FEDERAL AVIATION ADMINISTRATION

RECORD OF APPROVAL
FAR PART 150
NOISE COMPATIBILITY PROGRAM

Piedmont Triad International Airport (GSO)
Greensboro, North Carolina

Acting Regional Counsel, ASO-7

✓ CONCUR _____ NONCONCUR

06 NOV 08
Date

Robert B. Chapman
Airports Division Manager
Southern Region

✓ APPROVED _____ DISAPPROVED

07 Nov 08
Date

RECORD OF APPROVAL
PIEDMONT TRIAD INTERNATIONAL AIRPORT
GREENSBORO, NORTH CAROLINA

The approvals listed herein include approvals of actions that the airport recommends be taken by the Federal Aviation Administration (FAA). It should be noted that these approvals indicate only that the actions would, if implemented, be consistent with the purposes of Federal Air Regulation (FAR) Part 150. The FAA has provided technical advice and assistance to the airport to ensure that the operational elements are feasible (see 14 CFR 150.23(c)). These approvals do not constitute decisions to implement the actions. Later decisions concerning possible implementation of measures in this ROA will be subject to applicable environmental or other procedures or requirements, including Section 106 of the National Historic Preservation Act (NHPA).

The operational, land use control, and program management measures below summarize as closely as possible the airport operator's recommendations in the Noise Compatibility Program (NCP) and are cross-referenced to the program. The statements contained within the summarized measures and before the indicated FAA approval, disapproval, or other determination do not represent the opinions or decisions of the FAA.

OPERATIONAL MEASURES

1. NA-1: Evaluate Noise Barriers at Sites of Future Airport Facilities.

Under this measure, the Piedmont Triad Airport Authority (PTAA) would adopt a policy to evaluate potential benefits of noise barriers to control off-airport noise levels from future airport facilities. The policy would commit the PTAA to work with tenants to have the tenant install noise barriers if the PTAA considers the use of a barrier appropriate. (NCP, pp. 29-30; Tables 13 and 17)

FAA Action: **Approved for study only**. At such time as the study is complete, the FAA will review to determine if benefits are demonstrated.

2. NA-2: Preferred Night Runway Use.

When new runway 5L/23R is available for use during nighttime hub operations, designate runways 23L and 23R as the preferred departure runways and runways 5L and 5R as the preferred arrival runways. This head-to-head pattern of runway use will be used when permitted by weather and runway conditions. To the extent feasible, equal numbers of aircraft shall use the left and right runways for arrivals. Runway use assignments for departures shall be as established by Proposed Measure NA-3. (NCP, pp. 30-49; Tables 13; 14, and 17; and Figure 9)

FAA Action: **Approved as a voluntary measure**. This measure is approved as a voluntary measure, subject to traffic, weather, and airspace safety and efficiency. This measure may be implemented totally or in part by FAA Air Traffic based on the safe and efficient movement of air traffic. Times and levels of compliance will be determined by FAA Air Traffic as specific traffic management situations exist, understanding that ultimately the pilot in command of an aircraft is directly responsible for, and is the final authority as to the operation of that aircraft.

3. NA-3: Night Runway Use Assignments.

When new runway 5L/23R is available for use during the nighttime hub operations, designate the following pattern of runway use:

1. When departures are using runways 23L and 23R, designate runway 23R as the departure runway for Retrofitted Stage 3 aircraft
2. When departures are using runways 23L and 23R, the runways to be used by New Stage 3 aircraft are as follows:
    a. For all New Stage 3 aircraft departing to southern destinations, designate runway 23L as the departure runway
    b. For all New Stage 3 aircraft departing to south-western destinations, designate runway 23R as the departure runway
    c. For New Stage 3 aircraft departing to northern destinations, either runway 23L or runway 23R may be used as the departure runway.
    d. To the extent feasible, assign usage of runways 23L and 23R by New Stage 3 aircraft to northern destinations so that equal numbers of aircraft use runways 23L and 23R for night departures
3. When departures are using runways 5L and 5R, designate runway 5R as the departure runway for Retrofitted Stage 3 aircraft
4. When departures are using runways 5L and 5R, assign usage of departure runways by New Stage 3 aircraft so that approximately equal numbers of aircraft use runways 5L and 5R for departures to the extent feasible.
5. Aircraft departing on runway 23R and needing to make a transition to a more southerly heading should delay the transition until they have reached an altitude of 4,000 MSL.
6. It is anticipated that carriers operating during the nighttime will request runway assignments that are consistent with this measure.

