McClellan-Palomar Airport

Feasibility Study for Potential Improvements to McClellan-Palomar Airport

CRQ PAAC Meeting
August 15, 2013

McClellan-Palomar Airport

Background

- June 2011 – Board addressed need for study of runway improvements at McClellan-Palomar Airport
- Sept 2011 – Board directed staff conduct study

McClellan-Palomar Airport

Scope of Study

- Determine if a runway extension would:
  - improve runway safety
  - reduce airport noise
  - increase operational efficiency
  - increase business prospects
- Prepared in accordance with FAA requirements

Final Study and Report

- Contains findings and recommendations that are:
  - technically sound from an engineering perspective
  - fiscally responsible
  - makes good business sense
  - eligible for funding in accordance with FAA criteria

McClellan-Palomar Airport

- Design Critical Aircraft for the runway length –
  - Business Jet focus
  - Falcon 2000 (**B-II**)
- C/D-III aircraft use facility currently and will increase in the future
  - FAA requires open use of funded airports
- Improve safety at runway west end for current and future aircraft
- Increased useful fuel loads = longer haul trips

McClellan-Palomar Airport

West End Safety Improvements

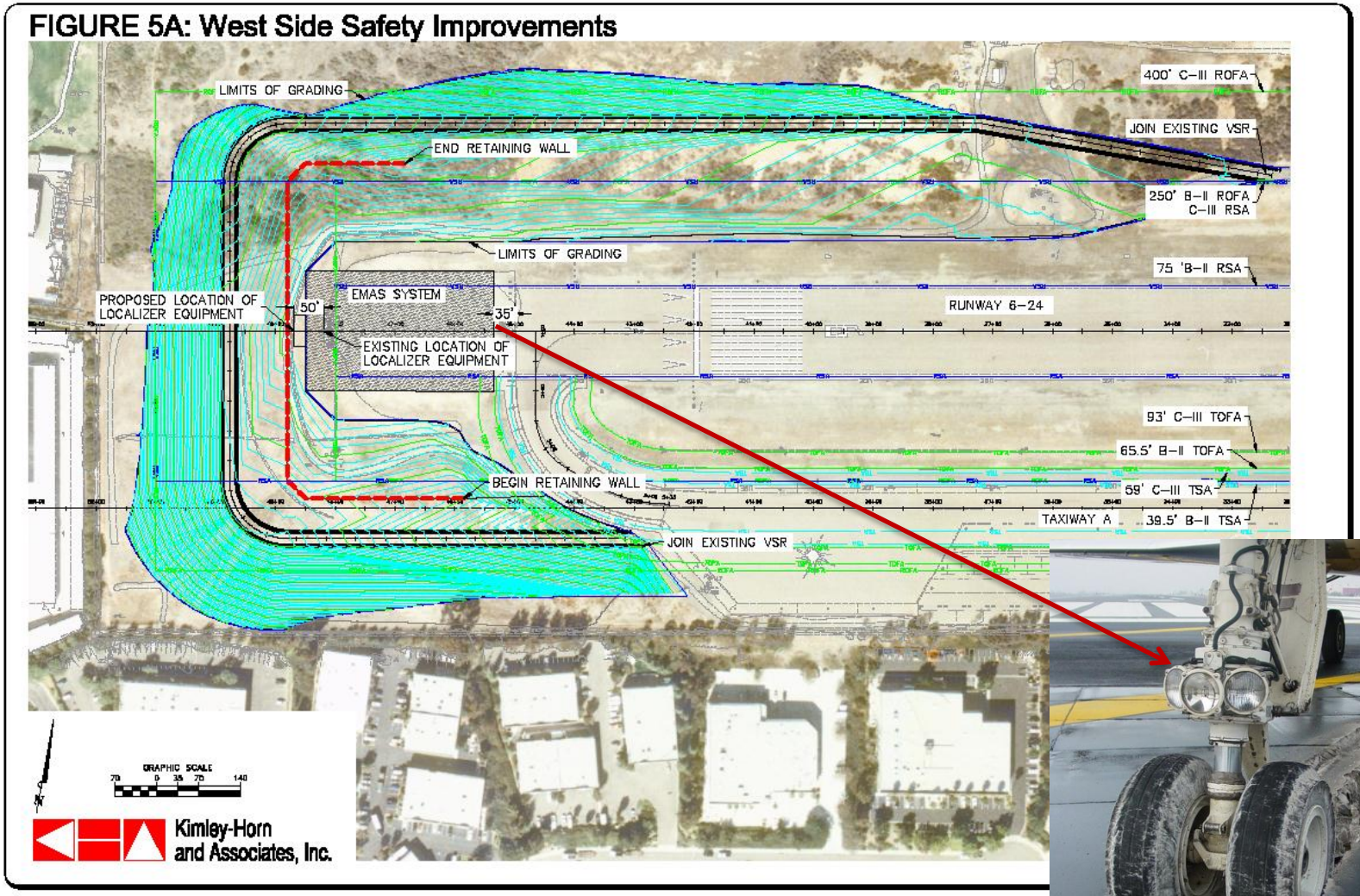
Runway Safety Improvements:

- Business Jet Aircraft
- Engineered Material Arresting System (EMAS)
- Improve grades

EMAS System

McClellan-Palomar Airport

West End Safety



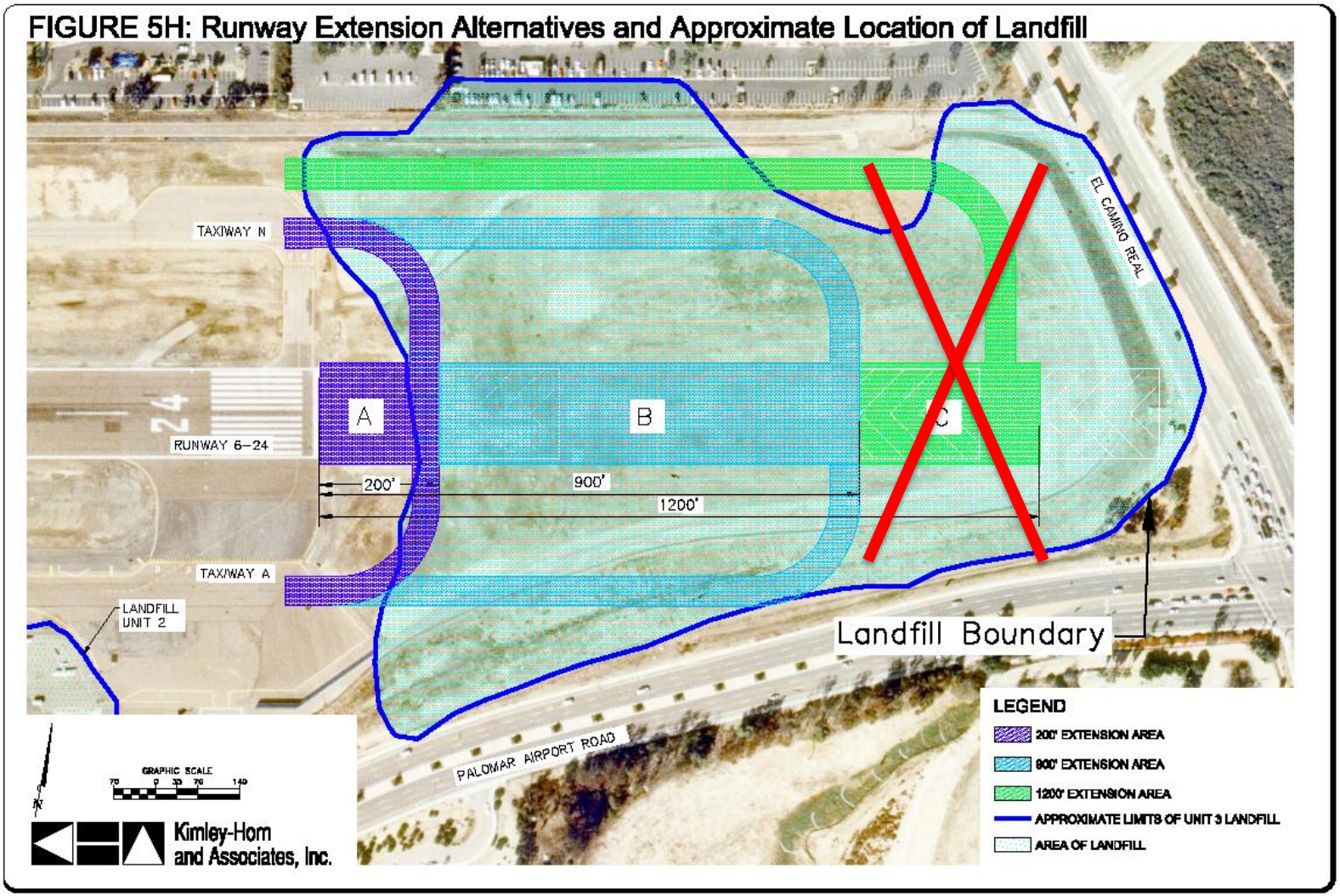
McClellan-Palomar Airport

Probable Construction Costs

Alternative	Description	Probable Construction Costs
West End	West End Safety Improvement including EMAS and grading	$25.4 Million

