

7 Airport Plans

7.1 Airport Layout Plan Drawing Set

The Airport Layout Plan (ALP) drawing set is a graphical representation and summarization of the efforts made throughout the master planning process. The ALP serves as a valuable planning tool that displays planned development, existing facilities, and airfield infrastructure at the Airport. Additionally, the ALP serves as the Airport's official set of record drawings, in compliance with Federal Aviation Administration (FAA) planning requirements. The ALP set provides facility data and design criteria required to enable the Airport to accommodate future aviation demand. The previous chapters supply the basis for the Airport's future layout as shown in the drawing set.

To be eligible for FAA Airport Improvement Program (AIP) grants, improvement projects must appear on an ALP approved by the FAA. The ALP is not only necessary for the Metropolitan Nashville Airport Authority (MNA) to receive federal financial assistance, but is also a blueprint of existing facilities, a plan for future facilities, and a public document. Pending FAA approval of the proposed projects, this ALP will serve as the development guide for the 20-year development at Nashville International Airport (BNA). Below is the list of drawings included in the BNA ALP:

- Title Sheet
- Airport Data Sheet
- Existing Airport Layout
- Future Airport Layout Plan
- FAR Part 77 Airspace Plan
- Plan and Profile – Runway 2L/20R
- Plan and Profile – Runway 2C/20C
- Plan and Profile – Runway 2R/20L
- Plan and Profile – Runway 13/31
- Inner Portion of the Approach Surface – Runway 2L
- Inner Portion of the Approach Surface – Runway 20R
- Inner Portion of the Approach Surface – Runway 2C/20C
- Inner Portion of the Approach Surface – Runway 2R/20L
- Inner Portion of the Approach Surface – Runway 13/31
- Terminal Area Plan
- General Aviation Area Plan
- Westside Area Plan
- Land Use Plan

The drawings were prepared in accordance with federal guidelines as defined in FAA Advisory Circular 150/5070-6B, *Airport Master Plans*, and Advisory Circular 150/5300-13, *Airport Design*. Additionally, the FAA Southern Region ALP Checklist served as a guide during the development of the ALP to ensure the inclusion of all required elements. The following paragraphs describe the specific elements found on each sheet within the ALP drawing set. The reduced size drawing set of the ALP is found in **Appendix C**.

7.1.1 Title Sheet

This introductory sheet provides basic information about the Airport and serves as the front cover of the ALP drawing set. Information identified consists of a drawing set index, FAA approval signature, location and vicinity maps, and other pertinent information required by the FAA Southern Region. Also shown is the FAA disclaimer statement. The Title Sheet is identified as Sheet 1.

7.1.2 Airport Data Sheet

The Airport Data Sheet includes general Airport data and detailed runway, taxiway, and instrument approach system data. The data include the Airport Reference Code, which identifies the largest group of aircraft expected to operate at the Airport, and therefore establishes the appropriate facility design standards. Also included are meteorological data including wind roses for all weather, visual flight rule (VFR) and instrument flight rule (IFR) weather conditions. All data tables provide information on existing and future conditions. Future information is based on the assumption that development described in the previous chapters will be implemented. The Airport Data Sheet is identified as Sheet 2.

7.1.3 Existing Airport Layout Plan

The Existing Airport Layout Plan details the existing conditions found at the Airport during this master planning process. The plan presents: Airport pavements and associated clearances, critical areas and dimensions, support and ancillary facilities, the property line, the terminal, and ground access infrastructure. This sheet also identifies all existing buildings. The Existing Airport Layout Plan is identified as Sheet 3.

7.1.4 Future Airport Layout Plan

The Future Airport Layout Plan depicts proposed improvements to the Airport throughout the 20-year planning period. The plan presents: proposed Airport pavements, including a 3,297 foot extension to Runway 2L with associated parallel taxiways, an extension of Taxiway K to the Runway 13 departure end, runway and taxiway safety areas and dimensions, and future

support and ancillary facilities. Proposed terminal improvements identified on the Future Airport Layout Plan include a new International Arrivals Building. Proposed terminal parking and roadway improvements with the addition of a Ground Transportation Center (GTC) are also identified on the Future Airport Layout Plan. The Future Airport Layout Plan identifies all property currently owned as well as proposed acquisitions throughout the planning horizon. Additionally, it is important to note that, although a future fourth parallel runway is depicted on this sheet, this runway is beyond the 20-year planning period and is included on the ALP to preserve the associated airspace.

