Agenda

- Who is Completing the BNA Master Plan Update?
- What is an Airport Master Plan?
- Purpose of an Airport Master Plan
- The Airport Master Plan Process
- Study Advisory Committees
- Project Funding
- Project Background
- BNA Sustainability Study
- Overview of Aviation Activity Forecasts
- Schedule
- Status
- Next Steps
Who is Completing BNA Master Plan Update?

- RW Armstrong, in professional association with:
  - Atkins Global
  - Gresham, Smith and Partners
  - Albersman & Armstrong Ltd.
  - MAC Consulting, LLC.
  - HMMH Inc.
  - Communications Strategies, LLC.
  - Broadwater and Associates Group, Inc.
What is an Airport Master Plan?

- Tool to manage the Airport’s development and operational sustainability
- Two Parts:
  - Master Plan Report
  - Airport Layout Plan (drawing set)
- Covers 5, 10, and 20-year horizons
- Customarily updated every 5-7 years
- Content, process, and methods follow FAA guidance and standards
Purpose of an Airport Master Plan

• Supports Airport modernization and expansion to meet foreseeable future aviation demand

• Ensures that development options are:
  • Planned
  • Logical
  • Feasible
  • Fiscally responsible
  • Environmentally Compatible
  • Sustainable

• Provides for federal and state funding assistance on eligible projects
The Airport Master Plan Process

- Pre-Planning, Study, Design, Secure Grants
- Inventory Existing Conditions
- Activity & Demand Forecasting
- Demand/Capacity Analysis & Facility Requirements
- Alternative Development Concepts
- ALP Plan Set
- Implementation Plan
- Final Documents & Plan Adoption
- Public Involvement - Study Advisory Committees
- Aerial Survey & Mapping
The Airport Master Plan Process continued...

• Inventory of Existing Conditions
  • Provides a baseline for analysis

• Aviation Demand Forecasts
  • Evaluate historical aircraft and passenger activity
  • Determine potential future activity based on historical trends, socioeconomic changes, and industry activity

• Demand/Capacity Analysis & Facility Requirements
  • Identify facility requirements during the 20-year planning period based on anticipated demand
  • Evaluate the ability of the existing facilities to accommodate the forecast demand

• Evaluate the 30-year horizon for potential airfield and terminal needs
The Airport Master Plan Process *continued*…

- Environmental Considerations
  - Provide general overview of the existing on-Airport environmental conditions

- Evaluation of Development Concepts
  - Evaluate various options to build or improve facilities to meet the anticipated aviation demand

- Airport Capital Improvement Program
  - Develop an implementation strategy consisting of funding strategies and project priority
The Airport Master Plan Process *continued*…

- **Airport Plans**
  - Depict existing conditions and planned improvements
  - Identify areas that are potentially available for future development
  - An approved Airport Layout Plan is necessary to receive FAA funding

- **Public Involvement Program**
  - Technical Advisory Committee
  - Community Advisory Committee
  - Public Meetings/Workshops
  - flynashville.com
Study Advisory Committees

- Technical Advisory Committee
  - Local organizations and businesses
  - Airport users and stakeholders
- Community Advisory Committee
  - State and Local representatives
  - Utility Companies
  - Community Groups
- What is their purpose?
  - Review and comment on Master Plan findings
  - Provide information and support pertaining to known matters such as:
    - Local Conditions
    - Technical Issues
    - Off-Airport Environmental and Community Issues
Project Funding

- Federal funds through Airport Improvement Program:
  - Entitlement Funds and Discretionary Funds
  - User Fees (Ticket Tax, Fuel Tax, etc.)
  - Economic Recovery Funds (ARRA)
- State Funds (Aviation Fuel Tax)
- Airport-Generated Funds:
  - Landing Fees
  - Land Rent / User Fees
  - Fuel Flowage Fees
  - FBO Services
  - Facility Usage Fees (Hangars, Tie-Downs, Auto Parking, etc.)
  - Commercial Operator Fees
  - Passenger Facility Charge (PFC) – on airline tickets
  - Customer Facility Charge (CFC) – on car rentals

BNA IS NOT FUNDED BY GENERAL TAXPAYER DOLLARS!
Previous Airport Master Plan completed in 2004

Industry trends and regional/local changes since 2004 necessitate a Master Plan Update

Ongoing changes at the Airport warrant an updated Airport Layout Plan to reflect existing conditions and planned improvements

Need for a consolidated Landside Development Plan to identify revenue-generating opportunities for the Airport
The Airport Master Plan/Sustainability Study Process

Aerial Survey & Mapping

Pre-Planning, Study Design, Secure Funding

Inventory Existing Conditions

Activity & Demand Forecasting

Demand/Capacity Analysis & Facility Requirements

Alternative Development Concepts

Implementation Plan

ALP Plan Set

Final Documents & Plan Adoption

Public Involvement - Study Advisory Committees

Conduct Sustainability Baseline Assessment

Identify Sustainability Goals & Targets

Identify Sustainability Strategies

Develop Implementation Plan

Prepare Final Sustainability Plan

Sustainability Legend

- complete
- in progress/to be completed

Master Plan Legend

- complete
- in progress/to be completed
- ongoing
Sustainability: An Approach to Airport Management

- Airport sustainability planning is a holistic approach to managing an airport to ensure:
  - Economic viability,
  - Operational efficiency,
  - Natural resource conservation, and
  - Social responsibility.

