

Chapter 2.0

Inventory of Existing Conditions



BROOKSVILLE - TAMPA BAY REGIONAL AIRPORT
& TECHNOLOGY CENTER



Michael Baker
INTERNATIONAL

2.0 INVENTORY OF EXISTING CONDITIONS

2.1 Background

The master planning process requires the gathering of information related to the existing conditions of the airport. This information serves as the basis for future steps in the planning process. As such, information related to the Brooksville-Tampa Bay Regional Airport (BKV) and its surrounding areas was collected in order to evaluate the future aviation needs of the community. Data collected in this phase provides an inventory of the following:

- ➔ Existing physical facilities: runway, taxiways, aircraft parking aprons, navigational aids, airport terminal, and facility areas for general aviation, corporate, and aviation support activities.
- ➔ The airport's overall role in west central Florida: development history, location, and access relationship to other transportation modes.
- ➔ Previous studies that contain information related to the development and eventual implementation of projects at BKV.

In order to obtain an accurate depiction of BKV and its surrounding community, it was necessary to conduct an inventory of data to address these and other issues from a variety of sources including:

- ➔ Interviews with airport personnel
- ➔ Interviews with BKV users and tenants
- ➔ Coordination with local, state, and federal agencies
- ➔ Research and review of previous airport planning analyses and studies
- ➔ Review of aerial photography, mapping, and facility layout plans
- ➔ Review of facility directories, approach plates, sectional charts, etc.
- ➔ Reference materials such as FAA publications, activity databases, and planning guidelines
- ➔ Review of airport and FAA statistical reports

2.2 Airport Role

Over the past 100 years of flight, general aviation airports have evolved from simple landing strips to complex aviation centers. However, the way the industry categorizes them has not kept pace. In May 2012, the FAA completed a study, General Aviation Airports: A National Asset, to examine the roles that general aviation airports play in our national aviation system to ensure that policy makers plan and invest wisely. Airports serving mostly general aviation operators have been divided into four categories:

- ➔ National
- ➔ Regional
- ➔ Local
- ➔ Basic

BKV is a public use general aviation facility that is categorized as a regional airport. Airports identified in this category support regional economies by connecting communities to statewide and interstate markets. On average, regional airports typically experience high levels of activity with some jets and multi-engine propeller aircraft. In addition to the FAA's analysis, the most recent

update of the Continuing Florida Aviation System Planning Process (CFASPP) has further identified that BKV is best suited for providing Recreational/Sport, Tourism, Flight Training, Corporate, Business/Recreational, and Air Cargo Services.

2.3 Airport History

Brooksville-Tampa Bay Regional Airport, like many general aviation airports, is a former WWII military airfield. The War Department constructed a complete operational training facility at the site at the start of WWII. The project consisted of runways, taxiways, aprons, roads, utility systems, and about 150 buildings and structures. The Brooksville Army Air Field was used as an auxiliary airfield of MacDill Field and Drew Field for training pilots and ground crews during the war. Operations at this field began in November 1942 with the arrival of the 1st Bomb Squadron. The 9th Bombardment Group used the airport for training on B-17 Flying Fortress and B-24 Liberators. The bomber crews from Brooksville regularly made practice runs to the Avon Park and Osprey Bombing Ranges.

The site remained active until late 1945, then began concluding its activities and closing down. The Army determined that the site was surplus to their needs and reported it excess to the War Assets Administration (WAA) between April 1946 and June 1947. The WAA sold or removed most of the improvements for off-site use and later conveyed the acreage and remaining improvements to the city of Brooksville in 1948. Shortly thereafter, the city of Brooksville transferred the property to Hernando County.

Today, the airport's two runway airfield is capable of accommodating general aviation/private, corporate, military, and other larger aircraft that are associated with commercial activity. BKV has onsite rail facilities for possible direct-by-rail access to the deep water Port of Tampa. Interstate 75, U.S. 41 and U.S. 19 are nearby, and the adjacent Suncoast Parkway has streamlined travel time to Tampa considerably. With over 125 businesses, the Technology Center is home to world class manufacturers and aerospace suppliers. Because Tampa International Airport (TPA) is a short drive away, BKV does not serve the general public through commercial airlines.

2.4 Location / Locale

The Hernando County Board of County Commissioners (BOCC) is the governing body that owns the Brooksville-Tampa Bay Regional Airport and controls the operations thereof. The BOCC has five commissioners that represent their respective districts within the county. BKV is located approximately six miles southwest of Brooksville, and is situated on 2,403 acres that is well-suited for commercial and/or industrial development. **Figure 2-1** illustrates the location of the airport in relation to the State of Florida and Brooksville. There are several commercial service airports located within 60 nautical miles of BKV including TPA (30 nautical miles south), St. Pete-Clearwater International (PIE) (36 nautical miles southwest), Orlando International Airport (MCO) (60 nautical miles east), and Sarasota-Bradenton International (SRQ) (65 nautical miles south). **Table 2-1** provides a brief comparison of the public airports in the area along with their respective facilities and associated distances from BKV.

**Table 2-1
Public Airports In The Region**

Airport	NM from BKV	Runways	Published Instrument Approach Procedures
Pilot County Airport (X05)	9 S	18-36 (3,700' x 75')	None
Inverness Airport (INF)	21 NE	1-19 (5,001' x 75')	RNAV (GPS)
Zephyrhills Municipal Airport (ZPH)	22 SE	4-22 (4,999' x 100') 18-36 (4,954' x 100')	GPS, NDB
Crystal River Airport (CGC)	25 NW	18-36 (2,666' x 100') 9-25 (4,557' x 75')	RNAV (GPS)
Tampa Executive Airport (VDF)	28 SE	18-36 (3,259' x 75') 5-23 (5,000' x 100')	ILS, LOC, RNAV (GPS)
Tampa International (TPA)	30 SW	19R-1L (11,002' x 150') 19L-1R (8,300' x 150') 10-28 (6,999' x 150')	ILS, LOC, RNAV (GPS)
Plant City Airport (PCM)	32	10-28 (3,948' x 75')	RNAV (GPS), VOR
Peter O. Knight Airport (TPF)	33 S	4-22 (3,580' x 100') 18-36 (2,687' x 75')	RNAV (GPS), NDB
Clearwater Airpark (CLW)	34 SW	16-34 (4,108' x 75')	None
St. Pete-Clearwater International (PIE)	36 SW	18R-36 L (4,000' x 75') 18L-36R (9,730' x 150') 9-27 (4,712' x 150') 4-22 (5,903' x 150')	ILS, LOC, RNAV (GPS), VOR/DME
Albert Whited Airport (SPG)	43 SW	7-25 (3,677' x 75') 18-36 (2,864' x 150')	RNAV (GPS), VOR
Source: FAA Terminal Procedures Publication (TPP) effective 2/6/2014 through 3/6/2014.			

2.5 Previous Studies

During the course of this planning effort, previous studies were reviewed and utilized whenever possible in order to gather as much pertinent background information prior to developing forecasts and development recommendations. Over the past several years, there have been several studies completed by state and federal agencies regarding BKV. Examples of these studies include but are not limited to the airport's previous master plan update, Continuing Florida Aviation System Planning Process (CFASPP), feasibility studies, and prior activity forecasts. The following sections provide an overview of the 2006 Master Plan Update, and the Continuing Florida Aviation System Planning Process.

