

Municipal Airport

Master Plan Update



Airport Master Plan Process

” PURPOSE AND NEED

- . Study of the airport and its needs to meet future aviation demand in the short-, medium-, and long-term time frame
- . Supports modernization / expansion of existing facilities
- . Provides strategic development plan for the airport

Airport Master Plan Process

” ELEMENTS OF THE MASTER PLAN

- . Existing conditions
- . Aviation forecast
- . Demand & capacity analysis
- . Facility requirements
- . Alternatives development
- . Environmental overview
- . Airport layout plan (ALP)
- . Facilities implementation plan

Airport Background

” BACKGROUND

- . Commercial service airport
 - ” Master Plan was initiated while Colgan Air (operating as United Airlines Express from 2003 - 2012) served the airport
 - ” August 1, 2012 – Silver Airlines took over operation of service to Washington-Dulles International Airport (IAD)
- . Located within city limits of Morgantown
- . Approximately 3 miles from I-68 and 6 miles from I-79

Airport Background

” FACILITIES

- . 638 acres
- . Runway 18-36; 5,199’ long x 150’ wide
- . One parallel taxiway, Taxiway A
- . Cross taxiways, Taxiway C and D
- . Precision approach to Runway 18 with ILS and MALSR
- . Non-precision GPS approach to Runway 36
- . Runway 18 PAPI
- . Runway 36 VASI
- . FAA owned and operated ATCT
- . Aircraft parking apron
- . T-hangars, conventional box hangars, two corporate hangars
- . Passenger terminal building and FBO
- . ARFF facility

Aviation Forecasts

” MORGANTOWN AREA SOCIOECONOMICS

- . Population in service area grew at same rate as US population from 2000 to 2008
 - ” Projected to grow slightly less than US population through 2030
- . Employment growth slightly more than US population from 2000
 - ” Projected to grow slightly more than US population through 2030

Aviation Forecasts

” ORIGIN AND DESTINATION TRAFFIC

- . O&D traffic reflects actual starting and termination points of travel, regardless of any intermediate connecting points
- . Non-stop service to and from IAD
- . Market changes with the changing of the air carrier in 2003
- . Top 10 markets include:
 - ” Washington D.C.
 - ” Tampa
 - ” New York
 - ” Boston
 - ” Chicago
 - ” Los Angeles
 - ” Orlando
 - ” Indianapolis
 - ” San Francisco
 - ” Seattle / Tacoma

Aviation Forecasts

” PASSENGER ENPLANEMENTS

- . Assumes level of service currently provided will persist throughout forecast period
 - ” From IAD,
 - . Travelers have access to 82 domestic and 45 international destinations
 - . Service on over 30 different carriers
 - . 341 daily domestic departures and 406 weekly international departures
- . 10,591 enplanements in 2009
- . 17,540 enplanements in 2030

Aviation Forecasts

” BASED AIRCRAFT

- . 84% single engine, 10% multi-engine, 4% jet, 2% helicopter
- . 0.9% annual growth over the forecast period
 - ” Consistent with expectations for general aviation in the FAA’s Terminal Area Forecast (TAF)
- . 49 based aircraft in 2009
- . 66 based aircraft in 2030

Aviation Forecasts

” ANNUAL OPERATIONS

- . Scheduled passenger operations are provided under the Essential Air Service (EAS) program
- . Average annual growth for forecast period
 - ” Commercial Air / Air Taxi: 1.3%
 - ” General Aviation: 1.4%
 - ” Non-scheduled/Other: 1.4%
 - ” Military: 2.0%
- . 43,430 total annual operations in 2009
- . 58,847 total annual operations in 2030

Aviation Forecasts

” AIRPORT REFERENCE CODE FOR PLANNING PURPOSES

- . Combination of aircraft approach category (AAC) and airplane design group (ADG)
 - ” AAC relates to approach speed of an aircraft
 - ” ADG relates to wingspan and tail height of an aircraft
- . Based on aircraft or combination of aircraft with highest approach speed code and greatest wingspan that is substantially using the airport (500+ annual operations)
- . For MGW the business jets represent aircraft that meet substantial use threshold

Facility Requirements

” RUNWAY LENGTH REQUIREMENTS

- . Length necessary determined based on elevation of airport, runway gradient, temperature and useful load of aircraft
 - ” Length required for departures at a 60% useful load:
 - . 5,000' (smaller business jets)
 - . 5,800' (business jets)
 - ” Length required for departures at 90% useful load:
 - . 6,500' (smaller business jets)
 - . 8,500' (business jets)
 - ” Length required for arrivals at 60% useful load:
 - . 5,500' (all business jets)
 - ” Length required for arrivals at 90% useful load:
 - . 7,000' (all business jets)

