

RECORD OF APPROVAL

FEDERAL AVIATION REGULATION PART 150 NOISE COMPATIBILITY PROGRAM KING COUNTY INTERNATIONAL AIRPORT/BOEING FIELD SEATTLE, WASHINGTON

INTRODUCTION

The Noise Compatibility Plan (NCP) for King County International Airport/Boeing Field (BFI) includes measures to abate aircraft noise, control land development, mitigate the impact of noise on non-compatible land uses, and implement and update the program. Federal Aviation Regulation (FAR) Part 150 requires that the plan apply to a period of no less than five years into the future, although it may apply to a longer period if the sponsor so desires. The airport sponsor has requested that the program measures be applied to the forecast five-year conditions noise exposure map (NEM) because it provides various options for the largest number of people. That NEM includes the assumption the airport master plan will be adopted with the proposed runway shift implemented (page S.9, Figure S.3 at page S.11). The original Part 150 study was completed in 2002, but due to the effects of the September 11, 2001 crisis, portions of the original document needed updating, including forecasts, land use analysis, NEMs, and recommendations. The supplement to the original Part 150 study was submitted to the FAA in October 2004. It is the supplement that includes this new data, and revises the airport sponsor's recommendations.

The objective of the noise compatibility planning process has been to improve the compatibility between aircraft operations and noise-sensitive land uses in the area, while allowing the airport to continue to serve its role in the community, state, and Nation. The approval actions listed herein include all those that the airport sponsor recommends be taken by the Federal Aviation Administration (FAA). It should be noted that the approvals indicate only that the actions would, if implemented, be consistent with the purposes of Part 150. These approvals do not constitute decisions to implement the actions. Subsequent decisions concerning possible implementation of these actions may be subject to applicable environmental procedures or aeronautical study or other requirements.

The program elements below summarize as closely as possible the airport operator's recommendations in the NCP and are cross-referenced to the program. The statements contained within the summarized program elements and before the indicated FAA approval, disapproval, or other determination, do not represent the opinions or decisions of the FAA.

PROGRAM ELEMENTS

Recommendation 1. Develop Combined Noise Contours with Seattle Tacoma International Airport This action is to develop a set of combined noise contours for BFI and Seattle-Tacoma International Airport in order to identify residents affected by the combined noise. (Page S.13, pages G.1 through G.5, pages H.3 through H.5)

FAA Determination: No Action Required. The airport sponsor initially proposed to prepare supplemental graphic(s) depicting the DNL 65 dB contour resulting from combined airport noise from both King County Airport (BFI) and Seattle Tacoma International Airport (SEA). Ultimately the airport sponsor submitted a noise compatibility program based solely on the BFI noise contours. The NCP recommendation states, "This action has been completed."

This is first time in the history of Part 150 that an airport sponsor has presented combined airport noise contours reflecting its operations and those of an adjacent airport, and the first time an airport sponsor considered including mitigation for combined airport noise contours in an NCP. Although the airport sponsor did not pursue NCP mitigation based on the combined noise contours, the FAA intends to review the underlying issues, including what procedures might be needed for a joint sponsor preparation and submittal of NEMs and the NCP.

Recommendation 2. Airport is to work with appropriate Federal Agencies, Local Jurisdictions, Tenants, and Community to Implement a Public [sic] Instrument Approach Procedure over Elliott Bay to Avoid Over Flight of Residential Areas The proposed published instrument approach would include an Elliott Bay ground track to avoid over flights of residential areas. The measure includes a recommendation that FAA aggressively pursue new technology to implement a procedure that would route approaching aircraft over the water. The procedure would not have an effect on the size of the 65 DNL contour, but would provide substantial relief from single-event flyovers to these residential areas. (Pages S.14 and S.15; Pages F.55 through F.69; Table F1 at page F.79, page H.8)

FAA Determination: Approved. The airport sponsor proposes to work with appropriate agencies and jurisdictions toward this goal. The airport would initiate discussions and dialog with the FAA upon approval of this recommendation in the Part 150 study. Any procedure ultimately would have to demonstrate it does not derogate air traffic safety or efficiency, and that it improves the noise environment over incompatible land uses.

