NOISE EXPOSURE MAPS

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INTRODUCTION

This is the Noise Exposure Maps document for Phoenix Sky Harbor International Airport, owned and operated by the City of Phoenix.

The Noise Exposure Maps documentation for the airport presents current aircraft noise impacts and anticipated impacts in five years. The documentation contains sufficient information so that reviewers unfamiliar with local conditions and the local public unfamiliar with the technical aspects of aircraft noise can understand the findings.

The Noise Exposure Maps document includes the first three chapters of the F.A.R. Part 150 Noise Compatibility Study. Chapter One, Inventory, presents an overview of the airport, airspace, aviation facilities, existing land use, and local land use policies and regulations.

Chapter Two, Aviation Noise, presents existing and forecast aircraft noise based on the assumption of no additional noise abatement efforts. This provides baseline data for evaluating potential noise abatement strategies in the second part of the study.

Chapter Three, Noise Impacts, analyzes the impact of the baseline aircraft noise defined in Chapter Two on noise sensitive land uses and the residential population. It also includes an analysis of potential residential development trends in the study area.

The official Noise Exposure Maps are presented in this section following page vii. For the convenience of FAA reviewers, FAA's official Noise Exposure Map checklist is presented on pages ii through vi.

F.A.R. PART 150
NOISE EXPOSURE MAP CHECKLIST

AIRPORT NAME: ***Phoenix Sky Harbor International Airport Phoenix, Arizona***

REVIEWER: _____

	Yes/No/NA	Page No./ Other Reference
I. **IDENTIFICATION AND SUBMISSION OF MAP DOCUMENT:**		
A. Is this submittal appropriately identified as one of the following, submitted under F.A.R. Part 150:		
1. a NEM only?	Yes	Title Page, p. i
2. a NEM and NCP?	No	
3. a revision to NEMs which have previously been determined by FAA to be in compliance with Part 150?	Yes	
B. Is the airport name and the qualified airport operator identified?	Yes	Title Page, p. i
C. Is there a dated cover letter from the airport operator which indicates the documents are submitted under Part 150 for appropriate FAA determination?	Yes	p. i
II. **CONSULTATION: [150.21(b), A150.105(a)]**		
A. Is there a narrative description of the consultation accomplished, including opportunities for public review and comment during map development?	Yes	Appendix B; and supplemental volume, Supporting Information on Project Coordination and Local Consultation
B. Identification:		
1. Are the consulted parties identified?	Yes	Appendices A and B; and supplemental volume, Supporting Information on Project Coordination and Local Consultation
2. Do they include all those required by 150.21(b) and A150.105(a)?	Yes	Appendices A and B; and supplemental volume, Supporting Information on Project Coordination and Local Consultation
C. Does the documentation include the airport operator's certification, and evidence to support it, that interested persons have been afforded adequate opportunity to submit their views, data, and comments during map development and in accordance with 150.21(b)?	Yes	p. vi; Appendix B, and supplemental volume, Supporting Information on Project Coordination and Local Consultation
D. Does the document indicate whether written comments were received during consultation and, if there were comments, that they are on file with the FAA region?	Yes	Appendix B, and supplemental volume, Supporting Information on Project Coordination and Local Consultation

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AIRPORT NAME: ***Phoenix Sky Harbor International Airport Phoenix, Arizona***

REVIEWER: _____

	Yes/No/NA	Page No./ Other Reference
III. **GENERAL REQUIREMENTS: [150.21]**		
A. Are there two maps, each clearly labeled on the face with year (existing condition year and 5-year)?	Yes	See NEM Maps, Exhibits 1 & 2 after p. vii
B. Map currency:		
1. Does the existing condition map year match the year on the airport operator's submittal letter?	Yes	Current year is labeled 1999, based on actual operations from July 1 1997 through June 30, 1998. This is a fair representation of existing conditions. Based on the 12 months ending December 1999, total operations were 561,161, 7.8 percent more than the operations modeled for 1999. Air carrier operations for that period were 386,859, 5.6 percent more than the operation modeled for 1999.
2. Is the 5-year map based on reasonable forecasts and other planning assumptions and is it for the fifth calendar year after the year of submission?	Yes	See 2004 NEM after p. vii; Chapter Two, pp. 2-5 - 2-8
3. If the answer to 1 & 2 above is no, has the airport operator verified in writing that data in the documentation are representative of existing condition and 5-year forecast conditions as of the date of submission?	N/A	
C. **If the NEM and NCP are submitted together:**		
1. Has the airport operator indicated whether the 5-year map is based on 5-year contours without the program vs. contours if the program is implemented?	N/A	
2. If the 5-year map is based on program implementation:		
a. are the specific program measures which are reflected on the map identified?	N/A	
b. does the documentation specifically describe how these measures affect land use compatibilities depicted on the map?	N/A	
3. If the 5-year NEM does not incorporate program implementation, has the airport operator included an additional NEM for FAA determination after the program is approved which shows program implementation conditions and which is intended to replace the 5-year NEM as the new official 5-year map?	N/A	

