3 LAWA NOISE COMPATIBILITY PLANNING AT VNY

3.1 Introduction

LAWA considers noise compatibility to be a high-priority, continuing process; over many decades of effort, it has established an extensive noise compatibility program at VNY. The program – and LAWA's continuing commitment to its implementation and improvement – is recognized for its innovation and benefits across the United States and internationally. Major elements include:

- noise abatement measures to reduce noise exposure or shift it away from sensitive land uses
- remedial land use measures to address residual incompatible land uses
- preventive land use measures to deter introduction of new incompatible land uses

The agency devotes significant attention, staff, and financial resources to program administration, publicity, implementation, monitoring, enforcement, review, and refinement. Sections 3.2 and 3.3 summarize the major noise abatement and compatible land use measures, respectively.

As discussed in Section 1.2.1, the VNY noise abatement program elements are implemented by numerous LAWA staff, including the Noise Management Section staff based at LAWA Administrative offices at LAX and in the VNY Noise Management Office, the VNY Airport Manager's Office, VNY Operations, VNY Public and Community Relations, and other LAWA and City of Los Angeles staff.

LAWA operates an extensive noise and operations monitoring system at VNY, LAX, and ONT. The system supports program monitoring and enforcement, pilot feedback, reporting, complaint analysis, and other implementation functions.

Sections 3.2 and 3.3 describe the existing noise abatement and compatible land use elements of the VNY noise management program. Section 3.4 summarizes the recommendations and status of a Part 150 study that LAWA conducted to review the VNY noise management program and identify potential improvements, including restrictions, for consideration.

3.2 Major Noise Abatement Elements

Major noise abatement elements of the VNY noise management program include:

- Quiet Jet Departure Program
- No Early Turn Program
- Departure Techniques
- Run-Up Restriction
- Helicopter and Route Deviation Program
- Partial Curfew
- Non-Addition Rule
- Noisier Aircraft Phaseout

Sections 3.2.1 through 3.2.8 describe each of these measures. The most formal program elements are implemented through City of Los Angeles ordinances, presented in Appendix D. Figure 4 on the following two pages reproduces a noise abatement handout LAWA uses to communicate with pilots.

Figure 4 VNY Noise Abatement Handout (Page 1 of 2)
Source: LAWA

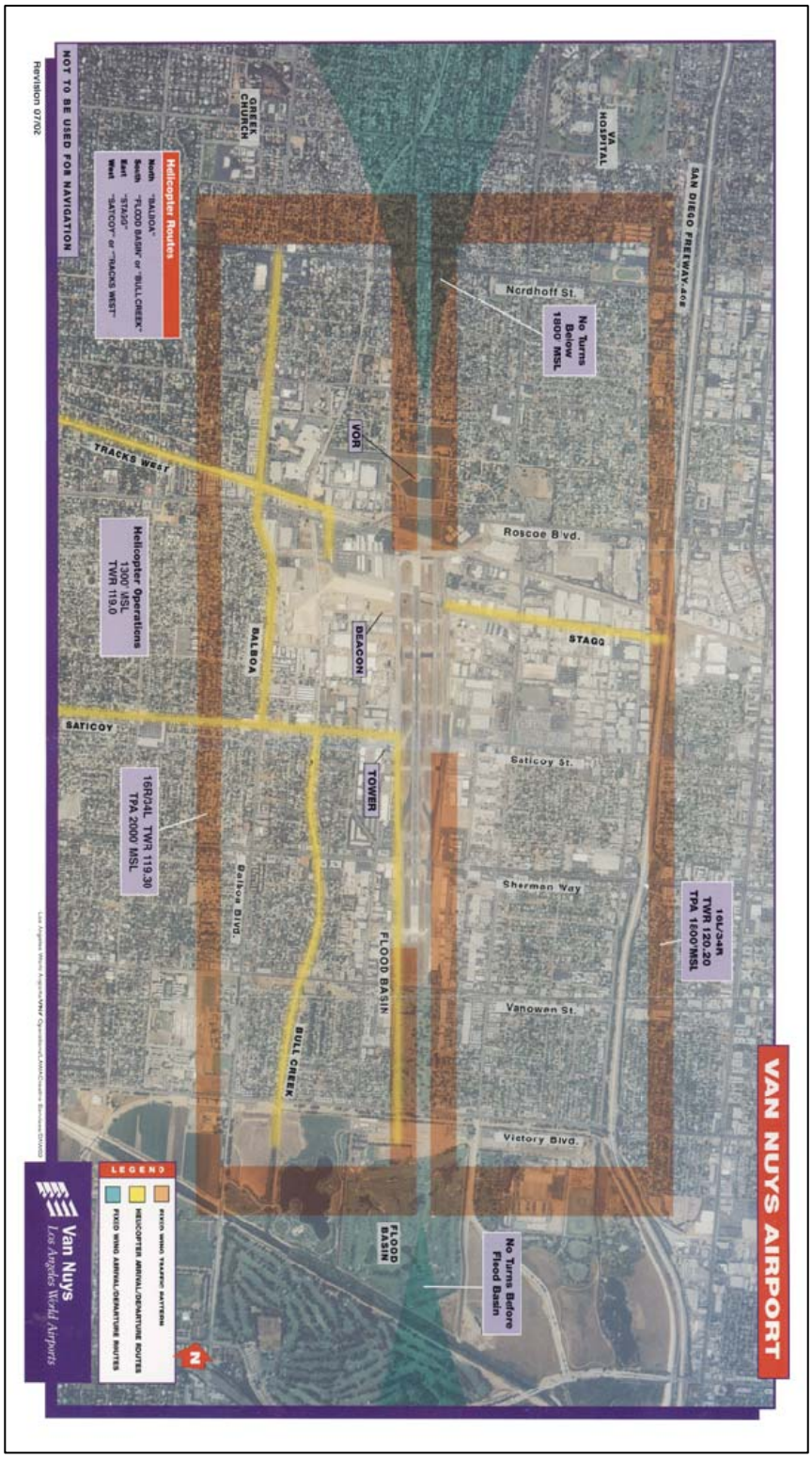
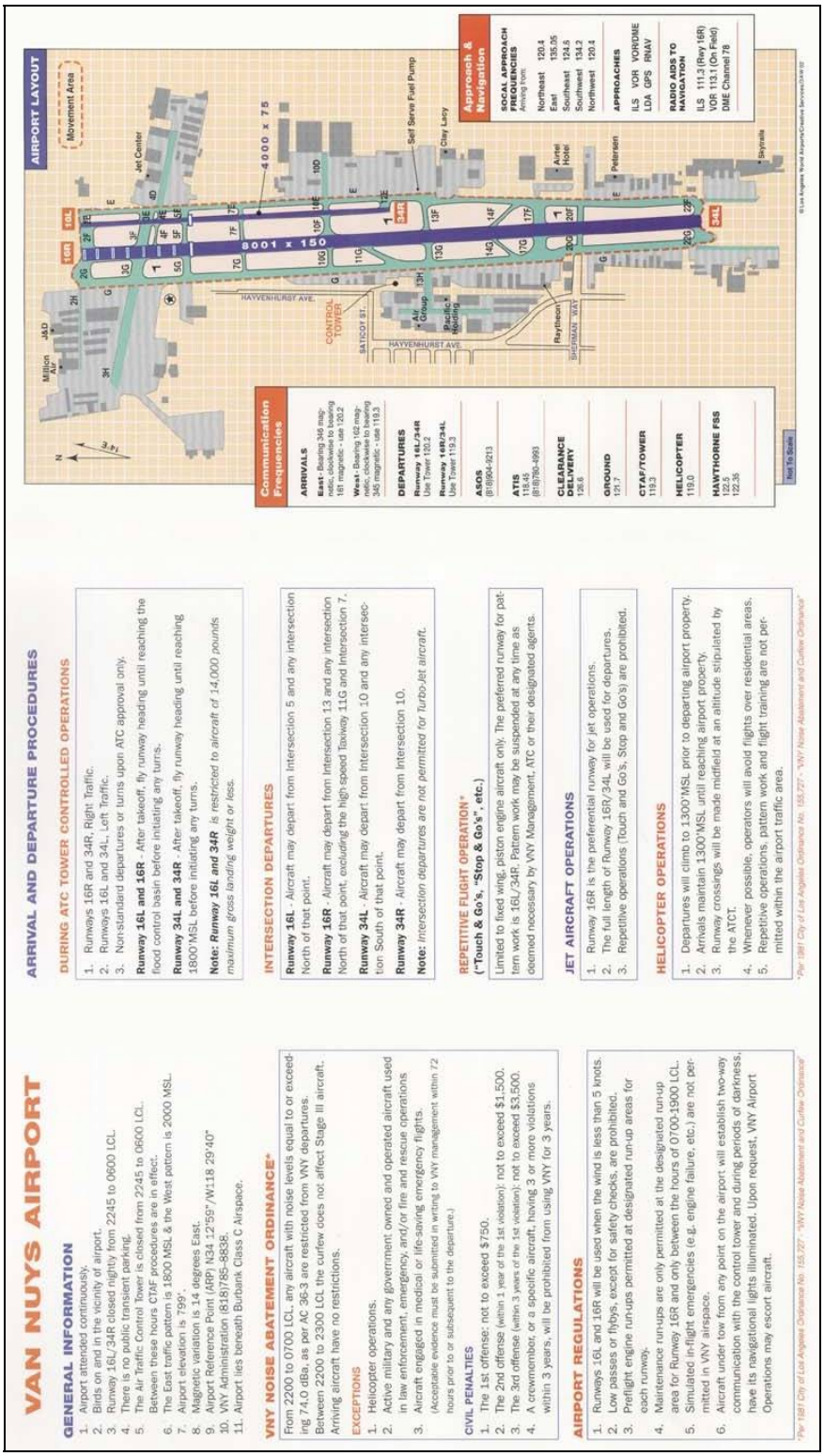


Figure 4 VNY Noise Abatement Handout (page 2 of 2)
Source: LAWA



VAN NUYS AIRPORT

GENERAL INFORMATION

1. Airport attended continuously.
2. Birds on and in the vicinity of airport.
3. Runway 16L/34R closed nightly from 2245 to 0600 LCL.
4. There is no public transient parking.
5. The Air Traffic Control Tower is closed from 2245 to 0600 LCL. Between these hours CTAF procedures are in effect.
6. The East traffic pattern is 1800 MSL & the West pattern is 2060 MSL.
7. Airport elevation is 799'.
8. Magnetic variation is 14 degrees East.
9. Airport Reference Point (ARP) N34 12'56" /W118 29'40"
10. VNY Administration (818)785-8838.
11. Airport lies beneath Burbank Class C Airspace.

