

Rock Hill/York County Airport (Bryant Field – UZA) (the Airport) is a publicly owned general aviation facility located approximately four miles north of the central business district of the City of Rock Hill, South Carolina (the City, refer to Figures 1-1 and 1-2, pages 1-2 and 1-3). The Airport is owned and operated by the City of Rock Hill. In order to establish a planning guideline for future



airport development, the owner has contracted this Airport Master Plan (Master Plan), which will satisfy future aviation demand in a financially feasible manner.

## 1.1 GOALS AND OBJECTIVES

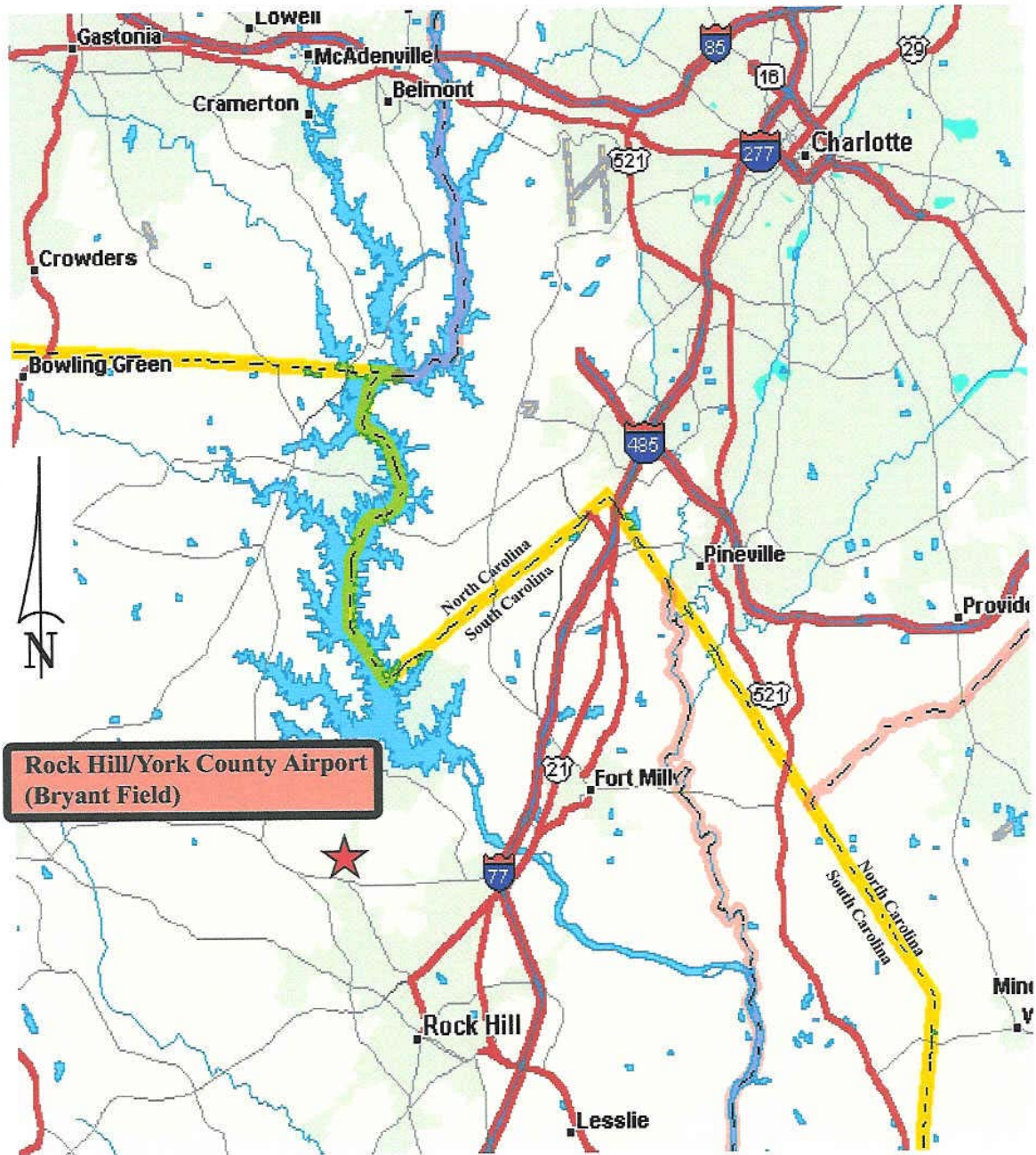
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The Airport Master Plan presents both short- and long-term development for the Airport and graphically displays and reports the data and logic upon which the Master Plan is based.

The goal of the 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. Objectives are attainable targets that are action-oriented and designed to address specific elements consistent with attainment of the goal. The objectives for Rock Hill/York County Airport (Bryant Field) are based on an initial evaluation of the Airport and its surrounding environs and meetings with Airport staff, City staff, South Carolina Department of Commerce Division of Aeronautics (SCDOA), and Federal Aviation Administration (FAA).

As information is developed during data gathering efforts, objectives for the Airport Master Plan should be flexible to ensure an objective basis for the final product. The specific goals and objectives for Rock Hill/York County Airport (Bryant Field) are to:

- Prepare an initial Master Plan report and layout plan set for the Airport
- Protect and enhance community land use goals and regional aviation needs



**Figure 1-1 – Location Map**

Source: DeLorme Street Atlas (2003)

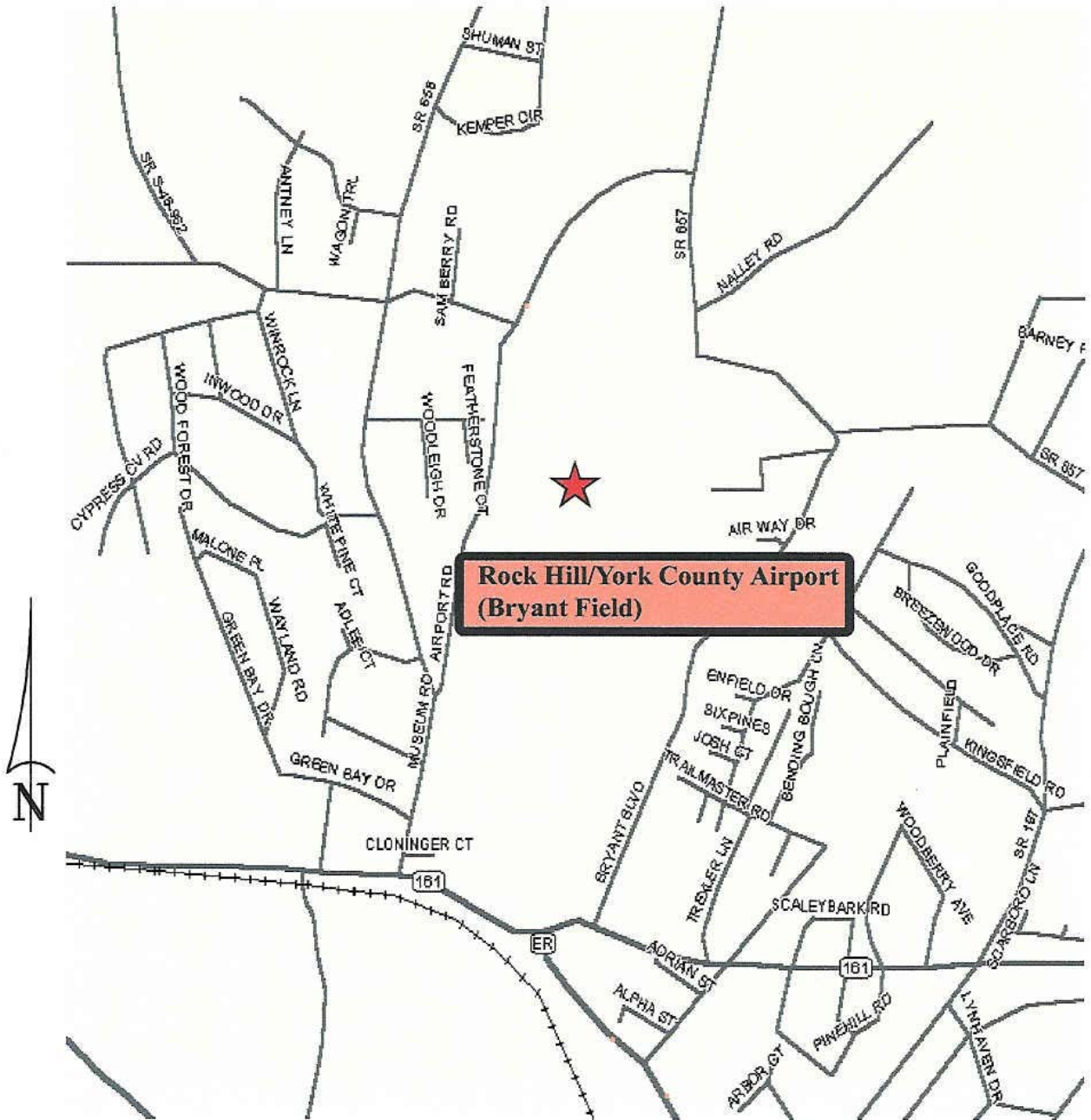


Figure 1-2 – Vicinity Map

Source: DeLorme Street Atlas (2003)



- Evaluate the current runway length to accommodate corporate jet activity
- Evaluate current land use adjacent to the Airport to prohibit encroachment, which could hinder future growth
- Evaluate existing infrastructure and make recommendations for future development
- Evaluate facility layout for conformance with FAA *Advisory Circular 150/5300-13 Airport Design (Change 7)*
- Ensure that any short-term actions and recommendations do not preclude long-term planning options
- Optimize the operational efficiency, effectiveness, and safety of the Airport
- Establish the framework for a continuous planning process

## 1.2 AIRPORT BACKGROUND

### 1.2.1 Location and Setting

Rock Hill/York County Airport (Bryant Field) is located within the Rock Hill city limits in York County, South Carolina, approximately four miles north of the central business district of the City of Rock Hill and encompasses approximately 401 acres. The Airport is generally bounded by Airport Industrial Park, small pockets of residential development, and undeveloped land to the east; S.C. 161 to the south; residential and institutional



development to the west; and undeveloped land and small pockets of residential development to the north. Figure 1.2.1-1 (page 1-5) illustrates the current layout and facilities of Rock Hill/York County Airport (Bryant Field).



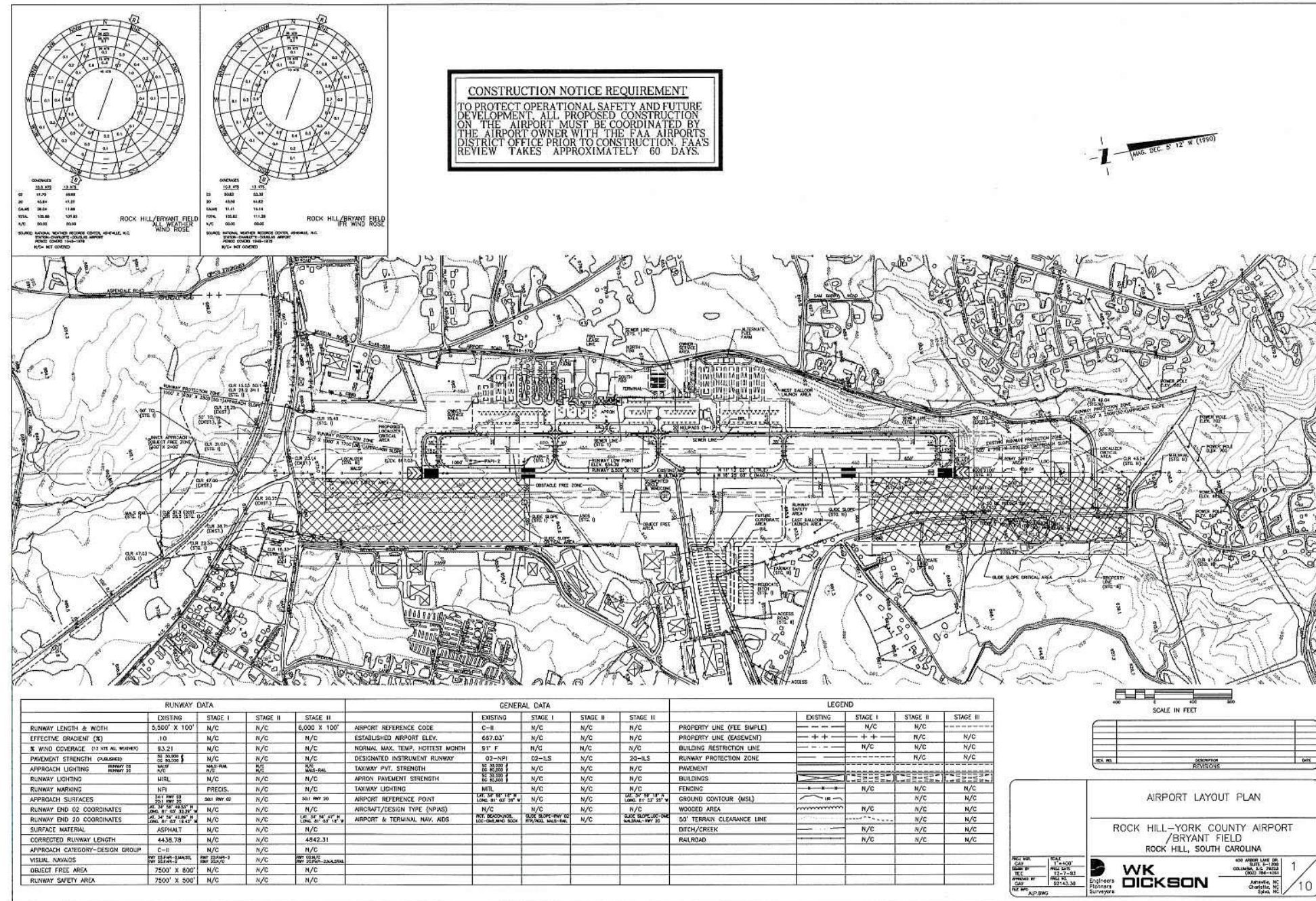


Figure 1.2.1-1 – Existing ALP

Source: W.K. Dickson (1994)



## 1.2.2 Airport History

In 1956, an Airport Commission was established to develop an airport to serve the Rock Hill area. The Airport Commission located a 364-acre tract at the Old York Road and Celanese Road intersection, and Rock Hill City Council approved property purchase and acre-for-acre exchanges to obtain the necessary land. In 1958, Rock Hill City Council applied for a federal grant to construct the Airport from the Civil Aeronautic Administration (CAA), the predecessor agency to the FAA. The CAA offered the City a \$126,000 grant to perform site preparation, paving of air operations areas, runway/stub-taxiway lighting, and landscaping.

In 1963, City Council received a grant for the construction of a taxiway to enhance the circulation and capacity of the Airport. In January 1966, City Council appropriated \$3,000 and received FAA permission to construct a crosswind turf runway (Runway 09-27). In addition, an Airport Master Plan was submitted to the FAA for approval.

Another grant was received in 1967 for construction of a 1,500' runway extension plus widening the existing 3,500' runway from 75' to 100'. The crosswind turf runway (Runway 09-27) was completed in December 1967. In 1974, the fifth Fixed Base Operator (FBO), since inception of the Airport, was given a lease by the City. Another grant was received in June 1976 for apron and taxiway expansion. In 1978, discussion of a general aviation terminal building was initiated, followed in 1979 by discussion of constructing an Instrument Landing System (ILS).

During the 1970s and early 1980s, the Airport experienced rapid growth in terms of based aircraft and operations, which resulted in a demand greater than the existing facilities could accommodate. In 1983, an Airport Layout Plan Update<sup>1</sup> was completed, which identified a series of improvement projects including:

- 5,500' x 100' runway
- Closure of turf strip (Runway 09-27)
- Installation of a localizer
- Additional property acquisition
- Full parallel taxiway
- Additional aircraft parking apron
- Hangar construction
- Development of an industrial park

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<sup>1</sup> Wilbur Smith Associates (October 1983). Airport Layout Plan Update, Bryant Field, Rock Hill Municipal Airport. Prepared for Rock Hill/York County Airport Commission.



