
D-701	DRAINAGE SYSTEM	1	LS	$10,000.00	$10,000.00
T-901	SEEDING	3	AC	$1,200.00	$3,600.00
T-908	MULCHING	3	AC	$800.00	$2,400.00
	CONTINGENCY (10%)	1	LS	$78,400.00	$78,400.00
			CONSTRUCTION TOTAL:		$902,275.00
			ENGINEERING, CONSTRUCTION ADMIN, RPR, TESTING (15%):		$135,341.25
			TOTAL:		$1,037,616.25
			ESCALATION (5%/YEAR):		$1,324,290.49

Preliminary Opinion of Probable Cost
New T-Hangars (2) (North of Existing Apron on East Side)
Phase III (11-20 years)
Rowan County Airport

Spec No.	Owner/Description	Quantity	Unit	Unit Price	Total
P-150	MOBILIZATION	1	LS	$150,050.00	$150,050.00
P-152	EMBANKMENT IN PLACE	130,000	CY	$12.00	$1,560,000.00
P-156	MISCELLANEOUS EROSION CONTROL	1	LS	$50,000.00	$50,000.00
P-209	CRUSHED AGGREGATE BASE COURSE	3,650	CY	$60.00	$219,000.00
P-401	BITUMINOUS CONCRETE SURFACE COURSE	2,500	TN	$98.00	$245,000.00
P-602	BITUMINOUS PRIME COAT	3,300	GAL	$2.50	$8,250.00
P-603	BITUMINOUS TACK COAT	1,100	GAL	$2.50	$2,750.00
D-701	DRAINAGE SYSTEM	1	LS	$60,000.00	$60,000.00
T-901	SEEDING	3	AC	$1,200.00	$3,600.00
T-908	MULCHING	3	AC	$800.00	$2,400.00
	10 UNIT T-HANGAR	2	EA	$425,000.00	$850,000.00
	CONTINGENCY (10%)	1	LS	$315,100.00	$315,100.00
			CONSTRUCTION TOTAL:		$3,466,150.00
			ENGINEERING, CONSTRUCTION ADMIN, RPR, TESTING (15%):		$519,922.50
			TOTAL:		$3,986,072.50
			ESCALATION (5%/YEAR):		$6,492,892.08

Preliminary Opinion of Probable Cost
Corporate Hangars (1) (East Side)
Phase III (11-20 years)
Rowan County Airport

Spec No.	Owner/Description	Quantity	Unit	Unit Price	Total
P-150	MOBILIZATION	1	LS	$65,100.00	$65,100.00
P-152	UNCLASSIFIED EXCAVATION	300	CY	$12.00	$3,600.00
P-156	MISCELLANEOUS EROSION CONTROL	1	LS	$10,000.00	$10,000.00
P-209	CRUSHED AGGREGATE BASE COURSE	350	CY	$60.00	$21,000.00
P-401	BITUMINOUS CONCRETE SURFACE COURSE	300	TN	$98.00	$29,400.00
P-602	BITUMINOUS PRIME COAT	375	GAL	$2.50	$937.50
P-603	BITUMINOUS TACK COAT	125	GAL	$2.50	$312.50
P-620	AIRFIELD PAVEMENT MARKING	300	SF	$2.00	$600.00
T-901	SEEDING	1	AC	$1,200.00	$1,200.00
T-908	MULCHING	1	AC	$800.00	$800.00
	CORPORATE HANGAR	1	EA	$800,000.00	$800,000.00
	CONTINGENCY (10%)	1	LS	$93,300.00	$93,300.00
			CONSTRUCTION TOTAL:		$1,026,250.00
			ENGINEERING, CONSTRUCTION ADMIN, RPR, TESTING (15%):		$153,937.50
			TOTAL:		$1,180,187.50
			ESCALATION (5%/YEAR):		$1,922,401.08

Preliminary Opinion of Probable Cost
Corporate Hangar (Adjacent to Old Terminal)
Phase III (11-20 years)
Rowan County Airport

Spec No.	Owner/Description	Quantity	Unit	Unit Price	Total
P-150	MOBILIZATION	1	LS	$130,200.00	$130,200.00
P-152	UNCLASSIFIED EXCAVATION	500	CY	$12.00	$6,000.00
P-156	MISCELLANEOUS EROSION CONTROL	1	LS	$5,000.00	$5,000.00
	MISCELLANEOUS DEMOLITION	1	LS	$20,000.00	$20,000.00
P-209	CRUSHED AGGREGATE BASE COURSE	600	CY	$60.00	$36,000.00
P-401	BITUMINOUS CONCRETE SURFACE COURSE	425	TN	$98.00	$41,650.00
P-602	BITUMINOUS PRIME COAT	550	GAL	$2.50	$1,375.00
P-603	BITUMINOUS TACK COAT	200	GAL	$2.50	$500.00
D-701	DRAINAGE SYSTEM	1	LS	$25,000.00	$25,000.00
	CORPORATE HANGAR	1	EA	$1,600,000.00	$1,600,000.00
	CONTINGENCY (10%)	1	LS	$186,600.00	$186,600.00
			CONSTRUCTION TOTAL:		$2,052,325.00
			ENGINEERING, CONSTRUCTION ADMIN, RPR, TESTING (15%):		$307,848.75
			TOTAL:		$2,360,173.75
			ESCALATION (5%/YEAR):		$3,844,474.34

