APPENDIX E

NOISE

ACRONYMS, ABBREVIATIONS, AND SYMBOLS

%ETR	Percent Engine Thrust Request
% NC	Percent Engine Speed
ADNL	A-weighted Day-Night Average Sound Level, as measured in decibels
AFB	Air Force Base
AFRL	Air Force Research Laboratory
ANSI	American National Standards Institute
ARR	Arrival
ASA	Acoustical Society of America
CDNL or L_{Cdn}	C-weighted Day-Night Average Sound Level
CHABA	Committee on Hearing, Bioacoustics and Biomechanics
CSEL	C-weighted Sound Exposure Level, as measured in decibels
dB	Decibels
dBA or dB(A)	A-Weighted Decibels
dBC	C-Weighted Decibels
DEP	Departure
DLR	German Aerospace Center
DNL	Day-Night Average Sound Level
DoD	Department of Defense
EIS	Environmental Impact Statement
EPR	Engine Pressure Ratio
ETR	Engine Thrust Request
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FICAN	Federal Interagency Committee on Aviation Noise
FICON	Federal Interagency Committee on Noise
FICUN	Federal Interagency Committee on Urban Noise
IN-LBS	Inch-Pounds of Torque
ITF	Interfacility
Hz	Hertz
kHz	Kilohertz
LBS	Pounds of Thrust
L_{Cdn}	C-weighted Day-Night Average Sound Level, as measured in decibels
L_{dn}	Day-Night Average Sound Level, as measured in decibels
L_{dnmr} or DNL_{mr}	Onset-Rate Adjusted Monthly Day-Night Average Sound Level
L_{eq}	Equivalent Sound Level
L_{max}	Maximum Sound Level
L_{pk}	Peak Sound Level
MOA	Military Operating Area
NIOSH	National Institute of Occupational Safety and Health
NIPTS	Noise-induced Permanent Threshold Shift
NLR	Noise Level Reduction
NZ I, II, or III	Noise Zone I, II, or III
OSHA	Occupational Safety and Health Administration
PAT	Closed Pattern
PHL	Potential Hearing Loss
PK_{15}(met)	Peak Noise Exceeded by 15 Percent of Firing Events
psf	Pounds Per Square Foot
RCNM	Roadway Construction Noise Model
RPM	Revolutions per Minute
SEL	Sound Exposure Level
SEL_r	Onset-Rate Adjusted Sound Exposure Level
USACHPPM	U.S. Army Center for Health Promotion and Preventive Medicine
USEPA	U.S. Environmental Protection Agency

NOISE IMPACT ASSESSMENT METHODS

Noise impacts can be quantified based on objective effects (such as hearing loss or damage to structures) or subjective judgments (such as community annoyance). Thus, assessment of impacts requires a combination of physical measurement of noise as well as assessment of psycho-acoustic and socio-acoustic effects. Noise is defined subjectively as being any unwanted sound. The following sections discuss how noise is described, the potential effects that noise may have on its receivers, and the methods by which noise levels are predicted.

CHARACTERISTICS OF SOUND

Sounds can be generally characterized based on three physical characteristics: amplitude, frequency, and duration. Amplitude is a measure of the strength of the sound and is directly measured in terms of the pressure of a sound wave. Frequency, which is perceived as "pitch," is the number of times per second sound causes air molecules to vibrate. Duration is simply how long the sound lasts. All three characteristics are critical to determining impacts of a particular sound source and are discussed in more detail below.

Amplitude. The loudest sounds that can be comfortably heard by humans have acoustic energy one trillion times the acoustic energy of the quietest sounds that humans detect. Because of this vast range in magnitude, attempts to represent sound amplitude by direct expression of sound pressure are unwieldy. In addition, human hearing is proportional rather than absolute (i.e., detecting whether one sound is twice as big as another rather than detecting whether one sound is a given number of pressure units bigger than another). Sound is, therefore, usually represented on a logarithmic scale, reflecting the way in which it is perceived, using a unit named the decibel (dB).

The threshold (level at which an effect starts) of human hearing is approximately 0 dB, and the threshold of discomfort is approximately 120 dB. Under laboratory conditions, differences in sound level of 1 dB can be detected by the human ear. In the community, the smallest change in average noise level that can be detected is about 3 dB. A change in sound level of about 10 dB is usually perceived by the average person as a doubling (or halving) of the sound's loudness, and this relation holds true for loud sounds and quieter sounds. A decrease in sound level of 10 dB actually represents a 90-percent decrease in sound intensity but only a 50-percent decrease in perceived loudness because of the nonlinear response of the human ear.

Figure E- 1 is a chart of A-weighted sound levels from typical sounds. Some sounds (air conditioner, vacuum cleaner) are continuous, and their levels are constant for some time. Other sounds (automobile, heavy truck) are the maximum sound during a vehicle pass-by. Some sounds (urban daytime, urban nighttime) are averages over some extended period.

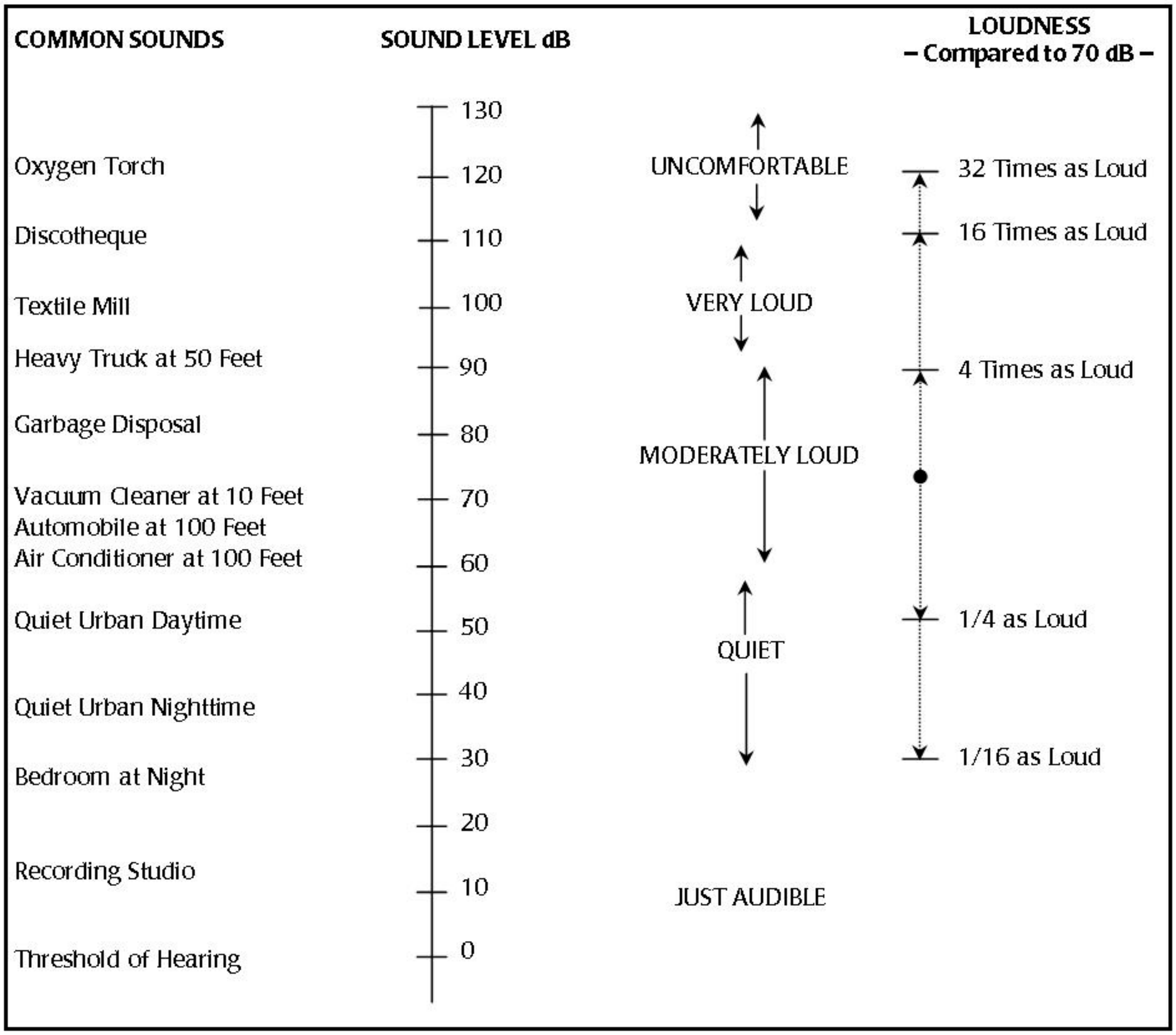

Figure E- 1. Typical A-Weighted Sound Levels of Common Sounds

Because of the logarithmic nature of the decibel scale, sound levels do not add and subtract directly and are somewhat cumbersome to handle mathematically. However, some simple rules of thumb are useful in dealing with sound levels. First, if a sound's intensity is doubled, the sound level only increases by 3 dB, regardless of the initial sound level. For example:

60 dB + 60 dB = 63 dB, and

80 dB + 80 dB = 83 dB.

The total sound level produced by two sounds of different levels is usually only slightly more than the higher of the two. For example:

60.0 dB + 70.0 dB = 70.4 dB.

Sound pressure of what is perceived as being continuous sound actually varies greatly over minute increments of time, so it is customary to deal with sound levels that represent averages over time. Levels presented as instantaneous (i.e., as might be read from the dial of a sound level meter) are based on averages of sound energy over either 1/8 second (fast) or 1 second (slow). This distinction becomes important when discussing sounds whose peak noise level lasts for only a short time, such as sonic booms.

Frequency. The normal human ear can hear frequencies from about 20 hertz (Hz) to about 20,000 Hz. It is most sensitive to sounds in the 1,000- to 4,000-Hz range. When measuring community response to noise, it is common to adjust the frequency content of the measured sound to correspond to the frequency sensitivity of the human ear. This adjustment is called A-weighting (American National Standards Institute [ANSI], 1988). Sound levels that have been so adjusted are referred to as A-weighted and may be denoted dBA or dB(A). However, because use of A-weighting to express sound level is so prevalent, it can normally be assumed that dB is equivalent to dBA or dB(A). In this study, sound levels are reported in dB and are A-weighted unless otherwise specified.

A-weighting is appropriate for sounds that are perceived by the ear. Impulsive sounds, such as sonic booms, thunder, and other sudden "booming" sounds, are perceived by more than just the ear; listeners may *feel* this type of sound as well as hearing it. When experienced indoors, this type of sound may cause rattling of the structure and its contents. Because A-weighting would de-emphasize the intrusive low-frequency component of this type of sound, C-weighting (ANSI, 1988) is applied, which only de-emphasizes frequencies that are outside the range of human hearing (about 20 Hz to 20,000 Hz). In this study, and in accordance with standard methodologies, C-weighted sound levels are used for the assessment of sonic booms, blasts from high explosives, and other impulsive sounds. C-weighting is specifically denoted as dBC whenever it is used in this study.

Duration. Sound varies over time at almost all locations. Sound can be classified into four basic categories that define its basic time pattern:

- Ambient. Ambient sound is the ever-present collection of background sounds at any given place. Ambient sound can be strictly natural, such as frogs and cicadas in the deep woods; strictly mechanical, such as street noise in a busy city;

or a combination of both, like sounds occurring in the suburbs. It is important to consider the existing ambient soundscape because what exists already has much to do with how annoying people will find a new sound. For example, the hum of a generator may be tolerated much better by those already living in an area with high mechanized ambient noise than those living in the far woods.

- Steady-state. Steady-state sound is of a consistent level and spectral content; examples are sounds originating from ventilation or mechanical systems that operate more or less continuously. From a military perspective, generators and aircraft run-up sounds are the most prominent steady-state sounds, and as a rule, the longer a steady-state sound persists, the more annoyed people will be.
- Transient Sound. Transient sound has a clearly defined beginning and end, rising above the background and then fading back into it. Transient sounds are typically associated with "moving" sound sources such an aircraft overflight or a single vehicle driving by, and they usually last for only a few minutes at the most. The annoyance caused by transient sounds is dependent upon both the maximum sound level and the duration.
- Impulsive Sound. Impulsive sound is of short duration (typically less than one second), high intensity, abrupt onset, rapid decay, and often a fast-changing spectral composition. It is characteristically associated with such sources as explosions, impacts, the discharge of firearms, the passage of supersonic aircraft (sonic booms), and many industrial processes. Impulsive sound can be particularly annoying because of the "startle factor" where the receiver has no warning that exposure to a loud sound is imminent.

NOISE METRICS

To communicate sound levels, the Department of Defense (DoD) uses three general types of noise-measuring descriptors, or metrics: (1) measuring the highest sound level occurring during a noise event, (2) combining the maximum level of that single event with its duration, and (3) describing the noise environment based on the total noise energy received over a specified length of time. The metrics used in this environmental impact statement (EIS) are described below.

Maximum Sound Level. This metric, denoted as L_{max}, is the highest sound level measured (using time integration of either 1/8 second or 1 second) during a noise event. For a listener observing an aircraft overflight, the noise level starts at the ambient or background noise level, rises to the maximum level as the aircraft flies closest to the observer, and returns to the background level as the aircraft recedes into the distance. L_{max} decreases as altitude or distance from the observer increases and varies according to the type of aircraft, airspeed, and power setting.

Peak Sound Level. For impulsive sounds, the true instantaneous peak sound pressure level, which lasts for only a fraction of a second, is important in determining impacts. For sonic booms, this is the peak pressure of the shock wave. This pressure usually is presented in physical units of pounds per square foot (psf). Peak sound levels are not frequency weighted. Sometimes it is represented on the decibel scale, with the symbol L_{pk}. Because the amount of sound energy that reaches a receiver from a given noise event varies so much with specific atmospheric conditions, a special metric sometimes is used to account for this variability. The PK_{15}(met) metric represents the peak sound level that will not be exceeded 85 percent of the time with a given noise event. This metric is useful for expressing, in general terms, how loud an area will get while a particular weapon is firing.

Sound Exposure Level. The Sound Exposure Level (SEL) metric is a single-number representation of a noise energy dose for an entire aircraft overflight. This measure takes into account the effect of both the duration and intensity of a noise event by summing the noise energy from each second in an event, which typically lasts several seconds into a single second.

SEL is useful for comparing aircraft that move at different speeds. As an example, fighter aircraft tend to create a high L_{max}, but their noise level tends to drop off quickly as the plane moves away from the listener at high speed. On the other hand, cargo-type aircraft tend to be quieter but generally take more time to move past the listener and out of earshot. It is important to remember that SEL does not directly represent the sound level heard at any given time, but rather, it provides a measure of the exposure of the entire acoustic event. SEL is useful for predicting several noise impacts, including sleep disturbance and animal escape response. SEL can be computed for C-weighted levels (appropriate for impulsive sounds), and the results denoted as CSEL. SEL for A-weighted sound is sometimes denoted as ASEL. Within this study, SEL is used for A-weighted sounds and CSEL for C-weighted.

Onset-rate Adjusted Sound Exposure Level. When an aircraft is flying fast and low to the ground, listeners may experience a very quick rise in noise as it flies overhead. To account for the resulting "surprise effect," a penalty of up to 11 dB is applied to the SEL value for the overflight. SEL values with this "onset-rate adjustment" are denoted as SEL_r.

Equivalent Sound Level. To summarize noise levels over longer periods of time, total sound is represented by the equivalent sound level (L_{eq}). L_{eq} is the average sound level over some time period (often an hour or a day, but any explicit time span can be specified), with the averaging being done on the same energy basis as used for SEL. SEL and L_{eq} are closely related, differing by (1) whether they are applied over a specific time period or over an event, and (2) whether the duration of the event is included or divided out. Just as SEL has proven to be a good measure of the noise impact of a single event, L_{eq} has been established to be a good measure of the impact of a series of events during a given time period. Cumulative noise metrics, such as L_{eq}, are useful because they represent a complicated set of noise events with a single number.

Day–Night Average Sound Level (DNL or L_{dn}). Noise tends to be more intrusive at night than during the day. This effect is accounted for by applying a 10-dB penalty to events that occur after 10:00 PM and before 7:00 AM. DNL is similar to L_{eq} except DNL has a nighttime penalty added. DNL is the community noise metric recommended by the U.S. Environmental Protection Agency (USEPA) (USEPA, 1974) and has been adopted by most federal agencies (Federal Interagency Committee on Noise [FICON], 1992). It has been widely accepted that DNL correlates well with community response to noise (Schultz, 1978; Finegold et al., 1994). This correlation is presented in the section titled "Noise Impacts on Humans." Furthermore, DNL has also been proven applicable to infrequent events (Fields and Powell, 1985) and to rural populations exposed to sporadic military aircraft noise (Stusnick et al., 1992, 1993).

It was noted earlier that, for impulsive sounds, C-weighting is more appropriate than A-weighting. The DNL can be computed for C-weighted noise and is denoted CDNL or L_{Cdn}. This procedure has been standardized, and impact interpretive criteria similar to those for DNL have been developed (Committee on Hearing, Bioacoustics and Biomechanics [CHABA], 1981).

Onset-rate Adjusted Monthly Day–Night Average Sound Level. Aircraft operations in military airspace (such as ranges, military operating areas [MOAs], and Warning Areas) generate a noise environment somewhat different from other community noise environments. Overflights are sporadic, occurring at random times and varying from day to day and week to week. This situation differs from most community noise environments, where noise tends to be continuous or patterned. Individual military overflight events also differ from typical community noise events in that noise from a low-altitude, high-airspeed flyover can have a sudden onset. To represent these differences, the conventional DNL metric is adjusted to account for the "surprise" effect of the sudden onset of aircraft noise events on humans (Plotkin et al., 1987; Stusnick et al., 1992, 1993). For aircraft exhibiting a rate of increase in sound level (called onset rate) of from 15 to 150 dB per second, an adjustment or penalty ranging from 0 to 11 dB is added to the normal SEL. Onset rates above 150 dB per second require an 11 dB penalty, while onset rates below 15 dB per second require no adjustment. In addition, because of the irregular occurrences of aircraft operations, the number of average daily operations is determined by using the calendar month with the highest number of operations. The Onset-Adjusted Monthly Day–Night Average Sound Level is denoted as L_{dnmr}.

NOISE IMPACTS ON HUMANS

Annoyance. The primary effect of aircraft noise on exposed communities is one of annoyance. Noise annoyance is defined by the USEPA as any negative subjective reaction on the part of an individual or group (USEPA, 1974).

Studies of community annoyance resulting from numerous types of environmental noise show that DNL correlates well with impact. Schultz (1978) showed a consistent relationship between DNL and percentage of the impacted population that was "highly annoyed" (9 or 10 on a scale of 1 to 10, with 10 being the most annoyed). A more recent study reaffirmed and updated this relationship (Finegold et al., 1994) (Table E-1). In general, correlation coefficients of 0.85 to 0.95 are found between the percentages of groups of people highly annoyed and the level of average noise exposure. The correlation coefficients for the annoyance of individuals are relatively low, however, on the order of 0.5 or less. This is not surprising, considering the varying personal factors that influence the manner in which individuals react to noise. Nevertheless, findings substantiate that, as a whole, communities' level of annoyance to aircraft noise is represented fairly reliably using DNL.

Table E-1. Relationship Between Annoyance and DNL

Noise Exposure (DNL)	Percent of Population Highly Annoyed
<65	<12
65–70	12–21
70–75	22–36
75–80	37–53
80–85	54–70
>85	>71

Source: Finegold et al., 1994

It is important to note that DNL does not represent the sound level heard at any particular time, but rather, it represents a cumulative sound exposure. DNL accounts for the sound level of individual noise events, the duration of those events, and the number of events. Its use is endorsed by the scientific community and is recognized as the standard methodology by most federal agencies (ANSI, 1980, 1988; USEPA, 1974; Federal Interagency Committee on Urban Noise [FICUN], 1980; FICON, 1992).

There are several commonly recognized average noise level thresholds that are based on expected community reaction. The first is DNL of 65 dB. This is a level most commonly used for noise planning purposes and represents a compromise between community impact and the need for activities like aviation, which unavoidably result in noise. Areas exposed to DNL above 65 dB generally are not considered suitable for residential use. The second is DNL of 55 dB, which was identified by the USEPA as a level "... requisite to protect public health and welfare with an adequate margin of safety," (USEPA, 1974). From a noise exposure perspective, that would be an ideal selection. However, financial and technical resources are generally not available to achieve that goal. Most agencies have identified DNL of 65 dB as a criterion that protects those most impacted by noise, and that often can be achieved on a practical basis (FICON, 1992). This corresponds to about 12 percent of the exposed population being highly annoyed. The third is DNL of 75 dB. This is the lowest level at which adverse health effects could be credible (USEPA, 1974).

Community annoyance from sonic booms, firing of heavy weaponry, and other impulsive noises is predicted using CDNL. The correlation between CDNL and annoyance has been estimated based on community reaction to impulsive sounds over several years (CHABA, 1981). Values of the C-weighted equivalent to the Schultz curve are different than that of the Schultz curve itself. Table E-2 shows the relationship between percentage of the population highly annoyed, DNL, and CDNL. If both continuous and impulsive noise occurs in the same area, impacts are assessed separately for each.

Table E-2. Relation Between Annoyance, DNL, and CDNL

CDNL	% Highly Annoyed	DNL
48	2	50
52	4	55
57	8	60
61	14	65
65	23	70
69	35	75

Source: CHABA, 1981

Speech Interference. Speech interference associated with aircraft noise is a primary cause of annoyance for communities. The disruption of routine activities such as radio or television listening, telephone use, or family conversation gives rise to frustration and irritation. The quality of speech communication is particularly important in classrooms and offices. In industrial settings it can cause fatigue and vocal strain in those who attempt to communicate over the noise.

The disruption of speech in the classroom is a primary concern, due to the potential for adverse effects on children's learning ability. There are two aspects to speech comprehension:

> *Word Intelligibility* - the percent of words transmitted and received. This might be important for students in the lower grades who are learning the English language, and particularly for students who have English as a Second Language.

Sentence Intelligibility – the percent of sentences transmitted and understood. This might be important for high-school students and adults who are familiar with the language, and who do not necessarily have to understand each word in order to understand sentences.

U.S. Federal Criteria for Interior Noise. In 1974, the USEPA identified a goal of an indoor 24-hour average sound level $L_{eq(24)}$ of 45 dB to minimize speech interference based on the intelligibility of sentences in the presence of a steady background noise (USEPA, 1974). Intelligibility pertains to the percentage of speech units correctly understood out of those transmitted, and specifies the type of speech material used, i.e. sentences or words. The curve displayed in Figure E- 2 shows the effect of steady indoor background sound levels on sentence intelligibility. For an average adult with normal hearing and fluency in the language, steady background sound levels indoors of less than 45 dB L_{eq} are expected to allow 100-percent intelligibility of sentences.

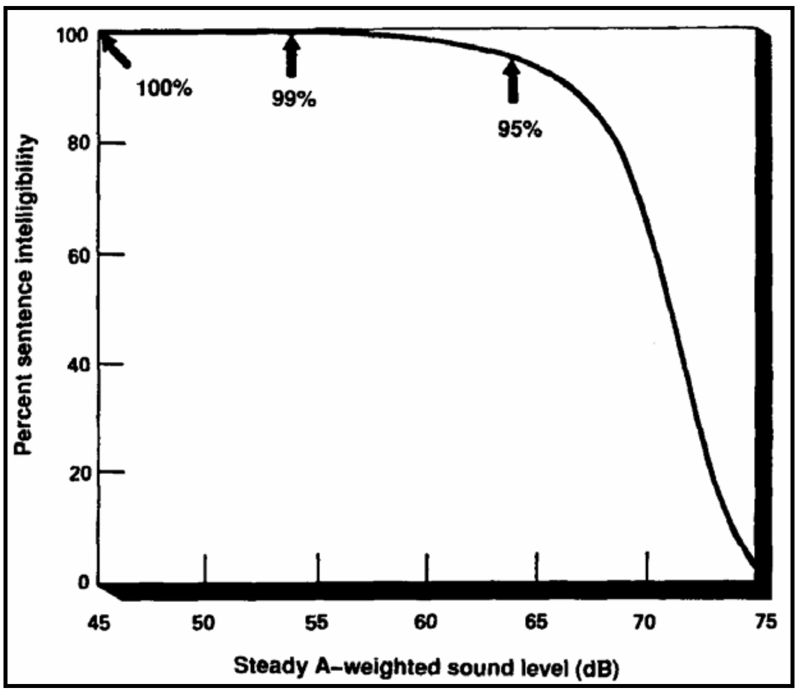

Figure E- 2. Speech Intelligibility Curve
Source: USEPA, 1974

The curve shows 99-percent sentence intelligibility for background levels at a L_{eq} of 54 dB, and less than 10-percent intelligibility for background levels above a L_{eq} of 73 dB. Note that the curve is especially sensitive to changes in sound level between 65 dB and 75 dB—an increase of 1 dB in background sound level from 70 dB to 71 dB results in a 14-percent decrease in sentence intelligibility, whereas a 1-dB increase in background sound level from 60 dB to 61 dB results in less than 1-percent decrease in sentence intelligibility.

Sleep Interference. The disturbance of sleep is a major concern for communities exposed to nighttime aircraft noise. There have been numerous research studies that have attempted to quantify the complex effects of noise on sleep. This section provides an overview of the major noise-induced sleep disturbance studies that have been conducted, with particular emphasis placed on those studies that have influenced U.S. federal noise policy. The studies have been separated into two groups:

- Initial studies performed in the 1960s and 1970s, where the research was focused on laboratory sleep observations.
- Later studies performed in the 1990s up to the present, where the research was focused on field observations, and correlations to laboratory research were sought.

Initial Studies. The relationship between noise levels and sleep disturbance is complex and not fully understood. The disturbance depends not only on the depth of sleep, but also on the previous exposure to aircraft noise, familiarity with the surroundings, the physiological and psychological condition of the recipient, and a host of other situational factors. The most readily measurable effect of noise on sleep is the number of arousals or awakenings, and so the body of scientific literature has focused on predicting the percentage of the population that will be awakened at various noise levels. Fundamentally, regardless of the tools used to measure the degree of sleep disturbance (awakenings, arousals, etc.), these studies have grouped the data points into bins to predict the percentage of the population likely to be disturbed at various sound level thresholds.