VNY NOISE ABATEMENT ORDINANCE*

From 2200 to 0700 LCL, any aircraft with noise levels equal to or exceeding 74.0 dBa, as per AC 36-3 are restricted from VNY departures. Between 2200 to 2300 LCL the curfew does not affect Stage III aircraft. Arriving aircraft have no restrictions.

EXCEPTIONS

1. Helicopter operations.
2. Active military and any government owned and operated aircraft used in law enforcement, emergency, and/or fire and rescue operations
3. Aircraft engaged in medical or life-saving emergency flights. (Acceptable evidence must be submitted in writing to VNY management within 72 hours prior to or subsequent to the departure.)

CIVIL PENALTIES

1. The 1st offense: not to exceed $750.
2. The 2nd offense (within 1 year of the 1st violation): not to exceed $1,500.
3. The 3rd offense (within 3 years of the 1st violation): not to exceed $3,500.
4. A crewmember, or a specific aircraft, having 3 or more violations within 3 years, will be prohibited from using VNY for 3 years.

AIRPORT REGULATIONS

1. Runways 16L and 16R will be used when the wind is less than 5 knots.
2. Low passes or flybys, except for safety checks, are prohibited.
3. Preflight engine run-ups permitted at designated run-up areas for each runway.
4. Maintenance run-ups are only permitted at the designated run-up area for Runway 16R and only between the hours of 0700-1900 LCL.
5. Simulated in-flight emergencies (e.g. engine failure, etc.) are not permitted in VNY airspace.
6. Aircraft under tow from any point on the airport will establish two-way communication with the control tower and during periods of darkness, have its navigational lights illuminated. Upon request, VNY Airport Operations may escort aircraft.

*Per 1981 City of Los Angeles Ordinance No. 155,727 - "VNY Noise Abatement and Curfew Ordinance"

ARRIVAL AND DEPARTURE PROCEDURES

DURING ATC TOWER CONTROLLED OPERATIONS

1. Runways 16R and 34R, Right Traffic.
2. Runways 16L and 34L, Left Traffic.
3. Non-standard departures or turns upon ATC approval only.

Runway 16L and 16R - After takeoff, fly runway heading until reaching the flood control basin before initiating any turns.

Runway 34L and 34R - After takeoff, fly runway heading until reaching 1800' MSL before initiating any turns.

Note: ***Runway 16L and 34R*** *is restricted to aircraft of 14,000 pounds maximum gross landing weight or less.*

INTERSECTION DEPARTURES

Runway 16L - Aircraft may depart from Intersection 5 and any intersection North of that point.

Runway 16R - Aircraft may depart from Intersection 13 and any intersection North of that point, excluding the high speed Taxiway 11G and Intersection 7.

Runway 34L - Aircraft may depart from Intersection 10 and any intersection South of that point.

Runway 34R - Aircraft may depart from Intersection 10.

Note: *Intersection departures are not permitted for Turbo-Jet aircraft.*

REPETITIVE FLIGHT OPERATION* ("Touch & Go's, "Stop & Go's", etc.)

Limited to fixed wing, piston engine aircraft only. The preferred runway for pattern work is 16L/34R. Pattern work may be suspended at any time as deemed necessary by VNY Management, ATC or their designated agents.

JET AIRCRAFT OPERATIONS

1. Runway 16R is the preferential runway for jet operations.
2. The full length of Runway 16R/34L will be used for departures.
3. Repetitive operations (Touch and Go's, Stop and Go's) are prohibited.

HELICOPTER OPERATIONS

1. Departures will climb to 1300' MSL prior to departing airport property.
2. Arrivals maintain 1300' MSL until reaching airport property.
3. Runway crossings will be made midfield at an altitude stipulated by the ATCT.
4. Whenever possible, operators will avoid flights over residential areas.
5. Repetitive operations, pattern work and flight training are not permitted within the airport traffic area.

*Per 1981 City of Los Angeles Ordinance No. 155,727 - "VNY Noise Abatement and Curfew Ordinance"

3.2.1 Quiet Jet Departure Program

Under the "Quiet Jet Departure Program" (also called the "Fly Friendly" or "Fly Neighborly" program"), jet aircraft operators are to conduct south departures so that measured noise levels are below established aircraft-type-specific targets at permanent monitoring location "VNY13," which is approximately 6,000 feet south of the airport, approximately 14,000 feet from the start-of-takeoff-roll point on Runway 16R, the primary runway used by jets at VNY, as shown in Figure 5.

Figure 5 VNY Noise Monitor VNY13 (Formerly V7) Location

Source: Aerial Photography © Environmental Systems Research Institute, Inc. (ESRI), 2011, © 2010 Microsoft Corporation and its data suppliers; Airport Property Line from LAWA.

LAWA monitors jet departure noise levels and flight track data at VNY13 and contacts the operators of jet aircraft that exceed the target levels set for the relevant aircraft type. This program is used to monitor and modify takeoff aircraft operations and to assist pilots in utilizing the appropriate noise mitigation takeoff procedures. LAWA formally initiated the program in February of 1994.

An important element of the program implementation was a "Letter of Commitment" in which jet operators agreed to use quiet departure procedures to avoid exceeding the target decibel levels on takeoff, which states:

- Pilots will fly aircraft using noise abatement techniques as outlined in manufacturers' operating manuals or National Business Aircraft Association (NBAA) Noise Abatement Program.
- Pilots will work to research complaints from local residents regarding individual flights and to encourage participation by other jet operators.
- Voluntary compliance will help forestall more drastic measures to reduce noise.

There is no formal penalty associated with exceeding the target noise level. Pilots can contact LAWA to identify departure target noise levels for a specific aircraft.

As discussed in detail in Section 3.4.5, Measure 31 of the 2003 Part 150 NCP submission proposed making the Fly Friendly program mandatory and establishing penalties for violations. As discussed in Section 3.5, LAWA subsequently conducted a "Part 161" study[25] to analyze this and other use restrictions proposed in the 2003 NCP. Analysis of the voluntary Fly Friendly program revealed that the program has resulted in measurable noise reduction. The study recommended that further related efforts should focus on enhancing the voluntary program to maximize its ongoing benefits. LAWA staff presented these results to the Board of Airport Commissioners and the VNY Citizens Advisory Council (CAC) at separate meetings in February 2010. Both groups endorsed the recommendation.

In early 2011, LAWA completed analyses of data collected since 1994 to develop refined targets for the largest and most specific feasible list of jet aircraft models, and to identify improvements to maximize the effectiveness of the program as a voluntary measure. LAWA presented the results to the CAC on April 5, 2011.[26] The CAC endorsed the recommendations, which are designed to further enhance the program's success and build on the operators' cooperative attitude, by adding a *positive* incentive to the program's implementation in the form of "Good Performer" awards. The program will continue to be entirely voluntary.

Following the April CAC meeting, LAWA undertook extensive notification to operators, pilots, and other interested parties, and a six-month transition period (from July 1 – December 31) to provide operators with the opportunity to become familiar with the new targets, and to adjust their procedures as necessary. The enhanced program will officially commence on January 1, 2012, with the first awards scheduled for the first quarter 2013.

[25] 14 CFR Part 161, "Notice and Approval of Airport Noise and Access Restrictions," which sets forth notice and analysis requirements airport proprietors must address prior to adoption of use restrictions affecting operations in certain aircraft type categories.

[26] As documented in "Van Nuys Airport Part 161 Study, Revised 'Fly Friendly' Target Noise Level Program," prepared by Harris Miller Miller & Hanson inc. for LAWA, March 3, 2011.

Further details on the Fly-Friendly program are available under the "Airport Information / Noise Management" section of the VNY website, at http://www.lawa.aero/welcome_VNY.aspx?id=4245, including a detailed implementation schedule.

3.2.2 No Early Turn Program

The "No Early Turn Program" calls for the following procedures related to jet departures:

> Takeoffs on Runways 16L and 16R shall climb straight out 2.2 miles DME (Distance Measuring Equipment), measured from the VNY very-high-frequency omnidirectional range (VOR) antenna (which is located off the north end of the airport), and climb straight out over flood basin before starting turn unless instructed by air traffic control."

This program is voluntary and there is no formal penalty imposed by LAWA for making an early turn without ATC instruction. However, LAWA monitors departures and notifies operators of aircraft that deviate from the established routes, to communicate the program requirements and to educate pilots regarding the preferred procedures.

3.2.3 Helicopter Route Program

In 1991, LAWA completed a comprehensive study of helicopter operations, impacts, and mitigation options.[27] The study was conducted with extensive operator, pilot, community, and FAA input. Based on the results of this extensive data collection, and analysis process, six helicopter "routes" were established that specify ingress and egress corridors, and altitude minimums, to maximize the safety and efficiency of traffic control, and to mitigate noise impacts on the adjacent communities.

The VNY Air Traffic Control Tower (ATCT) and individual operators enter into formal "letters of agreement" to implement this program. The VNY Noise Abatement Handout (Figure 4) depicts the routes graphically.

As in the case of the preceding "no early turn program" for fixed-wing jet aircraft, the helicopter route program is voluntary and there is no formal penalty imposed by LAWA for any observed deviations. However, LAWA monitors helicopter operations and notifies helicopter owners of operations that deviate from the established routes, to communicate the program requirements and to educate pilots regarding the established routes and altitude.

The helicopter modeling flight tracks presented in Section 5.1.7 that were used in developing the NEM contours were based on actual radar observations that reflect a strong central tendency along the preferred routes.

3.2.4 Departure Techniques

In addition to procedures included in the "Quiet Jet Departure Program" and "No Early Turn Program," LAWA publications also cite the following departure techniques:

[27] "Van Nuys Airport Helicopter Operations Study," City of Los Angeles Department of Airports Environmental Management Bureau, November 1991. The report is reproduced in full in Section 4 of "Background Appendices, Volume 1 of 3" of the 2003 Part 150 Study.

- Runway 16R is the preferred runway for all jet aircraft.
- The full length of Runways 16R and 34L will be used for all jet departures.
- Jet repetitive operations and pattern flying/training are not permitted.