Recommendation 3. Implement Close-In Departure Procedures for North Departures The FAA has approved specific Close-in Noise Abatement Departure Procedures for all aircraft types over 75,000 pounds and each aircraft operator has such procedures for each specific aircraft types. The implementation of this action will be voluntary, and is intended to reduce the size of the DNL 65 dB noise contour over residential areas north of the airport. The airport will request in writing that users implement this procedure on a voluntary basis for each type of aircraft they fly. This alternative would reduce single event over flight noise by about 2 to 3 dB in Georgetown (north) for older manufactured as Stage 2 aircraft, which have been retrofitted. Newer aircraft types climb fast enough that they are generally already higher than the 800 feet where the power cutback would occur when they pass over Georgetown. (Pages S.16 and S.17; F.37 through F.44, page H.5)

FAA Determination: Approved as voluntary.

Recommendation 4. Investigate the Viability of Undertaking a Part 161 Study for Stage 2 Jets and Maintain the Existing Voluntary Curfew on Nighttime Engine Run-ups (Pages S.18 and S.20 and pages F.9 through F.11; page F.20 through F.28, page I.6)

(a) This action will investigate the viability of a Part 161 Study to prohibit the use of Stage 2 jets at the Airport while concurrently maintaining the existing ban during the nighttime hours (10:00 p.m. to 7:00 a.m.) A Stage 2 curfew will reduce the 65 DNL noise contour over the area that is directly north and south of the Airport and will reduce loud single events for residents all around the Airport. Table F-1 at page F.79 indicates that implementation of this measure (identified as alternative A2a) could reduce the number of people within the future 65 DNL contour from 4,890 to 3,623.

(b) The airport has an existing nighttime curfew for engine run-ups. This reduces the ground generated noise intrusion to nearby residences during critical nighttime hours. It is recommended that the curfew be maintained as it is currently written. In the Fly Quiet brochure, pilots are requested to honor the nighttime curfew.

FAA Determination:

(a) **Approved for study.** Approval for study under Part 150 for a study under Part 161 in no way represents an FAA endorsement of a proposed restriction or of any other results of the Part 161 analysis. Any proposed restriction must meet the requirements of Part 161 and of the airport grant assurances.

(b) **Approved** as a continuation of an existing voluntary measure.

Recommendation 5. Update Flight Tracking and Noise Monitoring Program (Fly Quiet Program) This recommendation is to upgrade the existing noise monitoring system, including flight track monitoring, and conversion of portable monitors to permanent monitors, compatibility with Sea-Tac software conversion, and other equipment and software described on page S.22. The program will monitor noise levels and compliance with the noise abatement measures. Flight track monitoring will be used to formulate voluntary Fly Quiet procedures, provide accountability in evaluating the success of the Program, and provide information so that improvements can be made to the recommended noise abatement programs and procedures. The Fly Quiet program not only entails monitoring equipment, it includes (as described on page G.11 of the primary document) the production and distribution of a Fly Quiet brochure, the printing of boards for pilots lounges and flight schools, a pilot resource working group that is highly interested in fly quiet procedures and education, plus printed materials for the new West Vashon Departure if it comes to fruition. A committee could help identify the potential noise monitoring sites. (Page S.21 through S.23; pages F.29 through F.35)

FAA Determination: Approved. For reasons of aviation safety, this approval does not extend to use of the monitoring equipment for enforcement purposes by in situ measurement of any present noise threshold. Noise monitors must be located within the BFI NEM contours. Not all elements of the Fly Quiet program may be eligible for Federal financial assistance.

Recommendation 6. Conduct a Site Selection and Feasibility Study for Ground Run-Up Enclosure (GRE) This action is to conduct a site selection and feasibility study for a Ground Run-Up Enclosure. The study was initiated at the time the supplement to the NCP was submitted to the FAA in 2004. The number and type of run ups vary with specific aircraft. Based on the existing uses on airport property, it is difficult to determine a feasible site for such a facility at this

time. Preliminary study data show that the noise level reduction of a three-sided enclosure will provide about 15 dB of noise reduction. Additional information is contained in the Appendix. (Page S.24; pages F.17 through F.28)

FAA Determination: Approved for study. Safe placement of the structure and the noise benefits to residences over existing conditions without the enclosure (e.g., number of homes and distance from source-receiver) should be documented.