F.A.R. PART 150
NOISE EXPOSURE MAP CHECKLIST

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REVIEWER: _____

	Yes/No/NA	Page No./ Other Reference
IV. **MAP SCALE, GRAPHICS, AND DATA REQUIREMENTS: [A150.101, A150.103, A150.105, 150.21(a)]**		
A. Are the maps sufficient scale to be clear and readable (they must not be less than 1" to 8,000'), and is the scale indicated on the maps?	Yes	See NEM Maps after p. vii
B. Is the quality of the graphics such that required information is clear and readable?	Yes	
C. Depiction of the airport and its environs.		
1. Is the following graphically depicted to scale on both the existing conditions and 5-year maps:		
a. airport boundaries?	Yes	
b. runway configurations with runway end numbers?	Yes	
2. Does the depiction of the off-airport data include:		
a. a land use base map depicting streets and other identifiable geographic features?	Yes	
b. the area within the 65 Ldn **(or beyond, at local discretion)**?	Yes	
c. clear delineation of geographic boundaries and the names of all jurisdictions with planning and land use control authority within the 65 Ldn (or beyond, at local discretion)?	Yes	
D. 1. Continuous contours for at least the 65, 70, and 75 Ldn?	Yes	
2. Based on current airport and operational data for the existing condition year NEM, and forecast data for the 5-year NEM?	Yes	Chapter Two, pp. 2-5 - 2-13
E. Flight tracks for the existing condition and 5-year forecast timeframes (these may be on supplemental graphics which must use the same land use base map as the existing condition and 5-year NEM), which are numbered to correspond to accompanying narrative?	Yes	Chapter Two, Exhibits 2H, 2J, 2K, 2L, 2M, and 2N after p. 2-14
F. Locations of any noise monitoring sites (these may be on supplemental graphics which must use the same land use base map as the official NEMs)	Yes	Chapter Two, Exhibit 2A after p. 2-2
G. Noncompatible land use identification:		
1. Are noncompatible land uses within at least the 65 Ldn depicted on the maps?	Yes	See NEM Maps after p. vii
2. Are noise-sensitive public buildings identified?	Yes	

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	Yes/No/NA	Page No./ Other Reference
3. Are the noncompatible uses and noise-sensitive public buildings readily identifiable and explained on the map legend?	Yes	
4. Are compatible land uses, which would normally be considered noncompatible, explained in the accompanying narrative?	N/A	
V. NARRATIVE SUPPORT OF MAP DATA: [150.21(a), A150.1, A150.101, A150.103]		
A. 1. Are the technical data, including data sources, on which the NEMs are based adequately described in the narrative?	Yes	Chapter Two, pp. 2-3 - 2-16
2. Are the underlying technical data and planning assumptions reasonable?	Yes	Chapter Two, pp. 2-3 - 2-16
B. Calculation of Noise Contours:		
1. Is the methodology indicated?	Yes	Chapter Two, p. 2-3
a. is it FAA approved?	Yes	Chapter Two, p. 2-3
b. was the same model used for both maps?	Yes	Chapter Two, p. 2-1, p. and p. 2-3 - 2-4
c. has AEE approval been obtained for use of a model other than those which have previous blanket FAA approval?	N/A	
2. Correct use of noise models:		
a. does the documentation indicate the airport operator has adjusted or calibrated FAA-approved noise models or substituted one aircraft type for another?	No	Chapter Two, pp. 2-5 - 2-9. No calibrations done. Some composite aircraft descriptors used.
b. if so, does this have written approval from AEE?	N/A	All aircraft INM designators used are on AEE's pre-approved list of substitutions.
3. If noise monitoring was used, does the narrative indicate that Part 150 guidelines were followed?	Yes	Our measurement program is discussed in Chapter 2 and can be described as a "survey type" program. Please see FAA AC 150/5020-1, Noise Control and Compatibility Planning for Airports, pp. 12-17. Our results indicate reasonable agreement between measurements and INM predictions. Where the measured values deviated from INM predictions, it was explained by operations differing from average annual conditions

