PALOMAR AIRPORT ADVISORY COMMITTEE

Thursday, September 20, 2018
AGENDA ITEM 4

MCCLELLAN-PALOMAR AIRPORT MASTER PLAN UPDATE

McClellan-Palomar Airport (Palomar Airport) is owned and operated by the County of San Diego and located in the City of Carlsbad. The airport provides general aviation, corporate and commercial services acting as an economic engine for north San Diego County and the City of Carlsbad. The Palomar Airport serves as a gateway to resorts, tourist attractions, and is utilized by local businesses and residents. Economic activities related to the airport generate millions of dollars of income and revenue for the surrounding local communities, including Carlsbad, San Marcos, Vista, Oceanside, and Encinitas.

Airport master plans create a blueprint for future airport development to enhance safety and operational efficiency over a 20-year planning period. The Palomar Airport has had two previous master plans. The most recent one, completed in 1997, has reached the end of its 20-year planning period.

Staff collaborated with stakeholders including aviation business owners, pilots, and from the surrounding community to help address the community concerns of the proposed Master Plan Update and noise from the airport. Based on outreach, the Department of Public Works has prepared a proposed Master Plan Update for the Palomar Airport with the goal of developing a framework to ensure existing and future aviation demand is accommodated in a safe and cost-effective manner. Existing facilities, forecasts of future airplane operations, aviation demand, and alternatives for future facility development were all considered during the update process.

After analyzing the environmental impacts and costs of future improvements, the staff recommendation is for the Palomar Airport to remain a B-II classification with options to extend the runway and to explore impacts of the runway protection zones from a D-III classification.

BACKGROUND

Airport master plans are a framework to guide development that will accommodate existing and future aviation demand safely and cost-effectively. A master plan spans a 20-year planning horizon and provides a road map for the future that is flexible, reasonable, and justifiable. Previous Master Plans for McClellan-Palomar Airport were approved by the Board in 1979 and 1997.

A Feasibility Study for Potential Improvements to Palomar Airport Runway (Feasibility Study) was received by the Board on September 25, 2013. Work on the proposed Master Plan Update began at that time and included options and alternatives from the study. On December 16, 2015, following a recommendation from the Palomar Airport Advisory Committee, the Board directed staff to proceed with the proposed Master Plan Update focusing on the modified C/D–III classification, as the preferred alternative.

During subsequent coordination with the FAA it was later determined that combining the C/D classifications was not acceptable, so separate options were developed.

Public Input

The County's stakeholder outreach for the proposed Master Plan Update began in 2014 and included a comprehensive approach to stakeholder input prior to and during the release of the PEIR and draft Master Plan Update. Outreach included public workshops, stakeholder meetings and community events to engage diverse audiences. There was a dedicated website for the proposed Master Plan Update and PEIR, and more than 2,100 requests to be added to the email distribution list were received. County stakeholder outreach also included six public workshops, an open house at the airport terminal, 12 stakeholder meetings and meetings with the City of Carlsbad staff and presentations at the Palomar Airport Advisory Committee.

Aviation Forecasts

Aviation Forecasts are an important part of the Master Plan process to examine the level of demand expected to occur over the 20-year planning period. The forecasts are used to guide design and layout options in the Master Plan Update and to determine the environmental impacts in the Final PEIR. The forecast includes the number of commercial passengers, the number of aircraft takeoffs and landings, and the anticipated size of those aircraft making those takeoffs and landings.

The proposed Master Plan Update contains a baseline forecast based on airport activity from 2016 that was prepared using FAA guidelines. However, this baseline may not be the best indicator for future conditions at the airport because in 2016 there were almost no commercial operations at the airport. Therefore, two additional forecast scenarios were developed. Both scenarios consider that commercial service will resume at the airport in the near future.

Scenario 1 is based on the number of passengers that the current airport terminal could handle. This scenario fully utilizes the existing airport terminal capacity.

Scenario 2 reflects the number of passengers predicted to use Palomar Airport in the Regional Aviation Strategic Plan (RASP) prepared by the San Diego Association of Governments (SANDAG) in 2011. To support the larger number of passengers, Scenario 2 would require modifications to existing airport terminal facilities.

Use of the planning level scenarios reflects potential growth related to the return of commercial airline service at Palomar Airport. Both scenarios forecast that there will be more commercial passengers using the airport than the historical peak during 1999-2000; however, the number of airplane takeoffs and landings are 30 percent less than the historical peak of commercial passengers and aircraft operations:

Forecast	Departing Commercial Passengers	Airplane Takeoffs and Landings
Baseline	171	192,860
Scenario 1 Utilize Existing Terminal	305,000	195,000
Scenario 2 SANDAG Projected Use	575,000	208,000
1999/2000 – Historical Peak	78,000	292,000

Airport Classifications

The FAA classifies airports based on the characteristics of the airplanes that will use the airport. The size and type of the airplanes using an airport is used in the design of the airport. Airports are given an alpha designation (A, B, C, D, and E) based on an airplane's approach speed and a numeric code (I, II, III, IV, V and VI), which is based on wingspan and tail height. Palomar Airport is currently a B-II classification which means the airport meets FAA design standards for supporting B-II airplanes. A typical B-II airplane using the airport is a mid-sized business jet; however, larger jets that land at a faster speed and have wider wingspans than B-II airplanes have been safely operating at the airport for many years and will continue to use the airport in the future. The larger jets using the airport are predominately C-III and D-III corporate business jets and C-II commercial passenger jets.

