

FEDERAL AVIATION ADMINISTRATION

RECORD OF APPROVAL

14 CFR PART 150 NOISE COMPATIBILITY PROGRAM

TETERBORO AIRPORT

TETERBORO, NEW JERSEY

Mary M McCarthy
Regional Counsel, AEA-7

1/9/2023
Date

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CONCUR

NONCONCUR

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Manager, Airports Division, AEA-600

1/10/2023
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RECORD OF APPROVAL
TETERBORO AIRPORT
NOISE COMPATIBILITY PROGRAM

INTRODUCTION

The Teterboro Airport (TEB), Teterboro, New Jersey, Noise Compatibility Program (NCP) describes the current and future non-compatible land uses based upon the parameters established in Title 14 of the Code of Federal Regulations (CFR), Part 150, *Airport Noise Compatibility Planning*. Preparation of this Part 150 Study was initiated by the Port Authority of New York and New Jersey (Port Authority), the airport sponsor, in 2014. TEB submitted their Noise Exposure Maps (NEM) for the period 2016 through 2021. The FAA determined that the NEMs were prepared in accordance with procedures contained in Title 14 CFR Part 150 and accepted the maps on June 15, 2017. The TEB NCP measures were developed subsequent to the initial submission of NEMs for review and approval by FAA. The program evaluated a total of forty two measures and recommends a total of thirty three measures to prevent the introduction of additional non-compatible land uses and to reduce the effect of the noise generated at the airport. The recommendations include sixteen noise abatement measures, four land use management measures, and thirteen program management measures. The recommended measures are summarized in Section 2 (Noise Abatement Measures), Section 3 (Land Use Management Measures), and Section 4 (Program Management Measures) and Appendices C, G, and H of the NCP. More detailed descriptions and additional information on each measure can be found in Section 2.2 (Noise Abatement Measures); Sections 3.2 and 3.3 (Land Use Management Measures); and Section 4.2 (Program Management Measures) of the NCP.

FAA approval discussed herein is for the approval of measures the Port Authority recommends taking and this approval only indicates the recommended measures would, if implemented, be consistent with the purposes of 14 CFR Part 150. FAA approval does not constitute decisions to implement the measures nor does it constitute a commitment by the FAA to provide financial assistance to the Port Authority for the recommended measures. In addition, later decisions concerning possible implementation of the recommended measures may be subject to environmental protection laws and regulations or other procedures or requirements, as applicable.

The measures are identified below by program element and referenced to the NCP by page number. Each program element summarizes as closely as possible the airport operator's recommendations as found in the NCP. The statements contained within the summarized recommendations and before the indicated FAA approval, disapproval, or other determinations do not represent the opinions or decisions of the FAA.

NOISE ABATEMENT MEASURES (NCP Section 2)

1. Implement a Runway 24 Departure Turn to 230 degrees at Night (Page 2-8)

Description: Under this proposed noise abatement measure, aircraft departing Runway 24 would turn left to a 230° heading at night. Aircraft will continue on this heading until approximately 1.5 nautical miles from the end of the runway (DME), before initiating a second turn to 280°. This could ensure aircraft remain on the 230° heading beyond the residential area south of Moonachie Avenue before initiating the second turn. Restricting the turn to 280° until after 1.5 DME should also reduce the possibility of new areas being exposed to aircraft overflights west of Route 17 since aircraft would pass over the same areas as the existing procedures.

As of the issuance of the NCP, FAA directs aircraft to a 240° heading or the RUUDY SIX RNAV after takeoff. The current altitude restrictions in place for departures from Runway 24 would apply to the proposed procedure. The proposed flight track as shown in Figure 2-1 on page 2-9 would follow the procedure as described above. Due to the shared airspace with Newark International Airport (EWR), the implementation of this proposed noise abatement measure would require sequencing of arrivals into EWR or development of a new arrival procedure for EWR to avoid conflicts in the airspace between TEB and EWR.

FAA Action: APPROVED AS VOLUNTARY. Analysis contained within the NCP (Text, page 2-8 and Tables 2-2 and 2-3, page 2-15) demonstrates that this measure could reduce the number of residential units within the day-night average sound level (DNL) 65 decibel (dB) contour by 11 at 80% utilization of the proposal. Inclusion of these analytical results is presented as the basis upon which the decision was made, as it demonstrates that implementation of the measure could lead to noise reduction. Further, approval of this measure as voluntary does not commit the FAA or Port Authority to achieving the assumptions used for modeling as a target of implementation of the measure.

Implementation of this initiative is dependent on deconfliction with arrivals to Runway 22 at Newark Liberty International Airport (EWR) and successful implementation of EWR NCP noise abatement measure 1. Additional work with stakeholders and facilities is needed to design a flyable procedure that can meet safety and operational criteria. Use of the procedures is subject to Air Traffic Controller discretion based on operating conditions in place at the time of departure.

2. Encourage Intersection Departures from Taxiway K on Runway 1 at Night (Page 2-17)

Description: This proposed measure would implement an intersection departure from Taxiway K on Runway 1 at night. Aircraft using the intersection departure would enter Runway 1 from the end of the runway, then proceed to Taxiway K (600 feet from the end of the runway) before starting takeoff roll, instead of aircraft powering up and starting their departure from the end of the runway. This measure would be voluntary, and aircraft would not be restricted from using the full length of the runway if needed. This measure could reduce noise effects at night directly across Moonachie Ave from the end of Runway 1.

FAA Action: APPROVED AS VOLUNTARY. Analysis contained within the NCP (Text, page 2-17 and Tables 2-5 and 2-6, page 2-25) demonstrates that this measure could reduce the number of residential units within the DNL 65 dB contour by 23 at 80% utilization of the proposal. Inclusion of these analytical results is presented as the basis upon which the decision was made, as it demonstrates that implementation of the measure could lead to noise reduction. Further, approval of this measure as voluntary does not commit the FAA or Port Authority to achieving the assumptions used for modeling as a target of implementation of the measure. Use of the intersection departure at night is subject to Air Traffic Controller discretion based on operating conditions in place at the time of operation.

