ASE Future Air Service Planning Study Phase III BOCC Work Session

December 16, 2014

ASPEN/PITKIN COUNTY AIRPORT
FUTURE AIR SERVICE STUDY
A Flight Plan for Our Community

ASPEN/PITKIN COUNTY AIRPORT
OWNED AND OPERATED BY PITKIN COUNTY

Meeting Objectives

- Be familiar with the history of the ASE airfield and the purpose and phases of the Future Air Service Study
- Be knowledgeable about the outreach efforts undertaken with the community
- Be aware of the comments heard from the community regarding the project and alternatives
- Provide direction to staff regarding revisions to the Airport Layout Plan (ALP)
- Understand the next steps in the process and the timeline

ASE Airfield History…

- 1956 – Airport deeded to Pitkin County making it eligible for federal funds for airport development
- 1957 – Runway paved with money from Civil Aeronautics Administration (now FAA) and Pitkin County
- Initial runway dimensions – 5,200 ft. long X 60 ft. wide
- 1963 – Runway lengthened to 6,000 ft. due to pilot concern of landing on a 5,200-ft. long runway
- 1969 – Runway widened to 80 ft. to accommodate larger aircraft (Convair 580 w/wingspan of 105’-4”)

ASE Airfield History

- 1983 – ASE extended the runway to 7,000 ft., widened it to 100 ft. and strengthened it to accommodate the BAE-146 and other new jet aircraft
- 1998 – ALP update proposed relocating Taxiway “A” from 221.5 ft. east of the runway centerline to 320 ft. east of the runway centerline to provide more separation for aircraft safety
- 1999 - FAA approved this proposal as a modification to standards
- 2001 – Pitkin County adopted ordinance to restrict aircraft to wingspans of 95 ft. or less and maximum landed weight of 100,000 lbs
- 2003-2005 – Relocation of Taxiway “A” to 320 ft. (ESID project) was completed
- 2007 – Runway 15/33 rehabilitated (7,000 ft X 100 ft. wide with shoulders)
- 2011 – Runway 33 extended by 1,000 ft. to the south for takeoff use only

Study Overview

- What is the changing technology of future commercial aircraft serving ASE?
- What can ASE do to best sustain future commercial air service?
- How would ASE accommodate these operations?
- What are the impacts and benefits to the airport and community?
- What is best for the future health of the community?

Phase I Study Findings

- CRJ700
  - Provides 95% of ASE commercial service today
  - Replacing retired 50 seat RJ fleet is placing the CRJ 700 in high demand
  - US deliveries were from 2001 to 2011
  - Estimated operational lifespan 15-17 years
  - First retirements estimated to begin 2018
  - Over half of US fleet anticipated to be retired by 2021 with remainder retired by 2025

- Future regional jets will be entering into airline service beginning 2014-2018
- Next generation, although physically larger, offer
  - Reduced environmental impacts (noise, fuel burn/CO2, NOx)
  - Improved travel experience
- Existing wingspan restriction precludes future regional aircraft from serving ASE