FICON produced a guidance document that provided an overview of the most pertinent sleep disturbance research that had been conducted throughout the 1970s (FICON, 1992). Literature reviews and meta-analysis conducted between 1978 and 1989 made use of the existing datasets that indicated the effects of nighttime noise on various sleep-state changes and awakenings (Lukas, 1978; Griefahn, 1978; Pearsons et al., 1989). FICON noted that various indoor A-weighted sound levels—ranging from 25 to 50 dB—were observed to be thresholds below which significant sleep effects were not expected. Due to the large variability in the data, FICON did not endorse the reliability of the results.

However, FICON did recommend the use of an interim dose-response curve—awaiting future research—that predicted the percent of the exposed population expected to be awakened as a function of the exposure to single event noise levels expressed in terms of SEL. This curve was based on the research conducted for the U.S. Air Force (Finegold, 1994). The dataset included most of the research performed up to that point, and predicted that 10 percent of the population would be awakened when exposed to an interior SEL of approximately 58 dB. The data utilized to derive this relationship were primarily the results of controlled laboratory studies.

Recent Sleep Disturbance Research—Field and Laboratory Studies. It was noted in the early sleep disturbance research that the controlled laboratory studies did not account for many factors that are important to sleep behavior, such as habituation to the environment and previous exposure to noise and awakenings from sources other than aircraft noise. In the early 1990s, field studies were conducted to validate the earlier laboratory work. The most significant finding from these studies was that an estimated 80 to 90 percent of sleep disturbances were not related to individual outdoor noise events, but were instead the result of indoor noise sources and other non–noise-related factors. The results showed that there was less of an effect of noise on sleep in real-life conditions than had been previously reported from laboratory studies.

Federal Interagency Committee on Aviation Noise (FICAN). The interim FICON dose-response curve that was recommended for use in 1992 was based on the most pertinent sleep disturbance research that was conducted through the 1970s, primarily in laboratory settings. After that time, considerable field research was conducted to evaluate the sleep effects in peoples' normal home environment. Laboratory sleep studies tend to show higher values of sleep disturbance than field studies because people who sleep in their own homes are habituated to their environment and, therefore, do not wake up as easily (FICAN, 1997).

Based on the new information, FICAN updated its recommended dose-response curve in 1997, depicted as the lower curve in Figure E-3. This figure is based on the results of three field studies (Ollerhead, 1992; Fidell et al., 1994; Fidell et al., 1995a; Fidell et al., 1995b), along with the datasets from six previous field studies.

The new relationship represents the higher end, or upper envelope, of the latest field data. It should be interpreted as predicting the "maximum percent of the exposed population expected to be behaviorally awakened" or the "maximum percent awakened" for a given residential population. According to this relationship, a maximum of 3 percent of people would be awakened at an indoor SEL of 58 dB, compared to 10 percent using the 1992 curve. An indoor SEL of 58 dB is equivalent to outdoor SELs of 73 and 83 dB respectively assuming 15 and 25 dB noise level reduction from outdoor to indoor with windows open and closed, respectively.

Note the relatively low percentage of awakenings to fairly high noise levels. People think they are awakened by a noise event, but usually the reason for awakening is otherwise. For example, the 1992 U.K. Civil Aviation Authority study found the average person was awakened about 18 times per night for reasons other than exposure to an aircraft noise—some of these awakenings are due to the biological rhythms of sleep and some to other reasons that were not correlated with specific aircraft events.

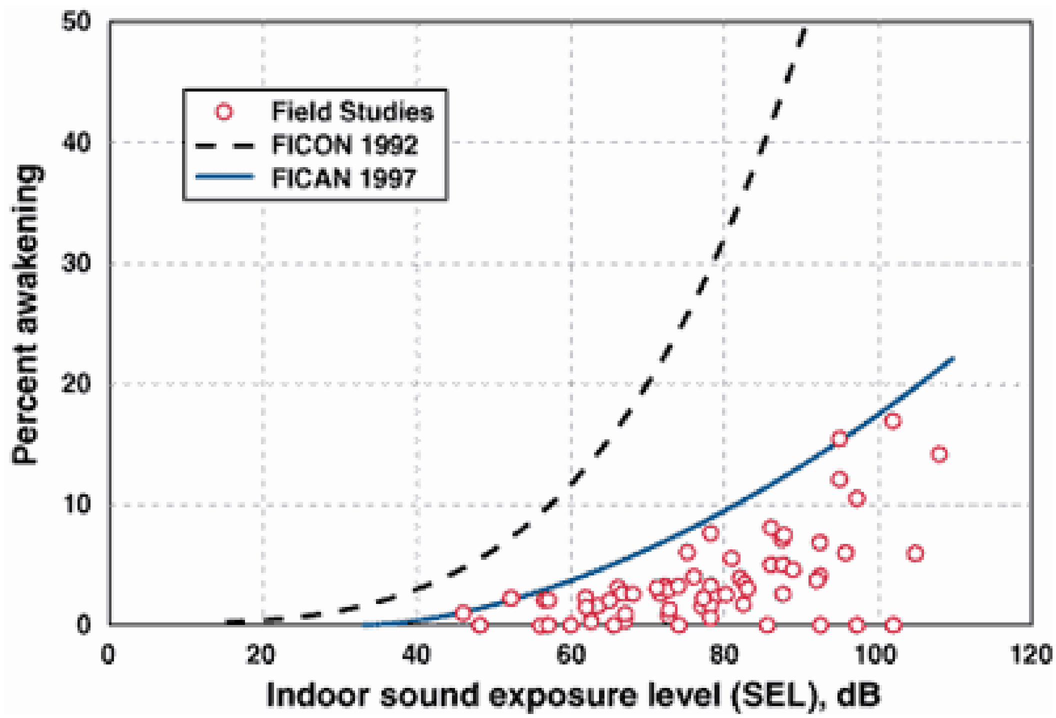

Figure E-3. FICAN's 1997 Recommended Sleep Disturbance Dose-Response Relationship

The FICAN 1997 curve is represented by the following equation:

$$\text{Percent Awakenings} = 0.0087 \times [\text{SEL} - 30]^{1.79}$$

Number of Events and Awakenings. In recent years, there have been studies and one proposal that attempted to determine the effect of multiple aircraft events on the number of awakenings. The German Aerospace Center (DLR) conducted an extensive study focused on the effects of nighttime aircraft noise on sleep and other related human performance factors (Basner, 2004). The DLR study was one of the largest studies to examine the link between aircraft noise and sleep disturbance and involved both laboratory and in-home field research phases. The DLR investigators developed a dose-effect curve that predicts the number of aircraft events at various values of L_{max} expected to produce one additional awakening over the course of a night. The dose-effect curve was based on the relationships found in the field studies.

In July 2008 ANSI and the Acoustical Society of America (ASA) published a method to estimate the percent of the exposed population that might be awakened by multiple aircraft noise events based on statistical assumptions about the probability of awakening (or not awakening) (ANSI, 2008). This method relies on probability theory rather than direct field research/experimental data to account for multiple events.

Figure E-4 depicts the awakenings data that form the basis and equations of ANSI S12.9-2008. The curve labeled 'Eq. (B1)' is the relationship between noise and awakening endorsed by FICAN in 1997. The ANSI recommended curve labeled 'Eq. (1)' quantifies the probability of awakening for a population of sleepers who are exposed to an outdoor noise event as a function of the associated indoor SEL in the bedroom. This curve was derived from studies of behavioral awakenings associated with noise events in "steady state" situations where the population has been exposed to the noise long enough to be habituated. The data points in Figure E-4 come from these studies. Unlike the FICAN curve, the ANSI 2008 curve represents the average of the field research data points.

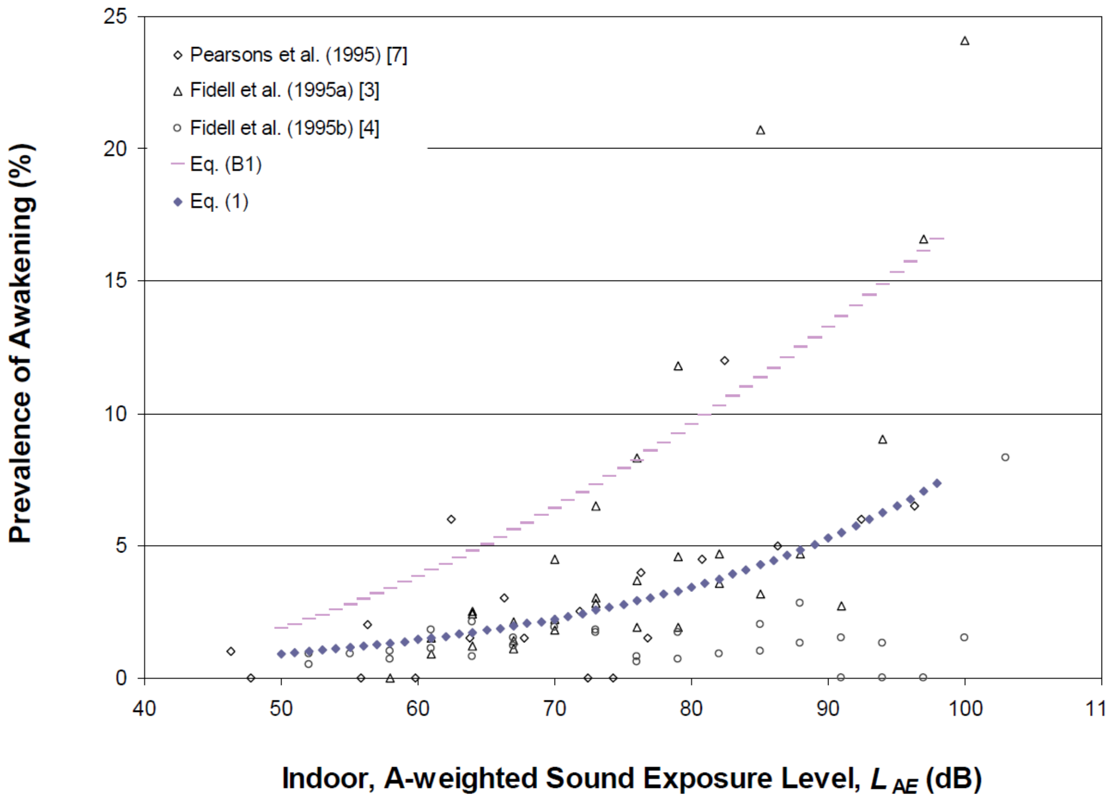

Figure E-4. Plot of Sleep Awakening Data versus Indoor SEL
Source: ANSI 2008

In December 2008, FICAN recommended the use of this new estimation procedure for future analyses of behavioral awakenings from aircraft noise (Figure E-5 and Figure E-6). In that statement, FICAN also recognized that additional sleep disturbance research is underway by various research organizations, and results of that work may result in additional changes to FICAN's position. Until that time, FICAN recommends the use of ANSI S12.9-2008.

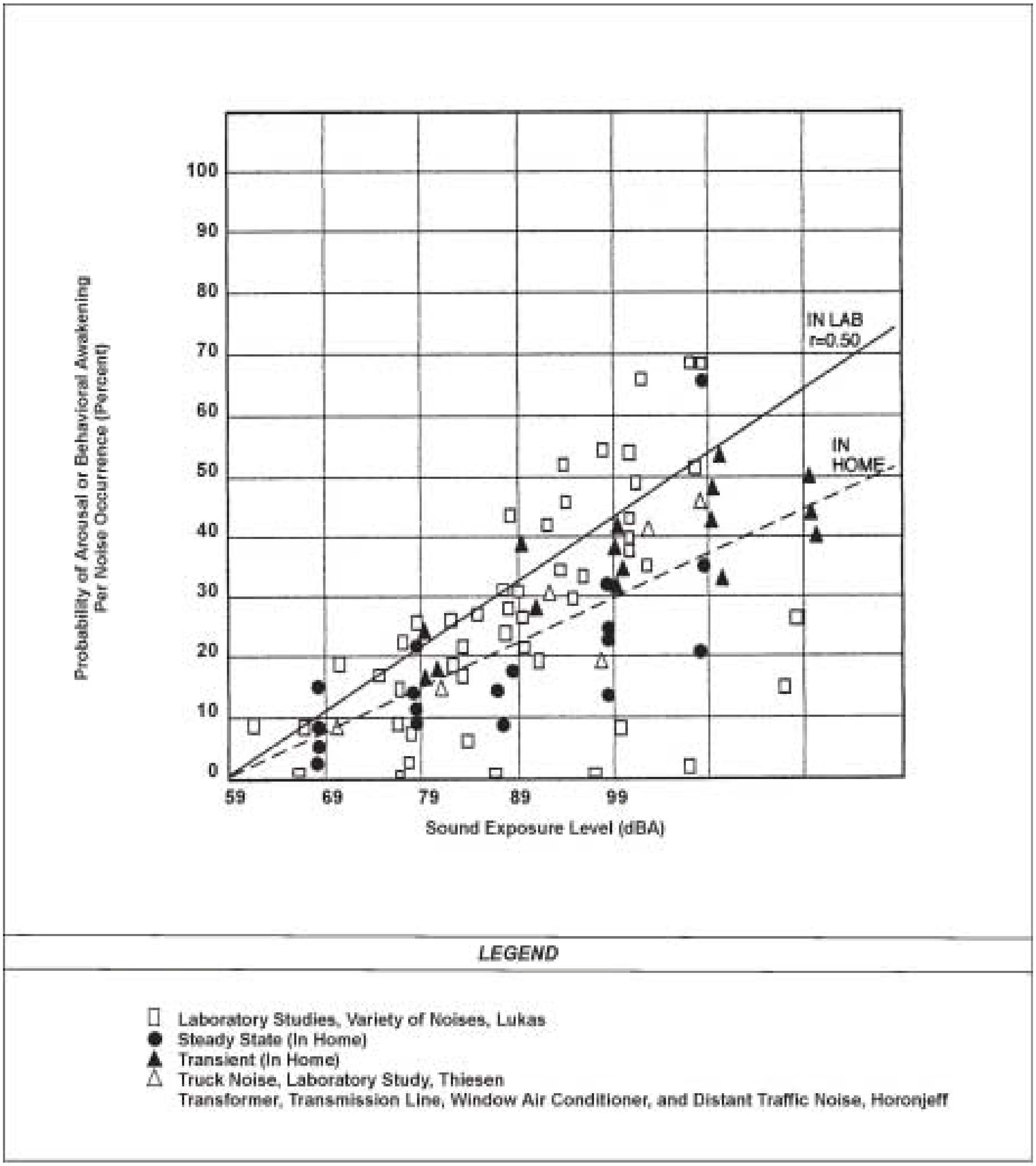

Figure E-5. Probability of Arousal or Behavioral Awakening in Terms of Sound Exposure Level

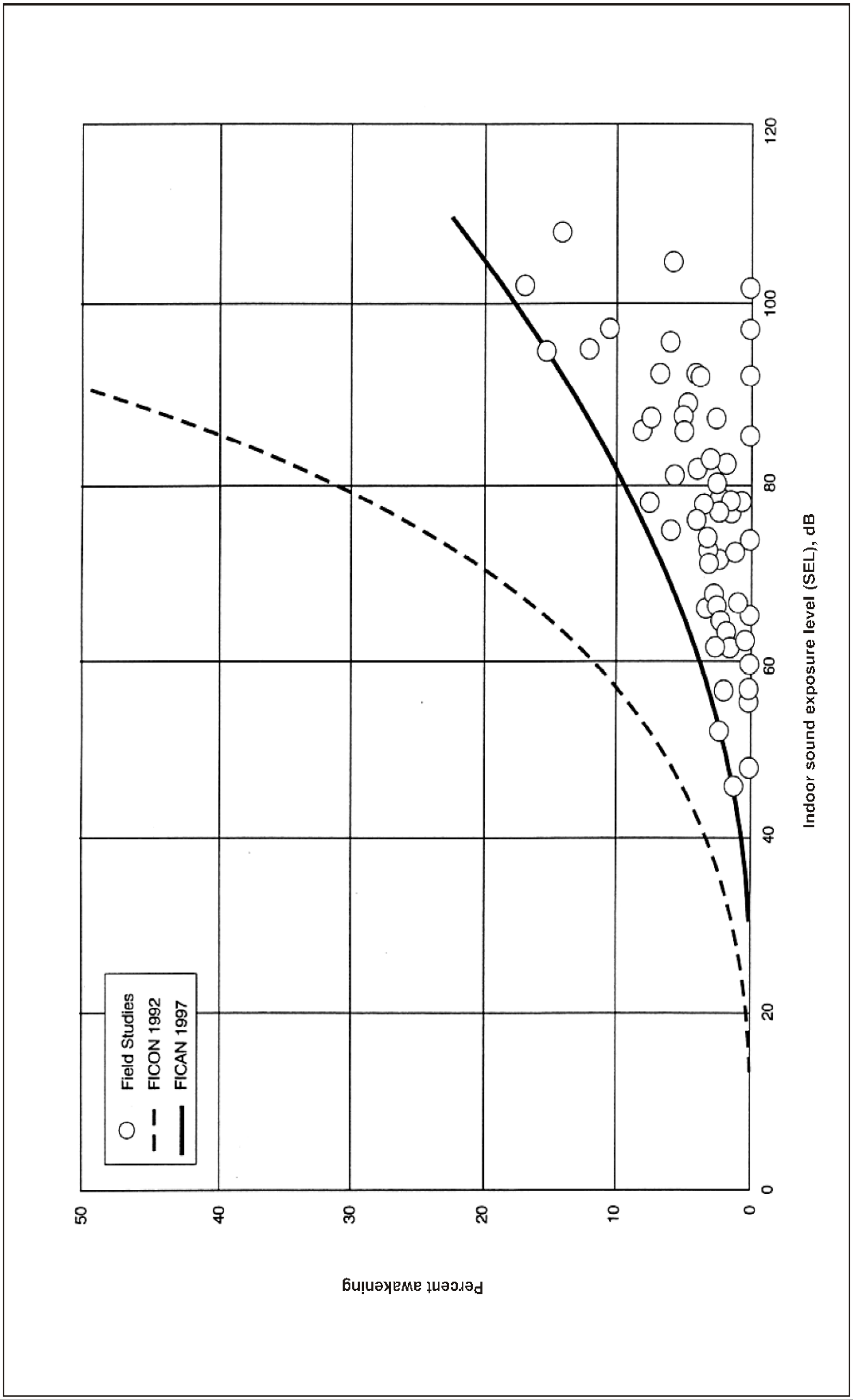

Figure E-6. Recommended Sleep Disturbance Dose-Response Relationship

Land Use Compatibility. As noted above, the inherent variability between individuals makes it impossible to predict accurately how any individual will react to a given noise event. Nevertheless, when a community is considered as a whole, its overall reaction to noise can be represented with a high degree of confidence. As described above, the best noise exposure metric for this correlation is the DNL or L_{dnmr} for military overflights. Impulsive noise can be assessed by relating CDNL to an "equivalent annoyance" DNL.

In June 1980, the ad hoc FICUN published guidelines (FICUN, 1980) relating DNL to compatible land uses. This committee was composed of representatives from the DoD; Transportation, Housing and Urban Development; USEPA; and the Veterans Administration. Since issuance of the FICUN guidelines, federal agencies have generally adopted the guidelines for their noise analyses. These guidelines are reprinted in Table E-3. The designations contained in the table do not constitute a federal determination that any use of land covered by the program is acceptable or unacceptable under federal, state, or local law. The responsibility for determining the acceptable and permissible land uses, and the relationship between specific properties and specific noise contours rests with the local authorities. The Federal Aviation Administration (FAA) determinations under Part 150 are not intended to substitute federally determined land uses for those determined to be appropriate by local authorities in response to locally determined needs and values in achieving noise-compatible land uses.

It is important to note that the guidelines presented in Table E-3 are recommendations, and compliance with them is not mandatory.

Table E-3. Land Use Compatibility with Yearly Day–Night Average Sound Levels

Land Use	**Yearly Day–Night Average Sound Level in Decibels**					
	Below 65	**65–70**	**70–75**	**75–80**	**80–85**	**Over 85**
Residential Use						
Residential, other than mobile and transient lodgings	Y	N[1]	N[1]	N	N	N
Mobile home parks	Y	N	N	N	N	N
Transient lodgings	Y	N[1]	N[1]	N[1]	N	N
Public Use						
Schools	Y	N[1]	N[1]	N	N	N
Hospitals and nursing homes	Y	25	30	N	N	N
Churches, auditoriums, and concert halls	Y	25	30	N	N	N
Government services	Y	Y	25	30	N	N
Transportation	Y	Y	Y[2]	N[3]	Y[4]	Y[4]
Parking	Y	Y	Y[2]	Y[3]	Y[4]	N

Continued on the next page…

Table E-3. Land Use Compatibility with Yearly Day–Night Average Sound Levels, Cont'd

Land Use	Yearly Day–Night Average Sound Level in Decibels					
	Below 65	65–70	70–75	75–80	80–85	Over 85
Commercial Use						
Offices—business and professional	Y	Y	25	30	N	N
Wholesale and retail—building materials, hardware, and farm equipment	Y	Y	Y[2]	Y[3]	Y[4]	N
Retail trade—general	Y	Y	25	30	N	N
Utilities	Y	Y	Y[2]	Y[3]	Y[4]	N
Communication	Y	Y	25	30	N	N
Manufacturing and Production						
Manufacturing—general	Y	Y	Y[2]	Y[3]	Y[4]	N
Photographic and optical	Y	Y	25	30	N	N
Agriculture (except livestock) and forestry	Y	Y[6]	Y[7]	Y[8]	Y[8]	Y[8]
Livestock farming and breeding	Y	Y[6]	Y[7]	N	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y	Y
Recreational						
Outdoor sports arenas and spectator sports	Y	Y[5]	Y5[6]	N	N	N
Outdoor music shells, amphitheaters	Y	N	N	N	N	N
Nature exhibits and zoos	Y	Y	N	N	N	N
Amusements, parks, resorts, and camps	Y	Y	Y	N	N	N
Golf courses, riding stables, and water recreation	Y	Y	25	30	N	N

Data for this table were taken from the Standard Land Use Coding Manual.
Y (YES) = land use and related structures compatible without restrictions.
N (No) = land use and related structures are not compatible and should be prohibited.
NLR = Noise Level Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.
25, 30, or 35 dB = land use and related structures generally compatible; measures to achieve NLR of 25, 30, or 35 dB must be incorporated into design and construction of structures.

(1) Where the community determines that residential or school uses must be allowed, measures to achieve outdoor-to-indoor NLR of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal residential construction can be expected to provide an NLR of 20 dB; thus, the reduction requirements are often stated as 5, 10, or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year round. However, the use of NLR criteria will not eliminate outdoor noise problems.
(2) Measures to achieve NLR 25 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.
(3) Measures to achieve NLR 30 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.
(4) Measures to achieve NLR 35 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.
(5) Land use compatible provided special sound reinforcement systems are installed.
(6) Residential buildings require an NLR of 25.
(7) Residential buildings require an NLR of 30.
(8) Residential buildings not permitted.

Hearing Loss. There is very little potential for hearing loss at noise levels below 75 dB DNL (CHABA, 1977). However, there are situations where noise in and around airbases may exceed 75 dB DNL.

The first of these is a result of exposure to occupational noise by individuals working in known high noise exposure locations such as jet engine maintenance facilities or aircraft maintenance hangers. In this case, exposure of workers inside the base boundary area should be considered occupational, which is excluded from the DoD Noise Program by DoD Instruction 4715.13, and should be evaluated using the appropriate DoD component regulations for occupational noise exposure. The DoD, U.S. Air Force, and the National Institute of Occupational Safety and Health (NIOSH) have all established occupational noise exposure damage risk criteria (or "standard") for hearing loss so as to not exceed 85 dB as an 8-hour time weighted average, with a 3-dB exchange rate in a work environment. (The exchange rate is an increment of decibels that requires the halving of exposure time, or a decrement of decibels that requires the doubling of exposure time. For example, a 3-dB exchange rate requires that noise exposure time be halved for each 3-dB increase in noise level. Therefore, an individual would achieve the limit for risk criteria at 88 dB for a time period of 4 hours, and at 91 dB for a time period of 2 hours.) The standard assumes "quiet" (where an individual remains in an environment with noise levels less than 72 dB) for the balance of the 24-hour period. Also, Air Force and Occupational Safety and Health Administration (OSHA) occupational standards prohibit any unprotected worker exposure to continuous (i.e., of a duration greater than one second) noise exceeding a 115 dB sound level. OSHA established this additional standard to reduce the risk of workers developing noise-induced hearing loss.

The second situation where individuals may be exposed to high noise levels is when noise contours resulting from flight operations in and around the installation reach or exceed 80 dB DNL both on and off base. To access the potential impacts of this situation, the DoD published a policy for assessing hearing loss risk (DoD, 2009). The policy defines the conditions under which assessments are required, references the methodology from a 1982 USEPA report, and describes how the assessments are to be calculated. The policy reads as follows:

> "Current and future high performance aircraft create a noise environment in which the current impact analysis based primarily on annoyance may be insufficient to capture the full range of impacts on humans. As part of the noise analysis in all future environmental impact statements, DoD components will use the 80 Day-Night A-Weighted (DNL) noise contour to identify populations at the most risk of potential hearing loss. DoD components will use as part of the analysis, as appropriate, a calculation of the Potential Hearing Loss (PHL) of the at risk population. The PHL (sometimes referred to as Population Hearing Loss) methodology is

defined in USEPA Report No. 550/9-82-105, *Guidelines for Noise Impact Analysis*."

The USEPA *Guidelines for Noise Impact Analysis* (hereafter referred to as "USEPA Guidelines") specifically addresses the criteria and procedures for assessing the noise-induced hearing loss in terms of the Noise-Induced Permanent Threshold Shift (NIPTS), a quantity that defines the permanent change in hearing level, or threshold, caused by exposure to noise (USEPA, 1982). Numerically, the NIPTS is the change in threshold averaged over the frequencies 0.5, 1, 2, and 4 kilohertz (kHz) that can be expected from daily exposure to noise over a normal working lifetime of 40 years, with the exposure beginning at an age of 20 years. A grand average of the NIPTS over time (40 years) and hearing sensitivity (10 to 90 percentiles of the exposed population) is termed the Average NIPTS. The Average NIPTS attributable to noise exposure for ranges of noise level in terms of DNL is given in Table E-4.