In 1994, the Airport Master Plan<sup>2</sup> was again updated and included the following improvement projects:

- ILS for Runway 02
- ILS for Runway 20
- Security fencing
- Runway improvements and extension
- New terminal building
- Add or expand FBO
- Miscellaneous improvements (technological and operational)

Table 1.2.2-1 provides a historical listing of the federal- and state-funded projects at the Airport. This listing provides the chronological development of the Airport.

**Table 1.2.2-1**  
**Historical Listing of Federal- and State-Funded Projects**  
**Rock Hill/York County Airport (Bryant Field)**

Fiscal Year	Amount	Federal Identifier	Funding Source	Description
1959	\$264,617		Federal/County/City	Land acquisition, site preparation, paving of air operations areas, runway/stub-taxiway lighting, landscaping
1963	\$27,059		Federal/County/City	Taxiway paving
1968	\$262,965		Federal/County/City	Runway extension, turf crosswind runway
1974	\$389,000		Federal	Apron, ramp, electrical system improvements, Phase I
1977	\$147,359		State/County/City	Apron, ramp, electrical system improvements, Phase II
1985	\$705,078	3-45-0049-01	Federal/State/County/City	Acquisition of land on north end, drainage improvements, stubbing out taxiway
1986	\$618,592	3-45-0049-02	Federal/State/County/City	Clearing land, construction of Runway 19 safety area, apron
1986	\$603,087	3-45-0049-04	Federal/State/County/City	Extension of taxiway, runway repairs, installation of electrical vault , radio control lights
1986	\$14,916		Federal/State/County/City	Replacement of rotating beacon
1987	\$550,209	3-45-0049-03	Federal/State/County/City	Relocation of Airport Road
1987	\$240,000		State/County/City	Installation of localizer, outer marker for instrument landings
1988	\$935,368	3-45-0049-05	Federal/State/County/City	Acquisition of land on south end, installation of taxiway lights
1989	\$666,667	3-45-0049-06	Federal/County/City	Acquisition of land on south end, replacement of runway lights

<sup>2</sup> W.K. Dickson & Company, Inc. (April 1994). Rock Hill/York County Airport/Bryant Field (29J) Airport Master Plan Update. Prepared for Rock Hill/York County Airport Commission.



**Table 1.2.2-1**  
**Historical Listing of Federal- and State-Funded Projects**  
**Rock Hill/York County Airport (Bryant Field)**

Fiscal Year	Amount	Federal Identifier	Funding Source	Description
1990	\$357,782	3-45-0049-07	Federal/County/City	Acquisition of land on south end, obstruction removal, revision of Master Plan
1991	\$952,526	3-45-0049-08	Federal/State/County/City	Obstruction removal, acquire land for approaches, relocation assistance
1991	\$3,537,105	3-45-0049-09	Federal/State/County/City	Obstruction removal, extend and rehabilitate runway, extend and strengthen taxiway and apron
1991	\$90,435	3-45-0049-10	Federal/State/County/City	Master Plan update
1995	\$500,000		State	New terminal
1996	\$1,750,000	3-45-0049-11	Federal/State/County/City	Acquire land and relocation assistance
1997	\$741,096	3-45-0049-12	Federal/State/County/City	Upgrade ILS, install runway indicator lights
2001	\$238,388	3-45-0049-13	Federal/State/County/City	Taxiway J rehabilitation, install medium intensity taxiway lights
2002	\$189,667	3-45-0049-14	Federal/State/County/City	Update Master Plan
2003	\$166,666	3-45-0049-15	Federal/State/County/City	Land Acquisition

Source: Rock Hill/York County Airport (Bryant Field) (October 2002)  
SCDOA (October 2002, June 2003)

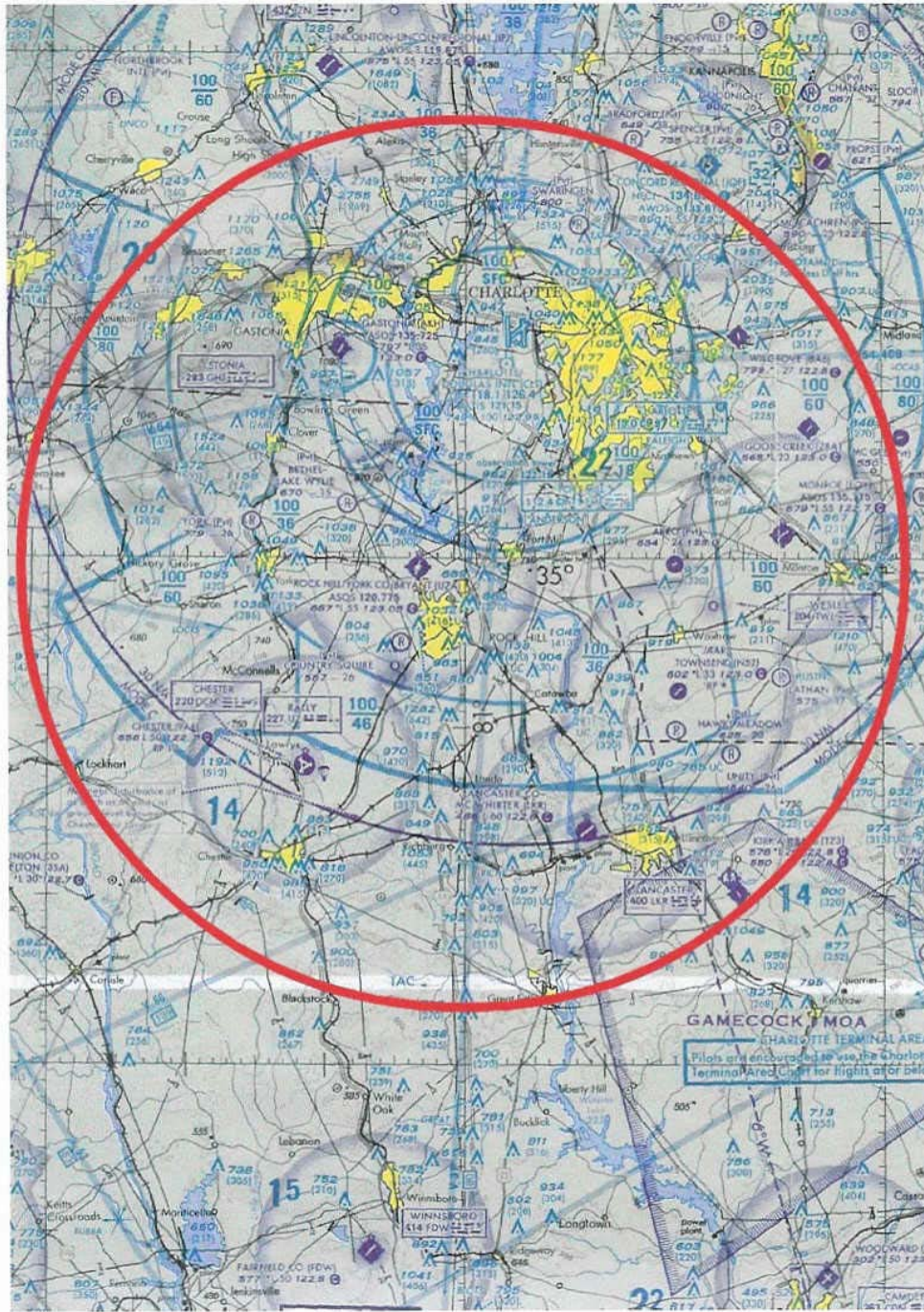
### 1.2.3 Adjacent Airports

Listed below are airports within 25 nautical miles (NM) of Rock Hill/York County Airport (Bryant Field). Figure 1.2.3-1 (page 1-9) graphically identifies the existing public use airports within a 25 NM radius, and Table 1.2.3-1 (page 1-10) describes these airports. Airports within 25 NM consist of:

- 1 Air Carrier
- 8 General Aviation, Public Use
- 11 Private
- 0 Military

Public Use Airport	Based Aircraft	Military
Charlotte-Douglas International Airport (Charlotte, NC)	153	Yes
Chester Municipal Airport (Chester, SC)	23	None
Gastonia Municipal Airport (Gastonia, NC)	87	None
Goose Creek Airport (Indian Trail, NC)	15	None
Jaars Townsend Airport (Waxhaw, NC)	11	None
Lancaster County Airport - McWhirter Field (Lancaster, SC)	43	None
Monroe Airport (Monroe, NC)	82	None
Wilgrove Airpark (Charlotte, NC)	53	None

Source: FAA 5010 Database (Effective 12/27/2001)



**Figure 1.2.3-1 – Adjacent Airports (25 NM)**

Source: U.S. Terminal Procedures Southeast (December 27, 2001)

Private Airport	Based Aircraft	Private Airport	Based Aircraft
Aero Plantation (Weddington, NC)	7	Kirk Air Base (Lancaster, SC)	9
Bethel-Lake Wylie (York, SC)	0	Lathan Strip (Monroe, NC)	1
Country Squire (Rock Hill, SC)	10	Swaringen (Charlotte, NC)	0
Edwards (Monroe, NC)	1	Unity Aerodrome (Lancaster, SC)	2
Hawks Knoll (Waxhaw, NC)	1	York (York, SC)	12
Hawks Meadow (Waxhaw, NC)	2		

Source: FAA 5010 Database (Effective 12/27/2001)

**Table 1.2.3-1**  
**Existing Airports Within 25 NM**  
**Rock Hill/York County Airport (Bryant Field)**

Airport/Associated City	Runway(s) (Length, Type)	Runway Lighting/Approach Aids	Instrument Approach(es)	Fuel	Services
Charlotte-Douglas International Airport (CLT) (Charlotte, NC)	Rwy 18R-36L 10,000' x 150' (Concrete-wire combed)	Rwy 18R-36L HIRL, CL; Rwy 18R MALSR, PAPI; Rwy 36L ALSF2, TDZL	Rwy 18L-36R ILS, RNAV (GPS); Rwy 18L VOR/DME; Rwy 36R ILS (CAT II, CAT III)	100LL, Jet A	Major airframe and powerplant repairs, aircraft avionics, cargo charter rental
	Rwy 18L-36R 8,847' x 150' (Asphalt, concrete, grooved)	Rwy 18R-36L HIRL, CL; Rwy 18L REIL, VASI; Rwy 36R ALSF2, TDZL, PAPI	Rwy 18R-36L ILS, RNAV (GPS); Rwy 36L ILS (CAT II, CAT III), VOR		
	Rwy 05-23 7,502' x 150' (Asphalt, concrete, grooved)	Rwy 05-23 HIRL; Rwy 05 MALSR, PAPI; Rwy 23 REIL, VASI	Rwy 05-23 ILS, NDB, RNAV (GPS); Rwy 23 VOR/DME		
Chester Municipal Airport (9A6) (Chester, SC)	Rwy 17-35 5,000' x 100' (Asphalt)	Rwy 17-35 MIRL, PAPI	Rwy 17-35 VOR/DME-A, GPS; Rwy 35 NDB	100LL, Jet A, MOGAS	None
Gastonia Municipal Airport (AKH) (Gastonia, NC)	Rwy 03-21 3,750' x 100' (Asphalt)	Rwy 03-21 MIRL; Rwy 03 ODALS, PAPI; Rwy 21 PAPI	Rwy 03-21 VOR/DME or GPS-A; Rwy 03 NDB, RNAV (GPS)	100LL, Jet A1	None
Goose Creek Airport (28A) (Indian Trail, NC)	Rwy 04-22 2,350' x 35' (Asphalt)	Rwy 04-22 LIRL (NTSD)	None	100LL	Major airframe and powerplant repairs
Jaars Townsend Airport (N52) (Waxhaw, NC)	Rwy 04-22 3,309' x 40' (Asphalt)	Rwy 04-22 LIRL (NTSD)	Rwy 04-22 VOR/DME or GPS-A; Rwy 04 GPS; Rwy 22 GPS	None	



**Table 1.2.3-1  
Existing Airports Within 25 NM  
Rock Hill/York County Airport (Bryant Field)**

Airport/Associated City	Runway(s) (Length, Type)	Runway Lighting/Approach Aids	Instrument Approach(es)	Fuel	Services
Lancaster County Airport- McWhirter Field (LKR) (Lancaster, SC)	Rwy 06-24 6,004' x 100' (Asphalt)	Rwy 06-24 MIRL, PAPI	Rwy 06-24 VOR/DME or GPS-A; Rwy 24 NDB or GPS	100LL, Jet A	None
Monroe Airport (EQY) (Monroe, NC)	Rwy 05-23 5,500' x 100 (Asphalt)	Rwy 05-23 MIRL, REIL, PAPI	Rwy 05-23 VOR/DME or GPS-B, VOR or GPS-A; Rwy 5 ILS, NDB or GPS, RNAV (GPS)	100LL, Jet A	Major airframe and powerplant repairs
Wilgrove Airpark (8A6) (Charlotte, NC)	Rwy 17-35 2,835' x 40' (Asphalt)	Rwy 17-35 LIRL (NTSD)	None	100LL	Minor powerplant repairs

Source: USDOT-FAA Airport/Facility Directory (Effective December 27, 2001 – February 21, 2002)  
USDOT-FAA U.S. Terminal Procedure Southeast (SE) (Effective December 27, 2001 – February 21, 2002)

### 1.2.4 Airport Organization

The Airport is owned by the City of Rock Hill. An Airport Commission makes recommendations on policies, operations, and general activities of the Rock Hill/York County Airport (Bryant Field) to City Council. The Commission consists of seven members, each with three-year terms (three of the appointments are made by York County Council). The City and County entered into an agreement on June 8, 1992, where they agreed that the City would remain the official sponsor of the Airport, but that the City and County would contribute equally in local funding.

The daily management of the Airport is performed by SkyTech (FBO), which has a lease with the City for all aviation-related components on the west side of the Airport. Skytech has constructed a maintenance hangar north of the terminal building and has a 25-year lease with the City. It is Skytech’s responsibility to lease the existing shade ports, port-a-ports, and tie-downs, as well as negotiate with potential clients construction of new hangars. The role of the Airport Administrator is to review all leases and requests for development in the vicinity that might affect the Airport. The following organizational chart (page 1-12) graphically illustrates the hierarchy at the Airport.



### 1.3 AIRPORT CLASSIFICATION

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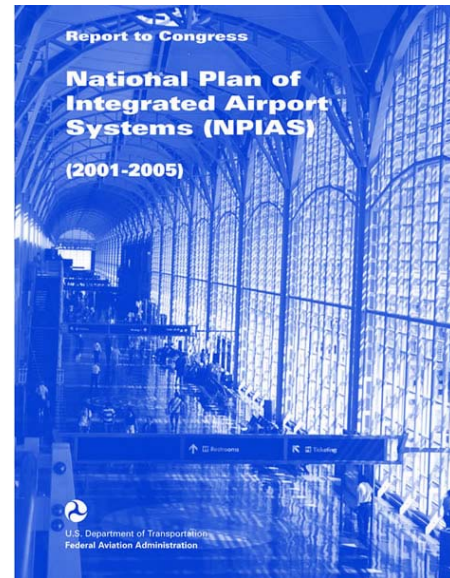
Airports are classified on the federal and state level based on the role each airport fulfills in the air transportation system. The FAA publishes the National Plan of Integrated Airport Systems (NPIAS), as required by USC 49 Section 47103. A primary purpose of NPIAS is to identify airports that are important to national transportation and, therefore, eligible to receive grants under the Airport Improvement Program (AIP). NPIAS is composed of commercial service, reliever, and selected general aviation airports.

Each state has an airport system plan that identifies the location and scale of development that is considered necessary to satisfy the state's need for air transportation. The airports that are included in state plans, but not in NPIAS, are usually small airports that have local significance but not considered to have national significance.

### 1.3.1 National Plan of Integrated Airport Systems (NPIAS)

The general principals guiding federal involvement are that the airport system should have the following attributes to meet the demand for air transportation.