Facility Requirements

” OTHER RUNWAY REQUIREMENTS

- . RSA beyond end of each runway must be 1,000’ long by 250’ each side of runway centerline, unless equivalent safety area is provided through use of EMAS
- . Runway centerline to aircraft parking separation must be 500’
 - ” Currently north apron has tie-downs located 469’ from runway centerline
- . Runway centerline to taxiway centerline separation must be 400’ minimum
 - ” Currently north and south portions of Taxiway A are located at 350 feet from centerline to Runway 18-36 centerline

Facility Requirements

” TAXIWAY REQUIREMENTS

- . Taxiway A needs to be relocated at proper separation (400' min.) from the runway

” TERMINAL APRON

- . Apron expansion to the north is necessary to accommodate future transient aircraft
- . Sufficient parking positions for airline are provided, assuming no additional air carrier enters into service at MGW

Facility Requirements

” **TERMINAL BUILDING**

- . Reallocation of space within terminal building necessary to accommodate future growth
 - ” Total terminal area: 34,000 square feet
 - ” Forecasted total terminal area required: 33,330 square feet
 - ” Deficiency in individual spaces for airline space, security screening checkpoint, and secure public space
- . Recommend reevaluation of terminal capacity within 10 years to determine if terminal expansion will be necessary

” **GENERAL AVIATION FACILITIES**

- . Additional aircraft storage hangars necessary to meet current and future based aircraft growth
- . Additional corporate hangar facilities necessary

Alternatives Analysis

“ GENERAL INFORMATION

- “ Seven different development alternatives were created and reviewed in the planning process
- “ Alternative I represents a no-build alternative
- “ Alternatives II through VII evaluate differing runway lengths that could be provided to meet demand of the business jet group of aircraft
- “ Development for hangar storage, aircraft parking, and proper separations from the runway are provided in each