McClellan-Palomar Airport

Runway Extension Alternatives



McClellan-Palomar Airport

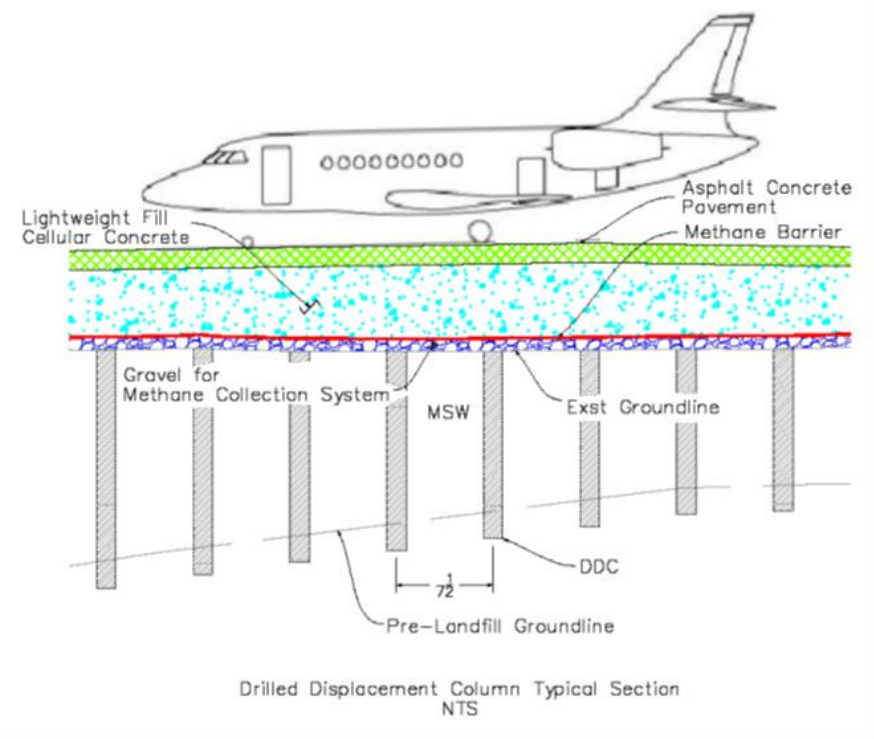
Landfill Options - Option 2 Drilled Displaced Columns

Advantages:

- Almost eliminates settlement
- Low initial cost
- Increases the strength of surrounding material
- Soil/lightweight fill layers bridge potential localized settlement.

Disadvantages:

- Requires night work or full airport closure
- Re-construction of methane gas collection system required