- Airports should be safe and efficient, located at optimum sites, and developed and maintained to appropriate standards
- The system should be extensive, providing as many people as possible with the convenient access to air transportation, defined as 30 minutes ground travel time to the nearest civilian airport
- Airports should be affordable to users and government, relying primarily on user fees and placing minimal burden on general revenues of local, state, and federal government
- Airports should be flexible and expandable, able to meet increased demand and accommodate new aircraft types
- Airports should be permanent, with assurance that they will remain open for aeronautical use over the long term
- Airports should be compatible with surrounding communities, maintaining a balance between the needs of aviation and requirements of neighboring areas
- The system should help air transportation contribute to a productive and competitive national economy



Information on the development needed to provide an adequate national system of airports is derived primarily from locally prepared airport master plans and regional and state system plans.

NPIAS groups airports by their intended role. One of five basic airport service levels that describe the type of service that the airport is expected to provide the community at the end of the five-year planning period is outlined on page 1-14. The service levels also represent funding categories for the distribution of federal aid. Airport service levels are as follows.



- **PR (Commercial Service Airport, Primary)** – this service level includes airports defined as large, medium, and small hubs and non-hub primary
- **CM (Commercial Service Airport, Other)** – this service level typically applies to airports enplaning less than 10,000 passengers
- **CR (Commercial Service Airport, Reliever)** – this airport also serves as a reliever facility and is included with CM in statistical summaries
- **RL (Reliever Airport)** – these airports are high capacity general aviation airports in major metropolitan areas, which provide general aviation pilots with an attractive alternative to using congested hub airports
- **GA (General Aviation Airport)** – this service level includes general aviation airports if they account for enough activity (usually at least 10 locally owned aircraft) and are at least 30 minutes from the nearest NPIAS airport

There are over 1,000 publicly owned, public-use landing areas that are not included in NPIAS. Most of these do not meet the minimum entry criteria of 10 based aircraft and 30 minutes ground travel time to the nearest NPIAS airport. More than 1,200 privately owned, public-use airports are not included in NPIAS because they are located at inadequate sites, redundant to publicly owned airports, or have too little activity to qualify for inclusion. In addition, almost 12,000 civil landing areas that are not open to the general public are not included in NPIAS.

NPIAS also reports data for the five-year planning period as noted:

- **Enplanements** – the number of commercial passengers expected to board at the airport during the fifth year of the five-year planning period
- **Based Aircraft** – the number of locally owned aircraft expected to be hangared or based at the airport at the end of the five-year planning period
- **Cost** – the estimated five-year costs for airport improvements, which are eligible for federal development grants under AIP

The 2001-2005 NPIAS<sup>3</sup> lists the Rock Hill/York County Airport (Bryant Field) as a GA (General Aviation Airport).

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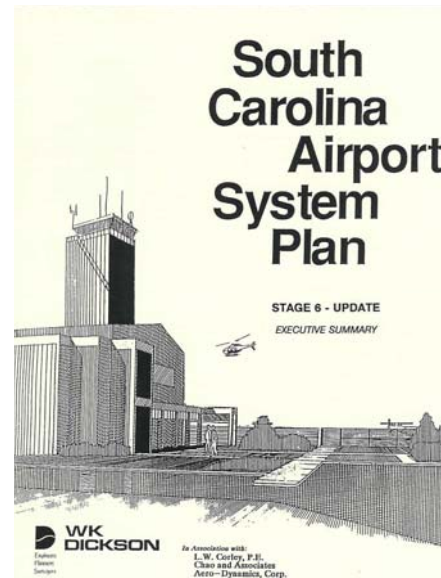
<sup>3</sup> U.S. Department of Transportation Federal Aviation Administration (August 2002). National Plan of Integrated Airport Systems (2001-2005). Report to Congress.

### 1.3.2 South Carolina Airport System Plan (SCASP)

SCDOA's Airport System Plan<sup>4</sup> identifies the role that Rock Hill/York County Airport (Bryant Field) should play in the system. This role includes continuing as a reliever to Charlotte-Douglas International Airport (Charlotte, North Carolina) and providing access and capacity to general aviation and businesses in the Rock Hill/York County area.

### 1.3.3 Airport Reference Code

The Airport Reference Code (ARC) was developed by the FAA as a system to correlate airport design criteria to the physical (wingspan) and operating (approach speed) characteristics of the most demanding aircraft currently using or expected to use an airport with greater than 500 annual operations. This classification system, as contained in the FAA's *AC 150/5300-13 Airport Design (Change 7)*, which is determined by approach speed in knots, now supersedes the former Utility and Transport Airport Role classification system. The ARC coding system consists of two components. The first component, depicted by a letter, designates the aircraft approach category; and the second component, depicted by a roman numeral, designates the airplane design group, which is determined by the wingspan. Table 1.3.3-1 (page 1-16) identifies the Aircraft Approach Categories and Aircraft Design Groups that have been established. Table 1.3.3-2 (page 1-16) lists examples of aircraft to give a perspective of the various aircraft classifications. For example, the ARC for an airport whose most demanding aircraft is a Boeing 737-200 would be C-III, based on an approach speed of 137 knots and a wingspan of 108'.



Please note that not all aircraft listed use the Rock Hill/York County Airport (Bryant Field). These tables are provided to enhance the reader's understanding and perspective of the actual ARC for the Rock Hill/York County Airport (Bryant Field).

<sup>4</sup> W.K. Dickson & Company in association with L.W. Corley, P.E., Chao & Associates, and Aero-Dynamics Corp (1992). South Carolina Airport System Plan Stage 6 – Update. Prepared for South Carolina Aeronautics Commission.

**Table 1.3.3-1**  
**Approach Categories and Design Groups**  
**Rock Hill/York County Airport (Bryant Field)**

Approach Categories	Aircraft Design Groups
A – Less than 90 knots	I – Wing Span Less Than 48'
B – 91 to 120 knots	II – Wing Span 49' to 78'
C – 121 to 140 knots	III – Wing Span 79' to 117'
D – 141 to 165 knots	IV – Wing Span 118' to 170'
E – Greater than 166 knots	V – Wing Span 171' to 196'
	VI – Wing Span 197' to 262'

Source: FAA AC 150/5300-13 *Airport Design (Change 7)*

**Table 1.3.3-2**  
**Selected Aircraft Classifications**  
**Rock Hill/York County Airport (Bryant Field)**

Aircraft	Approach Speed (Knots)	Category	Wingspan (Feet)	Design Group
BAE Jetstream 31	99	B	52.0'	II
Beech Airliner 1900-C	120	B	54.5'	II
Beech Baron 58P	101	B	37.8'	I
Beech Bonanza A36	72	A	33.5'	I
Beech King Air B-200	103	B	54.5'	II
Beech King Air C90-1	100	B	50.2'	II
Boeing 727-200	138	C	108.0'	III
Boeing 737-300	137	C	94.8'	III
Cessna 150	55	A	32.7'	I
Dassault Falcon 900	100	B	63.4'	II
DHC-DASH 7-100	83	A	93.0'	III
DHC-DASH 8-300	90	A	90.0'	III
Fokker F-28 2000	119	B	77.3'	II
Grumman Gulfstream I	113	B	78.3'	II
Grumman Gulfstream 200	140.7	C	58.2'	II
Grumman Gulfstream III	136	C	77.8'	II
Grumman Gulfstream IV	145	D	77.8'	II

Source: FAA AC-150/5300-13, *Airport Design (Change 7)*, Appendix 13

Rock Hill/York County Airport (Bryant Field) has an Aircraft Approach Category B and an Airplane Design Group II, therefore, resulting in a B-II ARC for Runway 02-20. The current critical aircraft utilizing Rock Hill/York County Airport (Bryant Field) are the Pilatus PC 12 and Citation Excel.



## 1.4 AIRPORT ACCESS AND TRANSPORTATION NETWORK

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Review of existing and planned surface transportation networks is important during the preparation of an Airport Master Plan. A large portion of how well an airport serves the public's air transportation needs is the airport's accessibility. The key factor is access time, which depends on distance and ground transportation infrastructure. Another factor is cost of personal and public transportation and operational maintenance costs for public transportation services.

### 1.4.1 Highway System

Figure 1.4.1-1 (page 1-18) illustrates the highway system, which serves Rock Hill/York County Airport (Bryant Field). Primary access to Rock Hill/York County Airport (Bryant Field) is via S.C. 161 to Museum Road to Airport Road.

### 1.4.2 Public Transportation

Public transportation is an important aspect of the surface transportation system. The adequacy of such service to the Airport is a concern since it provides an important link between the people using the Airport and their ultimate destinations. Public transportation currently available at Rock Hill/York County Airport (Bryant Field) includes rental cars and several taxi services.

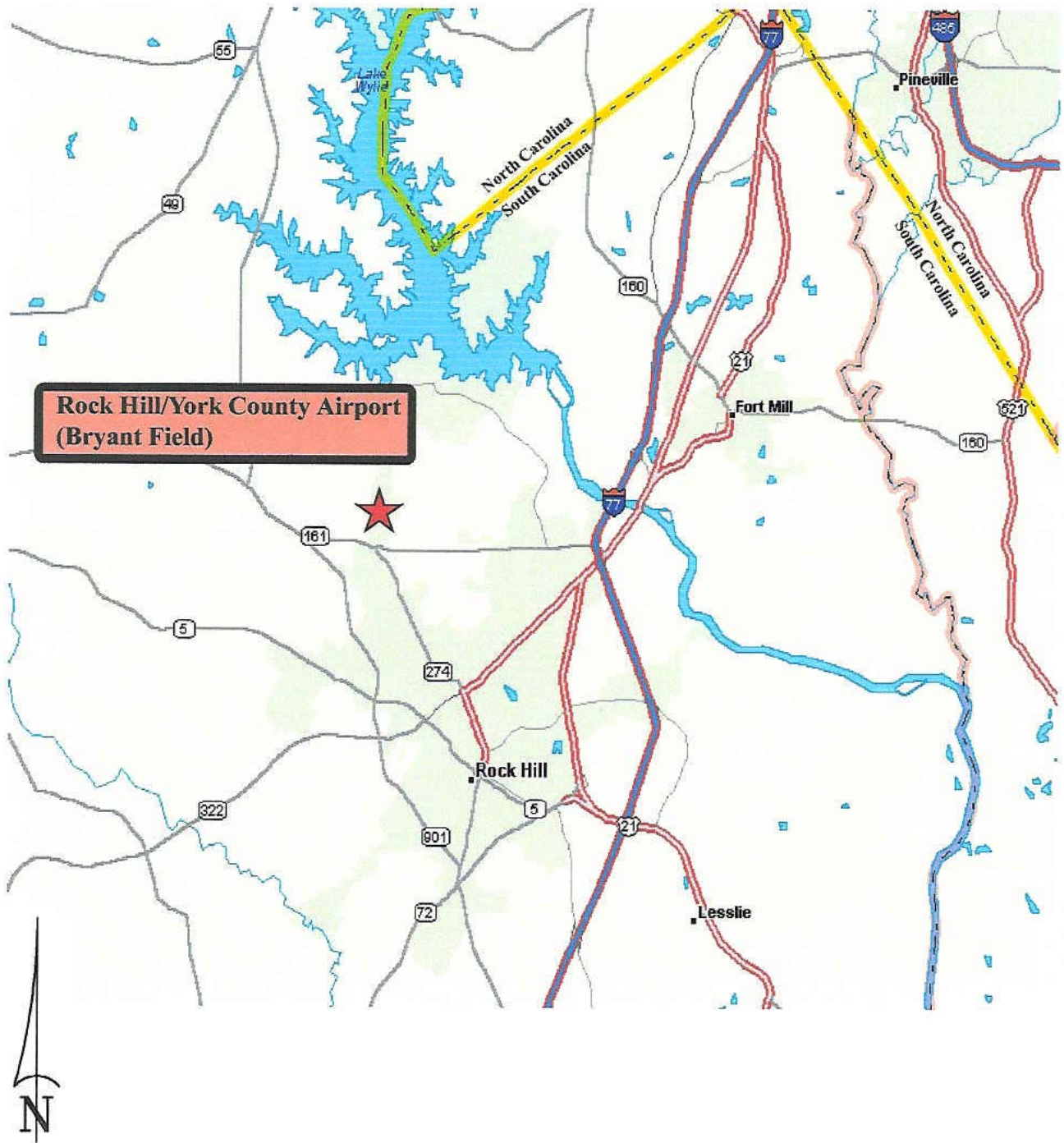
#### 1.4.2.1 **Rental Cars**

Three rental car agencies pay for a single parking space. A total of three spaces are reserved. The rental agencies do not have locations within the terminal building but bring the cars to the Airport as needed. These agencies are:

- Advantage Rent-a-Car
- Enterprise Rent-a-Car
- U-Save Auto Rental

#### 1.4.2.2 **Taxi Service**

Several different companies provide taxi service. The Airport does not have an agreement with any particular company. Upon request, FBO staff will provide a list of local companies to pilots or passengers.



**Figure 1.4.1-1 – Highway System**

Source: DeLorme Street Atlas (2003)

## 1.5 LAND USE AND REGULATIONS

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Land use is a continuously changing process, particularly in rapidly growing areas. Therefore, land use inventory must include available information on planned and proposed land uses, in addition to the data on existing uses. Zoning is the vehicle that localities use to control various or single uses under its jurisdiction.

### 1.5.1 Land Use in Vicinity of Airport

Land use (refer to Figure 1.5.1-1, page 1-20) immediately adjacent to the Airport consists of:

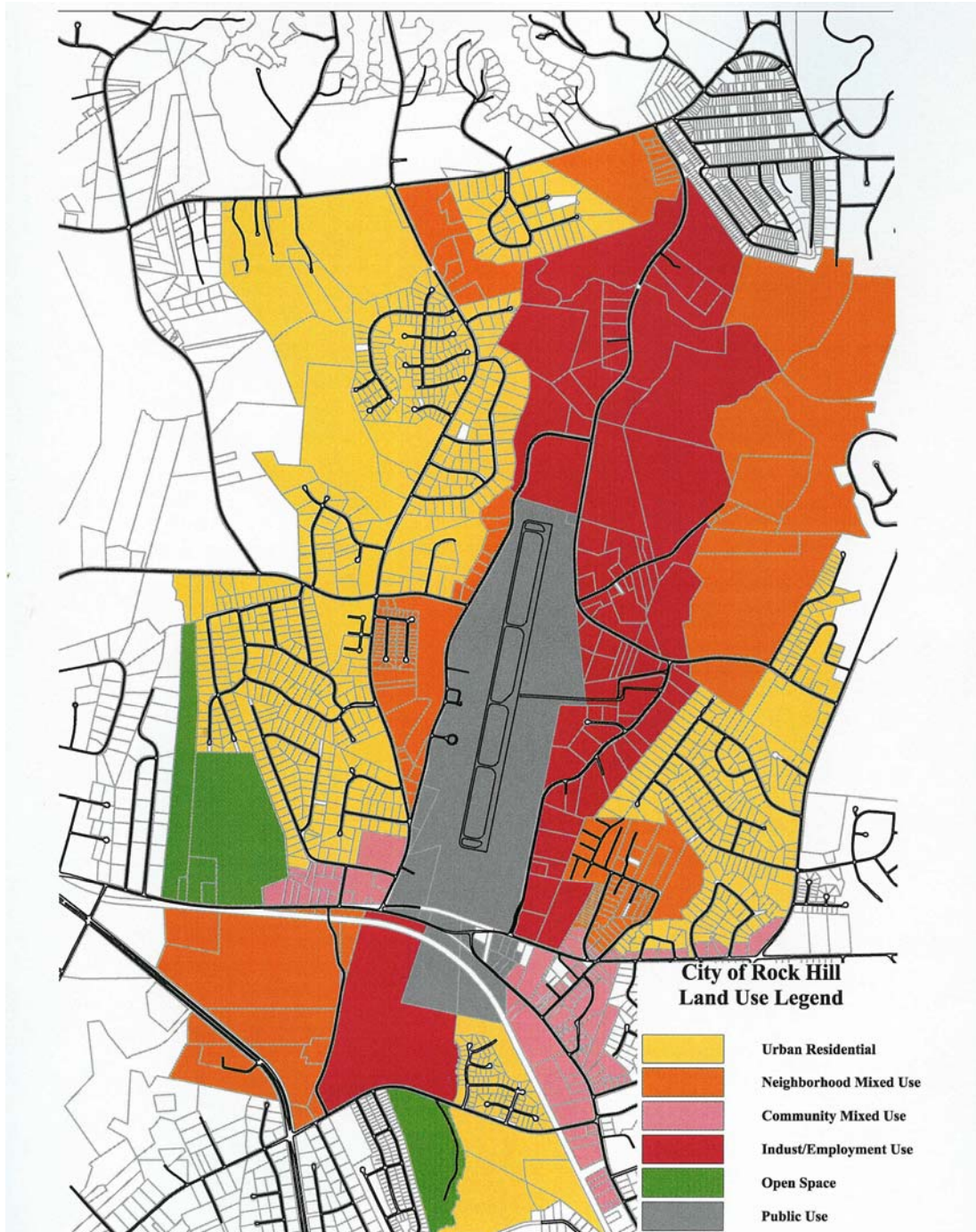
- Scattered single-family residential and undeveloped land to the north
- Airport Industrial Park, single-family residential, and undeveloped land to the east
- S.C. 161 and undeveloped land to the south
- Undeveloped land, scattered single-family residential, South Carolina Army National Guard post, and institutional development to the west

### 1.5.2 Zoning in Vicinity of Airport

Zoning within the Rock Hill city limits is compatible with the Airport and includes industrial, commercial, and planned unit development. Compatibility has been achieved over the past few years with rezoning of incompatible parcels within the City limits. Zoning in the County is predominantly residential and is not considered compatible with airport use. York County is currently revising its comprehensive plan and is taking the needs of the Airport into consideration during this process. Figure 1.5.2-1 (page 1-21) illustrates the current zoning designations in the vicinity of the Rock Hill/York County Airport (Bryant Field) area.