3. Design and Implement a Centralized Aircraft Run-up Pad (Page 2-27)

Description: This measure would relocate all aircraft maintenance run-ups to a centralized aircraft run-up pad adjacent to Taxiway Q as shown in Figure 2-7 on page 2-29. Maintenance run-ups currently occur most frequently at the northern end of the airfield on the Alpha Pad and less frequently at the eastern end of the airfield at the Taxiway G ramp, and at the southern end of the airfield on the Taxiway L ramp. Each of these locations is close to the perimeter of the airport. The centralized location would move the run-ups away from the airport perimeter and keep them close to the main ramp area. Port Authority regulations at TEB restrict all maintenance run-ups to daytime hours. If the centralized run-up pad is constructed, the existing preferred run-up location and heading would be amended.

FAA Action: APPROVED. Analysis contained within the NCP (Text, pages 2-27 and 2-28, and Tables 2-8 and 2-9, page 2-35) demonstrates that this measure could reduce the number of residential units within the DNL 65 dB contour by 5. Inclusion of these analytical results is presented as the basis upon which the decision was made, as it demonstrates that implementation of the measure could lead to noise reduction. Further, approval of this measure does not commit the FAA or Port Authority to achieving the assumptions used for modeling as a target of implementation of the measure. Approval of this measure in this context does not constitute a commitment by the FAA to provide federal financial assistance for this project. Later decisions concerning possible implementation of this measure may be subject to applicable environmental review or other procedures or requirements.

4. Implement an Offset Approach Procedure to Runway 19 (Page 2-37)

Description: This measure would implement an offset approach procedure to Runway 19. An offset approach is a procedure that approaches the runway at a specified angle to the extended centerline of the runway.

As part of the Part 150 Study, the TAC suggested an offset instrument landing system (ILS) approach procedure to Runway 19, which could reduce noise and aircraft overflights over densely populated areas north of TEB and at the Hackensack University Medical Center. This procedure is different than the 2016 Offset Visual as it is an instrument approach. Implementing an instrument approach allows pilots to use it at night and in reduced visibility conditions. The initial flight path would be a straight-line offset from the runway centerline by a specified set of degrees and would not turn to follow State Route 17 like the 2016 Offset Visual. This offset procedure is conceptual and would require further evaluation and design by the FAA as the procedure would need to remain clear of obstacles such as the WABC antenna.

FAA Action: DISAPPROVED FOR PURPOSES OF PART 150. Documentation provided in support of this measure by the Port Authority did not include an analysis demonstrating a reduction of populations exposed in non-compatible land use within the DNL 65 dB contour, in accordance with Title 14 CFR § 150.23(e)(5) and § 150.35(a). However, the proposed measure was implemented with the RNAV (GPS) X RWY 19 Arrival Procedure published December 31, 2020 in response to requests from the Port Authority and the Teterboro Aircraft Noise Abatement Advisory Committee. The procedure as published is a 13 degree offset to Runway 19 to avoid the Hackensack hospital. The procedure has had limited success due to several issues including pilot refusal of the procedure due to proximity to a communications tower. The Port Authority will continue to monitor usage and work with stakeholders to address concerns.

5. Implement an Offset Approach Procedure to Runway 6 (Page 2-47)

Description: This measure would implement an offset approach procedure to Runway 6. As shown in Figure 2-13 on page 2-49, aircraft approaching Runway 6 would fly to the east of Lyndhurst and Rutherford over mostly compatible land uses before rejoining the ILS approach and lining up with the runway centerline near the intersection of Routes 17 and 120 in East Rutherford. The presence of obstructions (radio antennas) north of Route 120 and the Meadowlands does not allow aircraft to remain on the offset longer than the intersection of Routes 17 and 120 in East Rutherford.

FAA Action: DISAPPROVED FOR PURPOSES OF PART 150. Documentation provided in support of this measure by the Port Authority did not include analysis demonstrating reduction of populations exposed in non-compatible land use within the DNL 65 dB contour, in accordance with Title 14 CFR § 150.23(e)(5) and § 150.35(a). A future update to the NCP addressing the analytical deficiency identified may result in the FAA reconsidering the decision for this measure. Disapproval of this measure for purposes of Part 150 does not prevent the Port Authority from pursuing further implementation of this measure outside of the Part 150 context.

6. Implement a Published Approach Procedure to Runway 1 and Increase Usage at Night (Page 2-55)

Description: This measure would implement a published approach procedure to Runway 1 in order to increase arrival usage at night. A published approach procedure is a publicly available visual or instrument approach procedure with defined repeatable and predictable flight instructions published by FAA. Currently, there is no published approach procedure (visual or instrument) to Runway 1. The ATCT instructs pilots using Runway 1 for arrivals to fly the Runway 6 ILS and then to circle to Runway 1. For noise abatement reasons, the preferred runway for arrivals to the north between 10 p.m. and 7 a.m. local time is Runway 1. The use of Runway 1 at night would place arrivals over compatible land use for the majority of the approach to the runway. Conceptually, aircraft approaching Runway 1 would follow the Runway 6 approach and turn to the east to line up with runway centerline for Runway 1. Figure 2-15 on page 2-57 displays the proposed potential flight path to Runway 1.

FAA Action: APPROVED AS VOLUNTARY. Analysis contained within the NCP (Text, page 2-55 and Tables 2-17 and 2-18, page 2-63) demonstrates that this measure could reduce the number of residential units within the 65 decibel (dB) day-night average sound level (DNL) contour by 7 at 25% utilization of the proposal. Inclusion of these analytical results is presented as the basis upon which the decision was made,

as it demonstrates that implementation of the measure could lead to noise reduction. Further, approval of this measure as voluntary does not commit the FAA or Port Authority to achieving the assumptions used for modeling as a target of implementation of the measure.

Implementation of this initiative is dependent on deconfliction with arrivals to Runway 22 at EWR and successful implementation of EWR NCP noise abatement measure 1. Additional work with stakeholders and facilities is needed to design a flyable procedure that can meet safety and operational criteria. Use of the procedures is subject to Air Traffic Controller discretion based on operating conditions in place at the time of departure.

