

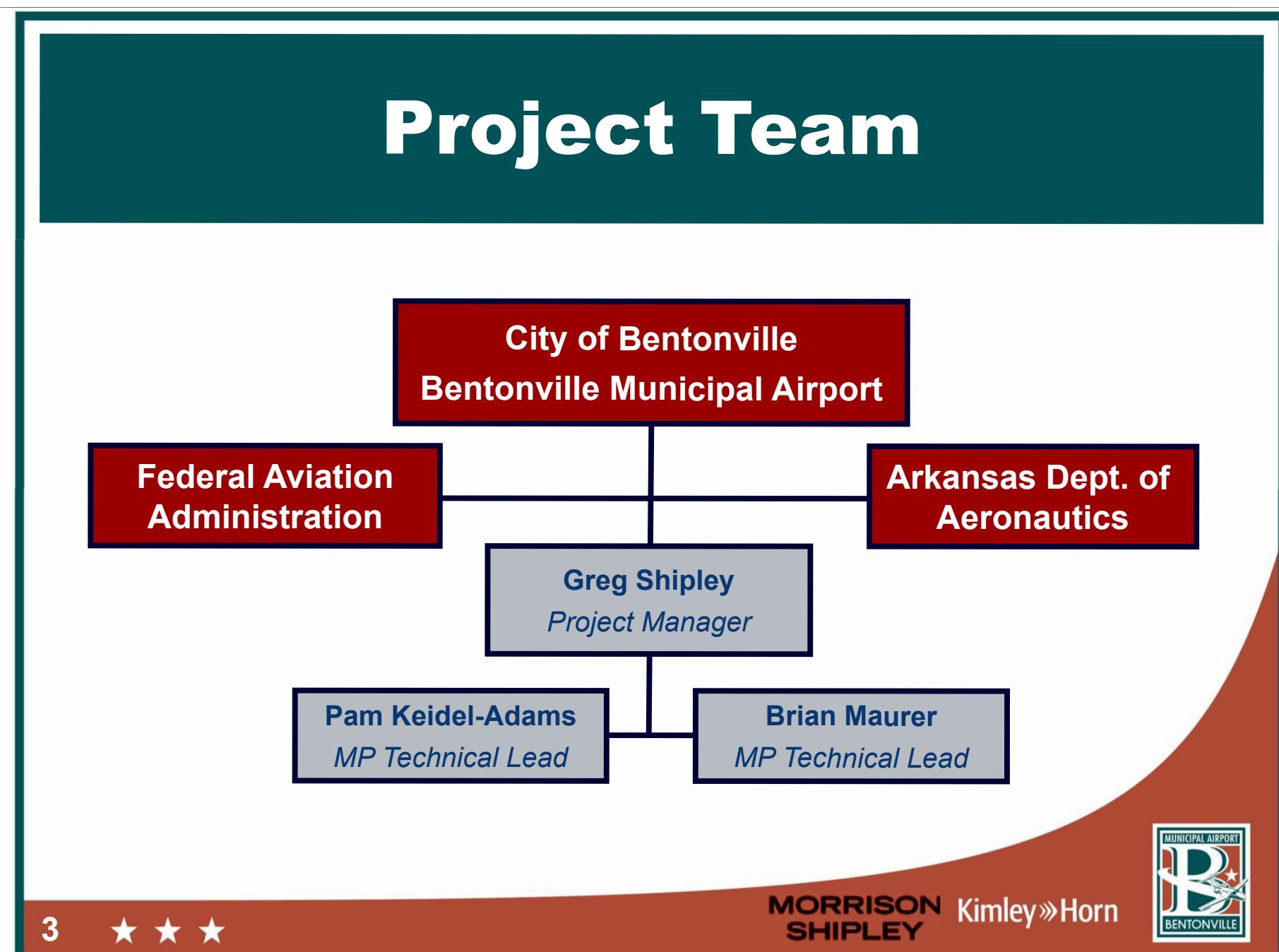