On February 27, 1995, the City of Rock Hill adopted Regulations and Minimum Standards to regulate the operation and use of the Airport. In addition, the City of Rock Hill and York County have adopted Height and Hazard Protection Codes.

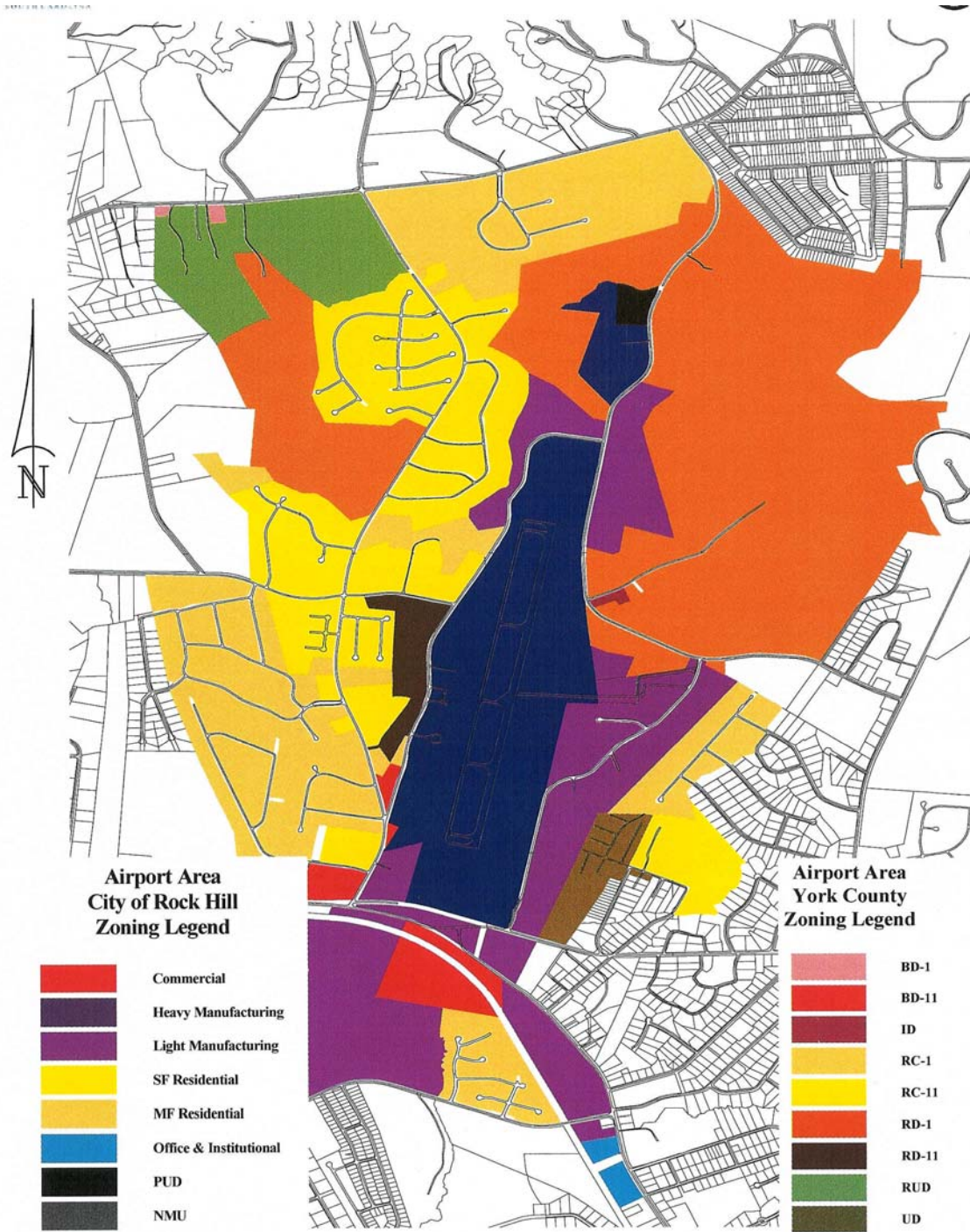




**Figure 1.5.1-1 – Existing Land Use**

Source: Rock Hill Planning Department (August 2002), York County Planning & Development (August 2002)





**Figure 1.5.2-1 – Existing Zoning**

Source: Rock Hill Planning Department (August 2002), York County Planning & Development (August 2002)

## 1.6 AIRPORT

### 1.6.1 Land

The City of Rock Hill currently owns approximately 401 acres in a fee simple title. Currently, the Airport does not have an Exhibit A that shows the accurate airport property and improvements. The subject parcels in question will be clarified with a newly created Exhibit A as part of this Master Plan.

### 1.6.2 Airside

This section describes the airside characteristics of Rock Hill/York County Airport (Bryant Field). Many of the characteristics noted are published in the Airport/Facility Directory (AFD). The AFD listing for Rock Hill/York County Airport (Bryant Field) is outlined below (page 277 of the August 8, 2002, edition)

<b>ROCK HILL (YORK CO) BRYANT FLD (UZA)</b>		4 NW	UTC-5(-4DT)	N34°59.27' W81°03.43'	<b>CHARLOTTE</b>
667	B	S4	<b>FUEL</b>	100LL, Jet A	<b>H-41, 6G, L-20F</b>
<b>RWY 02-20:</b>	H5500X100 (ASPH)		S-30, D-60	MIRL	<b>IAP</b>
<b>RWY 02:</b>	MALSF, PAPI(P2L)—GA 3.0° TCH 35' Trees		<b>RWY 20:</b> PAPI(P2L)—GA 3.0° TCH 39' Trees		
<b>AIRPORT REMARKS:</b> Attended 1300-0100Z± MIRL Rwy 02-20 and MALSF Rwy 02 preset med ints dusk-0400Z±; to increase ints and ACTIVATE after 0400Z±-CTAF					
<b>WEATHER DATA SOURCES:</b> ASOS 120.775 (803) 981-9388.					
<b>COMMUNICATIONS:</b> CTAF/UNICOM 123.05					
®	<b>ANDERSON FSS (AND)</b> TF 1-800-WX-BRIEF. NOTAM FILE UZA				
	<b>CHARLOTTE APP/DEP CON</b> 134.75		<b>CLNC DEL</b> 126.85		
<b>RADIO AIDS TO NAVIGATION:</b> NOTAM FILE AND					
<b>FORT MILL (L) VORTAC</b>	112.4	FML	Chan 71	N34°59.34' W80°57.29'	271° 5.1 NM to fld. 650/02W
<b>RALLY NDB (MHW/LOM)</b>	227	UZ	N34°53.40' W81°04.85'		016° 6 NM to fld.
<b>ILS</b> 108.5	I-UZA	Rwy 02	<b>LOM RALLY NDB</b>		

Source: USDOT, FAA Airport/Facility Directory Southeast U.S. (Effective August 8, 2002)

#### 1.6.2.1 Airport Name

The AFD lists the airport name as Rock Hill/York County Airport (Bryant Field).

#### 1.6.2.2 Airport Associated City

Airports are listed alphabetically in the AFD by the associated city and state. The associated city for the Rock Hill/York County Airport (Bryant Field) is Rock Hill, South Carolina. The Airport is located four miles north of the Rock Hill central business district.

### 1.6.2.3 Airport Identifier

A three- or four-character code is assigned to airports. Air Traffic Control (ATC) uses these identifiers in lieu of the airport name in flight plans, flight strips, and other written records and computer operations. The location identifier for Rock Hill/York County Airport (Bryant Field) is UZA.

### 1.6.2.4 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 ARP for Rock Hill/York County Airport (Bryant Field) is N 34° 59.27', W 81° 03.43'.

### 1.6.2.5 Navigation Charts

Airports are typically illustrated on Sectional and IFR Enroute Low and High Altitude Charts. Rock Hill/York County Airport (Bryant Field) is shown on the Charlotte Sectional, CG-21 World Aeronautical Chart, and L-20 IFR Enroute Low Altitude Chart. The Airport is not illustrated on any IFR Enroute High Altitude Charts.

### 1.6.2.6 Instrument Approaches

Rock Hill/York County Airport (Bryant Field) has four published instrument approach procedures:

- ILS Approach – Runway 02 (Figure 1.6.2.6-1, page 1-24)
- VOR or GPS-A Approach – Runway 02-20 (Figure 1.6.2.6-2, page 1-25)
- NDB Approach – Runway 02 (Figure 1.6.2.6-3, page 1-26)
- GPS Approach – Runway 02 (Figure 1.6.2.6-4, page 1-27)
- GPS Approach – Runway 20 (Figure 1.6.2.6-5, page 1-28)

Table 1.6.2.6-1 summarizes approaches and associated minimums.

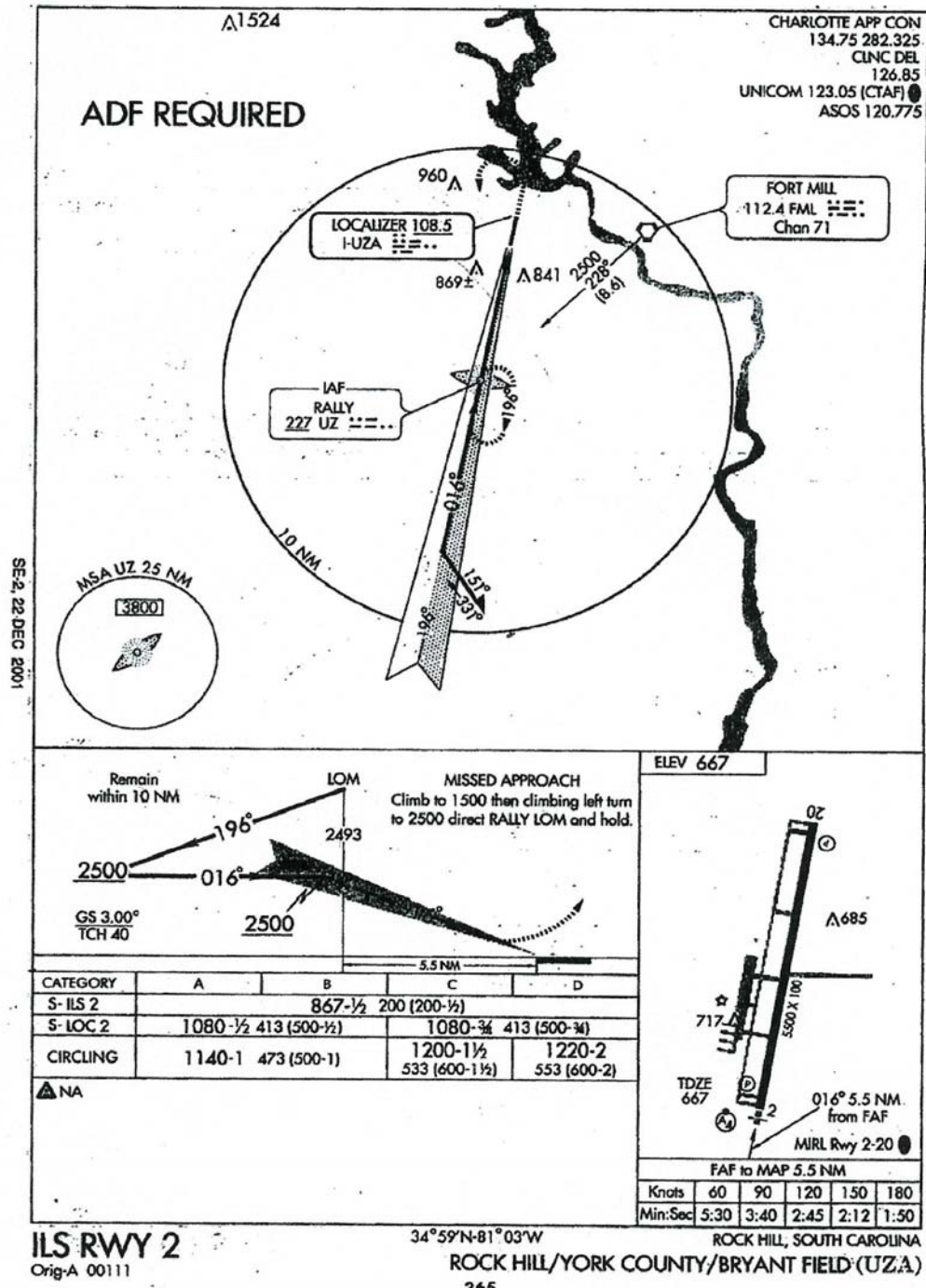


Figure 1.6.2.6-1 – ILS Approach-Runway 02

Source: U.S. Terminal Procedures Southeast (December 27, 2001)