Recommendation 7. Establish Building Design/Placement Standards to Reduce Off-Airport Noise Effects From Aircraft Movements on the Ground This action is to identify standards for building placement and design to act as barriers to reduce the effects of ground generated noise to adjacent residences. Proper acoustical treatment and placement of buildings can act as barriers to sound transmission, and such considerations should be incorporated if feasible in future landside development. The sponsor would higher a consultant to develop building/placement standards to reduce off-airport noise and identify design and noise standards for new or remodeled construction. (Page S.25, page H.10, page I.8)

FAA Determination: Approved for study.

Recommendation 8. Provide a Variety of Sound Attenuation For Single-Family Residential, Schools and Public Buildings, Purchase of Avigation Easements, and Sales Transaction Assistance in the 65 and 70 DNL This recommendation calls for the Airport to sound attenuate, on a voluntary basis, those single-family houses and multi-family structures within the 65 and 70 BFI noise contours, which are economically feasible to attenuate. As an option, the Airport would offer Sales Assistance to homeowners wishing to sell their homes, but are not able to do so due to proximity to the Airport. A third option would be the voluntary purchase of an avigation easement from those homeowners who do not want to take advantage of either the sound attenuation or sales assistance programs. Properties within the Noise Mitigation Boundary that are eligible for participation can be seen in Figures S.5 through S.9 at pages S.27 through S.31. The Study Advisory Committee recommended that sound attenuation of single-family residences (4-plex or smaller) and schools are a shared first priority, with multi-family attenuation second. (Pages S.26 through S.33; page F.29, pages G.1 through G.5, pages H.3 through H.5, page I.8 through I.11, Appendices 2 and 5; September 16, 2002, public hearing minutes)

FAA Determination: Approved for structures at noise sensitive land uses within the BFI 2008 "Revised Future Noise Exposure Map".

Recommendation 9. Investigate Voluntary Purchase of Homes with the 70 DNL Using Programs that are not available through Federal Program This action will investigate alternative funding sources which are not available through federal programming channels for the voluntary purchase of those homes within the 70 DNL noise contour. The airport will take responsibility for working with various funding agencies – local jurisdictions, state agencies – to determine which resources are available and plausible for this recommendation. The airport will investigate all possible options available to aid in helping finance the voluntary purchase of those homes within the 70 DNL noise contour. Given the normal requirement that homes be brought up to building codes at the time of insulating, it's possible that some of the older homes cannot be sufficiently mitigated at a typical cost to meet noise compatibility guidelines. A mandatory purchase program for entire neighborhoods would require residents who are not troubled by

airport noise to leave. A voluntary program funded by the FAA could lead to degradation of the remaining neighborhoods. On the other hand, it was felt that some relief should be provided to those who currently reside in an area of such high noise levels, if the residents would like relief that would not lead to neighborhood deterioration. (Page S.34; page F.29, pages G.5 through G.9, pages I.11 and I.12; Appendices 7 and 8)

FAA Determination: Approved. The Federal government has no control over local land use decisions; this action is within the authority of the airport sponsor and local and state jurisdictions. The airport sponsor has included the measure in the NCP for FAA determination.

Recommendation 10. Insulate School and Public Buildings This action is to insulate schools and public buildings in the following order of priorities in the BFI 65 and 70 DNL contours. The airport proposes to sound attenuate schools and single-family structures as a first priority, with sleeping portions of fire stations (after multi-family structures) as the last priority. (Page S.35 through S.36; pages I.10 and I.11, page F.29, pages J.30 and J.31; Appendices 7 and 8)

FAA Determination: Approved for structures at noise sensitive land uses within the BFI 2008 "Revised Future Noise Exposure Map".

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**FEDERAL AVIATION ADMINISTRATION
RECORD OF APPROVAL
FAR PART 150 NOISE COMPATIBILITY PROGRAM**

**King County International Airport
Boeing Field/Seattle, Washington**

<u><i>Alene D. Bue</i></u>	<u>5/6/05</u>	<u>✓</u>	<u> </u>
Assistant Administrator for Aviation Policy, Planning and Environment, AEP-1	Date	CONCUR	NONCONCUR

<u><i>Daphne A. Feltz</i></u>	<u>6/20/05</u>	<u>✓</u>	<u> </u>
Chief Counsel AGC-1	Date	CONCUR	NONCONCUR

<u><i>Christine M. L.</i></u>	<u>6/21/05</u>	<u>✓</u>	<u> </u>
Associate Administrator for Airports, ARP-1	Date	APPROVED	DISAPPROVED

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Supplemental Updated Information

Introduction

The original FAR Part 150 Study document went to Public Hearing on September 16, 2002. Since that time, due to the effects of September 11, 2001 and subsequent downturn in the numbers and types of aircraft operations, certain portions of the original document require updating. These areas include the forecasts of Aviation Activity, Land Use Analysis, Issues/Actions and Recommendations, and the Existing and Future Noise Exposure Maps.