Alternatives Analysis

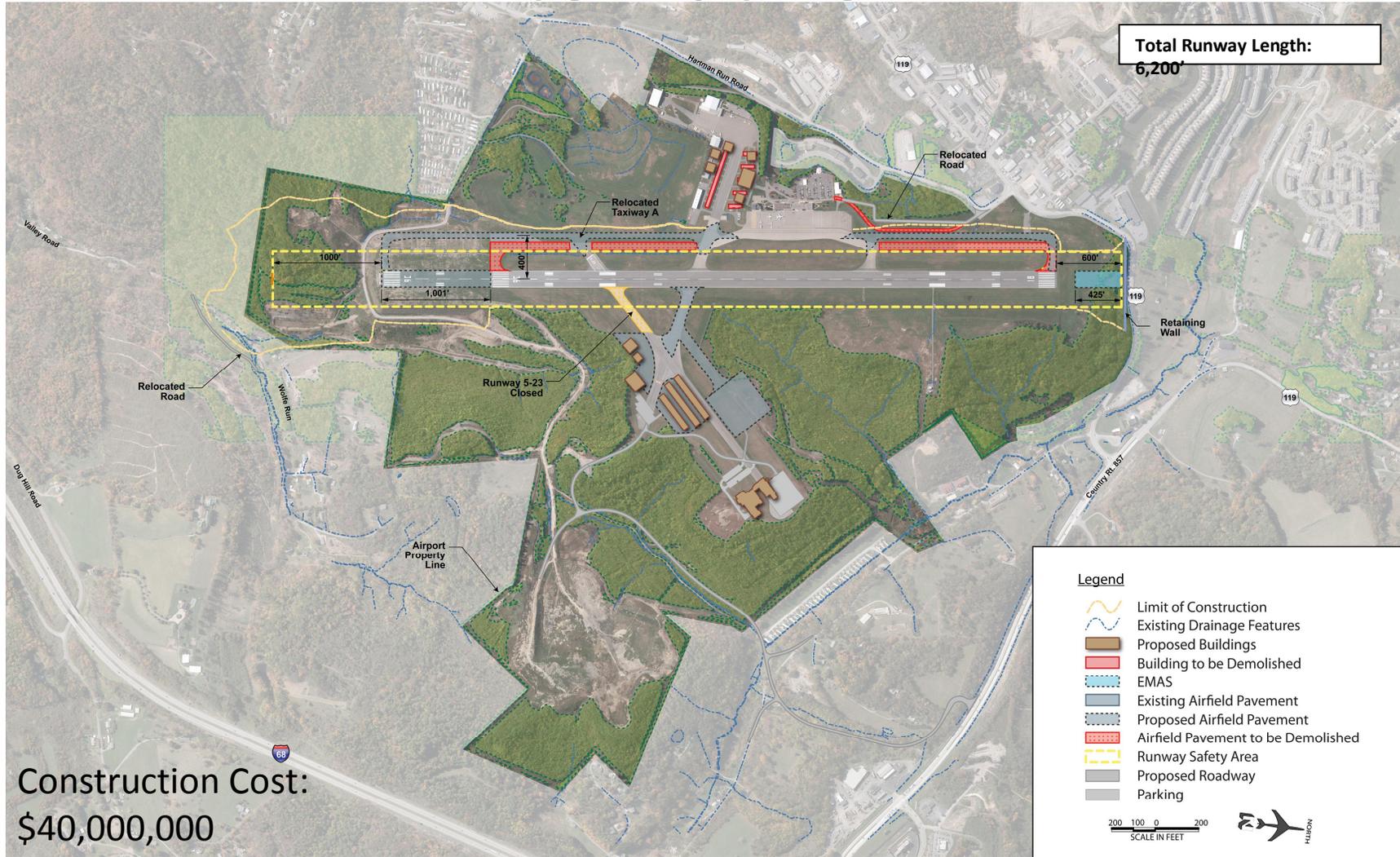
” COST ESTIMATE INFORMATION

- ” Construction cost estimates were developed for each alternative
- ” They **do** include construction costs associated with demolition of existing taxiways, preliminary earthwork (cut and fill), perimeter fencing, new pavements, aggregates, underdrains, property and acreage acquisition, edge lighting and guidance signs, NAVAID relocations, stream and wetland mitigation construction, and erosion and sediment control devices
- ” They **do not** include design fees, construction management fees, preliminary FAA approval requirements, or escalation costs for future year construction