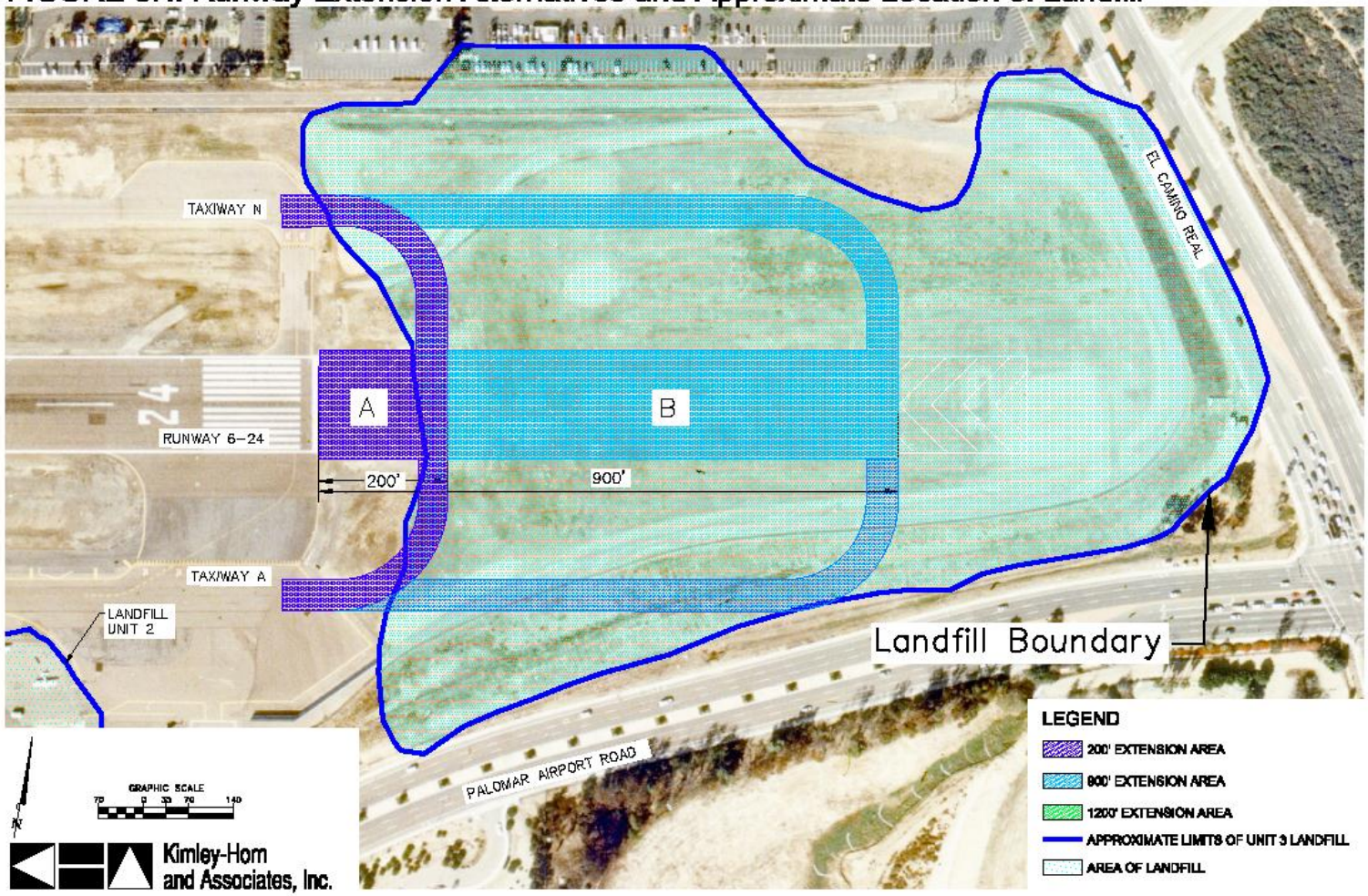


Cost Per Square Foot - $72/SF

McClellan-Palomar Airport

Runway Extension Alternatives