Table E-4. Average NIPTS and 10th Percentile NIPTS as a Function of DNL*

DNL	Average NIPTS (dB)**	10th Percentile NIPTS (dB)**
80–81	3.0	7.0
81–82	3.5	8.0
82–83	4.0	9.0
83–84	4.5	10.0
84–85	5.5	11.0
85–86	6.0	12.0
86–87	7.0	13.5
87–88	7.5	15.0
88–89	8.5	16.5
89–90	9.5	18.0

dB = decibels; DNL = Day–Night Average Sound Level; NIPTS = Noise-induced Permanent Threshold Shift
*Relationships between DNL and NIPTS were derived from CHABA, 1977.
**NIPTS values rounded to the nearest 0.5 dB.

Thus, for a noise exposure within the 80- to 81-DNL contour band, the expected lifetime average value of NIPTS (hearing loss) is 3.0 dB. The Average NIPTS is estimated as an average over all people included in the at risk population. The actual value of NIPTS for any given person will depend on their physical sensitivity to noise—some will experience more loss of hearing than others. The USEPA Guidelines provide information on this variation in sensitivity in the form of the NIPTS exceeded by 10 percent of the population, which is included in Table E-4 in the "10th Percentile NIPTS" column. As in the example above, for individuals within the 80- to 81-DNL contour band, the most sensitive of the population, would be expected to show no more degradation to their hearing than experiencing a 7.0-dB Average NIPTS hearing loss. And while the DoD policy requires that hearing loss risk be estimated for the population exposed to 80 dB DNL or greater, this does not preclude populations outside the 80-dB DNL contour, i.e., at lower exposure levels, from being at some degree of risk of hearing loss.

The actual noise exposure for any person living in the at-risk area is determined by the time that person is outdoors and directly exposed to the noise. Many of the people living within the applicable DNL contour will not be present during the daytime hours—they may be at work, at school, or involved in other activities outside the at-risk area. Many will be inside their homes and thereby exposed to lower noise levels, benefitting from the noise attenuation provided by the house structure. The actual activity profile is usually impossible to generalize. For the purposes of this analysis, it was assumed that residents are fully exposed to the DNL level of noise appropriate for their residence location and the Average NIPTS taken from Table E-4.

The quantity to be reported is the number of people living within each 1-dB contour band inside the 80-dB DNL contour who are at risk for hearing loss given by the Average NIPTS for that band. The average nature of Average NIPTS means that it underestimates the magnitude of the PHL for the population most sensitive to noise. Therefore, in the interest of disclosure, the information to be reported includes both the Average NIPTS and the 10th percentile NIPTS (Table E-4) for each 1-dB contour band inside the 80-dB DNL contour.

According to the USEPA documents titled *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*, and *Public Health and Welfare Criteria for Noise*, changes in hearing levels of less than 5 dB are generally not considered noticeable or significant. There is no known evidence that an NIPTS of less than 5 dB is perceptible or has any practical significance for the individual. Furthermore, the variability in audiometric testing is generally assumed to be ±5 dB. The preponderance of available information on hearing loss risk is from the workplace with continuous exposure throughout the day for many years. Clearly, this data is applicable to the adult working population. According to a report by Ludlow and Sixsmith, there were no significant differences in audiometric test results between military personnel, who as children had lived in or near stations where jet operations were based, and a similar group who had no such exposure as children (Ludlow and Sixsmith, 1999). Hence, for the purposes of PHL analysis, it can be assumed that the limited data on hearing loss is applicable to the general population, including children, and provides a conservative estimate of hearing loss.

Effects on Children. The effect of aircraft noise on children is a controversial area. Certain studies indicate that, in certain situations, children are potentially more sensitive to noise compared to adults. For example, adults average roughly 10 percent better than young children on speech intelligibility tests in high noise environments (ASA, 2000). Some studies indicate that noise negatively impacts classroom learning (Shield and Dockrell, 2008).

In response to noise-specific and other environmental studies, Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks* (1997), requires federal agencies to ensure that their policies, programs, and activities address environmental health and safety risks and to identify any disproportionate risks to children. While the issue of noise impacts on children's learning is not fully settled, in June 2002 ANSI released a new classroom acoustics standard entitled "Acoustical Performance Criteria, Design Requirements, and Guidelines for Schools" (ANSI S12.60-2002). At present, complying with the standard is voluntary in most locations. Essentially, the criteria states that when the noisiest hour is dominated by noise from such sources as aircraft, the limits for most classrooms are an hourly average A-weighted sound level of 40 dB, and the A-weighted sound level must not exceed 40 dB for more than 10 percent of the hour. For schools located near airfields, indoor noise levels would have to be lowered by 35 to 45 dBA relative to outdoor levels (ANSI, 2002).

Non-auditory Health Effects. Non-auditory health effects of long-term noise exposure, where noise may act as a risk factor, have not been found to occur at levels below those protective against noise-induced hearing loss (as described above). Most studies attempting to clarify such health effects have found that noise exposure levels established for hearing protection will also protect against any potential non-auditory health effects, at least in workplace conditions. The lead paper at the National Institutes of Health Conference on Noise and Hearing Loss, held on 22–24 January 1990 in Washington, D.C., stated the following: "The non-auditory effects of chronic noise exposure, when noise is suspected to act as one of the risk factors in the development of hypertension, cardiovascular disease, and other nervous disorders, have never been proven to occur as chronic manifestations at levels below these criteria (an average of 75 dBA for complete protection against hearing loss for an eight-hour day)." At the 1988 International Congress on Noise as a Public Health Problem, most studies attempting to clarify such health effects did not find them at levels below the criteria protective of noise-induced hearing loss, and even above these criteria, results regarding such health effects were ambiguous. Consequently, it can be concluded that establishing and enforcing exposure levels to protect against noise-induced hearing loss would not only solve the noise-induced hearing loss problem but also any potential non-auditory health effects in the work place (von Gierke, 1990).

Although these findings were directed specifically at noise effects in the work place, they are equally applicable to aircraft noise effects in the community environment. Research studies regarding the non-auditory health effects of aircraft noise are ambiguous, at best, and often contradictory. Yet, even those studies that purport to find such health effects use time–average noise levels of 75 dB and higher for their research.

The potential for noise to affect physiological health, such as the cardiovascular system, has been speculated; however, no unequivocal evidence exists to support such claims

(Harris, 1997). Conclusions drawn from a review of health effect studies involving military low-altitude flight noise, with its unusually high maximum levels and rapid rise in sound level, have shown no correlation to cardiovascular disease (Schwartze and Thompson, 1993). Since the F-35 would fly predominantly at high altitudes, even less concern exists for such health effects. Additional unsupported claims include flyover noise that produces increased mortality rates, adverse effects on the learning ability of middle- and low-aptitude students, aggravation of post-traumatic stress syndrome, increased stress, increase in admissions to mental hospitals, and adverse effects on pregnant women and the unborn fetus (Harris, 1997). Harris' comments are based on a report by The Health Council of The Netherlands (1996). That study discusses two epidemiological studies that looked at the hearing abilities of children whose mothers had been exposed to occupational noise during pregnancy. The results were conditionally qualified by the committee concluding "…that equivalent sounds levels of 85 dB(A) or higher during an 8-hour working day appear to be detrimental to the hearing of the unborn child," but then they also recommended that further research be undertaken to verify that conclusion.

In summary, there is no scientific basis for a claim that potential health effects exist for aircraft time–average sound levels below 75 dB.

Aircraft Noise Effects on Structures. Normally, the most sensitive components of a structure to airborne noise are the windows and, infrequently, the plastered walls and ceilings. An evaluation of the peak sound pressures impinging on the structure is normally sufficient to determine the possibility of damage. In general, at sound levels above 130 dB, there is the possibility of the excitation of structural component resonance. While certain frequencies (such as 30 Hz for window breakage) may be of more concern than other frequencies, conservatively, only sounds lasting more than 1 second above a sound level of 130 dB are potentially damaging to structural components (CHABA, 1977).

One study, directed specifically at low-altitude, high-speed aircraft, showed that there is little probability of structural damage from such operations (Sutherland, 1989). Sound levels at damaging frequencies (e.g., 30 Hz for window breakage or 15 to 25 Hz for whole-house response) produced by most military aircraft are rarely above 130 dB.

Noise-induced structural vibration may also cause annoyance to dwelling occupants because of induced secondary vibrations or "rattle" of objects (such as hanging pictures, dishes, plaques, and bric-a-brac) within the dwelling. Windowpanes may also vibrate noticeably when exposed to high levels of airborne noise, causing homeowners to fear breakage. In general, such noise-induced vibrations occur at sound levels above those considered normally compatible with residential land use. Thus, assessments of noise exposure levels for compatible land use should also be protective of noise-induced secondary vibrations.

Sonic Boom Effects on Structures. Sonic booms are commonly associated with structural damage. Most damage claims are for window panes, glass and plaster. Table E-5 summarizes the threshold of damage that might be expected at various overpressures. There is a large degree of variability in damage experience, and much of the damage depends on the pre-existing condition of a structure. Breakage data for glass, for example, spans a range of two to three orders of magnitude at a given overpressure. While glass can suffer damage at low overpressures, as shown in Table E-5, laboratory tests of glass (White, 1972) have shown that properly installed window glass will not break at overpressures below 10 psf, even when subjected to repeated booms. In general, structural damage from sonic booms should be expected only for overpressures above 10 psf.

Table E-5. Possible Damage to Structures from Sonic Booms

Sonic Boom Overpressure Nominal (psf)	Type of Damage	Item Affected
0.5–2	Plaster	Fine cracks; extension of existing cracks, with more in ceilings, over doorframes, between some plaster boards.
	Glass	Rarely shattered, either partial or extension of existing.
	Roof	Slippage of existing loose tiles/slates; sometimes new cracking of old slates at nail hole.
	Damage to outside walls	Existing cracks in stucco extended.
	Bric-a-brac	Items carefully balanced or on edges can fall; fine glass, such as large goblets, can fall and break.
	Other	Dust falls in chimneys.
2–4	Glass, plaster, roofs, ceilings	Failures would have been difficult to forecast in terms of their existing, localized condition. Nominally in good condition.
4–10	Glass	Regular failures within a population of well-installed glass; industrial as well as domestic greenhouses.
	Plaster	Partial ceiling collapse of good plaster; complete collapse of very new, incompletely cured, or very old plaster.
	Roofs	High probability rate of failure in nominally good state, slurry-wash; some chance of failures in tiles on modern roofs; light roofs (bungalow) or large area can move bodily.
	Walls (out)	Old, free standing, but in fairly good condition, can collapse.
	Walls (in)	Inside ("party") walls known to move at 10 psf.
Greater than 10	Glass	Some good glass will fail regularly to sonic booms from the same direction. Glass with existing faults could shatter and fly. Large window frames move.
	Plaster	Most plaster affected.
	Ceilings	Plaster boards displaced by nail popping.

Table E-5. Possible Damage to Structures from Sonic Booms, Cont'd

Sonic Boom Overpressure Nominal (psf)	Type of Damage	Item Affected
	Roofs	Most slate/slurry roofs affected, some badly; large roofs having good tile can be affected; some roofs bodily displaced causing gale-end and will-plate cracks; domestic chimneys dislodged if not in good condition.
	Walls	Internal party walls can move even if carrying fittings such as hand basins or taps; secondary damage due to water leakage.
	Bric-a-brac	Some nominally secure items can fall; e.g., large pictures, especially if fixed to party walls.

Source: Haber and Nakaki, 1989

Noise Effects on Historical and Archaeological Sites. Aircraft noise may affect historical sites more severely than newer modern structures because of the potential for increased fragility of structural components of historical buildings and other historical sites. There are limited scientific studies of such effects to provide guidance for their assessment.

One study involved the measurement of sound levels and structural vibration levels in a superbly restored plantation house, originally built in 1795, and now situated approximately 1,500 feet from the centerline at the departure end of Runway 19L at Washington Dulles International Airport. These measurements were made in connection with the proposed scheduled operation of the supersonic Concorde airplane at Dulles (Wesler, 1977). There was special concern for the building's windows, since roughly half of the 324 panes were original. No instances of structural damage were found. Interestingly, despite the high levels of noise during Concorde takeoffs, the induced structural vibration levels were actually less than those induced by touring groups and vacuum cleaning within the building itself.

As noted above for the effects of noise-induced vibrations of normal structures, assessments of noise exposure levels for normally compatible land uses should also be protective of historic and archaeological sites.

NOISE IMPACTS MODELING

Aircraft Noise

Subsonic Aircraft Noise. An aircraft in subsonic flight emits noise from two sources: the engines and flow noise around the airframe. To estimate noise impacts on the ground, the DoD first measures noise from each aircraft in several flight configurations in straight and level flight at a reference altitude above an array of microphones. These measurements are stored in the NOISEFILE database. Next, this information on aircraft source noise is applied to a computer model to show how aircraft noise can be expected to propagate in real-world conditions. The algorithms at the core of these models account for spherical spreading, atmospheric absorption, and lateral attenuation. Spherical spreading is, in essence, the reduction in noise due to the spreading of sound energy away from its source. Sound energy decreases by approximately 6 dB every time the distance between the source and receiver is doubled. Daily and hourly variations in atmospheric conditions (such as humidity and clouds) can alter the amount of sound energy at a given location. The noise models use monthly average temperature and humidity conditions to derive acoustically average atmospheric absorption coefficients for each given location. Lateral attenuation, or the loss of sound energy due to reflection of sound by the ground, depends upon the altitude of the aircraft and the distance to the receiver.

The Air Force has developed a series of computer models to handle modeling of aircraft noise in various situations. To describe airfield noise in the vicinity of an installation, the model NOISEMAP (Version 7.0) was used. NOISEMAP extracts data (speed and power setting of the aircraft) from the NOISEFILE database. The noise from each segment of each flight track from each aircraft then is summed to generate a map of average noise levels on the ground, which are typically expressed using the DNL metric. The model accounts for all operations, including both based and transient aircraft (Moulton, 1992). NOISEMAP results have been field tested against actual long-term noise level measurements and found to be valid (Armstrong Laboratories, 1991).

MR_NMAP was used to compute noise levels in the MOAs and Warning Areas (Lucas and Calamia, 1994). The primary noise metric computed by MR_NMAP is L_{dnmr} averaged over each airspace. MR_NMAP also uses data from the NOISEFILE database based on aircraft speed and power setting, but it spreads the noise energy throughout specified volumes of airspace. Both models calculate the noise levels based on aircraft operations data obtained from aircrews and airspace managers. These data include airspeed, duration of flight, altitudes of flight, distribution of aircraft in the airspace, and frequency of flight activities.

Noise levels for the pre-production F-35A aircraft were measured for limited conditions by Lockheed-Martin during initial testing in 2001 and then re-measured by the U.S. Air Force in 2007 (Mineral Wells) and 2008 (Edwards Air Force Base [AFB]). The Air Force Research Laboratory (AFRL) incorporated the 2008 data into the NOISEFILE database, which was then used as the source for noise analysis in this document.

Supersonic Aircraft Noise. Aircraft exceeding Mach 1 (the speed of sound) always create a sonic boom; however, not all supersonic flight activities will cause a boom that can be heard at ground level. As altitude increases, air temperature decreases, and the resulting layers of temperature change cause booms to be turned upward as they travel toward the ground. Depending on the altitude of the aircraft and the Mach number, many sonic booms are turned upward sufficiently that they never reach the ground. This same phenomenon, referred to as "cutoff," also acts to limit the width (area covered) of the sonic booms that reach the ground (Plotkin et al., 1989).

The computer program BOOMAP was used to model sonic booms associated with the proposed F-35 training. BOOMAP predicts CDNL beneath military airspace units based on variables such as airspace geometry and number of operations. The model accounts for altitude distribution, maneuver characteristics, variation in operations numbers, and atmosphere effects. The current version of BOOMAP was developed based on extensive field measurements of sonic booms (Frampton et al., 1993).

Construction Noise

Construction noise was modeled using the Roadway Construction Noise Model (RCNM) version 1.00, the Federal Highway Administration's (FHWA's) standard model for the prediction of construction noise (FHWA, 2006). The RCNM has the capability to model the types of construction equipment that are expected to be the dominant noise sources during construction associated with this action. The program uses a database of construction equipment source noise taken at a standard distance of 50 feet. Information on the noise level of each piece of equipment involved in construction is combined with data on what percentage of the time each piece of equipment would be running and the length of the workday to produce an equivalent noise level for the work site. The model adjusts for sound barriers that may reduce impact of the sound as well as a sound's being impulsive (banging), which increases the intrusiveness of the sound. The model yields L_{eq} and L_{max} at various distances and/or receptor locations.

Munitions Noise

The program BNoise2 was used to assess blast noise associated with expenditure of large-caliber munitions on the range. This program estimates CDNL based on type of weapon and ammunition, number of rounds fired, time-of-day of rounds fired, range attributes, and weather. The software also accounts for spectrum and directivity of both muzzle blast and projectile sonic boom. Source noise levels are based on field measurements of weapons noise.

BNoise2 is capable of producing both single-event and average noise levels. The DNL has been endorsed by the scientific community and several governmental agencies (ANSI, 1980, 1988; USEPA, 1974; FICUN, 1980; FICON, 1992) for use in assessing transportation and other types of noise. However, the U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM) has concluded that the use of average noise levels over a protracted time period generally does not adequately assess the probability of community noise complaints from weapons firing. Therefore, modeling and analysis of munitions noise in this EIS were performed for both DNL and PK_{15}(met) metrics.

To assess noise effects, the USACHPPM has defined three noise zones to be considered in land use planning. The zones are described by the noise levels to which they are exposed, and based on sociological considerations, compatible land uses are recommended.

Noise Zone I (NZ I) includes all areas in which the PK_{15}(met) decibel level is less than 87 dB (for small arms), the A-weighted DNL (ADNL) is less than 65 dB (for aircraft), and the CDNL is less than 62 dB (for large arms and explosions). NZ I is usually the furthest zone from the noise source, and it basically includes all areas not in either of the next two zones. As a rule, this area is suitable for all types of land use.

Noise Zone II (NZ II) is the next furthest area away from the noise source where the PK_{15}(met) decibel level is between 87 and 104 dB, the ADNL is between 65 and 75 dB, or the CDNL is between 62 and 70 dB. The noise exposure here is considered significant, and the use of land in this zone should generally be limited to activities such as manufacturing, warehousing, transportation, and resource protection. Residential use is strongly discouraged; however, if the community determines that this land must be used for houses, there should be a requirement that NLR features be integrated into the design and construction of houses. Further details of NLR ideas and strategies are available from USACHPPM.

Noise Zone III (NZ III) is the area closest to the source of the noise where the PK_{15}(met) decibel level is greater than 104 dB, the ADNL is greater than 75 dB, or the CDNL is greater than 70 dB. The noise level is so severe that no noise-sensitive uses should be considered in this area.

One final zone is the more informal Land Use Planning Zone. This zone is at the upper end of NZ I and is defined by a CDNL of 57 to 62 dB or an ADNL of 60 to 65 dB. It accounts for the fact that some installations have seasonal variability in their operations (or several unusually busy days during certain times of the year), and that averaging those busier days over the course of a year (as with the DNL) effectively dilutes their impact. Showing this extra zone creates one more added buffer layer to encroachment, and it signals to planners that encroachment into this area is the beginning of where complaints may become an issue. It also signals that extra care should be taken when approving plans.

Table E-6 shows all of the noise zones by the respective noise levels.

Table E-6. Noise Zone Levels

Zone	Noise Limit Aviation ADNL in A-Weighted dB	Noise Limit Impulsive CDNL in C-Weighted dB
Land Use Planning Zone	60–65	57–62
Noise Zone I	< 65	< 62
Noise Zone II	65–75	62–70
Noise Zone III	> 75	> 70

Source: Army Regulation 200-1, Environmental Protection and Enhancement, 13 December 2007.
ADNL = A-Weighted DNL; CDNL = C-Weighted DNL; PK_{15}(met) = Single Event Peak Level exceeded by 15% of events; < = less than; > = greater then; N/A = Not Applicable

(a) Although local conditions regarding the need for housing may require noise-sensitive land uses in NZ II, on or off base, this type of land use is strongly discouraged. The absence of viable alternative development options should be determined, and an evaluation should be conducted locally prior to local approvals, indicating that a demonstrated community need for the noise-sensitive land use would not be met if development were prohibited in NZ II.

(b) Where the community determines that these uses must be allowed, measures to achieve an outdoor-to-indoor NLR of at least 25 to 30 dB in NZ II, from small arms and aviation noise, should be incorporated into building codes and contained in individual approvals. The NLR for communities subjected to large-caliber weapons and the weapons system noise is lacking scientific studies to accomplish the recommended NLR. For this reason, it is strongly discouraged that noise-sensitive land uses be allowed in NZ II where large-caliber weapons use occurs.

(c) Normal permanent construction can be expected to provide a NLR of 20 dB for aircraft and small arms; thus, the reduction requirements are often stated as 5, 10, or 15 dB over standard construction, and they normally assume mechanical ventilation, upgraded Sound Transmission Class ratings in windows and doors, and closed windows year-round. Additional consideration should be given to modifying NLR levels based on peak noise levels or vibrations.

(d) NLR criteria will not eliminate outdoor noise problems. However, building location and site planning and the design and use of berms and barriers can help mitigate outdoor noise exposure NLR, particularly from ground-level aircraft sources. Barriers are generally not effective in noise reduction for large arms such as artillery and armor or large explosions.

Noise-Sensitive Receptor Analysis

Forty potentially noise-sensitive locations (noise-sensitive receptors) were selected for detailed analysis. The locations are listed (in latitude/longitude format) in Table E-7 and shown graphically in Figure E-7 through Figure E-9.

Table E-7. Geographic Locations of Noise-Sensitive Receptors

Loc. ID	General Description	Latitude	Longitude
SP01	Eglin Housing (Capehart)	30.4621000000000	86.5343370000000
SP02	Eglin Housing (Ben's Lake)	30.4663100000000	86.5440770000000
SP03	Chapel 2 - Building 2574	30.4675750000000	86.5485880000000
SP04	Cherokee Elem. School	30.4676540000000	86.5453840000000
SP05	Child Development Center	30.4678770000000	86.5395110000000
SP06	Oakhill School (recently closed)	30.4706650000000	86.5357330000000
SP07	Eglin Hospital	30.4617700000000	86.5550850000000
SP08	Eglin VAQ and Dorms	30.4851890000000	86.5015720000000

Table E-7. Geographic Locations of Noise-Sensitive Receptors, Cont'd

Loc. ID	General Description	Latitude	Longitude
SP09	Eglin Chapel 1	30.4859910000000	86.4970980000000
SP10	JSF ITC	30.4781560000000	86.5494370000000
SP11	Lewis Middle School	30.4926410000000	86.4930220000000
SP12	Valparaiso Elementary School	30.5119800000000	86.5032440000000
SP13	First Assembly of God (Valp)	30.5112750000000	86.5052380000000
SP14	New Hope Baptist (Valp)	30.5123770000000	86.5049140000000
SP15	Sovereign Grace Church (Valp)	30.5109380000000	86.5011530000000
SP16	First Baptist Church (Valp)	30.5103330000000	86.4991660000000
SP17	Unitarian Church (Valp)	30.5136190000000	86.4934440000000
SP18	#1 Housing (Valp)	30.5086450000000	86.5053760000000
SP19	#2 Housing (Valp)	30.5151280000000	86.5056270000000
SP20	Edge Elementary School	30.5272030000000	86.4947540000000
SP21	Twin Cities Medical Center	30.5335930000000	86.4956500000000
SP22	Niceville Community Church	30.5212470000000	86.5052940000000
SP23	Private School (Niceville)	30.5164070000000	86.5075210000000
SP24	Private School (Ft. Walton)	30.4705360000000	86.6070200000000
SP25	Okaloosa Walton College	30.4691000000000	86.6146540000000
SP26	Kenwood Elementary	30.4589320000000	86.6076810000000
SP27	Pryor Middle School	30.4456270000000	86.6100980000000
SP28	Housing (Ft. Walton Bch)	30.4680520000000	86.6067130000000
SP29	Residential property south of Hwy 90 in Crestview	30.7517651702521	86.5012921160185
SP30	Shalimar Elementary School	30.4495035496461	86.5746436534268
SP31	Shalimar Residential	30.4439058224344	86.5572388086836
SP32	Residential Poquito Bayou West Side	30.4575528839546	86.5795831397205
SP33	Univ. FL REEF	30.4753867930517	86.5731782196530
SP34	Eglin AFB Building 1 (AAC HQ)	30.4827484193627	86.5011571210095
SP35	Eglin AFB, Building 6 (ABW HQ)	30.4833454188862	86.5070443735942
SP36	Eglin Law Center (Bldg 2)	30.4832058086114	86.5077717578130
SP37	Saint Sylvester Catholic Church, Gulf Breeze	30.4039314470488	86.9524361254115
SP38	Residential, north of Choctaw	30.5866258267775	86.9458185251320
SP39	Residential, south of Choctaw	30.4492392209843	86.9329297433094
SP40	Okaloosa County Prison	30.6960669750000	86.5309960425000