7. Implement a Published Departure Procedure from Runway 19 (Page 2-65)

Description: This measure would implement a published departure procedure from Runway 19. A published departure procedure is a publicly available visual or instrument departure procedure with defined repeatable and predictable flight instructions published by FAA. Currently, there is no published departure procedure (visual or instrument) from Runway 19. Pilots using Runway 19 for departures may request to fly the Dalton Two VFR procedure in the TEB Quiet Flying Program, but they must be very familiar with the procedure in order to fly it due to EWR airspace constraints. For noise abatement reasons, Runway 19 is preferred for departures to the south between 10 p.m. and 7 a.m. local time. The implementation of a published procedure will allow pilots to utilize this runway during the designated nighttime period more effectively. This is discussed in TEB Noise Abatement Measure 12: Existing Voluntary Preferential Runway Use at Night on page 2-84. Aircraft departing Runway 19 could potentially follow a procedure like the existing Dalton Two VFR departure, turning right to a 280° heading and remaining at or below 1,300 feet. Figure 2-18 on page 2-67 displays the proposed flight path from Runway 19.

FAA Action: DISAPPROVED FOR PURPOSES OF PART 150. The Dalton Two was published October 15, 2021 and is available to Jeppesen Chart Subscribers; however, the procedure is not preferred by FAA Air Traffic Control due to airspace conflicts with EWR operations. Analysis contained within the NCP (Text, page 2-65 and Tables 2-20 and 2-21, page 2-73) demonstrates that this measure could reduce the number of residential units within the DNL 65 dB contour by 6 south of Runway 6 and increase the number of residential units within the contour south of Runway 1 by 4, resulting in a net decrease within the contour of 2 residential units at an assumed 10% utilization rate. However, additional analysis within the NCP (Text, page 2-65) states that “[w]hen the usage rate is increased to 25 percent, a small increase in population and dwelling units within the 65 DNL contour is shown due to expansion of the contour in the residential area south of Runway 1.” Due to the uncertainty in the measure to be able to result in a net reduction of population and non-compatible land uses within the DNL 65 dB contour at differing utilization rates, the measure does not meet the standard for approval by the FAA, in accordance with Title 14, Code of Federal Regulations (CFR), § 150.23(e)(5) and § 150.35(a). A future update to the NCP demonstrating overall reductions of populations and non-compatible land use within the DNL 65 dB contour at differing utilization rates may result in the FAA reconsidering the decision for this measure. Disapproval of this measure for purposes of Part 150 does not prevent the Port Authority from pursuing further implementation of this measure outside of the Part 150 context.

8. Existing Mandatory Permission to Operate Jet Aircraft (Page 2-75)

Description: This measure, in place at TEB since 1967, stipulates that no jet-powered aircraft may operate at TEB without prior approval of the Airport Manager. This measure helps the Port Authority control noise at the airport by ensuring that aircraft operators are aware of TEB's Quiet Flying Program and that their aircraft meet the mandatory noise limits. Operators of jet aircraft new to the airport or with a changed owner/operator must submit a "Permission to Operate" form to the Airport Manager for review and approval. The form is available on the TEB website and in the Flight Crew Handbook. It requires the operator to acknowledge awareness of and commitment to be consistent with the TEB Flight Crew Handbook. Congressional legislation has also specifically stated that the FAA administrator is prohibited from acting against the prior permission rules at TEB.

FAA Action: NO ACTION. This measure was in place prior to ANCA and is not subject to review under 14 CFR Part 161. It is the continuance of a pre-existing practice at TEB. The existing mandatory measures have been communicated to aircraft operators through informational handouts, the Flight Crew Handbook and signs at the airport's FBO's facilities.

9. Existing Mandatory Noise Limits (Page 2-77)

Description: This measure, in place at TEB since 1987 and updated in 1988, establishes A-weighted decibel (dBA) measurements to enforce formal "Maximum Noise Level" (MNL) limits that apply to takeoffs. The departure noise limits vary according to runway end and time of day, as follows:

- 80 dBA departure limit on Runway 24 from 10:00 p.m. to 7:00 a.m. local time;
- 90 dBA departure limit on Runway 24 from 7:00 a.m. to 10:00 p.m. local time;
- 95 dBA departure limit on Runways 01, 19 and 06 at all times; and
- 95 dBA departure limit for helicopters at all times.

If Runway 19 is officially closed by NOTAM, the applicable MNL for Runway 24 is 95 dBA. If the crosswind component existing at the time of departure on Runway 19 exceeds the maximum allowable crosswind component for the aircraft being used, the MNL for Runway 24 is 95 dBA. Exemptions may be granted by the Airport Manager, in cases where, due to unforeseen circumstances, noise abatement procedures were not used by the pilot in order to assure safety of flight. The Port Authority has installed Remote Noise Monitoring Sites (RMS) at six locations around TEB to track compliance, as shown in Figure 2-21 on page 2-78.

Aircraft that exceed these limits are issued a noise violation. Aircraft that have received three noise violations in a two-year span are not permitted to operate at TEB. Notifications of noise violations are sent to the operator via registered mail. Failure by the operator to receive notification shall not be cause for dismissal of the violation. A record of First Violation and Second Violation is kept for two years from the date of the violation. On the second anniversary, the record of that violation is expunged. Operators may conduct up to two flight tests, or "Noise Plots," on any one aircraft at TEB. These tests may be conducted for the purpose of evaluating noise abatement procedures. Permission for such tests will not

be granted if there is a record of a Second Violation for the aircraft involved. Operators may appeal the assessment of a noise violation.

FAA Action: NO ACTION. This measure was in place prior to ANCA and is not subject to review under 14 CFR Part 161. It is the continuance of a pre-existing practice at TEB. The existing mandatory measures have been communicated to aircraft operators through informational handouts, the Flight Crew Handbook, and signs at the airport's FBO's facilities.

10. Existing Mandatory Aircraft Maintenance Run-Up Restrictions (Page 2-79)

Description: This measure would continue existing mandatory aircraft run-up regulations established in Section 9.7 of the Port Authority Rules and Regulations. If TEB Noise Abatement Measure 3: Design and Implement a Centralized Aircraft Run-up Pad is implemented, the centralized run-up pad location in Figure 2-7 would become the designated run-up location under these same rules.

FAA Action: NO ACTION. This measure was in place prior to ANCA and is not subject to review under 14 CFR Part 161. It is the continuance of a pre-existing practice at TEB. The existing mandatory measures have been communicated to aircraft operators through informational handouts, the Flight Crew Handbook, and signs at the airport's FBO's facilities.