There are no formal penalties associated with the first two of these techniques. Section 7 of Los Angeles City Ordinance No. 155,727, the "Noise Abatement and Curfew Regulation" (reproduced in full in Appendix D), includes formal enforcement and penalty provisions for violation of restrictions on repetitive operations, established by Sections 1(j) and 3(a) and (b):

- Section 1, "Definitions," item (j), defines a "repetitive operation" as:

  "A practice operation, including, but not limited to, "touch and go" or "stop and go" operations, which utilize an airport runway to land where the aircraft touching down or landing takes off again within 5 minutes. However, this definition does not include such operations as are necessary because of safety considerations or weather phenomena."

- Section 3, "Repetitive Aircraft Operations," includes the following two restrictions:

  (a) No person shall engage in repetitive operations in any propeller-powered aircraft between the hours of 10:00 p.m. and 7:00 a.m. of the following day from June 21 through September 15 and between the hours of 9:00 p.m. and 7:00 a.m. of the following day from September 16 through June 20.

  (b) No person shall engage in repetitive operations in any turbo-jet or fan jet-powered aircraft at any time at the airport.

3.2.5 Run-Up Restriction

The Noise Abatement and Curfew Regulation also includes formal enforcement and penalty provisions for violation of a run-up restriction, established by Sections 1(k) and 5:

- Section 1, "Definitions," item (j), defines a "run-up" as:

  The ground testing or revving of an aircraft engine not immediately connected to contemporaneous air operation.

- Section 5, "Run-ups," states:

  No person shall test or run-up an aircraft engine for maintenance purposes between the hours of 7:00 p.m. and 7:00 a.m. of the following day. Engine run-ups shall be done only in areas designated in writing by the general manager.

LAWA has published a letter to tenants that permits them to conduct idle power run-ups on their leasehold property under certain conditions. Figure 6 presents the text of the letter.

Figure 6 Idle Power Runup Letter to Tenants
Source: LAWA

Dear Airport Tenant:

The City of Los Angeles, Ordinance No. 155727, the Van Nuys Airport Noise Abatement and Curfew Regulation (Ordinance), Section 5, establishes regulations governing engine run-ups for maintenance purposes on the airfield. According to the Ordinance, a run-up is defined as "the ground testing or revving of an aircraft engine not immediately connected to contemporaneous air operation."

The Ordinance states:

> "Section 5. Run-ups. No person shall test or run-up an aircraft engine for maintenance purposes between the hours of 7:00 p.m. and 7:00 a.m. of the following day. Engine run-ups shall be conducted only in areas designated in writing by the General Manager."

The purpose of the designated run-up area is to mitigate both the safety and noise issues that are inherent in this type of activity. Recently it has come to the attention of the Airport Management that certain types of maintenance activity (i.e., leak checks, etc.) require an aircraft engine to be run at idle power for a short period of time prior to any increase in power setting. This requirement has resulted in some difficulty complying with the "designated area" portion of the Ordinance. Effective Monday, May 14, 2001, all persons who need to perform these types of maintenance checks will be permitted to do so on their leasehold, and not be in violation of the Ordinance, provided the following provisions are adhered to:

- Contact Airport Operations at (818) 909-3527 or Airport Police at (818) 989-1747 prior to commencing the operation.
- All engine checks must be accomplished at idle power at all times and for a duration not to exceed three (3) minutes.
- A minimum of one wing walker must be present outside the aircraft, in clear view of the individual manipulating the controls of the aircraft, at all times the engine(s) are running to ensure the overall safety of the operation.
- The "jet blast/prop wash" resulting from the activity must be directed away from the service road at all times and in no way jeopardize the safety of any persons or property.

Please distribute/post the attached document to assist your maintenance personnel in complying with the aforementioned requirements. Any running of aircraft engines for maintenance purposes that cannot be accomplished in strict compliance with these stipulations must be conducted in the designated run-up area. The "designated" areas for engine run-ups are the primary run-up area for runway 16R or, if necessary, the secondary area at 34L, with the aircraft aligned with the runway heading. Any maintenance run-up activity not in compliance with the aforementioned provisions, as well as the time stipulations contained in the Ordinance, will be in violation of said Ordinance and handled accordingly

3.2.6 Partial Curfew

Section 2 of Los Angeles City Ordinance No. 155,727, the "Noise Abatement and Curfew Regulation," as amended by Ordinance No. 171889 on (reproduced in full in Appendix D), establishes a partial curfew. Briefly, the regulation prohibits non-Stage 3 fixed-wing aircraft with a takeoff noise level in excess of 74 A-weighted decibels (dBA), "as published in the most recent version of FAA Advisory Circular (AC) 36-3H (or in any revision, supplement, or replacement thereof listing the noise levels)," from departing between 10 p.m. and 7 a.m. Stage 3 fixed-wing aircraft are exempt until 11 p.m. The rule also exempts:

- Military aircraft and any government owned or operated aircraft involved in law enforcement, emergency, fire, or rescue operation.
- Aircraft not included in AC 36-3 that have been identified by the FAA in writing as having 74.0 dBA or lower takeoff noise level or for which satisfactory evidence has been furnished to the BOAC that the departure noise will not exceed 74.0 dBA.
- Aircraft engaged in a bona fide medical or life-saving emergency for which acceptable evidence has been submitted in writing to the VNY general manager within 72 hours of the departure.

VNY Operations staff monitor nighttime airport operations and report violations to the City Attorney for enforcement action as defined in Section 7, "Enforcement and Penalties," of the Ordinance.

3.2.7 Non-Addition Rule

Los Angeles City Ordinance 181106 (reproduced in full in Appendix D) added Section 5.1 to the "Noise Abatement and Curfew Regulation," to prohibit any additional non-Stage 3 aircraft with noise levels exceeding 77 dBA from being based at VNY or parked, tied down, or hangared at the airport for more than 30 days in any calendar year, subject to exceptions for major maintenance, repair, and refurbishment. The rule includes provisions that expired in 2005 and 2010 that permitted operators to replace "exempt based non-Stage 3 aircraft" with aircraft exceeding the 77 dBA limit, and which permitted the replacement aircraft to be based (i.e., parked, tied down, or hangared for more than 30 days a year).

VNY Operations staff monitor aircraft parked, tied down, and hangared at the airport to identify any exceedances of the 30-day limit, exclusive of exceptions for major maintenance, repair, and refurbishment for which operators have received any required approvals. Violations are reported to the City Attorney for enforcement action as defined in Section 7, "Enforcement and Penalties," of the Ordinance.

3.2.8 Noisier Aircraft Phaseout

Los Angeles City Ordinance 181106 (reproduced in full in Appendix D) amended Section 2 of Ordinance No. 155,727, the "Noise Abatement and Curfew Regulation" by adding two new sections (Section 5.2 "Aircraft Operations - Maximum Noise Levels" and Section 5.3 "Exemptions from Maximum Noise Levels"). Briefly, the rule prohibits operations by aircraft that exceed specified takeoff noise levels, according to a four-phase program implemented over eight years. Section 5.2 of the ordinance identifies the following phased reduction in maximum takeoff noise levels (also based on FAA AC 36-3H, or in any revision, supplement, or replacement):

- Starting January 1 of 2009: No aircraft may arrive or depart VNY whose takeoff noise level equals or exceeds 85 A-weighted decibels (dBA).
- Starting January 1 of 2011 year: No aircraft may arrive or depart VNY whose takeoff noise level equals or exceeds 83 dBA.
- Starting January 1 of 2014: No aircraft may arrive or depart VNY whose takeoff noise level equals or exceeds 80 dBA.
- Starting January 1 of 2016: No aircraft may arrive or depart VNY whose takeoff noise level equals or exceeds 77 dBA.

Section 5.3 of the Ordinance includes a number of exemptions, including operations of certain historic aircraft, operations associated with certain types of repair and maintenance activities, departures of permanently departing aircraft, and Stage 3 and 4 aircraft.

VNY Operations staff aircraft operations at the airport to identify any operations in banned aircraft types, exclusive of the noted exceptions for which operators have received any required approvals. Violations are reported to the City Attorney for enforcement action as defined in Section 7, "Enforcement and Penalties," of the "Van Nuys Noise Abatement and Curfew Regulation" presented in Appendix D.

3.3 Existing VNY Compatible Land Use Measures

LAWA, City of Los Angeles, and California programs and regulations include the following major compatible land use measures at VNY:

- sound insulation
- avigation and noise easements
- compatible building code
- noise disclosure

3.3.1 Sound Insulation

In May 2000, LAWA established the VNY Residential Soundproofing Program (RSP) to sound insulate existing airport incompatible residential land uses on parcels wholly or partially within the 65 dB "Community Noise Equivalent Level" (CNEL) contour for the 12 months of operations ending September 30, 1998 (referred to as the "Third Quarter of 1998" or "3Q98" contour). LAWA selected this eligibility contour to define a fixed program boundary that eliminated uncertainty as to whether a parcel's ineligibility might change in the future, to provide greater security to property owners. LAWA has funded the program to date from internal revenue sources.

LAWA's Airports Development Group / Residential Soundproofing Section implements the program. Participation in the program is voluntary. Homeowners are offered treatment in a prioritized order based on the 3Q98 CNEL value for the parcel. The treatment includes all structural modifications needed to reduce the maximum interior CNEL to 45 dB in all habitable rooms. LAWA will continue the program until all owners of eligible property have been offered treatment and the treatment is completed on dwelling units owned by those agreeing to participate.

The following list summarizes key elements of the program's implementation status

- 1,048 total dwelling units are within the program eligibility contours:
- 726 dwelling units have been sound insulated
- 12 units where the owners have declined participation in program
- 117 unit's owners have not responded to multiple notices from LAWA inviting them to participate, which LAWA has interpreted as a de facto decline of the offer
- 1 unit was determined to be ineligible due to code deficiency because of substandard construction
- 139 dwelling units are vacant parcels or ineligible because construction occurred since LAWA initiated the program, which also is after the October 1, 1998 cut-off date for federal funding for mitigation of noise-sensitive land uses.[28]
- 53 remaining units are scheduled to be sound insulated before the end of 2011. The owner of each unit has signed a contract with LAWA to participate in the program and the BOAC has authorized the funding. [It is anticipated that the sound insulation work will have started on these projects by the time this document is sent to the FAA and that final document will be updated as appropriate.]