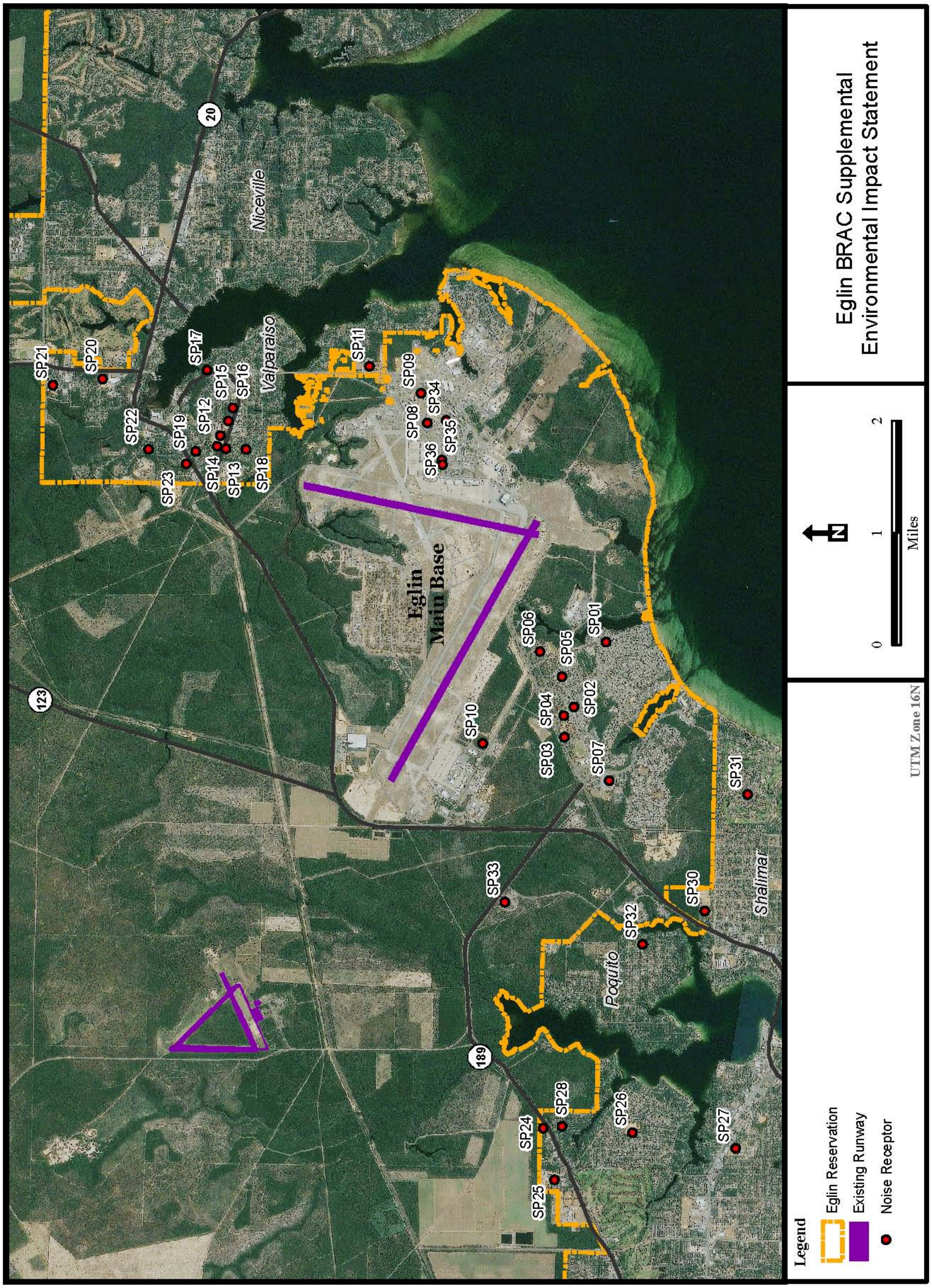

Figure E-7. Locations of Representative Noise-Sensitive Receptors Near Eglin Main

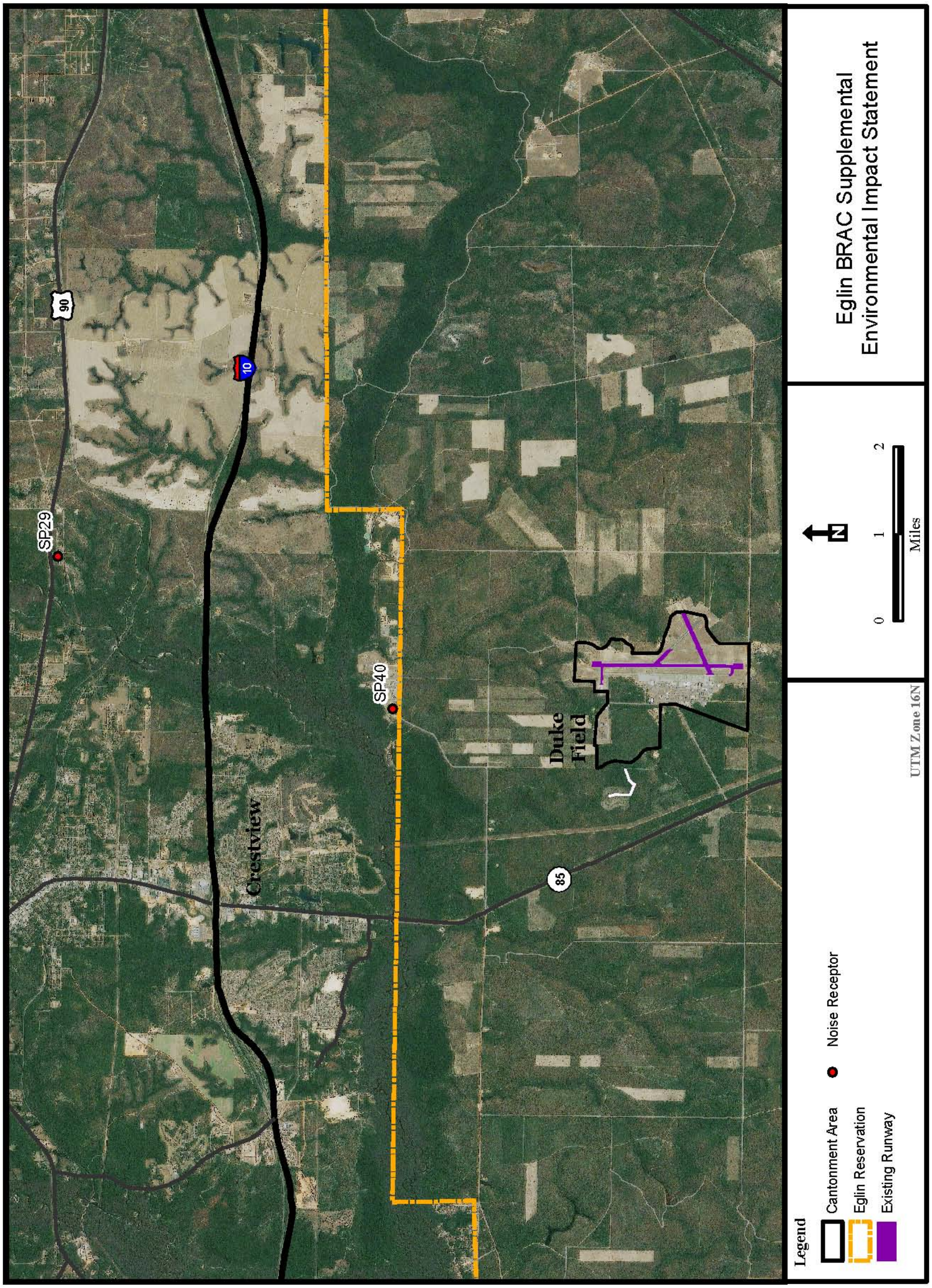

Figure E-8. Locations of Representative Noise-Sensitive Receptors Near Duke Field

1

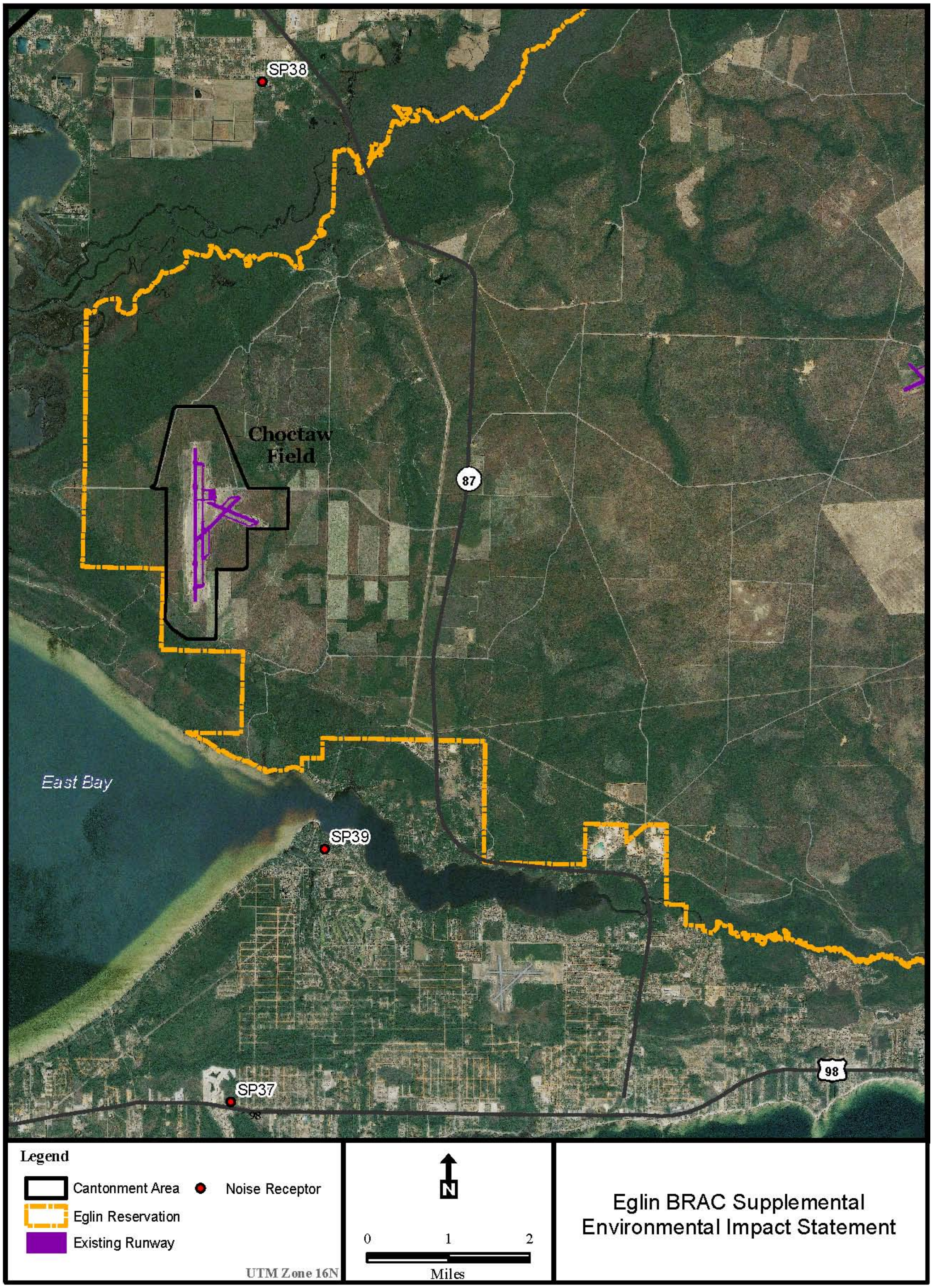

Figure E-9. Locations of Representative Noise-Sensitive Receptors Near Choctaw Field

2

Table E- 8 through Table E-15 describe the three flight profiles that contribute most to overall time-averaged noise levels (DNL) at each of the representative noise-sensitive receptors selected for analysis, for each alternative analyzed in this EIS. In other words, they are the flight profiles most likely to be annoying due to high overflight noise level, frequency of events and/or frequency of late-night events. It should be noted that these three "top contributor" flight profiles are not the only flight profiles that would be heard at the representative locations.

For each noise-sensitive receptor in Table E- 8 through Table E-15, the top three ranked aircraft noise events are described. For example, at SP01 under the No Action Alternative, the top-ranked noise event is an F-35B aircraft departure from Runway 12 at Eglin, following flight track 12D1, with engine power at 100% Engine Thrust Request (ETR), a speed of 114 KIAS, at a distance of 5,664 feet from the noise-sensitive receptor. Under the No Action Alternative, this event would occur 13.3 times on an Average Annual Day, and would have a SEL of 99 dB. The term "slant distance" (abbreviated "slant dist.") refers to the distance between the aircraft and the facility being analyzed. The following abbreviations are used in the tables for operation types: PAT (Closed Pattern), DEP (Departure), ARR (Arrival), and ITF (Interfacility). For engine power settings,%ETR (Percent Engine Thrust Request),% NC (Percent Engine Speed), IN-LBS (Inch-Pounds of Torque), LBS (Pounds of Thrust), and EPR (Engine Pressure Ratio). In cases where the listed aircraft speed is zero, the aircraft is on the runway, initiating its departure. In cases where the slant distance is listed as "*****", the distance between the aircraft and the location being analyzed is greater than 99,999 feet.

Table E- 8. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under the No Action Alternative

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP01	1	F-35B	DEP	12	12D31	Eglin	100.00% ETR	114	5664	13.3	0.0	99.1
SP01	2	F-35C	DEP	12	12D3	Eglin	100.00% ETR	244	5674	13.2	0.0	97.8
SP01	3	F-35B	ITF	18	18D1-12SB4	Duke	35.00% ETR	350	6065	0.7	0.0	107.8
SP02	1	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	1659	2.2	0.0	108.3
SP02	2	F-35B	ITF	18	18D1-12NB4	Duke	35.00% ETR	350	6100	0.7	0.0	109.7
SP02	3	F-35B	DEP	12	12D3	Eglin	100.00% ETR	114	5855	13.3	0.0	98.1
SP03	1	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	1058	2.2	0.0	111.3
SP03	2	F-35B	ITF	18	18D1-12NB4	Duke	35.00% ETR	350	6384	0.7	0.0	109.5
SP03	3	F-35C	PAT	12	12F1	Eglin	100.00% ETR	145	6185	12.5	0.0	96.8
SP04	1	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	1490	2.2	0.0	109.6
SP04	2	F-35B	ITF	18	18D1-12NB4	Duke	35.00% ETR	350	5880	0.7	0.0	110.5
SP04	3	F-35B	DEP	12	12D3	Eglin	100.00% ETR	114	5635	13.3	0.0	98.4
SP05	1	F-35B	DEP	12	12D3	Eglin	100.00% ETR	114	4647	13.3	0.0	101.6
SP05	2	F-35B	ITF	18	18D1-12NB4	Duke	35.00% ETR	350	5025	0.7	0.0	112
SP05	3	F-35B	ITF	18	18D1-12SB4	Duke	35.00% ETR	350	4938	0.7	0.0	111.6
SP06	1	F-35B	DEP	12	12D3	Eglin	100.00% ETR	114	3178	13.3	0.0	106.2
SP06	2	F-35B	ITF	18	18D1-12SB4	Duke	35.00% ETR	350	3586	0.7	0.0	116.1
SP06	3	F-35C	DEP	12	12D3	Eglin	100.00% ETR	244	3178	13.2	0.0	104.7
SP07	1	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	2740	2.2	0.0	101.3
SP07	2	F-35B	ITF	18	18D1-12NB4	Duke	35.00% ETR	350	9167	0.7	0.0	102.6
SP07	3	F-35C	PAT	12	12F1	Eglin	100.00% ETR	145	9014	12.5	0.0	90.9
SP08	1	F-35B	DEP	12	12D3	Eglin	100.00% ETR	246	6780	13.3	0.0	96.2
SP08	2	F-35C	DEP	12	12D3	Eglin	100.00% ETR	273	6872	13.2	0.0	95.6
SP08	3	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	2050	2.5	0.0	102.3
SP09	1	F-35B	DEP	12	12D3	Eglin	100.00% ETR	246	7735	13.3	0.0	94.3

Table E-8. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under the No Action Alternative, Cont'd

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP09	2	F-35C	DEP	12	12D3	Eglin	100.00% ETR	300	7864	13.2	0.0	93.7
SP09	3	F-35A	DEP	12	12D3	Eglin	100.00% ETR	300	7864	9.7	0.0	93.7
SP10	1	F-35B	ITF	18	18D1-12NB4	Duke	35.00% ETR	350	3365	0.7	0.0	117.9
SP10	2	F-35C	PAT	30	30F1	Eglin	100.00% ETR	145	1625	2.2	0.0	114
SP10	3	F-35C	PAT	12	12F1	Eglin	100.00% ETR	145	2953	12.5	0.0	106.1
SP11	1	F-35B	DEP	12	12D3	Eglin	100.00% ETR	246	10469	13.3	0.0	89.7
SP11	2	F-35C	DEP	12	12D3	Eglin	100.00% ETR	300	10562	13.2	0.0	89.6
SP11	3	F-35A	DEP	12	12D3	Eglin	100.00% ETR	300	10562	9.7	0.0	89.6
SP12	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	1606	0.3	0.0	111
SP12	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	1606	0.3	0.0	111
SP12	3	F-16C	PAT	01	01C1	Eglin	93.00% NC	200	1920	0.4	0.0	103.9
SP13	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	1050	0.3	0.0	114.9
SP13	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	1050	0.3	0.0	114.9
SP13	3	F-16C	PAT	01	01C1	Eglin	93.00% NC	200	1415	0.4	0.0	107.2
SP14	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	1068	0.3	0.0	114.9
SP14	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	1068	0.3	0.0	114.9
SP14	3	F-16C	PAT	01	01C1	Eglin	93.00% NC	200	1488	0.4	0.0	106.6
SP15	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	2325	0.3	0.0	107.2
SP15	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	2325	0.3	0.0	107.2
SP15	3	F-35C	PAT	12	12F1	Eglin	65.00% ETR	145	8789	12.5	0.0	87.7
SP16	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	2981	0.3	0.0	104.6
SP16	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	2981	0.3	0.0	104.6
SP16	3	F-35C	PAT	12	12F1	Eglin	65.00% ETR	145	9201	12.5	0.0	87.2
SP17	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	4493	0.3	0.0	100.2
SP17	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	4493	0.3	0.0	100.2

Table E-8. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under the No Action Alternative, Cont'd

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP17	3	F-35C	PAT	12	12F1	Eglin	65.00% ETR	145	11351	12.5	0.0	84.1
SP18	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	1202	0.3	0.0	113.6
SP18	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	1202	0.3	0.0	113.6
SP18	3	F-16C	PAT	01	01C1	Eglin	93.00% NC	200	1488	0.4	0.0	107
SP19	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	660	0.3	0.0	118.9
SP19	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	660	0.3	0.0	118.9
SP19	3	E-3A	PAT	19	19C6	Eglin	1.30 EPR	140	683	0.7	0.0	106.5
SP20	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	3094	0.3	0.0	105
SP20	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	3094	0.3	0.0	105
SP20	3	DC-9-30QN9 (Q)	DEP	01	01D8	Eglin	12426.00 LBS	166	3695	0.2	0.1	92.5
SP21	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	2398	0.3	0.0	107.7
SP21	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	2398	0.3	0.0	107.7
SP21	3	F-35A	ARR	19	19A2	Eglin	55.00% ETR	170	1601	0.1	0.0	102.6
SP22	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	387	0.3	0.0	123.1
SP22	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	387	0.3	0.0	123.1
SP22	3	F-15A	PAT	19	19C1	Eglin	80.00% NC	160	477	1.4	0.0	103.2
SP23	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	239	0.3	0.0	126.4
SP23	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	239	0.3	0.0	126.4
SP23	3	E-3A	PAT	19	19C6	Eglin	1.20 EPR	160	313	0.7	0.0	112
SP24	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	1982	0.8	0.0	99
SP24	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	7244	1.6	0.8	80.7
SP24	3	C-130H&N&P	PAT	30	30C1	Eglin	16000.00 IN-LBS	150	2026	2.5	0.0	85.3
SP25	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	3211	0.8	0.0	93.2
SP25	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	8349	1.6	0.8	78.6
SP25	3	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	7388	2.4	1.6	73.9

Table E-8. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under the No Action Alternative, Cont'd

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP26	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	2298	0.8	0.0	97.4
SP26	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	7085	1.6	0.8	80.8
SP26	3	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	6108	2.4	1.6	75.8
SP27	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	2838	0.8	0.0	94.9
SP27	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	7367	1.6	0.8	80.2
SP27	3	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	6600	2.4	1.6	74.8
SP28	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	2043	0.8	0.0	98.7
SP28	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	7150	1.6	0.8	80.9
SP28	3	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	6036	2.4	1.6	76.5
SP29	1	F-35B	PAT	18	18DF2	Duke	55.00% ETR	150	4593	0.0	0.2	90.4
SP29	2	F-35C	PAT	18	18I2	Duke	33.00% ETR	225	4735	1.7	0.1	87.8
SP29	3	F-35A	PAT	18	18I2	Duke	33.00% ETR	225	4735	1.0	0.1	87.8
SP30	1	F-35C	PAT	12	12F1	Eglin	55.00% ETR	145	15941	12.5	0.0	80.1
SP30	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	8848	1.6	0.8	80.5
SP30	3	F-35C	DEP	12	12D3	Eglin	150.00% ETR	0	15941	13.2	0.0	78.9
SP31	1	F-35C	DEP	12	12D3	Eglin	100.00% ETR	203	14986	13.2	0.0	82.4
SP31	2	F-35B	DEP	12	12D3	Eglin	100.00% ETR	114	14987	13.3	0.0	82.2
SP31	3	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	7519	2.2	0.0	89.1
SP32	1	F-35C	PAT	12	12F1	Eglin	55.00% ETR	145	14175	12.5	0.0	81.1
SP32	2	F-35C	DEP	12	12D3	Eglin	150.00% ETR	0	14290	13.2	0.0	79.4
SP32	3	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	8295	1.6	0.8	80.1
SP33	1	F-35B	ITF	18	18D1-12NB4	Duke	35.00% ETR	350	7700	0.7	0.0	102
SP33	2	F-35C	PAT	12	12F1	Eglin	55.00% ETR	145	7545	12.5	0.0	89.9
SP33	3	F-35B	ITF	12	12FRVL1	Eglin	75.00% ETR	120	7543	3.9	0.0	93.3
SP34	1	F-35B	DEP	12	12D3	Eglin	100.00% ETR	246	6081	13.3	0.0	97.6

Table E-8. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under the No Action Alternative, Cont'd

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP34	2	F-35C	DEP	12	12D3	Eglin	100.00% ETR	300	6207	13.2	0.0	96.8
SP34	3	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	1890	2.5	0.0	103.5
SP35	1	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	1425	2.5	0.0	107
SP35	2	F-35B	DEP	12	12D3	Eglin	100.00% ETR	246	5340	13.3	0.0	99.4
SP35	3	F-35B	ITF	18	18D1-12SB4	Duke	35.00% ETR	350	1933	0.7	0.0	109.4
SP36	1	F-35B	DEP	12	12D3	Eglin	100.00% ETR	246	5182	13.3	0.0	99.7
SP36	2	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	1496	2.5	0.0	106.6
SP36	3	F-35B	ITF	18	18D1-12SB4	Duke	35.00% ETR	350	1837	0.7	0.0	110
SP37	1	F-35C	ITF	18	18D1	Choctaw	35.00% ETR	300	7471	2.7	0.2	82.9
SP37	2	F-35A	ITF	18	18D1	Choctaw	35.00% ETR	300	7471	1.2	0.0	82.9
SP37	3	F-35C	ARR	36	36B1	Choctaw	27.00% ETR	350	2990	0.5	0.1	78.5
SP38	1	F-35C	ITF	36	36D1	Choctaw	35.00% ETR	300	8380	2.7	0.2	89.6
SP38	2	F-35A	ITF	36	36D1	Choctaw	35.00% ETR	300	8380	1.2	0.0	89.6
SP38	3	F-35C	PAT	18	18F1	Choctaw	65.00% ETR	145	16730	13.5	0.9	73.6
SP39	1	F-35C	ITF	18	18D1	Choctaw	100.00% ETR	300	9991	2.7	0.2	89.9
SP39	2	F-35C	PAT	36	36F1	Choctaw	65.00% ETR	145	13935	13.5	0.9	78.4
SP39	3	F-35A	ITF	18	18D1	Choctaw	100.00% ETR	300	9991	1.2	0.0	89.9
SP40	1	F-35C	ARR	18	18A1	Duke	55.00% ETR	170	2698	1.9	0.1	97.9
SP40	2	F-35C	PAT	18	18I1	Duke	55.00% ETR	170	2706	1.7	0.1	98.1
SP40	3	F-16A	DEP	36	36D1	Duke	92.30% NC	300	2767	1.7	0.0	98.6

Table E-9. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 1A

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP01	1	F-35B	DEP	12	12D3	Eglin	100.00% ETR	114	5664	10.1	0.0	99.1
SP01	2	F-35C	PAT	30	30F1	Eglin	57.00% ETR	145	2212	3.5	0.0	102.7
SP01	3	F-35B	ITF	18	18D1-12SB4	Duke	35.00% ETR	350	6065	0.7	0.0	107.8
SP02	1	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	1659	3.5	0.0	108.3
SP02	2	F-35B	ITF	18	18D1-12NB4	Duke	35.00% ETR	350	6100	0.7	0.0	109.7
SP02	3	F-35B	ITF	18	18D1-12SB4	Duke	35.00% ETR	350	6095	0.7	0.0	108.4
SP03	1	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	1058	3.5	0.0	111.3
SP03	2	F-35B	ITF	18	18D1-12NB4	Duke	35.00% ETR	350	6384	0.7	0.0	109.5
SP03	3	F-35B	PAT	30	30F1	Eglin	55.00% ETR	150	1058	0.9	0.0	108.8
SP04	1	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	1490	3.5	0.0	109.6
SP04	2	F-35B	ITF	18	18D1-12NB4	Duke	35.00% ETR	350	5880	0.7	0.0	110.5
SP04	3	F-35B	ITF	18	18D1-12SB4	Duke	35.00% ETR	350	5880	0.7	0.0	108.8
SP05	1	F-35B	ITF	18	18D1-12NB4	Duke	35.00% ETR	350	5025	0.7	0.0	112
SP05	2	F-35B	ITF	18	18D1-12SB4	Duke	35.00% ETR	350	4938	0.7	0.0	111.6
SP05	3	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	3014	3.5	0.0	106.4
SP06	1	F-35B	ITF	18	18D1-12SB4	Duke	35.00% ETR	350	3586	0.7	0.0	116.1
SP06	2	F-35B	DEP	12	12D3	Eglin	100.00% ETR	114	3178	10.1	0.0	106.2
SP06	3	F-35B	ITF	18	18D1-12NB4	Duke	35.00% ETR	350	3782	0.7	0.0	115.4
SP07	1	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	2740	3.5	0.0	101.3
SP07	2	F-35B	ITF	18	18D1-12NB4	Duke	35.00% ETR	350	9167	0.7	0.0	102.6
SP07	3	F-35C	PAT	12	12F1	Eglin	100.00% ETR	145	9014	10.9	0.0	90.9
SP08	1	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	2050	2.5	0.0	102.3
SP08	2	F-35B	DEP	12	12D3	Eglin	100.00% ETR	246	6780	10.1	0.0	96.2
SP08	3	F-35C	DEP	12	12D3	Eglin	100.00% ETR	273	6872	10.1	0.0	95.6
SP09	1	F-35B	DEP	12	12D3	Eglin	100.00% ETR	246	7735	10.1	0.0	94.3

Table E-9. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 1A, 59 Aircraft, Cont'd