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NOISE EXPOSURE MAP CHECKLIST

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	Yes/No/NA	Page No./ Other Reference
4. For noise contours below 65 Ldn, does the supporting documentation include explanation of local reasons? (Narrative explanation is highly desirable but not required by the Rule.)	N/A	
C. Noncompatible Land Use Information:		
1. Does the narrative give estimates of the number of people residing in each of the contours (Ldn 65, 70, and 75 at a minimum) for both the existing condition and 5-year maps?	Yes	Chapter Three, pp. 3-4 - 3-7, pp. 3-9 - 3-15
2. Does the documentation indicate whether Table 1 of Part 150 was used by the airport operator?	Yes	Chapter Three, pp. 3-1 - 3-3 Exhibit 3A
a. If a local variation to Table 1 was used;		
(1) does the narrative clearly indicate which adjustments were made and the local reasons for doing so?	N/A	
(2) does the narrative include the airport operators complete substitution for Table 1?	N/A	
3. Does the narrative include information on self-generated or ambient noise where compatible/noncompatible land use identification consider non-airport/aircraft sources?	No	
4. Where normally noncompatible land uses are not depicted as such on the NEMs, does the narrative satisfactorily explain why, with reference to the specific geographic areas?	N/A	
5. Does the narrative describe how forecasts will affect land use compatibility?	Yes	Chapter Three, pp. 3-9 - 3-15
VI. **MAP CERTIFICATIONS: [150.21(b), 150.21(e)]**		
A. Has the operator certified in writing that interested persons have been afforded adequate opportunity to submit views, data, and comments concerning the correctness and adequacy of the draft maps and forecasts?	Yes	Certification statements on NEM Maps and p. vii
B. Has the operator certified in writing that each map and description of consultation and opportunity for public comment are true and complete?	Yes	Certification statements on NEM Maps and p. vii

SPONSOR'S CERTIFICATION

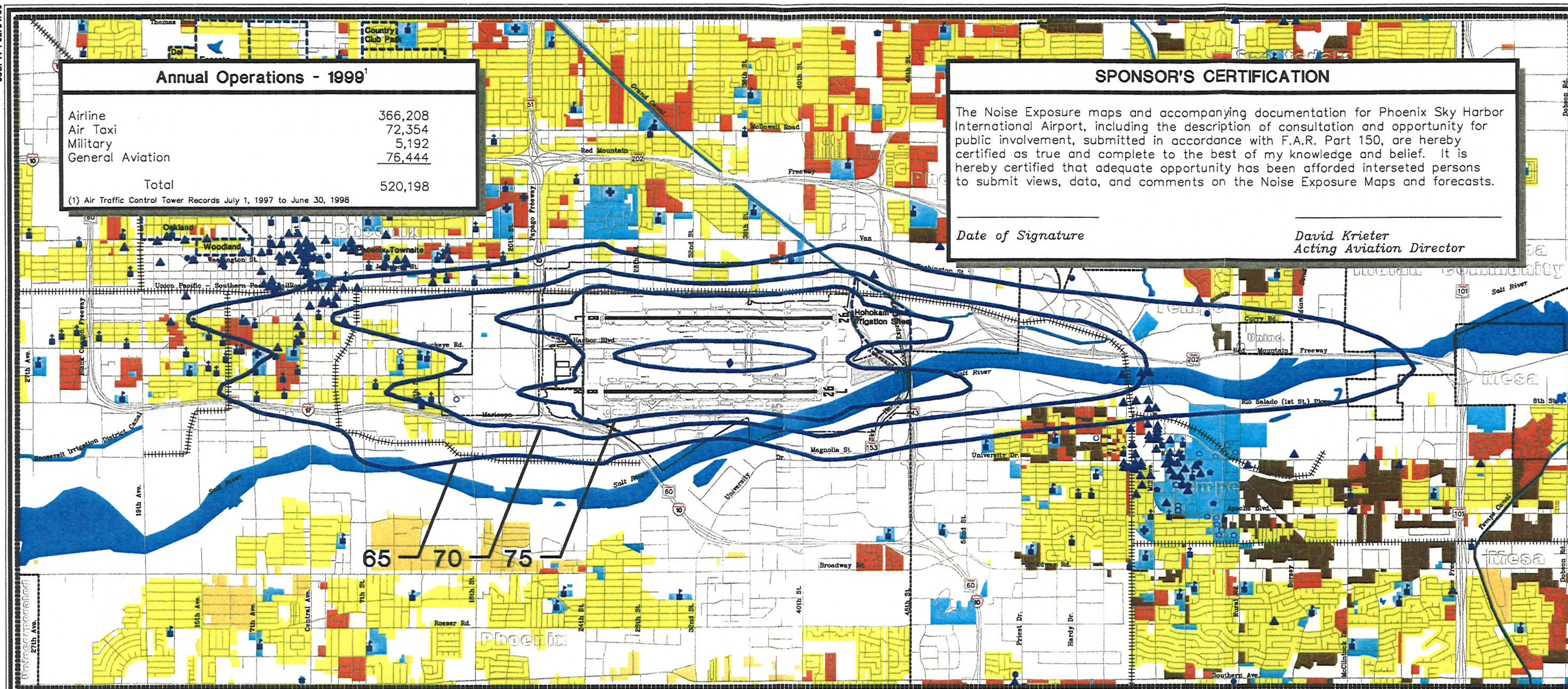
The Noise Exposure Maps and accompanying documentation for Phoenix Sky Harbor International Airport, including the description of consultation and opportunity for public involvement, submitted in accordance with F.A.R. Part 150, and hereby certified as true and complete to the best of my knowledge and belief. It is hereby certified that adequate opportunity has been afforded interested persons to submit views, data, and comments on the Noise Exposure maps and forecasts. It is further certified that the 1999 Noise Exposure Map and supporting data are fair and reasonable representations of existing conditions at the airport.