2006 Master Plan Update

The previous Master Plan Update for BKV was completed in 2006 and included the thought and reasoning behind proposed development recommendations. Therefore, the previous study provides insight that is useful for conducting this current planning effort. The 2006 Master Plan Update included recommendations to expand the existing Runway 27 to approximately 8,000 feet and to construct full-length parallel taxiways along the inner portions of the airfield. The study also recommended additional corporate and T-hangar developments. Since the completion of the 2006 Master Plan Update, a new Airport Traffic Control Tower (ATCT) was constructed and several of the recommendations from the study have either been completed or are under construction at BKV. The airport is also going through the process of rebranding itself as a premier aviation facility and science and technology center. Given these changes, and that more accurate activity data is now available from the ATCT, the need for a new Master Plan Update (MPU) was justified to reevaluate the airport's long-term needs.

Continuing Florida Aviation System Planning Process (CFASPP)

The CFASPP was established by the FAA and FDOT because of the need for a method to help maintain a viable statewide aviation environment. This process is a method used within Florida to continually monitor the aviation environment and determine the development requirements to best meet projected aviation demands. The most recent updates for BKV pertaining to airport roles, existing and future demand, and system requirements were reviewed and used as appropriate for the current update of the BKV Airport Master Plan.

2.6 Airport Access

The Brooksville-Tampa Bay Regional Airport and Technology Center is bounded on the west, north and east by major roadways. U.S. 41 runs parallel to the airport's eastern boundary. The four-lane arterial roadway has historically served as the primary access to, and entry into, the airport. Spring Hill Drive, a four-lane county arterial roadway, was constructed generally along the airport's northern boundary and provides major access to the Technology Center and Airport Administration offices. The Suncoast Parkway, which lies along the airport's western boundary, is a four-lane limited-access toll road with entry/exit points to the south (County Line Road) and north (Spring Hill Drive) of the airport.

There are several points of access into the airport property from the surrounding roadway network. From U.S. 41, there are two access drives into the FBO area and one into the fire station. Railpark Drive, a two lane county roadway constructed along the south boundary of the Southwest Florida Water Management District office parcel, extends to American Flyer Drive which leads to Runway Drive. American Flyer Drive serves the eastern portion of the Technology Center, which includes hangars along the east side of Runway 3-21. Runway Drive, an east-west, two-lane county road emanating from U.S. 41, has been the historic point of access to the interior of the airport, crossing at the south end of Runway 3-21, behind a key pad-activated gate. Sgt. Lea Mills Boulevard is a two-lane county road that extends west from U.S. 41 along the airport's southern boundary and ends at Corporate Boulevard.

There are four points of access from Spring Hill Drive, three of which enter into the Technology Center as two-lane public roads. The fourth access drive goes directly to a private aviation facility. On the west side of the airport, a two-lane county roadway (Aerial Way) extends south from Spring Hill Drive through the Technology Center near the west end of Runway 9-27. Aerial Way terminates at the airport's sole access road from the west (Corporate Boulevard), a two-lane county road which crosses the Suncoast Parkway as an overpass and connects to Anderson Snow Road, a County north-south collector roadway from Spring Hill Drive to County Line Road. Corporate Boulevard continues beyond Aerial Way along the airport's west side and ends at Sgt. Lea Mills Boulevard. Radial Road provides an external point of access to the southwest, which serves the Airport Subregional Wastewater Treatment Plant and a couple of parcels of land which were landlocked by the construction of the Suncoast Parkway.

2.7 Climate

Because Brooksville is located in west central Florida near the warm waters of the Gulf of Mexico, the temperatures remain relatively mild throughout the year. The average low in the summer months

(June, July, and August) has historically been 72 degrees; whereas, the average high during the same months has historically been 91 degrees. The lowest recorded temperature in Brooksville was 13 degrees in 1985 and the highest recorded temperature was 110 degrees in 1985. June is the average warmest month and conversely January is the average coldest month. Historical average precipitation in the area varies from 2.09 inches (November) to 8.24 inches (July). Historical wind data obtained from the National Climatic Data Center (NCDC) from 2004 through 2013 revealed that the predominant wind direction at BKV is from the west.

Wind Data

Table 2-2 presents the results of an updated wind analysis for BKV which utilized observations obtained from the on-airport Automated Surface Observing System (ASOS) during the years 2004 through 2013. **Figure 2-2** illustrates All Weather, VFR, and IFR wind coverage by direction at BKV with no tailwind component (i.e., assuming that the runway can only be used in one direction). The highlighted sections of the figure represent the runway end that would be preferred for approaches/departures based on the wind direction.

Table 2-2												
Runways 3-21 and 9-27 Coverage Analysis (2004-2013)												
	All Weather Coverage % (Knots)				Visual Flight Rule (VFR) Coverage % (Knots)				Instrument Flight Rule (IFR) Coverage % (Knots)			
Runway	10.5	13	16	20	10.5	13	16	20	10.5	13	16	20
3-21	95.01	97.32	99.33	99.86	94.46	97.09	99.34	99.88	96.95	98.13	99.26	99.78
9-27	97.57	98.89	99.78	99.95	97.45	98.89	99.82	99.98	98.00	98.93	99.65	99.89
Combined	99.35	99.86	99.97	100.00	99.36	99.89	99.99	100.00	99.33	99.77	99.92	99.98
	Ceiling = All Visibility = All 117,593 Observations (100.00%)				Ceiling ≥ 1,000' Visibility ≥ 3 Miles 92,231 Observations (78.19%)				Ceiling < 1,000' and ≥ 200' Visibility < 3 Miles and ≥ ½-Mile 25,599 Observations (21.7%)			
Source: Station 722014, Hernando County, Florida, 2004-2013.												