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP09	2	F-35C	DEP	12	12D3	Eglin	100.00% ETR	300	7864	10.1	0.0	93.7
SP09	3	F-35A	DEP	12	12D3	Eglin	100.00% ETR	300	7864	7.4	0.0	93.7
SP10	1	F-35C	PAT	30	30F1	Eglin	100.00% ETR	145	1625	3.5	0.0	114
SP10	2	F-35B	ITF	18	18D1-12NB4	Duke	35.00% ETR	350	3365	0.7	0.0	117.9
SP10	3	F-35C	PAT	12	12F1	Eglin	100.00% ETR	145	2953	10.9	0.0	106.1
SP11	1	F-35C	DEP	01	01DD3	Eglin	100.00% ETR	244	6222	3.7	0.0	96
SP11	2	F-35A	DEP	01	01DD3	Eglin	100.00% ETR	244	6222	2.7	0.0	96
SP11	3	F-35B	DEP	12	12D3	Eglin	100.00% ETR	246	10469	10.1	0.0	89.7
SP12	1	F-35C	DEP	01	01DD3	Eglin	100.00% ETR	273	1966	3.7	0.0	110.4
SP12	2	F-35A	DEP	01	01DD3	Eglin	100.00% ETR	273	1966	2.7	0.0	110.4
SP12	3	F-35B	DEP	01	01DD3	Eglin	100.00% ETR	246	1666	0.8	0.0	112.7
SP13	1	F-35C	DEP	01	01DD3	Eglin	100.00% ETR	273	1495	3.7	0.0	113.7
SP13	2	F-35A	DEP	01	01DD3	Eglin	100.00% ETR	273	1495	2.7	0.0	113.7
SP13	3	F-35B	DEP	01	01DD3	Eglin	100.00% ETR	246	1131	0.8	0.0	117.3
SP14	1	F-35C	DEP	01	01DD3	Eglin	100.00% ETR	273	1561	3.7	0.0	113.1
SP14	2	F-35A	DEP	01	01DD3	Eglin	100.00% ETR	273	1561	2.7	0.0	113.1
SP14	3	F-35B	DEP	01	01DD3	Eglin	100.00% ETR	246	1156	0.8	0.0	117
SP15	1	F-35C	DEP	01	01DD3	Eglin	100.00% ETR	273	2572	3.7	0.0	107.4
SP15	2	F-35A	DEP	01	01DD3	Eglin	100.00% ETR	273	2572	2.7	0.0	107.4
SP15	3	F-35B	DEP	01	01DD3	Eglin	100.00% ETR	246	2367	0.8	0.0	108.8
SP16	1	F-35C	DEP	01	01DD3	Eglin	100.00% ETR	273	3178	3.7	0.0	104.9
SP16	2	F-35A	DEP	01	01DD3	Eglin	100.00% ETR	273	3178	2.7	0.0	104.9
SP16	3	F-35B	DEP	01	01DD3	Eglin	100.00% ETR	246	3015	0.8	0.0	106.1
SP17	1	F-35C	DEP	01	01DD3	Eglin	100.00% ETR	300	4720	3.7	0.0	100.6
SP17	2	F-35A	DEP	01	01DD3	Eglin	100.00% ETR	300	4720	2.7	0.0	100.6

Table E-9. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 1A, 59 Aircraft, Cont'd

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP17	3	F-35B	DEP	01	01DD3	Eglin	100.00% ETR	246	4525	0.8	0.0	101.4
SP18	1	F-35C	DEP	01	01DD3	Eglin	100.00% ETR	273	1512	3.7	0.0	113.7
SP18	2	F-35A	DEP	01	01DD3	Eglin	100.00% ETR	273	1512	2.7	0.0	113.7
SP18	3	F-35B	DEP	01	01DD3	Eglin	100.00% ETR	246	1266	0.8	0.0	115.9
SP19	1	F-35B	DEP	01	01DD3	Eglin	100.00% ETR	246	825	0.8	0.0	120.5
SP19	2	F-35C	DEP	01	01DD3	Eglin	100.00% ETR	300	1486	3.7	0.0	113.5
SP19	3	F-35A	DEP	01	01DD3	Eglin	100.00% ETR	300	1486	2.7	0.0	113.5
SP20	1	F-35C	DEP	01	01DD3	Eglin	100.00% ETR	300	4282	3.7	0.0	101.4
SP20	2	F-35A	DEP	01	01DD3	Eglin	100.00% ETR	300	4282	2.7	0.0	101.4
SP20	3	F-35A	ARR	19	19A2	Eglin	55.00% ETR	170	2457	2.5	0.2	98.8
SP21	1	F-35A	ARR	19	19A2	Eglin	55.00% ETR	170	1601	2.5	0.2	102.6
SP21	2	F-35C	DEP	01	01DD3	Eglin	100.00% ETR	300	4382	3.7	0.0	101.1
SP21	3	F-35C	ARR	19	19A2	Eglin	55.00% ETR	170	1601	1.4	0.1	102.6
SP22	1	F-35B	DEP	01	01DD3	Eglin	100.00% ETR	300	777	0.8	0.0	120.9
SP22	2	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	387	0.3	0.0	123.1
SP22	3	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	387	0.3	0.0	123.1
SP23	1	F-35B	DEP	01	01DD3	Eglin	100.00% ETR	246	592	0.8	0.0	123.8
SP23	2	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	239	0.3	0.0	126.4
SP23	3	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	239	0.3	0.0	126.4
SP24	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	1982	0.8	0.0	99
SP24	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	7244	1.6	0.8	80.7
SP24	3	C-130H&N&P	PAT	30	30C1	Eglin	16000.00 IN-LBS	150	2026	2.5	0.0	85.3
SP25	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	3211	0.8	0.0	93.2
SP25	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	8349	1.6	0.8	78.6
SP25	3	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	7388	2.4	1.6	73.9

Table E-9. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 1A, 59 Aircraft, Cont'd

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP26	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	2298	0.8	0.0	97.4
SP26	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	7085	1.6	0.8	80.8
SP26	3	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	6108	2.4	1.6	75.8
SP27	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	2838	0.8	0.0	94.9
SP27	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	7367	1.6	0.8	80.2
SP27	3	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	6600	2.4	1.6	74.8
SP28	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	2043	0.8	0.0	98.7
SP28	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	7150	1.6	0.8	80.9
SP28	3	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	6036	2.4	1.6	76.5
SP29	1	F-35B	PAT	18	18DF2	Duke	55.00% ETR	150	4593	0.0	0.2	90.4
SP29	2	F-35C	PAT	18	18I2	Duke	33.00% ETR	225	4735	1.7	0.1	87.8
SP29	3	F-35A	PAT	18	18I2	Duke	33.00% ETR	225	4735	1.0	0.1	87.8
SP30	1	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	10147	3.5	0.0	85.7
SP30	2	F-35C	PAT	12	12F1	Eglin	55.00% ETR	145	15941	10.9	0.0	80.1
SP30	3	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	8848	1.6	0.8	80.5
SP31	1	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	7519	3.5	0.0	89.1
SP31	2	F-35C	DEP	12	12D3	Eglin	100.00% ETR	203	14986	10.1	0.0	82.4
SP31	3	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	210	8229	1.6	0.8	82.4
SP32	1	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	10355	3.5	0.0	86.2
SP32	2	F-35C	PAT	12	12F1	Eglin	55.00% ETR	145	14175	10.9	0.0	81.1
SP32	3	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	8295	1.6	0.8	80.1
SP33	1	F-35B	ITF	18	18D1-12NB4	Duke	35.00% ETR	350	7700	0.7	0.0	102
SP33	2	F-35C	PAT	12	12F1	Eglin	55.00% ETR	145	7545	10.9	0.0	89.9
SP33	3	F-35B	ITF	12	12FRVL1	Eglin	75.00% ETR	120	7543	3.4	0.0	93.3
SP34	1	F-35B	DEP	12	12D3	Eglin	100.00% ETR	246	6081	10.1	0.0	97.6

Table E-9. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 1A, 59 Aircraft, Cont'd

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP34	2	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	1890	2.5	0.0	103.5
SP34	3	F-35C	DEP	12	12D3	Eglin	100.00% ETR	300	6207	10.1	0.0	96.8
SP35	1	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	1425	2.5	0.0	107
SP35	2	F-35C	DEP	01	01DD3	Eglin	150.00% ETR	0	2607	3.7	0.0	104.2
SP35	3	F-35B	ITF	18	18D1-12SB4	Duke	35.00% ETR	350	1933	0.7	0.0	109.4
SP36	1	F-35C	DEP	01	01DD3	Eglin	150.00% ETR	0	2394	3.7	0.0	105.3
SP36	2	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	1496	2.5	0.0	106.6
SP36	3	F-35B	ITF	18	18D1-12SB4	Duke	35.00% ETR	350	1837	0.7	0.0	110
SP37	1	F-35C	ITF	18	18D1	Choctaw	35.00% ETR	300	7471	2.7	0.2	82.9
SP37	2	F-35A	ITF	18	18D1	Choctaw	35.00% ETR	300	7471	1.2	0.0	82.9
SP37	3	F-35C	ARR	36	36B1	Choctaw	27.00% ETR	350	2990	0.5	0.1	78.5
SP38	1	F-35C	ITF	36	36D1	Choctaw	35.00% ETR	300	8380	2.7	0.2	89.6
SP38	2	F-35A	ITF	36	36D1	Choctaw	35.00% ETR	300	8380	1.2	0.0	89.6
SP38	3	F-35C	PAT	18	18F1	Choctaw	65.00% ETR	145	16730	13.5	0.9	73.6
SP39	1	F-35C	ITF	18	18D1	Choctaw	100.00% ETR	300	9991	2.7	0.2	89.9
SP39	2	F-35C	PAT	36	36F1	Choctaw	65.00% ETR	145	13935	13.5	0.9	78.4
SP39	3	F-35A	ITF	18	18D1	Choctaw	100.00% ETR	300	9991	1.2	0.0	89.9
SP40	1	F-35C	ARR	18	18A1	Duke	55.00% ETR	170	2698	1.9	0.1	97.9
SP40	2	F-35C	PAT	18	18I1	Duke	55.00% ETR	170	2706	1.7	0.1	98.1
SP40	3	F-16A	DEP	36	36D1	Duke	92.30% NC	300	2767	1.7	0.0	98.6

Table E-10. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 1I

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP01	1	F-35B	DEP	12	12D3	Eglin	100.00% ETR	114	5664	11.4	0.0	99.1
SP01	2	F-35C	DEP	12	12D3	Eglin	100.00% ETR	244	5674	11.3	0.0	97.8
SP01	3	F-35C	PAT	30	30F1	Eglin	57.00% ETR	145	2212	3.4	0.0	102.7
SP02	1	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	1659	3.4	0.0	108.3
SP02	2	F-35B	DEP	12	12D3	Eglin	100.00% ETR	114	5855	11.4	0.0	98.1
SP02	3	F-35C	DEP	12	12D3	Eglin	100.00% ETR	203	5854	11.3	0.0	95.9
SP03	1	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	1058	3.4	0.0	111.3
SP03	2	F-35B	PAT	30	30F1	Eglin	55.00% ETR	150	1058	0.9	0.0	108.8
SP03	3	F-35B	ITF	30	30FRVL1	Eglin	55.00% ETR	150	1038	1.1	0.0	107.4
SP04	1	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	1490	3.4	0.0	109.6
SP04	2	F-35B	DEP	12	12D3	Eglin	100.00% ETR	114	5635	11.4	0.0	98.4
SP04	3	F-35B	PAT	30	30F1	Eglin	55.00% ETR	150	1490	0.9	0.0	107.8
SP05	1	F-35B	DEP	12	12D3	Eglin	100.00% ETR	114	4647	11.4	0.0	101.6
SP05	2	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	3014	3.4	0.0	106.4
SP05	3	F-35C	DEP	12	12D3	Eglin	100.00% ETR	203	4646	11.3	0.0	99.7
SP06	1	F-35B	DEP	12	12D3	Eglin	100.00% ETR	114	3178	11.4	0.0	106.2
SP06	2	F-35C	DEP	12	12D3	Eglin	100.00% ETR	244	3178	11.3	0.0	104.7
SP06	3	F-35A	DEP	12	12D3	Eglin	100.00% ETR	244	3178	8.3	0.0	104.7
SP07	1	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	2740	3.4	0.0	101.3
SP07	2	F-35B	DEP	12	12D3	Eglin	100.00% ETR	114	9010	11.4	0.0	89.6
SP07	3	F-35C	DEP	12	12D3	Eglin	150.00% ETR	0	9009	11.3	0.0	88.5
SP08	1	F-35B	DEP	12	12D3	Eglin	100.00% ETR	246	6780	11.4	0.0	96.2
SP08	2	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	2050	2.5	0.0	102.3
SP08	3	F-35C	DEP	12	12D3	Eglin	100.00% ETR	273	6872	11.3	0.0	95.6
SP09	1	F-35B	DEP	12	12D3	Eglin	100.00% ETR	246	7735	11.4	0.0	94.3

Table E-10. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 1I, 59 Aircraft, Cont'd

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP09	2	F-35C	DEP	12	12D3	Eglin	100.00% ETR	300	7864	11.3	0.0	93.7
SP09	3	F-35A	DEP	12	12D3	Eglin	100.00% ETR	300	7864	8.3	0.0	93.7
SP10	1	F-35C	PAT	30	30F1	Eglin	100.00% ETR	145	1625	3.4	0.0	114
SP10	2	F-35B	DEP	12	12D3	Eglin	100.00% ETR	114	2952	11.4	0.0	105.4
SP10	3	F-35B	PAT	30	30F1	Eglin	100.00% ETR	150	1625	0.9	0.0	113.8
SP11	1	F-35B	DEP	12	12D3	Eglin	100.00% ETR	246	10469	11.4	0.0	89.7
SP11	2	F-35C	DEP	12	12D3	Eglin	100.00% ETR	300	10562	11.3	0.0	89.6
SP11	3	F-35A	DEP	12	12D3	Eglin	100.00% ETR	300	10562	8.3	0.0	89.6
SP12	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	1606	0.3	0.0	111
SP12	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	1606	0.3	0.0	111
SP12	3	F-35B	DEP	01	01DD3	Eglin	100.00% ETR	246	1666	0.2	0.0	112.7
SP13	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	1050	0.3	0.0	114.9
SP13	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	1050	0.3	0.0	114.9
SP13	3	F-35B	DEP	01	01DD3	Eglin	100.00% ETR	246	1131	0.2	0.0	117.3
SP14	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	1068	0.3	0.0	114.9
SP14	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	1068	0.3	0.0	114.9
SP14	3	F-35B	DEP	01	01DD3	Eglin	100.00% ETR	246	1156	0.2	0.0	117
SP15	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	2325	0.3	0.0	107.2
SP15	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	2325	0.3	0.0	107.2
SP15	3	F-35B	DEP	01	01DD3	Eglin	100.00% ETR	246	2367	0.2	0.0	108.8
SP16	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	2981	0.3	0.0	104.6
SP16	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	2981	0.3	0.0	104.6
SP16	3	F-35B	DEP	01	01DD3	Eglin	100.00% ETR	246	3015	0.2	0.0	106.1
SP17	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	4493	0.3	0.0	100.2
SP17	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	4493	0.3	0.0	100.2

Table E-10. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 1I, 59 Aircraft, Cont'd

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP17	3	F-35B	DEP	01	01DD3	Eglin	100.00% ETR	246	4525	0.2	0.0	101.4
SP18	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	1202	0.3	0.0	113.6
SP18	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	1202	0.3	0.0	113.6
SP18	3	F-35B	DEP	01	01DD3	Eglin	100.00% ETR	246	1266	0.2	0.0	115.9
SP19	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	660	0.3	0.0	118.9
SP19	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	660	0.3	0.0	118.9
SP19	3	F-35B	DEP	01	01DD3	Eglin	100.00% ETR	246	825	0.2	0.0	120.5
SP20	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	3094	0.3	0.0	105
SP20	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	3094	0.3	0.0	105
SP20	3	F-35B	DEP	01	01DD3	Eglin	100.00% ETR	300	3286	0.2	0.0	104.7
SP21	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	2398	0.3	0.0	107.7
SP21	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	2398	0.3	0.0	107.7
SP21	3	F-35B	DEP	01	01DD3	Eglin	100.00% ETR	300	2860	0.2	0.0	106.3
SP22	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	387	0.3	0.0	123.1
SP22	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	387	0.3	0.0	123.1
SP22	3	F-35B	DEP	01	01DD3	Eglin	100.00% ETR	300	777	0.2	0.0	120.9
SP23	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	239	0.3	0.0	126.4
SP23	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	239	0.3	0.0	126.4
SP23	3	F-35B	DEP	01	01DD3	Eglin	100.00% ETR	246	592	0.2	0.0	123.8
SP24	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	1982	0.8	0.0	99
SP24	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	7244	1.6	0.8	80.7
SP24	3	C-130H&N&P	PAT	30	30C1	Eglin	16000.00 IN-LBS	150	2026	2.5	0.0	85.3
SP25	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	3211	0.8	0.0	93.2
SP25	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	8349	1.6	0.8	78.6
SP25	3	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	7388	2.4	1.6	73.9

Table E-10. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 1I, 59 Aircraft, Cont'd

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP26	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	2298	0.8	0.0	97.4
SP26	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	7085	1.6	0.8	80.8
SP26	3	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	6108	2.4	1.6	75.8
SP27	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	2838	0.8	0.0	94.9
SP27	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	7367	1.6	0.8	80.2
SP27	3	F-35C	PAT	18	18I1	Eglin	43.00% ETR	250	3109	1.3	0.0	87.5
SP28	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	2043	0.8	0.0	98.7
SP28	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	7150	1.6	0.8	80.9
SP28	3	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	6036	2.4	1.6	76.5
SP29	1	F-35B	PAT	18	18DF2	Duke	55.00% ETR	150	4593	0.0	0.2	90.4
SP29	2	F-35C	PAT	18	18I2	Duke	33.00% ETR	225	4735	1.7	0.1	87.8
SP29	3	F-35A	PAT	18	18I2	Duke	33.00% ETR	225	4735	1.0	0.1	87.8
SP30	1	F-35C	PAT	18	18I2	Eglin	43.00% ETR	250	3115	1.3	0.0	95.2
SP30	2	F-35C	PAT	18	18I1	Eglin	43.00% ETR	250	3074	1.3	0.0	95.2
SP30	3	F-35B	DEP	18	18D2	Eglin	100.00% ETR	300	3576	0.1	0.0	104.2
SP31	1	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	7519	3.4	0.0	89.1
SP31	2	F-35C	DEP	12	12D3	Eglin	100.00% ETR	203	14986	11.3	0.0	82.4
SP31	3	F-35B	DEP	12	12D3	Eglin	100.00% ETR	114	14987	11.4	0.0	82.2
SP32	1	F-35C	PAT	18	18I1	Eglin	43.00% ETR	250	4205	1.3	0.0	96.2
SP32	2	F-35C	PAT	18	18I2	Eglin	43.00% ETR	250	4461	1.3	0.0	96.1
SP32	3	F-35A	PAT	18	18I1	Eglin	43.00% ETR	250	4205	0.6	0.0	96.2
SP33	1	F-35C	PAT	18	18I1	Eglin	100.00% ETR	250	2717	1.3	0.0	107.2
SP33	2	F-35C	PAT	18	18I2	Eglin	100.00% ETR	250	2717	1.3	0.0	107.2
SP33	3	F-35B	PAT	18	18I1	Eglin	100.00% ETR	250	3013	1.1	0.0	105.5
SP34	1	F-35B	DEP	12	12D3	Eglin	100.00% ETR	246	6081	11.4	0.0	97.6

Table E-10. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 1I, 59 Aircraft, Cont'd

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP34	2	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	1890	2.5	0.0	103.5
SP34	3	F-35C	DEP	12	12D3	Eglin	100.00% ETR	300	6207	11.3	0.0	96.8
SP35	1	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	1425	2.5	0.0	107
SP35	2	F-35B	DEP	12	12D3	Eglin	100.00% ETR	246	5340	11.4	0.0	99.4
SP35	3	F-35C	DEP	12	12D3	Eglin	100.00% ETR	273	5419	11.3	0.0	98.6
SP36	1	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	1496	2.5	0.0	106.6
SP36	2	F-35B	DEP	12	12D3	Eglin	100.00% ETR	246	5182	11.4	0.0	99.7
SP36	3	F-18E/F	DEP	19	19D5T	Eglin	97.00% NC	150	2453	0.2	0.0	112.6
SP37	1	CL-601	DEP	19	19D10	Eglin	4559.00 LBS	250	30689	4.1	1.7	40.1
SP37	2	F-35B	DEP	12	12D3	Eglin	150.00% ETR	0	*****	11.4	0.0	40.9
SP37	3	F-35C	DEP	12	12D3	Eglin	150.00% ETR	0	*****	11.3	0.0	40.8
SP38	1	F-15E	DEP	01	01DA	Eglin	90.00% NC	350	10000	0.0	0.0	85.3
SP38	2	F-15E	DEP	19	19D6	Eglin	90.00% NC	350	14388	0.1	0.0	79.1
SP38	3	A-10A	DEP	19	19D6	Eglin	90.00% NC	250	5360	0.8	0.0	70.3
SP39	1	F-35C	DEP	12	12D3	Eglin	150.00% ETR	0	*****	11.3	0.0	40.5
SP39	2	F-35C	DEP	36	36D3	Eglin	150.00% ETR	0	*****	3.6	0.0	44.3
SP39	3	F-35A	DEP	12	12D3	Eglin	150.00% ETR	0	*****	8.3	0.0	40.5
SP40	1	F-35C	ARR	18	18A1	Duke	55.00% ETR	170	2698	1.9	0.1	97.9
SP40	2	F-35C	PAT	18	18I1	Duke	55.00% ETR	170	2706	1.7	0.1	98.1
SP40	3	F-16A	DEP	36	36D1	Duke	92.30% NC	300	2767	1.7	0.0	98.6

Table E- 11. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 2A

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP01	1	F-15A	PAT	19	19C7	Eglin	90.00% NC	300	1913	0.7	0.0	107.8
SP01	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	12426.00 LBS	166	4441	1.6	0.8	92
SP01	3	F-16C	PAT	19	19C7	Eglin	93.00% NC	200	1994	0.4	0.0	104.7
SP02	1	F-15A	PAT	19	19C7	Eglin	90.00% NC	300	2119	0.7	0.0	103
SP02	2	F-18E/F	DEP	12	12D6	Eglin	97.00% NC	150	5888	0.3	0.0	101.4
SP02	3	F-18E/F	DEP	12	12D7	Eglin	97.00% NC	150	5888	0.3	0.0	101.4
SP03	1	F-18E/F	DEP	12	12D6	Eglin	97.00% NC	150	6170	0.3	0.0	100.4
SP03	2	F-18E/F	DEP	12	12D7	Eglin	97.00% NC	150	6170	0.3	0.0	100.4
SP03	3	E-3A	PAT	19	19C6	Eglin	1.10 EPR	170	995	0.7	0.0	99.3
SP04	1	F-18E/F	DEP	12	12D6	Eglin	97.00% NC	150	5658	0.3	0.0	102
SP04	2	F-18E/F	DEP	12	12D7	Eglin	97.00% NC	150	5658	0.3	0.0	102
SP04	3	F-15A	PAT	19	19C7	Eglin	71.00% NC	240	2502	0.7	0.0	100.5
SP05	1	F-18E/F	DEP	12	12D6	Eglin	97.00% NC	150	4718	0.3	0.0	104.3
SP05	2	F-18E/F	DEP	12	12D7	Eglin	97.00% NC	150	4718	0.3	0.0	104.3
SP05	3	F-15A	PAT	19	19C7	Eglin	71.00% NC	240	1510	0.7	0.0	104.3
SP06	1	F-18E/F	DEP	12	12D6	Eglin	97.00% NC	150	3307	0.3	0.0	108.4
SP06	2	F-18E/F	DEP	12	12D7	Eglin	97.00% NC	150	3307	0.3	0.0	108.4
SP06	3	F-18E/F	DEP	30	30D7	Eglin	97.00% NC	150	3180	0.1	0.0	109.2
SP07	1	E-3A	PAT	30	30C6	Eglin	1.10 EPR	170	995	0.3	0.0	99.6
SP07	2	F-18E/F	DEP	12	12D7	Eglin	97.00% NC	150	9011	0.3	0.0	94.6
SP07	3	F-18E/F	DEP	12	12D6	Eglin	97.00% NC	150	9011	0.3	0.0	94.6
SP08	1	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	2050	2.5	0.0	102.3
SP08	2	F-18E/F	DEP	19	19D5T	Eglin	97.00% NC	150	4164	0.2	0.0	105.9
SP08	3	F-18E/F	DEP	19	19D4	Eglin	97.00% NC	150	4164	0.2	0.0	105.9
SP09	1	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	3227	2.5	0.0	97

Table E-11. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 2A, 59 Aircraft, Cont'd

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP09	2	F-18E/F	DEP	19	19D5T	Eglin	97.00% NC	150	5473	0.2	0.0	102
SP09	3	F-18E/F	DEP	19	19D4	Eglin	97.00% NC	150	5473	0.2	0.0	102
SP10	1	F-18E/F	DEP	12	12D7	Eglin	97.00% NC	0	2952	0.3	0.0	108.6
SP10	2	F-18E/F	DEP	12	12D6	Eglin	97.00% NC	0	2952	0.3	0.0	108.6
SP10	3	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	2962	2.5	0.0	99.7
SP11	1	F-18E/F	DEP	19	19D5T	Eglin	97.00% NC	0	6217	0.2	0.0	98.4
SP11	2	F-18E/F	DEP	19	19D4	Eglin	97.00% NC	0	6217	0.2	0.0	98.4
SP11	3	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	15313	13.4	0.0	83.2
SP12	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	1606	0.3	0.0	111
SP12	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	1606	0.3	0.0	111
SP12	3	F-16C	PAT	01	01C1	Eglin	93.00% NC	200	1920	0.4	0.0	103.9
SP13	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	1050	0.3	0.0	114.9
SP13	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	1050	0.3	0.0	114.9
SP13	3	F-16C	PAT	01	01C1	Eglin	93.00% NC	200	1415	0.4	0.0	107.2
SP14	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	1068	0.3	0.0	114.9
SP14	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	1068	0.3	0.0	114.9
SP14	3	F-16C	PAT	01	01C1	Eglin	93.00% NC	200	1488	0.4	0.0	106.6
SP15	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	2325	0.3	0.0	107.2
SP15	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	2325	0.3	0.0	107.2
SP15	3	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	12346	13.4	0.0	86.6
SP16	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	2981	0.3	0.0	104.6
SP16	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	2981	0.3	0.0	104.6
SP16	3	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	12767	13.4	0.0	86.1
SP17	1	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	13648	13.4	0.0	85.4
SP17	2	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	4493	0.3	0.0	100.2