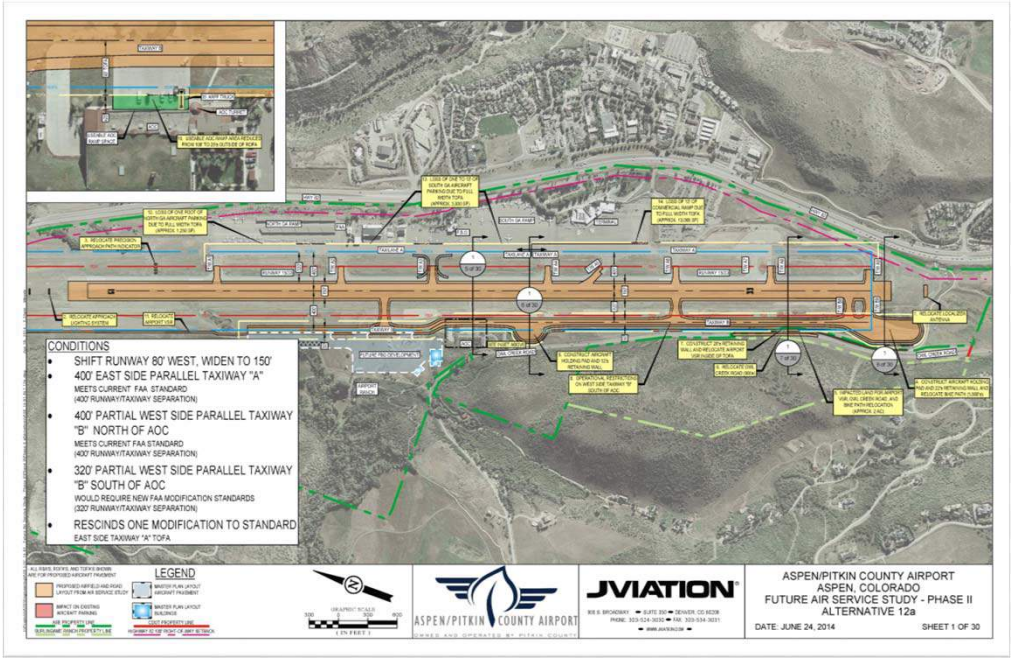
Phase I Study Findings

TABLE 3.2 AIRCRAFT TECHNICAL SPECIFICATIONS				
AIRCRAFT TYPE	WINGSPAN FEET/ INCHES	MAX LW (LBS)	ASE PERFORMANCE CAPABLE	MEETS/DOES NOT MEET CURRENT OPERATIONAL RESTRICTIONS
Current Regional Aircraft				
CRJ-700	76' 3"	67,000	Yes	Meets
Q-400	93' 3"	62,000	Yes	Meets
CRJ-900	81' 7"	73,500	No	Meets
CRJ-1000	85' 11"	81,500	No	Meets
E-170	85' 4"	72,312	No	Meets
E-175	85' 4"	74,957	No	Meets
E-190	94' 3"	94,799	No	Meets
E-195	94' 3"	99,208	No	Meets
Future Regional Aircraft				
E175-E2	101’ 8”	86,201	Yes*	Does Not Meet
E190-E2	110’ 7”	107,431	Yes*	Does Not Meet
E195-E2	110’ 7”	116,911	TBD*	Does Not Meet
MRJ-70 Standard	95' 9"	79,807	TBD	Does Not Meet
MRJ-90 Standard	95' 9"	83,776	TBD	Does Not Meet
CS100 Base	115’ 1”	110,000	Yes	Does Not Meet
CS300 Base	115’ 1”	121,500	Yes	Does Not Meet

Source: Manufacturers; *E-Jets E2 data are preliminary

Phase II Findings

- **Airspace Analysis**
  - The 80’ runway shift to the west (meets FAA 400’ RW/TW separation standard) had minimal impact to approach and departure procedures
- **Separation Standard**
  - The remaining alternatives meet the FAA standards (excluding RW/TW separation on west side at the Airport Operations Center to the south)
- **Modification of Standards**
  - The FAA is requiring ASE to meet standards and will not grant a Modification of Standards unless the standard cannot be met and an equivalent level of safety can be achieved
- **Wingspan Restriction**
  - The remaining alternatives allow next generation regional commercial aircraft to operate with reasonable operating restrictions
- **Second Fixed Base Operator**
  - The remaining alternatives can accommodate the development of a second FBO on the west side



FAA Design Standards to Accommodate Airplane Design Group D-III Aircraft

Airfield Configuration	FAA Standard	ASE Current Condition	Meets Standard
Runway to Taxiway Separation	400’	320’	✗
Runway Width*	150’	100’	✗
Runway Holdbar Separation	328’	272.5’	✗
Runway Safety Area	500’	500’	✓
Runway Object Free Area	800’	800’	✓
Taxiway Width	50’	50’	✓
Taxiway Safety Area	118’	118’	✓
Taxiway A OFA Width**	186’	169’	✗
Maximum Wingspan	118’	95’	✗

*Runway width for ADG D-III is based on aircraft max takeoff weight. For aircraft less than 150,000 lbs the standard width is 100’

**A current MOS is in place for Taxiway A Object Free Area (93’ on west, 76’ on east = 169’)

Narrowing Process in a Nutshell

Does not meet FAA standards (MOS)

- Alternatives 1, 2, 5, 5a, 9, 10, 13

Meets FAA standards with *significant* impact

- Alternatives 4, 6, 7, 7a, 7b, 8

Meets FAA standards (to the greatest extent possible) with *major* operational impact