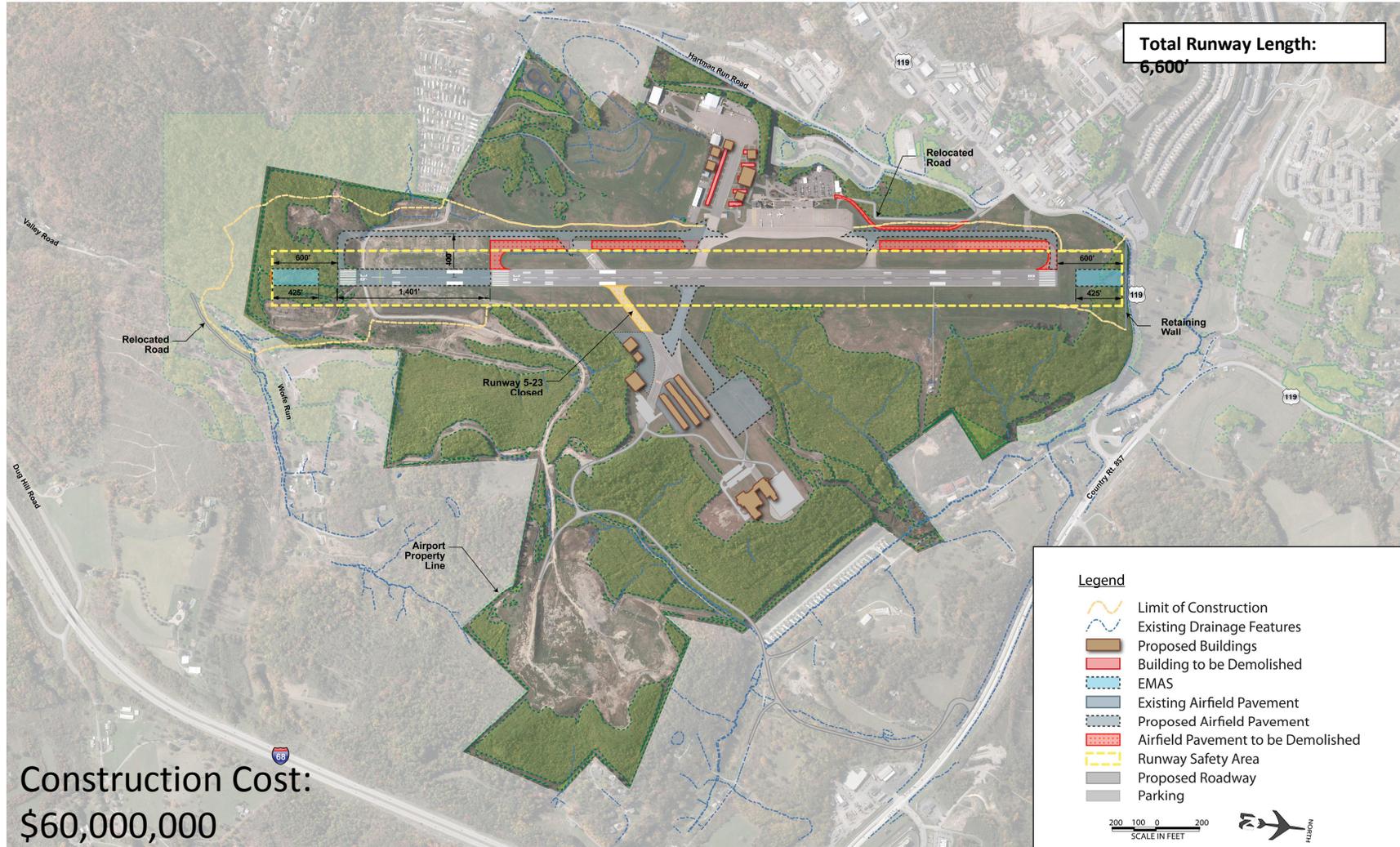
Alternative II



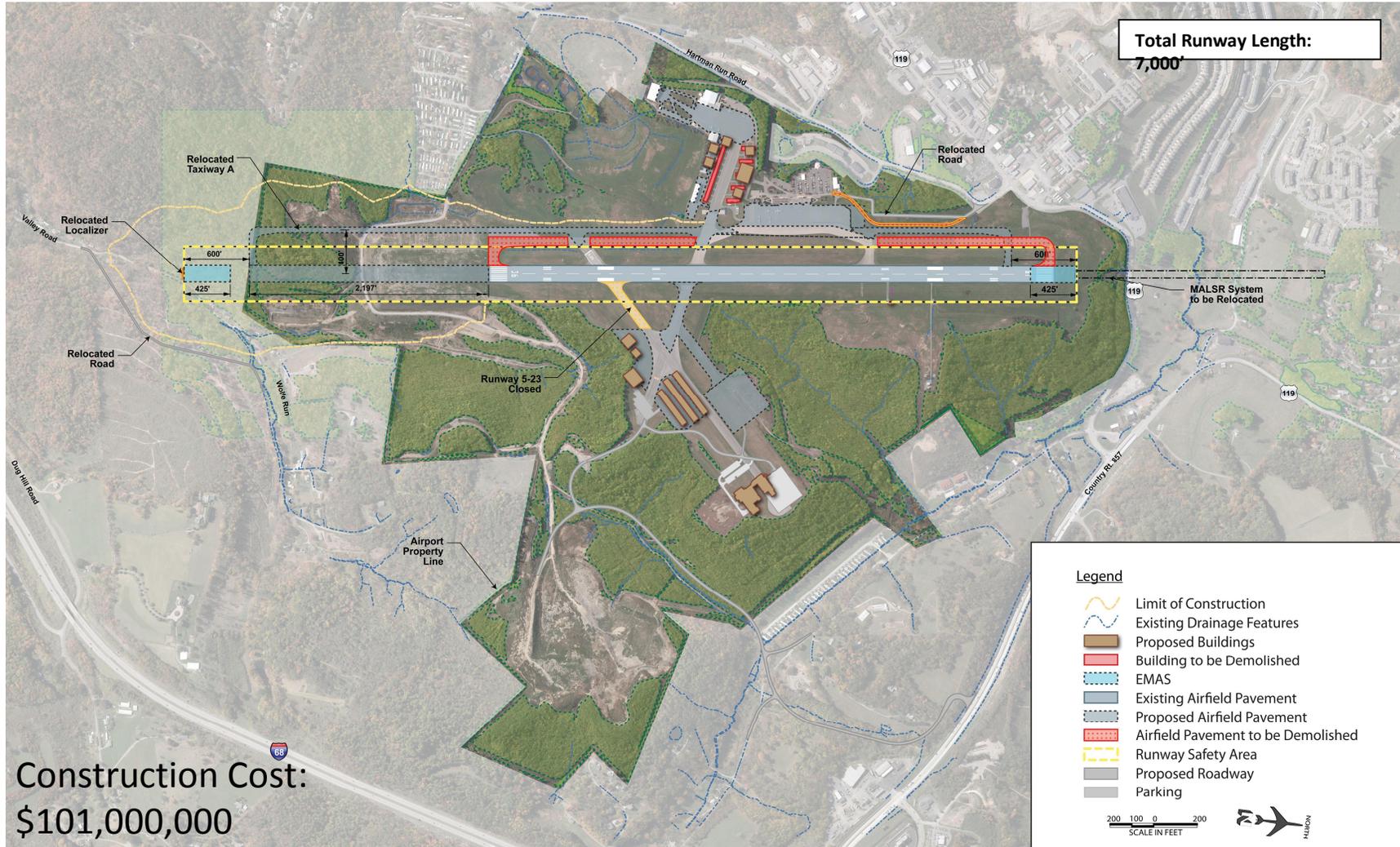
Alternative III



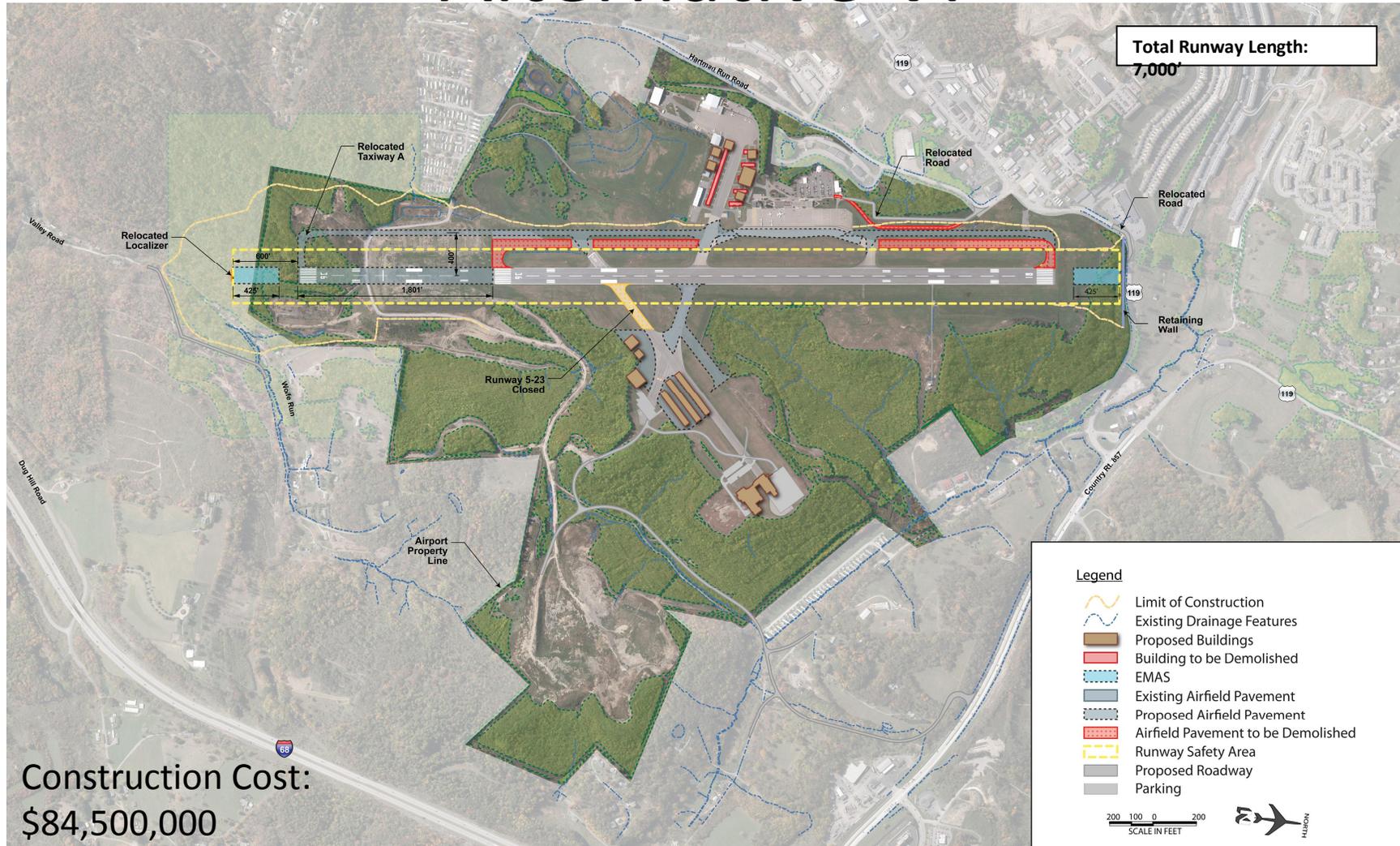
Alternative IV



Alternative V



Alternative VI



Alternative Analysis

” SUMMARY

Alternative	Construction Cost	Additional Runway Length Provided	Total Runway Length
Alternative II	\$17,000,000	601' / 0'	6800' *
Alternative III	\$40,000,000	1,001'	6,200'
Alternative IV	\$60,000,000	1,401'	6,600'
Alternative V	\$101,000,000	1,801'	7,000'
Alternative VI	\$84,500,000	1,801'	7,000'
Alternative VII	\$197,000,000	3,281'	8,480'

