

Council Workshop

Ann Arbor Municipal Airport: Creating an Excellent Airport



February 8, 2016

Agenda

- How does the airport serve our community?
- What would it take to achieve excellence?
- What actions have been taken since 2007?
- Would a runway extension alter the aircraft mix using the airport?
- What alternatives have been considered?
- What are some of the concerns expressed?

ARB: Serves many purposes

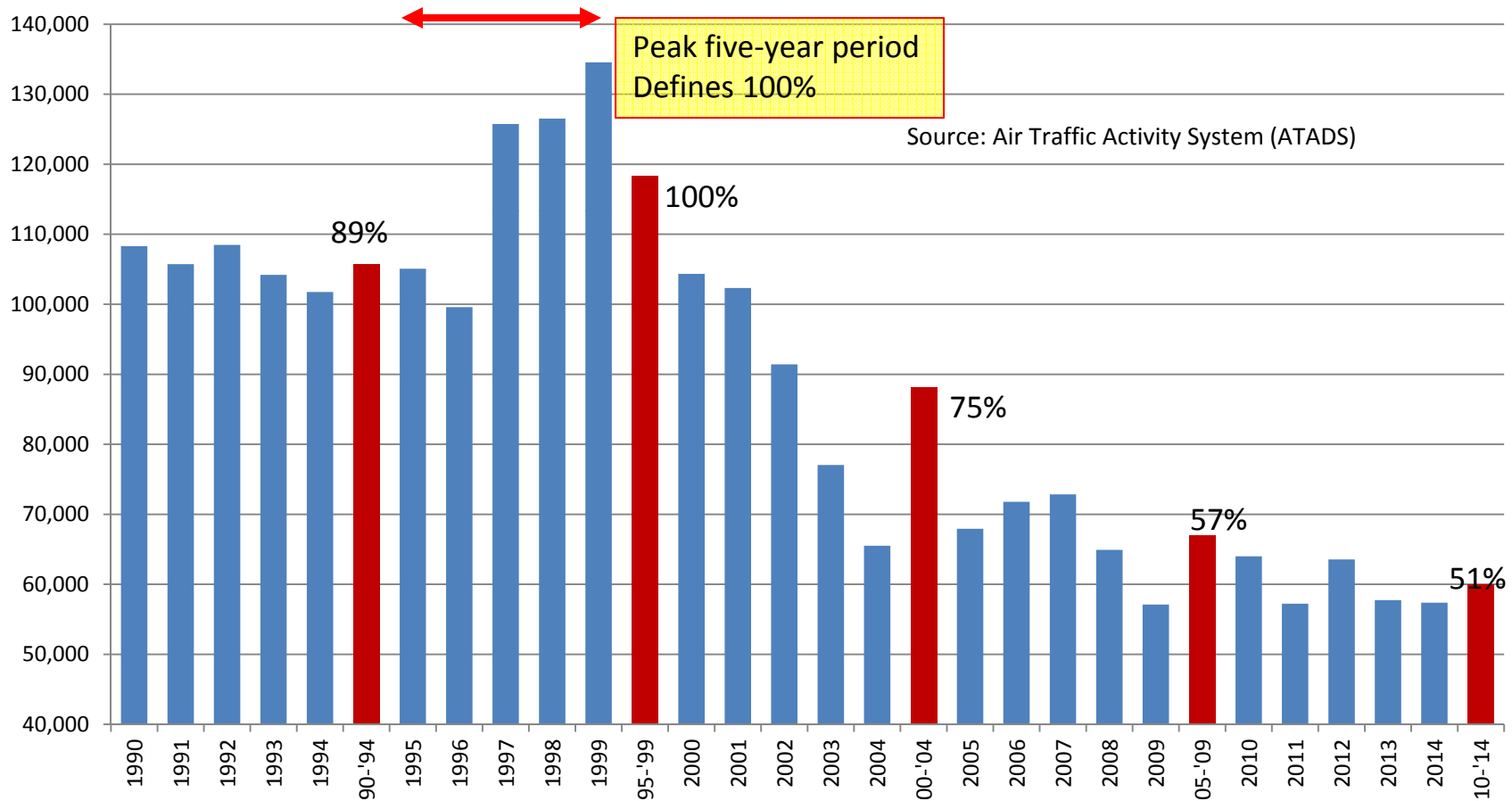


MICHIGAN *flyers*



ARB: Airport Operations 1990-2014

Annually and 5-year means



ARB: Some Key Statistics

Airport/aircraft related

- Property owned by airport
 - 730 acres
- Aircraft based at airport
 - 162 SE, 13 ME, 1 Jet, 7 Heli
- Number of hangars
 - 166
- Aircraft operations in 2015
 - 56,915 (22,944 itinerant)

Business related

- Budget in 2015
 - \$900,000**
- Number of business tenants
 - 11
- Number employed
 - 82 FTEs
- Number of flight schools
 - 5
- Acres leased to farming
 - 168 acres
- Recreational fields
 - 10 acres leased

**\$0 from local property taxes

ARB: Community Benefits Assessment

- Evaluated for 2015 data
- Source: MDOT-Aero based on EDRG* model
- Estimated \$38 million of economic output

		Jobs		Income		Output	
		local	state	local	state	local	state
Direct	Airport	82	82	\$7,520,000	\$7,520,000	\$19,560,000	\$19,560,000
	Off-site	128	128	\$3,460,000	\$3,460,000	\$9,630,000	\$9,630,000
Indirect	Airport	42	82	\$1,760,000	\$3,840,000	\$5,080,000	\$11,450,000
	Visitor spending	35	55	\$1,465,000	\$2,410,000	\$4,300,000	\$7,140,000
Total Impact		287	347	\$14,210,000	\$17,225,000	\$38,570,000	\$47,780,000

*Economic Development Research Group, Inc. Boston MA

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ARB: Creating an Excellent Airport