11. Existing Voluntary Restraint from Operations between 11:00 p.m. and 6:00 a.m. (Page 2-84)

Description: This measure would continue existing Port Authority policy requesting that aircraft operators voluntarily restrain from operating any aircraft between the hours of 11:00 p.m. and 6:00 a.m. in order to reduce off-airport noise at night. Operators who do not abide by this voluntary restraint receive a letter from the Port Authority to: 1) Remind them that the TEB Quiet Flying Program is in place; 2) Notify them of their failure to meet program requirements; and 3) Remind them that only essential flights should be conducted during the restraint period.

FAA Action: APPROVED. This measure is voluntary on behalf of aircraft operators. It is the continuance of a pre-existing practice at TEB. The existing voluntary measures have been communicated to aircraft operators through informational handouts, the Flight Crew Handbook, and signs at the airport's FBO's facilities. No further FAA Actions are associated with this measure.

12. Existing Voluntary Preferential Runway Use at Night (Page 2-85)

Description: This measure would continue existing Port Authority policy requesting that aircraft operators of all aircraft over 12,500 pounds, all jet aircraft, and those aircraft with high noise levels (as determined by the Noise Office) request the runway that has been designated by the Port Authority as a preferential runway for arrivals and departures between 10:00 p.m. and 7:00 a.m. local time.

The designated preferential runways between 10:00 p.m. and 7:00 a.m. are 1) Runway 1 for landing when airport traffic is landing to the north, and 2) Runway 19 for departures when airport traffic is departing to the south. Arriving to Runway 1 and departing from Runway 19 at night could reduce noise levels over

residential areas south of Runway 6-24 by routing flight operations over compatible land use south of Runway 1-19.

FAA Action: APPROVED. This measure is voluntary on behalf of aircraft operators. It is the continuance of a pre-existing practice at TEB. The existing voluntary measures have been communicated to aircraft operators through informational handouts, the Flight Crew Handbook, and signs at the airport's FBO's facilities. No further FAA Actions are associated with this measure.

13. Existing Voluntary Encouragement of the Use of National Business Aviation Association (NBAA) Noise Abatement Departure Procedures (NADP) (Page 2-87)

Description: This existing measure encourages aircraft operators to utilize the latest NBAA NADP for departures at TEB. The NBAA recommends the use of its High Density NADP procedure for airports with "high density" (congested airspace) such as TEB. NBAA recommends that aircraft operators follow a Noise Abatement Departure procedure as shown in Figure 2-22 (page 2-87), which includes a thrust reduction to a "quiet climb" power setting starting at elevation 800 feet and then resumption of a normal climb at elevation 1,500 feet for TEB. The "quiet climb" between elevation 800 feet and 1,500 feet has the potential to reduce noise as it reduces the amount of thrust used at lower elevations over nearby residential areas.

FAA Action: APPROVED. This measure is voluntary on behalf of aircraft operators. It is the continuance of a pre-existing practice at TEB. The existing voluntary measures have been communicated to aircraft operators through informational handouts, the Flight Crew Handbook, and signs at the airport's FBO's facilities. No further FAA Actions are associated with this measure.

14. Existing Voluntary Restraint from the Use of Reverse Thrust (Page 2-90)

Description: Under this existing measure, the Port Authority recommends that aircraft operators of all turbojet aircraft voluntarily restrict the use of reverse thrust activity after landing at TEB except when necessary for operational safety. Use of reverse thrust changes the direction in which air is exhausted through the jet engines resulting in a short period of increased noise which can typically be heard outside of the airport. Therefore, any reduction in the use of reverse thrust could have a noise benefit. Reverse thrust is used primarily to decelerate the aircraft after landing and is dependent upon aircraft type, aircraft weight, runway length, and runway surface condition.

FAA Action: APPROVED. This measure is voluntary on behalf of aircraft operators. It is the continuance of a pre-existing practice at TEB. The existing voluntary measures have been communicated to aircraft operators through informational handouts, the Flight Crew Handbook, and signs at the airport's FBO's facilities. No further FAA Actions are associated with this measure.

15. Existing Voluntary IFR and VFR Approach and Landing Procedures to Runway 1 at Night (Page 2-91)

Description: Under this existing measure, the Port Authority Noise Office requests aircraft operators comply with the voluntary Instrument Flight Rules (IFR) and Visual Flight Rules (VFR) approach and landing procedures to Runway 1 at night that are set forth in the TEB Flight Crew Handbook. These instructions

provide pilot guidance and techniques for reducing noise on approach to the runway. VFR procedures are possible when the weather is good and visual references can be used for safe operation of the aircraft. IFR procedures are necessary when weather conditions deteriorate, and visual references cannot be used. The approach and landing procedures to Runway 1 are published in the TEB Flight Crew Handbook.

FAA Action: APPROVED. This measure is voluntary on behalf of aircraft operators. It is the continuance of a pre-existing practice at TEB. The existing voluntary measures have been communicated to aircraft operators through informational handouts, the Flight Crew Handbook, and signs at the airport's FBO's facilities. No further FAA Actions are associated with this measure.

16. Existing Voluntary Helicopter Routes (Page 2-92)

Description: Under this existing measure, the Port Authority requests that helicopter operators continue to voluntarily follow the helicopter routes depicted in Figure 2-23 on page 2-93. These routes are extracted from the FAA's VFR Helicopter Route Charts. This existing measure keeps helicopter overflights over transportation corridors and compatible land use as much as possible and reduces noise over residential areas.

FAA Action: APPROVED. This measure is voluntary on behalf of aircraft operators. It is the continuance of a pre-existing practice at TEB. The existing voluntary measures have been communicated to aircraft operators through informational handouts, the Flight Crew Handbook, and signs at the airport's FBO's facilities. No further FAA Actions are associated with this measure.

LAND USE MEASURES (NCP Section 3)

1. Acquire Non-compatible Residential Parcels (Page 3-5)

Description: The Port Authority is recommending property acquisition and to make the land compatible by rezoning to comply with applicable FAA requirements for residential property acquisition. Pursuant to the requirements of FAA Order 5100.37B Land Acquisition and Relocation Assistance for Airport Projects, an airport that purchases a property with a non-compatible land use utilizing AIP grant funding may modify the land use by removing the non-compatible structure, working with the jurisdiction to rezone the property to a compatible land use, and reselling the property.