Brooksville - Tampa Bay Regional Airport

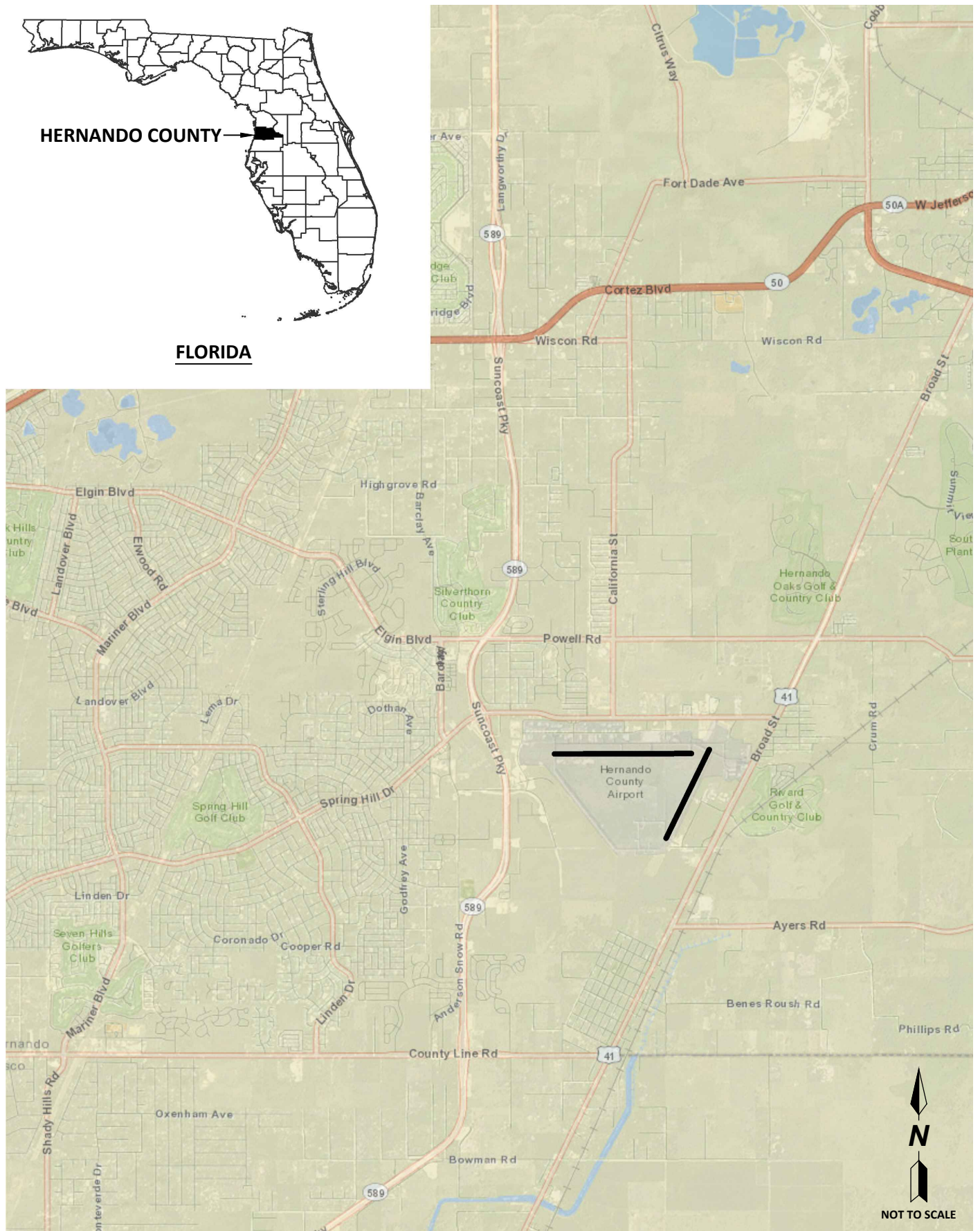
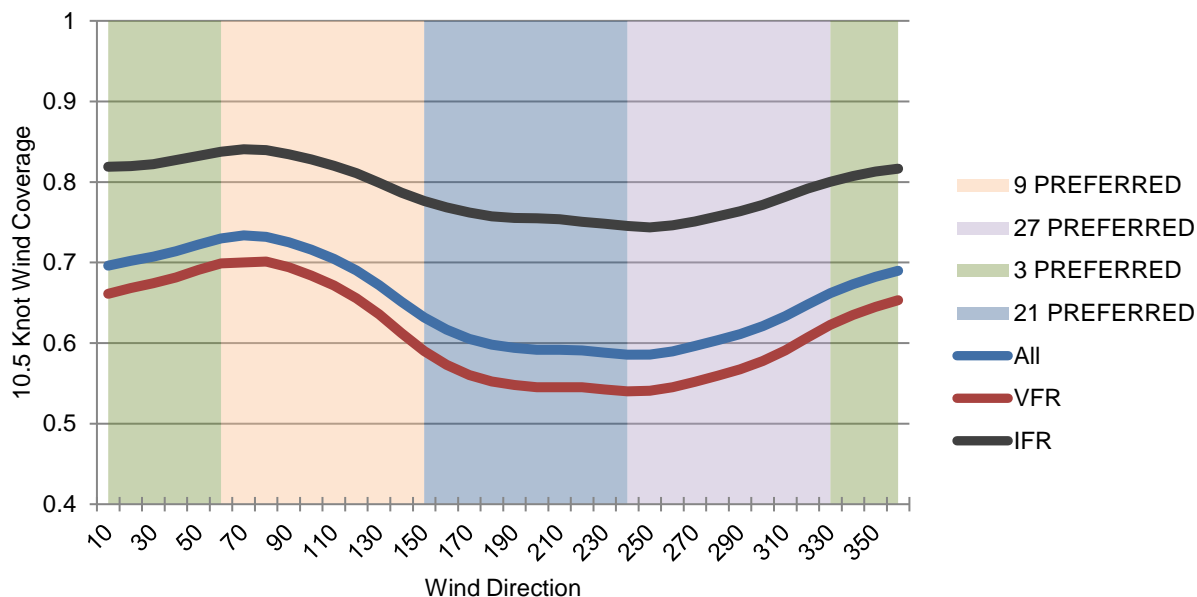


Figure 2-1 Location / Vicinity Map

Figure 2-2
Wind Coverage by Direction



Source: Station 722014, Hernando County, Florida, 2004-2013.

2.8 Landside Facilities

The inventory of airport landside facilities includes all facilities located within the airport boundaries that are not required for aircraft movement and air navigation. Some examples of these facilities include but are not limited to hangar structures, parking, fuel storage and fueling facilities, fencing, and terminal facilities. A graphic denoting the various landside facilities is shown in **Figure 2-3**.

Based on the geometric layout of the active runways and taxiways, the Brooksville-Tampa Bay Regional Airport and Technology Center has been divided into four distinct areas. Throughout the remainder of this Master Plan Update, these areas will be referred to as:

- ➔ **North Side** – The area located on the north side of Runway 9-27 includes the Technology Center and the Northeast Hangar Area. On the airside, this area is served primarily by Taxiway A, Runway 9-27, and their associated connector taxiways and taxilanes. Landside access to this area is served by Flight Path Drive and Aviation Loop Drive. Entrance to the airport on the north side is provided by Spring Hill Drive.
- ➔ **East Side** – The entire area located on the east side of Runway 3-21 and Runway end 27. Taxiway B provides airfield access into this area. Landside access is from U.S. 41.
- ➔ **West Side** – The area located to the west of the airfield, including the Technology Center and the closed runway. Access to the west side of the airport is provided from Aerial Way from the north, Corporate Boulevard from the west, and Sgt. Lea Mills Boulevard from the east.
- ➔ **Midfield** – The area bounded by Runway 9-27 on the north, Runway 3-21 on the east, Sgt. Lea Mills Boulevard to the south, and the closed runway to the west.

Currently the predominant area of general aviation development at BKV is concentrated on the east side of the airport near U.S. 41.

Technology Center

With over 125 businesses, the Brooksville-Tampa Bay Regional Airport and Technology Center is home to world class manufacturers and aerospace suppliers. The Technology Center encompasses approximately 430 acres and leases parcels of land for building and ready-to-build sites between two to 50 acres. A substantial portion of the Technology Center is situated along the north, south, and west sides of the airfield and is adjacent to the Suncoast Parkway. On the airport's southeast side, the Technology Center offers rail-side lots with access to track loading near U.S. 41.

Airport Administration and Maintenance

The airport administration and maintenance facilities are located on the north side of the airport near the intersection of Sam Pearson Way and Flight Path Drive. The 5,559 square foot administration facility is home to airport staff and the Hernando County Office of Business Development. The facility also includes a conference room that is used regularly by Hernando County staff and airport tenants.

The airport maintenance facility is located airside adjacent to an aircraft parking apron near the southeast corner on the administration building. The 1,500 square foot facility is used by airport staff to store and maintain equipment associated with operating the airport

Hangars and Tie-Downs

Several aviation-related tenants are located within the Technology Center, north, northwest, and east of the airfield. These tenants maintain conventional/corporate hangars of different sizes and provide a variety of aviation-related services on the airport. Several of the largest hangars are used for maintenance and aircraft storage by the FBO. T-hangars and shade hangars are concentrated within the American Aviation FBO leasehold and along the east side of Taxiway B. The various airport hangars and their associated sizes are summarized in **Table 2-3**.