- Alternatives 3, 11, 12

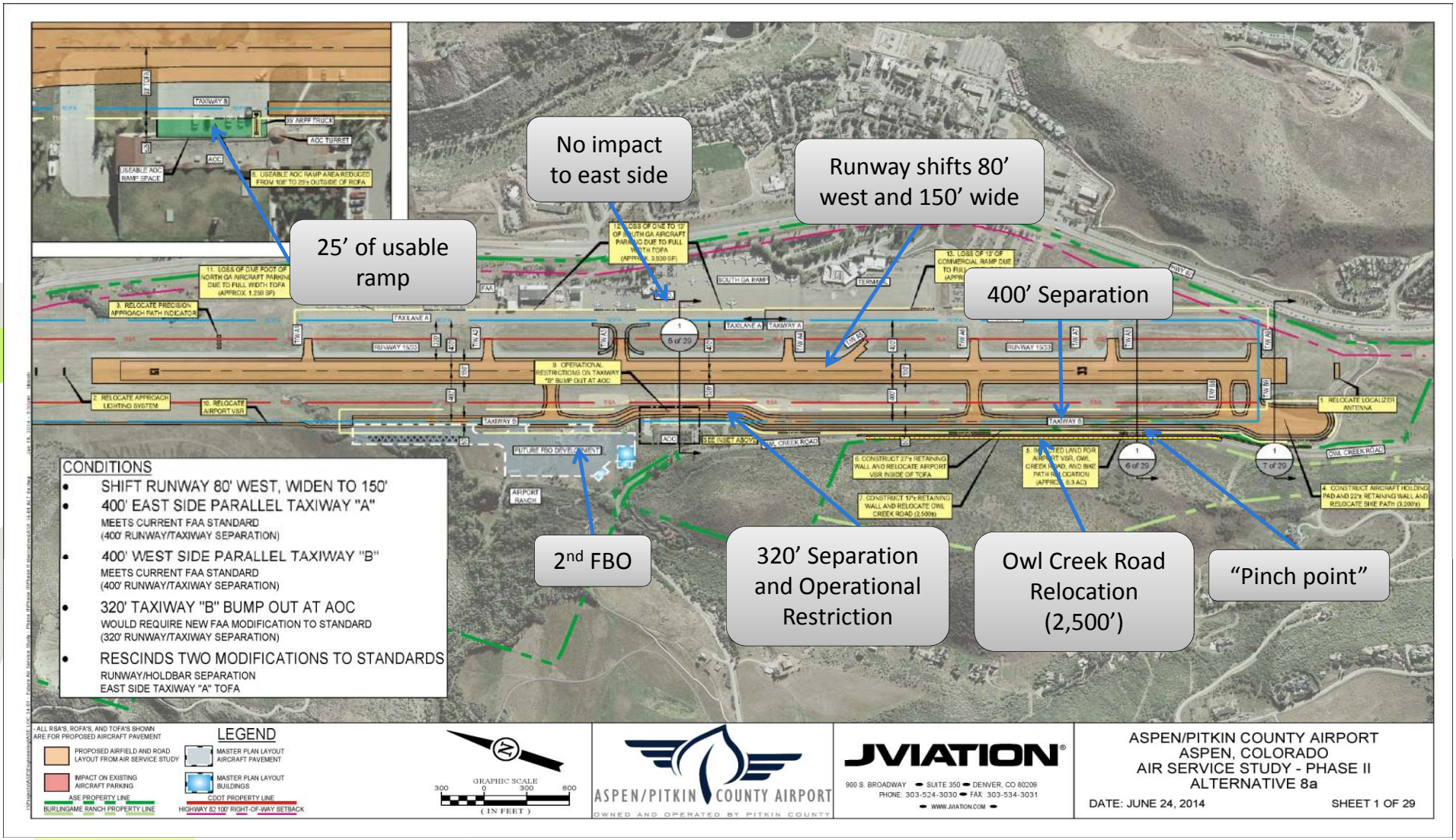
Meets FAA standards (to the greatest extent possible) with *reasonable* operational impacts