Aircraft Operations

- Essential
 - Establish direct line of sight of FAA Tower to Rw24 hold area to improve safety
 - Increase runway length to improve safety and aircraft utilization
- Desired
 - Establish 34:1 glideslope to RW24 to improve safety in low visibility conditions

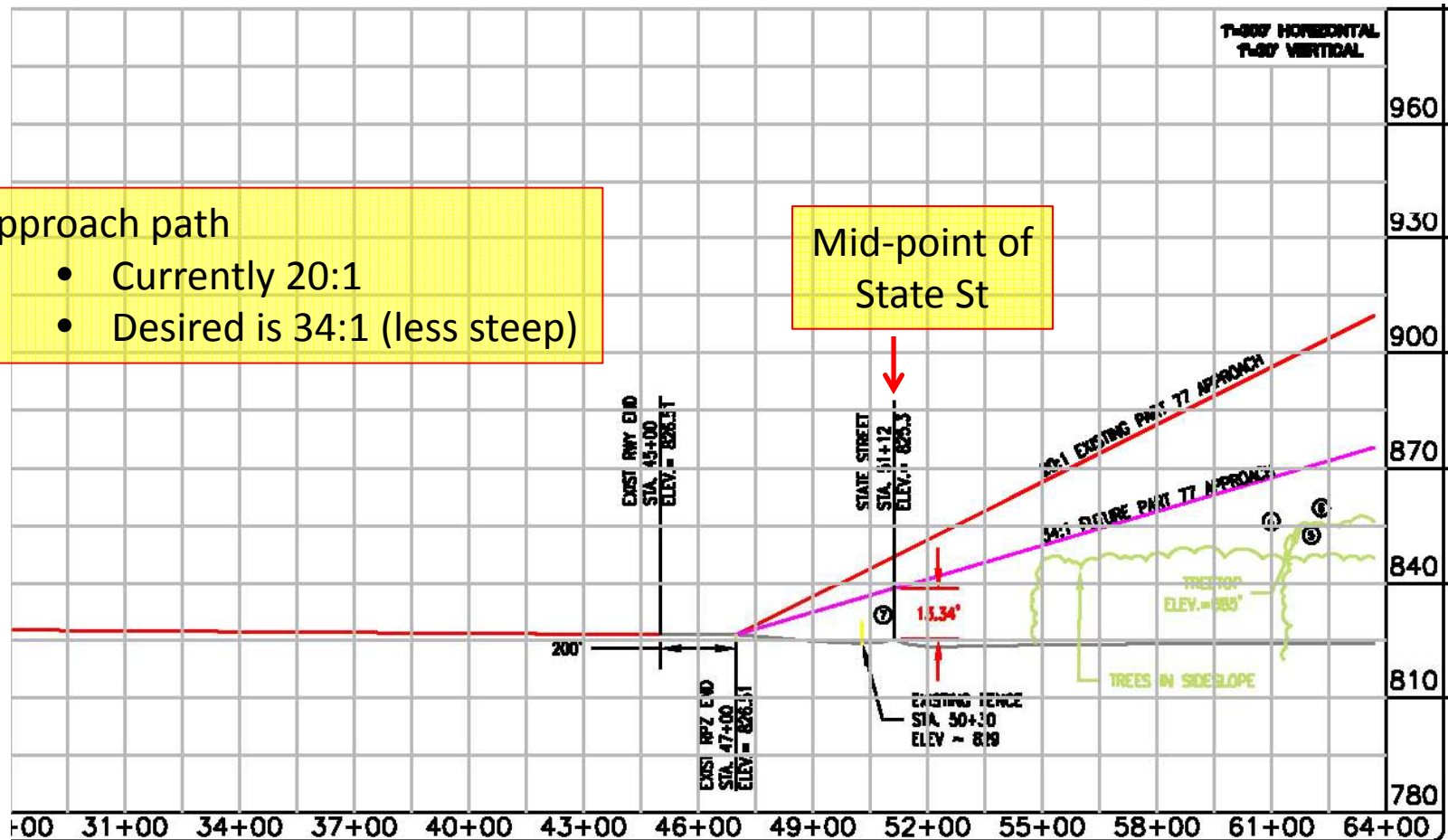
Support infrastructure

- Desired
 - Improve internal roads and parking
 - Renovate and extend terminal building

ARB: Approach to RW24 over State Street

Approach path

- Currently 20:1
- Desired is 34:1 (less steep)



ARB: Safety issue:

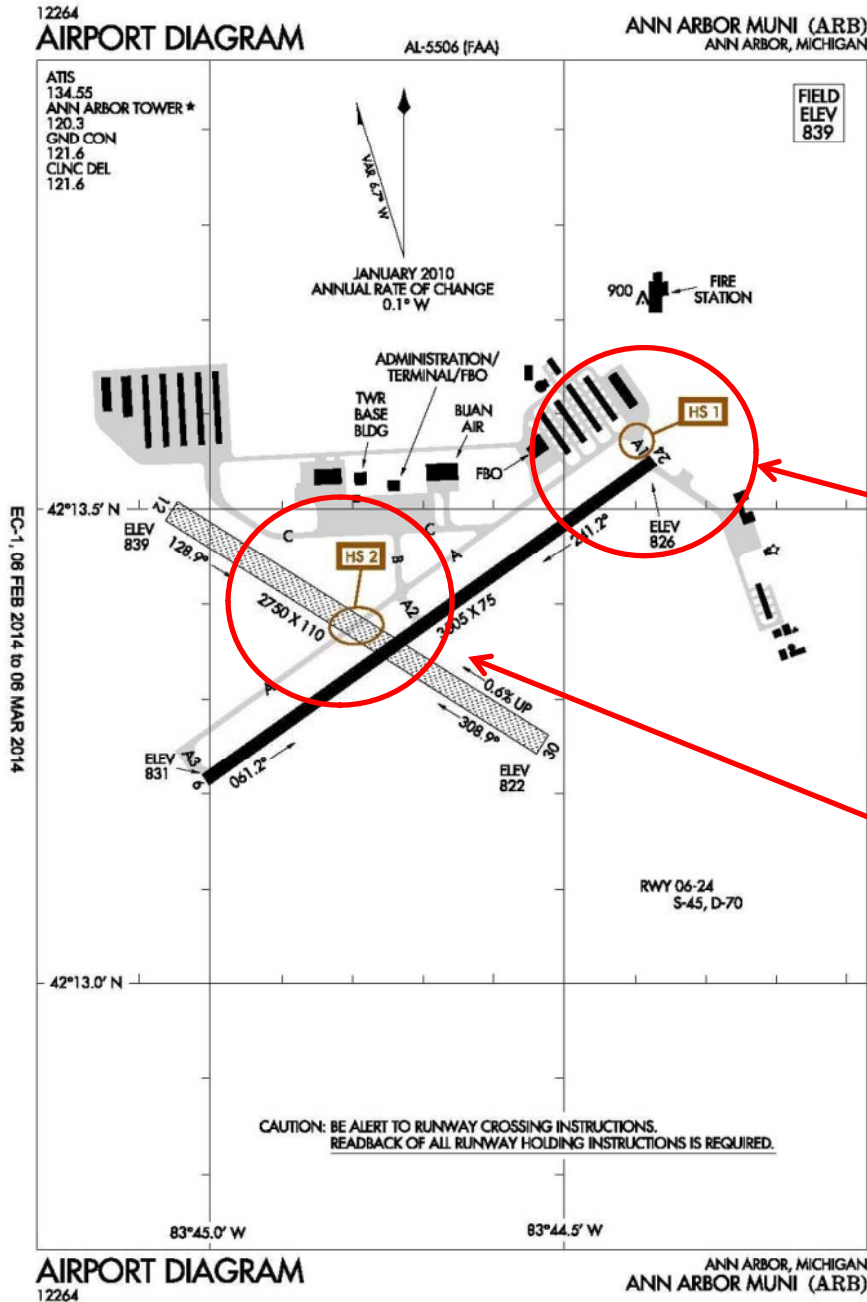
FAA tower cannot see aircraft in hold area on RW24

Pilot view



Tower view





ARB: FAA Identified Hot Spots*

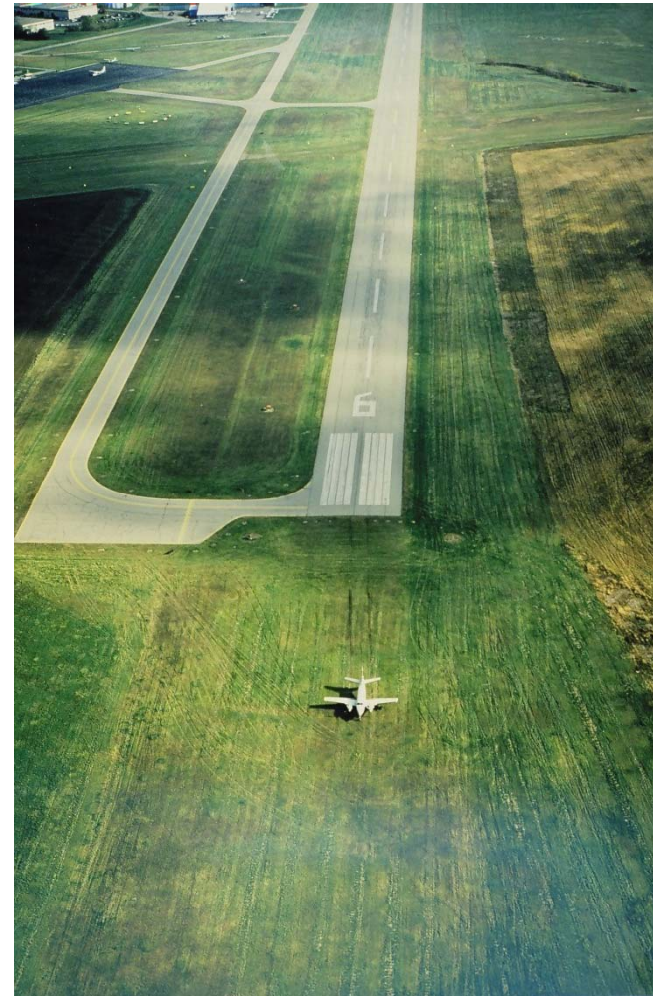
Hold short area for Rw24

Intersection of taxiway with unpaved RW12/34

*A hot spot is defined as a location on an airport movement area with a history of potential risk of collision or runway incursion, and where **heightened attention by pilots and drivers** is necessary.

ARB: Runway Overruns

Overrun: Where the aircraft cannot stop before the end of the runway



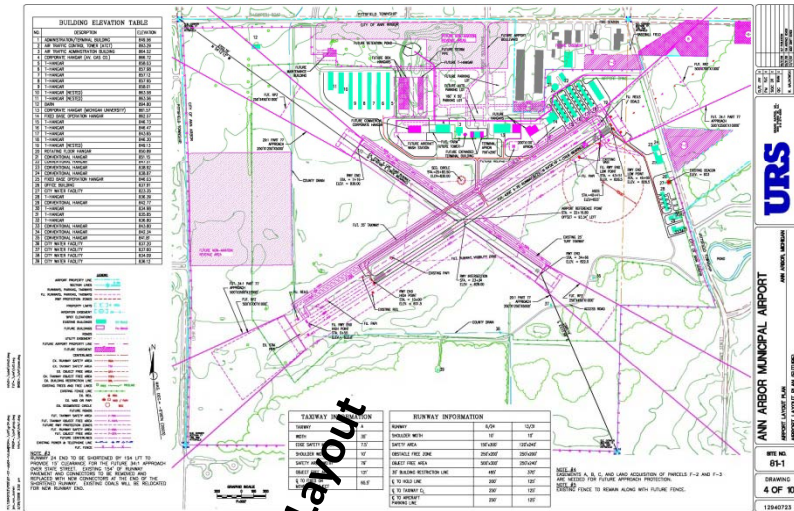
ARB: Safety Issue: Runway Overruns

- ARB had 11 known overruns between 1998 – 2008
 - Data source: FAA/NASA ASRS and AIDS accident/incident reporting
- During same period, all other Michigan airports combined had **one** overrun.
- 15 of 235 public use airports in Michigan have FAA/contract control tower
- ARB's runway is shortest of all Michigan towered airports
- 2015: 7th busiest in MI
- Chances of overruns are greater at ARB because of high operations on 3,505' runway