(NCP, pp. 30-50; Tables 13; 14, and 17; and Figure 9)

FAA Action: **Approved as a voluntary measure for Piedmont Triad Airport Authority (PTAA) implementation through coordination and agreement with air carriers**. This measure is approved as a voluntary measure, subject to traffic, weather, and airspace safety and efficiency. This measure may be implemented totally or in part by FAA Air Traffic based on the safe and efficient movement of air traffic. Times and levels of compliance will be determined by FAA Air Traffic as specific traffic management situations exist, understanding that ultimately the pilot in command of an aircraft is directly responsible for, and is the final authority as to the operation of that aircraft. The PTAA will work with Greensboro Air Traffic Control to determine appropriate distance measuring equipment (DME) to replace altitudes.

4. NA-4: Night Southbound Departure Corridor from Runway 23L.

Promptly after FAA approval of this measure, establish a new nighttime departure procedure for aircraft departing runway 23L for southern destinations so that the initial flightpath is in a southerly direction, east of and parallel to NC Highway 68. Departing aircraft shall initiate the left departure turn onto this flight path as soon as practicable. Aircraft may make a transition to another heading after reaching 4,000 feet MSL. (NCP, pp. 30-50; Tables 13; 14, and 17; and Figure 9)

FAA Action: Approved as a voluntary measure. This measure is approved as a voluntary measure, subject to traffic, weather, and airspace safety and efficiency. This measure may be implemented totally or in part by FAA Air Traffic based on the safe and efficient movement of air traffic. Times and levels of compliance will be determined by FAA Air Traffic as specific traffic management situations exist, understanding that ultimately the pilot in command of an aircraft is directly responsible for, and is the final authority as to the operation of that aircraft. The PTAA will work with Greensboro Air Traffic Control to determine appropriate distance measuring equipment (DME) to replace altitudes.

5. NA-5: Night Departure Procedures from Runway 23R.

Aircraft departing runway 23R at night and turning right shall initiate the right departure turn as soon as practicable. (NCP, pp. 30-50; Tables 13; 14, and 17; and Figure 9)

FAA Action: Approved as a voluntary measure. This measure is approved as a voluntary measure, subject to traffic, weather, and airspace safety and efficiency. This measure may be implemented totally or in part by FAA Air Traffic based on the safe and efficient movement of air traffic. Times and levels of compliance will be determined by FAA Air Traffic as specific traffic management situations exist, understanding that ultimately the pilot in command of an aircraft is directly responsible for, and is the final authority as to the operation of that aircraft.

6. NA-6: Night Northbound Departure Corridor from Runway 23L.

Promptly after FAA approval of this measure, establish a new nighttime departure procedure for aircraft departing from runway 23L to northern destinations to initiate a left departure turn to a northeasterly heading as soon as practicable. (NCP, pp. 30-50; Tables 13; 14, and 17; and Figure 9)

FAA Action: Approved as a voluntary measure. This measure is approved as a voluntary measure, subject to traffic, weather, and airspace safety and efficiency. This measure may be implemented totally or in part by FAA Air Traffic based on the safe and efficient movement of air traffic. Times and levels of compliance will be determined by FAA Air Traffic as specific traffic management situations exist, understanding that ultimately the pilot in command of an aircraft is directly responsible for, and is the final authority as to the operation of that aircraft.

7. NA-8: Departures from Runway 5L.

When runway 5L/23R is available for use, establish a procedure to delay initial turns from runway heading by aircraft departing on runway 5L until such aircraft reach an altitude of 4,000 MSL. (NCP, pp. 30-50; Tables 13; 14, and 17; and Figure 9)

FAA Action: **Approved as a voluntary measure**. This measure is approved as a voluntary measure, subject to traffic, weather, and airspace safety and efficiency. This measure may be implemented totally or in part by FAA Air Traffic based on the safe and efficient movement of air traffic. Times and levels of compliance will be determined by FAA Air Traffic as specific traffic management situations exist, understanding that ultimately the pilot in command of an aircraft is directly responsible for, and is the final authority as to the operation of that aircraft. The PTAA will work with Greensboro Air Traffic Control to determine appropriate distance measuring equipment (DME) to replace altitudes.

8. NA-9: Departures from Runway 5R.

Revise the existing procedure to delay initial left turns from runway heading by aircraft using runway 5R until such aircraft reach an altitude of 4,000 MSL. (NCP, pp. 30-50; Tables 13; 14, and 17; and Figure 9)

FAA Action: **Approved as a voluntary measure**. This measure is approved as a voluntary measure, subject to traffic, weather, and airspace safety and efficiency. This measure may be implemented totally or in part by FAA Air Traffic based on the safe and efficient movement of air traffic. Times and levels of compliance will be determined by FAA Air Traffic as specific traffic management situations exist, understanding that ultimately the pilot in command of an aircraft is directly responsible for, and is the final authority as to the operation of that aircraft. The PTAA will work with Greensboro Air Traffic Control to determine appropriate distance measuring equipment (DME) to replace altitudes.