Fixed Base Operator

The airport is home to a full service Fixed Base Operator (FBO): American Aviation. The FBO is responsible for aircraft services such as passenger handling, aircraft fueling, parking, maintenance, charters, rentals, and flight training. An FBO also provides many ground handling services such as car rentals, hotel reservations, and pilot lounge facilities. A detailed view of the FBO and its respective terminal area facilities is graphically depicted in **Figures 2-4**.

American Aviation has been operating at BKV since 1979. The FBO's facilities are located adjacent to U.S. 41 on the northeast side of the airport near Runway 21. American Aviation maintains approximately 71,000 square feet of conventional hangar space, 40 T-hangars, 16 shade hangars, and apron facilities capable of accommodating up to 60 tie-down spaces.

Vehicular Parking

Businesses located at the Brooksville-Tampa Bay Regional Airport and Technology Center have designated parking areas for their employees and patrons. For the purpose of this study, vehicular parking associated with the FBO, hangars, and airport support facilities were identified as part of the inventory of existing facilities. The information depicted in **Table 2-3** is used later in this study to identify future parking needs.

Fencing / Security

The entire perimeter of the airport is securely enclosed by a six-foot high fence that is topped with three strands of barbed wire. Gates are provided at various locations throughout the property as needed for airside access. Airside access at motorized gate locations is accomplished by key code entry and/or remote control; whereas, remotely located gates are chained and locked with padlocks that can only be accessed by airport personnel.

Fuel Storage Facilities

The FBO maintains fuel storage facilities within its respective leasehold. Fuel storage facilities at American Aviation are located on the west side of the FBO's apron area. The fuel farm includes two 12,000 gallon tanks, one containing Jet A fuel and the other containing AvGas. Four fuel trucks also provide fueling services to aircraft. These include: two 3,000 gallon Jet A fuel trucks, and two AvGas – one a 2,000 gallon truck and the other a 1,200 gallon truck.

Fuel storage facilities are also located on the south side of the apron area associated with the westside maintenance complex. The fuel farm includes two Jet A fuel tanks – one 12,000 gallon and one 10,000 gallon tank, and one 4,000 gallon AvGas fuel tank. Also, 24/7 self-service AvGas fueling is offered at this facility. Four fuel trucks also provide fueling services to aircraft.

In addition to the FBO facilities, the Florida Army National Guard and Army Aviation Support Unit, Jet ICU, and Hernando County Sheriff's Department/Bay Flight own fuel storage facilities which are utilized for their own private fueling activities. Because private fueling activities are not considered in determining BKV's future needs, only the FBO facilities are evaluated later in the study from the standpoint of future airport requirements.

Fire Station

BKV features an on-site fire department to provide emergency and non-emergency services to the airport and Technology Center tenants. Personnel regularly train alongside with members of the local Florida Army National Guard and Army Aviation Support Facility stationed at the airport along with emergency operations staff, sheriff department personnel, and county leadership in HAZMAT exercises and disaster drills.

Hernando County Fire Station #14 is located on the far northeastern side of the American Aviation FBO apron and is manned 24 hours a day. The facility is currently equipped with an ALS (Advanced Life Support) engine, a brush truck and an ARFF (Aircraft Rescue and Firefighting) truck. Additional support is provided by the Hernando County Northwest Fire District, located five miles away from the airport, providing response times of less than 10 minutes.

**Table 2-3
Existing Airport Facilities**

Description	Size	Notes
Hangar Facilities		
Chapman Corporate Hangar	5,625 SF	
Neubert Corporate Hangar	10,000 SF	
NE Corporate Hangar	9,672 SF	
NE Corporate Hangar	10,000 SF	
NE Corporate Hangar	5,920 SF	
NE Corporate Hangar	6,400 SF	
NE Corporate Hangar	6,400 SF	
Dome Hangars (8)	8,600 SF	8 units (1,075 SF each)
Vacant Corporate Hangar	10,000 SF	
Old Sheriff's Hangar	3,600 SF	
American Aviation (FBO)	12,500 SF	
American Aviation (FBO)	15,000 SF	
American Aviation (FBO)	31,500 SF	
American Aviation (FBO)	12,000 SF	
T-Hangars	45,500 SF	40 units
Shade Hangars	17,000 SF	16 units
EAA Hangar	4,200 SF	
Jet ICU	17,500 SF	
Sheriff's Department/Bay Flight	3,500 SF	
SE Corporate Hangar	9,025 SF	
SE Corporate Hangar	6,000 SF	
SE Corporate Hangar	4,675 SF	
T-Hangars	33,525 SF	28 units
Westside Maintenance Facility	22,100 SF	
Subtotal	310,242 SF	
Apron Facilities		
Chapman Corporate Hangar	14,348 SF	Asphalt
Airport Administration	14,455 SF	Asphalt
Neubert Corporate Hangar	23,982 SF	Asphalt
NE Corporate Hangar	4,369 SF	Asphalt
NE Corporate Hangar	7,813 SF	Asphalt
NE Corporate Hangar	5,952 SF	Asphalt
NE Corporate Hangar	5,952 SF	Asphalt
NE Corporate Hangar	4,369 SF	Asphalt
FL Army National Guard	379,484 SF	Asphalt with Concrete Pads
Vacant Corporate Hangar	30,242 SF	Asphalt
American Aviation (FBO)	403,286 SF	Asphalt
Jet ICU	17,490 SF	Asphalt
Sheriff's Department/Bay Flight	7,821 SF	Asphalt
SE Corporate Hangars	47,923 SF	Asphalt
Westside Maintenance Facility	96,898 SF	Asphalt
Subtotal	1,064,384 SF	
Buildings / Other		
Airport Administration	5,559 SF	
Airport Maintenance	1,500 SF	
American Aviation FBO Terminal	3,750 SF	
Westside Maintenance Facility Administration	4,125 SF	
Fire Station #14	5,950 SF	
Subtotal	20,884 SF	
Auto Parking		

**Table 2-3
Existing Airport Facilities**

Description	Size	Notes
Airport Administration	24 spaces	
NE Corporate Hangars	11 spaces	
Dome Hangars	None	
Fire Station #14	6 spaces	
American Aviation	68 spaces	
Sheriff Department /Bay Flight	11 spaces	
SE T-Hangars	23 spaces	
SE Corporate Hangars	22 spaces	
Westside Maintenance Facility	27 spaces	
Subtotal	192 spaces	
Fuel Facilities		
American Aviation Fuel Storage (Jet-A)	20,000 Gal.	(2) 10,000 Gallon Tanks (Jet-A)
American Aviation Fuel Storage (Avgas)	20,000 Gal.	(2) 10,000 Gallon Tanks (AvGas)
Westside Maintenance Facility (AvGas)	4,000 Gal.	
Westside Maintenance Facility (Jet A)	22,000 Gal.	10,000 Gallon Tank (Jet A) 12,000 Gallon Tank (Jet A)
Subtotal	66,000 Gal.	
Source: Michael Baker Jr., Inc., 2014.		