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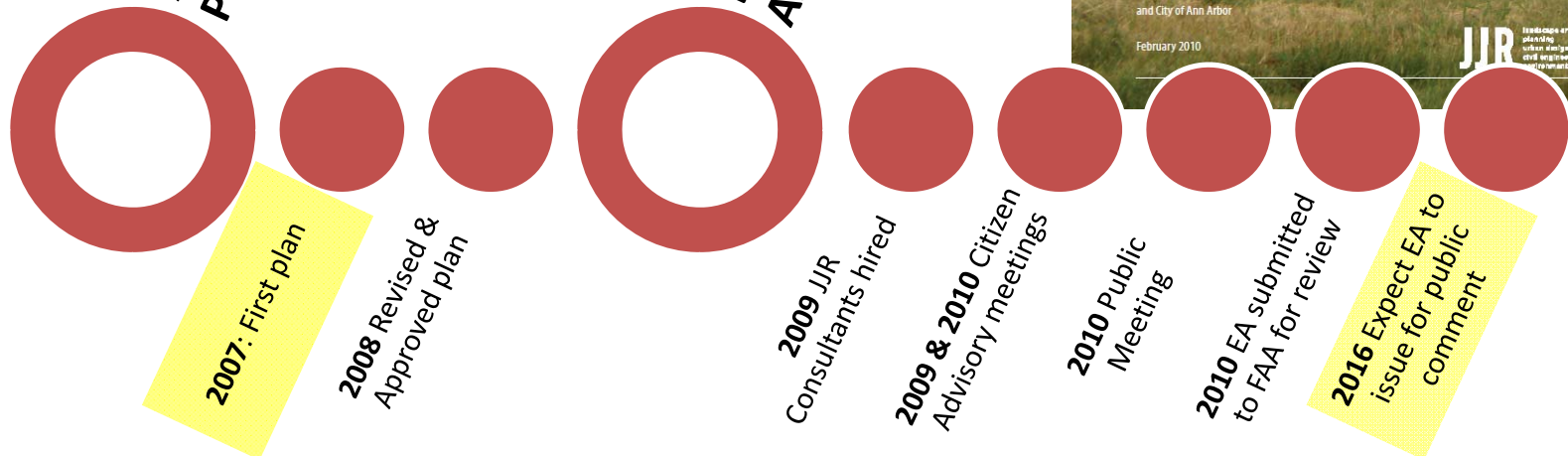
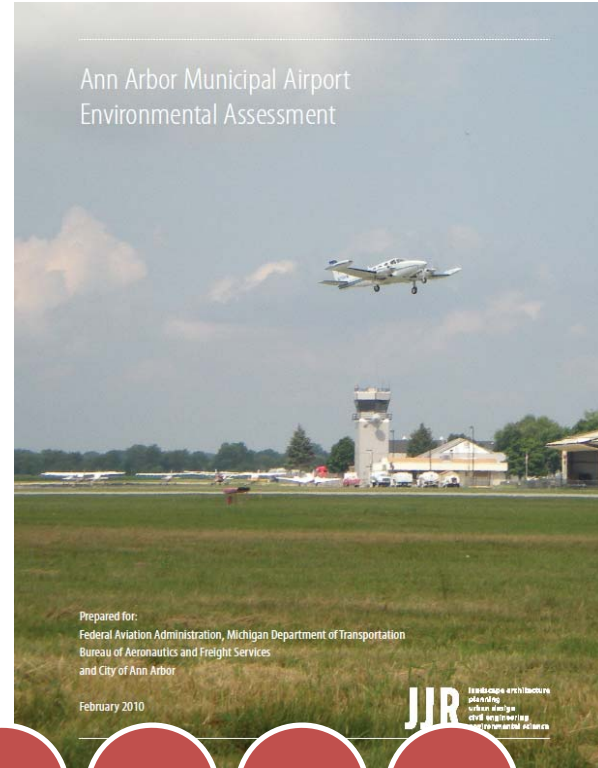
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ARB: Revised ALP and EA timeline



Airport Layout Plan

Environmental Assessment



2007: First plan

2008 Revised & Approved plan

2009 JJR Consultants hired

2009 & 2010 Citizen Advisory meetings

2010 Public Meeting

2010 EA submitted to FAA for review

2016 Expect EA to issue for public comment

ARB ALP: Shift of runway by 150ft

Approved ALP 2008

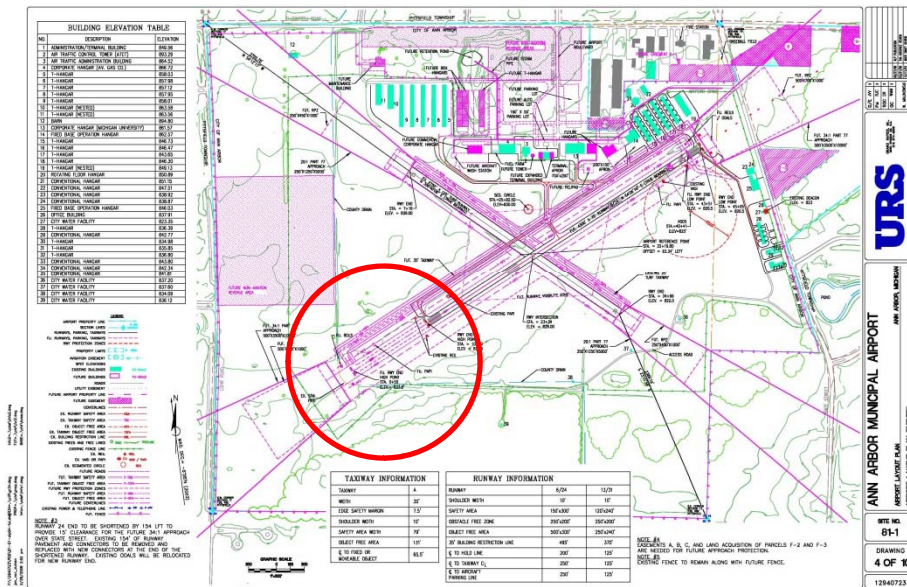
Solves two problems with shift



- Establishes direct line of sight of Tower to RW24 hold line
- Establishes 34:1 glide-slope for aircraft landing RW24