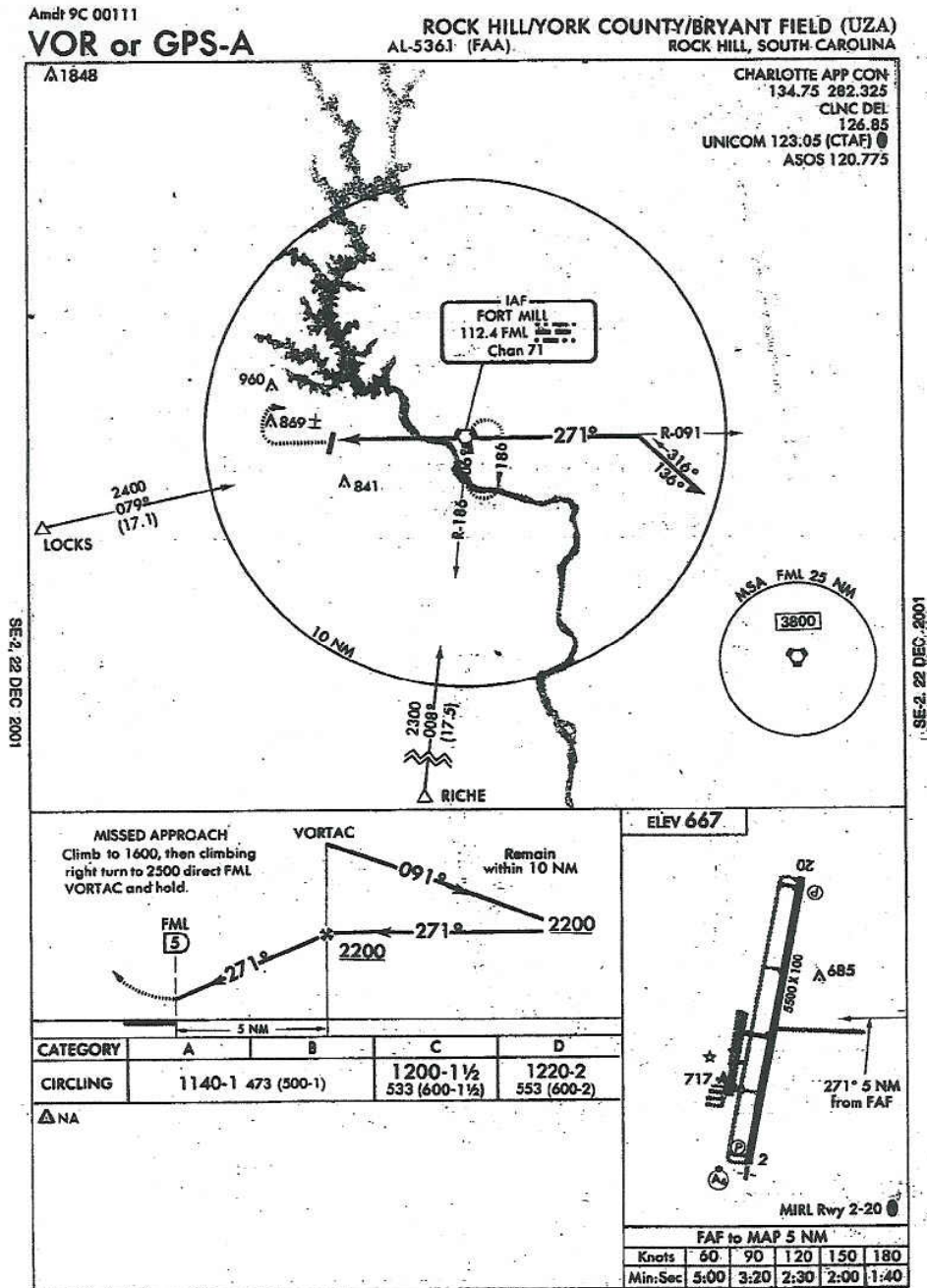


Figure 1.6.2.6-2 – VOR or GPS-A Approach-Runway 02-20

Source: U.S. Terminal Procedures Southeast (December 27, 2001)

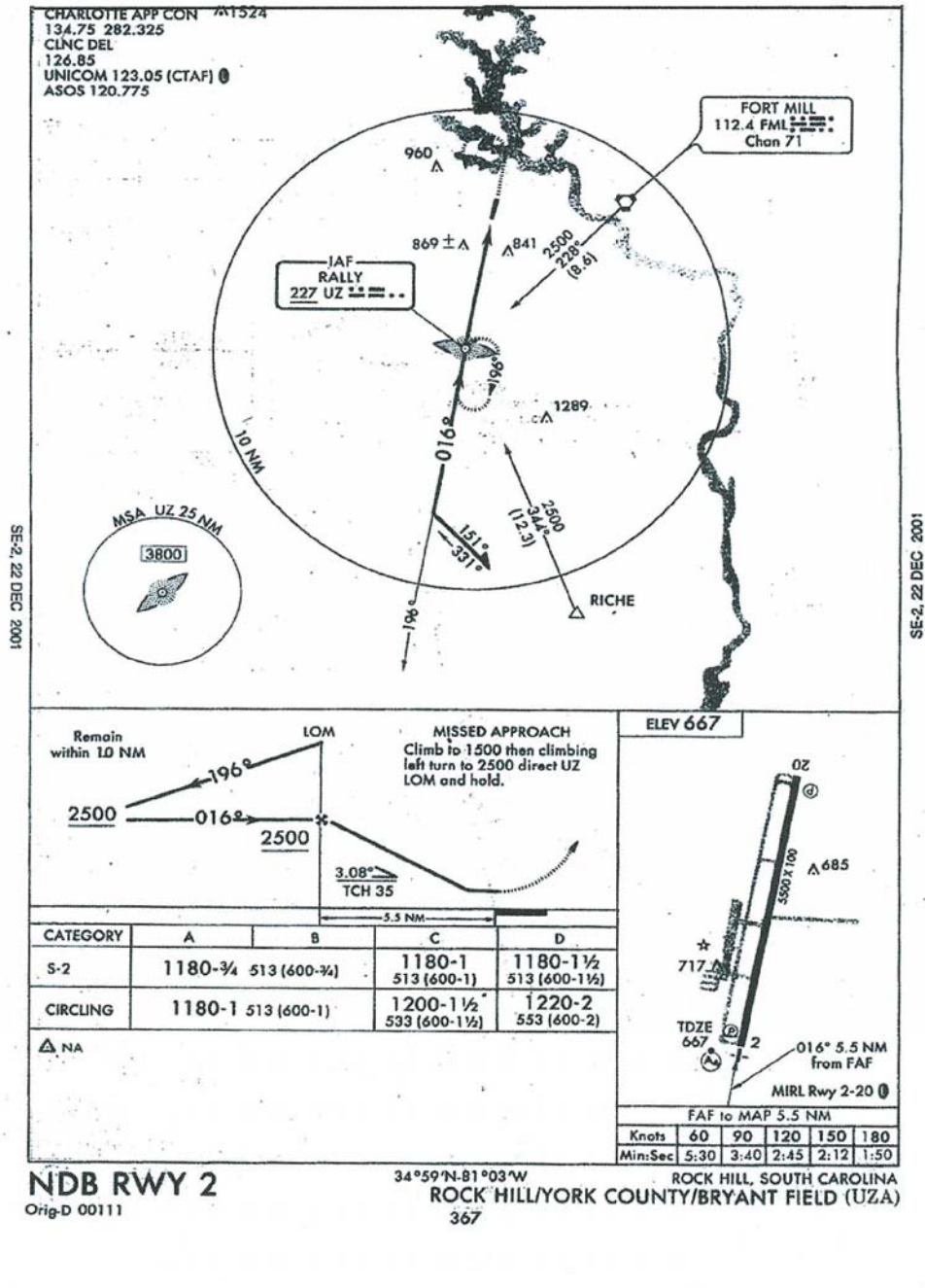


Figure 1.6.2.6-3 – NDB Approach-Runway 02

Source: U.S. Terminal Procedures Southeast (December 27, 2001)

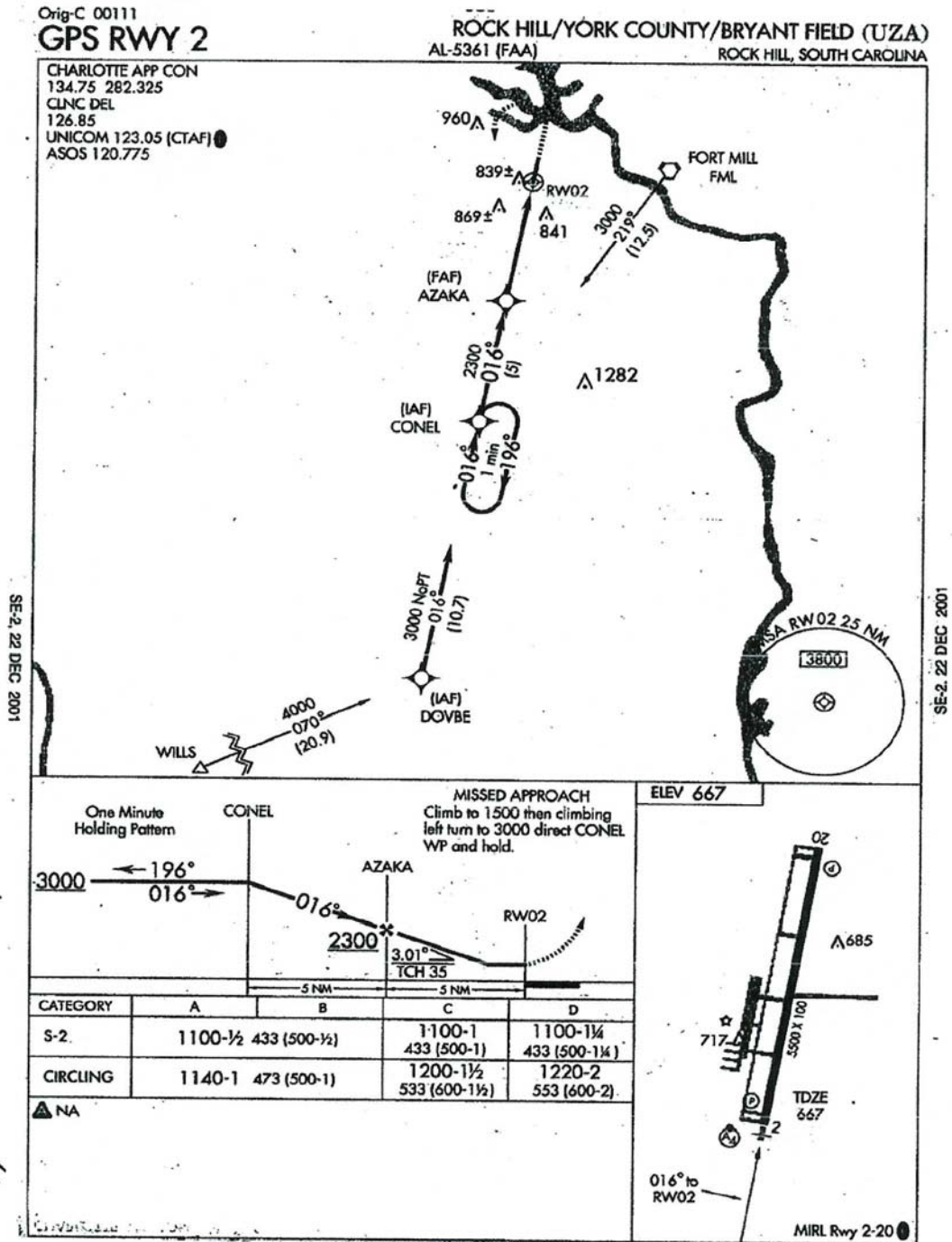


Figure 1.6.2.6-4 – GPS Approach-Runway 02

Source: U.S. Terminal Procedures Southeast (December 27, 2001)

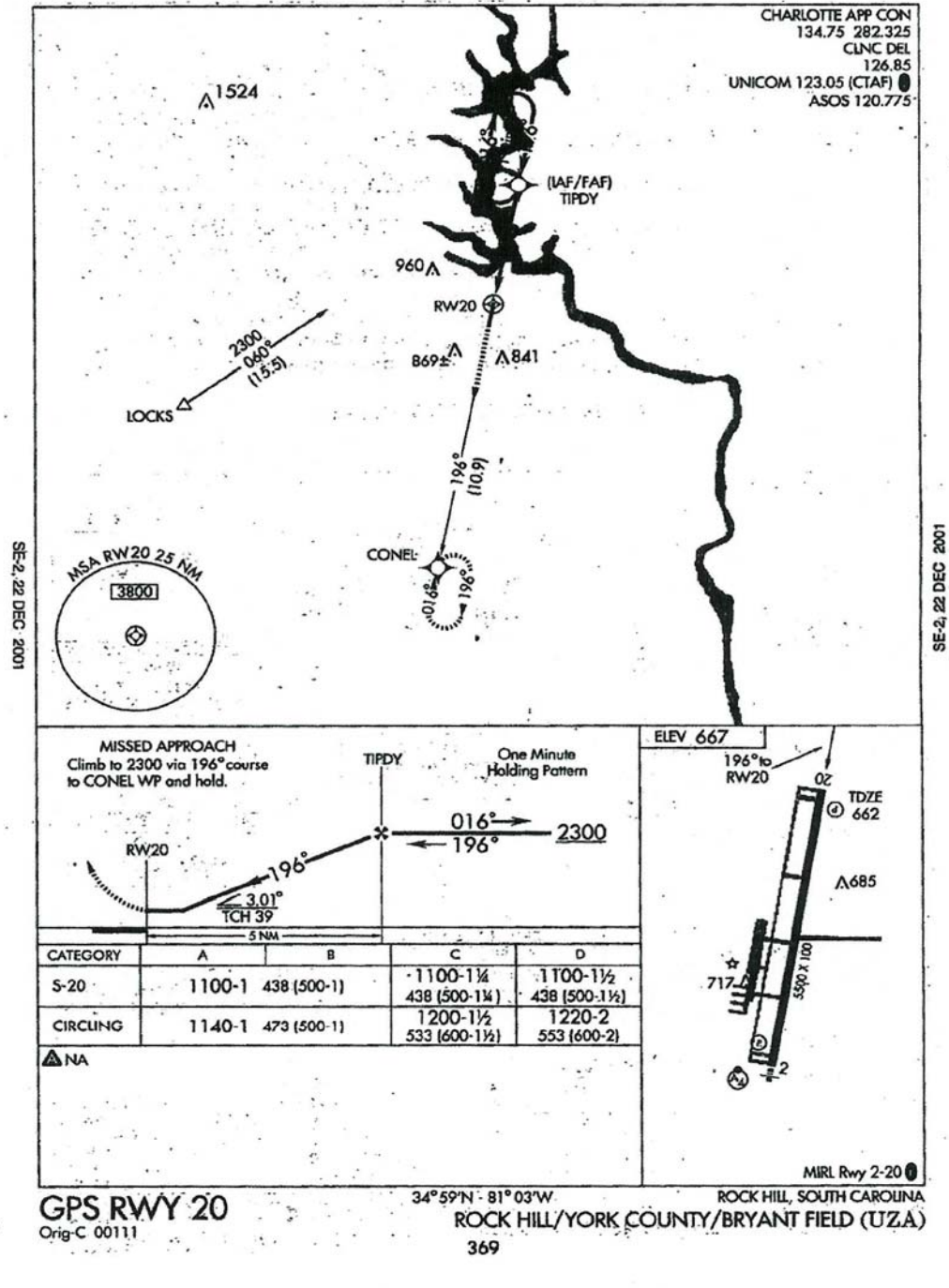


Figure 1.6.2.6-5 – GPS Approach-Runway 20

Source: U.S. Terminal Procedures Southeast (December 27, 2001)



**Table 1.6.2.6-1**  
**Airport Approach Minimums**  
**Rock Hill/York County Airport (Bryant Field)**

Approach Procedure	Minimum Altitude (MSL)	Visibility (Miles)	Category
ILS – Runway 02	867'	½	A/B/C/D
NDB – Runway 02	1,180'	¾	A/B
	1,180'	1	C
	1,180'	1½	D
GPS – Runway 02	1,100'	½	A/B
	1,100'	1	C
	1,100'	1¼	D
GPS – Runway 20	1,100'	1	A/B
	1,100'	1¼	C
	1,100'	1½	D

Source: USDOT-FAA U.S. Terminal Procedures Southeast (SE) (Effective December 27, 2001 – February 21, 2002)

### 1.6.2.7 Airport Elevation

The elevation is the highest point of an airport’s usable runways, measured in feet, above mean sea level (MSL). When elevation is sea level, it will be indicated as (00'). When elevation is below sea level, a minus (-) sign will precede the figure. The airport elevation for the Rock Hill/York County Airport (Bryant Field) is 667' MSL.

### 1.6.2.8 Airport Beacon

The airport beacon has a color combination of lights to distinguish type of airport. Beacons rotate at 12 to 30 flashes per minute to designate airports, landmarks, and points on federal airways. The rotating beacon at Rock Hill/York County Airport (Bryant Field) flashes green and white and operates dusk to dawn, and in IFR weather conditions. The beacon is located approximately 1,000' west of the runway, adjacent to Airport Road.

### 1.6.2.9 Airport Servicing

Airports can offer four levels of aircraft services, which are reported in the AFD. The levels are:

- Minor airframe repairs (S1)
- Minor airframe and minor powerplant repairs (S2)
- Major airframe and minor powerplant repairs (S3)
- Major airframe and major powerplant repairs (S4)
- Other specialty services offered by airports can include:

- Aircraft painting
- Avionics
- Interior refinishing

These types of services can be noted in the Airport Remarks of the AFD. The AFD lists S4 servicing for Rock Hill/York County Airport (Bryant Field).

