REVIEW: EIR / EIS ALTERNATIVES FOR THE PROPOSED SFO RUNWAY RECONFIGURATION PROGRAM

Prepared for:
San Francisco Bay Conservation
and
Development Committee

February 2001

Prepared by: G & C AVIATION CONSULTING

The documents reviewed, and commended on, in this report consisted of those submitted for comment, including referenced material, by John L. Pfeifer, Manager, Federal Aviation Administration, Western-Pacific Region, San Francisco Airports District Office to Will Travis of the San Francisco Bay Conservation and Development Commission:

- FAA Document, SFO RUNWAY RECONFIGURATION PROGRAM EIR/ESIS, ALTERNATIVES CONSIDERED AND ELIMINATED FROM DETAILED STUDY, PRELIMINARY REPORT, November – 2000.

- FAA Document, SFO RUNWAY RECONFIGURATION PROGRAM EIR/EIS, DEMAND MANAGEMENT ALTERNATIVES, PRELIMINARY REPORT, November-2000.

This review was requested by and conducted under a sub-contract with Donald B. Neuwirth, Special Consultant, San Francisco Bay Conservation and Development Committee.

Disclaimer: Due to the fluid content of the proponents/FAA, San Francisco Airport District Office (ADO) documents, this review is a work in progress and subject to change. The comments expressed in this review are solely those of G&C Aviation Consulting.

Introduction and Executive Summary

Introduction:

The purpose of this review was to determine what effect the proposal may have on compliance with the overall safe and efficient utilization of navigable airspace by aircraft. This study consists of a cursory airspace analysis, Airport Layout Plan (ALP), airport delay casual factors, air traffic system induced delay and of the potential effect of the proposal on the National Airspace System (NAS).

EXECUTIVE SUMMARY:

In particular, this report addresses the issues and comments by the proponent/San Francisco Airports District Office:

- Random Navigation (RNAV) – RNAV will allow the development of missed approaches that will fly a precise track using satellite navigation. The use of RNAV will allow the missed approach off Runway 28 to be routed around terrain and obstructions east of Mt. San Bruno.

- RNAV arrival and departure routes – These routes will provide precise navigation along a predetermined track. RNAV does not rely on ground based navigational aids. The arrival and departure routes can be designed to increase capacity, efficiency, reduce noise and route aircraft around noise sensitive areas.

- Enhanced flow control between LAX and SFO – The current LAX-SFO-LAX flow of aircraft should be metered according to airport capacity and constraints. The current system is reactive vs. proactive.

- IFR and VFR flow rates – Develop flow rates that will accommodate the various airport capacity levels based on airport ceiling and visibility.

- Airlines should develop IFR and VFR schedules for SFO – The airlines could modify their flight schedule to correspond with the weather levels mentioned in the previous item. This will facilitate the implementation of an air traffic flow control program as weather dictates.

- FAA, Office of System Capacity should be requested to conduct an air/ground study to establish an independent baseline for the current regional airport infrastructure. Future alternatives can then be developed, evaluated and modeled. The end product will provide a cost/benefit for both IFR and VFR initiatives.

- Standard ground stops and flow programs for each level of weather conditions, based on "real-time." Current flow programs do not consider the various acceptance rates that are impacted by each level of weather.

- Create RNAV routes to mitigate the CURRENT 7AM departure delay. Off-loading aircraft to a third air traffic departure route would mitigate approximately 20 hours per day (Annually 7,300 hours) at SFO. Reducing the 20 hours of delay will provide additional gains in capacity and efficiency. The mitigation of 20 hours of daily delay will positively impact the airport throughout the day

- Change Warning Areas 513/ 260 to "real-time" use. Obtaining concurrence from the military to use a portion of the east side of warning area for arrivals and departures will allow maneuvering off shore, dual arrival and departure routes and noise mitigation.

- Corridor in the Special Use Airspace in order to separate turboprop and jet routes.