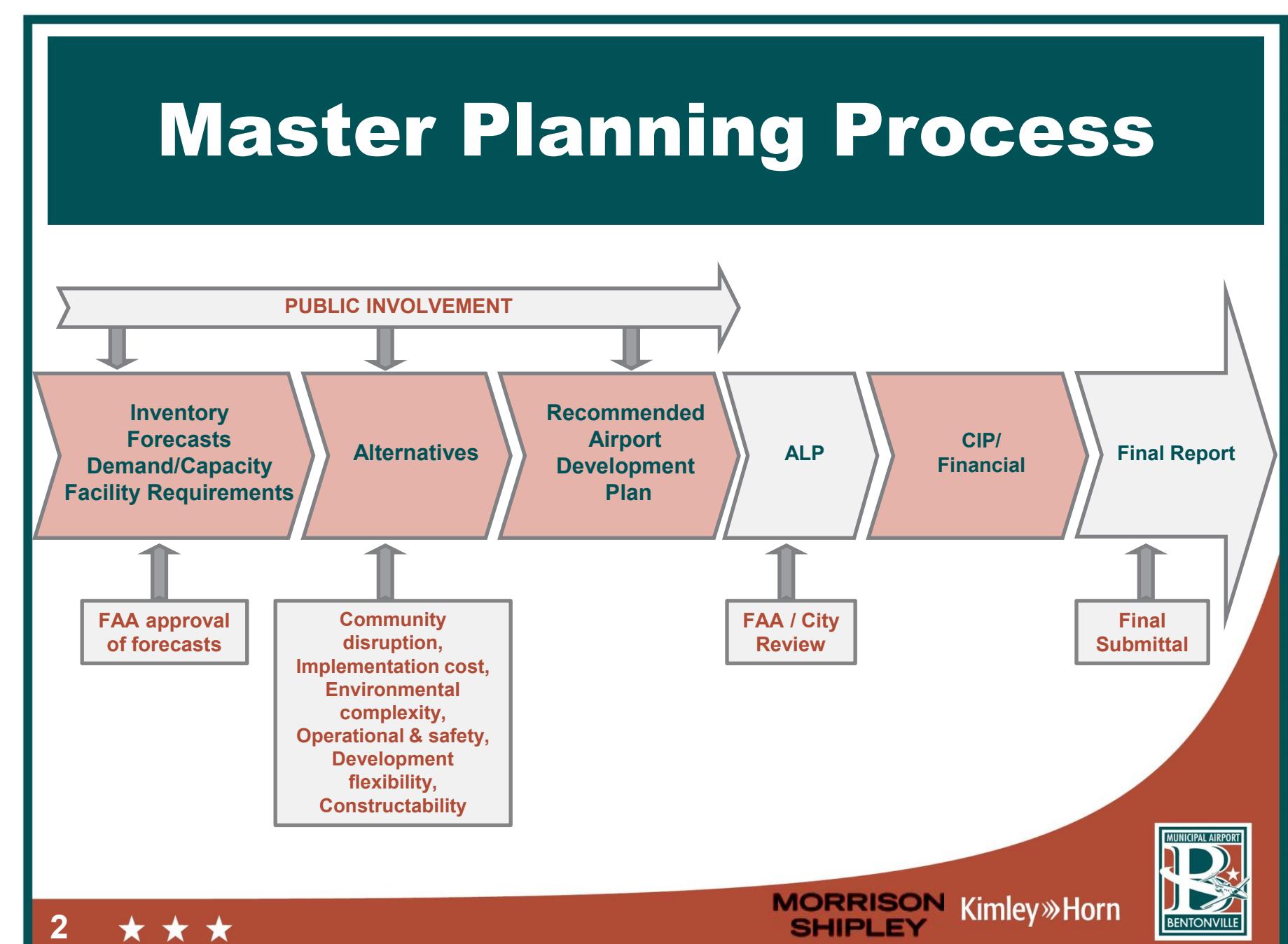