_____

Date of Signature

_____

David Krietor
Acting Aviation Director
Phoenix Sky Harbor International Airport



Annual Operations - 1999[1]

Airline	366,208
Air Taxi	72,354
Military	5,192
General Aviation	76,444
Total	520,198

(1) Air Traffic Control Tower Records July 1, 1997 to June 30, 1998

SPONSOR'S CERTIFICATION

The Noise Exposure maps and accompanying documentation for Phoenix Sky Harbor International Airport, including the description of consultation and opportunity for public involvement, submitted in accordance with F.A.R. Part 150, are hereby certified as true and complete to the best of my knowledge and belief. It is hereby certified that adequate opportunity has been afforded interseted persons to submit views, data, and comments on the Noise Exposure Maps and forecasts.

Date of Signature

David Krieter
Acting Aviation Director

LEGEND

- Airport Property
- Municipal Boundaries
- Study Area
- DNL Noise Contour
- Historic District Boundaries
- Rural Residential (0-1 du/ac)
- Large Lot Residential (1.1-2 du/ac)
- Small Lot Residential (2.1-5 du/ac)
- Medium Density Residential (5.1-15 du/ac)
- High Density Residential (15+ du/ac)
- Water
- Noise-Sensitive Institutions
- Place of Worship
- School
- Hospital
- Museum
- Library
- Historic Structure
- Residence Halls
- Community Center

Source: Coffman Associates and Brown-Buntin Associates Analysis.

Aerial Photography Land Use Interpretation September 1998.