The Port Authority has identified one parcel for potential acquisition: a mobile home park with approximately 200 units, south of Runway 1 as shown in Figure 3-2 on page 3-7. Over a quarter of the mobile homes (57 total) in this parcel are within the DNL 65 dB or greater contours. Mobile homes are not considered compatible with airport noise levels greater than DNL 65 dB. Sound insulation is not an available option for mobile homes because their design and construction do not lend themselves to effective noise reduction measures. The parcel is located very close to the runway end and none of the proposed noise abatement measures would remove the entire parcel from the DNL 65 dB contour.

If the Port Authority were to acquire this parcel using FAA grant funding, it would be required to provide relocation assistance to eligible residents in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.

FAA Action: APPROVED. This measure could potentially benefit 57 dwelling units located in the DNL 65 dB contour, based on the accepted TEB NEM. This number is only a representation of structures located within the currently accepted NEM and may change either due to structures not meeting all requirements for program or due to a change to the DNL 65 dB contour itself on a future updated NEM submission.

Approval of this measure is not a commitment of future federal funding under any grant-in-aid program administered by the FAA. Final determinations regarding eligibility and funding will be made at such time the Port Authority submits requests for federal financial assistance and will be dependent upon the accepted NEM at the time the request is submitted, provided the NEM can be validated for currency.

2. Sound-Insulate Eligible Dwelling Units (Page 3-10)

Description: The Port Authority is proposing to provide sound insulation for eligible residential dwelling units within the DNL 65 dB contour. Types of dwelling units include, but are not limited to, single-family units, multi-family units (up to and including high-rise apartment buildings), and mixed-use structures with retail on the ground floor and residential units above. Sound insulation programs provide compatible noise environments inside structures as a means to mitigate aircraft noise exposure. Sound insulation treatments may include window and door replacement, caulking, weather stripping, and positive air ventilation. Positive ventilation systems use a fan to draw outside air into an indoor space, pressurizing the space. Indoor air is exhausted out of the building through sound-insulated exterior openings. Ventilation-only treatments are limited to structures where positive ventilation does not already exist.

The goal of sound insulation under 14 CFR Part 150 is to provide an average interior DNL of 45 dB or below and to provide at least a 5 dB improvement to the noise level reduction of the structure. Based on the experience of other airports' residential sound insulation programs, sound insulation is effective in reducing interior noise exposure and has a high level of satisfaction among dwelling unit occupants.

In residential sound insulation programs funded, in part, by FAA Airport Improvement Program (AIP) grants, a dwelling unit is eligible for sound insulation only if it meets all of the criteria set forth in FAA Order 5100.38D, Airport Improvement Program Handbook (AIP Handbook), Appendix R. To be eligible, the dwelling unit must meet the following criteria:

1. It must be located within the DNL 65 dB contour of an FAA-accepted NEM.
2. It must have been constructed before publication of FAA-accepted DNL contours. Dwelling units constructed in the vicinity of TEB after June 15, 2017, are not eligible for federally funded sound insulation.
3. It must be in compliance with the local building code.
4. It must have an average noise level in habitable rooms above DNL 45 dB (with windows closed).

The FAA also has discretion to fund sound insulation for dwelling units located in structures that contain a mix of residential and commercial uses (e.g., buildings with retail on the first floor and apartments in upper floors). In addition, a modular structure that has a noise-sensitive use may be eligible for federally funded sound insulation if the structure is permanent and meets the building requirements for non-modular structures, as given in Appendix R of the AIP Handbook.

The following dwelling units may be eligible for federally funded positive ventilation systems in addition to or in lieu of residential sound insulation:

- Dwelling units that qualify for sound insulation and do not have existing positive ventilation systems
- Dwelling units that do not qualify for sound insulation and do not have existing positive ventilation yet require it so that exterior doors and windows can be kept closed to obtain the noise-level reduction required for compatibility

Dwelling units that do not have positive ventilation systems and are determined to be eligible for federally funded positive ventilation systems would be divided into two groups:

- Existing interior noise exposure of at least DNL 45 dB
- Existing interior noise exposure below DNL 45 dB, but only with having all exterior doors and windows closed

In exchange for accepting sound insulation under TEB Land Use Measure 2, the Port Authority is requiring the property owner to provide to the Port Authority an aviation easement. An aviation easement is a conveyance of airspace over property for use by an airport. The property owner has restricted use of their property subject to the airport sponsor's easement for overflight and other applicable restrictions on the use and development of the parcel. Aviation easements run with the land (i.e., are attached to the property for as long as the easement is in effect). Therefore, an aviation easement binds future property owners and informs them of the property's exposure to aircraft noise while also restricting use of the parcel as described in the aviation easement.

FAA Action: APPROVED. This measure could potentially benefit 139 dwelling units and 336 people located in the DNL 65 dB contour, excluding block rounding and neighborhood equity, based on the accepted TEB NEM. This number is only a representation of structures located within the currently accepted NEM and may change either due to structures not meeting all requirements for program eligibility as discussed in the NCP (Pages 3-10 through 3-13) or due to a change to the DNL 65 dB contour itself on a future updated NEM submission. Prior to the start of the Sound Insulation Program (SIP), the Port Authority shall develop a policy and procedure manual (PPM) to guide SIP implementation and an acoustical testing protocol (ATP). The PPM should outline SIP objectives and priorities, community outreach process, identify and define boundaries for eligible structures, including proposals for treatment of neighborhood equity and block rounding (in accordance with Appendix R of the AIP Handbook) and the suggested aviation easement language. The ATP outlines the acoustical testing process to ensure the acoustical testing or

residential structures is conducted accurately and efficiently. The ATP shall be provided to FAA for review and concurrence.

Approval of this measure is not a commitment of future federal funding under any grant-in-aid program administered by the FAA. Final determinations regarding eligibility and funding will be made at such time the Port Authority submits requests for federal financial assistance and will be dependent upon the accepted NEM at the time the request is submitted, provided the NEM can be validated for currency.

3. Sound-Insulate Eligible Non-Residential Noise-Sensitive Structures (Page 3-15)

Description: The Port Authority is proposing to provide sound insulation for eligible non-residential noise-sensitive structures within the DNL 65 dB contour. Non-residential noise-sensitive structures include public use facilities such as schools, places of worship, libraries, daycares, and transient lodging. Sound insulation programs provide compatible noise environments inside structures to mitigate aircraft noise exposure. Sound insulation treatments may include window and door replacement, caulking, weather stripping, and positive air ventilation.