PLANNING PROCESS



BENTONVILLE MUNICIPAL AIRPORT
MASTER PLAN UPDATE
Public Workshop #3
August 3, 2015

MORRISON SHIPLEY Kimley-Horn



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MORRISON SHIPLEY
ENGINEERS • SURVEYORS

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FACILITY REQUIREMENTS

Airfield Facility Requirements

Airsides		
	Existing	Ultimate
Runway 18-36		
Length	4,426	5,015
Width	65	75
RDC	B-II-5000	B-II-5000
Turf Runway		
Length	N/A	2448
Width	N/A	75
RDC	N/A	A-1(s)-VIS
Taxiway		
Length	Partial	Full (W) / Partial (E)
Width	35	35

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Future Storage Needs

Year	T-hangars		
	Required (Units)	Existing Units	Net Surplus / (Deficiency) Number
PAL 1	24	26	2
PAL 2	27	26	(1)
PAL 3	33	26	(7)
Conventional Hangars			
Year	Required Area (SF)	Existing Area (SF)	Net Surplus / (Deficiency) Area (SF)
PAL 1	66,200	52,450	(13,800)
PAL 2	79,400	52,450	(26,900)
PAL 3	105,000	52,450	(52,900)

Note: New hangars are addressing some of the needs including new 6,300SF hangar on west side.

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Support Facility Requirements (PAL 3 - 2035)

- Identify an area to develop a maintenance facility
- Improve west side vehicle access and signage
- Construct a full interior perimeter road

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ALTERNATIVE COMPARISON

North Extension Cost Estimate (Alternative 1)

Item	Cost (\$)	Basis
Program Definition/Feasibility Study	\$100,000	Comparable Study
NEPA Environmental Assessment	\$400,000	Comparable Study
Land Acquisition		
Minimum for Airfield Needs	\$3,200,000	32 ac. @ \$100,000 per acre
Lake and Park Relocation	\$3,400,000	20 ac. @ \$170,000 per acre
Fees and Services	\$660,000	Assume 10% of Cost
Business Relocation	\$ -	
Construction		
Lake Relocation & Mitigation	\$7,500,000	185,400 CY @ \$40 CY
Runway Extension	\$3,000,000	5,000 SY @ \$600 SY
Design/Bid/Construction Management		
Lake Relocation/Mitigation	\$1,350,000	Assume 18% of Construction
Runway Extension	\$540,000	Assume 18% of Construction
Lake/Wetland Monitoring and Maintenance	\$150,000	3 yrs. @ \$50,000 ea.
Total Estimated Program Costs – Alt 1	\$20,300,000	

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South Extension Cost Estimate (Alternative 2)

Item	Cost (\$)	Basis
Program Definition/Feasibility Study	\$100,000	Comparable Study
NEPA Environmental Assessment	\$400,000	Comparable Study
Land Acquisition for Airfield Needs		
South RPZ (minimum)	\$1,530,000	9 ac. @ \$170,000 per acre
North RPZ and Southwest (minimum)	\$1,900,000	19 ac. @ \$100,000 per acre
Fees and Services	\$343,000	Assume 10% of Cost
Business Relocations (3)		3 businesses
Property Acquisition (relocation site)	\$561,000	3 ac. @ \$170,000 per acre + 10% fees
Relocation Assistance	\$195,000	3 business @ 65,000 ea.
Design/Bid/Construction Management	\$1,328,400	Assume 18% of Construction
Site Construction	\$7,380,000	12,300 SF of building @ \$600 SF
Demolition of Old Site	\$738,000	Assume 10% of Construction
Wetland Mitigation	\$40,000	1 ac. @ \$40,000 per acre
Runway Extension		
Design/Bid/Construction Management	\$540,000	Assume 18% of Construction
Runway Extension	\$3,000,000	5,000 SY @ \$600 SY
Total Estimated Program Costs – Alt 2	\$18,055,400	

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Comparison of Alternatives

Evaluation Criteria	North Extension	South Extension
Community Disruption		
Quantitative and qualitative impacts related to the displacement and/or relocation of residences, businesses or public amenities. The more facilities/tenants displaced, the higher the chance of increased project complexity, inconvenience and duration.	+	No business relocations
Implementation Cost		
Estimated total program cost including land/easement acquisition, design, NEPA approval, permitting, construction, wetland mitigation, lake relocation, airspace protection, demolition and replacement of relocated facilities, and construction services.		+
11% less expensive ¹		
Environmental Complexity		
Includes potential long-term impacts to natural resources such as water quality, habitats, and hydrology (e.g. wetland conversion and lake relocation).		+
Less impact to waters of the U.S.		