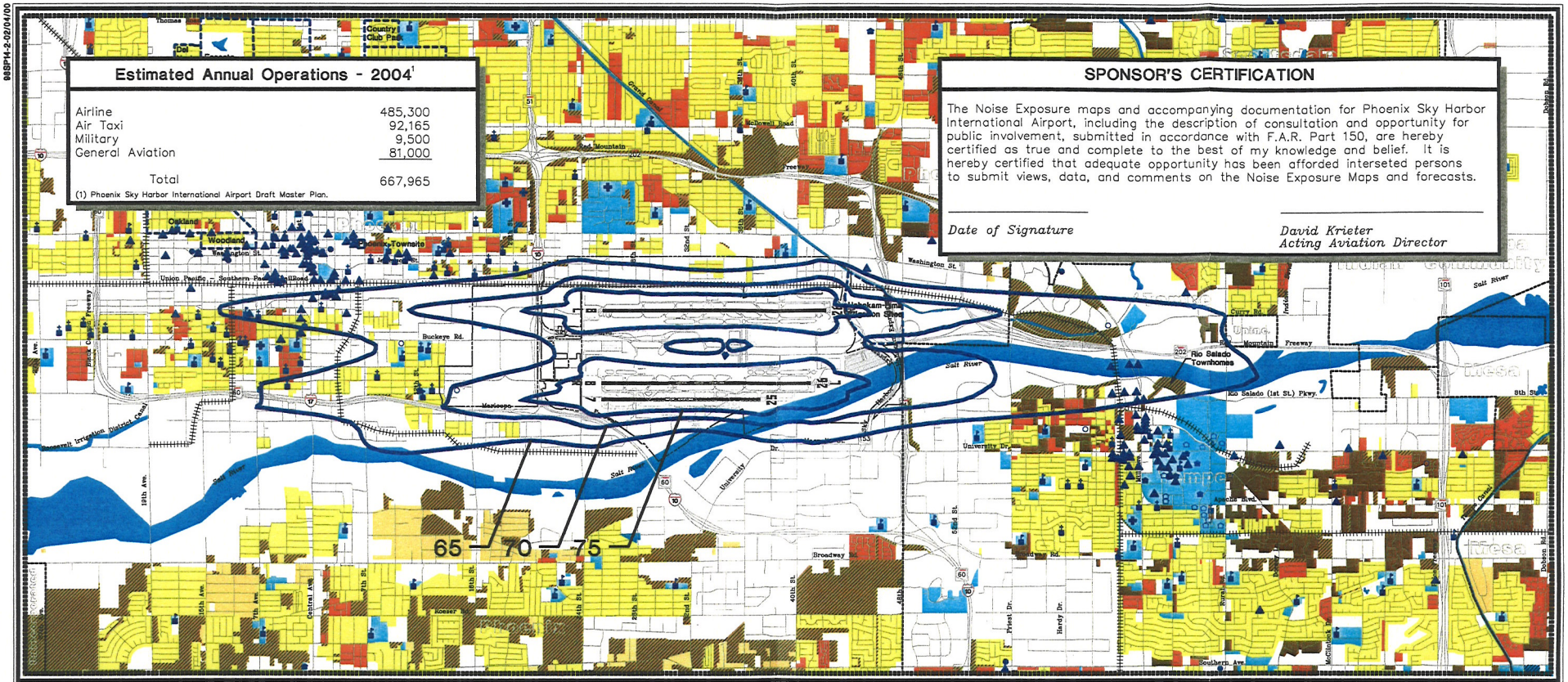
NORTH

0 5000
SCALE IN FEET

PHOENIX • SKY HARBOR INTERNATIONAL AIRPORT

Exhibit 1
PHOENIX SKY HARBOR INTERNATIONAL AIRPORT
1999 NOISE EXPOSURE MAP

98SP14-2-02/04/00



Estimated Annual Operations - 2004[1]

Airline	485,300
Air Taxi	92,165
Military	9,500
General Aviation	81,000
Total	667,965

(1) Phoenix Sky Harbor International Airport Draft Master Plan.

SPONSOR'S CERTIFICATION

The Noise Exposure maps and accompanying documentation for Phoenix Sky Harbor International Airport, including the description of consultation and opportunity for public involvement, submitted in accordance with F.A.R. Part 150, are hereby certified as true and complete to the best of my knowledge and belief. It is hereby certified that adequate opportunity has been afforded interseted persons to submit views, data, and comments on the Noise Exposure Maps and forecasts.

Date of Signature

David Krieter
Acting Aviation Director

LEGEND

- Airport Property
- Municipal Boundaries
- Study Area
- DNL Noise Contour
- Historic District Boundaries
- Rural Residential (0-1 du/ac)
- Large Lot Residential (1.1-2 du/ac)
- Small Lot Residential (2.1-5 du/ac)
- Medium Density Residential (5.1-15 du/ac)
- High Density Residential (15+ du/ac)
- Water
- Noise-Sensitive Institutions
- Place of Worship
- School
- Hospital
- Museum
- Library
- Historic Structure
- Residence Halls
- Community Center
- Proposed Residential Development Areas
- Proposed Noise-Sensitive Institutions

Source: Coffman Associates and Brown-Buntin Associates Analysis.

Aerial Photography Land Use Interpretation September 1998.

NORTH

0 5000

SCALE IN FEET

PHOENIX SKY HARBOR INTERNATIONAL AIRPORT

Exhibit 2
PHOENIX SKY HARBOR INTERNATIONAL AIRPORT
2004 NOISE EXPOSURE MAP