* Airports Council International-North America
Integration of Sustainability into Existing Processes

- **Business Process Management (BPM)**
  Managing processes to guide responsibilities, roles, policies and processes

- **Performance Excellence (Baldrige)**
  Driving results through high performing processes

- **Quality Management System (QMS)**
  Ensuring the organization requirements and continuously improving processes (CALEA)

- **Enterprise Risk Management (ERM)**
  Managing risk and opportunity oversight across the whole enterprise

- **Lean Six Sigma (LSS)**
  Driving improvement, utilization of DMAIC, PDCA and lean to reduce variation and streamline processes

- **Safety Management System (SMS)**
  Ensuring the airport safety requirements and continuously improving safety processes

- **Enterprise Resource Planning (ERP)**
  Increasing efficiency, timeliness and accuracy of information through centralized IT automation for major processes

- **Sustainability**
  Ensuring Economic viability, Operational efficiency, Natural resources conservation and Social responsibility

To sustain the heartbeat of the Mid-South by cherishing its resources to ensure the Music City keeps flying high.
Planning Process and Project Status Update

Phase 1
- June – Oct 2011: Conduct Sustainability Baseline Assessment
- Oct – Dec 2011: Establish Sustainability Goals & Objectives
- Dec 2011 – Mar 2012: Identify Candidate Sustainability Initiatives
- Evaluated Candidate Initiatives

Phase 2
- Mar – July 2012: Develop Sustainability Performance Targets
- Apr – Aug 2012: Develop Implementation & Monitoring Program
- May – Nov 2012: Prepare Sustainability Management Plan

To sustain the heartbeat of the Mid-South by cherishing its resources to ensure the Music City keeps flying high
Sustainability Study Goals and Objectives Focus

- Economic Vitality
- People
- Facilities and Infrastructure
- Community
- Natural Resources
- Energy
- Surface Transportation

To sustain the heartbeat of the Mid-South by cherishing its resources to ensure the Music City keeps flying high.
Overview of Aviation Demand Forecasts

- Forecast of Air Carrier Enplanements
  - Used to determine existing and future passenger terminal area requirements
- Forecast of Air Carrier Operations
  - Used to determine existing and future airfield and terminal requirements in accommodating aircraft
- Forecast of General Aviation Operations
  - Used to ensure adequate airfield and GA facilities are available for GA activities
- Forecast of Cargo Operations
  - Used to ensure adequate airfield and cargo facilities are available for existing and future cargo operations
Historic BNA Enplanements

Historic Enplanements

Enplanements

Historic Activity

Years:
- 2007
- 2008
- 2009
- 2010
- 2011

Values:
- 0
- 2,000,000
- 4,000,000
- 6,000,000
- 8,000,000
2011 BNA Preferred Forecast - Enplanements

Historic and Projected Enplanements

AAGR 2011-2031:
- High Growth: 3.9%
- Preferred: 3.6%
- TAF: 3.4%
- Low Growth: 2.1%
2011 BNA Preferred Forecast - Total Operations

Historic and Projected Operations

<table>
<thead>
<tr>
<th>Year</th>
<th>Historic Operations</th>
<th>High Growth</th>
<th>Preferred</th>
<th>TAF</th>
<th>Low Growth</th>
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AAGR 2011-2031:
- High Growth: 2.4%
- Preferred: 2.3%
- TAF: 1.8%
- Low Growth: 2.0%
## Preferred Forecast Summary

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<th>2016</th>
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Source: RW Armstrong 2012.
## FAA Terminal Area Forecast (TAF) Comparison

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<td>TAF</td>
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<td>TAF vs. Preferred</td>
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<td>0.4%</td>
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<td></td>
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<td></td>
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<td>TAF</td>
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<td>189,338</td>
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<td>TAF vs. Preferred</td>
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<td>TAF</td>
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<sup>1</sup> – MNAA-provided data was used as the baseline.

Status

- Inventory of Existing Conditions
  - Finalized Working Paper No.1
- Aviation Demand Forecasts
  - Finalized Working Paper No.2
- Began Demand/Capacity Analysis & Facility Requirements
- Began Airport Landside Development Plan
Next Steps

- Complete Demand/Capacity Analysis & Facility Requirements (Working Paper No.3)
- Complete Landside Development Plan
- Complete Alternative Development Concepts
- Conduct Public Meeting/Workshop No. 2 in September 2012
Thank you for your participation!
www.flynashville.com