9. NA-10: Restrictions on Use of APUs.

Under this measure, the Piedmont Triad Airport Authority (PTAA) will adopt a policy for future airport facilities, and for new tenants after FAA approval of this measure, that would require that auxiliary power units, either on-board units or ground units, except for units in use for engine starts, not produce night-time noise levels in off-airport residential neighborhoods that exceed the ambient noise level at those locations. (NCP, p. 51; Tables 13 and 17)

FAA Action: **Approved**. Although implementation of this measure would not reduce the footprint of the NEM contours and the exact benefits are difficult to assess, it may reduce the amount of sleep disturbance and noise annoyance perceived by residents of nearby neighborhoods during nighttime hours.

10. NA-11: Noise Abatement Departure Profiles.

Under this measure, the Piedmont Triad Airport Authority (PTAA) designates the Close-in Noise Abatement Departure Profile (NADP) for jet departures on runways 5L and 5R beginning with the opening for use of new runway 5L/23R. (NCP, pp. 51-52; and Tables 13 and 17)

FAA Action: **Approved as a voluntary measure**. This measure is approved as a voluntary measure, subject to traffic, weather, and airspace safety and efficiency. This measure may be implemented totally or in part by FAA Air Traffic based on the safe and efficient movement of air traffic. Times and levels of compliance will be determined by FAA Air Traffic as specific traffic management situations exist, understanding that ultimately the pilot in command of an aircraft is directly responsible for, and is the final authority as to the operation of that aircraft.

11. NA-12: Noise Abatement Approach Procedure.

Under this measure, the PTAA requests that FAA Air Traffic Control Tower personnel direct all jet aircraft arriving at the airport, whether on an IFR or a visual approach, to intercept the final approach at least 5.5 nautical miles from the intended landing runway and to stay at or above the glideslope throughout the remainder of their approach. The PTAA requests that FAA Air Traffic Control Tower personnel direct all jet aircraft arriving at the airport and on the final approach within 12.5 nautical miles from the intended landing runway, whether on an IFR or a visual approach, to stay at or above the glideslope throughout the remainder of their approach. (NCP, pp. 52-54; Tables 13 and 17)

FAA Action: **Approved as a voluntary measure**. This measure is approved as a voluntary measure, subject to traffic, weather, and airspace safety and efficiency. This measure may be implemented totally or in part by FAA Air Traffic based on the safe and efficient movement of air traffic. Times and levels of compliance will be determined by FAA Air Traffic as specific traffic management situations exist, understanding that ultimately the pilot in command of an aircraft is directly responsible for, and is the final authority as to the operation of that aircraft.

12. NA-13: Altitude for Downwind Legs.

Under this measure, the PTAA requests that FAA Air Traffic Control Tower personnel direct IFR aircraft on the downwind leg for arrival on runways 5L, 5R, 23L or 23R to remain at or above 4,000' MSL until crossing the extended centerline of runway14/32 at the airport. When implementing this measure and there are simultaneous approaches to runways 5L and 5R, the PTAA requests that FAA Air Traffic Control Tower personnel direct IFR aircraft on the downwind leg for runway 5R to remain at or above 5,000' MSL and aircraft on the downwind leg for runway 5L to remain at or above 4,000' MSL. (NCP, pp. 52-54; and Tables 13 and 17)

FAA Action: **Approved as a voluntary measure**. This measure is approved as a voluntary measure, subject to traffic, weather, and airspace safety and efficiency. This measure may be implemented totally or in part by FAA Air Traffic based on the safe and efficient movement of air traffic. Times and levels of compliance will be determined by FAA Air Traffic as specific traffic management situations exist, understanding that ultimately the pilot in command of an aircraft is directly responsible for, and is the final authority as to the operation of that aircraft.

LAND USE MEASURES

FAA consideration of recommended land use measures utilizing the 2014 Noise Exposure Maps (NEMs) and forecast operational data as opposed to the current Operations NEM is appropriate due to FedEx's documented commitment and imminent timeline for establishing their Overnight Express Air Cargo Sorting and Distribution Facility at Piedmont Triad International Airport.

1. LU-1: Acquire Noise-Sensitive Properties where DNL Exceeds 70 dB.

The PTAA will offer to acquire properties with houses or other noise-sensitive land uses where DNL with the 2014 NCP exceeds 70 dB. (NCP, pp. 55-56; Figures 14 and 15, and Table14 and 16)

FAA Action: **Approved**. The specific identification of properties recommended for inclusion in the program and specific definition of the scope of the program will be required prior to approval for Federal funding. Further, applicable real property acquisitions must conform to the provisions of the Uniform Relocation Assistance and Real Property Acquisitions Act and 14 CFR Part 24 to be eligible for Federal funding. Homes built after October 1, 1998 are not eligible for acquisition programs. All noise land acquisitions must comply with Grant Assurance 31 which requires sponsors to develop re-use plans and dispose of noise land as soon as practicable.