* Declared distances must be used. LDA = 5,200'. TORA/TODA/ASDA = 5,800'

Alternative Analysis

” **PREFERRED ALTERNATIVE**

. Alternative IV

- ” Extends runway to total usable length of 6,600’
(accommodates business jets at just under 75% useful load)
- ” EMAS systems on both ends to provide safety area
- ” Retaining wall and embankment construction off of Runway 18 threshold
- ” Embankment construction and Runway 36 extension
 - . Impacts to existing Runway 18 localizer, airport storm water management pond, interior airport access road, property acquisition, Valley Road relocation, stream mitigation

Environmental Overview

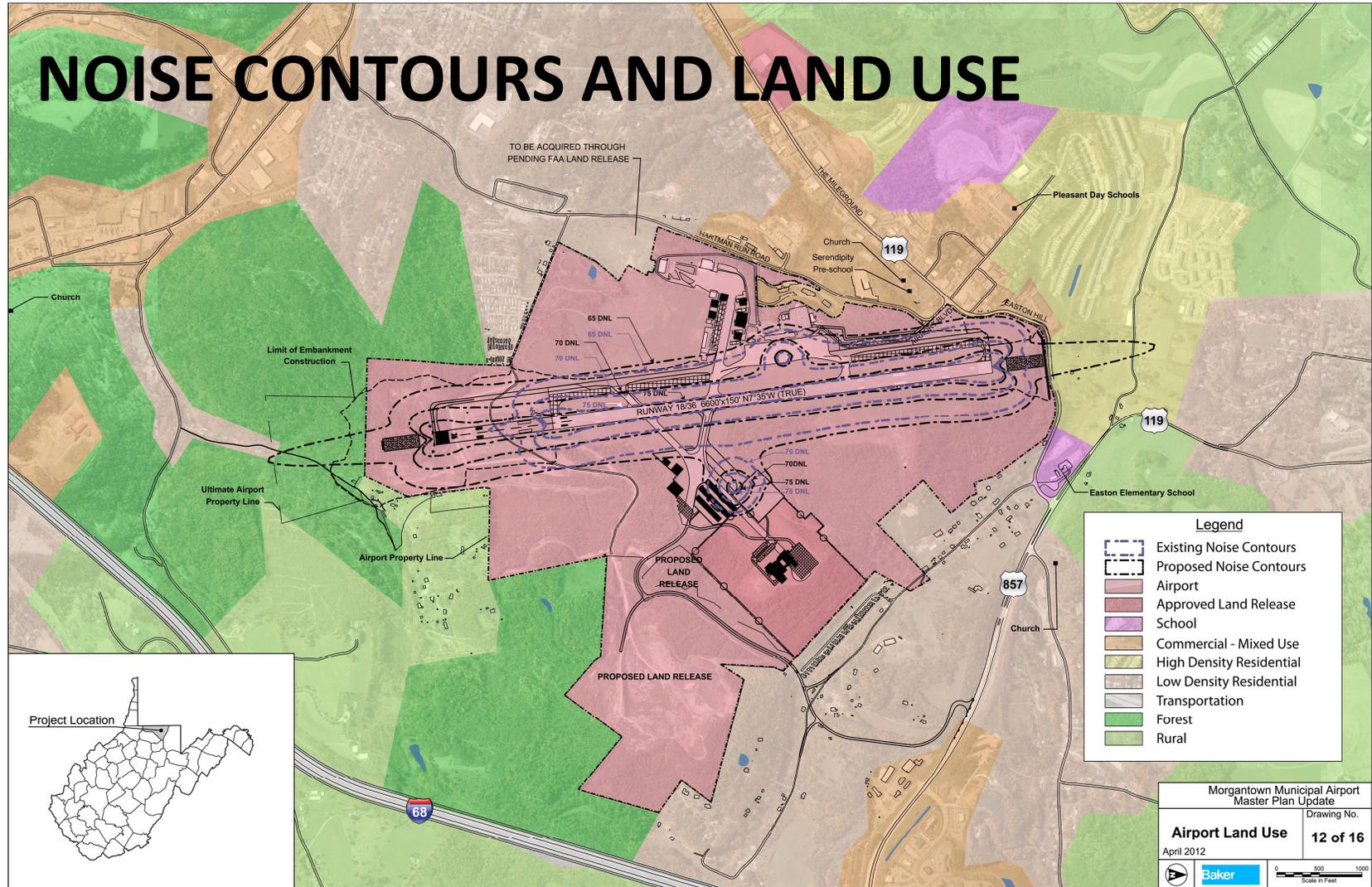
“ OVERVIEW OF IMPACTS AS A RESULT OF PREFERRED ALTERNATIVE

. FAA requires evaluation of the following items:

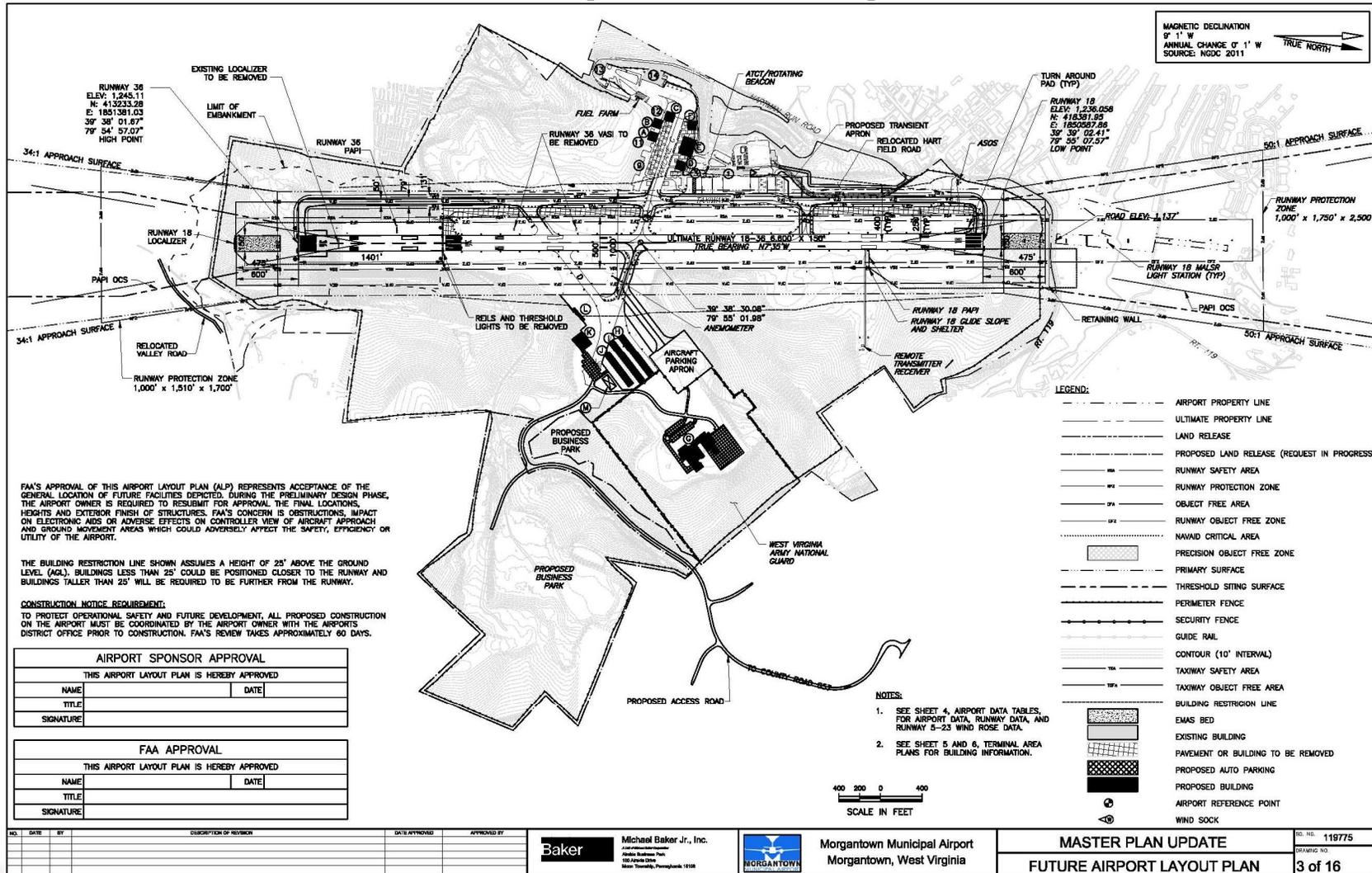
- Noise
- Compatible Land Use
- Social and Induced Socioeconomic Impacts
- Air Quality
- DOT Act Section 4(f)
- Historical, Architectural, and Cultural Resources
- Fish, Wildlife, and Plants
- Endangered and Threatened Species
- Wetlands
- Floodplains
- Coastal Zone Management and Coastal Barriers
- Wild and Scenic Rivers
- Farmlands
- Energy Supply and Natural Resources
- Light Emissions
- Solid Waste and Hazardous Sites
- Environmental Justice
- Construction Impacts