Table E-11. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 2A, 59 Aircraft, Cont'd

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP17	3	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	4493	0.3	0.0	100.2
SP18	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	1202	0.3	0.0	113.6
SP18	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	1202	0.3	0.0	113.6
SP18	3	F-16C	PAT	01	01C1	Eglin	93.00% NC	200	1488	0.4	0.0	107
SP19	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	660	0.3	0.0	118.9
SP19	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	660	0.3	0.0	118.9
SP19	3	E-3A	PAT	19	19C6	Eglin	1.30 EPR	140	683	0.7	0.0	106.5
SP20	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	3094	0.3	0.0	105
SP20	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	3094	0.3	0.0	105
SP20	3	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	12334	13.4	0.0	86.9
SP21	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	2398	0.3	0.0	107.7
SP21	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	2398	0.3	0.0	107.7
SP21	3	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	11673	13.4	0.0	87.9
SP22	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	387	0.3	0.0	123.1
SP22	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	387	0.3	0.0	123.1
SP22	3	F-15A	PAT	19	19C1	Eglin	80.00% NC	160	477	1.4	0.0	103.2
SP23	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	239	0.3	0.0	126.4
SP23	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	239	0.3	0.0	126.4
SP23	3	E-3A	PAT	19	19C6	Eglin	1.20 EPR	160	313	0.7	0.0	112
SP24	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	1982	0.8	0.0	99
SP24	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	7244	1.6	0.8	80.7
SP24	3	C-130H&N&P	PAT	30	30C1	Eglin	16000.00 IN-LBS	150	2026	2.5	0.0	85.3
SP25	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	3211	0.8	0.0	93.2
SP25	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	8349	1.6	0.8	78.6
SP25	3	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	7388	2.4	1.6	73.9

Table E-11. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 2A, 59 Aircraft, Cont'd

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP26	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	2298	0.8	0.0	97.4
SP26	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	7085	1.6	0.8	80.8
SP26	3	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	6108	2.4	1.6	75.8
SP27	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	2838	0.8	0.0	94.9
SP27	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	7367	1.6	0.8	80.2
SP27	3	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	6600	2.4	1.6	74.8
SP28	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	2043	0.8	0.0	98.7
SP28	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	7150	1.6	0.8	80.9
SP28	3	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	6036	2.4	1.6	76.5
SP29	1	F-35B	PAT	18	18LI1	Duke	33.00% ETR	225	1358	2.3	0.0	98.3
SP29	2	F-35A	ARR	18	18LA1	Duke	27.00% ETR	330	1713	7.1	0.5	87.8
SP29	3	F-35C	PAT	18	18LI1	Duke	33.00% ETR	225	3052	3.3	0.0	92.7
SP30	1	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	8848	1.6	0.8	80.5
SP30	2	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	8239	2.4	1.6	75
SP30	3	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	23035	13.4	0.0	75.5
SP31	1	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	210	8229	1.6	0.8	82.4
SP31	2	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	19992	13.4	0.0	77.5
SP31	3	F-18E/F	DEP	19	19D4	Eglin	94.00% NC	300	9599	0.2	0.0	91.6
SP32	1	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	8295	1.6	0.8	80.1
SP32	2	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	7539	2.4	1.6	74.6
SP32	3	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	23652	13.4	0.0	75.3
SP33	1	F-15A	PAT	30	30C2	Eglin	90.00% NC	300	2811	0.3	0.0	101.7
SP33	2	F-16C	PAT	30	30C2	Eglin	93.00% NC	200	2945	0.6	0.0	98.1
SP33	3	F-15A	PAT	30	30C2	Eglin	90.00% NC	300	2568	0.1	0.0	102.2
SP34	1	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	1890	2.5	0.0	103.5

Table E-11. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 2A, 59 Aircraft, Cont'd

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP34	2	F-15A	PAT	12	12C1	Eglin	90.00% NC	300	1667	0.4	0.0	107.2
SP34	3	F-18E/F	DEP	19	19D5T	Eglin	97.00% NC	150	4492	0.2	0.0	105.2
SP35	1	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	1425	2.5	0.0	107
SP35	2	F-18E/F	DEP	19	19D5T	Eglin	97.00% NC	150	2658	0.2	0.0	111.7
SP35	3	F-18E/F	DEP	19	19D4	Eglin	97.00% NC	150	2658	0.2	0.0	111.7
SP36	1	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	1496	2.5	0.0	106.6
SP36	2	F-18E/F	DEP	19	19D5T	Eglin	97.00% NC	150	2453	0.2	0.0	112.6
SP36	3	F-18E/F	DEP	19	19D4	Eglin	97.00% NC	150	2453	0.2	0.0	112.6
SP37	1	F-35C	ITF	18	18D1	Choctaw	35.00% ETR	300	7471	3.4	0.2	82.9
SP37	2	F-35A	ITF	18	18D1	Choctaw	35.00% ETR	300	7471	2.3	0.0	82.9
SP37	3	F-35C	ARR	36	36B1	Choctaw	27.00% ETR	350	2990	0.8	0.1	78.5
SP38	1	F-35C	ITF	36	36D1	Choctaw	35.00% ETR	300	8380	3.4	0.2	89.6
SP38	2	F-35A	ITF	36	36D1	Choctaw	35.00% ETR	300	8380	2.3	0.0	89.6
SP38	3	F-35C	PAT	18	18F1	Choctaw	65.00% ETR	145	16730	13.5	0.9	73.6
SP39	1	F-35C	ITF	18	18D1	Choctaw	100.00% ETR	300	9991	3.4	0.2	89.9
SP39	2	F-35A	ITF	18	18D1	Choctaw	100.00% ETR	300	9991	2.3	0.0	89.9
SP39	3	F-35C	PAT	36	36F1	Choctaw	65.00% ETR	145	13935	13.5	0.9	78.4
SP40	1	F-35B	DEP	36	36D3	Duke	100.00% ETR	300	2957	1.9	0.0	105.7
SP40	2	F-35C	DEP	36	36D3	Duke	100.00% ETR	300	4611	1.7	0.0	100.3
SP40	3	F-35B	ITF	18	18F4	Duke	55.00% ETR	150	3639	3.5	0.2	94.6

Table E-12. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 2B

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP01	1	F-15A	PAT	19	19C7	Eglin	90.00% NC	300	1913	0.7	0.0	107.8
SP01	2	F-35C	PAT	30	30F1	Eglin	57.00% ETR	145	2212	1.9	0.0	102.7
SP01	3	F-35B	ITF	12	12FVL2	Eglin	91.00% ETR	60	7082	0.9	0.0	105.9
SP02	1	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	1659	1.9	0.0	108.3
SP02	2	F-35B	ITF	12	12FVL2	Eglin	100.00% ETR	150	6072	0.9	0.0	107.2
SP02	3	F-35B	ITF	12	12FVL1	Eglin	100.00% ETR	150	6113	0.9	0.0	107
SP03	1	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	1058	1.9	0.0	111.3
SP03	2	F-35B	PAT	30	30F1	Eglin	55.00% ETR	150	1058	0.6	0.0	108.8
SP03	3	F-35B	ITF	12	12FVL1	Eglin	100.00% ETR	150	6191	0.9	0.0	106.7
SP04	1	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	1489	1.9	0.0	109.6
SP04	2	F-35B	ITF	12	12FVL1	Eglin	100.00% ETR	150	5776	0.9	0.0	108
SP04	3	F-35B	ITF	12	12FVL2	Eglin	100.00% ETR	150	5748	0.9	0.0	107.7
SP05	1	F-35B	ITF	12	12FVL2	Eglin	100.00% ETR	150	5174	0.9	0.0	110.9
SP05	2	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	3014	1.9	0.0	106.4
SP05	3	F-35B	ITF	12	12FVL1	Eglin	55.00% ETR	150	5259	0.9	0.0	109.8
SP06	1	F-35B	ITF	12	12FVL2	Eglin	100.00% ETR	150	4057	0.9	0.0	115.9
SP06	2	F-35B	ITF	12	12FVL1	Eglin	55.00% ETR	150	4141	0.9	0.0	113.5
SP06	3	F-35C	PAT	30	30F1	Eglin	100.00% ETR	145	3187	1.9	0.0	108.4
SP07	1	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	2740	1.9	0.0	101.3
SP07	2	F-35C	PAT	30	30SP1	Eglin	100.00% ETR	275	3918	0.7	0.0	102.4
SP07	3	F-35B	PAT	30	30SP1	Eglin	100.00% ETR	275	3918	0.5	0.0	102.4
SP08	1	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	2050	2.5	0.0	102.3
SP08	2	F-18E/F	DEP	19	19D5T	Eglin	97.00% NC	150	4164	0.2	0.0	105.9
SP08	3	F-18E/F	DEP	19	19D4	Eglin	97.00% NC	150	4164	0.2	0.0	105.9
SP09	1	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	3227	2.5	0.0	97

Table E-12 Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 2B, 59 Aircraft, Cont'd

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP09	2	F-18E/F	DEP	19	19D5T	Eglin	97.00% NC	150	5473	0.2	0.0	102
SP09	3	F-18E/F	DEP	19	19D4	Eglin	97.00% NC	150	5473	0.2	0.0	102
SP10	1	F-35C	PAT	30	30F1	Eglin	100.00% ETR	145	1625	1.9	0.0	114
SP10	2	F-35B	ITF	12	12FVL1	Eglin	100.00% ETR	140	2956	0.9	0.0	116
SP10	3	F-35C	PAT	12	12F1	Eglin	100.00% ETR	145	2953	5.9	0.0	106.1
SP11	1	F-35C	PAT	12	12F1	Eglin	65.00% ETR	145	9327	5.9	0.0	88.4
SP11	2	F-18E/F	DEP	19	19D5T	Eglin	97.00% NC	0	6217	0.2	0.0	98.4
SP11	3	F-18E/F	DEP	19	19D4	Eglin	97.00% NC	0	6217	0.2	0.0	98.4
SP12	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	1606	0.3	0.0	111
SP12	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	1606	0.3	0.0	111
SP12	3	F-35C	PAT	19	19I1	Eglin	55.00% ETR	170	1623	1.3	0.0	102.7
SP13	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	1050	0.3	0.0	114.9
SP13	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	1050	0.3	0.0	114.9
SP13	3	F-35C	PAT	19	19I1	Eglin	55.00% ETR	170	1070	1.3	0.0	106.3
SP14	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	1068	0.3	0.0	114.9
SP14	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	1068	0.3	0.0	114.9
SP14	3	F-35C	PAT	19	19I1	Eglin	55.00% ETR	170	1090	1.3	0.0	106.1
SP15	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	2325	0.3	0.0	107.2
SP15	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	2325	0.3	0.0	107.2
SP15	3	F-35C	PAT	19	19I1	Eglin	55.00% ETR	170	2338	1.3	0.0	99.7
SP16	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	2981	0.3	0.0	104.6
SP16	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	2981	0.3	0.0	104.6
SP16	3	F-35C	PAT	19	19I1	Eglin	55.00% ETR	170	2995	1.3	0.0	97.5
SP17	1	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	13648	13.4	0.0	85.4
SP17	2	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	4493	0.3	0.0	100.2

Table E-12 Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 2B, 59 Aircraft, Cont'd

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP17	3	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	4493	0.3	0.0	100.2
SP18	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	1202	0.3	0.0	113.6
SP18	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	1202	0.3	0.0	113.6
SP18	3	F-35C	PAT	19	19I1	Eglin	55.00% ETR	170	1221	1.3	0.0	105.3
SP19	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	660	0.3	0.0	118.9
SP19	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	660	0.3	0.0	118.9
SP19	3	F-35C	PAT	19	19I1	Eglin	55.00% ETR	170	701	1.3	0.0	109.5
SP20	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	3094	0.3	0.0	105
SP20	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	3094	0.3	0.0	105
SP20	3	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	12334	13.4	0.0	86.9
SP21	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	2398	0.3	0.0	107.7
SP21	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	2398	0.3	0.0	107.7
SP21	3	F-35C	PAT	19	19I1	Eglin	55.00% ETR	170	2405	1.3	0.0	99.3
SP22	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	387	0.3	0.0	123.1
SP22	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	387	0.3	0.0	123.1
SP22	3	F-35B	PAT	19	19I1	Eglin	55.00% ETR	150	422	0.9	0.0	113.7
SP23	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	239	0.3	0.0	126.4
SP23	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	239	0.3	0.0	126.4
SP23	3	F-35B	PAT	19	19I1	Eglin	55.00% ETR	150	270	0.9	0.0	117
SP24	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	1982	0.8	0.0	99
SP24	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	7244	1.6	0.8	80.7
SP24	3	C-130H&N&P	PAT	30	30C1	Eglin	16000.00 IN-LBS	150	2026	2.5	0.0	85.3
SP25	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	3211	0.8	0.0	93.2
SP25	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	8349	1.6	0.8	78.6
SP25	3	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	7388	2.4	1.6	73.9

Table E-12 Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 2B, 59 Aircraft, Cont'd

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP26	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	2298	0.8	0.0	97.4
SP26	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	7085	1.6	0.8	80.8
SP26	3	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	6108	2.4	1.6	75.8
SP27	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	2838	0.8	0.0	94.9
SP27	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	7367	1.6	0.8	80.2
SP27	3	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	6600	2.4	1.6	74.8
SP28	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	2043	0.8	0.0	98.7
SP28	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	7150	1.6	0.8	80.9
SP28	3	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	6036	2.4	1.6	76.5
SP29	1	C-130H&N&P	ARR	18	18A3	Duke	5000.00 IN-LBS	200	1228	0.1	0.2	85.5
SP29	2	C-130H&N&P	ARR	18	18A2	Duke	4000.00 IN-LBS	210	1830	1.2	0.4	81.9
SP29	3	C-130H&N&P	ARR	18	18A3	Duke	5000.00 IN-LBS	200	1228	0.3	0.2	85.5
SP30	1	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	8848	1.6	0.8	80.5
SP30	2	F-35C	PAT	30	30SP1	Eglin	100.00% ETR	275	9655	0.7	0.0	90.3
SP30	3	F-35C	PAT	30	30SP1	Duke	100.00% ETR	275	9655	0.7	0.0	90.3
SP31	1	F-35C	PAT	30	30SP1	Eglin	100.00% ETR	275	7459	0.7	0.0	94.3
SP31	2	F-35C	PAT	30	30SP1	Duke	100.00% ETR	275	7459	0.7	0.0	94.3
SP31	3	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	210	8229	1.6	0.8	82.4
SP32	1	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	8295	1.6	0.8	80.1
SP32	2	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	10355	1.9	0.0	86.2
SP32	3	F-35C	PAT	30	30F1	Duke	65.00% ETR	145	10355	1.9	0.0	86.2
SP33	1	F-35C	PAT	12	12F1	Eglin	55.00% ETR	145	7546	5.9	0.0	89.9
SP33	2	F-35C	PAT	12	12F1	Duke	55.00% ETR	145	7546	5.9	0.0	89.9
SP33	3	F-35B	ITF	12	12FVL1	Eglin	150.00% ETR	0	8227	0.9	0.0	96.4
SP34	1	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	1890	2.5	0.0	103.5

Table E-12 Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 2B, 59 Aircraft, Cont'd

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP34	2	F-15A	PAT	12	12C1	Eglin	90.00% NC	300	1667	0.4	0.0	107.2
SP34	3	F-18E/F	DEP	19	19D5T	Eglin	97.00% NC	150	4492	0.2	0.0	105.2
SP35	1	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	1425	2.5	0.0	107
SP35	2	F-35C	PAT	19	19I1	Eglin	100.00% ETR	170	2613	1.3	0.0	107.9
SP35	3	F-35C	PAT	19	19I2	Eglin	100.00% ETR	170	2613	1.3	0.0	107.9
SP36	1	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	1496	2.5	0.0	106.6
SP36	2	F-35C	PAT	19	19I1	Eglin	100.00% ETR	170	2401	1.3	0.0	109
SP36	3	F-35C	PAT	19	19I2	Eglin	100.00% ETR	170	2401	1.3	0.0	109
SP37	1	CL-601	DEP	19	19D10	Eglin	4559.00 LBS	250	30689	4.1	1.7	40.1
SP37	2	JPATS	ARR	30	30AC	Eglin	90.00% TORQUE	190	27262	0.3	0.0	55
SP37	3	F-15A	DEP	19	19D2	Eglin	90.00% NC	350	62462	0.3	0.0	53.7
SP38	1	F-15E	DEP	01	01DA	Eglin	90.00% NC	350	10000	0.0	0.0	85.3
SP38	2	F-15E	DEP	19	19D6	Eglin	90.00% NC	350	14388	0.1	0.0	79.1
SP38	3	A-10A	DEP	19	19D6	Eglin	90.00% NC	250	5360	0.8	0.0	70.3
SP39	1	F-15A	DEP	19	19D6	Eglin	90.00% NC	350	51461	0.2	0.0	54.6
SP39	2	F-15A	DEP	19	19D6	Eglin	90.00% NC	350	51461	0.2	0.0	54.6
SP39	3	F-15E	DEP	19	19D6	Eglin	90.00% NC	350	49667	0.1	0.0	56
SP40	1	F-16A	DEP	36	36D1	Duke	92.30% NC	300	2767	1.7	0.0	98.6
SP40	2	F-35C	ITF	12	12D1-18B1	Eglin	35.00% ETR	300	3439	2.5	0.0	94.6
SP40	3	F-35C	ITF	12	12D1-18B1	Duke	35.00% ETR	300	3439	2.5	0.0	94.6

Table E-13. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 2C

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP01	1	F-15A	PAT	19	19C7	Eglin	90.00% NC	300	1913	0.7	0.0	107.8
SP01	2	F-35B	ITF	12	12FVL2	Eglin	91.00% ETR	60	7082	0.5	0.0	105.9
SP01	3	F-35C	PAT	30	30F1	Eglin	57.00% ETR	145	2212	1.0	0.0	102.7
SP02	1	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	1659	1.0	0.0	108.3
SP02	2	F-35B	ITF	12	12FVL2	Eglin	100.00% ETR	150	6072	0.5	0.0	107.2
SP02	3	F-35B	ITF	12	12FVL1	Eglin	100.00% ETR	150	6113	0.5	0.0	107
SP03	1	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	1058	1.0	0.0	111.3
SP03	2	F-35B	PAT	30	30F1	Eglin	55.00% ETR	150	1058	0.4	0.0	108.8
SP03	3	F-35B	ITF	12	12FVL1	Eglin	100.00% ETR	150	6191	0.5	0.0	106.7
SP04	1	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	1489	1.0	0.0	109.6
SP04	2	F-35B	ITF	12	12FVL1	Eglin	100.00% ETR	150	5776	0.5	0.0	108
SP04	3	F-35B	ITF	12	12FVL2	Eglin	100.00% ETR	150	5748	0.5	0.0	107.7
SP05	1	F-35B	ITF	12	12FVL2	Eglin	100.00% ETR	150	5174	0.5	0.0	110.9
SP05	2	F-35B	ITF	12	12FVL1	Eglin	55.00% ETR	150	5259	0.5	0.0	109.8
SP05	3	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	3014	1.0	0.0	106.4
SP06	1	F-35B	ITF	12	12FVL2	Eglin	100.00% ETR	150	4057	0.5	0.0	115.9
SP06	2	F-35B	ITF	12	12FVL1	Eglin	55.00% ETR	150	4141	0.5	0.0	113.5
SP06	3	F-35C	PAT	30	30F1	Eglin	100.00% ETR	145	3187	1.0	0.0	108.4
SP07	1	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	2740	1.0	0.0	101.3
SP07	2	F-35B	PAT	30	30SP1	Eglin	100.00% ETR	275	3918	0.4	0.0	102.4
SP07	3	F-35C	PAT	30	30SP1	Eglin	100.00% ETR	275	3918	0.3	0.0	102.4
SP08	1	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	2050	2.5	0.0	102.3
SP08	2	F-18E/F	DEP	19	19D5T	Eglin	97.00% NC	150	4164	0.2	0.0	105.9
SP08	3	F-18E/F	DEP	19	19D4	Eglin	97.00% NC	150	4164	0.2	0.0	105.9
SP09	1	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	3227	2.5	0.0	97

Table E-13. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 2C, 59 Aircraft, Cont'd

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP09	2	F-18E/F	DEP	19	19D5T	Eglin	97.00% NC	150	5473	0.2	0.0	102
SP09	3	F-18E/F	DEP	19	19D4	Eglin	97.00% NC	150	5473	0.2	0.0	102
SP10	1	F-35C	PAT	30	30F1	Eglin	100.00% ETR	145	1625	1.0	0.0	114
SP10	2	F-35B	ITF	12	12FVL1	Eglin	100.00% ETR	140	2956	0.5	0.0	116
SP10	3	F-35C	PAT	12	12F1	Eglin	100.00% ETR	145	2953	3.1	0.0	106.1
SP11	1	F-18E/F	DEP	19	19D5T	Eglin	97.00% NC	0	6217	0.2	0.0	98.4
SP11	2	F-18E/F	DEP	19	19D4	Eglin	97.00% NC	0	6217	0.2	0.0	98.4
SP11	3	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	15313	13.4	0.0	83.2
SP12	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	1606	0.3	0.0	111
SP12	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	1606	0.3	0.0	111
SP12	3	F-35B	PAT	19	19I1	Eglin	55.00% ETR	150	1611	0.6	0.0	103.4
SP13	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	1050	0.3	0.0	114.9
SP13	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	1050	0.3	0.0	114.9
SP13	3	F-35B	PAT	19	19I1	Eglin	55.00% ETR	150	1055	0.6	0.0	107.1
SP14	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	1068	0.3	0.0	114.9
SP14	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	1068	0.3	0.0	114.9
SP14	3	F-35B	PAT	19	19I1	Eglin	55.00% ETR	150	1073	0.6	0.0	106.9
SP15	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	2325	0.3	0.0	107.2
SP15	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	2325	0.3	0.0	107.2
SP15	3	F-35B	PAT	19	19I1	Eglin	55.00% ETR	150	2331	0.6	0.0	100.2
SP16	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	2981	0.3	0.0	104.6
SP16	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	2981	0.3	0.0	104.6
SP16	3	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	12767	13.4	0.0	86.1
SP17	1	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	13648	13.4	0.0	85.4
SP17	2	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	4493	0.3	0.0	100.2

Table E-13. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 2C, 59 Aircraft, Cont'd

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP17	3	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	4493	0.3	0.0	100.2
SP18	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	1202	0.3	0.0	113.6
SP18	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	1202	0.3	0.0	113.6
SP18	3	F-35B	PAT	19	19I2	Eglin	55.00% ETR	135	1200	0.6	0.0	106.1
SP19	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	660	0.3	0.0	118.9
SP19	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	660	0.3	0.0	118.9
SP19	3	F-35B	PAT	19	19I1	Eglin	55.00% ETR	150	666	0.6	0.0	110.6
SP20	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	3094	0.3	0.0	105
SP20	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	3094	0.3	0.0	105
SP20	3	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	12334	13.4	0.0	86.9
SP21	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	2398	0.3	0.0	107.7
SP21	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	2398	0.3	0.0	107.7
SP21	3	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	11673	13.4	0.0	87.9
SP22	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	387	0.3	0.0	123.1
SP22	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	387	0.3	0.0	123.1
SP22	3	F-35B	PAT	19	19I1	Eglin	55.00% ETR	150	422	0.6	0.0	113.7
SP23	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	239	0.3	0.0	126.4
SP23	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	239	0.3	0.0	126.4
SP23	3	F-35B	PAT	19	19I1	Eglin	55.00% ETR	150	270	0.6	0.0	117
SP24	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	1982	0.8	0.0	99
SP24	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	7244	1.6	0.8	80.7
SP24	3	C-130H&N&P	PAT	30	30C1	Eglin	16000.00 IN-LBS	150	2026	2.5	0.0	85.3
SP25	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	3211	0.8	0.0	93.2
SP25	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	8349	1.6	0.8	78.6

Table E-13. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 2C, 59 Aircraft, Cont'd

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP25	3	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	7388	2.4	1.6	73.9
SP26	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	2298	0.8	0.0	97.4
SP26	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	7085	1.6	0.8	80.8
SP26	3	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	6108	2.4	1.6	75.8
SP27	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	2838	0.8	0.0	94.9
SP27	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	7367	1.6	0.8	80.2
SP27	3	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	6600	2.4	1.6	74.8
SP28	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	2043	0.8	0.0	98.7
SP28	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	7150	1.6	0.8	80.9
SP28	3	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	6036	2.4	1.6	76.5
SP29	1	F-35B	PAT	18	18LI1	Duke	33.00% ETR	225	1358	1.6	0.0	98.3
SP29	2	F-35A	ARR	18	18LA1	Duke	27.00% ETR	330	1713	7.3	0.5	87.8
SP29	3	F-35C	PAT	18	18LI1	Duke	33.00% ETR	225	3052	3.0	0.0	92.7
SP30	1	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	8848	1.6	0.8	80.5
SP30	2	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	8239	2.4	1.6	75
SP30	3	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	23035	13.4	0.0	75.5
SP31	1	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	210	8229	1.6	0.8	82.4
SP31	2	F-35B	PAT	30	30SP1	Eglin	100.00% ETR	275	7459	0.4	0.0	94.3
SP31	3	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	7519	1.0	0.0	89.1
SP32	1	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	8295	1.6	0.8	80.1
SP32	2	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	7539	2.4	1.6	74.6
SP32	3	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	23652	13.4	0.0	75.3
SP33	1	F-15A	PAT	30	30C2	Eglin	90.00% NC	300	2811	0.3	0.0	101.7
SP33	2	F-16C	PAT	30	30C2	Eglin	93.00% NC	200	2945	0.6	0.0	98.1
SP33	3	F-35C	PAT	12	12F1	Eglin	55.00% ETR	145	7546	3.1	0.0	89.9

Table E-13. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 2C, 59 Aircraft, Cont'd