LAWA has funded the sound insulation program to date from internal revenue sources, at a total cost of approximately $11 million. LAWA estimates that sound insulating the 53 remaining units (assuming the offer acceptance rate is equal to the historic average) will bring the total program cost to approximately $12 million and that the treatment will be completed by June 30, 2012.

The land use analyses presented in this document take into account the status of the sound insulation program within the updated existing and forecast case NEM contours. Based on the preceding summary of program status, which indicates all eligible property units will have been offered treatment before the end of 2011, all the dwelling units within the program boundary are considered compatible for Part 150 purposes, depicted as such in the NEM figures, and counted as such in NEM tabular counts.

As discussed under Part 150 NCP Compatible Land Use Measure 2 in Section 3.4.1 and in the FAA's Record of Approval (ROA) for the VNY NCP (presented in Appendix B), FAA approved a sound insulation program as a formal Part 150 NCP element. The FAA approval excludes homes constructed after September 30, 1998 and homes that LAWA has already treated. The FAA approval also notes that federal funding is contingent on LAWA preparation and FAA acceptance of updated NEMs to identify properties eligible for inclusion. This final requirement is a principal purpose of this update to the VNY NEMs

3.3.2 Avigation and Noise Easements

Property owners must sign an "avigation and noise easement" to receive sound insulation treatment.

3.3.3 Compatible Building Code

The City of Los Angeles Municipal Code sets the following acoustical standards for new construction and for alterations and additions to existing structures:

[28] The FAA's policy published in the Federal Register April 3, 1998 (Volume 63, Number 64), states that the FAA will not approve federal funding to mitigate noise-sensitive land uses constructed after October 1, 1998.

91.1208.8. Exterior Sound Transmission Control.

91.1208.8.1. Application consistent with local land-use standards. All structures identified in Section 91.1208.1.1[29] located in noise critical areas, such as proximity to highways, county roads, city streets, railroads, rapid transit lines, airports or industrial areas shall be designed to prevent the intrusion of exterior noises beyond prescribed levels. Proper design shall include, but shall not be limited to, orientation of the structure, setbacks, shielding and sound insulation of the building itself.

91.1208.8.2. Allowable interior noise levels. Interior noise levels attributed to exterior sources shall not exceed 45db in any habitable rooms, classrooms, residential care facilities and places of worship. The noise metric shall be either the day-night average sound level (L_{dn}) or the community noise equivalent level (CNEL), consistent with the noise element of the local general plan.

Worst-case noise levels, either existing or future, shall be used as the basis for determining compliance with this section. Future noise levels shall be predicted for a period of at least 10 years from the time of building permit application.

91.1208.8.3. Airport noise sources. Residential structures and all other structures identified in Section 91.1208.1.1 located where the annual L_{dn} or CNEL (as defined in Title 21, Subchapter 6, California Code of Regulations) exceeds 60db, shall require an acoustical analysis showing that the proposed design will achieve prescribed allowable interior level.

EXCEPTION: New single family detached dwellings and all non-residential noise sensitive structures located outside the noise impact boundary of 65db CNEL are exempt from Section 91.1208.

Alterations or additions to all noise sensitive structures, within the 65db and greater CNEL shall comply with the Section 91.1208. If the addition or alternation cost exceeds 75% of the replacement cost of the existing structure, then the entire structure must comply with Section 91.1208.

For public-use airports or heliports, the L_{dn} or CNEL shall be determined from the Aircraft Noise Impact Area Map prepared by the Airport Authority. For military bases, the L_{dn} shall be determined from the facility Air Installation Compatible Use Zone (AICUZ) plan. For all other airports or heliports, or public-use airports or heliports for which a land-use plan has not been developed, the L_{dn} or CNEL shall be determined from the noise element of the general plan of the local jurisdiction.

When aircraft noise is not the only significant source, noise levels from all sources shall be added to determine the composite site noise level.

91.1208.8.4. Other noise sources. All structures identified in Section 91.1208.1.1 located where the L_{dn} or CNEL exceeds 60db shall require an acoustical analysis showing that the proposed design will limit exterior noise to the prescribed allowable interior level. The noise element of the local general plan shall be used to the greatest extent possible to identify sites with noise levels potentially greater than 60db.

91.1208.8.5. Compliance. Evidence of compliance shall consist of submittal of an acoustical analysis report, prepared under the supervision of a person experienced in the field of acoustical engineering, with the application for a building permit for all structures identified in Section 91.1208.1.1 or the use of prescriptive standards for residential structures in the Los Angeles County Building Code Manual. The report shall show topographical relationships of noise sources and dwelling sites, identification of noise sources and their characteristics, predicted noise spectra and levels at the exterior of the proposed structure considering present and future land usage, basis for the prediction (measured or obtained from published data), noise attenuation measures to be applied, and an analysis of the noise insulation effectiveness of the proposed construction showing that the prescribed interior level requirements are met.

[29] 91.1208.1.1. Purpose and scope. The purpose of this section is to establish uniform minimum noise insulation performance standards to protect persons within new hotels, motels, dormitories, residential care facilities, apartment houses, dwellings, private schools, and places of worship from the effects of excessive noise, including but not limited to, hearing loss or impairment and interference with speech and sleep.

If interior allowable noise levels are met by requiring that windows be unopenable or closed, the design for the structure must also specify ventilation or air-conditioning system to provide a habitable interior environment. The ventilation system must not compromise the interior room noise reduction.

91.1208.8.6. Appendix Chapter 12, Section 1208A.8.6 of the C.B.C. is hereby adopted by reference.

3.3.4 Noise Disclosure

Section 11010 of the California Business and Professions Code requires any person who intends to offer subdivided lands within California for sale or lease to file with the Department of Real Estate an application for a public report that includes, among other things, the location of all existing airports and of all proposed airports shown on the general plan of any city or county located within 2 statute miles of the subdivision. A copy of the report must be given to the prospective purchaser by the owner, subdivider, or agent prior to the execution of a binding contract or agreement for the sale or lease of any lot or parcel in a subdivision or upon request by any member of the public.

If the property to be subdivided is located within an airport influence area (e.g., within the 65 dB CNEL contour at VNY), the following statement shall be included in the notice of intention:

NOTICE OF AIRPORT IN VICINITY

This property is presently located in the vicinity of an airport, within what is known as an airport influence area. For that reason, the property may be subject to some of the annoyances or inconveniences associated with proximity to airport operations (for example: noise, vibration, or odors). Individual sensitivities to those annoyances can vary from person to person. You may wish to consider what airport annoyances, if any, are associated with the property before you complete your purchase and determine whether they are acceptable to you. (B) For purposes of this section, an "airport influence area," also known as an "airport referral area," is the area in which current or future airport-related noise, overflight, safety, or airspace protection factors may significantly affect land uses or necessitate restrictions on those uses as determined by an airport land use commission.

The California Department of Transportation Legal Division interprets existing law to require sellers of residential property to provide a notice of proximity to airports to prospective buyers, as reported in the California Airport Land Use Planning Handbook:[30]

Another important form of buyer awareness measures represented in ALUC policies are real estate disclosure statements. California state real estate law requires that sellers of real property disclose "any fact materially affecting the value and desirability of the property" (California Civil Code, Section 1102.1(a)). While this general requirement leaves to the property seller the decision as to whether airport-related information constitutes a fact warranting disclosure, other sections of state disclosure law specifically mention airports.

Section 1102.17 of the Civil Code says that: "The seller of residential real property subject to this article who has actual knowledge that the property is affected by or zoned to allow industrial use described in Section 731a of the Code of Civil Procedure shall give written notice of that knowledge as soon as practicable before transfer of title."

Section 731a of the Code of Civil Procedure then specifies: "Whenever any city, city and county, or county shall have established zones or districts under authority of law wherein certain manufacturing or commercial or airport uses are expressly permitted, except in an action to abate a public nuisance brought

[30] "California Airport Land Use Planning Handbook," State of California Department of Transportation Division of Aeronautics, January 2002.

in the name of the people of the State of California, no person or persons, firm or corporation shall be enjoined or restrained by the injunctive process from reasonable and necessary operation in any such industrial or commercial zone or airport of any use expressly permitted therein, nor shall such use be deemed a nuisance without evidence of the employment of unnecessary and injurious methods of operation…."

The interpretation of the Department of Transportation Legal Division is that these sections of the law establish a requirement for disclosure of information regarding the effects of airports on nearby property provided that the seller has "actual knowledge" of such effects. ALUCs have particular expertise in defining where airports have effects on surrounding lands. ALUCs thus can give authority to this disclosure requirement by establishing a policy indicating the geographic boundaries of the lands deemed to be affected by airport activity. In most cases, this boundary will coincide with commission's planning boundary for an airport (the airport area of influence). Furthermore, ALUCs should disseminate information regarding their disclosure policy and its significance by formally mailing copies to local real estate brokers and title companies. Having received this information, the brokers would be obligated to tell sellers that the facts should be disclosed to prospective buyers.

3.4 VNY Part 150 Study

As discussed in Section 1, LAWA made a combined NEMs and NCP submission to the FAA in August 2003. FAA found the NEMs in compliance on April 4, 2009 and executed a Record of Approval (ROA) for the proposed NCP actions effective October 16, 2009.[31]

LAWA proposed 35 NCP measures, in five categories: (1) four land use measures, (2) seven helicopter noise abatement measures, (3) four fixed-wing noise abatement procedures, (4) 13 program implementation measures, and (5) seven "use-restriction" measures. Sections 3.4.1 through 3.4.5 provide brief summaries[32] of the measures in each of these categories, FAA responses in the ROA, and subsequent LAWA actions.

3.4.1 Off- and On-Airport Compatible Land Use Measures

Measure 1: **Adopt an Airport Land Use Commission (ALUC) Airport Comprehensive Land Use Plan (CLUP) for VNY and environs reflecting the provisions of the NCP.** The program will be subject to ongoing monitoring and implementation. *This measure effectively continues the existing ALUC / CLUP process for inclusion as a formal Part 150 NCP element.*

FAA Response in ROA: *Approved. Amending the various comprehensive plans is within the authority of the land use planning departments. The Federal Government has no control over local land use planning.*

Subsequent LAWA Actions: LAWA c*ontinues the existing ALUC / CLUP process, as discussed in Section 2.2.2 of this document.*

Measure 2: **Sound insulation program for residential properties within 65 dB CNEL.** If any portion of a lot lies within the 65 CNEL then it should be included. Continue acoustical

[31] Detailed FAA responses are presented in the full ROA reproduced in Appendix B of this document.