¹ As noted in the chapter, this assumes that HWY 12 remains in the RPZ and is not relocated. If a relocation is required, the cost would be substantial and this alternative would likely not be less expensive.

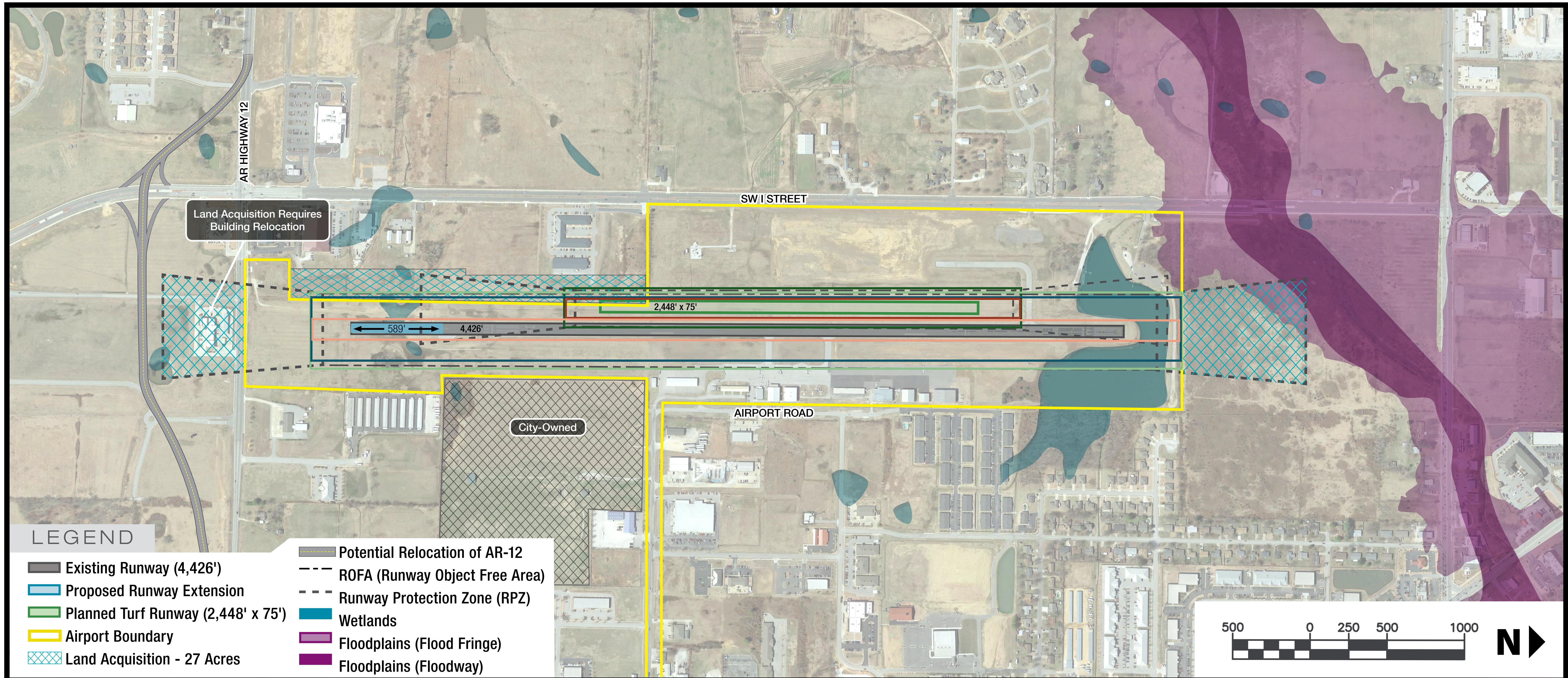
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Comparison of Alternatives