**1.6.2.10 Airport Fueling**

Refer to Table 1.6.2.10-1 for fuel facility data. Airport staff has kept historical fuel flowage records. Table 1.6.2.10-2 (page 1-31) summarizes the fuel sales for the time period noted. The Airport does not currently have a Spill Protection Control and Countermeasure Plan (SPCC).



**Table 1.6.2.10-1  
Aviation Fuel Farm  
Rock Hill/York County Airport (Bryant Field)**

<b>Product</b>	<b>Storage – Gallons/Type</b>	<b>Tank Containment</b>	<b>Self-Service Fueling Available</b>
100LL	1 – 12,000 AST	12,000	Yes
JET A	1 – 12,000 AST	12,000	No

Source: Skytech (August 2002)

**Table 1.6.2.10-2**  
**Indexed Fuel Sales**  
**Rock Hill/York County Airport (Bryant Field)**

	100LL	Jet A	Total		100LL	Jet A	Total
<b>1993</b>				<b>1998</b>			
January to June	\$31,505	\$23,946	\$55,451	January to June	\$35,347	\$28,339	\$63,686
July to December	22,183	7,886	40,069	July to December	48,712	31,042	79,754
<b>Total</b>	<b>63,688</b>	<b>31,832</b>	<b>95,520</b>	<b>Total</b>	<b>84,059</b>	<b>59,381</b>	<b>143,440</b>
<b>1994</b>				<b>1999</b>			
January to June	47,244	23,445	70,689	January to June	41,489	30,922	72,411
July to December	40,859	23,038	63,897	July to December	47,445	60,030	107,475
<b>Total</b>	<b>88,103</b>	<b>46,483</b>	<b>134,586</b>	<b>Total</b>	<b>88,934</b>	<b>90,952</b>	<b>179,886</b>
<b>1995</b>				<b>2000</b>			
January to June	40,058	15,180	55,238	January to June	33,522	71,733	105,255
July to December	31,808	15,085	46,893	July to December	39,849	34,200	74,049
<b>Total</b>	<b>71,866</b>	<b>30,265</b>	<b>102,131</b>	<b>Total</b>	<b>73,371</b>	<b>105,933</b>	<b>179,304</b>
<b>1996</b>				<b>2001</b>			
January to June	38,382	14,495	52,877	January to June	6,543	3,265	9,808
July to December	35,900	7,283	43,183	July to December	24,640	30,851	55,491
<b>Total</b>	<b>74,282</b>	<b>21,778</b>	<b>96,060</b>	<b>Total</b>	<b>31,183</b>	<b>34,116</b>	<b>65,491</b>
<b>1997</b>				<b>2002</b>			
January to June	44,399	12,648	57,047	January to June	\$34,913	\$58,726	\$93,639
July to December	50,127	19,620	69,747	July to December			
<b>Total</b>	<b>\$94,526</b>	<b>\$32,268</b>	<b>126,794</b>	<b>Total</b>			

Note: Fuel sales indexed to June 1993 Urban CPI (i.e., 144.4)

Source: Carolina Flight Center (January 1993 through January 2001)

Skytech (August 2001 through July 2002)

U.S. Department of Labor, Bureau of Labor Statistics Urban Consumer Price Index

In addition to self-service fueling, the Airport has two fuel trucks; i.e., a 1,200-gallon 100LL truck and a Jet-A 3,000-gallon truck. A review of Table 1.6.2.10-2 (page 1-31) indicates a growth in overall fuel sales from 1996 through December 2000. This growth is from an annual indexed total sale of \$96,060 to \$179,304 at an annual rate of increase of 16.9%. After December 2000, two events combined to dramatically reduce fuel sales in 2001; i.e., a change in FBO and September 11, 2001, events. Since 2001, 2002 fuel sales indicate a rapid recovery. It should also be noted that the percentage of jet fuel sales has increased from a 1993-1997 range of 25% to 35% to a 1998-2002 range of 41% to 63%.



#### **1.6.2.11 Other Airport Services**

FBO services are provided by Skytech, Inc. and include

- Air BP 100LL fuel 24-hour self-service pump; 100LL/jet fuel truck service
- Major airframe and powerplant repair
- Avionics sales, installation, and service
- Aircraft sales

#### **1.6.2.12 Airport Entry Rights**

Conducting flights outside the United States and its territories requires U.S. Customs declarations. Airports designated as Airport of Entry (AOE) or Landing Rights Airport (LRA) require customs notification. The Rock Hill/York County Airport (Bryant Field) is neither an AOE nor LRA.

#### **1.6.2.13 Traffic Pattern Altitude**

At most airports and military bases, traffic pattern altitudes (TPA) for propeller-driven aircraft are generally from 600' to as high as 1,500' above ground level (AGL). The TPA at the Rock Hill/York County Airport (Bryant Field) is 1,500' for most aircraft and 2,500' for turbine aircraft.



### 1.6.2.14 Airport Certification

Airports serving Department of Transportation-certified carriers are certified under FAR Part 139. The Rock Hill/York County Airport (Bryant Field) is not certified under this regulation.

### 1.6.2.15 Airport Inspections

Airports not inspected by the FAA are identified in the AFD. The Rock Hill/York County Airport (Bryant Field) is regularly inspected, and Airport Data (FAA 5010) is modified.

### 1.6.2.16 Runway Data

Runway data for each runway is presented in Table 1.6.2.16-1.

**Table 1.6.2.16-1  
Runway Data  
Rock Hill/York County Airport (Bryant Field)**

	Rwy 02	Rwy 20
<b>Runway Dimensions And Surface</b>		
Length (feet)	5,500'	5,500'
Width (feet)	100'	100'
Slope (%)	-0.1%	+0.1%
Surface	Asphalt	Asphalt
Pavement Conditions (refer to Appendix B)	Good	Good
<b>Thresholds</b>		
Displaced	None	None
<b>Runway Weight Bearing Capacity</b>		
Weight Bearing Capacity (pounds)	60,000	60,000
Landing Gear Configuration	Dual wheel	Dual wheel
<b>Runway Marking/Traffic</b>		
Marking	Non-Precision	Non-Precision
Marking Condition	Good	Good
<b>Runway Lighting/Visual Aids</b>		
Lighting System	MIRL	MIRL
Lighting System Condition	Good	Good
Lighting Control Frequency	123.05	123.05
Visual Slope Indicator Runway 02	PAPI – 2L	PAPI – 2L
Visual Slope Indicator Runway 20	MALSF	NA
<b>Runway End Data</b>		
Latitude Runway 02	N 34° 58' 49.4900"	N 34° 59' 42.8600"
Longitude Runway 02	W 81° 03' 32.2600"	W 81° 03' 19.4000"
Elevation Runway 02 and 20 (MSL)	666.5'	661.2'
<b>Restrictions</b>		
Runway	None	None

Source: USDOT, FAA Airport/Facility Directory Southeast U.S. (Effective December 27, 2001 - February 21, 2002)

### 1.6.2.17 Taxiway Data

The current taxiway system at Rock Hill/York County Airport (Bryant Field) consists of a parallel taxiway and stub connectors. Figure 1.6.2.17-1 (page 1-35) illustrates the current taxiway configuration, and Table 1.6.2.17-1 summarizes the taxiway characteristics.

**Table 1.6.2.17-1**  
**Taxiway Systems**  
**Rock Hill/York County Airport (Bryant Field)**

Taxiway Designation	Approximate Dimensions	Approximate Weight Bearing Capacity	Lighting/Condition
A	6,165.0' x 35'	SG 30,000 lbs. DG 60,000 lbs.	MITL/Good
B	322.5' x 35'	SG 30,000 lbs. DG 60,000 lbs.	MITL/Good
C	332.5' x 35'	SG 30,000 lbs. DG 60,000 lbs.	MITL/Good
D	Future	Future	Future
E	615' x 35'	SG 30,000 lbs. DG 60,000 lbs.	MITL/Good
F	82.5' x 35'	SG 30,000 lbs. DG 60,000 lbs.	MITL/Good
G	415.0' x 35'	SG 30,000 lbs. DG 60,000 lbs.	MITL/Good
H	332.5' x 35'	SG 30,000 lbs. DG 60,000 lbs.	MITL/Good
J	1,700' x 35'	SG 30,000 lbs. DG 60,000 lbs.	MITL/Good

Source: Rock Hill/York County Airport (Bryant Field) (September 2002)

The Rock Hill/York County Airport (Bryant Field) has a full-length parallel taxiway “A” to the west of the runway, located 400’ centerline to centerline from the runway. Connector taxiways “B,” “C,” “E,” “G,” and “H” connect the runway to the parallel taxiway as well as extensions of taxiway “A”. Extensions of taxiways “E” and “G” and a short connector taxiway “F” connect the parallel taxiway with the west side aprons. Taxiway “J” on the east side of the Airport connects three hangars (dormant in use) associated with industrial buildings within Airport Industrial Park and 59 T-hangar units.

### 1.6.2.18 Apron Data

The apron areas for the Airport are located on the west side and are contiguous (refer to Figure 1.6.2.18-1, page 1-36). For purposes of description (in this report only), the aprons are identified as follows:

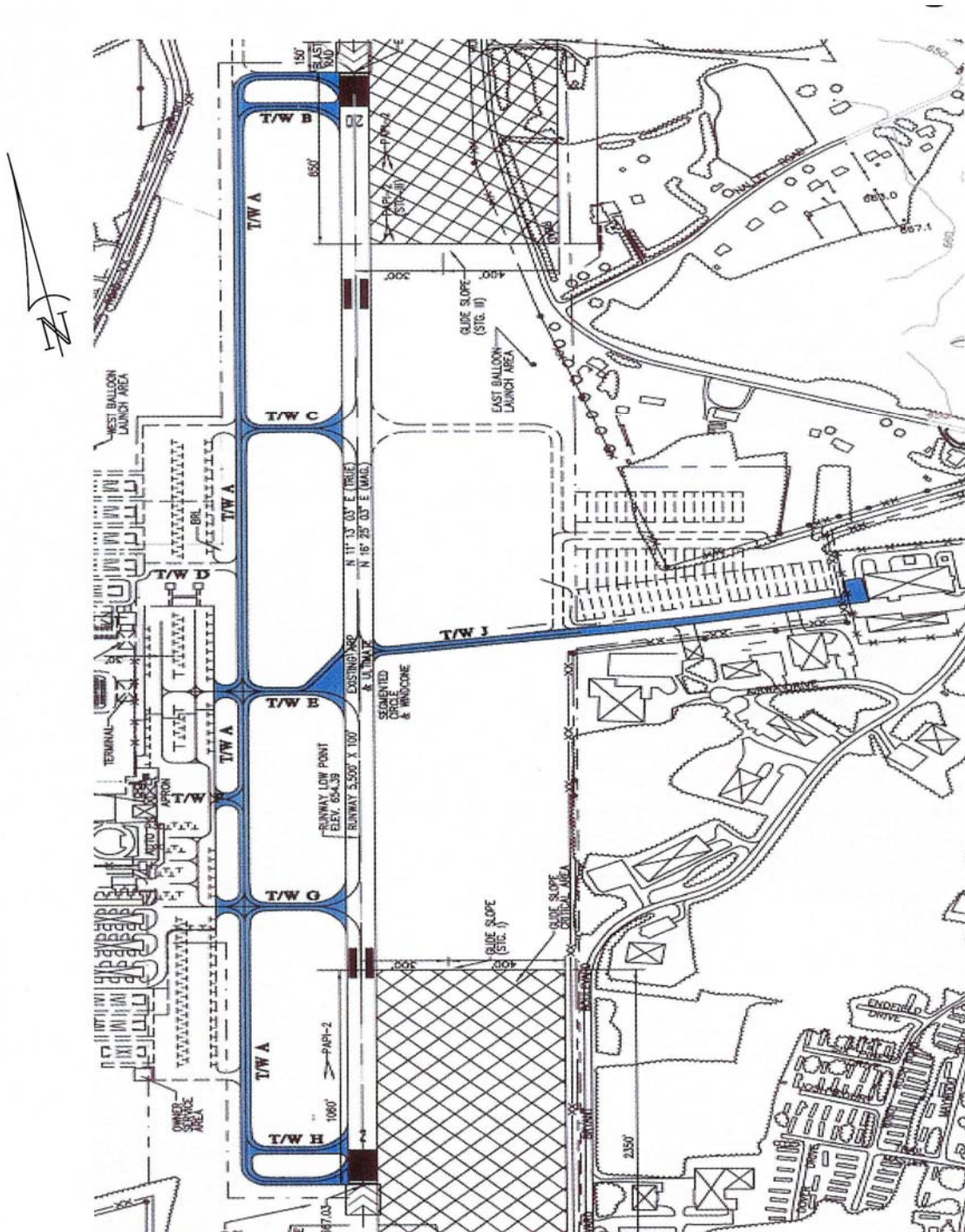
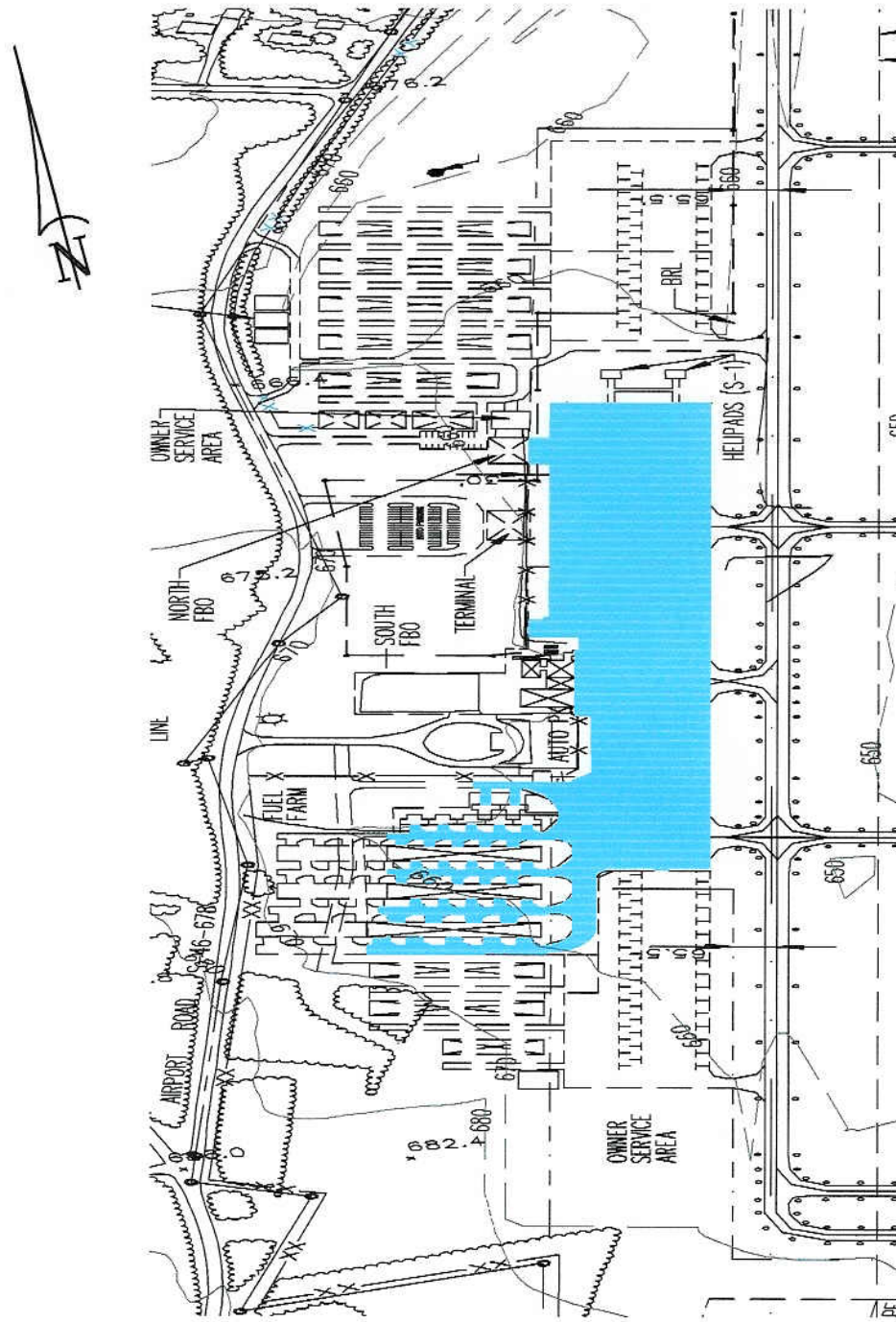


Figure 1.6.2.17-1 – Existing Taxiway Configuration

Source: W.K. Dickson (1994)



**Figure 1.6.2.18-1 – Existing Apron Configuration**

Source: W.K. Dickson (1994)



- South Apron – far south, with tie-downs
- Middle Apron – in front of old FBO complex (no active tie-downs)
- Terminal Apron South – from center of terminal to middle apron
- Terminal Apron North – from center of terminal north including Skytech areas

Most apron areas are in good to excellent condition with some lighting limitations. Taxilanes between tie-downs can be a challenge for Design Level II aircraft. The current taxilane width clearances range from 50' to 60' depending on the type of aircraft tied down. Design Level II aircraft wingspans can range from 49' up to but not including 79'. The ultimate FAA-suggested Design Level II standard for taxilane width clearances is 115'.