- Modify flow current air traffic management control decisions on "East Coast" departures. Currently, East Coast departures are not into a flow control situation if their departure time is in the early morning hours (EST). When those aircraft approach SFO, the aircraft inbound from close in destinations are held while the traffic from the East Coast lands. Flowing the East Coast aircraft and sequencing them with the close in traffic will avoid holding and reduce delays. Flow control decisions made on the East Coast are usually too late to benefit SFO. The East Coast traffic is a causal factor for the delay of arrivals from the other close in departure airports and is the cause of aircraft holding.

- Petition FAA to designate SFO as a slot-controlled airport – Although there has been a moratorium on slot controlled airports; these types of mitigation efforts are being reopened at the Washington level.

- Change use of SFO to international or long haul flights only. Oakland could then be a domestic airport. This could occur but it would require the formation of a regional airport authority.

- Utilize the current transit tunnels under the "North" terminal to extend the current BART system south and provide service between SFO/OAK. (Another "TUBE" to serve only the airports)

- The term "FAA" is nebulous and does NOT identify the source of comment or background foundation. This occurs throughout the documents.

- Traffic Management Advisor (TMA), has reduced inbound delay by over 2 minutes per aircraft and increased capacity by 5%.

- Final Approach Spacing Tool (FAST) was not considered and has increased landing rates at DFW by 9-13%.

- Free-Flight Phase One was not considered by the airport but has been implemented and is operational. Free Flight Phase Two is in the implementation phase and is on schedule.

- Proceeding direct to a destination was not mentioned, but flight time savings could be in excess of 6 minutes per aircraft.

- Surface Management System (SMS) was not considered and has reduced taxi-out times by one minute per aircraft at the Atlanta airport.

Runway Reconfiguration Alternative:

- Current departure, arrival and missed-approach procedures penetrate the Golden Gate National Recreation Area (GGNRA).

- BXR would allow "HEAVY" departures to depart northbound and proceed west over the GGNRA and Marin County for Pacific-rim destinations. This procedure is currently NOT practiced.

Options Not Considered:

- The new runway could be 4,300 feet north of the existing runway 28L vs. 28R.

- Locate the runway approach ends adjacent to each other and do not offset the runways (Runway 28). This would require less intrusion into the Bay and could facilitate the ground operation.

- The airport's chosen alternative does NOT protect the missed-approach on Runway 28 from aircraft departing Runway 1. Under this situation, there cannot be simultaneous arrivals and departures at all times but is of vital concern during IFR weather.

- Runway 28R should be considered as a taxiway serving both runways or as a departure runway.

- The displaced departure threshold for the NEW RWY1L has been moved north to reduce the 65 CNL footprint south of the airport. Other noise reduction methods had not been explored as a means to reduce the noise contour. Other initiatives such as soundproofing, land acquisition, noise burms, sound walls etc., were not considered. (The National Plan of Integrated Airport Systems (NPIAS) requires these efforts be considered.)

- NPIAS required that construction that is NOT cost effective is NOT eligible for AIP grants.

Supporting Materials:

- FAA, Western-Pacific Region, Airports Division NOT compliant with FAA Order 7400.2D.

- FAA, Airport Airspace Analysis NOT completed. (Ref: FAAO 7400.2D)

- FAA "approved" Airport Layout Plan (ALP) NOT included. (RIS, AC150/5070-6)

- FAA, review/processing by Airways Facilities Offices NOT apparent. (RIS, FAAO 7400.2D)

- FAA, Air Traffic Circulation of proposal NOT completed. (RIS, FAAO 7400.2D)

- FAA, Western-Pacific Region, Air Traffic Division, did NOT complete a study on the impact to air traffic system. (RIS, FAAO 7400.2D)

- FAA, Western-Pacific Region, Air Traffic Division, did NOT evaluate the aeronautical effect.
- (RIS, FAAO 7400.2D)

- Final determination, by the FAA airports office does not reflect the results of an airport airspace analysis. (RIS, FAAO 7400.2D)