The purpose of sound insulation is to provide an average interior DNL of 45 dB or below and to provide at least a 5 dB improvement to the noise level reduction of the structure with the installation of the treatments. All eligibility requirements in Appendix R of the AIP Handbook must be met.

In non-residential sound insulation programs funded in part by FAA AIP grants, a non-residential noise-sensitive structure is eligible for sound insulation only if it meets all of the criteria set forth in the AIP Handbook, Appendix R. To be eligible, the structure must meet the following criteria:

- 1) It must be located within the DNL 65 dB contour of an FAA-accepted NEM.
- 2) It must have been constructed before publication of FAA-accepted DNL contours. In the case of TEB, FAA-accepted DNL contours were first made available to the public on June 15, 2017. Therefore, structures constructed in the vicinity of TEB after June 15, 2017, are not eligible for federally funded sound insulation.
- 3) It must be in compliance with the local building code.
- 4) It must have an average noise level in habitable rooms above DNL 45 dB (with windows closed).

According to Table C-5 of the AIP Handbook, the FAA may not authorize the installation of sound insulation for structures with non-residential noise-sensitive land uses that are located in temporary commercial facilities (e.g., a house of worship or day care facility under lease in a retail/commercial facility).

The following structures may be eligible for federally funded positive ventilation systems in addition to or in lieu of structural sound insulation:

- Structures that qualify for sound insulation and do not have existing positive ventilation systems

- Structures that do not qualify for sound insulation and do not have existing positive ventilation yet but require it so that exterior doors and windows can be kept closed to obtain the noise-level reduction required for compatibility

Structures that do not have positive ventilation systems and are determined eligible for federally funded positive ventilation systems would be divided into two groups:

- Existing interior noise exposure of at least DNL 45 dB
- Existing interior noise exposure below DNL 45 dB, but only with having all exterior doors and windows closed

The 2021 Accepted NEM DNL 65 dB contour includes one school that did not receive sound insulation treatments during previous Port Authority sound insulation programs (Jersey College of Nursing), one place of worship (Catalyst Agape Church) and one day care facility (Learning Tree Academy) (Table 3-4, Page 3-16) for a total of three non-residential noise-sensitive structures within the DNL 65 dB contour. The 2021 Accepted NEM DNL 65 dB contour also includes one school that previously received sound insulation treatments during previous Port Authority sound insulation programs (Bergen County Technical High School). The Bergen County Technical High School is not proposed for inclusion in this measure by the Port Authority.

FAA Action: APPROVED. This measure could potentially benefit users and attendees of these three non-compatible noise-sensitive structures located in the DNL 65 DNL contour based on the accepted TEB NEM. This approval is for structures located within the currently accepted NEM identified in Table 3-4 on Page 3-16 of the NCP (except for the Bergen County Technical High School as noted above) and may change either due to structures not meeting all requirements for program eligibility as discussed in the NCP (Pages 3-10 through 3-13 and 3-15 through 3-17) or due to a change to the DNL 65 dB contour itself on a future updated NEM submission. Additionally, eligibility of non-residential noise-sensitive structures located in commercial structures will be evaluated on a case-by-case basis. Prior to the start of the SIP, the Port Authority shall develop a PPM to guide SIP implementation and an ATP. This PPM and ATP for these three non-residential noise-sensitive structures can be combined with the PPM and ATP for residential structures identified in the approval of Land Use Measure 2 and shall be provided to FAA for review and concurrence.

Approval of this measure is not a commitment of future federal funding under any grant-in-aid program administered by the FAA. Final determinations regarding eligibility and funding will be made at such time the Port Authority submits requests for federal financial assistance and will be dependent upon the accepted NEM at the time the request is submitted, provided the NEM can be validated for currency.

4. Assist with Establishing an Airport Noise Overlay Zone (Page 3-20)

Description: Airport noise overlay zones are intended to prevent non-compatible land uses from being developed near an airport. The noise overlay zone works in tandem with the local jurisdictions' existing zoning and provides detailed information regarding the land uses allowable within the overlay zone, such

as noise level reduction required for noise- sensitive structures. If the overlay zone allows for non-compatible land uses, such as residential, schools and churches, then the overlay zone will also include specific building codes to ensure compatibility and the addition of avigation easements. These specific codes are generally more stringent than standard building codes, but similar to the existing codes required for energy conservation purposes.

Land use control agencies within the jurisdictions showed interest in establishing airport noise overlay zones to assist in better land use compatibility with aircraft operations. The following land use jurisdictions expressed interest in an overlay zone: New Jersey Sports and Exposition Authority, City of Hackensack, Borough of East Rutherford, Borough of Hasbrouck Heights, Borough of Little Ferry, Bergen County, Township of South Hackensack, and Borough of Teterboro.

Using the forecast NEM as the basis, the Port Authority could provide information to each local jurisdiction responsible for land use zoning designations in developing an airport noise overlay zone that would achieve the land use zoning goals of that community.

FAA Action: APPROVED. The decision whether to pursue such a policy is an issue for government entities responsible for land use planning or real estate transactions to decide. The Port Authority should work directly with any state and/or local governments that wish to develop this preventive land use measure using the Accepted 2021 NEM as the initial basis. Approval of this measure is not a commitment of future federal funding under any grant-in-aid program administered by the FAA. Final determinations regarding eligibility and funding will be made at such time the Port Authority submits requests for federal financial assistance.

PROGRAM MANAGEMENT MEASURES (NCP Section 4)

1. Maintain Noise Office (Page 4-5)

Description: The Port Authority is proposing to continue to operate the Noise Office, which is a vital link between the Airport and communities on aircraft noise concerns. Following issuance of this Record of Approval, the Port Authority's Noise Office's responsibilities will expand to include implementation of the recommended NCP measures and monitoring adherence with the implemented noise abatement measures. It is possible that the Port Authority may need additional staff resources in the Noise Office to adequately address the increased responsibilities that come with the implementation and monitoring of NCPs at four airports simultaneously.

FAA ACTION: APPROVED. Implementation of this continued measure is considered to be within the authority of the Port Authority of New York and New Jersey.

2. Maintain Noise and Operations Management System (Page 4-6)

Description: The Port Authority is proposing to continue use of the Noise and Operations Management System (NOMS), which supports the investigation of noise complaints as well as communication with the

public about the noise environment associated with TEB. The Airport NOMS (ANOMS) also retains historical data so that noise and operational trends can be determined. Maintenance of the NOMS will enable the Port Authority to investigate noise complaints and provide a means to monitor adherence to NCP noise abatement measures for TEB. Of the six noise monitors in the current TEB NOMS, none are located within the Accepted 2021 NEM DNL 65 contour.