2. LU-2: Sound Insulation of Noise-Sensitive Structures where DNL Exceeds 65 dB.

The PTAA will offer to sound insulate eligible residences and other noise-sensitive structures intended for public use or assembly (i.e., schools, houses of worship and hospitals) where DNL with the 2014 NCP exceeds 65 dB. The PTAA will require property owners participating in the program to grant an avigation easement to the PTAA upon completion of the treatment. (NCP, pp. 55-57; Figures 14 and 15, and Table14 and 16)

FAA Action: **Approved for eligible properties where the DNL is between 65 and 70 dB in accordance with the Record of Decision (ROD), rendered on 12/31/01 based on the Environmental Impact Statement for Proposed Runway 5L/23R, Proposed New Overnight Express Air Cargo Sorting and Distribution Facility, and Associated Developments**. The specific identification of structures recommended for inclusion in the program and specific definition of the scope of the program will be required prior to approval for Federal funding.

3. LU-3: Optional Acquisition of Avigation Easements for Noise-Sensitive Structures where DNL Exceeds 65 dB.

The PTAA may at its option offer to acquire noise easements for selected residences where the DNL with the 2014 NCP exceeds 65 dB. (NCP, pp 55-58; (NCP, pp. 55-57; Figures 14 and 15, and Table14 and 16)

FAA Action: Approved for eligible properties where the DNL is between 65 and 70 dB that choose not to participate in LU-2. The specific identification of structures recommended for inclusion in the program and specific definition of the scope of the program will be required prior to approval for Federal funding.

4. LU-4: Other Assistance for Owners of Residential Property where DNL Exceeds 65 dB.

The PTAA may at its option offer assistance in the form of Sales Assistance or in the form of Purchase Assurance to owners of selected residential property where the DNL with the 2014 NCP exceeds 65 dB. Homeowners participating in the Sales Assistance Program would grant an avigation easement to the PTAA upon the closing of the sale. (NCP, pp. 57-59; Figures 14 and 15, and Table14 and 16)

FAA Action: Approved for further study and analysis for eligible properties where the DNL is between 65 and 70 dB. Upon identification of interested eligible properties and before FAA approval for implementation, the sponsor must submit an updated NCP identifying the details of the proposed measure for FAA deliberation. The specific identification of structures recommended for inclusion in the program and specific definition of the scope of the program will be required prior to approval for Federal funding. This will require submission of an updated NCP for FAA deliberation.

5. LU-5: Pursue Compatible Use Zoning where DNL Exceeds 65 dB.

The PTAA will work with land use authorities of jurisdictions in the vicinity of the airport to adopt compatible use zoning. (NCP, p. 59)

FAA Action: Approved.

PROGRAM MANAGEMENT MEASURES

1. NM-1: Establish a Noise Monitoring Function at PTIA.

The PTAA will establish a noise monitoring function within the PTAA with responsibilities that include: to monitor aircraft noise; to provide a point of contact within the PTAA for issues related to aircraft noise; to serve as a liaison with the community for such issues; and to keep air carriers and the public informed about compliance with measures in the NCP. (NCP, p. 60)

FAA Action: Approved.

2. NM-2: Publish DNL Contours for DNL 60 and Above.

When the PTAA publishes aircraft noise contours, it will publish contours at 5-dB intervals for values of DNL of 60 dB and above. The most recent contours will be published on the PTAA web site. The contours will be updated as required by FAR Part 150. (NCP, pp. 60-61)

FAA Action: Approved.

3. NM-3: Install and Operate an Aircraft Noise and Operations Monitoring System.

The PTAA will install and operate an aircraft noise and operations monitoring system to monitor aircraft noise and aircraft operations in the vicinity of the airport. The system will reflect state-of-the-art technology. It is expected that the system will have six or more permanent monitoring microphones and one or two portable monitoring microphones. To the extent feasible, the permanent microphones will be at locations used during the Part 150 study. Summaries of the monitoring results will be reported regularly on the PTAA web site. (NCP, pp. 61-62; and Figure 15)

FAA Action: Approved. For reasons of aviation safety, this approval does not extend to the use of monitoring equipment for enforcement purposes by in-situ measurement of any preset noise thresholds and shall not be used for mandatory enforcement of any voluntary measure. Eligibility for Federal funding for a fixed permanent monitoring system will be limited to sponsors who can clearly show that portable monitors would be inadequate for their situation. A determination of eligibility will be made at the time of application for funding.