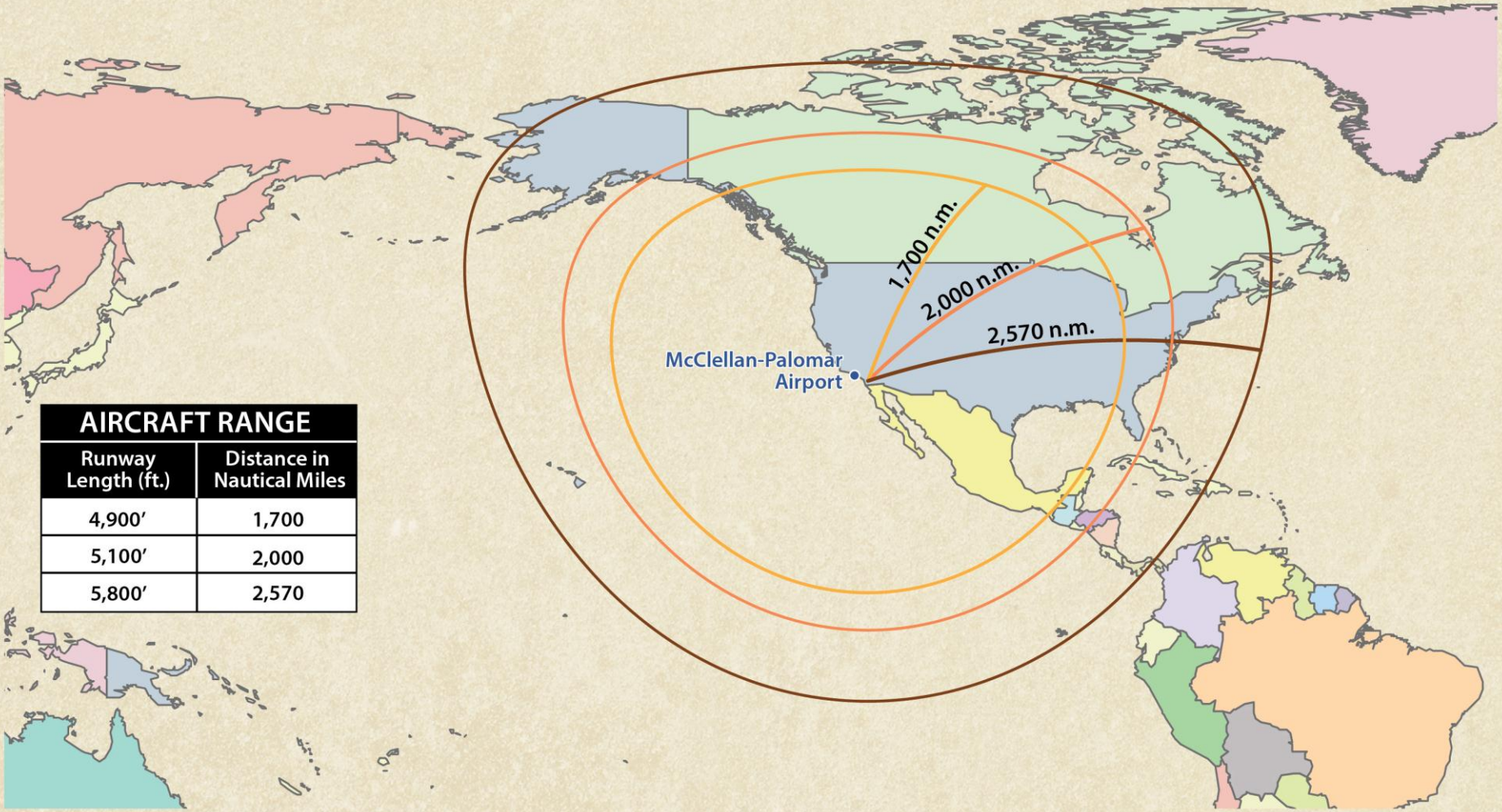
FIGURE 5H: Runway Extension Alternatives and Approximate Location of Landfill