Updated Forecasts

The operations that are used to generate the Existing Noise Exposure Map are typically related to the last 12-month period or calendar year prior to the beginning of the Study. Because of the events of 9/11, any national, local, or regional forecasts developed prior to this time are somewhat skewed. Thus, new forecasts have been generated to reflect a more accurate picture. The following table entitled, *Summary of Airport Planning Forecasts, 2003-2023* presents revised forecasts as contained in the *King County International Airport Aviation Activity Forecast Update* and will be utilized as the basis for producing both the Existing and Future Noise Exposure Maps.

Table S1
SUMMARY OF AIRPORT PLANNING FORECASTS, 2003-2023
King County International Airport FAR Part 150 Supplemental Report

	Base Year	2008	2013	2018	2023
<i>Air Carrier Aircraft</i> ¹	8,982	10,968	12,531	14,094	16,658
Manufacturing	2,410	3,020	2,829	3,030	3,629
Air Cargo	4,802	5,813	6,945	7,822	9,030
Charter	1,770	2,135	2,757	3,242	3,999
<i>Military Aircraft</i>	2,766	3,000	3,000	3,000	3,000
AWACS	190	195	200	200	200
Variety of Types	2,576	2,805	2,800	2,800	2,800
<i>Air Taxi Aircraft</i> ²	50,456	57,225	63,638	70,052	76,466
Single-Engine	30,274	33,477	36,274	38,879	42,056
Multi-Engine	6,055	6,581	6,682	7,005	6,882
Turbo-prop	2,523	3,434	4,455	5,604	6,117
Jet	7,568	8,870	10,500	11,909	13,764
Helicopter	4,036	4,864	5,727	6,655	7,647
<i>General Aviation Aircraft</i>	236,258	251,398	267,509	284,652	302,893
Single-Engine	141,755	147,067	152,480	157,982	166,592
Multi-Engine	28,351	28,911	28,088	28,465	27,260
Turbo-prop	11,813	15,084	18,726	22,772	24,231
Jet	35,439	38,967	44,139	48,391	54,521
Helicopter	18,901	21,369	24,076	27,042	30,289
Total Annual Operations	298,462	322,591	346,678	371,798	399,017

Base Year refers to the 12-month time period July 2002 through June 30, 2002.

¹ Aircraft capable of carrying over sixty passengers that are being operated for commercial purposes, including those used for cargo purposes, such as wide-body aircraft utilized by UPS, and using a three letter designator (regardless of whether or not they actually are being utilized for passenger service).

² Composed of aircraft capable of seating less than 60 passengers, that are being utilized for commercial purposes (passengers, air freight, med-evac, etc), or which use a three letter company designator or "Tango". Commuter airline operations are also included in this assessment.

Fleet Mix

The fleet mix of aircraft that operate at the airport is an important element in terms of determining aircraft noise and the corresponding aircraft for input into the FAA's Integrated Noise Model (INM). The associated fleet mix for both the base year and the year 2008 can be seen in the following tables entitled, *Aircraft Operations by INM Type, 2003* and *Aircraft Operations by INM Type, 2008*.

Table S2
AIRCRAFT OPERATIONS by INM TYPE, 2003
King County International Airport FAR Part 150 Supplemental Report