FAA airport design guidance recommends the proposed Master Plan Update include improvements to support larger C-III and D-III aircraft when the number of takeoffs and landings of those faster and larger aircraft exceed 500 operations each year. There are already more than 500 annual operations of the D-III aircraft occurring at Palomar Airport, so D-III aircraft alone prompt consideration of improvements to a D-III standard. The FAA recognizes there can be unique situations that affect an airport owner's decision for their airport's classification, and the County can elect to keep Palomar Airport at a B-II classification.

Major Airport Changes Being Considered

The Master Plan Update considers four main design features to make additional enhancements to an already safe facility:

1) **Engineered Material Arresting System (EMAS):** Construction of EMAS provides an additional safety feature to assist with stopping airplanes in an emergency situation. EMAS enhances safety by working like a runaway truck ramp to slow and safely stop an aircraft by absorbing its forward energy should it overrun the runway.

2) **Runway Extension:** The existing runway length of 4,897 feet does not provide some airplane operators the same benefits they would have with a longer

runway. Additional runway length is needed by some airplanes to takeoff fully-fueled and loaded to allow them to fly farther.

In addition, a runway extension would reduce airplane noise for communities west of the Palomar Airport because it would allow most airplanes to increase flight elevation sooner. The airplane would be quieter to people on the ground because the airplane would be higher in the air.

3) **Runway and Taxiway Shift:** Shifting the runway to the north to increase the distance between the runway and the taxiway would meet FAA design standards for larger airplanes. Such a shift would provide more clearance between wing tips of air planes when they are operating on the runway and the taxiway at the same time.

4) **Runway Protection Zones:** Runway Protection Zones (RPZ) are areas that extend off the end of the runway and serve to enhance the protection of people and property on the ground. Specific diagrams for the RPZs can be found in the proposed Master Plan Update.

Master Plan Update Alternatives
The Master Plan Update includes six alternatives for the future classification of Palomar Airport. The following two alternatives were selected as the most viable for the future of Palomar Airport. Both alternatives can accommodate all forecasted takeoff and landings and commercial passengers with only minor modifications to the existing terminal building.

At a future Board hearing the County Board of Supervisors (Board) will be requested to review the staff recommendation, to approve the McClellan-Palomar Airport Master Plan Update and to certify the associated Final Program Environmental Impact Report (PEIR). The Board will consider the following alternatives and associated options for the future classification of the Palomar Airport including:

D-III Modified Standards Compliance Alternative and Options
The D-III Modified Standards Compliance Alternative (D-III Alternative) was developed to meet FAA design standards, with some modifications to remain on the existing airport property, while enhancing safety for existing and future operations of larger D-III airplanes. This alternative includes a shift of the runway to the north by 123 feet and a shift north of the taxiway by 19 feet to meet design standards for a D-III aircraft. The current estimated construction cost for the D-III Alternative is $90 million. The airport changes and options include:

1) **Engineered Material Arresting System (EMAS):** The D-III Alternative includes the construction of an EMAS at the west and east ends of the runway.

2) **Runway Extension:** The D-III Alternative includes an extension of the runway by 370 feet and is necessary as part of this alternative to minimize the effects of new RPZs on private properties at the east end of the airport.

Option 1: Extend Runway up to 800 Feet – Option 1 to this alternative would add an additional 430 feet of runway extension to the 370 feet extension. This option would require the relocation of the EMAS on the eastern end of the runway, bridging the inactive landfill, and construction of a retaining wall at the south side along Palomar Airport Road. The extension would likely be done in phases.

D-III Alternative Constraints
There are several constraints associated with the shifting the runway and taxiway north:

- The shift north would eliminate the north ramp aircraft parking area for over 30 small general aviation airplanes and would eliminate a self-service fuel facility at the north ramp. The affected airplanes would be relocated to the south side of the airport.
- Five modifications of the FAA design standards would be needed to remain on Airport property. The FAA has indicated they are willing to work with the County on the necessary modifications.
- The D-III Modified Standards Compliance Alternative would affect an existing office building, not currently in the RPZ, on the north side of the airport. Any effects to the property could be addressed by working with the property owner.