ARB: Extending the runway by 800ft

Proposed runway length 4300ft



- Improves safety for landing and departing aircraft
- Improves aircraft utilization decreases weight restrictions on departure for larger aircraft currently using airport



What considerations determine runway length?

Which aircraft

- The critical aircraft actually using the airport
- Those aircraft with the most demanding requirements
- >500 operations/yr.

Local considerations

- Airport elevation
- Maximum mean monthly temperature
- Runway slope
- Wet or dry pavement

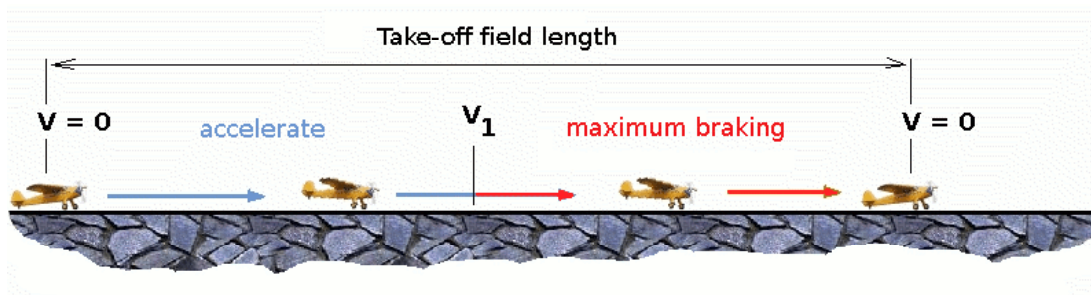
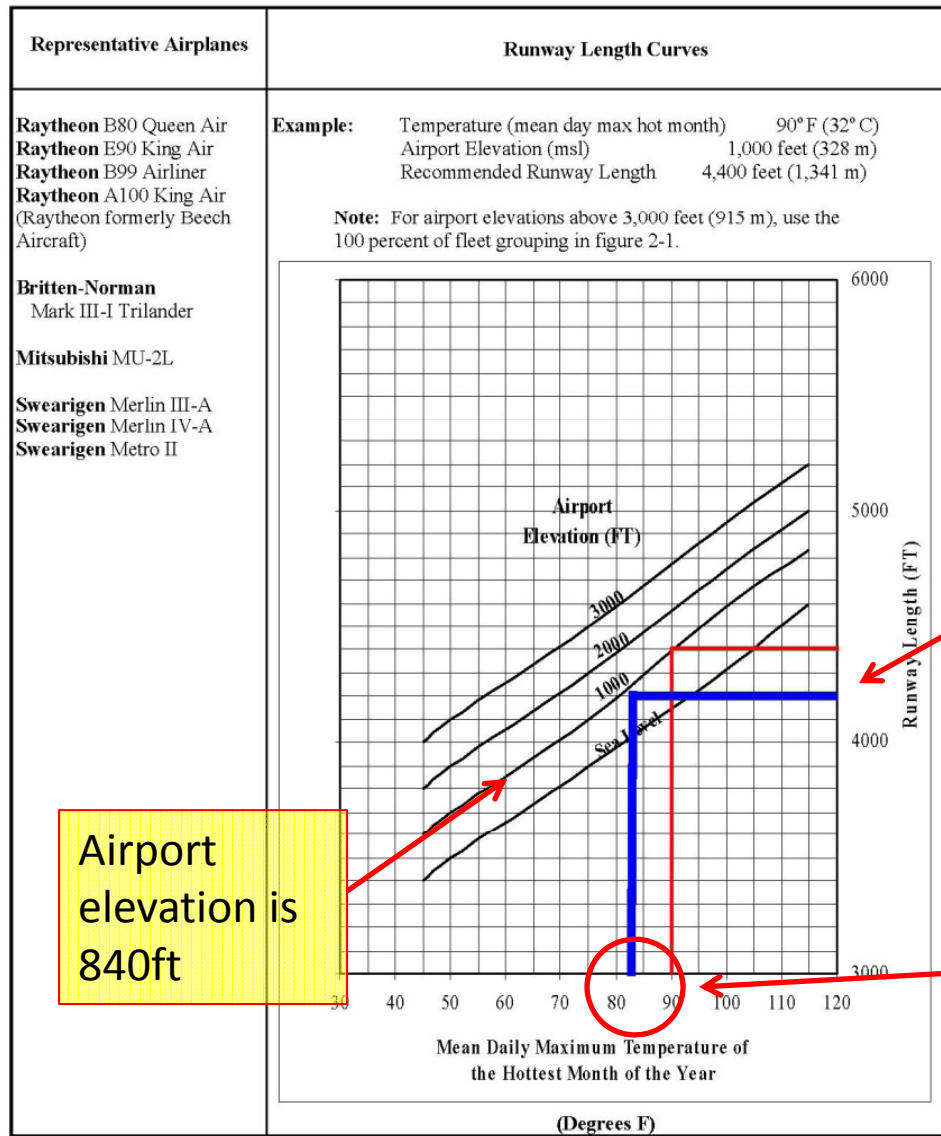


Figure 2-2. Small Airplanes Having 10 or More Passenger Seats
(Excludes Pilot and Co-pilot)



These are typical aircraft currently using ARB

Airport elevation is 840ft

Suggested runway length is 4,200ft
 Michigan B-II standard is 4300ft based on M.A.S.P.