FAA ACTION: APPROVED. The Port Authority may seek to maintain and/or replace existing noise monitors. Only noise monitors within the accepted NEM at the time of any potential funding requests would be eligible for federal funding for replacement if all other eligibility criteria are met. Approval of this measure is not a commitment of future federal funding under any grant-in-aid program administered by the FAA. Final determinations regarding eligibility and funding of future upgrades will be made at such time the Port Authority submits requests for federal financial assistance.

3. Maintain Public Flight Tracking Portal (Page 4-7)

Description: The existing public flight tracking portal is an internet-based system that allows the public to view aircraft movements in the New York/New Jersey area via a website. The existing portal provides aircraft locations and noise monitor values for current and historical operations at TEB and is used to post information about runway closures. The flight tracking portal provides a public interface for the Port Authority's NOMS and is therefore a key communication and educational tool used by the Noise Office. The Port Authority is proposing to continue use of this system.

FAA ACTION: APPROVED. Approval of this measure is not a commitment of future federal funding under any grant-in-aid program administered by the FAA. Final determinations regarding eligibility and funding will be made at such time the Port Authority submits requests for federal financial assistance and will be dependent upon the accepted NEM at the time the request is submitted, provided the NEM can be validated for currency.

4. Maintain Noise Complaint Management System (Page 4-8)

Description: The existing noise complaint management system is used by the Port Authority to collect and manage noise complaint information from each of the airports in its system. The Port Authority provides noise complaint reports to the FAA on a quarterly basis for informational purposes. The use of a noise complaint management system enables the Noise Office to efficiently respond to noise complaints and gain insights from noise complaint data. The Port Authority is proposing to continue use of this system.

FAA ACTION: APPROVED. Implementation of this continued measure is considered to be within the authority of the Port Authority of New York and New Jersey. Approval of this measure is not a commitment of future federal funding under any grant-in-aid program administered by the FAA. Final determinations regarding eligibility and funding will be made at such time the Port Authority submits requests for federal financial assistance and will be dependent upon the accepted NEM at the time the request is submitted, provided the NEM can be validated for currency.

5. Maintain Noise Office Website (Page 4-9)

Description: The Port Authority's Noise Office website provides links to submit a noise complaint, public flight tracking portal, noise monitoring, data reports, and airport community roundtables. The noise information website also contains a link to a central web page for each of the Port Authority's four 14 CFR Part 150 Studies. Thus, the Noise Office website serves as a single point of entry to all of the publicly available information and services provided by the Noise Office. The Port Authority is proposing to continue use of this website. The TEB webpage also contains Teterboro specific information such as the TEB Flight Crew Handbook, information about the maximum noise levels and the voluntary restraint from flying period.

FAA ACTION: APPROVED. Implementation of this continued measure is considered to be within the authority of the Port Authority of New York and New Jersey.

6. Continue Community Outreach Activities (Page 4-10)

Description: The Port Authority will continue to support groups that discuss TEB noise abatement procedures and issues, such as the Teterboro Aircraft Noise Abatement Advisory Committee (TANAAC) and Teterboro Users Group (TUG). The TANAAC is a stakeholder engagement group established in 1987 to provide a forum for ongoing dialogue between the airport and the neighboring communities. TANAAC helped to establish the existing noise abatement program at TEB and now along with the Port Authority oversees noise abatement measures. Its membership includes the Port Authority, TEB airport management, FAA, federal, state and locally elected officials, airport users, and community representatives from fifteen neighboring municipalities. TANAAC meets quarterly and meetings are open to the public.

The TUG is a group of airport users that meets on a regular basis dedicated to enhancing the airports safety, efficiency, and infrastructure in the interest of all the airport's constituents. The TUG regularly meets to discuss use of and adherence to flight procedures at TEB. The Port Authority and TEB staff attend these meetings and provide information as requested. The Port Authority is proposing to continue to participate in the TANAAC and TUG, and support additional community outreach activities.

FAA ACTION: APPROVED. Implementation of this continued measure is considered to be within the authority of the Port Authority of New York and New Jersey.

7. Establish a Community Planners Forum (Page 4-11)

Description: The Port Authority recommends initiating a Community Planners Forum that will bring together land use planners and local zoning jurisdictions responsible for land use planning in the vicinity of the airport. The Port Authority would provide the venue for this voluntary forum to allow for the sharing and dissemination of aircraft noise related information pertaining to comprehensive planning, land use issues, zoning issues, and noise mitigation efforts by the local jurisdictions. The goal of this measure is to provide a forum for land use planning agencies and zoning jurisdictions to be made aware of aircraft noise

related information relating to comprehensive planning, land use issues, zoning issues, and noise mitigation efforts at TEB.

FAA ACTION: APPROVED. Implementation of this continued measure is considered to be within the authority of the Port Authority of New York and New Jersey.

8. Establish and Manage a Fly Quiet Program (Page 4-12)

Description: The Port Authority recommends updating the existing TEB Flight Crew Handbook which documents the current Quiet Flying Program to provide a comprehensive Fly Quiet Program for TEB. This program will incorporate the existing mandatory and voluntary noise abatement measures at TEB documented in the Handbook along with the additional proposed measures approved in the NCP. The TEB Flight Crew Handbook includes details on maximum noise limits for departures, permission to operate jet aircraft forms, preferential noise abatement runway usage, maintenance run-up restrictions and flight procedures designed to reduce noise over residential communities. The Fly Quiet Program will allow the Port Authority to continue to develop collaborative solutions for abating noise from aircraft operations at TEB.

The Fly Quiet Program encourages pilots and air traffic controllers to use agreed noise abatement flight tracks, noise abatement departure procedures, and preferential runways. The updated program will continue to include airline/pilot awareness campaigns with promotional materials (e.g., handouts/flyers, signage, and other educational materials) to ensure pilots know about the recommended noise abatement procedures at the Airport. The Noise Office would then track adherences to the noise abatement procedures through the Fly Quiet Program and report on them. The Fly Quiet Program would also include the preparation of comprehensive noise reports using the data acquired and maintained in the NOMS system. The Fly Quiet noise reports would be published on the Noise Office website and shared with various stakeholders including, but not limited to, the FAA, TANAAC members, and land use planners.