- Alternatives 8a, 12a

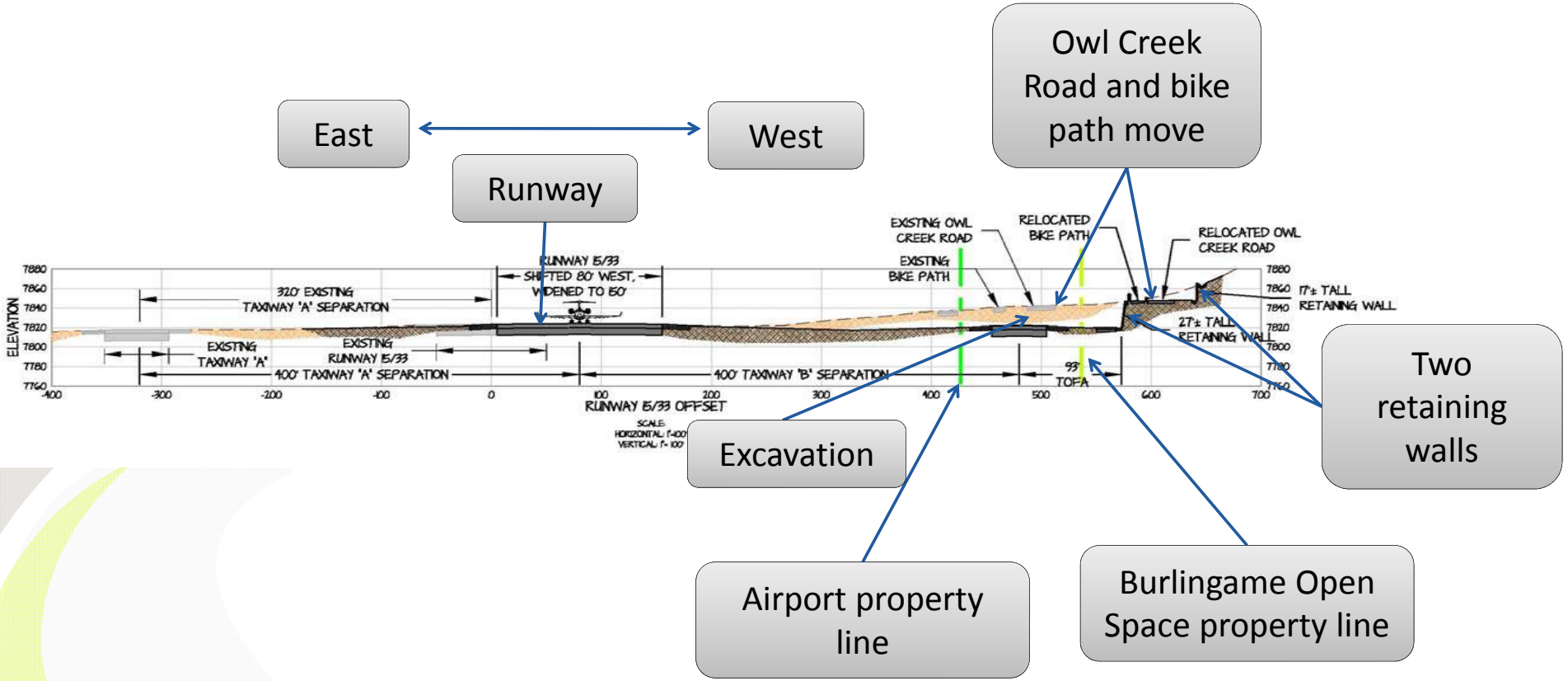
Phase II Study Objectives

- **Meet FAA standards of safety, efficiency and operational capacity**
- **Minimize the impact on the facilities previously approved in the 2012 Master Plan Update**
- **Accommodate larger future regional commercial aircraft**