Mean Daily Max Temp for July is 83F

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ARB: 3505 vs 4300ft runway. What changes?

- Current airport designation
 - B-II Small Aircraft

- Future airport designation
 - B-II Small Aircraft

- “B” – approach speed 91-120kts
- “II” – wingspan 49-79ft

- Larger aircraft use
 - An approved airplane flight manual
- Greater restrictions could be determined by
 - FAR Part 135
 - Pilot
 - Owner/operator
 - Insurance company

Bottom line
There should not be an
influx of larger aircraft

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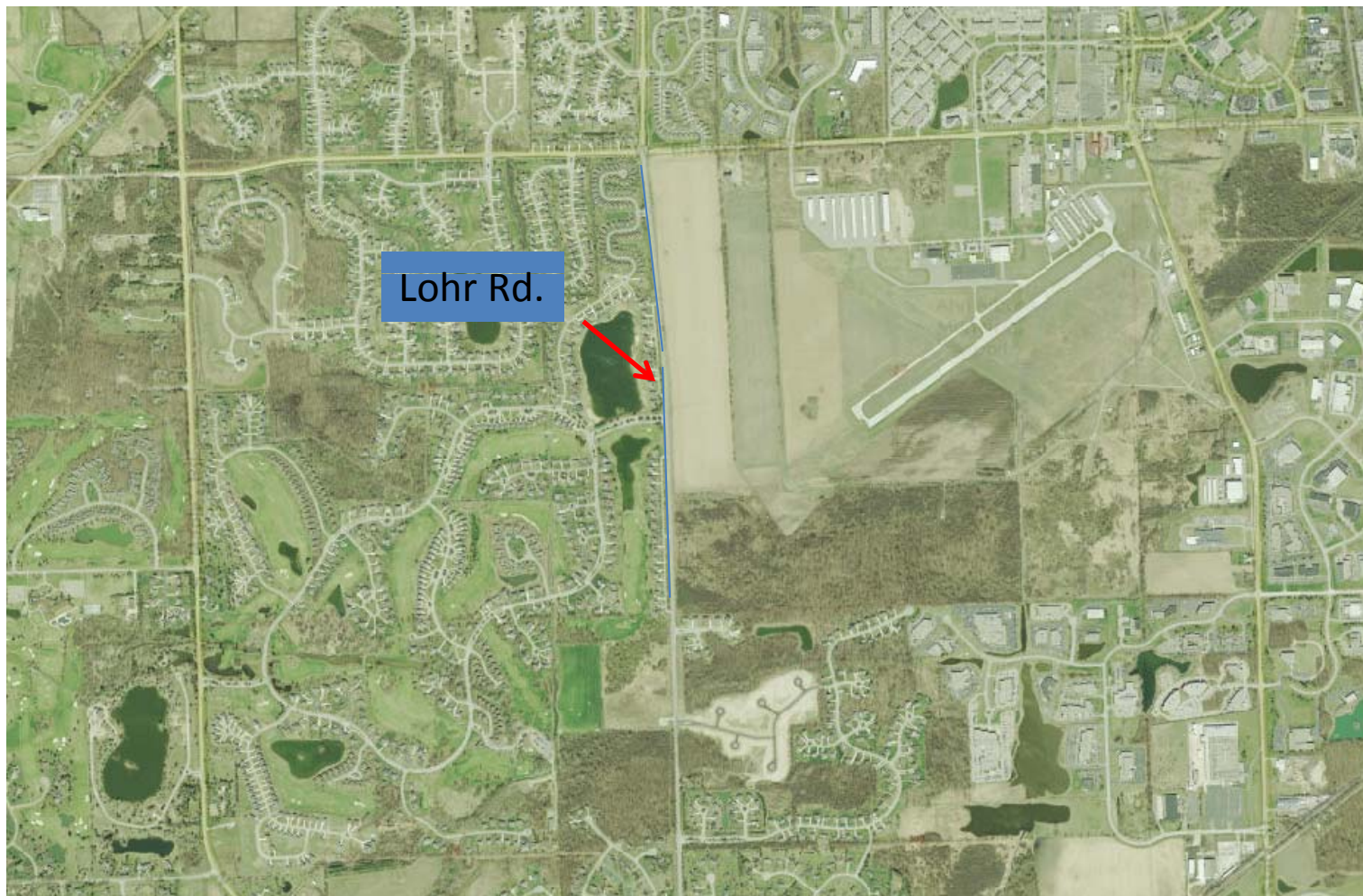
ARB: Alternatives considered

- Do nothing
 - Rejected by City Council with approval 2008 ALP
- Extend/shift runway 950ft with displaced threshold
 - Does not meet FAA guidelines for funding
- Shift runway with extension < 800ft
 - Judgment call on cost/benefit and likelihood of funding.
 - What would be the observable difference?
- Realign runway or extend to east
 - Disruptive to roads or very expensive, or both.

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ARB: Residential build-up 1990-2010