McCLELLAN-PALOMAR AIRPORT

FALCON 2000 RANGE AT ALTERNATIVE RUNWAY LENGTHS

Runway Length Benefits

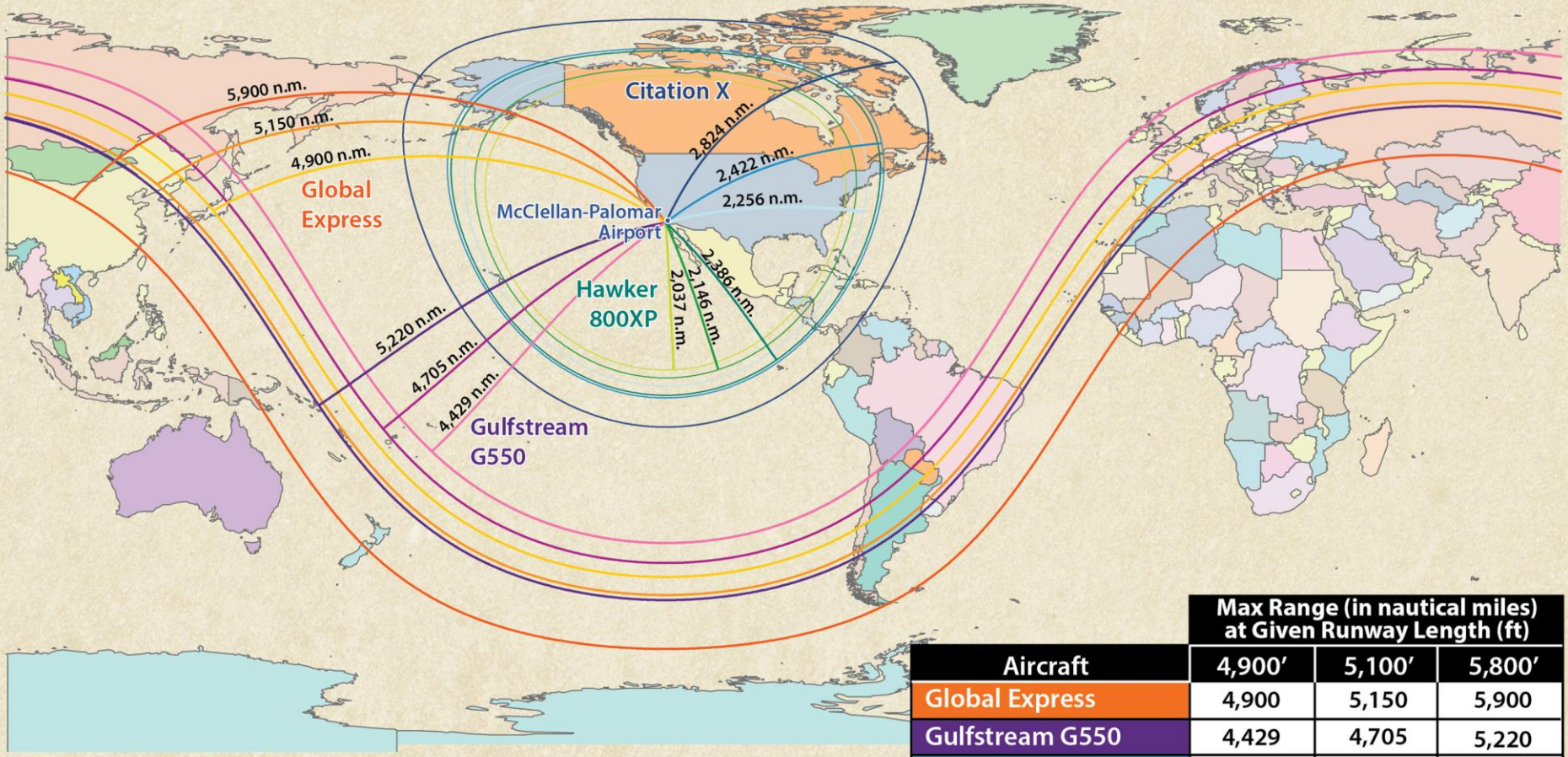


AIRCRAFT RANGE	
Runway Length (ft.)	Distance in Nautical Miles
4,900′	1,700
5,100′	2,000
5,800′	2,570

McCLELLAN-PALOMAR AIRPORT

BUSINESS JET RANGE AT ALTERNATIVE RUNWAY LENGTHS

Runway Length Benefits



Aircraft	Max Range (in nautical miles) at Given Runway Length (ft)		
	4,900′	5,100′	5,800′
Global Express	4,900	5,150	5,900
Gulfstream G550	4,429	4,705	5,220
Citation X(750)	2,256	2,422	2,824
Hawker 800XP	2,037	2,146	2,386