Environmental Overview

NOISE CONTOURS AND LAND USE



Future Airport Layout Plan



Facilities Implementation Plan

“ **PLANNED IMPROVEMENT PROJECTS**

- . Terminal Improvements and Roof Replacement
- . Emergency Generator Upgrade
- . Terminal and Gate Security Upgrades
- . Taxiway C Rehabilitation
- . Runway 18-36 Rehabilitation
- . Lighting and Signage Rehabilitation
- . Wildlife Control Fencing

“ **DEVELOPMENT PROJECTS FROM ALP**

- . Runway 36 Extension
- . Runway 18 RSA Improvements
- . Hangar Development
- . Relocation of Taxiway A
- . North Terminal Apron Expansion
- . Aircraft Parking Apron (East Side)

“ **COST ESTIMATES**

- . Includes design fees and construction management fees
- . Presented in 2012 dollars and do not account for inflation

Facilities Implementation Plan

Development Year	Improvement Project	Budget	Possible Funding Source
Year 1		\$1,805,000	
	Terminal Improvements and Roof Replacement	\$1,250,000	AIP
	Emergency Generator Upgrade	\$350,000	AIP
	Terminal and Gate Security Upgrades	\$50,000	AIP
	Runway 36 Extension Benefit/Cost Analysis	\$155,000	AIP
Year 2		\$12,525,000	
	Hangar Development (East Side) (all costs; design, CM, etc.)	\$7,530,000	AIP/Local
	Relocation of Taxiway A – North (all costs; design, CM, etc.)	\$3,995,000	AIP
	Runway 36 Extension EA/EIS	\$1,000,000	AIP
Year 3		\$17,651,200	
	Runway 18 RSA Improvements / EMAS Design	\$1,731,200	AIP
	Aircraft Parking Apron (East Side) (all costs; design, CM, etc.)	\$6,140,000	Federal Earmarks (FE)
	Relocation of Taxiway A – South (all costs; design, CM, etc.)	\$2,685,000	AIP
	Conventional/Corporate Hangar Development (Taxilane C) (all costs; design, CM, etc.)	\$7,235,000	AIP/Local
Year 4		\$22,910,500	
	Runway 18 RSA Improvements / EMAS Construction	\$22,910,500	AIP
Year 5		\$12,000,000	
	Runway 18 MALSR Replacement (all costs; design, CM, etc.)	\$12,000,000	AIP
Year 6		\$3,645,000	
	Runway 36 Extension Design	\$3,045,000	AIP
	Taxiway C Rehabilitation (all costs; design, CM, etc.)	\$350,000	AIP
	Runway 36 PAPI Installation (all costs; design, CM, etc.)	\$250,000	AIP
Year 7		\$37,059,000	
	Runway 36 Extension Construction	\$37,059,000	AIP / FE
Year 8		\$7,000,000	
	Runway 18-36 Rehabilitation (all costs; design, CM, etc.)	\$5,500,000	AIP
	Lighting and Signage Rehabilitation (all costs; design, CM, etc.)	\$1,500,000	AIP
Years 11 - 20		\$2,734,500	
	Wildlife Control Fencing (all costs; design, CM, etc.)	\$2,000,000	AIP / Local
	North Terminal Apron Expansion (all costs; design, CM, etc.)	\$734,500	AIP

Next Steps

” PUBLIC WORKSHOP

- November 14th, 5:00 pm – 7:00 pm
Morgantown Municipal Airport
ARFF Training Room at MGW
100 Hart Field Road
Morgantown, WV 26505

” FINAL SUBMISSION TO FAA

- Incorporates public comments where necessary

Frequently Asked Questions

” WHERE CAN I GET MORE INFORMATION?

- Additional information is contained in the MPU document that is available for review at the Morgantown Municipal Airport and the Morgantown City Library.

” PUBLIC REVIEW INFORMATION:

- Copies of the draft MPU may be reviewed at the following locations and times from October 22nd through November 27th 2012:
 - » **Morgantown City Library**
373 Spruce Street
Morgantown, WV 26505
Hours: Mon. – Thurs. 9:00 am – 8:00 pm
Fri. & Sat. 9:00 am – 4:00 pm
Sun. 1:00 pm – 4:00 pm
 - » **Morgantown Municipal Airport**
100 Hart Field Road
Morgantown, WV 26505
Hours: Mon. – Fri. 9:00 am – 5:00 pm