B-II Enhanced Alternative and Options
The B-II Enhanced Alternative (B-II Alternative) was developed to meet FAA design standards while enhancing safety for existing and future airplane operations from larger and faster C-III and D-III airplanes. Shifting the runway would not be necessary for the B-II Alternative. The size of the existing RPZs would be reduced to match the FAA design standards. Two existing parcels on the west end would be removed from the RPZ and existing land use restrictions may be removed. Remaining at a B-II classification is less costly compared to the D-III Alternative. The current estimated construction cost for the B-II Enhanced Alternative is $25 million. The airport changes and options include:

1) **Engineered Material Arresting System (EMAS):** The B-II Alternative includes construction of EMAS on the west end of the runway to assist airplanes in stopping.

2) **Runway Extension:** The B-II Alternative includes two options for runway extension:

Option 1: Extend Runway by 200 Feet – Option 1 would add up to 200 feet of runway extension. Extension of the runway by 200 feet would provide additional runway length for takeoff and landing and would not require construction over the inactive landfill. The 200 foot extension would cost an additional $14.3 million over the base B-II alternative.

Option 2: Extend Runway up to 900 Feet – Option 2 would extend the runway up to 900 feet, 200 feet near-term, plus additional 700 feet long-term. The runway extension would require bridging the inactive landfill and construction of a retaining wall at the south side of the airport along Palomar Airport Road. The 900 foot extension would likely be done in phases and would cost an additional $67.3 million over the base B-II alternative.

Option 3: Explore Solutions Runway Protection Zone Constraints for a Future D-III Design Designation – To address any renewed restrictions, Option 3 would direct staff to work with property owners to identify a viable solution.

B-II Alternative Constraints

The main constraint associated with this alternative that should be considered is:

- When commercial airplanes larger than B-II are on the runway or taxiway, no other airplane larger than B-II can be on either the runway or taxiway. FAA has indicated that if the B-II alternative is chosen, an operational restriction may be extended to all airplanes larger than B-II. This could result in time delays.

Staff Recommendation

Staff recommendation is for Palomar Airport to remain a B-II design standard and include Options 2 and 3 which would extend the runway up to 900 feet and work to determine if a viable solution can be found to alleviate new land use concerns in RPZs posed by the D-III Alternative. The B-II Alternative safely accommodates larger C-III and D-III airplane, has a lower estimated construction cost, does not impact the northern airplane parking area, and enhances safety through the construction of EMAS. With a B-II Alternative, the airport is safe today and will be safe in the future, while allowing flexibility should the opportunity arise to pursue the D-III Alternative to make further safety improvements in the future.

Program Environmental Impact Report (PEIR)

The County is preparing a Final PEIR for the proposed Master Plan Update in accordance with Section 15168 of the CEQA Guidelines. The Board will also make a finding regarding the Program Environmental Impact Report (PEIR) that has been prepared. As with other matters that PAAC considers Environmental review is not part of PAACs assigned duties, so it is not included in the recommended motion.

The PEIR analyzes the environmental impacts from all improvements anticipated in the Master Plan Update. The PEIR proposes all feasible mitigation measures to reduce

significant impacts to below a level of significance, and also describes the project objectives, environmental setting, and project alternatives.

The County circulated the Draft PEIR and the Draft Master Plan Update for a 61-day public comment period and based on the comments received during the initial public review period, the County elected to revise and recirculate some portions of the PEIR to clarify and strengthen the analysis. Public comments were also received on the recirculated portions of the PEIR. The County received 138 comment letters from agencies, organizations and individuals regarding the Draft PEIR and Master Plan Update documents during the initial and recirculation public review periods.

The PEIR followed state and federal guidance to study potential environmental impacts of the Master Plan Update improvements, and states which resources have the potential for significant impacts, and which resources were determined to have less than significant impacts. Since the PEIR analysis was conducted at a programmatic level, subsequent project-level CEQA review will be needed once a project in the Master Plan Update moves forward for design and construction.

The following impacts were found to be significant and mitigable as described in the PEIR:

- Traffic
- Biology
- Aesthetics and Visual Resources
- Hazardous Materials
- Construction Noise

The PEIR evaluated other environmental resources including Air Quality, Energy Use and Consumption, Land Use and Planning, Operational Noise, Public Services, and Greenhouse Gas Emissions, and the analysis concluded the Master Plan Update did not exceed thresholds of significance and would not result in significant environmental impacts under CEQA.

RECOMMENDED MOTION

"The Palomar Airport Advisory Committee recommends the County Board of Supervisors to approve the McClellan-Palomar Airport Master Plan Update, with a B-II Enhanced Alternative and includes Options 1, 2, and 3 which allows a runway extension of up to 900-feet over the existing inactive landfill and directs staff to return to the Board in the future for further consideration of the D-III Modified Standards Compliance Alternative if a viable solution can be found to alleviate land use concerns from the D-III Modified Standards Compliance Alternative's Runway Protection Zones, as recommended by staff."