Descriptions of the improvements over the next 20 years are included in Chapter 5, *Airport Development Concepts*. These projects will be phased over the next 20 years as depicted on the drawing. The Future Airport Layout Plan is identified as Sheet 4.

7.1.5 FAR Part 77 Airspace Plan

Federal Aviation Regulation (FAR) Part 77, *Safe, Efficient Use and Preservation of the Navigable Airspace*, establishes standards and notification requirements for determining objects that affect the navigable airspace. All objects, such as buildings, utility poles, or towers, must be measured and compared to the FAR Part 77 “Imaginary Surfaces,” which include the Primary, Approach, Transitional, Horizontal, and Conical Surfaces. These surfaces are defined and discussed in Chapter 3, *Demand/Capacity Analysis and Facility Requirements*. This drawing depicts the FAR Part 77 Imaginary Surfaces for BNA based on the future recommended airside development. Dimensions of most of the surfaces are controlled by the category of approach planned for each runway (i.e., visual, non-precision, or precision). Penetration of these surfaces by fixed or moveable objects constitutes an obstruction to air navigation. FAR Part 77 allows the FAA to identify obstructions as potential aeronautical hazards, which assists in ensuring the safe and efficient use of navigable airspace. In addition to the extents of the Imaginary Surfaces, this sheet identifies known obstructions within the airspace surrounding the Airport. The Airspace Plan is identified as Sheet 5.

7.1.6 Plan and Profile

The Plan and Profile sheets illustrate the existing and future plan and profile views of each runway. These sheets depict the slope of each runway along with associated gradient and elevation changes. The Plan and Profile sheets are identified as:

- Runway 2L/20R Plan and Profile – Sheet 6.
- Runway 2C/20C Plan and Profile – Sheet 7.
- Runway 2R/20L Plan and Profile – Sheet 8.

- Runway 13/31 Plan and Profile – Sheet 9.

7.1.7 Inner Portion of the Approach Surface

The Inner Portion of the Approach Surface illustrates the existing and future inner approach surface of each Runway. Each plan view depicts the boundaries of the approach surface, adjacent transitional surfaces, and the location of all significant objects enclosed by this area. The profile view depicts the approach surface slope, existing and proposed terrain profiles along the extended runway centerline, and the height of identified significant objects. A separate table identifies significant objects by type and overall height and depth of imaginary surface penetrations. It also identifies the proposed disposition of any object determined to be an obstruction. The Inner Portion of the Approach Surface sheets are identified as:

- Runway 2L Inner Portion of the Approach Surface – Sheet 10.
- Runway 20R Inner Portion of the Approach Surface – Sheet 11.
- Runway 2C/20C Inner Portion of the Approach Surface – Sheet 12.
- Runway 2R/20L Inner Portion of the Approach Surface – Sheet 13.
- Runway 13/31 Inner Portion of the Approach Surface – Sheet 14.

7.1.8 Aviation Activity Area Plans

BNA has 3 areas on the Airport that provide the interface between passengers and cargo and the aircraft, or where maintenance and overhaul, and general aviation activities occur. These areas are:

- The Main Terminal Area located north of Runway 13/31, between Runways 20L and 20R, and south of Interstate 40. Identified as Sheet 15.
- The General Aviation Area located south of Runway 13/31, between Runway 2C and Donelson Pike, and north of Murfreesboro Road. Identified as Sheet 16.
- The Westside Area located west of Runway 2L/20R, south of Runway 13, north of Murfreesboro Road, and east of Briley Parkway. Identified as Sheet 17.

7.1.9 Land Use Plan

The Land Use Plan is designed to assist in identifying recommended land uses for existing and proposed property areas maintained by the MNAA. This sheet was developed based on FAA development guidance criteria and BNA land use studies in conjunction with input provided by the MNAA. The Land Use Plan is identified as Sheet 18.

7.1.10 Exhibit "A" Property Map

The Exhibit "A" Property Map is a record of all acquisitions and releases of land by the MNAA. Its purpose is to serve as an inventory of airport parcels; provide a record of their acquisition; identify an airport's interest in those parcels; and document the funding mechanisms used in their acquisition, thereby making the sponsor aware of any federal obligations associated with the release of each parcel.

The MNAA currently has an Exhibit "A" Property Map on file with the FAA Memphis Airports District Office (Memphis ADO), which is continually maintained current by the Airport. At 41 pages, it is impractical to include the Exhibit "A" as part of the Airport Layout Plan, and therefore, has been omitted from the ALP. The MNAA will provide the Memphis ADO with electronic updates of the Exhibit "A" as the Airport acquires or releases property.

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