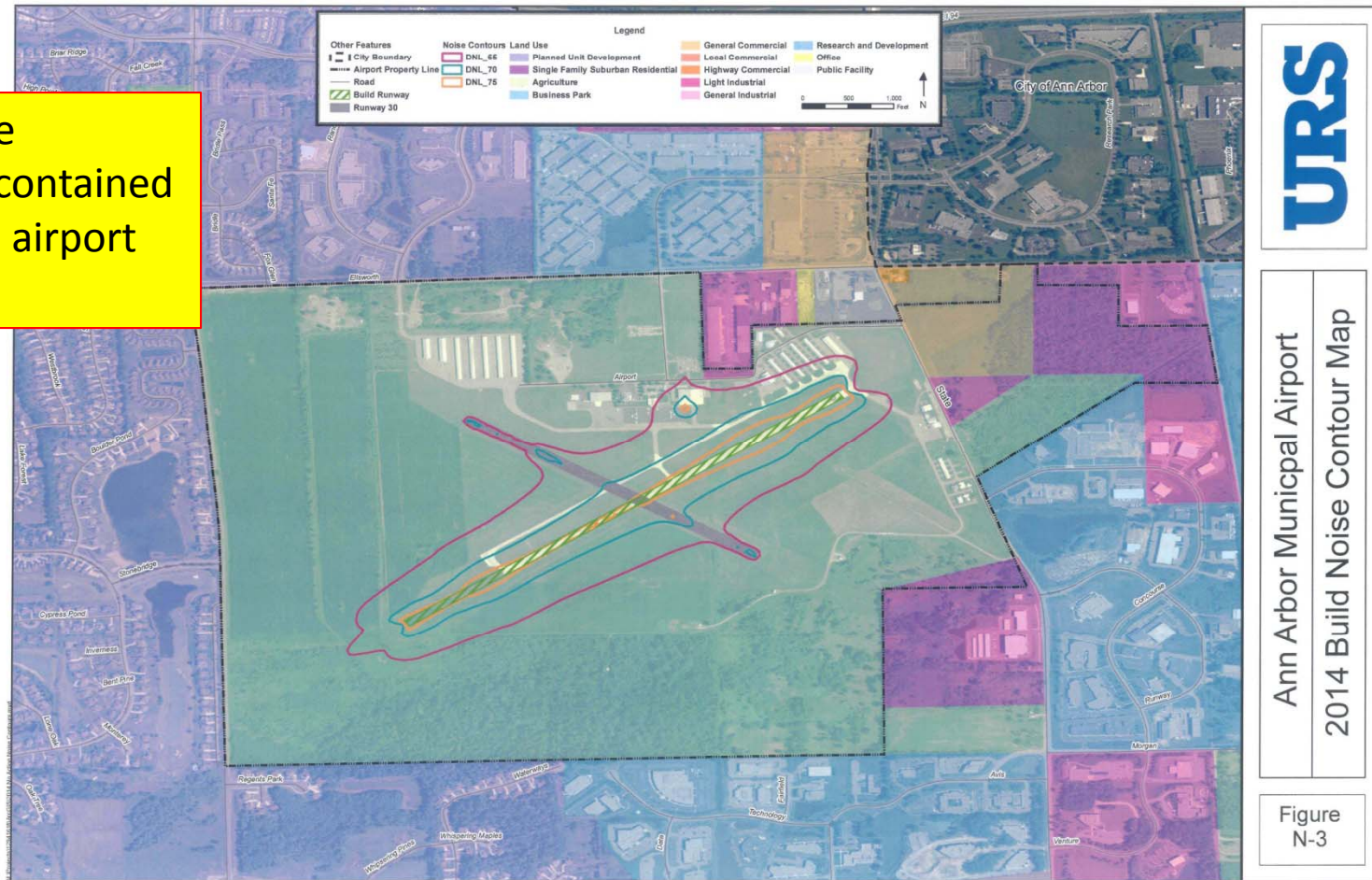


ARB: Noise Abatement Flight Procedures



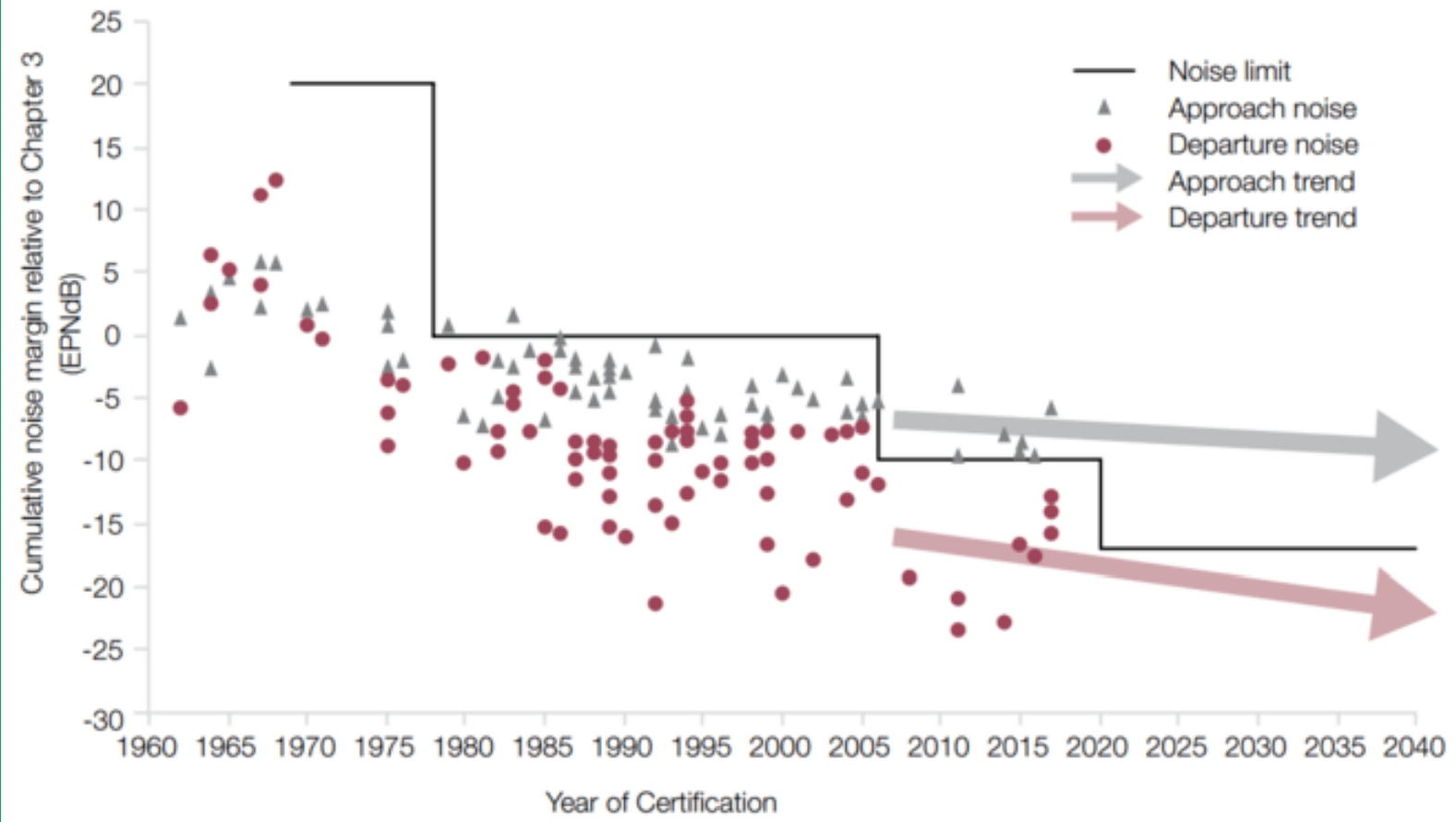
ARB: Estimated 65db Noise Envelope with Runway Extension