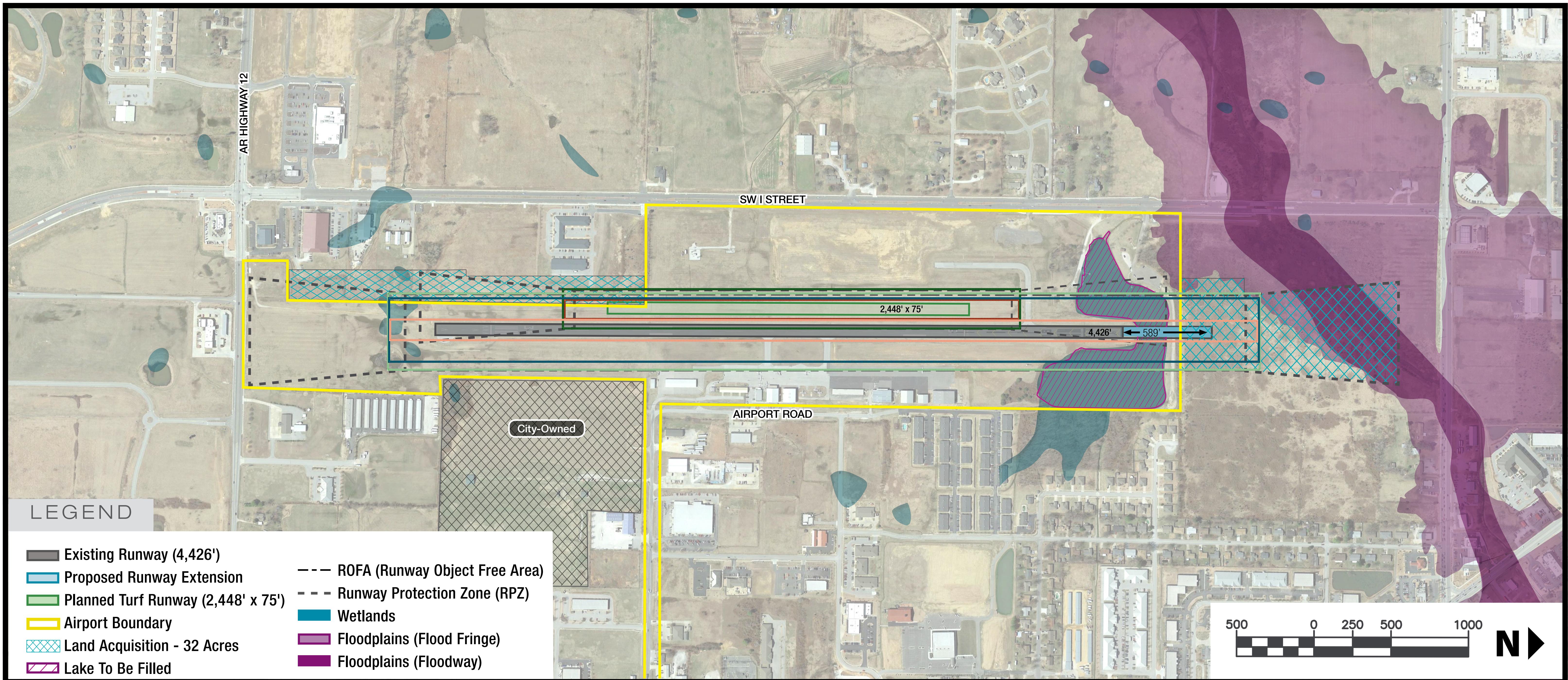
Evaluation Criteria	North Extension	South Extension
Operational & Safety Concerns		
Includes wildlife hazard mitigation, compatible land use and airspace protection. Also includes potential impacts to pilot situation awareness.		+
Removes a wildlife attractant, compliant RPZs		
Development Flexibility & Expandability		
Includes ability to accommodate changing market demands and any areas gained that are suitable for additional revenue generating development or to accommodate unforeseen user demands.		+
Additional runway length and developable space		
Constructability / Ease of Implementation		
Reflects the relative ease of which the facilities can be constructed with standard methods and materials. Community disruption and environmental concerns can also affect the ease of implementation.		+
Historical planning and agency coordination		