Brooksville-Tampa Bay Regional Airport



Figure 2-3 Existing Landside Facilities

Brooksville-Tampa Bay Regional Airport

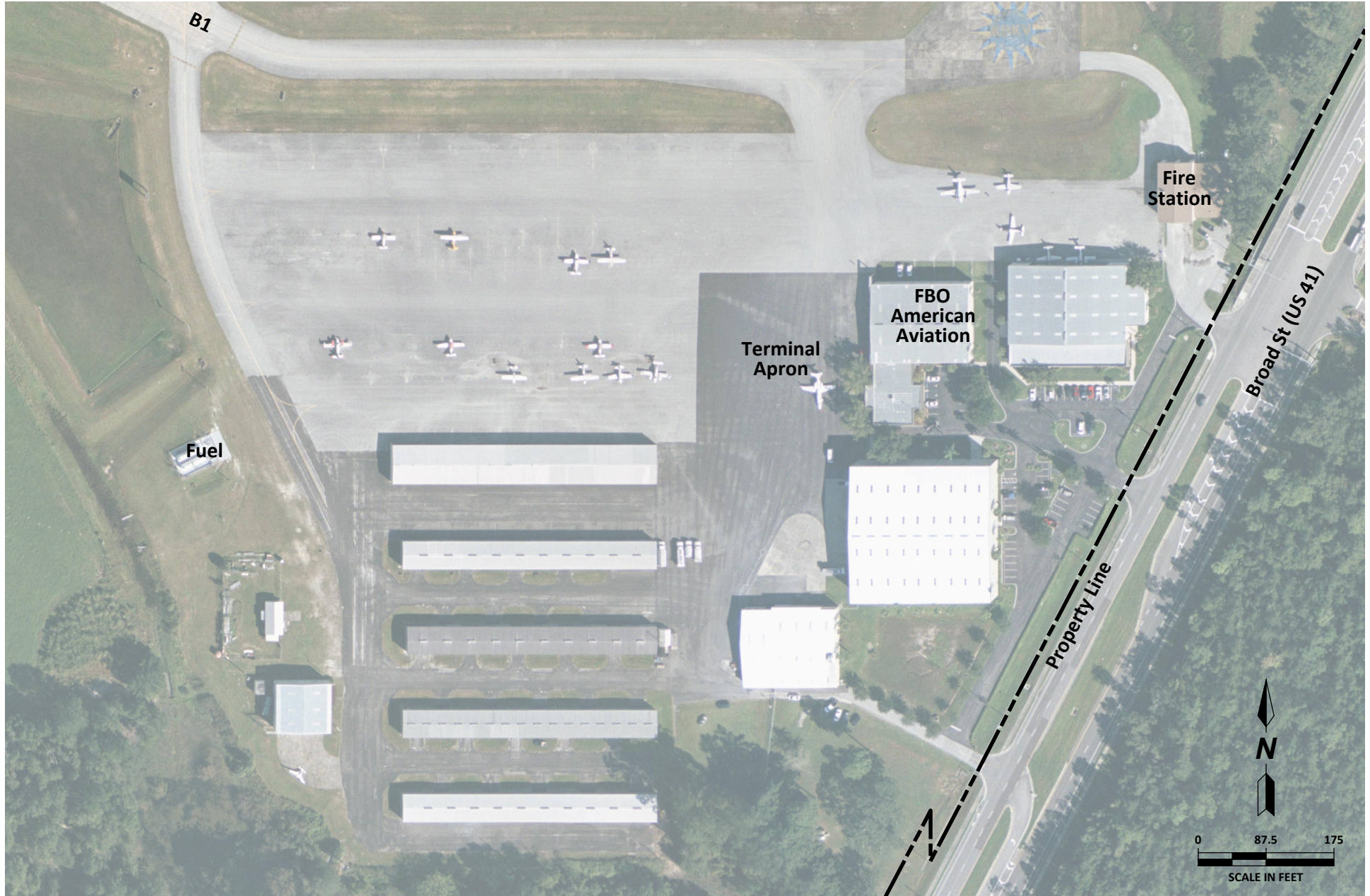


Figure 2-4 FBO & Terminal Area Facilities

2.9 Airside Facilities

The inventory of airside facilities includes all facilities required to support the movement and operation of aircraft. These facilities include the airport's runway, taxiways, taxilanes, apron, airfield lighting, and pavement markings. The existing airfield facilities at BKV are discussed in the following sections and a graphic denoting the various airside facilities is illustrated in **Figure 2-5**.

Runways

There are two active runways at BKV. The primary runway, Runway 9-27, is 7,002 feet long and 150 feet wide. The secondary or crosswind runway, Runway 3-21, has an overall length of 5,015 feet and is 150 feet wide. Both runways are lighted for nighttime operations and are of concrete construction. A visual inspection of Runway 9-27 and Runway 3-21 was performed during the inventory visit conducted as part of this study. During the inventory, the pavement of both runways was found to be in good condition. Joint / crack sealing and spall repair was conducted on all runway pavements in March 2012. The 2014 FAA Digital Airport/Facility Directory documents the existing runway pavement strengths as shown in **Table 2-4**.

Table 2-4	
Runway Pavement Strength	
Runway 9-27	
Single Wheel	90,000 lbs.
Dual Wheel	130,000 lbs.
Single Tandem	165,000 lbs.
Dual Tandem	230,000 lbs.
Runway 3-21	
Single Wheel	50,000 lbs.
Dual Wheel	75,000 lbs.
Single Tandem	95,000 lbs.
Dual Tandem	135,000 lbs.
Source: 2014 FAA Digital Airport/Facility Directory	

Taxiways

There are currently two active taxiways serving the two runways at BKV, as well as multiple connector and exit taxiways that provide access to and from the runway and taxiway systems. All north airfield taxiway pavements are of concrete design, with the exception of Taxiway A-6 and a portion of Taxiway A-3. Joint/crack sealing and spall repair was conducted on all concrete taxiways in March 2012. Taxiway B and its four connector taxiways (B-1, B-2, B-3, and B-4) are of asphalt design. **Table 2-5** describes the location, width, and condition for each.

Taxiway A is the full-length parallel taxiway to Runway 9-27. Located on the north side of the runway, this taxiway also serves the departure end of Runway 21. The taxiway has been constructed to a width of 75 feet and maintains a taxiway centerline to runway centerline spacing of 525 feet. There are two additional connector taxiways associated with Taxiway A as well as two exit taxiways that serve each runway end.

Taxiway A-9 is 75 feet wide and provides access to Runway 9 from Taxiway A. Taxiway A-6 is located approximately 3,420 feet from the Runway 9 threshold and is constructed to a width of 50 feet. Taxiway A-5 is situated approximately 2,020 feet from the Runway 27 threshold and is 75 feet wide.

Taxiway A-3 serves the departure end for Runway 27, and the usable pavement surface varies from 92 feet at its widest point to 85 feet at its narrowest point. Upon visual inspection, the pavement surface for this taxiway showed signs of fatigue with visible cracking and therefore was categorized in fair condition. All four connector taxiways run in a north to south direction and connect Taxiway A to Runway 9-27 at a perpendicular angle. Taxiway A also has multiple entrance/exit taxilanes that provide

airfield access to the tenants of the North Hangar Area on the north side of the airfield. At its eastern end, Taxiway A extends approximately 1,700 feet beyond the threshold of Runway 27, passing through the runway safety area for Runway 21 and ending at a taxilane that services aircraft taxiing to and from the general aviation facilities.

There is also a connector Taxiway B-1 that runs in a northwest to southeast direction and ties into Taxiway A diagonally just beyond connector Taxiway A-3. Taxiway B-1 services Runway 21 and connects Taxiway A to the taxilane that leads into the FBO/general aviation portion of the airfield. There are no designated run-up areas for Taxiway A.

Taxiway B spans the entire length of Runway 3-21. It measures 35 feet in width, and the pavement is in fair condition. It provides access to the threshold end of Runway 21, commencing from connector Taxiway B-1 and running in a northeast to southwest direction. In addition to B-1, there are three other taxiways servicing Taxiway B and Runway 3-21. Taxiway B-2 is 50 feet wide and Taxiways B-4 and B-5 are 35 feet in width. Taxiway B-2 measures 149 feet from hold bar to runway centerline. There are no designated run-up areas for aircraft using Taxiway B.