[32] Drawn from detailed discussions in Chapter V of the 2003 Part 150 submission.

insulation program until all dwelling units are insulated. *This measure establishes a sound insulation program as a formal Part 150 NCP element.*

FAA Response in ROA: *Approved for homes constructed before October 1, 1998. The FAA's policy published in the Federal Register April 3, 1998 (Volume 63, Number 64), states that the FAA will not approve Federal funding to mitigate noise-sensitive land uses constructed after October 1, 1998. This element would improve land use compatibility in the vicinity of the airport. The NEM/NCP updated information states approximately 232 homes per year are being insulated. Since the time the NCP was completed, it is estimated that somewhere near 900 homes need to be insulated. Structures recommended for inclusion in the program and the scope of the program will be required prior to approval for federal funding.*

In order to be eligible for federal funding, the project is subject to FAA order 5100.38C. Homes that have already been acoustically treated by the City of Los Angeles prior to approval of the Part 150 study cannot be eligible for federal AIP or PFC funding.

Subsequent LAWA Actions: *LAWA is continuing with the existing sound insulation program, as discussed in Section 3.3.1 of this document. One purpose of this update to the VNY NEMs is to identify ongoing program boundaries that are consistent with FAA funding criteria.*

Measure 3: **Ensure compatibility of additional development within the airport noise impact area.** Adopt measures to restrict the introduction of new housing within the projected 65 dB CNEL, unless such property is sound insulated and an avigation easement granted in favor of the airport. Maintain and monitor the General Plan over time to assure airport/community compatibility. Encourage owners of undeveloped land to voluntarily develop the property consistent with California State Noise Standards. *This measure effectively continues existing compatible land use control measures (i.e., building code, easements, and disclosure) for inclusion as a formal NCP element.*

FAA Response in ROA: *Approved with respect to preventing the introduction of new housing.*

The portion of this measure that permits new noncompatible development within the [CNEL] 65 dB, even with sound attenuation and/or easement, is inconsistent with the FAA's guidelines and 1998 policy and is disapproved for purposes of Part 150. This decision relates to the measure's consistency with the purposes of Part 150. This measure is within the authority of LAWA and local planning jurisdiction. The Federal Government has no control over local land use planning.

Subsequent LAWA Actions: *LAWA continues implementation of existing compatible land use control measures (i.e., building code, easements, and disclosure) outside of Part 150, as discussed in Section 3.3.*

Measure 4: **On-airport construction and capital improvement that contribute to noise abatement.** (A) Construct airfield improvements shown on the current airport layout plan to improve safety and convenience, which might lead to reduced delays, unnecessary ground idling, conflicting flight paths, and other types of activity that

increase noise exposure. (B) Develop neighborhood enhancement projects focused on noise mitigation (e.g. sound walls, landscaping). (C) Construct a hush house on the airfield to suppress jet engine maintenance noise, with the location determined after further study.

FAA Response in ROA: *Disapproved. Part A – The NCP indicates this measure is to improve airfield efficiency, not to improve noise although it states there may be secondary noise benefits that are not quantified. Parts B and C – the NCP appears to present these as potential noise mitigation concepts, but does not include any quantitative analysis regarding the expected decibel / CNEL reduction in noise. The NCP also does not indicate where these types of ground noise mitigating barriers should be located to improve the noise environment to residences near the airport, nor the number of residences or residents expected to benefit. The FAA cannot determine how the measure contributes to improving the noise benefit around the airport.*

Subsequent LAWA Actions: *None.*

3.4.2 Helicopter Noise Abatement Measures

Measure 5: **Formulate and adopt local plans and ordinances to regulate the establishment and operation of new helicopter landing facilities in the general area.** Monitor, maintain, and adjust plans and ordinances over time.

FAA Response in ROA: *Approved for study. The NCP indicates in several meeting minutes, which are open for public comment, that helicopter operations are problematic around VNY. The helicopter study, while completed in 1991, provides some insight into the MSL altitude at which helicopters fly due to glide slope, fixed wing patterns, and separation requirements.*

That portion of the measure that recommends adoption of local plans and ordinances as necessary to regulate the establishment and operation of new helicopter landing facilities is disapproved.

Subsequent LAWA Actions: *LAWA continues to monitor helicopter compliance with existing noise abatement operating procedures described in Section 3.2.3, and to communicate as appropriate with helicopter operators, residents, and the FAA. LAWA also assessed helicopter use restrictions in the 14 C.F.R. Part 161 study, as discussed in Section 3.5.*

Measure 6: **Increase altitude of west-side helicopter operations.** Investigate whether to encourage helicopter pilots operating west of VNY to increase their altitude 300 feet which may be accommodated under the existing Burbank glideslope.

FAA Response in ROA: *Disapproved. The FAA review indicates that changing the altitude of helicopters in the area would increase complexity for both controllers and pilots. It has been discussed with pilots and controllers who have indicated it would be difficult to implement and add complexity to the congested airspace. Because the NCP did not include a quantitative analysis, and the narrative indicates the proposal would likely derive benefits outside of the sponsor's selected CNEL noise contour study area, implementation would not be justified for purposes of noise mitigation.*

Subsequent LAWA Actions: *LAWA assessed helicopter use restrictions in the 14 C.F.R. Part 161 study, as discussed in Section 3.5, and determined they were not justified under benefit-cost and other Part 161 evaluation criteria. LAWA continues to monitor helicopter compliance with existing noise abatement operating procedures described in Section 3.2.3, and to communicate as appropriate with helicopter operators, residents, and the FAA.*

Measure 7: **Conduct testing and research to determine whether a helicopter training facility would be appropriate on the Bull Creek Site.** Such a facility would preclude the need for helicopters to leave the airport to train elsewhere. Any such facility would be limited in the number of operations allowed as determined by further study.

FAA Response in ROA: *Disapproved. The airport has no authority to regulate numbers of operations; such action would be subject to analysis and approval under 14 C.F.R. Part 161. Also, the NCP does not provide sufficient information to determine whether the Bull Creek site would be noise beneficial and there appears to be conflicting information in the helicopter study, which indicates there is opposition to helicopter operations in the Bull Creek area because it is noise-sensitive. Due to the age of the study(ies), updated land use information also would be needed to determine whether there are new noncompatible land use that might be affected should operations be shifted to this site.*

Subsequent LAWA Actions: *LAWA continues to monitor helicopter compliance with existing noise abatement operating procedures described in Section 3.2.3, and to communicate as appropriate with helicopter operators, residents, and the FAA.*

Measure 8: **Improve use of established helicopter routes.** Develop a program to require helicopter operators to fly along established routes, in particular Stagg Street instead of Saticoy Street, and to maximize operations over the least noise sensitive areas such as the industrial development to the east and the Flood Control Basin to the south.

FAA Response in ROA: *Disapproved. FAA review of the recommendation indicates an increase in the use of Stagg Street arrival/departure procedures would create a safety hazard for ATC and it is not acceptable for this reason. Increased use of the Stagg Street route will increase the frequency of traffic crossing over mid-filed and produce unacceptable levels of risk to safety. It also is noted that the documentation states an analysis of benefits was not conducted, and that it is not likely that benefits will occur within the CNEL contours of the official NEMs.*

Subsequent LAWA Actions: *LAWA assessed helicopter use restrictions in the 14 C.F.R. Part 161 study, as discussed in Section 3.5, and determined they were not justified under benefit-cost and other Part 161evaulation criteria. LAWA continues to monitor helicopter compliance with existing noise abatement operating procedures described in Section 3.2.3, and to communicate as appropriate with helicopter operators, residents, and the FAA.*

Measure 9: **Investigate the feasibility of moving the Bull Creek route to the west, over Balboa Boulevard, to reduce noise over residents in the Creek area.** Surface traffic on the Balboa Boulevard route should mask some of the noise from helicopters.

FAA Response in ROA: *Disapproved. The NCP recommends additional study to determine whether this measure is feasible. The 1991 Helicopter Study suggests the Bull Creek area is noise sensitive, but indicates a shift to Balboa Boulevard would require helicopters to fly over more residential areas and a school, and that more testing is needed to determine whether it is feasible. The NCP should provide more information on the noise benefits or disbenefits of shifting operations to this proposed route. Without more current land use information, it is not possible to tell whether new noncompatible land uses would be impacted or benefitted should the route be shifted.*

Subsequent LAWA Actions: *LAWA continues to monitor helicopter compliance with existing noise abatement operating procedures described in Section 3.2.3, and to communicate as appropriate with helicopter operators, residents, and the FAA.*

Measure 10: **Work toward enactment of an ordinance that would require City-owned helicopters to maintain specified altitudes (depending on fixed-wing conflicts), except when a mission requires a lower altitude or an orbiting maneuver.** Under FAA regulations, helicopters must now be at 500 feet altitude within the VNY Airport Traffic Area (ATA), which extends five miles in all directions from the airport. The ordinance would require helicopters within and outside the ATA to maintain sufficient altitude, particularly when they are transiting an area. The altitude would be determined during the development of the ordinance but, at a minimum, would maintain the 500 feet altitude currently flown in the ATA.

FAA Response in ROA: *Disapproved. This measure recommends a local ordinance to enforce study-related recommended altitudes. Aircraft altitudes may not be established by local ordinance.*

Any study of possible changes to the airspace in the vicinity of VNY must be conducted in consultation with the FAA's Air Traffic Organization because of the potential impacts on airspace safety and efficiency. Should a study recommend changes in altitude that are demonstrated to be safe, they may be submitted for approval under 14 C.F. R. Part 150. These changes must include a quantified noise benefit to demonstrate the measure meets Part 150 approval criteria.

Subsequent LAWA Actions: *LAWA assessed helicopter use restrictions in the 14 C.F.R. Part 161 study, as discussed in Section 3.5, and determined they were not justified under benefit-cost and other Part 161evaulation criteria. LAWA continues to monitor helicopter compliance with existing noise abatement operating procedures described in Section 3.2.3, and to communicate as appropriate with helicopter operators, residents, and the FAA.*

Measure 11: **Improve communications between the airport, the FAA, helicopter operators, and residents in an effort to reduce the impact and negative perception of helicopter operations.** Residents would be encouraged to provide as much information as possible regarding helicopter infringements, to increase follow-up by the airport and improve self-policing by helicopter operators and individual pilots.