**Table 1.6.2.18-1  
Apron Tie-Down Systems  
Rock Hill/York County (Bryant Field)**

Apron Designation	Dimensions/ Area	Surface Type	Number of Parking Positions	Lighting/ Condition
South Apron	750' x 175' 14,583 s.y. 200' x 25' 555 s.y.	Asphalt	20 regular 4 not in use (fuel area) 1 not in use (taxiway area)	Street Poles/ Good
Middle Apron	200' x 200' 4,444 s.y.	Asphalt	None	Street Poles/ Good
Terminal Apron South	400' x 240' 10,666 s.y.	Asphalt	2 large 16 regular 1 not in use (taxiway area)	Street Poles/ Excellent
Terminal Apron North	420' x 240' 11,200 s.y.	Asphalt	1 large 25 regular 1 not in use (taxiway area)	Floodlights/ Excellent
Total	41,448 s.y.		3 large 61 regular 7 not in use	

Note: Dimensions include taxilanes.  
Source: Talbert & Bright Inc. (September 2002)

### 1.6.2.19 Weather Data Sources

Aviation weather can be reported through several weather data sources. These sources include:

- **Automated Surface Observing System (ASOS)** – reports altimeter setting, wind data, temperature, dew point, density altitude, visibility, cloud height/ceiling data, precipitation, identification/intensity, and freezing rain occurrence
- **Automated Weather Observing System (AWOS)** – reports data based on the system level designation
  - AWOS-A – reports altimeter setting
  - AWOS-1 – reports altimeter setting, wind data, temperature, dew point, and density altitude
  - AWOS-2 – reports same as AWOS-1, plus visibility
  - AWOS-3 – reports same as AWOS-1, plus visibility and cloud height/ceiling data
- **Hazardous In-flight Weather Advisory Service (HIWAS)** – HIWAS is a continuous broadcast of in-flight weather advisories including summarized SIGMETs, convective SIGMETs, AIRMETs, and urgent PIREPs. HIWAS is presently broadcast over selected VORs
- **Limited Aviation Weather Reporting Station (LAWRS)** – LAWRS is a station where observers report cloud height, weather, obstructions to vision, temperature, dew point, surface wind, altimeter, and pertinent remarks
- **Low Level Wind Shear Alert System (LLWAS)** – LLWAS indicates a system consisting of a center field and several field perimeter anemometers
- **Supplemental Aviation Weather Reporting Station (SAWRS)** – SAWRS identifies airports that have a supplemental aviation weather reporting station available to pilots for current weather information
- **Terminal Doppler Weather Radar (TDWR)** – TDWR identifies airports that have Doppler weather radar services

Rock Hill/York County Airport (Bryant Field) has an ASOS system on the airfield. Other airports within 25 NM of Rock Hill/York County Airport (Bryant Field) with weather data sources include:

- Charlotte-Douglas International Airport (Charlotte, NC) – ASOS, HIWAS, LLWAS, and TDWR
- Gastonia Municipal Airport (Gastonia, NC) – ASOS
- Monroe Airport (Monroe, NC) – ASOS

#### 1.6.2.20 Airspace

There are two categories of airspace or airspace areas. These categories are regulatory and non-regulatory. Within these two categories, there are four airspace types:

- Controlled
- Uncontrolled
- Special use
- Other airspace

The categories and types of airspace are dictated by the complexity or density of aircraft movements, nature of operations conducted within the airspace, level of safety required, and national and public interest.

#### Controlled Airspace

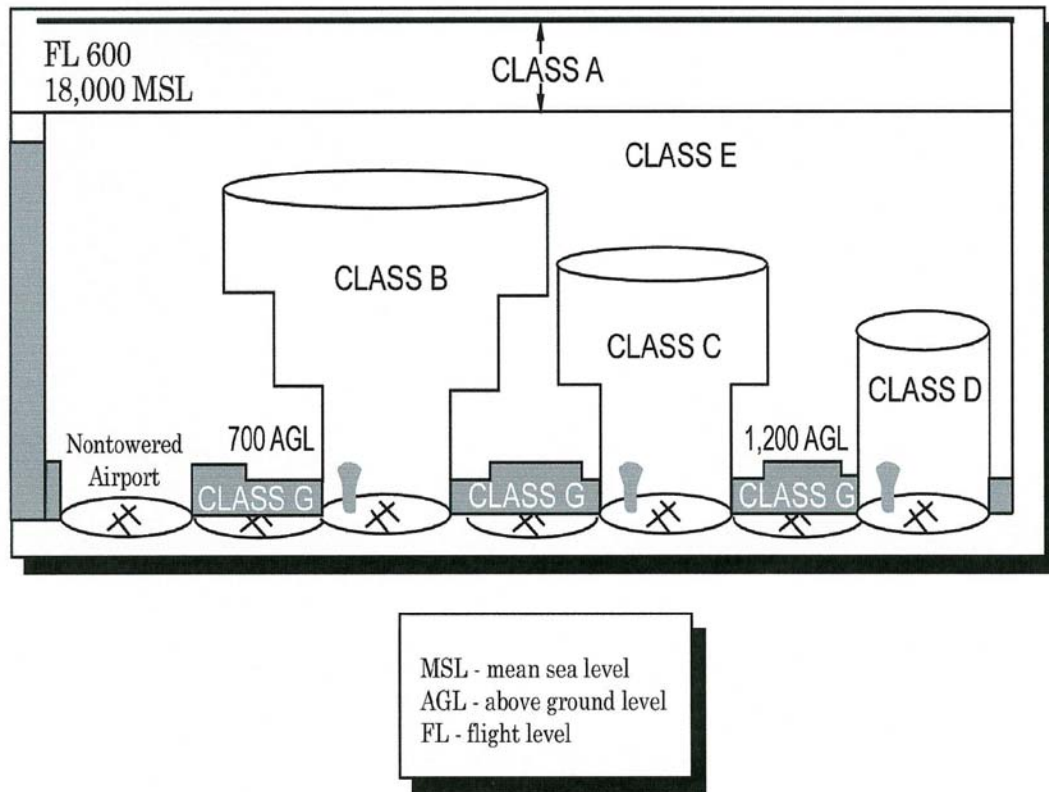
Controlled airspace is a generic term that covers different classifications of airspace and defined dimensions within which air traffic control service is provided to IFR and VFR flights in accordance with airspace classification. The classifications of controlled airspace are:

- Class A
- Class B
- Class C
- Class D
- Class E

Figure 1.6.2.20-1 (page 1-39) graphically depicts the airspace classes.

#### *Class A Airspace*

Class A Airspace is airspace from 18,000' MSL up to and including Flight Level 600, including the airspace overlying the waters within 12 NM of the coast of the 48 contiguous states and Alaska. Class A airspace is not specifically charted.



**Figure 1.6.20-1 – Airspace Classifications**

Source: <http://www.rduafss.faa.gov/airspace/classes.html>



### *Class B Airspace*

Class B Airspace is airspace from the surface to 10,000' MSL surrounding the nation's busiest airports in terms of IFR operations or passenger enplanements. The configuration of each Class B airspace area is individually tailored and consists of a surface area and two or more layers and designed to contain all published instrument procedures once an aircraft enters the airspace. Class B airspace is charted on Sectional Charts, IFR Enroute Low Altitude Charts, and Terminal Area Charts.

### *Class C Airspace*

Class C Airspace is airspace from the surface to 4,000' above the airport elevation (charted in MSL) surrounding those airports that have an operational control tower, are serviced by a radar approach control, and have a certain number of IFR operations or passenger enplanements. Although the configuration of each Class C airspace area is individually tailored, the airspace usually consists of a 5-NM radius core surface area that extends from the surface up to 4,000' above the airport elevation and a 10-NM radius shelf area that extends from 1,200' to 4,000' above the airport elevation. Class C airspace is charted on Sectional, IFR Enroute Low Altitude, and Terminal Area Charts, where appropriate.

### *Class D Airspace*

Class D Airspace is airspace from the surface to 2,500' above the airport elevation (charted in MSL) surrounding those airports that have an operational control tower. The configuration of each Class D airspace area is individually tailored, and when instrument procedures are published, the airspace will normally be designed to contain the procedures. Class D airspace areas are depicted on Sectional and Terminal Area Charts with blue-segmented lines and on IFR Enroute Low Altitude Charts with a boxed [D].

### *Class E Airspace*

Class E Airspace is not Class A, Class B, Class C, or Class D and is not controlled. The types of Class E airspace include:

- (A) Surface area designated for an airport
- (B) Extension to a surface area
- (C) Airspace used for transition
- (D) Enroute domestic areas
- (E) Federal airways
- (F) Offshore airspace areas

Class E airspace below 14,500' MSL is charted on Sectional, Terminal Area, World, and IFR Enroute Low Altitude Charts.

### **Uncontrolled Airspace**

Uncontrolled airspace is that portion of the airspace that has not been designated Class A, Class B, Class C, Class D, and Class E airspace. This airspace classification is Class G.

### **Special Use Airspace**

Special use airspace consists of airspace wherein activities must be confined because of their nature, or wherein limitations are imposed upon aircraft operations that are not a part of those activities, or both. Special use airspace areas are depicted on aeronautical charts. Types of special use airspace include:

- Prohibited areas
- Restricted areas
- Warning areas
- Military operations areas (MOA)
- Alert areas
- Controlled firing areas (CFA)
- National security areas (NSA)

#### *Prohibited Areas*

Prohibited areas contain airspace of defined dimensions, identified by an area on the surface of the earth within which the flight of aircraft is prohibited. These areas are published in the Federal Register and depicted on aeronautical charts.

#### *Restricted Areas*

Restricted areas contain airspace identified by an area on the surface of the earth within which the flight of aircraft, while not wholly prohibited, is subject to restrictions. Restricted areas denote the existence of unusual, often invisible hazards to aircraft such as artillery firing, aerial gunnery, or guided missiles. Restricted areas are published in the Federal Register and constitute FAR Part 73. Restricted airspace is depicted on Sectional and Enroute Charts appropriate for use at the altitude or flight level being flown.

### *Warning Areas*

Warning areas are airspace of defined dimensions, extending from 3 NM outward from the coast of the United States, that contain activity that may be hazardous to nonparticipating aircraft.

### *Military Operations Areas*

Military operations areas consist of airspace of defined vertical and lateral limits established for the purpose of separating certain military training activities from IFR traffic. MOAs are depicted on Sectional, VFR Terminal Area, and Enroute Low Altitude Charts.

### *Alert Areas*

Alert areas are depicted on aeronautical charts to inform nonparticipating pilots of areas that may contain a high volume of pilot training or an unusual type of aerial activity.

### *Controlled Firing Areas*

Controlled firing areas contain activity, which, if not conducted in a controlled environment, could be hazardous to nonparticipating aircraft.

### *National Security Areas*

National security areas consist of airspaces of defined vertical and lateral dimensions established at locations where there is a requirement for increased security and safety of ground facilities.

Other airspace areas include the following:

- Airport advisory area
- Military training routes
- Temporary flight restrictions
- Parachute jump aircraft operations
- Published VFR routes
- Terminal radar service area (TRSA)

Figures 1.6.2.20-2 (page 1-44) and 1.6.2.20-3 (page 1-45) are excerpts from the Charlotte Section Aeronautical and Enroute Low Altitude Charts, respectively. Table 1.6.2.20-1 (page 1-46) shows types of airspace within 25 NM of the Rock Hill/York County Airport (Bryant Field).





Figure 1.6.2.20-2 – Charlotte Sectional Aeronautical Chart

Source: Charlotte Sectional Aeronautical Chart (2002)





Figure 1.6.2.20-3 – Enroute Low Altitude Chart

Source: IFR Enroute Low Altitude – U.S. (April 2002)

**Table 1.6.2.20-1**  
**Airspace within 25 NM**  
**Rock Hill/York County Airport (Bryant Field)**

Airspace	Description
<b>Controlled</b>	Within 25 NM
A	See definition of Class A airspace
B	SFC 1,800', 3,600' 4,600', 6,000', 8,000' to 10,000' for CLT
C	30 NM from CLT
D	Control Zone B in effect – Concord
E	Rock Hill/York County Airport (Bryant Field), Chester Municipal Airport, Concord Regional Airport, Gastonia Municipal Airport, Jaars Townsend Airport, Lancaster County Airport-McWhirter Field, Lincolnton Airport, Monroe Airport, Shelby Airport
<b>Special Use</b>	
Prohibited Areas	N.A.
Restricted Areas	N.A.
Warning Areas	N.A.
Military Operation Areas	Gamecock 1 MOA
Alert Areas	N.A.
Controlled Firing Areas	N.A.
National Security Areas	N.A.
<b>Other</b>	
Airport Advisory Area	N.A.
Military Training Routes	IR 718, IR 82
Parachute Jump Aircraft Operations	Chester Municipal Airport
Published VFR Routes	V66, V37, V259, V54, V415, V454
Terminal Radar Service Area	CLT

Source: Charlotte Sectional Aeronautical Chart (71<sup>st</sup> Edition)

### 1.6.2.21 Air Navigation Radio Aids

Various types of air navigation aids (NAVAIDS) are in use today, each serving a special purpose. These aids have varied owners and operators: FAA, military services, private organizations, individual states, and foreign governments. The FAA has statutory authority to establish, operate, and maintain air navigation facilities. In addition, the FAA prescribes standards for the operation of any of these aids, which are used for instrument flight in federally controlled airspace. The navigation aids are tabulated in the Airport/Facility Directory. This section discusses the radio navigation aids as they relate to Rock Hill/York County Airport (Bryant Field).

- **Non-Directional Radio Beacon (NDB)** – is a low or medium frequency radio beacon which transmits non-directional signals so the pilot of an aircraft, properly equipped, can determine bearings and “home” on the station. These facilities normally operate in the frequency band of 190 to 535 kHz and transmit a continuous carrier with either 400 or 1,020 Hz

modulation. All radio beacons, except the compass locator, transmit a continuous three-letter identification in code except during voice transmissions. The NDB station service volume is shown in Table 1.6.2.21-1. Table 1.6.2.21-2 provides the NDB information for Rock Hill/York County Airport (Bryant Field).

**Table 1.6.2.21-1  
NDB Service Volumes  
Rock Hill/York County Airport  
(Bryant Field)**

Class	Distance (Radius)
Compass Locator	15 NM
MH	25 NM
H	50 NM*
HH	75 NM

\* Service ranges of individual facilities may be less than 50 NM. Restrictions to service volumes are first published as a Notice to Airmen and then with the alphabetical listing of the NAVAID in the Airport/Facility Directory.