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP34	1	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	1890	2.5	0.0	103.5
SP34	2	F-15A	PAT	12	12C1	Eglin	90.00% NC	300	1667	0.4	0.0	107.2
SP34	3	F-18E/F	DEP	19	19D5T	Eglin	97.00% NC	150	4492	0.2	0.0	105.2
SP35	1	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	1425	2.5	0.0	107
SP35	2	F-18E/F	DEP	19	19D5T	Eglin	97.00% NC	150	2658	0.2	0.0	111.7
SP35	3	F-18E/F	DEP	19	19D4	Eglin	97.00% NC	150	2658	0.2	0.0	111.7
SP36	1	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	1496	2.5	0.0	106.6
SP36	2	F-18E/F	DEP	19	19D5T	Eglin	97.00% NC	150	2453	0.2	0.0	112.6
SP36	3	F-18E/F	DEP	19	19D4	Eglin	97.00% NC	150	2453	0.2	0.0	112.6
SP37	1	F-35C	ITF	18	18D1	Choctaw	35.00% ETR	300	7471	3.4	0.2	82.9
SP37	2	F-35A	ITF	18	18D1	Choctaw	35.00% ETR	300	7471	0.9	0.0	82.9
SP37	3	F-35C	ARR	36	36B1	Choctaw	27.00% ETR	350	2990	0.8	0.1	78.5
SP38	1	F-35C	ITF	36	36D1	Choctaw	35.00% ETR	300	8380	3.4	0.2	89.6
SP38	2	F-35A	ITF	36	36D1	Choctaw	35.00% ETR	300	8380	0.9	0.0	89.6
SP38	3	F-35C	PAT	18	18F1	Choctaw	65.00% ETR	145	16730	13.5	0.9	73.6
SP39	1	F-35C	ITF	18	18D1	Choctaw	100.00% ETR	300	9991	3.4	0.2	89.9
SP39	2	F-35C	PAT	36	36F1	Choctaw	65.00% ETR	145	13935	13.5	0.9	78.4
SP39	3	F-35C	PAT	18	18F1	Choctaw	65.00% ETR	145	17393	13.5	0.9	76.7
SP40	1	F-35B	DEP	36	36D3	Duke	100.00% ETR	300	2957	1.9	0.0	105.7
SP40	2	F-35C	DEP	36	36D3	Duke	100.00% ETR	300	4611	1.7	0.0	100.3
SP40	3	F-16A	DEP	36	36D1	Duke	92.30% NC	300	2767	1.7	0.0	98.6

Table E-14. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 2D

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP01	1	F-35B	ITF	12	12FVL2	Eglin	91.00% ETR	60	7082	1.5	0.0	105.9
SP01	2	F-15A	PAT	19	19C7	Eglin	90.00% NC	300	1913	0.7	0.0	107.8
SP01	3	F-35B	ITF	12	12FVL1	Eglin	55.00% ETR	150	7197	1.5	0.0	103.5
SP02	1	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	1659	1.3	0.0	108.3
SP02	2	F-35B	ITF	12	12FVL2	Eglin	100.00% ETR	150	6072	1.5	0.0	107.2
SP02	3	F-35B	ITF	12	12FVL1	Eglin	100.00% ETR	150	6113	1.5	0.0	107
SP03	1	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	1058	1.3	0.0	111.3
SP03	2	F-35B	ITF	12	12FVL1	Eglin	100.00% ETR	150	6191	1.5	0.0	106.7
SP03	3	F-35B	PAT	30	30F1	Eglin	55.00% ETR	150	1058	0.8	0.0	108.8
SP04	1	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	1489	1.3	0.0	109.6
SP04	2	F-35B	ITF	12	12FVL1	Eglin	100.00% ETR	150	5776	1.5	0.0	108
SP04	3	F-35B	ITF	12	12FVL2	Eglin	100.00% ETR	150	5748	1.5	0.0	107.7
SP05	1	F-35B	ITF	12	12FVL2	Eglin	100.00% ETR	150	5174	1.5	0.0	110.9
SP05	2	F-35B	ITF	12	12FVL1	Eglin	55.00% ETR	150	5259	1.5	0.0	109.8
SP05	3	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	3014	1.3	0.0	106.4
SP06	1	F-35B	ITF	12	12FVL2	Eglin	100.00% ETR	150	4057	1.5	0.0	115.9
SP06	2	F-35B	ITF	12	12FVL1	Eglin	55.00% ETR	150	4141	1.5	0.0	113.5
SP06	3	F-35B	ITF	30	30FVL2	Eglin	100.00% ETR	150	3182	0.3	0.0	117.6
SP07	1	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	2740	1.3	0.0	101.3
SP07	2	F-35B	ITF	12	12FVL1	Eglin	100.00% ETR	150	9013	1.5	0.0	98.3
SP07	3	F-35B	PAT	30	30F1	Eglin	55.00% ETR	150	2740	0.8	0.0	99.7
SP08	1	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	2050	2.5	0.0	102.3
SP08	2	F-35B	ITF	12	12FVL2	Eglin	55.00% ETR	150	6943	1.5	0.0	101.4
SP08	3	F-18E/F	DEP	19	19D5T	Eglin	97.00% NC	150	4164	0.2	0.0	105.9
SP09	1	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	3227	2.5	0.0	97
SP09	2	F-18E/F	DEP	19	19D5T	Eglin	97.00% NC	150	5473	0.2	0.0	102

Table E-14. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 2D, 59 Aircraft, Cont'd

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP09	3	F-18E/F	DEP	19	19D4	Eglin	97.00% NC	150	5473	0.2	0.0	102
SP10	1	F-35B	ITF	12	12FVL1	Eglin	100.00% ETR	140	2956	1.5	0.0	116
SP10	2	F-35C	PAT	30	30F1	Eglin	100.00% ETR	145	1625	1.3	0.0	114
SP10	3	F-35B	ITF	12	12FVL2	Eglin	100.00% ETR	140	2956	1.5	0.0	113.1
SP11	1	F-18E/F	DEP	19	19D5T	Eglin	97.00% NC	0	6217	0.2	0.0	98.4
SP11	2	F-18E/F	DEP	19	19D4	Eglin	97.00% NC	0	6217	0.2	0.0	98.4
SP11	3	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	15313	16.3	0.0	83.2
SP12	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	1606	0.3	0.0	111
SP12	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	1606	0.3	0.0	111
SP12	3	F-35A	PAT	19	19I1	Eglin	55.00% ETR	170	1623	1.1	0.0	102.7
SP13	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	1050	0.3	0.0	114.9
SP13	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	1050	0.3	0.0	114.9
SP13	3	F-35A	PAT	19	19I1	Eglin	55.00% ETR	170	1070	1.1	0.0	106.3
SP14	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	1068	0.3	0.0	114.9
SP14	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	1068	0.3	0.0	114.9
SP14	3	F-35A	PAT	19	19I1	Eglin	55.00% ETR	170	1090	1.1	0.0	106.1
SP15	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	2325	0.3	0.0	107.2
SP15	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	2325	0.3	0.0	107.2
SP15	3	F-35A	PAT	19	19I1	Eglin	55.00% ETR	170	2338	1.1	0.0	99.7
SP16	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	2981	0.3	0.0	104.6
SP16	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	2981	0.3	0.0	104.6
SP16	3	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	12767	16.3	0.0	86.1
SP17	1	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	13648	16.3	0.0	85.4
SP17	2	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	4493	0.3	0.0	100.2
SP17	3	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	4493	0.3	0.0	100.2
SP18	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	1202	0.3	0.0	113.6

Table E-14. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 2D, 59 Aircraft, Cont'd

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP18	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	1202	0.3	0.0	113.6
SP18	3	F-35A	PAT	19	19I2	Eglin	55.00% ETR	170	1200	1.1	0.0	105.3
SP19	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	660	0.3	0.0	118.9
SP19	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	660	0.3	0.0	118.9
SP19	3	F-35B	PAT	19	19I1	Eglin	55.00% ETR	150	666	0.9	0.0	110.6
SP20	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	3094	0.3	0.0	105
SP20	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	3094	0.3	0.0	105
SP20	3	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	12334	16.3	0.0	86.9
SP21	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	2398	0.3	0.0	107.7
SP21	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	2398	0.3	0.0	107.7
SP21	3	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	11673	16.3	0.0	87.9
SP22	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	387	0.3	0.0	123.1
SP22	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	387	0.3	0.0	123.1
SP22	3	F-35B	PAT	19	19I1	Eglin	55.00% ETR	150	422	0.9	0.0	113.7
SP23	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	239	0.3	0.0	126.4
SP23	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	239	0.3	0.0	126.4
SP23	3	F-35B	PAT	19	19I2	Eglin	55.00% ETR	135	283	0.9	0.0	117
SP24	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	1982	0.8	0.0	99
SP24	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	7244	1.6	0.8	80.7
SP24	3	C-130H&N&P	PAT	30	30C1	Eglin	16000.00 IN-LBS	150	2026	2.5	0.0	85.3
SP25	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	3211	0.8	0.0	93.2
SP25	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	8349	1.6	0.8	78.6
SP25	3	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	7388	2.4	1.6	73.9
SP26	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	2298	0.8	0.0	97.4
SP26	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	7085	1.6	0.8	80.8
SP26	3	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	6108	2.4	1.6	75.8

Table E-14. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 2D, 59 Aircraft, Cont'd

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP27	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	2838	0.8	0.0	94.9
SP27	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	7367	1.6	0.8	80.2
SP27	3	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	6600	2.4	1.6	74.8
SP28	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	2043	0.8	0.0	98.7
SP28	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	7150	1.6	0.8	80.9
SP28	3	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	6036	2.4	1.6	76.5
SP29	1	F-35B	DEP	36	36D3	Duke	100.00% ETR	300	7400	2.9	0.0	93.7
SP29	2	F-35B	PAT	18	18DF2	Duke	55.00% ETR	150	4593	0.0	0.2	90.4
SP29	3	F-35C	DEP	36	36D3	Duke	100.00% ETR	300	10495	2.5	0.0	88.7
SP30	1	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	8848	1.6	0.8	80.5
SP30	2	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	8239	2.4	1.6	75
SP30	3	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	23035	16.3	0.0	75.5
SP31	1	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	210	8229	1.6	0.8	82.4
SP31	2	F-35C	PAT	30	30F1	Eglin	65.00% ETR	145	7519	1.3	0.0	89.1
SP31	3	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	19992	16.3	0.0	77.5
SP32	1	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	8295	1.6	0.8	80.1
SP32	2	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	23652	16.3	0.0	75.3
SP32	3	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	7539	2.4	1.6	74.6
SP33	1	F-35B	ITF	12	12FVL1	Eglin	150.00% ETR	0	8227	1.5	0.0	96.4
SP33	2	F-15A	PAT	30	30C2	Eglin	90.00% NC	300	2811	0.3	0.0	101.7
SP33	3	F-35C	PAT	12	12F1	Eglin	55.00% ETR	145	7546	3.9	0.0	89.9
SP34	1	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	1890	2.5	0.0	103.5
SP34	2	F-35B	ITF	12	12FVL2	Eglin	55.00% ETR	150	7306	1.5	0.0	101.5
SP34	3	F-15A	PAT	12	12C1	Eglin	90.00% NC	300	1667	0.4	0.0	107.2
SP35	1	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	1425	2.5	0.0	107
SP35	2	F-35B	ITF	12	12FVL2	Eglin	55.00% ETR	150	5504	1.5	0.0	107.1

Table E-14. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 2D, 59 Aircraft, Cont'd

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP35	3	F-18E/F	DEP	19	19D5T	Eglin	97.00% NC	150	2658	0.2	0.0	111.7
SP36	1	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	1496	2.5	0.0	106.6
SP36	2	F-18E/F	DEP	19	19D5T	Eglin	97.00% NC	150	2453	0.2	0.0	112.6
SP36	3	F-18E/F	DEP	19	19D4	Eglin	97.00% NC	150	2453	0.2	0.0	112.6
SP37	1	F-35C	ITF	18	18D1	Choctaw	35.00% ETR	300	7471	3.5	0.2	82.9
SP37	2	F-35B	ITF	18	18D1	Choctaw	35.00% ETR	300	7471	1.8	0.1	82.9
SP37	3	F-35A	ITF	18	18D1	Choctaw	35.00% ETR	300	7471	0.9	0.0	82.9
SP38	1	F-35C	ITF	36	36D1	Choctaw	35.00% ETR	300	8380	3.5	0.2	89.6
SP38	2	F-35B	ITF	36	36D1	Choctaw	35.00% ETR	300	8380	1.8	0.1	89.6
SP38	3	F-35A	ITF	36	36D1	Choctaw	35.00% ETR	300	8380	0.9	0.0	89.6
SP39	1	F-35C	ITF	18	18D1	Choctaw	100.00% ETR	300	9991	3.5	0.2	89.9
SP39	2	F-35B	ITF	18	18D1	Choctaw	100.00% ETR	300	9991	1.8	0.1	89.9
SP39	3	F-35C	PAT	36	36F1	Choctaw	65.00% ETR	145	13935	13.5	0.9	78.4
SP40	1	F-35B	DEP	36	36D3	Duke	100.00% ETR	300	2957	2.9	0.0	105.7
SP40	2	F-35A	ARR	18	18A1	Duke	55.00% ETR	170	2698	6.6	0.4	97.9
SP40	3	F-35C	ARR	18	18A1	Duke	55.00% ETR	170	2698	4.8	0.3	97.9

Table E-15. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 2E

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP01	1	F-15A	PAT	19	19C7	Eglin	90.00% NC	300	1913	0.7	0.0	107.8
SP01	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	12426.00 LBS	166	4441	1.6	0.8	92
SP01	3	F-16C	PAT	19	19C7	Eglin	93.00% NC	200	1994	0.4	0.0	104.7
SP02	1	F-15A	PAT	19	19C7	Eglin	90.00% NC	300	2119	0.7	0.0	103
SP02	2	F-18E/F	DEP	12	12D6	Eglin	97.00% NC	150	5888	0.3	0.0	101.4
SP02	3	F-18E/F	DEP	12	12D7	Eglin	97.00% NC	150	5888	0.3	0.0	101.4
SP03	1	F-18E/F	DEP	12	12D6	Eglin	97.00% NC	150	6170	0.3	0.0	100.4
SP03	2	F-18E/F	DEP	12	12D7	Eglin	97.00% NC	150	6170	0.3	0.0	100.4
SP03	3	E-3A	PAT	19	19C6	Eglin	1.10 EPR	170	995	0.7	0.0	99.3
SP04	1	F-18E/F	DEP	12	12D6	Eglin	97.00% NC	150	5658	0.3	0.0	102
SP04	2	F-18E/F	DEP	12	12D7	Eglin	97.00% NC	150	5658	0.3	0.0	102
SP04	3	F-15A	PAT	19	19C7	Eglin	71.00% NC	240	2502	0.7	0.0	100.5
SP05	1	F-18E/F	DEP	12	12D6	Eglin	97.00% NC	150	4718	0.3	0.0	104.3
SP05	2	F-18E/F	DEP	12	12D7	Eglin	97.00% NC	150	4718	0.3	0.0	104.3
SP05	3	F-15A	PAT	19	19C7	Eglin	71.00% NC	240	1510	0.7	0.0	104.3
SP06	1	F-18E/F	DEP	12	12D6	Eglin	97.00% NC	150	3307	0.3	0.0	108.4
SP06	2	F-18E/F	DEP	12	12D7	Eglin	97.00% NC	150	3307	0.3	0.0	108.4
SP06	3	F-18E/F	DEP	30	30D7	Eglin	97.00% NC	150	3180	0.1	0.0	109.2
SP07	1	E-3A	PAT	30	30C6	Eglin	1.10 EPR	170	995	0.3	0.0	99.6
SP07	2	F-18E/F	DEP	12	12D7	Eglin	97.00% NC	150	9011	0.3	0.0	94.6
SP07	3	F-18E/F	DEP	12	12D6	Eglin	97.00% NC	150	9011	0.3	0.0	94.6
SP08	1	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	2050	2.5	0.0	102.3
SP08	2	F-18E/F	DEP	19	19D5T	Eglin	97.00% NC	150	4164	0.2	0.0	105.9
SP08	3	F-18E/F	DEP	19	19D4	Eglin	97.00% NC	150	4164	0.2	0.0	105.9
SP09	1	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	3227	2.5	0.0	97

Table E-15. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 2E, 59 Aircraft, Cont'd

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP09	2	F-18E/F	DEP	19	19D5T	Eglin	97.00% NC	150	5473	0.2	0.0	102
SP09	3	F-18E/F	DEP	19	19D4	Eglin	97.00% NC	150	5473	0.2	0.0	102
SP10	1	F-18E/F	DEP	12	12D7	Eglin	97.00% NC	0	2952	0.3	0.0	108.6
SP10	2	F-18E/F	DEP	12	12D6	Eglin	97.00% NC	0	2952	0.3	0.0	108.6
SP10	3	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	2962	2.5	0.0	99.7
SP11	1	F-18E/F	DEP	19	19D5T	Eglin	97.00% NC	0	6217	0.2	0.0	98.4
SP11	2	F-18E/F	DEP	19	19D4	Eglin	97.00% NC	0	6217	0.2	0.0	98.4
SP11	3	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	15313	16.3	0.0	83.2
SP12	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	1606	0.3	0.0	111
SP12	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	1606	0.3	0.0	111
SP12	3	F-16C	PAT	01	01C1	Eglin	93.00% NC	200	1920	0.4	0.0	103.9
SP13	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	1050	0.3	0.0	114.9
SP13	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	1050	0.3	0.0	114.9
SP13	3	F-16C	PAT	01	01C1	Eglin	93.00% NC	200	1415	0.4	0.0	107.2
SP14	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	1068	0.3	0.0	114.9
SP14	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	1068	0.3	0.0	114.9
SP14	3	F-16C	PAT	01	01C1	Eglin	93.00% NC	200	1488	0.4	0.0	106.6
SP15	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	2325	0.3	0.0	107.2
SP15	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	2325	0.3	0.0	107.2
SP15	3	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	12346	16.3	0.0	86.6
SP16	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	2981	0.3	0.0	104.6
SP16	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	2981	0.3	0.0	104.6
SP16	3	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	12767	16.3	0.0	86.1
SP17	1	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	13648	16.3	0.0	85.4
SP17	2	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	4493	0.3	0.0	100.2
SP17	3	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	4493	0.3	0.0	100.2

Table E-15. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 2E, 59 Aircraft, Cont'd

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP18	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	1202	0.3	0.0	113.6
SP18	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	1202	0.3	0.0	113.6
SP18	3	F-16C	PAT	01	01C1	Eglin	93.00% NC	200	1488	0.4	0.0	107
SP19	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	660	0.3	0.0	118.9
SP19	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	660	0.3	0.0	118.9
SP19	3	E-3A	PAT	19	19C6	Eglin	1.30 EPR	140	683	0.7	0.0	106.5
SP20	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	3094	0.3	0.0	105
SP20	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	3094	0.3	0.0	105
SP20	3	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	12334	16.3	0.0	86.9
SP21	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	2398	0.3	0.0	107.7
SP21	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	2398	0.3	0.0	107.7
SP21	3	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	11673	16.3	0.0	87.9
SP22	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	387	0.3	0.0	123.1
SP22	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	387	0.3	0.0	123.1
SP22	3	F-15A	PAT	19	19C1	Eglin	80.00% NC	160	477	1.4	0.0	103.2
SP23	1	F-18E/F	ARR	19	19A6	Eglin	88.00% NC	140	239	0.3	0.0	126.4
SP23	2	F-18E/F	ARR	19	19A8	Eglin	88.00% NC	140	239	0.3	0.0	126.4
SP23	3	E-3A	PAT	19	19C6	Eglin	1.20 EPR	160	313	0.7	0.0	112
SP24	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	1982	0.8	0.0	99
SP24	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	7244	1.6	0.8	80.7
SP24	3	C-130H&N&P	PAT	30	30C1	Eglin	16000.00 IN-LBS	150	2026	2.5	0.0	85.3
SP25	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	3211	0.8	0.0	93.2
SP25	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	8349	1.6	0.8	78.6
SP25	3	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	7388	2.4	1.6	73.9
SP26	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	2298	0.8	0.0	97.4

Table E-15. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 2E, 59 Aircraft, Cont'd

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP26	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	7085	1.6	0.8	80.8
SP26	3	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	6108	2.4	1.6	75.8
SP27	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	2838	0.8	0.0	94.9
SP27	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	7367	1.6	0.8	80.2
SP27	3	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	6600	2.4	1.6	74.8
SP28	1	T-38A	PAT	30	30C1	Eglin	100.00% RPM	300	2043	0.8	0.0	98.7
SP28	2	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	7150	1.6	0.8	80.9
SP28	3	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	6036	2.4	1.6	76.5
SP29	1	F-35B	DEP	36	36D3	Duke	100.00% ETR	300	7400	2.9	0.0	93.7
SP29	2	F-35C	PAT	18	18I2	Duke	33.00% ETR	225	4735	3.3	0.0	87.8
SP29	3	F-35B	PAT	18	18DF2	Duke	55.00% ETR	150	4593	0.0	0.2	90.4
SP30	1	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	8848	1.6	0.8	80.5
SP30	2	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	8239	2.4	1.6	75
SP30	3	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	23035	16.3	0.0	75.5
SP31	1	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	210	8229	1.6	0.8	82.4
SP31	2	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	19992	16.3	0.0	77.5
SP31	3	F-18E/F	DEP	19	19D4	Eglin	94.00% NC	300	9599	0.2	0.0	91.6
SP32	1	DC-9-30QN9 (Q)	DEP	19	19D4	Eglin	10821.00 LBS	250	8295	1.6	0.8	80.1
SP32	2	F-35B	DEP	18	18D3	Duke	100.00% ETR	300	23652	16.3	0.0	75.3
SP32	3	BAE-HS-748	DEP	19	19D4	Eglin	90.00% RPM	115	7539	2.4	1.6	74.6
SP33	1	F-15A	PAT	30	30C2	Eglin	90.00% NC	300	2811	0.3	0.0	101.7
SP33	2	F-16C	PAT	30	30C2	Eglin	93.00% NC	200	2945	0.6	0.0	98.1

Table E-15. Top Contributor Flight Profiles to Overall Time-Averaged Noise Levels at Representative Noise-Sensitive Locations Under Alternative 2E, 59 Aircraft, Cont'd

Loc. ID	Rank	Aircraft	Op Type	RW	Track	Origin	Engine Power	Speed (KIAS)	Slant Dist. (ft)	Day Ops	Night Ops	SEL (dB)
SP33	3	F-15A	PAT	30	30C2	Eglin	90.00% NC	300	2568	0.1	0.0	102.2
SP34	1	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	1890	2.5	0.0	103.5
SP34	2	F-15A	PAT	12	12C1	Eglin	90.00% NC	300	1667	0.4	0.0	107.2
SP34	3	F-18E/F	DEP	19	19D5T	Eglin	97.00% NC	150	4492	0.2	0.0	105.2
SP35	1	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	1425	2.5	0.0	107
SP35	2	F-18E/F	DEP	19	19D5T	Eglin	97.00% NC	150	2658	0.2	0.0	111.7
SP35	3	F-18E/F	DEP	19	19D4	Eglin	97.00% NC	150	2658	0.2	0.0	111.7
SP36	1	F-16C	PAT	12	12C1	Eglin	93.00% NC	200	1496	2.5	0.0	106.6
SP36	2	F-18E/F	DEP	19	19D5T	Eglin	97.00% NC	150	2453	0.2	0.0	112.6
SP36	3	F-18E/F	DEP	19	19D4	Eglin	97.00% NC	150	2453	0.2	0.0	112.6
SP37	1	F-35C	ITF	18	18D1	Choctaw	35.00% ETR	300	7471	3.4	0.2	82.9
SP37	2	F-35A	ITF	18	18D1	Choctaw	35.00% ETR	300	7471	2.3	0.0	82.9
SP37	3	F-35C	ARR	36	36B1	Choctaw	27.00% ETR	350	2990	0.8	0.1	78.5
SP38	1	F-35C	ITF	36	36D1	Choctaw	35.00% ETR	300	8380	3.4	0.2	89.6
SP38	2	F-35A	ITF	36	36D1	Choctaw	35.00% ETR	300	8380	2.3	0.0	89.6
SP38	3	F-35C	PAT	18	18F1	Choctaw	65.00% ETR	145	16730	13.5	0.9	73.6
SP39	1	F-35C	ITF	18	18D1	Choctaw	100.00% ETR	300	9991	3.4	0.2	89.9
SP39	2	F-35A	ITF	18	18D1	Choctaw	100.00% ETR	300	9991	2.3	0.0	89.9
SP39	3	F-35C	PAT	36	36F1	Choctaw	65.00% ETR	145	13935	13.5	0.9	78.4
SP40	1	F-35B	DEP	36	36D3	Duke	100.00% ETR	300	2957	2.9	0.0	105.7
SP40	2	F-35A	ARR	18	18A1	Duke	55.00% ETR	170	2698	7.6	0.5	97.9
SP40	3	F-35C	ARR	18	18A1	Duke	55.00% ETR	170	2698	5.9	0.4	97.9

Flights Over Valparaiso

Aircraft conducting departures from RW 01, arrivals to RW 19, or closed patterns to RW 01 or RW 19 at Eglin Main Base must necessarily overfly portions of the city of Valparaiso at relatively low altitude. These low-altitude overflights are major contributors to elevated noise levels in Valparaiso, Table E-16 lists the frequency and types and of departures, arrivals, and closed pattern operations flown on these runways under each alternative.