65db noise envelope contained within the airport property



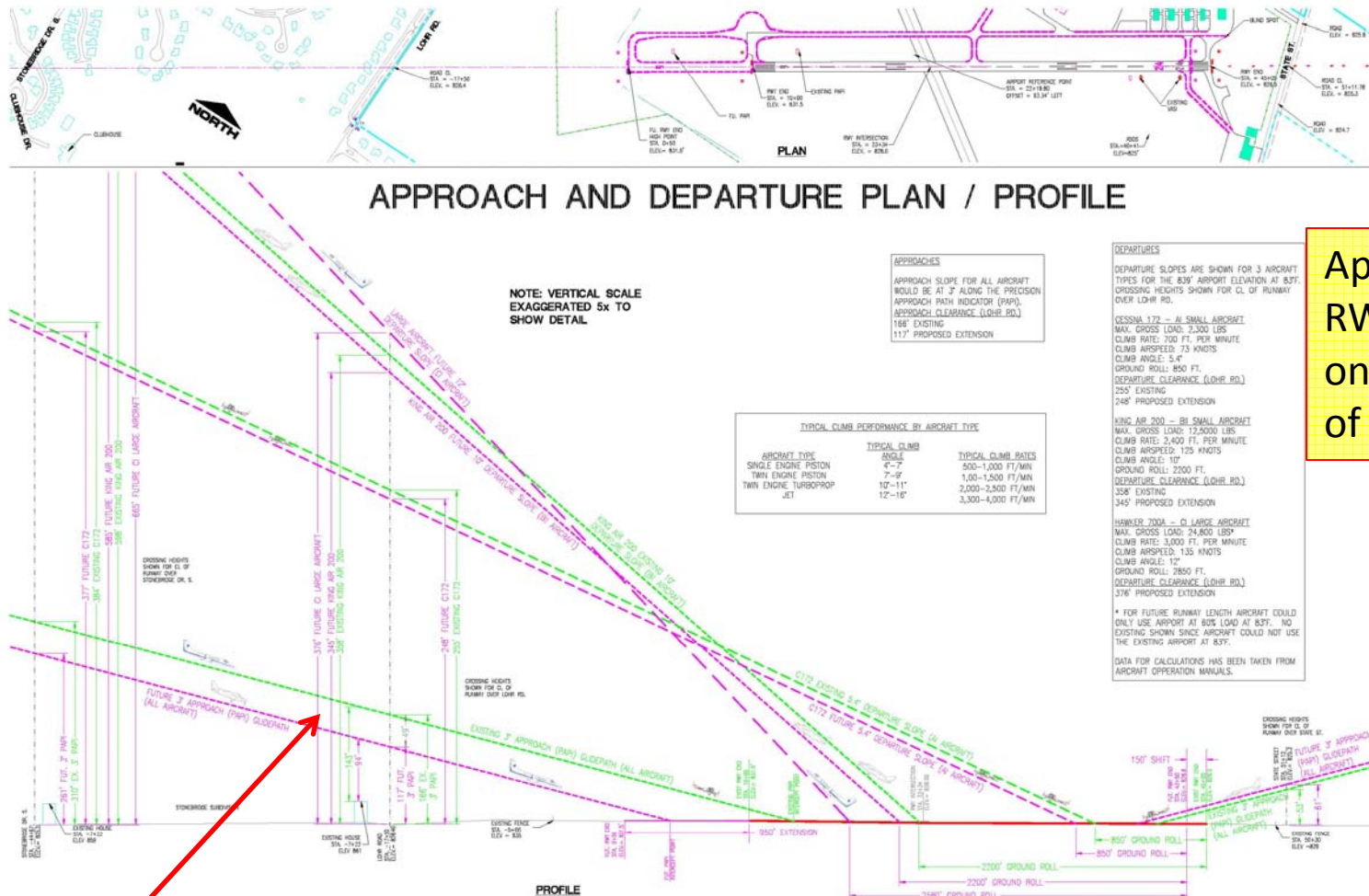
Aircraft are becoming quieter

Figure 9.1: Historic and future trends in cumulative certificated aircraft noise levels from noise discussion paper, 1960-2040



Source: UK Airports Commission Discussion Paper: Aviation Noise 2013 and Final Report 2015

ARB: Aircraft approach heights to RW06** with proposed runway configuration



Approach to RW06 in use only 15-20% of time

The difference is estimated as 49ft (143 vs 97ft above roof of existing building)

Summary Conclusions from the EA

- “Implementation of the Preferred Alternative
 - Addresses the needs of the critical aircraft using the airport
 - would not require the acquisition of land,
 - no homes or businesses would be displaced,
 - no impact on wetlands, county drains, or floodplains.
 - enhances the safety of airport operations. “

Michigan Dept. of Transportation-Aero

Brief comments

Mark Noel, Manager Planning and Development



Time for Questions