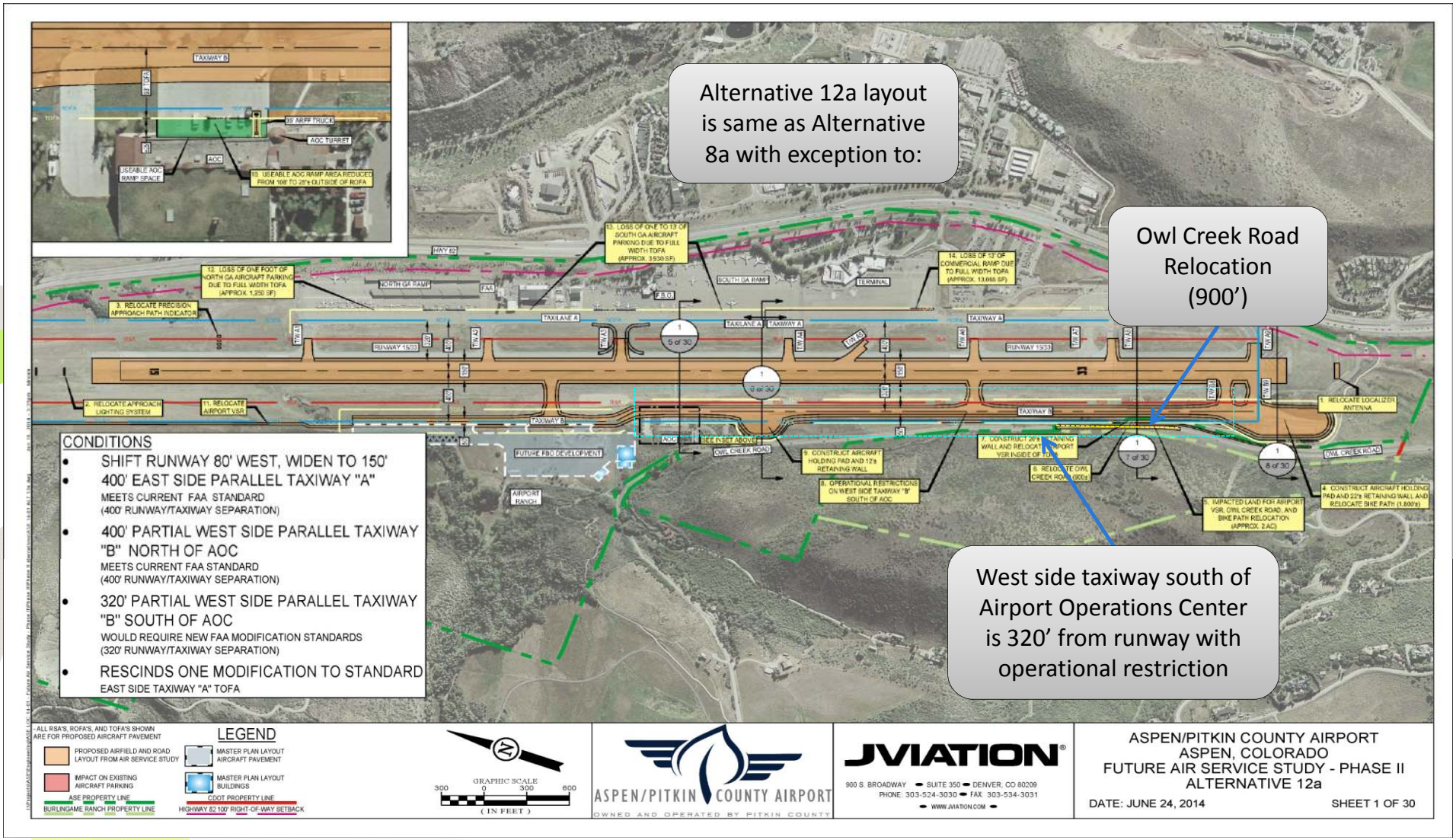
Alternative 8a - Layout



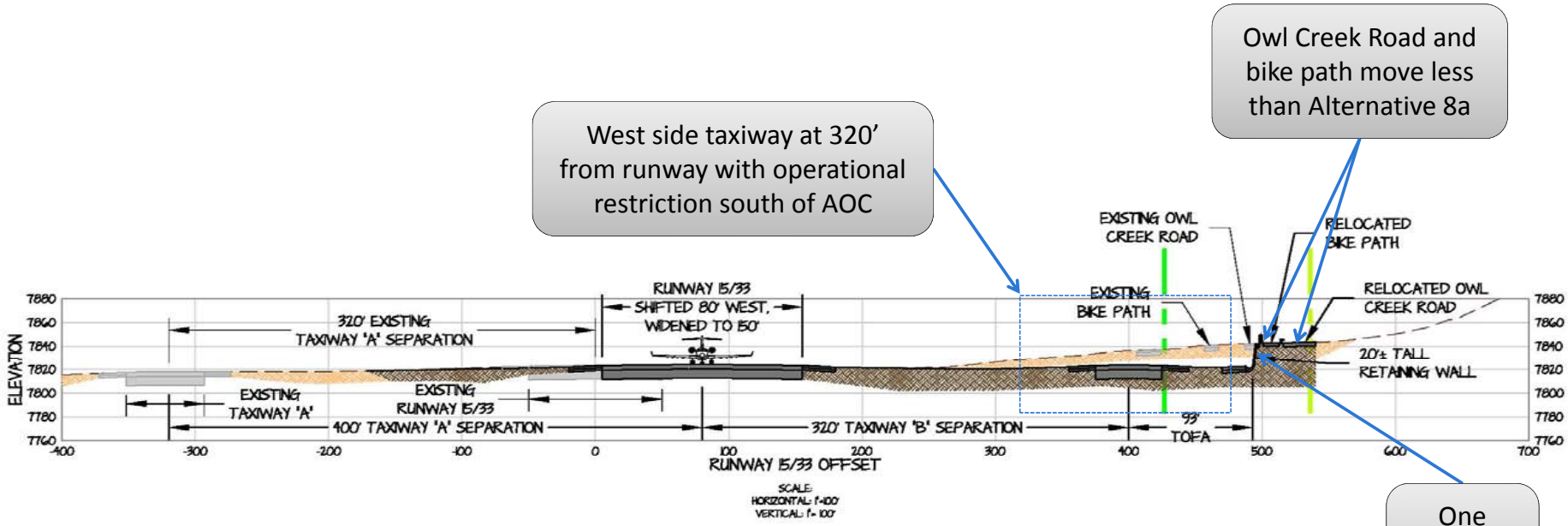
Alternative 8a – Owl Creek Road Section



Alternative 12a - Layout



Alternative 12a – Owl Creek Road Section



Conceptual Cost

Least Operational Impact, Highest Ability to Meet Study Objectives	
Alternative 8a	$132 M
Alternative 12a	$121 M