FAA Action: APPROVED AS VOLUNTARY. Use of any procedure, including those that would be the subject of a Fly Quiet Program, is subject to Air Traffic Controller discretion based on operating conditions in place at the time of aircraft operation. Further, approval of this measure is not a commitment of future federal funding under any grant-in-aid program administered by the FAA. Final determinations regarding eligibility and funding will be made at such time the Port Authority submits requests for federal financial assistance and will be dependent upon the accepted NEM at the time the request is submitted, provided the NEM can be validated for currency.

9. Make Aircraft Noise Contours Available in a Geographic Information System (GIS) (Page 4-13)

Description: An interactive NEM (presenting DNL 65 dB and higher contour lines) can provide the public, land use planning agencies, and other stakeholders with easy access to an airport's noise contours to enhance awareness and decision-making regarding aircraft noise. This measure would involve the Port Authority providing a Google Earth file (or other readily useable file) of the Accepted TEB 2021 DNL 65, 70, and 75 dB contours to the public for download. The Port Authority could also host a map on its Noise

Office website that would include these GIS layers as a downloadable file containing noise contour shapes for easy viewing by interested parties.

Interactive noise contour maps for TEB were developed as part of this Study. Those maps allow users to determine whether their residence or any other noise-sensitive building is within or outside of the DNL 65 dB contours. They were favorably received when showcased at the TEB draft NEM workshops and subsequently posted for public access on the TEB 14 CFR Part 150 website. It is the Port Authority's intention to maintain public access to these maps. The Port Authority will also provide the Accepted 2021 NEM DNL 65 dB contour to the local planning agencies with land uses within the contour boundary.

FAA ACTION: APPROVED. Implementation of this continued measure is considered to be within the authority of the Port Authority of New York and New Jersey.

10. Update the Noise Exposure Map (Page 4-14)

Description: The FAA requires that an airport operator maintain NEMs that reflect current or reasonably projected conditions in order to obtain FAA funding for noise programs. Specifically, 14 CFR § 150.21(d), states that an airport operator shall “promptly prepare and submit a revised noise exposure map” if any change in the operation of the airport creates a “substantial, new non-compatible use” or a “significant reduction in noise over existing non-compatible uses” that is not reflected on the FAA-accepted NEM on record. The former condition reflects an increase of DNL 1.5 dB in terms of the DNL over non-compatible uses or over uses that are made non-compatible by the noise increase, while the latter condition reflects a reduction of DNL 1.5 dB over uses that were formerly non-compatible but are made compatible by the noise reduction.

Consistent with Part 150 requirements, the Port Authority will evaluate any changes in the noise environment at TEB and notify the FAA whether they believe the NEM continues to be a reasonable representation of current and/or forecast conditions at TEB or submit an updated NEM to the FAA for acceptance. The Port Authority anticipates updating the NEMs when operations at TEB stabilize as the aviation sector continues to recover from the COVID-19 pandemic.

FAA ACTION: APPROVED. The FAA retains discretion to evaluate and determine currency of the NEMs based on information submitted by the Port Authority so long as the Port Authority continues to seek federal funding for implementation of measures approved under 14 CFR Part 150. Approval of this measure is not a commitment of future federal funding under any grant-in-aid program administered by the FAA. Final determinations regarding eligibility and funding will be made at such time the Port Authority submits requests for federal financial assistance to update the NEMs.

11. Update the Noise Compatibility Program (Page 4-15)

Description: 14 CFR § 150.23(e)(9), states that NCPs must include a “[p]rovision for revising the program if made necessary by revision of the noise exposure map.” This may occur if a significant change is identified that results in a revision to the NEMs. Examples of changes are a large addition of non-compatible land uses, or new elements required to achieve land use compatibility. The NCP does not

require an update with each NEM update. The Port Authority proposes updating the NCP only when additional measures and/or modified measures are required to reduce non-compatible land use in accordance with an updated NEM.

FAA ACTION: APPROVED. The FAA retains discretion to recommend updates to the NCP as a whole or to individual measures at such time that revised NEMs are submitted by the Port Authority and so long as the Port Authority continues to seek federal funding for implementation of measures approved under 14 CFR Part 150. Approval of this measure is not a commitment of future federal funding under any grant-in-aid program administered by the FAA. Final determinations regarding eligibility and funding will be made at such time the Port Authority submits requests for federal financial assistance to update the NCPs.

12. Update Airfield Noise Abatement Program Signage (Page 4-16)

Description: TEB has installed four noise abatement signs on the airfield and one at both ends of each runway, reminding pilots of the noise abatement program in place at TEB. Two of the signs also include descriptions of the maximum noise limits for departures from Runway 19 and 24. The signs are specific to each runway end. One additional sign is proposed to be installed in conjunction with Noise Abatement Measure 3 for a centralized aircraft run-up pad. This sign would remind pilots of the correct headings to use and the mandatory restrictions regarding the time of day for run-ups.

FAA ACTION: APPROVED. Approval of this measure is not a commitment of future federal funding under any grant-in-aid program administered by the FAA. Final determinations regarding eligibility and funding will be made at such time the Port Authority submits requests for federal financial assistance and will be dependent upon the accepted NEM at the time the request is submitted, provided the NEM can be validated for currency.

13. The Port Authority to Coordinate with the FAA on Development and Implementation of NextGen Procedures (Page 4-22)

Description: The FAA's NextGen implementation involves managing flight procedures for numerous airports in the region and is not specific to TEB. The Port Authority is a member of the NextGen Advisory Committee (NAC), a federal advisory committee that makes recommendations to the FAA regarding the possible implementation of NextGen in the New York/New Jersey/Philadelphia airspace; this includes air traffic and airspace management recommendations. As a collaborating member of the NAC, the Port Authority can advance measures for further FAA evaluation by either directly engaging with the FAA's NY Terminal Radar Approach Control (TRACON) or submitting measures to the NAC for its consideration. This measure proposes the continuation of the Port Authority's role on the NAC and to consider dispersal headings or other lateral track variations pursuant to Section 175 of the FAA Reauthorization Act of 2018 when the FAA is evaluating new or amended area navigation departure procedures under NextGen.

FAA ACTION: APPROVED.