McClellan-Palomar Airport

Noise Contours Comparison

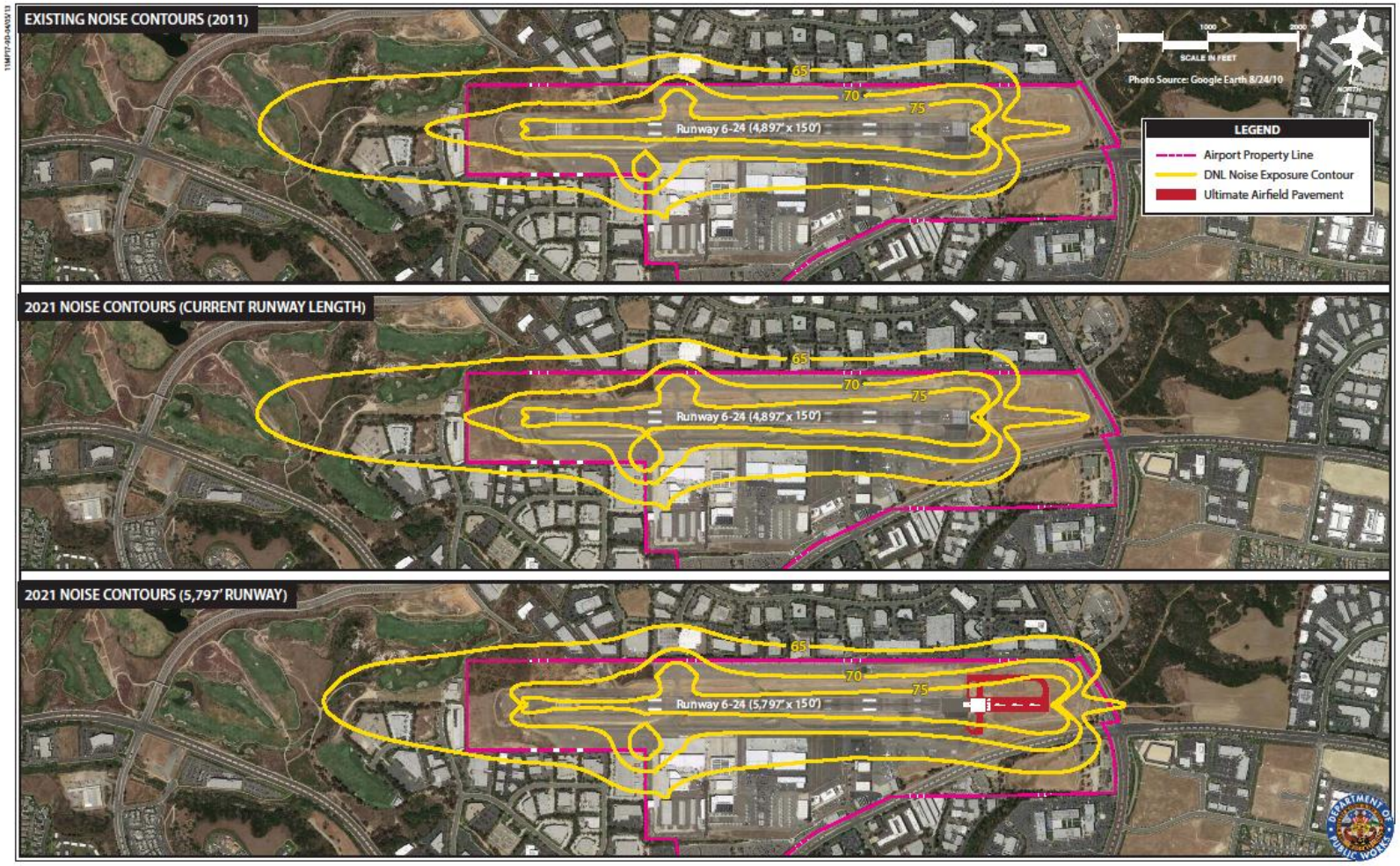


Figure 9D
NOISE CONTOURS COMPARISON

McClellan-Palomar Airport

Probable Construction Costs

		Probable Construction Costs		
Alternative	East End Alternative Description	East End Extension	West End Safety Improvements	Total Improvement
Alt. A	200 ft extension with north and south side end connector taxiways	$22.5 Million	$25.4 Million	$47.9 Million
Alt. B-1	900 ft extension with north side end connector taxiway	$49.6 Million		$75.0 Million
Alt. B-2	900 ft extension with north and south side end connector taxiways	$69.7 Million		$95.1 Million