FAA Response in ROA: *Establishing improved communications is approved.*

Any recommended change to existing flight procedures not approved in this NCP and any flight procedures or flight tracks not already in place at VNY are disapproved for inclusion in the guidebook. Such changes would need to be separately reviewed, for reasons of aviation safety and efficiency, by the FAA. Noise mitigation measures must be accompanied by an analysis demonstrating their noise benefits. Changes in flight procedures normally also need an appropriate environmental analysis.

Subsequent LAWA Actions: *LAWA continues to monitor helicopter compliance with existing noise abatement operating procedures described in Section 3.2.3, and to communicate as appropriate with helicopter operators, residents, and the FAA.*

3.4.3 Fixed-Wing Noise Abatement Measures

Measure 12: **Establish noise abatement and departure techniques for all aircraft departing VNY.** Modified or reduced noise takeoff procedures would vary according to aircraft type, size, and weight. Some aircraft might be required to fly a steeper takeoff profile while others would find it necessary to use a more shallow profile. The takeoff parameters for aircraft would be established through continuous measurement of individual aircraft noise levels using approved manufacturers or NBAA procedures.

FAA Response in ROA: *Approved as voluntary. Exhibits 2 and 3 [of the 2003 NCP submission] provide benefits information of implementing the Fly Friendly program. That program could benefit several thousand people within the CNEL 65 dB contour.*

Subsequent LAWA Actions: *As discussed in Section 3.2.1, LAWA is pursuing enhancements to the voluntary Fly Friendly target noise level program that includes updated departure noise level targets and a positive incentive recognition program.*

Measure 13: **Implement noise abatement and departure procedures.** This measure implements the intent of Measure 12; it was included in the Part 150 separately for the purposes of incorporating the results of adopting NCP "Scenario No. 9," which assumed the use of reduced take-off thrust power settings within safety levels for all jet departures and prohibit aircraft having Part 36 takeoff noise levels in excess of 74 dBA (excluding emergency flights), between the hours of 10:00 pm and 7:00 am.

FAA Response in ROA: *The measure related to existing procedures continuing at the airport on a voluntary basis is approved as voluntary. The NCP narrative indicates this measure is effective and provides a quantifiable noise benefit.*

Any changes to the voluntary nature of the Fly Friendly program or adjustments to flight profiles are disapproved. Such changes need to be separately reviewed, for reasons of aviation safety and efficiency by the FAA. Part 161 applies to measures that would reduce the total number or hours of Stage 2 or Stage 3 aircraft operations at the airport. Extending the curfew hours would require compliance with 14 C.F.R. Part 161 and the Airport Noise and Capacity Act of 1990 (ANCA), 49 U.S.C. 47524(b).

Subsequent LAWA Actions: *As discussed in Section 3.2.1, LAWA is pursuing enhancements to the voluntary Fly Friendly target noise level program that includes updated departure noise level targets and a positive incentive recognition program.*

Measure 14: **Update on-airfield noise abatement signage.** Re-sign the airport at every departure point/intersection with signs that can be read day and night that provide the following:

- Please Fly Quietly
- Departing South: No Turns Before the Flood Basin
- Departing North: No Turns Before 1,800 MSL

On intersection signs only, the following words should be included: *Intersection Departures Are Not Allowed Between 10:00 pm and 7:00 am.* Implement immediately with larger, clearer signs being posted at every run-up area describing recommended noise abatement procedures, including altitudes and locations at which turns should be initiated after departure, and noise sensitive areas to be avoided.

FAA Response in ROA: *Approved for procedures already in effect at the airport.*

Location of the signs, to ensure airfield safety, and final wording on signage must be separately approved as part of implementing the measure and may make voluntary measures mandatory. This measure should remind pilots of the noise abatement procedures in place and is considered a program management tool. It is intended to improve compliance with voluntary noise abatement procedures already in place.

Subsequent LAWA Actions: *On an ongoing basis, LAWA will consider addition of signs where appropriate to complement those already in place at the airport.*

Measure 15: **Adopt full length runway use policy.** This measure would reiterate the existing "top of the runway" jet departure policy, (taking off at the furthest end of the runway).

FAA Response in ROA: *Disapproved. There is no analysis to demonstrate the measure's noise benefits and the FAA cannot determine how the measure contributes to improving the noise environment around the airport. This disapproval does not prohibit or discourage continuation of existing practices to use the full runway length outside the Part 150 program.*

Subsequent LAWA Actions: *LAWA continues the existing voluntary full runway length practices outside the Part 150 program, as discussed in Section 3.2.4.*

3.4.4 Program Implementation Measures

Measure 16: **Establish noise roundtable.** Establish a noise roundtable at VNY to review progress on the implementation of the Part 150 Study. The Roundtable could make adjustments to allow for the implementation of additional noise measures which might be recommended over time, if they become technically and economically feasible.

The Roundtable will act as a review board for at least two years after the recommendations of Scenario No. 12 (the Ad Hoc Committee recommendations incorporated within Measures 13, 15, 18, 19, 20, 21, 24, and 26) and Scenario No. 9 are fully implemented, with the understanding that the Part 150 Study would be continued.

The Roundtable will hold annual meetings, or more frequently as warranted, to discuss the status of the Part 150 program, recommended adjustments, and complaints with airport users and the affected community. LAWA will monitor aircraft noise levels and

airport activity to determine if significant unexpected changes have occurred to the base year NEM, and to determine if the Part 150 program is being successfully implemented.

FAA Response in ROA: *Approved. The Noise Roundtable can act as a forum for discussion of noise issues and assist in tracking NCP progress. The Noise Roundtable has no authority to make adjustment to NCP measures. It may make recommendations to the airport operator for changes to VNY's existing NCP.*

Subsequent LAWA Actions: *LAWA continues to use the VNY Citizens Advisory Council (CAC) for regular public presentation and discussion of noise issues.*

Measure 17: **Establish noise management monitoring system.** Establish a noise management monitoring and flight track system with software and database that feature the ability to positively identify all aircraft and maintain an automated data system that will provide the following information for jet operations:

- "N" number sorting by types of jets
- aircraft type, owner, and pilot
- Part 36-3 (most recent edition) listed noise departure level
- NBAA, or aircraft manufacturer's noise abatement operation level
- actual operation noise level recorded by VNY noise monitors

Calibrate the system to ensure accurate "real time" monitoring of noise abatement procedures for jet departures, and install a radio receiver and recording system that will identify airport tower clearance "N" number and "real time" operation information.

FAA Response in ROA: *Approved for purposes of Part 150. This measure would provide data to the airport on existing noise and flight procedures and flight track adherence and implementation, and enable LAWA to improve its ability to monitor the effectiveness of its Part 150 program. Approval of this measure does not obligate the FAA to participate in funding the acquisition or installation of the permanent noise monitors and associated equipment. Note, for the purpose of aviation safety, this approval does not extend to the use of monitoring equipment for enforcement purposes by in-situ measurement of any pre-set noise thresholds.*

Subsequent LAWA Actions: *LAWA has completed the system installation.*

Measure 18: **Establish automated system to provide feedback to citizens.** Establish an automated feedback system to those in the community such that residents are assured that data kept on a daily basis is accurate and reliable. Acquire ANOMS, or a similar system, that has the capability to interface with ARTS 3 data, track aircraft by altitude, provide a hard copy of individual flight information characteristics, and provide automated noise monitoring correspondence capabilities.

FAA Response in ROA: *Approved. This measure would provide data to the airport and enable LAWA to improve its ability to monitor the effectiveness of its Part 150 Program and to address citizen noise queries. Approval of this measure does not obligate the FAA to participate in funding the acquisition of installation of the permanent noise monitors and associated equipment. Note, for the purpose of aviation safety, this approval does not extend to the use of monitoring equipment for enforcement purposes by in-situ measurement of any pre-set noise thresholds.*

Subsequent LAWA Actions: *LAWA has completed the system installation.*

Measure 19: **Establish tenant association to promote noise abatement procedures.** Establish a more formalized tenant association willing to communicate with violating pilots to voluntarily comply with the "Fly Neighborly" programs and procedures.

FAA Response in ROA: *Approved in part. This measure intends to use the tenant association to provide reminders to pilots of noise abatement measures already in place at the airport and to improve communications between member tenants and the community.*

Subsequent LAWA Actions: *LAWA continues to use the VNY CAC for regular public presentation and discussion of noise issues. LAWA also requests the opportunity to make presentations at the Van Nuys Airport Association (VNAA) for the stated communications purposes.*[33]

Measure 20: **Request that FAA add a noise abatement message to ATIS broadcast.** Request the FAA, as a partner in this project, change its regional policy to allow local towers to add a brief "Fly Quietly" message to the Automatic Terminal Information System (ATIS) that states: "Due to excessive aircraft noise levels, aircraft operating at VNY should fly in a friendly manner," utilizing NBAA or manufacturer's noise abatement procedures.

FAA Response in ROA: *Disapproved. Revised Order 7110.65, Air Traffic Control, no longer provides for noise abatement advisories. Noise abatement advisories may be published in the Airport Facilities Directory and pilot handouts. Other measures recommended in the NCP for communication with pilots could achieve the same goal.*

Subsequent LAWA Actions: *LAWA continues to promote the VNY noise abatement program through other FAA-approved communication vehicles cited in the ROA.*

Measure 21: **Adopt noise-sensitive marketing policy.** Develop and adopt a noise-sensitive marketing policy for VNY that will encourage the voluntary introduction of quieter aircraft into VNY operations and discourage the use of noisier aircraft.

FAA Response in ROA: *Approved as voluntary. Approved for voluntary marketing approaches, as contemplated in this measure. Implementation of this measure is considered to be within the authority of LAWA. Marketing expenses are not eligible for Federal funding assistance. Any mandatory enforcement of this policy would constitute an airport noise and access restriction that may only be adopted after full compliance with the Airport Noise and Capacity Act of 1990 (ANCA), 49 U.S.C. 47524(b), and 14 CFR Part 161.*

Subsequent LAWA Actions: *In lieu of a voluntary marketing approach, LAWA analyzed and proposed a formal phaseout of noisier aircraft under the Part 161 and Noisier Aircraft Phaseout Study discussed in Section 3.5. That study led to the adoption*

[33] "VNAA is a collaboration of Van Nuys Airport tenants and supporters working to achieve economic growth and increased public awareness of the general aviation industry." From the VNAA website (http://www.thevnaa.org/mission.html), last accessed 5/18/2011.

of Los Angeles City Ordinance 181106 (discussed in Section 3.2.8), which implements a four-step decibel-based phaseout based on FAA-published noise levels.