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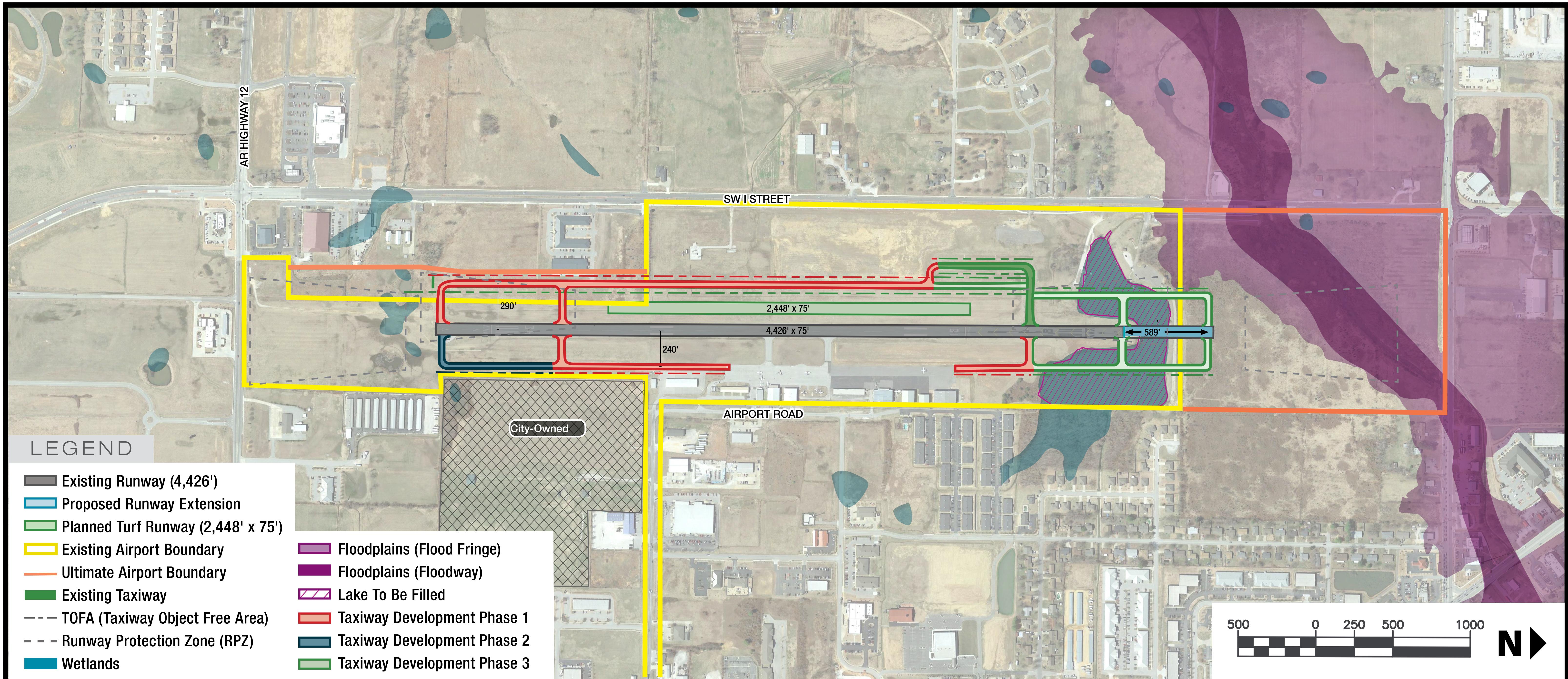
RUNWAY 18-36 SOUTH EXTENSION



RUNWAY 18-36 NORTH EXTENSION



TAXIWAY SYSTEM PHASED ALTERNATIVES



PREFERRED DEVELOPMENT STRATEGY

DEVELOPMENT PHASES/FEATURES:

PHASE 1: NEAR-TERM

- 1 Land Acquisition
- 2 Construct Turf Runway
- 3 Install PAPIs for Runway 18-36
- 4 Taxiway Improvements (Phase I)
- 5 West Side Hangars & Aprons (Phase I)
- 6 West Side General Aviation Terminal
- 7 Maintenance Equipment Storage Building
- 8 Connecting Taxiway Removal

PHASE 2: FUTURE

- 9 West Side Hangars & Apron (Phase 2)
- 10 Runway Widening & Strengthening

PHASE 3: LONG-TERM

- 11 Airfield Perimeter Road
- 12 Extend Runway 18-36 (589' North)
- 13 Taxiway Improvements (Phase 2)
- 14 Taxiway Improvements (Phase 3)
- 15 West Side Hangars & Apron (Phase 3)