Anticipated Funding Sources: Federal Aviation Administration, Colorado Department of Transportation -Division of Aeronautics, Aspen Pitkin County Airport Enterprise Fund

Cost Components

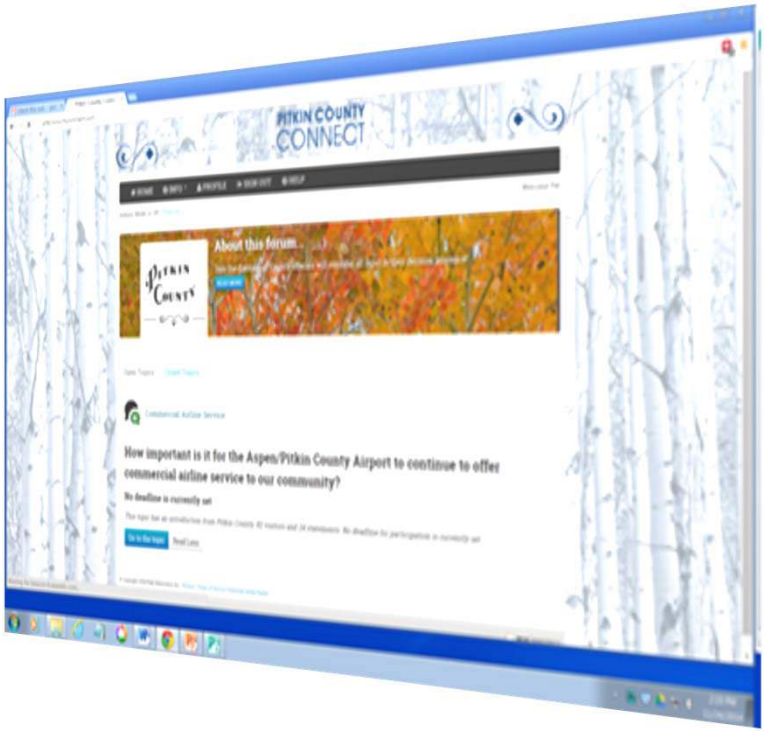
- Overall site grading to evaluate the required earthwork
- Site specific drainage was also analyzed, with special consideration to Owl Creek
- Conceptual utility plans which account for the general layout and estimated quantities
- Conceptual level airfield electrical design for general layout and quantities for the runway and taxiway lighting and guidance systems, and all navigational aids (NAVAIDS) impacted by the project
- Unit costs were developed from historical bid prices

Public Outreach

- Outreach efforts were consistently offered throughout Phase III including:
  - Produced 3 ***Press Releases*** for Phase III events that resulted in stories in both newspapers
  - Created an easily ***identifiable project logo*** for the public recognition along with an ***revised project website*** for easier access to information
  - Conducted 10 ***Coffee Chats*** with the County Manager at the Airport Terminal twice a week for two months; promoted on radio, print and TV
  - Provided 8+ ***presentations*** throughout the community with civic groups, local governments, and neighborhoods
  - Held 2 ***community open house events*** on Oct. 30th at the Pitkin County Library and on November 11th at the Airport Operations Center (50+ attendees)

Community Outreach

- Produced an ***educational video*** for the public on key elements associated with the study (200+ views on YouTube)
- Published a ***Guest Editorial*** in the Aspen Times
- Launched ***Pitkin County Connect*** with Phase III; invitations sent to all individuals who participated on Master Plan committees and airport task forces
- Utilized ***weekly county agenda ad*** to promote engagement and feedback
- Promoted engagement on ***Pitkin County Facebook*** page (currently has close to 1,000 friends of the page)



What We Heard…

- There is a cursory understanding of the issue with some confusion and misinformation
- Over the course of educational conversations, the public was generally supportive
- Citizens support continued viable commercial air service operations
- Citizens recognize that the economic value to the community to see commercial operations sustained in a meaningful way
- Meeting FAA safety standards was understood and generally supported

Community Questions and Concerns…

- **Why is the Aspen/Pitkin County Airport considering making changes to allow larger commercial aircraft?**
- **Answer:** The Air Service Study found future commercial aircraft capable of serving the airport in Aspen will be larger and have wider wingspans than aircraft now allowed to operate here. The CRJ 700 now provides 95% of our commercial jet service but this aircraft is being retired within the next 10 years. All commercial regional jets being designed to replace the CRJ700 have wider wingspans and are larger than aircraft now operating here. If this community wants commercial service at a similar level to that offered today we will need to increase the distance between our taxiway and runway to accommodate larger wingspans.