**Table 2-5
Summary of Existing Airfield Pavements**

Surface	Length (feet)	Width (feet)	Pavement Type	Pavement Condition	Markings	Lighting
Runways						
9-27	7,002	150	Concrete	Good	Precision instrument (9) Non-precision instrument (27)	MIRL
3-21	5,015	150	Concrete	Good	Non-precision instrument	MIRL
Taxiways and Connectors						
A	8,704	75	Concrete	Fair	Centerline	MITL
B	5,020	35	Concrete	Fair	Centerline	MITL
A-9	530	75	Concrete	Fair	Centerline	MITL
A-6	530	50	Asphalt	Fair	Centerline	MITL
A-5	530	75	Concrete	Fair	Centerline	MITL
A-3	530	85 to 92	Concrete/Asphalt	Fair	Centerline	MITL
B-1	775	75	Asphalt	Fair	Centerline	MITL
B-2	240	50	Asphalt	Fair	Centerline	MITL
B-3	240	35	Asphalt	Fair	Centerline	MITL
B-4	240	35	Asphalt	Fair	Centerline	MITL
B-5	240	35	Concrete	Fair	Centerline	MITL
C-9	700	75	Concrete	Fair	Centerline	MITL
Closed Runway	5,050	150	Concrete	Poor	None	None

Source: Michael Baker Jr., Inc., 2014.

Brooksville-Tampa Bay Regional Airport

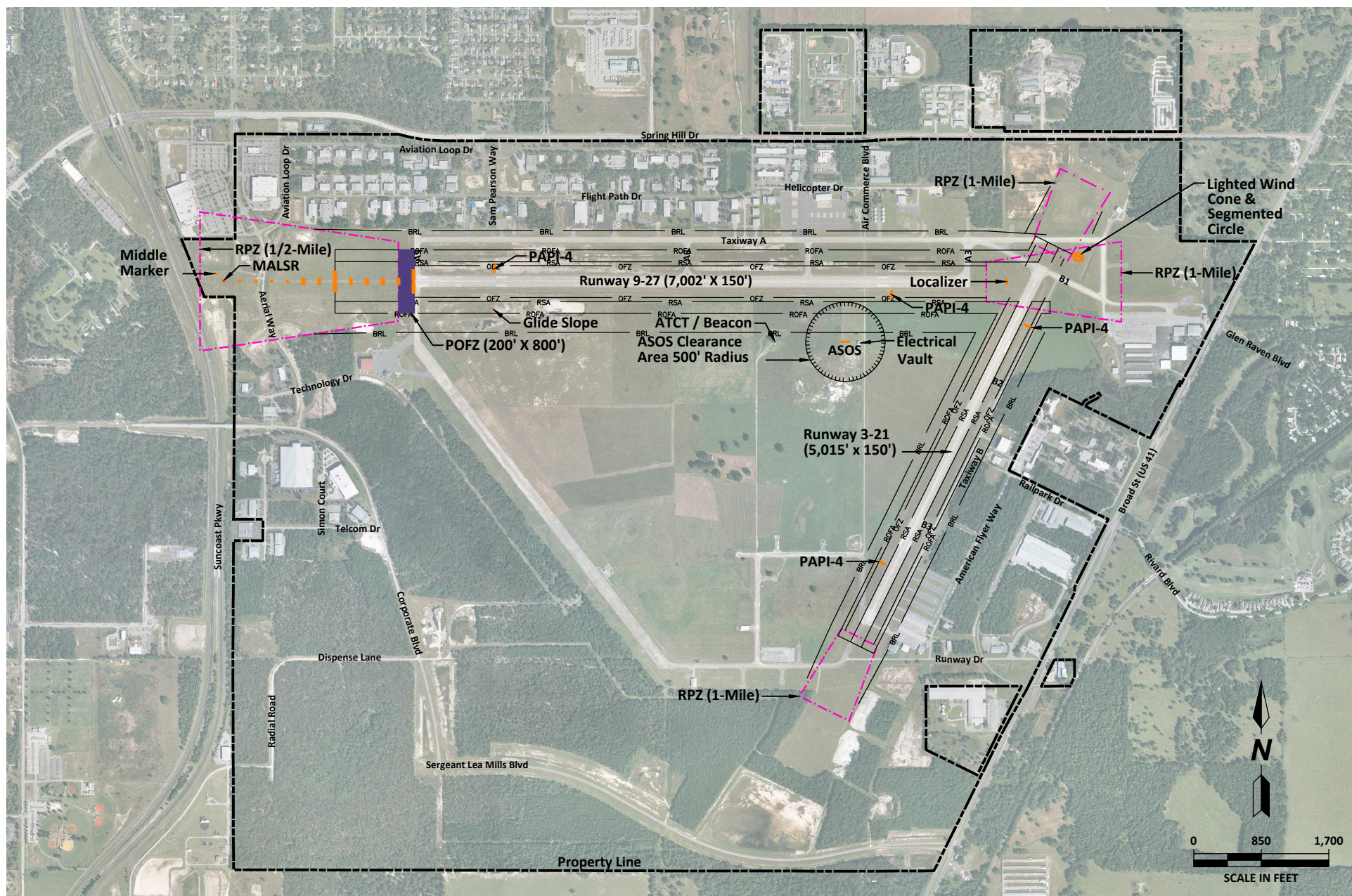


Figure 2-5 Existing Airside Facilities

Pavement Markings

Pavement markings provide the standards for delineating operations on paved areas (runways, taxiways, and aprons) on the airfield. Runway 9 is marked for precision instrument approaches and Runways 27, 3 and 21 are marked to accommodate non-precision approaches. Markings include centerline striping, threshold bars, aiming point markers, side stripes, and runway shoulder markings. The approach ends of all runways are designated with markings that identify the runways by their magnetic azimuth. During the field visit, these markings were observed to be in good condition.

Taxiway markings are also in good condition throughout the airfield. All taxiways are equipped with taxiway centerline strips and hold short lines. At controlled airports, holding position markings identify the location on a taxiway or apron where aircraft are supposed to stop until it is safe to proceed onto the runway. Taxiways at the airport do not have edge markings to delineate the width of the taxiways. All runways and taxiways were cleaned and restriped in 2012.

Airfield Lighting

Airfield lighting is necessary at all airports that intend to accommodate operational activity during nighttime hours and/or during inclement weather conditions. It allows pilots to identify the airport from the air and also helps them maneuver safely on the ground during lowered visibility conditions. All airfield lighting electrical requirements at BKV are provided from the electrical vault located within a fenced area near the ATCT on the south side of Runway 9-27. The electrical vault houses the necessary transformers, controllers, and generators for airfield lighting, signage, and NAVAIDS. The following section discusses the type and condition of airfield lighting systems used at BKV.

Airport Rotating Beacon

The airport's rotating beacon universally indicates the location and presence of an airport at night or during Instrument Meteorological Conditions (IMC). The new beacon at BKV is located on top of the existing airport traffic control tower just west of the airport electrical vault. The beacon is equipped with an optical rotating lighting system that projects two beams of light, one green and one white, 180 degrees apart. The beacon is in excellent condition and is operational during nighttime hours and during poor visibility conditions. The former airport beacon remains in place adjacent to the electrical vault, and stands 35 feet from the security/service road. Although this beacon is operational, it has been decommissioned.