Measure 22: **Establish relocation financial assistance program.** Develop a program to provide financial assistance to residents interested in moving out of the noise impact area.

FAA Response in ROA: *Approved for noncompatible development that existed as of October 1, 1998. Some proposed elements of this measure may not be eligible for financial assistance. Federal participation is based on the FAA's mitigation policy, published in the Federal Register April 1998. It states that beginning October 1, 1998, the FAA will approve remedial noise mitigation measures, (sound insulation, sales assurance or transaction assurance, etc.) under Part 150 only for noncompatible development that exists as of that date.*

Noncompatible development that occurred after October 1, 1998, may only be addressed in Part 150 programs with preventive mitigation measures (land use controls, comprehensive plan, zoning regulations, subdivision regulations, building code, etc.). In order for the land acquisition, purchase assurance, sales assurance or transaction assurance to be eligible for federal funding, the project is subject to compliance with FAA Order 5100.38C, paragraph 811. The Federal Relocation Assistance and Real property Acquisition Policies Act also must be followed.

Subsequent LAWA Actions: *LAWA continues to pursue land use mitigation measures discussed in Section 3.3 of this document. Financial assistance at this time is limited to the sound insulation program discussed in Section 3.3.1.*

Measure 23: **Continue noise abatement officer position.** Continue the full-time noise abatement officer position to work with Airport Security to continually monitor jet departures, and report to the Airport Manager and community departure noise levels. The officer will be responsible for operation of the permanent monitoring system, serve as a community liaison on noise issues, coordinate with pilots, collect and respond to noise complaints, and develop a program to improve formal communications with the FAA and aircraft operators on noise abatement procedures. The noise complaint system should be improved to provide greater feedback to operators, and link complaints to noise reduction measures. The function of the noise complaint system should be expanded to pursue noise reduction and not merely used for public relations purposes.

FAA Response in ROA: *Approved. Implementation of this measure is considered to be within the authority of LAWA.*

Subsequent LAWA Actions: *LAWA continues its extensive commitment of staff and other resources to VNY noise compatibility program administration, publicity, implementation, monitoring, enforcement, review, and refinement, as discussed in Section 3.1. This commitment includes multiple noise program staff at VNY.*

Measure 24: **Compile noise abatement information.** Compile available information on noise abatement procedures from manufacturers, pilots, and noise offices at other general aviation airports to be made available to pilots operating at VNY.

FAA Response in ROA: *Disapproved. Noise abatement procedures are airport specific and must be evaluated for effectiveness at individual airports. Any new procedures proposed for noise mitigation at VNY may not be implemented prior to study to determine whether they can be implemented safely and efficiently, and whether they are noise beneficial.*

Subsequent LAWA Actions: *None.*

Measure 25: **Seek to raise Burbank glideslope.** Continue coordinated research with the FAA to investigate the feasibility of raising the Burbank Runway 7 glideslope to allow an increase in operating altitude for helicopter and fixed-wing operations at VNY by as much as 1,500 to 2,000 feet, to permit a 1,500 to 2,000 foot above ground level (AGL) minimum helicopter pattern altitude. The Steering Committee recommended that this measure be forwarded to the VNY Helicopter Task Force for consideration. Pending the outcome of the evaluation by the Task Force, this measure would be subject to modification. Ongoing monitoring and implementation should be maintained.

FAA Response in ROA: *Disapproved. While this measure proposes only to maintain communication between the FAA for both BUR and VNY on this issue, the FAA has already examined the feasibility of the proposal. The FAA has concerns regarding the "ripple" effect the change to the glideslope would cause within the Southern California Terminal Radar Control (TRACON) airspace around VNY. Traffic is already constrained by multiple regulated airspace areas and high terrain nearby. Raising the glideslope at BUR would require additional changes to vertical altitude for separation purposes. This will create the loss of significant designated altitude when there is an aircraft executing the Instrument Landing System (ILS) to BUR. Loss of any altitude will be detrimental to air traffic operations in the vicinity.*

Subsequent LAWA Actions: *None.*

Measure 26: **Establish noise abatement lease policy.** Recommend that it be a policy of the BOAC to add to any future new Fixed Based Operator (FBO) leaseholders a requirement that they base only Stage 3 aircraft at VNY. The requirement would only apply to based aircraft and not to itinerant aircraft. Based aircraft are defined as any aircraft parked, hangared, or tied down at VNY for more than 90 days. The discussion in the Part 150 made it clear that the intent was to limit this restriction to jet aircraft.

FAA Response in ROA: *Disapproved for purposes of Part 150. The stated intent of this measure is to enforce through leases the requirements of the non-addition rule. The NCP analysis includes very little information beyond that included in this ROA. FAA's review must include a determination that the measure reduces and/or prevents the introduction of noncompatible land uses, that it does not impose an undue burden on interstate or foreign commerce (including any unjust discrimination), and that it does not affect aircraft safety or efficiency (see section 150.33 for a detailed discussion of FAA review and approval criteria).*

While the non-addition rule as it applies to Stage 2 aircraft is "grandfathered" and not subject to 14 CFR Part 161, this lease requirement has not been evaluated under 14 CFR Part 150. The measure does not discuss the potential impacts on owners of non-

staged, Stage 1 and other non-Stage 2 aircraft. Also it appears to apply only to jet aircraft, which could be unjustly discriminatory.

Subsequent LAWA Actions: *In lieu of using a lease policy to limit use of noisier aircraft at VNY, LAWA analyzed and proposed a formal phaseout of noisier aircraft under the Part 161 and Noisier Aircraft Phaseout Study discussed in Section 3.5. That study led to the adoption and implementation of Los Angeles City Ordinance 181106 (as discussed in Section 3.2.8 and reproduced in full in Appendix D), which implements a four-step decibel-based phaseout based on FAA-published noise levels.*

Measure 27: **Request FAA upgrade Air Traffic Control Tower to support 24-hour operation.** Request the FAA to upgrade the VNY Air Traffic Control Tower from a level 3 tower to a level 4 tower. An upgrade to a level 4 control tower would result in more efficient and improved operational control and could provide for increased tower personnel on duty to support the recommendation that the tower be operated 24 hours a day.

FAA Response in ROA: *Disapproved. Specific standards must be met prior to extending hours of operation of any ATC facility. These are based primarily on numbers of hourly operations, but may take critical safety issues into account. FAA does not enforce locally enacted noise rules. Keeping the tower open solely for the purpose of noise abatement does not meet these criteria. FAA Order JO 7232.5G, "Changing Operating Hours for Terminal Facilities," describes FAA requirements.*

Subsequent LAWA Actions: *None.*

Measure 28: **Recommend that FAA require larger "N" numbers on aircraft to improve visibility.** Larger "N" numbers on aircraft, particularly on the bottom side of wings, would enhance a citizen's ability to identify an aircraft, thereby better enabling utilization of the noise complaint procedures.

FAA Response in ROA: *Disapproved for purposes of Part 150. There is insufficient information to demonstrate a measureable noise benefit. The requirements for N-number placement and size are contained in 14 CFR Part 45.20. That regulation indicates there is a minimum size requirement and does not prohibit an aircraft owner increasing the size of the aircraft identifying number. The NCP discussion indicates larger N numbers are intended to help people identify aircraft that may be violating noise rules at the airport and could have a marginal contribution to noise reduction. Other noise monitoring and tracking measures in the NCP intended as Program Management measures would accomplish a similar goal.*

Subsequent LAWA Actions: *LAWA continues implementation of the other noise monitoring and tracking measures to which this section of the ROA refers.*

3.4.5 Restrictive Measures

The Part 150 also recommended that LAWA investigate seven use restrictions:

Measure 29: **Incentives/Disincentives in Rental Rates:** Establish a set of incentives and disincentives through differential rental rates to encourage the greater use of quieter

aircraft and less use of noisier aircraft at VNY. Rental rates for leases and tie downs would be correlated to the level of noise generated by the aircraft.

FAA Response in ROA: *Disapproved for purposes of Part 150 pending compliance with Part 161. The NCP provides discussion but no technical analysis or quantification of the expected benefits. The NCP mentions the potential for unjust discrimination and burden on commerce, which also must be analyzed under 14 C.F.R Part 150.*

As recognized in the NCP the proposed incentives and disincentives in rental rates for based aircraft could constitute an airport noise and access restriction that may only be adopted after full compliance with the Airport Noise and Capacity Act of 1990 (ANCA), 49 U.S.C. 47521 et seq., and 14 C.F.R. Part 161. The completed Part 161 analysis may be submitted for FAA reconsideration of this measure under Part 150. For FAA action under Part 150, additional analysis needs to be included addressing impacts of the proposal on non-Stage 2 and Stage 3 aircraft.

Subsequent LAWA Actions: *LAWA analyzed this measure under the Part 161 and Noisier Aircraft Phaseout Study discussed in Section 3.5. That study led to the conclusion that the objectives of the proposed rental rate incentives and disincentives would be more effectively met through the implementation of the Noisier Aircraft Phaseout, which implements the use restriction proposed in NCP Measure 32.*

Measure 30: **Incentives/Disincentives in Landing Fees:** Establish a system of differential landing fees for aircraft using VNY with higher landing fees for noisier aircraft and lower landing fees for quieter aircraft.

FAA Response in ROA: *Disapproved for purposes of Part 150 pending compliance with Part 161. As recognized in the NCP the proposed incentives and disincentives in landing fees could constitute an airport noise and access restriction that may only be adopted after full compliance with the Airport Noise and Capacity Act of 1990 (ANCA), and 14 C.F.R. Part 161. The completed Part 161 analysis may be submitted for FAA reconsideration of this measure under Part 150 if an FAA determination under Part 150 is sought. Other issues also must be addressed under Part 150 including the measure's impacts on aircraft that are not Stage 2 or Stage 3, and a quantification of noise benefits from implementing this measure.*

Subsequent LAWA Actions: *LAWA analyzed this measure under the Part 161 and Noisier Aircraft Phaseout Study discussed in Section 3.5. That study led to the conclusion that the objectives of the proposed land fee incentives and disincentives would be more effectively met through the implementation of the Noisier Aircraft Phaseout, which implements the use restriction proposed in NCP Measure 32.*

Measure 31: **Establish Fines for Violations of VNY Noise Abatement Policies:** Establish a system of monetary penalties (fines) to be imposed on aircraft operators who violate noise abatement policies at VNY. The Proposed Restriction would make the voluntary VNY Fly Friendly program mandatory and establish penalties for violations of the program. This NCP measure proposes that the City of Los Angeles implement the following penalties: $500 for the third violation; $1,000 for the fourth violation; and $2,000 for the fifth and subsequent violations. Any operator who commits a 6th violation would be banned from using VNY.