Community Questions…

- **Can't the FAA give us a new modification of safety standard?**
- **Answer:** We have a good working relationship with the FAA, and have been allowed to operate safely with a modification of standards for many years. The FAA is reducing the number of modifications it issues for airports like ours and is requiring us to meet its full safety standards unless we can show that it is physically impossible for us to do so. After analyzing 18 different airport layout plans we now know that we can, and must, meet FAA safety standards if we want to accommodate future commercial aircraft.
- **Are bigger jets going to be noisier or have a greater impact on air quality than the CRJ 700 and Q400 that operate here now?**
- **Answer:** Larger wingspans and new jet engines are designed to improve efficiency and significant strides have been made to reduce noise. On a per passenger basis we expect to see less fuel burn. Both noise and air quality impacts will be important factors studied in the subsequent Environmental Assessment (EA).

Community Questions…

- **Will accommodating larger aircraft spell massive growth in air traffic here?**
- **Answer:** Unlikely, given what we know today. Growth and congestion at our airport is limited by two key factors: physical apron space to move and manage aircraft on the ground and limited airspace in the mountains that surround us. Forecast demand will be studied in the Environmental Assessment, but no matter what the demand, our physical and environmental limitations will be factors in curbing excessive growth.
- **If we make the recommended runway improvements will 737s ever be able to land here?**
- **Answer:** We don't know. Our mountainous terrain and altitude have historically limited the types of aircraft capable of operating here. Aircraft with wingspans up to 118' will be allowed to use the runway, but whether this sized aircraft can meet stringent air carrier safety standards to operate here remains to be seen. This will be studied in the EA.

Community Questions…

- **Will runway changes increase the number of flights that land from the Aspen end of the runway?**
- **Answer:** No. While the majority of landings occur from the north (Shale Bluffs) end of the runway, sometimes pilots opt to land from the south because of stiff tailwinds. Pilots will continue to make the safest choice for landing despite changes to the runway.
- **Why must we accommodate a second Fixed Base Operator on the west side of the airport?**
- **Answer:** When the airport receives federal grants, it must agree to FAA grant assurances. We are required to provide an equal opportunity for other fixed base operators to conduct business at the airport if there is interest and available space on the airport to do so.

Community Questions…

- **When will the BOCC consider a new airport layout plan? If approved, how quickly would construction begin?**
- **Answer:** The Board of County Commissioners will consider the new airport layout plan on December 16, 2014. If approved an EA would likely begin during the summer of 2015, and continue for 18 to 24 months. No development can occur at our airport until this rigorous and thorough EA is conducted. It is during the EA that we as a community can seriously consider how development at the airport aligns with our values and whether maintaining regular commercial service operations at the airport is important to the community.
- **How much are these runway improvements going to cost the taxpayer?**
- **Answer:** Taxpayer dollars from property, sales tax, special district or federal income tax are ***not*** used to fund airport improvements today, and we do not anticipate the use of general fund tax monies for these improvements.

Necessary Local & Federal Approvals

Local Review & Approvals

- Pitkin County
  - Location and Extents Review
  - Aspen/Pitkin County Airport Design Guidelines
  - Building Permit
  - Environmental Health
- City of Aspen/Aspen Valley Land Trust
  - Potential Change in Use for Burlingame Parcel

Federal Reviews & Approvals

- United States Army Corps of Engineers
  - 404 Permit
- Federal Aviation Administration
  - ALP Revisions
  - Environmental Assessment
  - FONSI/ROD
  - Obstruction Evaluation/Airspace Analysis
  - Navaid Relocation
  - Modification of Standards