McClellan-Palomar Airport

Business Case Summary

Current Regional Economic Benefits

- $321.4 million revenues
- 2,215 jobs
- $81.3 million income to workers

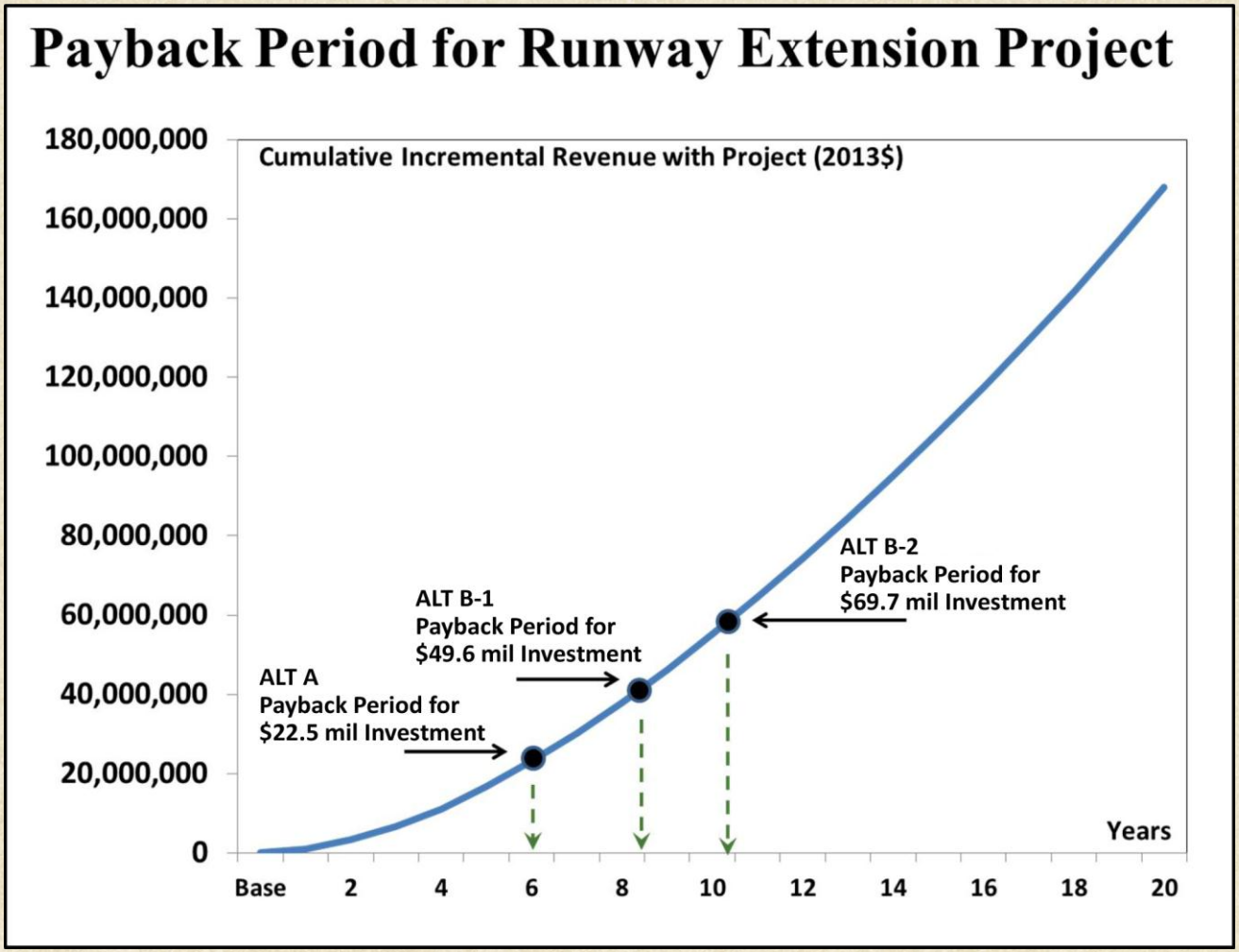
Regional 20 Year Forecast

- Without Runway Extension - $8.3 billion in revenues
- With Runway Extension (Alt B) - **$163.2** million in addition to $8.3 billion
- Increase in tax collections
  - Local - $367.7 million
  - State - $128.9 million

McClellan-Palomar Airport

Business Case

Regional Payback Period



McClellan-Palomar Airport

Regional
Benefit-Cost Analysis

ALTERNATIVE A - 200 Foot Extension	
Benefit Cost Ratio	**1.49**
ALTERNATIVE B - 900 Foot Extension	
Benefit Cost Ratio	**2.53**

Alternative's BCA > 1.0

McClellan-Palomar Airport

FAA Eligibility

- *Eligible* for Grant Funding Consideration
- Safety Improvements (west end) top priority in FAA funding potential
- Capacity Projects lowest FAA priority
  - Potential higher cost sharing
  - Funded after other FAA priorities

McClellan-Palomar Airport

Executive Summary

- Airfield – same Runway Design Code as today (B-II)
  - Business Jets usage
  - Falcon 2000 (critical design aircraft)
- West End Safety Improvement
  - Enhance safety on west departure
  - $25.4 Million
- Preferred East Extension Alternative – 900 foot (Drilled Displaced Columns)
  - 100% B-II sized aircraft served
  - $69.7 Million with south parallel taxiway
  - Benefit Cost Ratio – 2.53
  - Regional Pay Back Period ~ 11 years

McClellan-Palomar Airport

Airport Master Plan Update

- New 20-yr Master Plan *In Progress*
  - 2015-2035
- Aviation Forecasts, Facility Requirements, Constraints Development Concept
  - Incorporation of Runway Extension Feasibility Data
- Master Plan Implementation Plan
  - Considers Runway Extension in the Context of Long-Term Facility Improvements
  - Project Sequencing, Environmental, Financial Plan
- Programmatic Environmental Impact Report (EIR)

McClellan-Palomar Airport

Next Steps

- Board of Supervisors:
  - Targeting September 25 board meeting

Item will have 2 actions:

- Find proposed action is exempt under CEQA
- Receive report titled Feasibility Study for Potential Improvements to McClellan-Palomar Airport

Recommended Motion

The Palomar Airport Advisory Committee recommends the County Board of Supervisors accept the Feasibility Study for Potential Improvements to McClellan-Palomar Airport Runway dated August 1, 2013, and prepared for the County by Kimley-Horn and Associates, Inc.

McClellan-Palomar Airport

QUESTIONS/COMMENTS?