FAA Response in ROA: *Disapproved for purposes of Part 150 pending compliance with 14 C.F.R. Part 161. The current Fly Friendly procedures are voluntary, and a high compliance rate has been achieved. The pilot in command has responsibility for the safe operation of an aircraft, and may not always be able to comply with the procedures. As recognized in the NCP, the proposed expansion of fines to mandate compliance constitutes an airport noise and access restriction that may only be adopted after full compliance with the Airport Noise and Capacity Act of 1990 (ANCA), 49 U.S.C. 47524(b), and 14 C.F.R. Part 161. Other issues also must be addressed under Part 150 including the measure's impacts on aircraft that are not Stage 2 or Stage 3, and a quantification of noise benefits derived from implementing this measure.*

Subsequent LAWA Actions: *As discussed in Section 3.2.1, LAWA is pursuing enhancements to the voluntary Fly Friendly target noise level program that include updated departure noise level targets and a positive incentive recognition program.*

Measure 32: **Establish Maximum Daytime Noise Limits:** Establish a maximum daytime noise limit for all aircraft operating at VNY of 77 dBA.

FAA Response in ROA: *Disapproved pending compliance with Part 161. The NCP does not quantify noise benefits derived from this measure. As recognized in the NCP the proposed measure constitutes an airport noise and access restriction that could only be adopted after full compliance with the Airport Noise and Capacity Act of 1990 (ANCA), and 14 C.F.R. Part 161. The completed Part 161 analysis may be submitted for FAA reconsideration of this measure under Part 150 if an FAA determination under Part 150 is being sought. Other issues also must be addressed under Part 150 including the measure's impacts on aircraft that are not Stage 2 or Stage 3.*

Subsequent LAWA Actions: *LAWA analyzed this measure under the Part 161 and Noisier Aircraft Phaseout Study discussed in Section 3.5. That study led to the adoption and implementation of Los Angeles City Ordinance 181106 (as discussed in Section 3.2.8 and reproduced in full in Appendix D) which prohibits operations by aircraft that exceed specified takeoff noise levels, according to a four-phase decibel-based program implemented over eight years, culminating in the NCP's proposed 77 dBA limit starting on January 1, 2016. In the course of assessing and pursuing approval of this proposed ordinance, LAWA obtained FAA acknowledgement that the phaseout as approved with exemptions for Stage 3 and Stage 4 aircraft is not subject to ANCA or Part 161. Appendix E presents a copy of the FAA opinion on this matter.*

Measure 33: **Establish a Limit on Stage 3 Jets:** Establish a cap on the number of Stage 3 jets that may be based at VNY.

FAA Response in ROA: *Disapproved pending compliance with Part 161. The NCP does not quantify the noise benefits. The measure proposes to examine this recommendation in detail in a Part 161 study. As recognized in the NCP the proposed measure constitutes an airport noise and access restriction that could only be adopted after full compliance with the Airport Noise and Capacity Act of 1990 (ANCA), and 14 C.F.R. Part 161. The completed Part 161 analysis may be submitted for FAA reconsideration of this measure under Part 150 if an FAA determination under Part 150 is being sought. Other issues also must be addressed under Part 150 including the measure's impacts on aircraft that are not Stage 2 or Stage 3.*

Subsequent LAWA Actions: *LAWA analyzed this measure under the Part 161 and Noisier Aircraft Phaseout Study discussed in Section 3.5. That study led to the conclusion that the proposed restriction of based Stage 3 jets would not meet several ANCA and Part 161 conditions. In particular, it is unlikely that the benefits of the restriction would be greater than the costs, to a major extent because the restriction would largely shift noise to other noise-sensitive airports. For these primary reasons, LAWA discontinued pursuit of this proposal.*

Measure 34: **Expansion of the VNY Curfew:** Amend the existing curfew ordinance to expand the hours to include all non-emergency jets and non-emergency helicopters as aircraft that would come under the provisions of the curfew from 10 pm to 7 am.

FAA Response in ROA: *Disapproved pending compliance with Part 161. The NCP does not quantify the noise benefits. As recognized in the NCP the proposed measure constitutes an airport noise and access restriction that could only be adopted after full compliance with the Airport Noise and Capacity Act of 1990 (ANCA), and 14 C.F.R. Part 161. The measure proposes to examine this recommendation in detail in a Part 161 study. As recognized in the NCP, the proposed measure constitutes an airport noise and access restriction that could only be adopted after full compliance with the Airport Noise and Capacity Act of 1990 (ANCA), and 14 C.F.R. Part 161. ANCA and Part 161 apply to restrictions affecting Stage 2 and Stage 3 aircraft operations. A clarifying point – the extension of the curfew hours is grandfathered under ANCA only as it applies to Stage 2 aircraft. Applicability of the expanded curfew hours to Stage 3 aircraft would be subject to Part 161. The completed Part 161 analysis may be submitted for FAA reconsideration of this measure under Part 150 if an FAA determination under Part 150 is being sought. Other issues also must be addressed under Part 150 including the measure's impacts on aircraft that are not Stage 2 or 3.*

Subsequent LAWA Actions: *LAWA analyzed this measure under the Part 161 and Noisier Aircraft Phaseout Study discussed in Section 3.5. That study led to the conclusion that expanding the curfew would not meet several ANCA and Part 161 conditions. In particular, it is likely the costs would be significantly greater than the benefits, and the restriction would largely shift noise to other noise-sensitive airports. For these primary reasons, LAWA discontinued pursuit of this proposal.*

Measure 35: **Establish a Cap or Phase-Out of Helicopters:** Establish a cap on the number of, or initiate a phase-out of helicopters from VNY.

FAA Response in ROA: *Disapproved pending compliance with Part 161. The NCP does not quantify the noise benefits. As recognized in the NCP the proposed measure constitutes an airport noise and access restriction that could only be adopted after full compliance with the Airport Noise and Capacity Act of 1990 (ANCA), and 14 C.F.R. Part 161. ANCA and Part 161 apply to restrictions affecting Stage 2 and 3 aircraft operations, including helicopters. The completed Part 161 analysis may be submitted for FAA reconsideration of this measure under Part 150 if an FAA determination under Part 150 is being sought. Other issues also must be addressed under Part 150 including the measure's potentially discriminatory effect against a class of aircraft.*

Subsequent LAWA Actions: *LAWA analyzed this measure under the Part 161 and Noisier Aircraft Phaseout Study discussed in Section 3.5. That study led to the*

conclusion that either a cap or phase-out of helicopter activity would not meet several ANCA and Part 161 conditions. In particular, it is likely the costs would significantly exceed the benefits, operations would largely shift to other noise-sensitive airports, and the restrictions would be considered discriminatory, because they were based on a specific aircraft category rather than strictly noise-related considerations. For these primary reasons, LAWA discontinued pursuit of both options included in this proposal.

3.5 Part 161 and Noisier Aircraft Phaseout Study

As discussed in the preceding section, the Part 150 submission acknowledged that NCP measures 29 – 35 represented noise and access restriction proposals that were subject to ANCA provisions, as implemented by the FAA in 14 C.F.R. Part 161. Implementation of any of those measures was contingent on LAWA addressing Part 161 notice, analysis, and documentation requirements, and – for any measures affecting Stage 3 aircraft operations – would be contingent on LAWA receiving FAA's implementation approval. LAWA retained a consulting team to conduct the study required under Part 161 to assess these seven proposals, and several other proposals that the Los Angeles City Council and the LAWA Board of Airport Commissioners subsequently added, ultimately leading to a total of 12 options. The study commenced in 2005.

Over the next five years, the VNY Part 161 study process led to the following primary results:

- Adoption and implementation (through a city ordinance) of a "noisier aircraft phaseout" under the Part 161 "grandfather"[34] provision that addressed the objectives of several of the proposed restrictions to limit operations in the noisiest aircraft types operating at VNY.[35] Section 3.2.8 of this document discusses the phaseout.
- The determination that LAWA could not justify the remaining proposed restrictions – including a formal Fly Friendly program – under statutory conditions for approval set forth in Part 161 or under contractual commitments LAWA had made when accepting federal grants.[36]
- Determination that the voluntary Fly Friendly program had resulted in measurable noise reduction and that an updated program could yield further benefits.

LAWA staff presented these results to the LAWA Board of Airport Commissioners and the VNY Citizens Advisory Council (CAC) at separate meetings in February 2010, and recommended that:

- Part 161 efforts related to adoption of further use restrictions should be discontinued

[34] 14 C.F.R. Part 161.3(a) exempts ("grandfathers") restrictions on Stage 2 aircraft operations that were first proposed before October 2, 1990 and on Stage 3 aircraft operations that became effective before that date. 14 C.F.R. Part 161.7(d)(2) exempts restrictions on Stage 2 aircraft operations "at a general aviation airport where the airport proprietor has formally initiated a regulatory or legislative process on or before October 2, 1990." In addition to the noisier aircraft phaseout, all existing use restrictions that were in place prior to the Part 161 October 2, 1990 grandfather cut-off date continue in effect. As discussed in Section 3.2 of this document, these ongoing restrictions are implemented through City of Los Angeles ordinances, presented in Appendix D.

[35] LAWA analyzed the environmental impacts of the noisier aircraft phaseout pursuant to the California Environmental Quality Act (CEQA), as documented in "Van Nuys Airport Noisier Aircraft Phaseout Final Environmental Impact Report," Los Angeles World Airports, March 2009.

[36] In particular FAA grant assurance 22(a), "Economic Nondiscrimination," which states that an airport operator "will make its airport available as an airport for public use on fair and reasonable terms and without unjust discrimination to all types, kinds, and classes of aeronautical use."

- Further efforts related to the Fly Friendly program should focus on enhancing the voluntary program to maximize its ongoing benefits

Both groups endorsed these recommendations. Section 3.2.1 discusses the enhancements to the Fly Friendly program that LAWA is pursuing in a totally voluntary manner.

LAWA is not pursuing any additional formal use restrictions for VNY at this time.