Runway Lighting

Both of the active runways at BKV are equipped with Medium Intensity Runway Lights (MIRLs) along their pavement edge, which are used primarily during night operations. During the evening when the ATCT is closed, pilots can operate the runway lighting by use of the pilot controlled lighting system. This lighting system is operated through the Common Traffic Advisory Frequency (CTAF) of 118.55 MHz. Having the pilot controlled lighting on the CTAF eliminates the need for pilots to change frequencies in order to turn the airfield lights on, thus allowing a continuous listen/watch form of communication on a single frequency. The pilot simply keys the aircraft's microphone to control the runway lighting system.

As part of the runway lighting system, the identification of the runway end, or threshold, is of major importance to a pilot during landing and takeoff. Therefore, runway ends and thresholds are equipped with special lighting to aid in the approach to or identification of the runway end during takeoff and

landing. At BKV, the ends of Runway 9-27 and Runway 3-21 are identified with four threshold lights located towards the sides of each runway. An additional 18 threshold lights are evenly spaced across the end of Runway 9 as part of the approach lighting system. Threshold lights have a two color (red/green) lens and are placed across the end of the runway pavement. The green half of the lens faces approaching aircraft thereby identifying the beginning of the usable runway. The red half of the lens faces the aircraft on takeoff, indicating the end of the usable runway.

A Precision Approach Path Indicator (PAPI) system provides the pilot of an aircraft with visual descent guidance information during the approach to a runway. These lights are typically visible from five miles during the day and up to 20 miles or more at night. PAPIs use a light bar unit that is installed in a single row perpendicular to the runway edge. The lights in the light bar project a beam of white light in the upper segment and red light in the lower segment. Depending on the aircraft's angle in relation to these lights, the pilot will receive a combination that indicates his position relative to the desired glide slope. BKV has a four light PAPI system located on the left side of each runway. The systems are over 20 years old and are currently in the process of being renewed or replaced. In addition to these systems, Runway 9 is equipped with a Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR) which is used in conjunction with various NAVAIDS to provide a full precision instrument approach capability during inclement weather conditions. The MALSR is also over 20 years old and it is difficult to obtain replacement parts. Both runway identification lighting and approach lighting systems are pilot controlled. These fixtures are illuminated with the runway lighting, but do not include changeable intensity control.

Taxiway and Apron Lighting

In addition, all taxiways including connectors are equipped with Medium Intensity Taxiway Lights (MITLs) along the edges that are pilot controlled. However, as with the approach lighting system, the taxiway edge lights are not outfitted with changeable intensity control. There is no apron edge lighting available. However, lighting near the ramp and hangar areas is provided via outdoor lighting affixed to the hangars and poles. At the Westside Maintenance Facility there is some exterior lighting available, but it does not adequately illuminate the area.

Instrument Approaches and Navigational Aids

As stated earlier, Runways 3, 21, and 27 are marked to accommodate non-precision instrument approaches, while Runway 9 is marked to accommodate precision instrument approaches. Runway 9 currently is equipped with a Category-I Instrument Landing System (ILS) approach including a MALSR that extends beyond the runway end, a Middle Marker, and an Outer Marker. The ILS broadcasts on 111.1 MHz with a three letter designate I-OSV and provides for a Decision Height of not less than 200 feet above field elevation when visibility is not less than one-half statute mile.

In addition, each runway end at BKV has non-precision instrument approach capability through the use of Global Positioning Satellites (GPS). By analyzing the time delays of signals received from some of these satellites, air based receivers are able to determine latitude, longitude, and altitude. All four of the GPS straight-in and circling non-precision approaches at each end offer better minimum descent altitudes and visibility requirements.

Wind Cone and Segmented Circle

The purpose of a segmented circle is to help pilots locate the wind cone while in-flight and to identify any special traffic patterns that may exist at the airport. The segmented circle encompasses

360 degrees similar to a compass, and where applicable, traffic pattern and landing strip indicators are provided outside the circle to denote the established traffic patterns. At BKV, there are no traffic pattern or landing strip indicators located outside the segmented circle and for this reason the traffic patterns for both runways are standard left-hand patterns. In this arrangement, pilots make a series of left-hand turns in order to access the approach end of each runway. The wind cone and segmented circle at BKV is centrally located northeast of the Runway 27 threshold between Taxiways A and B1 and is illuminated at night for visibility.

Automated Surface Observing System (ASOS)

BKV is equipped with an on-airport ASOS which is located adjacent to the electrical vault within the midfield portion of the airport. The ASOS was commissioned in 1992 and is used to measure and record weather conditions by using a suite of sensors. ASOS units are implemented cooperatively with the National Weather Service (NWS) and the FAA, which distributes the information to pilots. Specifically, the ASOS at BKV records temperature, visibility, precipitation types and amounts, wind direction and speed, cloud ceiling and barometric pressure, among others.

According to NWS representatives, the equipment is in good working order; however, it is recommended that an Uninterruptable Power Supply (UPS) be installed in the future to protect against power interruptions to the sensors.

Airfield Signage

BKV has a number of illuminated airfield signs which display instruction and guidance information to pilots. Holding designation signage (e.g., runway/taxiway intersection) is identified by white numbers on a red background. Directional and informational signage is identified by black inscriptions on a yellow background; whereas, signs that contain yellow text on a black background identify the runway or taxiway on which the aircraft is located. In addition to informational and directional signage, Runway 9-27 is equipped with runway distance remaining signs that are characterized by single, double-sided white numbers on black backgrounds. The distance to remain signage illustrates numeric digits which represent the quantity of runway available in thousands of feet. These signs are utilized by pilots as a reference during aircraft takeoffs and landings. Currently, additional airfield signage is needed in some locations on the airfield and existing signage is in need of replacement or upgrade as the equipment reaches the end of its useful service life.

Airport Utilities

The facility requirements and development alternatives created in this study are partially dependent upon the airport's ability to provide essential utility service to future development areas. Because existing electrical, drainage, sanitary sewer, and water service is currently provided to existing structures such as businesses throughout the Technology Center, the FBO, hangars and support facilities, it is safe to assume that developments located around the periphery of the airfield will have the ability to easily connect to utilities.

Airspace Environment

BKV is surrounded by Class D airspace within a four nautical mile radius, extending from the surface up to 1,500 feet above Mean Sea Level (MSL). The airspace directly over the airfield is classified as Class E airspace. This Class E category begins at 700 feet Above Ground Level (AGL) and extends upward; however, the airfield is located just inside Tampa Bay's Class B airspace, which

has various floor and ceiling levels. The overlapping Class B airspace begins at 6,000 AGL and extends upward until it meets the next overlapping airspace. It meets up with Class E airspace once again at 10,000 feet AGL and continues as Class E airspace until it meets up with the overlying controlled airspace (Class A) at 17,999 MSL. The airspace north of the airfield falls wholly within Class E airspace, and it extends from 700 feet AGL up to the 18,000-foot MSL floor of Class A airspace (the overlying controlled airspace). Airspace designated as Class B or Mode C designates a high traffic area where air traffic control personnel use transponders to identify, communicate and control aircraft operating within the designated airspace. At BKV, Mode C airspace consists of a 30 nautical mile radius which corresponds to the outer ring of Tampa's Class B airspace. Mode C airspace bisects the airfield in an east to west direction. Class B, D and E airspace are classified as controlled airspace, with specific requirements governing VFR and IFR operations.