Preliminary Opinion of Probable Cost
Corporate Hangars (4) and Apron (West Side)
Phase III (11-20 years)
Rowan County Airport

Spec No.	Owner/Description	Quantity	Unit	Unit Price	Total
P-150	MOBILIZATION	1	LS	$243,750.00	$243,750.00
P-152	EMBANKMENT IN PLACE	160,000	CY	$12.00	$1,920,000.00
P-156	MISCELLANEOUS EROSION CONTROL	1	LS	$45,000.00	$45,000.00
P-209	CRUSHED AGGREGATE BASE COURSE	2,600	CY	$60.00	$156,000.00
P-401	BITUMINOUS CONCRETE SURFACE COURSE	1,350	TN	$98.00	$132,300.00
P-602	BITUMINOUS PRIME COAT	1,600	GAL	$2.50	$4,000.00
P-603	BITUMINOUS TACK COAT	550	GAL	$2.50	$1,375.00
D-701	DRAINAGE SYSTEM	1	LS	$50,000.00	$50,000.00
T-901	SEEDING	3	AC	$1,200.00	$3,600.00
T-908	MULCHING	3	AC	$800.00	$2,400.00
	CORPORATE HANGAR	4	EA	$640,000.00	$2,560,000.00
	CONTINGENCY (10%)	1	LS	$511,800.00	$511,800.00
			CONSTRUCTION TOTAL:		$5,630,225.00
			ENGINEERING, CONSTRUCTION ADMIN, RPR, TESTING (15%):		$844,533.75
			TOTAL:		$6,474,758.75
			ESCALATION (5%/YEAR):		$10,546,699.74

Preliminary Opinion of Probable Cost
New Terminal Parking Lot Expansion (West Side)
Phase III (11-20 years)
Rowan County Airport

Spec No.	Owner/Description	Quantity	Unit	Unit Price	Total
P-150	MOBILIZATION	1	LS	$63,975.00	$63,975.00
P-152	EMBANKMENT IN PLACE	50,000	CY	$12.00	$600,000.00
P-156	MISCELLANEOUS EROSION CONTROL	1	LS	$45,000.00	$45,000.00
P-209	CRUSHED AGGREGATE BASE COURSE	1,080	CY	$60.00	$64,800.00
P-401	BITUMINOUS CONCRETE SURFACE COURSE	1,000	TN	$98.00	$98,000.00
P-602	BITUMINOUS PRIME COAT	1,300	GAL	$2.50	$3,250.00
P-603	BITUMINOUS TACK COAT	440	GAL	$2.50	$1,100.00
D-701	DRAINAGE SYSTEM	1	LS	$35,000.00	$35,000.00
T-901	SEEDING	3	AC	$1,200.00	$3,600.00
T-908	MULCHING	3	AC	$800.00	$2,400.00
	CONTINGENCY (10%)	1	LS	$91,700.00	$91,700.00
			CONSTRUCTION TOTAL:		$1,008,825.00
			ENGINEERING, CONSTRUCTION ADMIN, RPR, TESTING (15%):		$151,323.75
			TOTAL:		$1,160,148.75
			ESCALATION (5%/YEAR):		$1,889,760.07

Preliminary Opinion of Probable Cost
Old Terminal Parking Lot Expansion (East Side)
Phase III (11-20 years)
Rowan County Airport

Spec No.	Owner/Description	Quantity	Unit	Unit Price	Total
P-150	MOBILIZATION	1	LS	$12,525.00	$12,525.00
P-152	EMBANKMENT IN PLACE	3,500	CY	$12.00	$42,000.00
P-156	MISCELLANEOUS EROSION CONTROL	1	LS	$25,000.00	$25,000.00
P-209	CRUSHED AGGREGATE BASE COURSE	460	CY	$60.00	$27,600.00
P-401	BITUMINOUS CONCRETE SURFACE COURSE	400	TN	$98.00	$39,200.00
P-602	BITUMINOUS PRIME COAT	500	GAL	$2.50	$1,250.00
P-603	BITUMINOUS TACK COAT	170	GAL	$2.50	$425.00
D-701	DRAINAGE SYSTEM	1	LS	$30,000.00	$30,000.00
T-901	SEEDING	1	AC	$1,200.00	$1,200.00
T-908	MULCHING	1	AC	$800.00	$800.00
	CONTINGENCY (10%)	1	LS	$18,000.00	$18,000.00
			CONSTRUCTION TOTAL:		$198,000.00
			ENGINEERING, CONSTRUCTION ADMIN, RPR, TESTING (15%):		$29,700.00
			TOTAL:		$227,700.00
			ESCALATION (5%/YEAR):		$370,899.31

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