Table E-16. JSF Departures from RW 01, Arrivals to RW 19, and Closed Patterns to RW 01 and RW 19 at Eglin Main Base

Operations Over Valparaiso	No Action	Scenario 1A	Scenario 1I	Scenario 2A	Scenario 2B	Scenario 2C	Scenario 2D	Scenario 2E
Mil Departure	0.00	10.94	0.46	–	0.16	0.11	5.00	–
Overhead Break Arrival (Conventional Landings)	0.00	0.32	0.32	–	0.04	0.01	0.07	–
Overhead Break Arrival (Slow Landings)	0.00	0.06	0.00	–	0.00	0.00	0.02	–
Overhead Break Arrival (RVL)	0.00	0.07	0.00	–	0.00	0.00	0.02	–
Standard Straight-in Arrivals (IFR)	0.49	12.04	0.00	–	2.15	0.96	2.46	-–
Standard Straight-in Arrivals (IFR to Slow Landings)	0.09	2.12	0.00	–	0.62	0.61	0.61	–
SFO Arrivals (BREAK)	0.11	0.00	0.00	–	0.00	0.00	0.00	–
SFO Arrival (STRAIGHT-IN)	0.01	0.00	0.00	–	0.00	0.00	0.00	–
Touch and Go (Conventional)	0.00	0.50	0.00	–	0.32	0.17	0.23	–
Touch and Go (Slow)	0.00	0.08	0.00	–	0.05	0.04	0.07	–
Touch and Go (RVL)	0.00	0.09	0.00	–	0.05	0.03	0.03	–
Touch and Go (VL)	0.00	0.01	0.00	–	0.04	0.00	0.07	–
IFR Pattern (Conventional)	0.00	3.80	0.05	–	4.20	0.98	4.42	–
IFR Pattern (Slow Landings)	0.00	2.15	0.03	–	1.85	1.23	1.85	–

Operations Over Valparaiso	No Action	Scenario 1A	Scenario 1I	Scenario 2A	Scenario 2B	Scenario 2C	Scenario 2D	Scenario 2E
AB Departure	0.00	0.40	0.04	–	0.00	0.00	0.00	–
STO Departure	0.00	1.22	0.12	–	0.00	0.00	0.00	–
Overhead VL	0.00	0.01	0.00	–	0.00	0.00	0.07	–
Total Operations Over Valparaiso	**0.70**	**33.82**	**1.02**	**–**	**9.46**	**4.13**	**14.91**	**–**
Total Percentage of Eglin Operations Over Valparaiso	**0%**	**14%**	**0%**	**–**	**9%**	**7%**	**14%**	**–**
Total Percentage of JSF Operations Over Valparaiso	**0%**	**7%**	**0%**	**–**	**2%**	**1%**	**3%**	**–**

* "Operations over Valparaiso" are departures from Runway 01, arrivals to RW 19, closed pattern from 01 and 19. This table does not include any flights into Duke Field, which may overfly Valparaiso.

Noise at Individual Schools

Hourly L_{eq} Noise levels at representative schools near Eglin Main are listed in Table E-17 through Table E-24 for each hour of a typical school day (7:00 AM to 4:00 AM), for each alternative analyzed in this Supplemental EIS. Schools presented were selected to help understand the noise environment and, as such, this table may not include all schools that are affected by noise contours. Indoor L_{eq} was assumed to be 25 dB less than outdoor L_{eq} due to NLR provided by the school structure with windows closed. Actual outdoor-to-indoor NLR varies from school to school and between locations within individual schools. L_{eq} is provided for each hour of the day to give some indication as to which hours of the day might be more disruptive of learning.

Table E-17. Hourly L_{eq} Noise Levels During the School Day at Representative Schools Near Eglin Main Under the No Action Alternative*

Loc. ID	General Description	7:00–8:00 AM	8:00–9:00 AM	9:00–10:00 AM	10:00–11:00 AM	11:00 AM –12:00 PM	12:00–1:00 PM	1:00–2:00 PM	2:00–3:00 PM	3:00–4:00 PM
SP04	Cherokee Elementary School	55 (30)	58 (33)	59 (34)	60 (35)	61 (36)	62 (37)	61 (36)	61 (36)	60 (35)
SP05	Child Development Center	57 (32)	60 (35)	61 (36)	62 (37)	63 (38)	64 (39)	63 (38)	63 (38)	62 (37)
SP06	Oakhill School (recently closed)	61 (36)	64 (39)	65 (40)	66 (41)	67 (42)	68 (43)	67 (42)	67 (42)	66 (41)
SP11	Lewis Middle School	45 (20)	48 (23)	49 (24)	51 (26)	52 (27)	52 (27)	52 (27)	51 (26)	51 (26)
SP12	Valparaiso Elementary School	49 (24)	52 (27)	53 (28)	55 (30)	56 (31)	56 (31)	56 (31)	55 (30)	55 (30)
SP20	Edge Elementary School	42 (17)	45 (20)	46 (21)	48 (23)	49 (24)	49 (24)	49 (24)	48 (23)	48 (23)
SP23	Private School (Niceville)	60 (35)	63 (38)	64 (39)	65 (40)	67 (42)	67 (42)	67 (42)	66 (41)	65 (40)
SP24	Private School (Ft. Walton)	37 (12)	40 (15)	41 (16)	43 (18)	44 (19)	44 (19)	44 (19)	43 (18)	43 (18)
SP26	Kenwood Elementary School	36 (11)	39 (14)	40 (15)	41 (16)	42 (17)	43 (18)	42 (17)	42 (17)	41 (16)
SP27	Pryor Middle School	34 (9)	37 (12)	38 (13)	39 (14)	40 (15)	41 (16)	40 (15)	40 (15)	39 (14)
SP30	Shalimar Elementary School	37 (12)	40 (15)	41 (16)	42 (17)	43 (18)	44 (19)	43 (18)	43 (18)	42 (17)

* Interior noise levels are stated in parenthesis.

Table E-18. Hourly L_{eq} Noise Levels During the School Day at Representative Schools Near Eglin Main Under Alternative 1A*

Loc. ID	General Description	7:00–8:00 AM		8:00–9:00 AM		9:00–10:00 AM		10:00–11:00 AM		11:00 AM–12:00 PM		12:00–1:00 PM		1:00–2:00 PM		2:00–3:00 PM		3:00–4:00 PM	
SP04	Cherokee Elementary School	55	(30)	58	(33)	59	(34)	61	(36)	62	(37)	62	(37)	62	(37)	61	(36)	61	(36)
SP05	Child Development Center	57	(32)	60	(35)	61	(36)	62	(37)	63	(38)	64	(39)	63	(38)	63	(38)	62	(37)
SP06	Oakhill School (recently closed)	61	(36)	64	(39)	65	(40)	66	(41)	67	(42)	68	(43)	67	(42)	67	(42)	66	(41)
SP11	Lewis Middle School	47	(22)	50	(25)	51	(26)	52	(27)	53	(28)	54	(29)	53	(28)	53	(28)	52	(27)
SP12	Valparaiso Elementary School	57	(32)	60	(35)	61	(36)	63	(38)	64	(39)	64	(39)	64	(39)	63	(38)	63	(38)
SP20	Edge Elementary School	49	(24)	52	(27)	53	(28)	55	(30)	56	(31)	56	(31)	56	(31)	56	(31)	55	(30)
SP23	Private School (Niceville)	66	(41)	69	(44)	70	(45)	71	(46)	72	(47)	73	(48)	72	(47)	72	(47)	71	(46)
SP24	Private School (Ft. Walton)	37	(12)	40	(15)	41	(16)	42	(17)	43	(18)	44	(19)	43	(18)	43	(18)	42	(17)
SP26	Kenwood Elementary School	35	(10)	38	(13)	39	(14)	41	(16)	42	(17)	42	(17)	42	(17)	41	(16)	41	(16)
SP27	Pryor Middle School	34	(9)	37	(12)	38	(13)	39	(14)	40	(15)	41	(16)	40	(15)	40	(15)	39	(14)
SP30	Shalimar Elementary School	37	(12)	40	(15)	41	(16)	42	(17)	43	(18)	44	(19)	43	(18)	43	(18)	42	(17)

*Interior noise levels are stated in parenthesis.

Table E-19. Hourly L_{eq} Noise Levels During the School Day at Representative Schools Near Eglin Main Under Alternative 1I*

Loc. ID	General Description	7:00–8:00 AM	8:00–9:00 AM	9:00–10:00 AM	10:00–11:00 AM	11:00 AM–12:00 PM	12:00–1:00 PM	1:00–2:00 PM	2:00–3:00 PM	3:00–4:00 PM
SP04	Cherokee Elementary School	54 (29)	57 (32)	58 (33)	59 (34)	60 (35)	61 (36)	60 (35)	60 (35)	59 (34)
SP05	Child Development Center	55 (30)	58 (33)	59 (34)	60 (35)	61 (36)	62 (37)	61 (36)	61 (36)	60 (35)
SP06	Oakhill School (recently closed)	59 (34)	62 (37)	63 (38)	64 (39)	65 (40)	66 (41)	65 (40)	65 (40)	64 (39)
SP11	Lewis Middle School	44 (19)	47 (22)	48 (23)	50 (25)	51 (26)	51 (26)	51 (26)	50 (25)	50 (25)
SP12	Valparaiso Elementary School	50 (25)	53 (28)	54 (29)	56 (31)	57 (32)	57 (32)	57 (32)	56 (31)	56 (31)
SP20	Edge Elementary School	43 (18)	46 (21)	47 (22)	48 (23)	49 (24)	50 (25)	49 (24)	49 (24)	48 (23)
SP23	Private School (Niceville)	61 (36)	64 (39)	64 (39)	66 (41)	67 (42)	68 (43)	67 (42)	67 (42)	66 (41)
SP24	Private School (Ft. Walton)	37 (12)	40 (15)	41 (16)	43 (18)	44 (19)	44 (19)	44 (19)	43 (18)	43 (18)
SP26	Kenwood Elementary School	36 (11)	39 (14)	40 (15)	42 (17)	43 (18)	43 (18)	43 (18)	42 (17)	42 (17)
SP27	Pryor Middle School	35 (10)	38 (13)	39 (14)	40 (15)	41 (16)	42 (17)	41 (16)	41 (16)	40 (15)
SP30	Shalimar Elementary School	41 (16)	44 (19)	45 (20)	46 (21)	47 (22)	48 (23)	47 (22)	47 (22)	46 (21)

*Interior noise levels are stated in parenthesis.

Table E-20. Hourly L_{eq} Noise Levels During the School Day at Representative Schools Near Eglin Main Under Alternative 2A*

Loc. ID	General Description	7:00–8:00 AM		8:00–9:00 AM		9:00–10:00 AM		10:00–11:00 AM		11:00 AM–12:00 PM		12:00–1:00 PM		1:00–2:00 PM		2:00–3:00 PM		3:00–4:00 PM	
SP04	Cherokee Elementary School	43	(18)	46	(21)	47	(22)	48	(23)	49	(24)	50	(25)	49	(24)	49	(24)	48	(23)
SP05	Child Development Center	46	(21)	49	(24)	50	(25)	51	(26)	52	(27)	53	(28)	52	(27)	52	(27)	51	(26)
SP06	Oakhill School (recently closed)	48	(23)	51	(26)	52	(27)	54	(29)	55	(30)	55	(30)	55	(30)	54	(29)	54	(29)
SP11	Lewis Middle School	41	(16)	44	(19)	45	(20)	46	(21)	47	(22)	48	(23)	47	(22)	47	(22)	46	(21)
SP12	Valparaiso Elementary School	49	(24)	52	(27)	53	(28)	54	(29)	55	(30)	56	(31)	55	(30)	55	(30)	54	(29)
SP20	Edge Elementary School	43	(18)	46	(21)	47	(22)	48	(23)	49	(24)	50	(25)	49	(24)	49	(24)	48	(23)
SP23	Private School (Niceville)	60	(35)	63	(38)	64	(39)	65	(40)	66	(41)	67	(42)	66	(41)	66	(41)	65	(40)
SP24	Private School (Ft. Walton)	35	(10)	38	(13)	39	(14)	41	(16)	42	(17)	42	(17)	42	(17)	41	(16)	41	(16)
SP26	Kenwood Elementary School	34	(9)	37	(12)	38	(13)	40	(15)	41	(16)	41	(16)	41	(16)	40	(15)	40	(15)
SP27	Pryor Middle School	33	(8)	36	(11)	37	(12)	38	(13)	39	(14)	40	(15)	39	(14)	39	(14)	38	(13)
SP30	Shalimar Elementary School	32	(7)	35	(10)	36	(11)	37	(12)	38	(13)	39	(14)	38	(13)	38	(13)	37	(12)

* Interior noise levels are stated in parenthesis.

Table E-21. Hourly L_{eq} Noise Levels During the School Day at Representative Schools Near Eglin Main Under Alternative 2B*

Loc. ID	General Description	7:00–8:00 AM		8:00–9:00 AM		9:00–10:00 AM		10:00–11:00 AM		11:00–12:00 PM		12:00–1:00 PM		1:00–2:00 PM		2:00–3:00 PM		3:00–4:00 PM	
SP04	Cherokee Elementary School	53	(28)	56	(31)	57	(32)	58	(33)	59	(34)	60	(35)	59	(34)	59	(34)	58	(33)
SP05	Child Development Center	54	(29)	57	(32)	58	(33)	59	(34)	60	(35)	61	(36)	60	(35)	60	(35)	59	(34)
SP06	Oakhill School (recently closed)	58	(33)	61	(36)	61	(36)	63	(38)	64	(39)	64	(39)	64	(39)	64	(39)	63	(38)
SP11	Lewis Middle School	44	(19)	47	(22)	48	(23)	49	(24)	50	(25)	51	(26)	50	(25)	50	(25)	49	(24)
SP12	Valparaiso Elementary School	51	(26)	54	(29)	55	(30)	57	(32)	58	(33)	58	(33)	58	(33)	57	(32)	57	(32)
SP20	Edge Elementary School	45	(20)	48	(23)	49	(24)	50	(25)	51	(26)	52	(27)	51	(26)	51	(26)	50	(25)
SP23	Private School (Niceville)	62	(37)	65	(40)	66	(41)	68	(43)	69	(44)	69	(44)	69	(44)	68	(43)	68	(43)
SP24	Private School (Ft. Walton)	36	(11)	39	(14)	40	(15)	42	(17)	43	(18)	43	(18)	43	(18)	42	(17)	42	(17)
SP26	Kenwood Elementary School	35	(10)	38	(13)	39	(14)	40	(15)	41	(16)	42	(17)	41	(16)	41	(16)	40	(15)
SP27	Pryor Middle School	33	(8)	36	(11)	37	(12)	39	(14)	40	(15)	40	(15)	40	(15)	39	(14)	39	(14)

SP30	Shalimar Elementary School	35	(10)	38	(13)	39	(14)	41	(16)	42	(17)	42	(17)	42	(17)	41	(16)	41	(16)

* Interior noise levels are stated in parenthesis.

Table E-22. Hourly L_{eq} Noise Levels During the School Day at Representative Schools Near Eglin Main Under Alternative 2C*

Loc. ID	General Description	7:00–8:00 AM		8:00–9:00 AM		9:00–10:00 AM		10:00–11:00 AM		11:00 AM–12:00 PM		12:00–1:00 PM		1:00–2:00 PM		2:00–3:00 PM		3:00–4:00 PM	
SP04	Cherokee Elementary School	51	(26)	54	(29)	55	(30)	56	(31)	57	(32)	58	(33)	57	(32)	57	(32)	56	(31)
SP05	Child Development Center	52	(27)	55	(30)	56	(31)	57	(32)	58	(33)	59	(34)	58	(33)	58	(33)	57	(32)
SP06	Oakhill School (recently closed)	56	(31)	59	(34)	60	(35)	61	(36)	62	(37)	63	(38)	62	(37)	62	(37)	61	(36)
SP11	Lewis Middle School	42	(17)	45	(20)	46	(21)	48	(23)	49	(24)	49	(24)	49	(24)	48	(23)	48	(23)
SP12	Valparaiso Elementary School	50	(25)	53	(28)	54	(29)	56	(31)	57	(32)	57	(32)	57	(32)	56	(31)	56	(31)
SP20	Edge Elementary School	44	(19)	47	(22)	48	(23)	49	(24)	50	(25)	51	(26)	50	(25)	50	(25)	49	(24)
SP23	Private School (Niceville)	61	(36)	64	(39)	65	(40)	67	(42)	68	(43)	68	(43)	68	(43)	67	(42)	67	(42)
SP24	Private School (Ft. Walton)	36	(11)	39	(14)	40	(15)	41	(16)	42	(17)	43	(18)	42	(17)	42	(17)	41	(16)
SP26	Kenwood Elementary School	35	(10)	38	(13)	39	(14)	40	(15)	41	(16)	42	(17)	41	(16)	41	(16)	40	(15)
SP27	Pryor Middle School	33	(8)	36	(11)	37	(12)	38	(13)	39	(14)	40	(15)	39	(14)	39	(14)	38	(13)
SP30	Shalimar Elementary School	34	(9)	37	(12)	38	(13)	40	(15)	41	(16)	41	(16)	41	(16)	40	(15)	40	(15)

* Interior noise levels are stated in parenthesis.

Table E-23. Hourly L_{eq} Noise Levels During the School Day at Representative Schools Near Eglin Main Under Alternative 2D*

Loc. ID	General Description	7:00–8:00 AM		8:00–9:00 AM		9:00–10:00 AM		10:00–11:00 AM		11:00 AM–12:00 PM		12:00–1:00 PM		1:00–2:00 PM		2:00–3:00 PM		3:00 – 4:00 PM	
SP04	Cherokee Elementary School	53	(28)	56	(31)	57	(32)	58	(33)	59	(34)	60	(35)	59	(34)	59	(34)	58	(33)
SP05	Child Development Center	54	(29)	57	(32)	58	(33)	60	(35)	61	(36)	61	(36)	61	(36)	60	(35)	60	(35)
SP06	Oakhill School (recently closed)	58	(33)	61	(36)	62	(37)	64	(39)	65	(40)	65	(40)	65	(40)	64	(39)	64	(39)
SP11	Lewis Middle School	43	(18)	46	(21)	47	(22)	49	(24)	50	(25)	50	(25)	50	(25)	49	(24)	49	(24)

SP12	Valparaiso Elementary School	51	(26)	54	(29)	55	(30)	57	(32)	58	(33)	58	(33)	58	(33)	57	(32)	57	(32)
SP20	Edge Elementary School	45	(20)	48	(23)	49	(24)	50	(25)	51	(26)	52	(27)	51	(26)	51	(26)	50	(25)
SP23	Private School (Niceville)	62	(37)	65	(40)	66	(41)	68	(43)	69	(44)	69	(44)	69	(44)	68	(43)	68	(43)
SP24	Private School (Ft. Walton)	36	(11)	39	(14)	40	(15)	41	(16)	43	(18)	43	(18)	43	(18)	42	(17)	41	(16)
SP26	Kenwood Elementary School	35	(10)	38	(13)	39	(14)	40	(15)	41	(16)	42	(17)	41	(16)	41	(16)	40	(15)
SP27	Pryor Middle School	33	(8)	36	(11)	37	(12)	39	(14)	40	(15)	40	(15)	40	(15)	39	(14)	39	(14)
SP30	Shalimar Elementary School	35	(10)	38	(13)	39	(14)	40	(15)	42	(17)	42	(17)	42	(17)	41	(16)	40	(15)

* Interior noise levels are stated in parenthesis.

Table E-24. Hourly L_{eq} Noise Levels During the School Day at Representative Schools Near Eglin Main Under Alternative 2E*

Loc. ID	General Description	7:00–8:00 AM		8:00–9:00 AM		9:00–10:00 AM		10:00–11:00 AM		11:00 AM–12:00 PM		12:00–1:00 PM		1:00–2:00 PM		2:00–3:00 PM		3:00–4:00 PM	
SP04	Cherokee Elementary School	43	(18)	46	(21)	47	(22)	48	(23)	49	(24)	50	(25)	49	(24)	49	(24)	48	(23)
SP05	Child Development Center	46	(21)	49	(24)	50	(25)	51	(26)	52	(27)	53	(28)	52	(27)	52	(27)	51	(26)
SP06	Oakhill School (recently closed)	48	(23)	51	(26)	52	(27)	54	(29)	55	(30)	55	(30)	55	(30)	54	(29)	54	(29)
SP11	Lewis Middle School	41	(16)	44	(19)	45	(20)	46	(21)	47	(22)	48	(23)	47	(22)	47	(22)	46	(21)
SP12	Valparaiso Elementary School	49	(24)	52	(27)	53	(28)	54	(29)	55	(30)	56	(31)	55	(30)	55	(30)	54	(29)
SP20	Edge Elementary School	43	(18)	46	(21)	47	(22)	48	(23)	49	(24)	50	(25)	49	(24)	49	(24)	48	(23)
SP23	Private School (Niceville)	60	(35)	63	(38)	64	(39)	65	(40)	66	(41)	67	(42)	66	(41)	66	(41)	65	(40)
SP24	Private School (Ft. Walton)	35	(10)	38	(13)	39	(14)	41	(16)	42	(17)	42	(17)	42	(17)	42	(17)	41	(16)
SP26	Kenwood Elementary School	34	(9)	37	(12)	38	(13)	40	(15)	41	(16)	41	(16)	41	(16)	40	(15)	40	(15)
SP27	Pryor Middle School	33	(8)	36	(11)	37	(12)	38	(13)	39	(14)	40	(15)	39	(14)	39	(14)	38	(13)
SP30	Shalimar Elementary School	32	(7)	35	(10)	36	(11)	38	(13)	39	(14)	39	(14)	39	(14)	38	(13)	38	(13)

* Interior noise levels are stated in parenthesis.

Number of Noise Events Analysis

Speech interference associated with aircraft noise is a primary cause of annoyance for many communities. The disruption of routine indoor activities such as watching television or listening to the radio, using the telephone or conversing gives rise to frustration and irritation. Several research studies since 1984 have concluded that if an aircraft noise event's L_{max} reached no higher than 50 dB, 90 percent of the words in a sentence would typically be understood. However, should the noise get louder, the percentage of words understood is further reduced. Ultimately, the bottom line is that one's activity has been disrupted or their ability for their speech to be understood begins to be limited to some degree at an indoor L_{max} of 50 dB.

An analysis of the number of events above an indoor L_{max} of 50 dB was undertaken using an interior L_{max} of 50 dB as a threshold and assuming that the average home built to modern building codes, in a "windows-closed" environment, provides 25 dB of attenuation from outdoor noise sources (noise level reduction). L_{max} is a measure of the loudest noise level occurring during a noise event. The total number of aircraft noise events that exceed the threshold L_{max} level of 50 dB inside the structure was determined for an average operating day (24-hour period). In this way the result answers the question of how many aircraft fly over a given location that may potentially result in some level of interruption of one's activities such as sentence intelligibility, TV watching, or telephonic communications.

The results are displayed in Table E-25 where the location of interest is provided in the left-most column, and the conditions under which the analysis was performed are provided in subsequent columns. The first condition provides the number of times during a day that one might have experienced disruption of communications or activities during the time when the 33rd Fighter Wing was flying F-15s and other aircraft were being flown, including the 46th Test Wing at Eglin and passenger aircraft. For example, an individual living in Eglin housing (Capehart) (SP01) would have typically experienced as many as 83 disruptive events a day. The second column represent the conditions under the No Action Alternative or the level of flight activity approved by the February 2009 Record of Decision, during which both the 33rd FW F-35 and other users would be operating at Eglin with flight restrictions imposed on RW 01/19. For example, under the No Action Scenario at the Eglin housing (Capehart), a resident would be expected to experience as many as 177 disruptive events each day. The subsequent columns provide the estimated number of events under each Joint Strike Fighter (JSF) beddown scenario.

Table E-25. Number of Noise Events above 50 dB L_{max} at Locations of Interest on or near Eglin Main Base

Location of Interest		Number-of-Events Above (Interior 50 dB L_{max})								
		2006 AICUZ	NA	1A	1I	2A	2B	2C	2D	2E
SP01	Eglin Housing (Capehart)	83	177	180	135	49	103	80	104	49
SP02	Eglin Housing (Ben's Lake)	63	164	166	116	34	89	64	91	34
SP03	Chapel 2 - Building 2574	58	153	142	105	24	79	55	80	24
SP04	Cherokee Elem. School	62	164	165	113	32	88	63	90	32
SP05	Child Development Center	85	187	188	133	50	108	81	113	50
SP06	Oakhill School	92	191	194	138	52	111	83	115	52
SP07	Eglin Hospital	6	128	117	86	7	60	37	59	7
SP08	Eglin VAQ and Dorms	79	165	168	117	61	113	91	112	59
SP09	Eglin Chapel 1	67	144	142	95	38	82	63	77	34
SP10	JSF ITC	94	183	164	120	20	77	51	83	20
SP11	Lewis Middle School	15	100	100	81	25	49	39	47	22
SP12	Valparaiso Elementary School	59	60	99	56	108	125	117	122	107
SP13	First Assembly of God (Valp)	86	91	130	84	133	153	144	153	132
SP14	New Hope Baptist (Valp)	70	59	99	56	108	125	117	123	107
SP15	Sovereign Grace Church (Valp)	58	48	87	48	75	90	82	83	69
SP16	First Baptist Church (Valp)	31	39	78	39	57	73	65	64	50
SP17	Unitarian Church (Valp)	11	15	55	16	37	52	45	44	30
SP18	#1 Housing (Valp)	68	124	146	105	89	111	101	105	83
SP19	#2 Housing (Valp)	85	67	108	65	117	132	124	130	116
SP20	Edge Elementary School	21	17	50	14	65	79	72	76	64
SP21	Twin Cities Medical Center	29	24	56	20	72	81	76	81	71
SP22	Niceville Community Church	76	72	110	69	119	134	127	132	118
SP23	Private School (Niceville)	85	76	117	74	125	140	132	138	124
SP24	Private School (Ft. Walton)	6	6	6	11	6	6	6	6	6
SP25	Okaloosa Walton College	3	3	2	3	2	2	2	2	2
SP26	Kenwood Elementary	5	3	3	4	3	3	3	3	3
SP27	Pryor Middle School	3	3	3	9	2	2	2	2	2
SP28	Housing (Ft. Walton Bch)	6	6	6	10	5	5	5	5	5
SP29	Residential property south of Hwy 90 in Crestview	0	9	9	9	52	46	48	21	23
SP30	Shalimar Elementary School	2	2	3	17	1	3	2	2	1
SP31	Shalimar Residential	2	4	18	13	1	10	5	10	1

Table E-25. Number of Noise Events above 50 dB L_{max} at Locations of Interest on or near Eglin Main Base, Cont'd

Location of Interest		Number-of-Events Above (Interior 50 dB L_{max})								
		2006 AICUZ	NA	1A	1I	2A	2B	2C	2D	2E
SP32	Residential Poquito Bayou West Side	2	10	7	10	3	4	3	4	3
SP33	Univ. FL REEF	5	106	82	113	6	43	29	43	6
SP34	Eglin AFB Building 1 (AAC HQ)	80	170	174	123	62	115	92	115	60
SP35	Eglin AFB, Building 6 (ABW HQ)	90	183	192	134	71	126	103	127	70
SP36	Eglin Law Center (Building 2)	91	184	194	136	73	128	104	128	72
SP37	Saint Sylvester Catholic Church, Gulf Breeze	0	0	0	0	0	0	0	0	0
SP38	Residential, north of Choctaw	0	4	4	4	6	0	5	7	6
SP39	Residential, south of Choctaw	0	4	4	4	6	0	5	7	6
SP40	Okaloosa County Prison	1	35	35	34	49	45	49	69	82

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