Source: USDOT, FAA Airport/Facility Directory Southeast U.S. (Effective December 27, 2001 - February 21, 2002)

**Table 1.6.2.21-2  
Airport Non-Directional Radio Beacon  
Rock Hill/York County Airport (Bryant Field)**

Facility Name	Identifier	Class	Frequency (KHz)	Geographical Position		Direction to Field	Distance to Field
				Latitude	Longitude		
Rally	UZ	DME	227	N34°53.40'	W81°04.85'	016°	6 NM

Source: USDOT, FAA Airport/Facility Directory Southeast U.S. (Effective December 27, 2001 - February 21, 2002)

- **Very High Frequency Omnidirectional Range Station (VOR)** – forms the basic element of the Enroute radio navigation system in the United States. VORs operate within the 108.0 to 117.95 MHz frequency band and have a power output necessary to provide coverage within their assigned operational service volume. They are subject to line-of-sight restrictions, and range varies proportionally to the altitude of the receiving equipment. The normal service ranges for the various classes of VORs are given in Table 1.6.2.21-3 (page 1-48). Using the class designator as a prefix to the station type designation indicates the Standard Service Volume (SSV) of a station.

**Table 1.6.2.21-3**  
**VOR/DME/TACAN Standard Service Volumes (SSVs)**  
**Rock Hill/York County Airport (Bryant Field)**

SSV Class Designation	Altitude and Range Boundaries
T (Terminal)	From 1,000' AGL up to and including 12,000' AGL at radial distances out to 25 NM
L (Low Altitude)	From 1,000' AGL up to and including 18,000' AGL at radial distances out to 40 NM
H (High Altitude)	From 1,000' AGL up to and including 14,500' AGL at radial distances out to 40 NM. From 14,500' AGL up to and including 60,000' AGL at radial distances out to 100 NM. From 18,000' AGL up to and including 45,000' AGL at radial distances out to 130 NM.

Source: USDOT, FAA Airport/Facility Directory Southeast U.S. (Effective December 27, 2001 - February 21, 2002)

For reasons peculiar to military or naval operations (unusual siting conditions, the pitching and rolling of a naval vessel, etc.), the civil VOR/DME system of air navigation was considered unsuitable for military or naval use. A new navigational system, Tactical Air Navigation (TACAN), was therefore developed by the military and naval forces to more readily lend itself to military and naval requirements. As a result, the FAA has been in the process of integrating TACAN facilities with the civil VOR/DME program. These integrated facilities are called VHF Omnidirectional Range/Tactical Air Navigation (VORTAC). A VORTAC is a facility consisting of three individual services: VOR azimuth, TACAN azimuth, and TACAN distance (DME) at one site. Although more than one component incorporating more than one operating frequency and using more than one antenna system, a VORTAC is considered to be a unified navigational aid.

Distance Measuring Equipment (DME) operates using paired pulses at a specific spacing, which are sent out from aircraft (interrogation) and received at the ground station. The ground station (transponder) then transmits paired pulses back to the aircraft at the same pulse spacing but on a different frequency. The time required for the round trip of the signal exchange is measured in the airborne DME unit and is translated into distance (nautical miles) from the aircraft to the ground station.

VORTAC navigation facilities, established by the FAA, provide course and distance information from co-located components under a frequency-pairing plan. Aircraft receiving equipment, which provides for automatic DME selection, ensures reception of azimuth and distance information from a common source when designations VOR/DME, VORTAC, ILS/DME, and LOC/DME are selected. Table 1.6.2.21-4 (page 1-49) provides the VORTAC information for the Charlotte VORTAC. The Charlotte VORW/DME is located 050° and 16.7 NM west of Rock Hill/York County Airport (Bryant Field).



**Table 1.6.2.21-4**  
**VOR/VORTAC Facilities**  
**Rock Hill/York County Airport (Bryant Field)**

NAVAID Information	Charlotte
Equipment Configuration	VORTAC
Class	Low Altitude
Frequency (MHZ)	112.4
Identifier	FML
TACAN/DME Channel	97
Latitude	N 34° 59.34'
Longitude	W 80° 57.29'
Bearing to Center of Airport	271°
Distance to Center of Airport (NM)	5.1
Site Elevation (MSL)	650
Magnetic Variation	02W
HIWAS	N/A
ASR/PAR	N/A

Source: USDOT, FAA Airport/Facility Directory Southeast U.S. (Effective December 27, 2001 - February 21, 2002)

- **Instrument Landing System (ILS)** – is designed to provide an approach path for exact alignment and descent of an aircraft on final approach to a runway. The ground equipment consists of two highly directional transmitting systems and, along the approach, three (or fewer) marker beacons. The directional transmitters are known as the localizer and glide slope transmitters. Table 1.6.2.21-5 provides the information for the ILS system.

**Table 1.6.2.21-5**  
**ILS Information**  
**Rock Hill/York County Airport (Bryant Field)**

NAVAID Information	
ILS/DME Frequency (MHZ)	108.5
Identifier	I-UZA
Approach Runway	Runway 02
Final Approach Fix	LOM RALLY NDB

Source: USDOT, FAA Airport/Facility Directory Southeast U.S. (Effective December 27, 2001 – February 21, 2002)

- **Global Positioning System (GPS)** – is a U.S. satellite-based radio navigational, positioning, and time transfer system operated by the Department of Defense (DOD). The system provides highly accurate position and velocity information and precise time on a continuous global basis to an unlimited number of properly equipped users. The system is unaffected by weather and provides a worldwide common grid reference

system based on the earth-fixed coordinate system. Since GPS is a user-based system (i.e., independent of ground-based radio navigational aids), domestic Enroute and Terminal IFR operations can be conducted as soon as proper avionics systems are installed in aircraft. The avionics necessary to receive all of the ground-based facilities appropriate for the route to the destination airport and any required alternate airport must be installed and operational. Ground-based facilities necessary for these routes must also be operational.

### 1.6.2.22 Airfield Electrical System

The airfield electrical system at Rock Hill/York County Airport (Bryant Field) is in good condition. The existing electrical vault and control systems were moved into the terminal building in the spring of 1999.

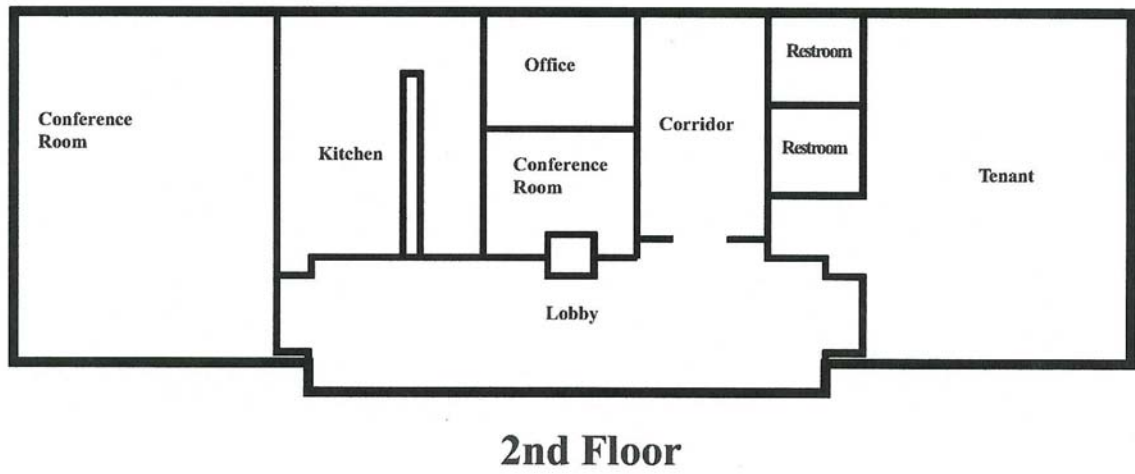
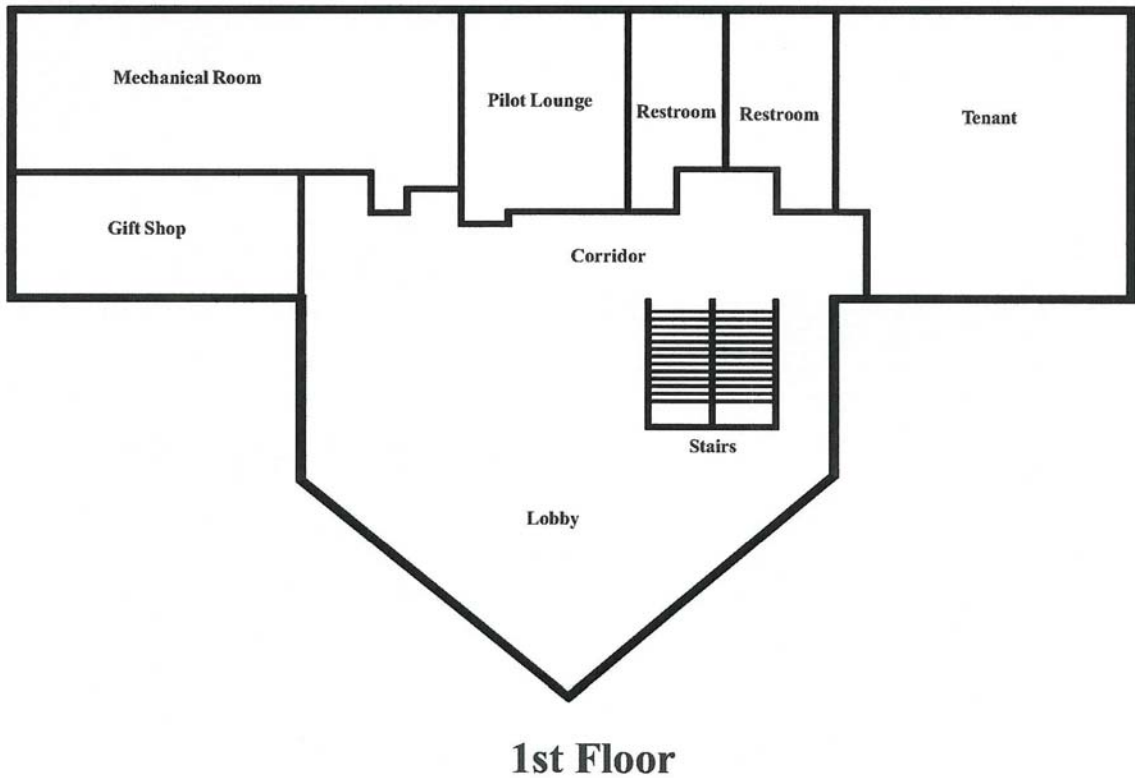
## 1.6.3 Landside

### 1.6.3.1 Terminal Building

The Airport's terminal building is designed for the business user (refer to Figure 1.6.3.1-1, page 1-51). It has a large and small conference room for hourly, half-day, and full-day rent. There is a large concourse downstairs with a business table, pilot lounge, bookstore, and flight planning facilities.

**Table 1.6.3.1-1**  
**Approximate Terminal Space Allocation**  
**Rock Hill/York County Airport (Bryant Field)**

Area	Square Footage	
	First Floor	Second Floor
Manager's Office		135
Tenant	749	758
Small Conference Room		141
Large Conference Room		713
Kitchen		237
Storage		96
Corridor	434	563
Entrance Corridor		230
Restrooms		120
Elevator	11	11
Other/Supports/Etc.	226	3
Lobby (stairs 154 sf)	1,352	
Mechanical	621	
Pilot Lounge	265	



**Figure 1.6.3.1-1 – Existing Terminal Area Floor Plan**

Source: Odell & Associates (1997)

**Table 1.6.3.1-1**  
**Approximate Terminal Space Allocation**  
**Rock Hill/York County Airport (Bryant Field)**

Area	Square Footage	
	First Floor	Second Floor
Pilot Lounge Restroom	38	
Gift Shop	325	
Men's Restroom	169	
Women's Restroom	169	
Total	4,359	3,007
<b>Grand Total</b>		<b>7,366</b>

Source: Odell & Associates (1997)  
Talbert & Bright, Inc. (September 2002)

### 1.6.3.2 Automobile Parking

As shown in Table 1.6.3.2-1, the terminal building automobile parking lot has a total of 64 spaces. The parking lot is in excellent condition with curbed grass dividers and ten high quality light poles. During the weeks of September 2 and 9, 2002, the vehicle occupancy ranged from 30% to 40% at midday. The FBO (Skytech) automobile parking area is also a high quality lot with 25 marked spaces and 4 light poles. The general occupancy rate of this parking area during early September 2002 ranged from 43% to 48%.

**Table 1.6.3.2-1**  
**Automobile Parking Summary**  
**Rock Hill/York County Airport (Bryant Field)**

Building	Regular Spaces	Handicap Spaces	Other	Remarks
Terminal	57	4	3 (rental)	Paved Good Condition 10 Light Poles
Skytech Hangar	24	1	3 (unmarked)	Paved Good Condition 4 Light Poles
Avionics			30+	Gravel Street Pole-Lights

Source: Rock Hill/York County Airport (Bryant Field) (September 2002)



### 1.6.3.3 Hangars

As shown in Table 1.6.3.3-1, a variety of hangars are provided at the Rock Hill Airport. Near the “South Apron,” 29 shade-ports and 7 port-a-ports are located. These facilities house primarily single-engine aircraft and on occasion twin-engine aircraft. The “Middle Apron” conventional hangars are now used for twin-engine aircraft storage. Taxiway “J” houses 59 T-hangar units primarily for single-engine aircraft. Sixteen (16) Taxiway “J” T-hangar units are under construction. Three (3) hangars associated with industrial buildings in the Airport Industrial Park off Taxiway “J” were not utilized as of September 2002.



**Table 1.6.3.3-1  
Hangar Buildings  
Rock Hill/York County Airport (Bryant Field)**

Building Description	Square Footage	Number of		Total Aircraft	Building Condition
		Aircraft Per Unit	Number of Units		
Middle Ramp					
Conventional Hangar	4,800	1-twin-engine	1	1	Good
Conventional Hangar	2,400	1-twin-engine	1	1	Good
Office	1,500				
T-Hangar Shade Ports	12,375	10	1	10	Good
	12,375	10	1	10	Good
	14,025	9	1	9	Good
Port-a-Ports		1	7	7	Good
FBO - Maintenance Hangar	10,000	N/A	N/A	N/A	New
Office – Skytech	5,000	N/A	N/A	N/A	New

**Table 1.6.3.3-1  
Hangar Buildings  
Rock Hill/York County Airport (Bryant Field)**

Building Description	Square Footage	Aircraft Per Unit	Number of Units	Total Aircraft	Building Condition
T-Hangars (Taxiway "J")	12,650*	10	4	40	New
	10,450*	8	2	16	New
	7,900*	3	1	3	New
	Subtotal			59	
To Be Constructed	10,450*	8	2	16	
Hangars Attached to Industries at Airport Industrial Park		1	3	0	Average
	Total			113	

\* – Square footage estimated  
Source: Talbert & Bright, Inc. (September 2002)

#### 1.6.3.4 ARFF and Security

The City and County police provide security on a periodic patrol basis.

ARFF support is provided by a manned City fire station four miles away and by a volunteer station in Tirzah (four miles away)

#### 1.6.3.5 Snow Removal

A snow blade is available, which is attached to a City truck for snow removal.

### 1.7 FIELD MAINTENANCE EQUIPMENT AND STORAGE

City crews and equipment on a regular basis provide field maintenance. Equipment is stored off-site at the City of Rock Hill's Operations Center.

### 1.8 SOLID WASTE DISPOSAL

Solid waste disposal is provided by the City of Rock Hill.

## 1.9 ELECTRICAL POWER

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Electrical power is provided by the City of Rock Hill.

## 1.10 WATER/SANITARY SEWER UTILITIES

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Water and sewer service is provided by the City of Rock Hill.

## 1.11 TELECOMMUNICATIONS

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Telecommunications is provided by Comporium Communications (<http://www.comporium.com/>).

## 1.12 EXISTING PLANNING STUDIES

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Table 1.12-1 outlines the reports and studies that were reviewed in an effort to gather pertinent data for this chapter.

**Table 1.12-1**  
**Planning Document Resource List**  
**Rock Hill/York County Airport (Bryant Field)**

Publication	Date
National Plan of Integrated Airport Systems	March 1999
South Carolina Airport System Plan	February 1992
Economic Impact of Civilian Aviation in South Carolina	1990
Source: Talbert & Bright, Inc. (August 2002)	