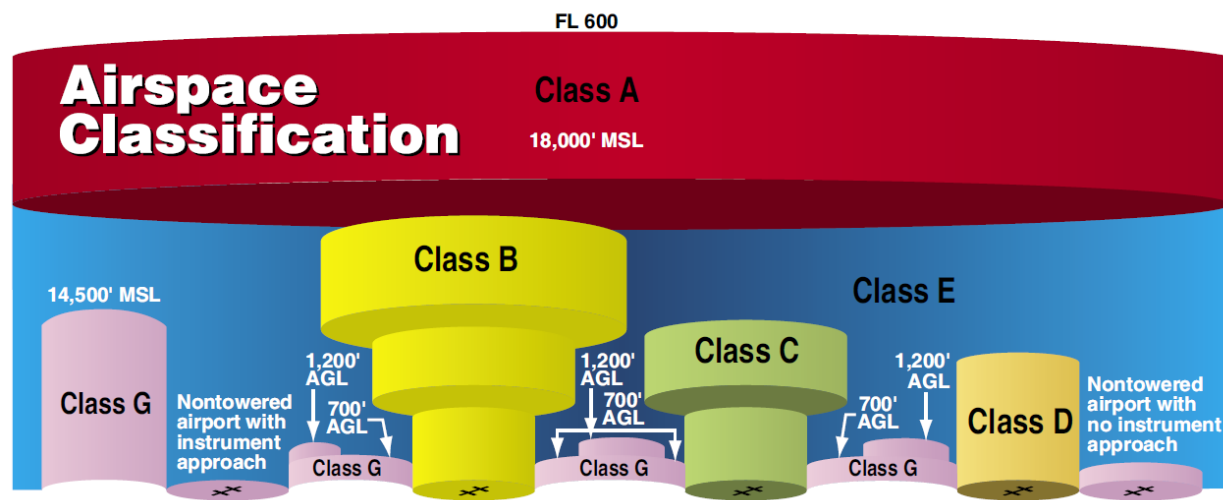
Victor Airways

The airspace environment of BKV is also influenced by two Victor airways. These airways are designated corridors of airspace used for en route navigation by linking VHF Omni-directional Range (VOR) facilities. Victor Airway V7-521 passes through a small portion of the Class E airspace on the northeast side. This northwest/southeast route runs between the VOR facilities at the Lakeland Linder Regional and Cross City Airports. The second Victor Airway, V441-579, passes through the westernmost edge of Class E airspace over the airport. This route runs from the VOR facility at the St. Pete-Clearwater International Airport almost directly north to the VOR facility at the Gainesville Regional Airport.

Airport Traffic Control (ATCT)

The ATCT at BKV is located within the midfield portion of the airport, just west of the electrical vault, and is staffed by Robinson Aviation, Inc. (RVA) between the hours 7:00 a.m. and 10:00 p.m. seven days a week. The ATCT not only oversees aircraft flying within the controlled airspace near BKV, but also the vehicles and aircraft operating on the ground within the defined movement area. Vehicle or aircraft operators must maintain contact with tower personnel in either of these areas, whether on the ground or in the air. ATCT personnel's purpose is to ensure that all movements are coordinated in a safe manner. Pilots that wish to enter or transition through the Class D airspace surrounding BKV must first get clearance from the ATCT. **Figure 2-6** graphically depicts a comparison of the airspace classes by type; whereas, the aeronautical chart for BKV and the surrounding area is shown in **Figure 2-7**.

Figure 2-6
Airspace Classes



Source: FAA 2008 Pilot's Handbook of Aeronautical Knowledge.

2.10 Environmental Factors

Some of the proposed improvement projects at the airport will require environmental permitting through a number of different agencies, each with its own criteria and focus. Future development of the airport and the integration of environmental permitting will be critical to the success of each project as well as to the success of the airport.

Coordination with the appropriate agencies for permitting requirements will be made on an individual basis as each project is funded. Additional details to the possible environmental impacts are included as part of the alternatives analysis in this Master Plan Update.

Brooksville-Tampa Bay Regional Airport

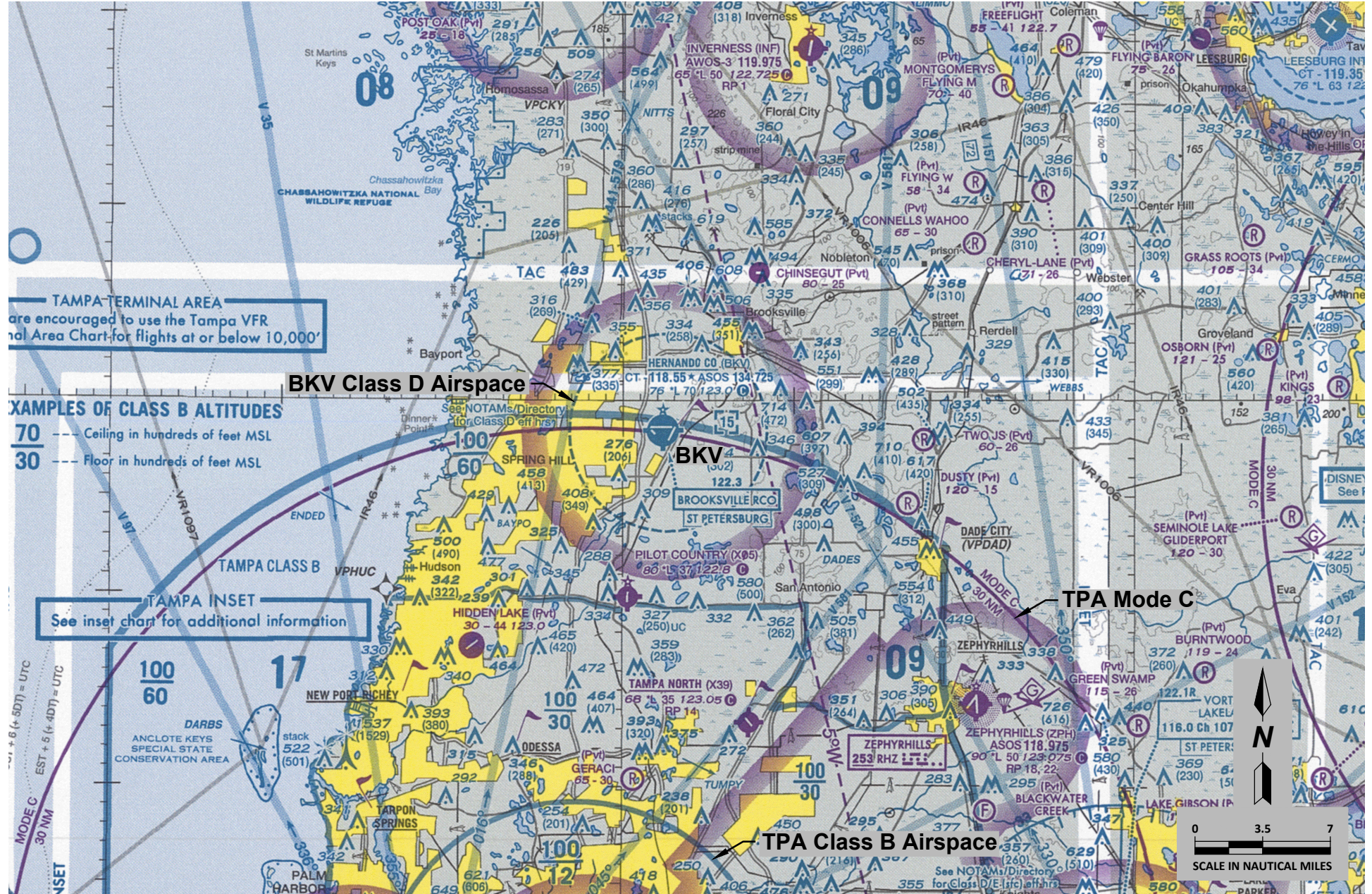


Figure 2-7 Sectional Aeronautical Chart