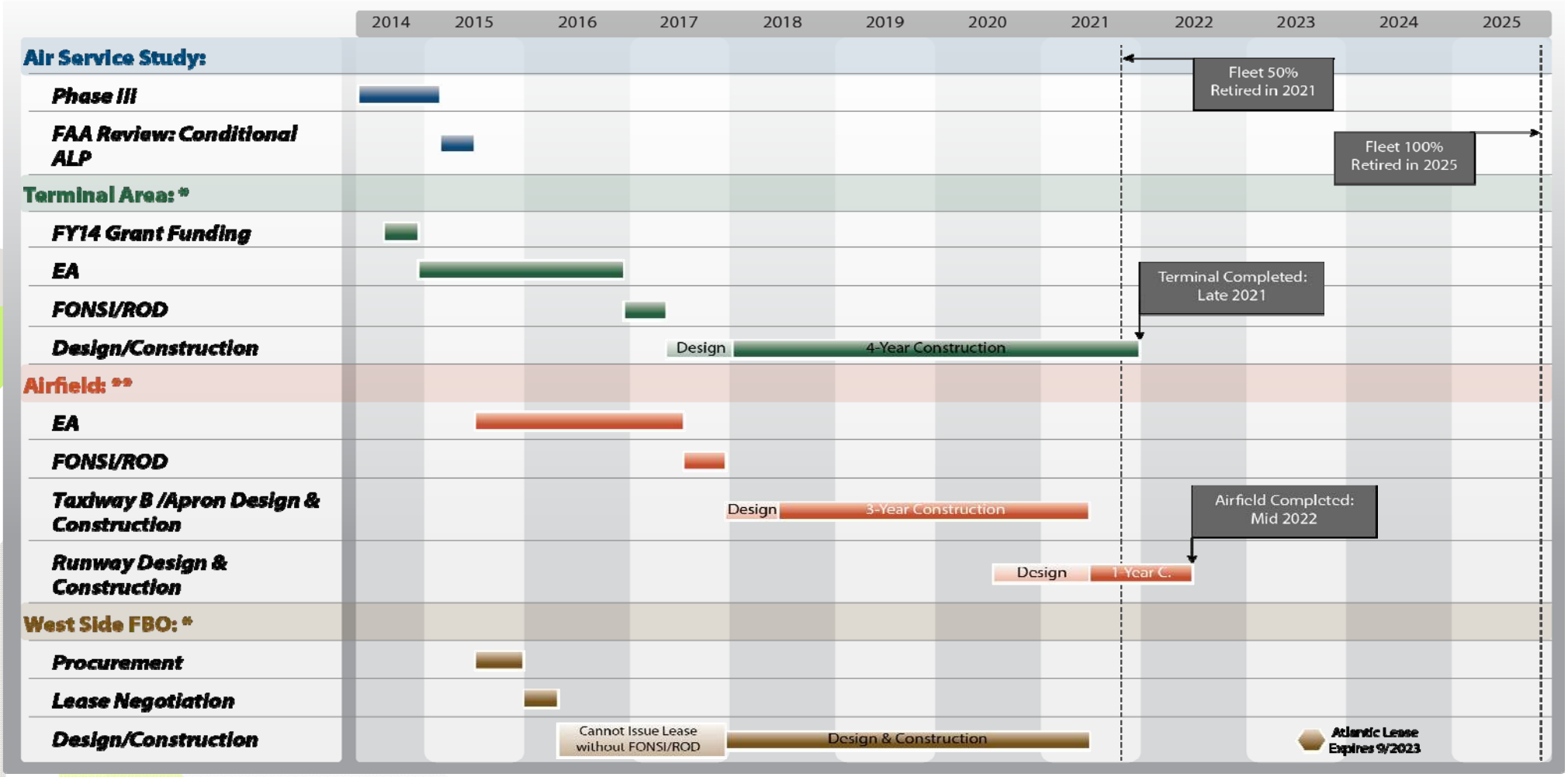
Recommendation for Alternative 8a

- Provides an airfield configuration that accommodates all known future regional commercial aircraft
- Is most closely aligned with federal safety standards for runway and taxiway separation of 400'
- Allows for maximum aircraft operational efficiency with minimal operational holds
- Meets FAA design Group III standards, excluding the bump out around AOC
- Has overall preliminary support of community

Recommended Next Steps

- ***Initiate Phase III Step B***
  - *Direct staff to prepare a revised ALP reflecting Phase II* ***Alternative 8a***
  - *Continue ongoing public education*
  - *Submit revised ALP for Board approval*
  - *Submit approved ALP to FAA for review and approval*
- ***Phase IV***
  - Upon FAA approval of the revised ALP and ***consent of the BOCC*** (at that time), conduct an Environmental Assessment necessary to evaluate environmental impacts associated with potential capital improvements
  - Key elements to be EA Study would include:
    - Forecast and fleet mix
    - Natural resources impacts (23 categories including noise, air quality, surface traffic, etc.)
    - Socio-economic impacts

ASE Potential Project Schedule



** 2012 Master Plan Update ** Currently Being Evaluated*

Thank you

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