INM Aircraft Type	FAR Stage	Daily Arrivals		Daily Departures		Daily Operations			Annual Operations
		Day	Night	Day	Night	Arrivals	Departures	Total	
GASEPF		82.53	14.56	82.53	14.56	97.09	97.09	194.18	70,877
GASEPV		82.53	14.56	82.53	14.56	97.09	97.09	194.18	70,877
BEC58P		34.03	4.81	34.03	4.81	38.84	38.84	77.67	28,351
CNA441		14.03	2.15	14.03	2.15	16.18	16.18	32.36	11,813
LEAR25	2	6.30	1.61	6.30	1.61	7.90	7.90	15.81	5,770
CL600	3	5.25	0.90	5.25	0.90	6.15	6.15	12.30	4,488
SABR80	2	4.14	0.71	4.14	0.71	4.85	4.85	9.71	3,544
GIV	3	4.14	0.71	4.14	0.71	4.85	4.85	9.71	3,544
CIT3	3	4.86	0.51	4.86	0.51	5.37	5.37	10.73	3,918
LEAR35	3	12.42	2.14	12.42	2.14	14.56	14.56	29.13	10,632
MU3001	3	4.14	0.71	4.14	0.71	4.85	4.85	9.71	3,544
CVR580		0.37	0.26	0.37	0.26	0.63	0.63	1.27	463
DHC6		1.50	1.04	1.50	1.04	2.54	2.54	5.08	1,853
LEAR25	2	0.97	0.67	0.97	0.67	1.64	1.64	3.27	1,194
LEAR35	3	3.53	2.45	3.53	2.45	5.98	5.98	11.97	4,369
DHC6		22.09	3.80	22.09	3.80	25.89	25.89	51.78	18,901
727EM2	3	0.75	0.64	0.75	0.64	1.39	1.39	2.78	1,016
74720B	3	0.29	0.25	0.29	0.25	0.54	0.54	1.08	396
757RR	3	1.09	0.91	1.09	0.91	2.00	2.00	4.00	1,459
A30062	3	0.71	0.60	0.71	0.60	1.32	1.32	2.63	961
DC870	3	0.36	0.30	0.36	0.30	0.66	0.66	1.32	480
A310	3	0.16	0.13	0.16	0.13	0.29	0.29	0.58	212
DC95HW	3	0.21	0.18	0.21	0.18	0.38	0.38	0.76	279
707QN	3	0.16		0.16		0.16	0.16	0.31	114
737400	3	2.20		2.20		2.20	2.20	4.41	1,609
747400	3	0.01		0.01		0.01	0.01	0.02	8
757PW	3	0.69		0.69		0.69	0.69	1.37	501
767300	3	0.04		0.04		0.04	0.04	0.07	27
777200	3	0.21		0.21		0.21	0.21	0.42	152
DHC6		1.44	0.26	1.44	0.26	1.70	1.70	3.39	1,239
DHC8		0.41	0.07	0.41	0.07	0.48	0.48	0.97	354
MD83	3	0.21	0.04	0.21	0.04	0.24	0.24	0.48	177
GASEPV		36.37	5.10	36.37	5.10	41.47	41.47	82.94	30,274
DHC6		4.81	0.72	4.81	0.72	5.53	5.53	11.06	4,036
DHC8		0.24	0.04	0.24	0.04	0.28	0.28	0.57	206
CIT3	3	2.35	0.40	2.35	0.40	2.75	2.75	5.49	2,005
74720B	3	0.31		0.31		0.31	0.31	0.62	226
DHC8		2.63		2.63		2.63	2.63	5.26	1,918
GIIB	3	0.85		0.85		0.85	0.85	1.70	622
BEC58P		2.79	12.09		1.50	14.88	1.71	16.59	6,054
TOTAL		342.08	73.36	339.29	62.77	415.44	402.27	817.71	298,462

Totals may not equal due to rounding.

Table S3
AIRCRAFT OPERATIONS by INM TYPE, 2008
King County International Airport FAR Part 150 Supplemental Report

INM Aircraft Tpe	FAR Stage	Daily Arrivals		Daily Departures		Daily Operations			Annual Operations
		Day	Night	Day	Night	Arrivals	Departures	Total	
GASEPF		85.62	15.11	85.62	15.11	100.73	100.73	201.46	73,538
GASEPV		85.62	15.11	85.62	15.11	100.73	100.73	201.46	73,536
BEC58P		38.27	6.50	38.27	6.50	44.77	44.77	89.54	32,682
CNA441		38.27	6.50	38.27	6.50	44.77	44.77	89.54	32,682
CIT3	3	11.28	1.95	11.28	1.95	13.23	13.23	26.46	9,658
CL600	3	2.86	0.49	2.86	0.49	3.36	3.36	6.71	2,450
GIIB	2	1.79	0.31	1.79	0.31	2.10	2.10	4.19	1,531
GIV	3	1.50	0.26	1.50	0.26	1.75	1.75	3.51	1,280
LEAR25	2	2.42	0.42	2.42	0.42	2.84	2.84	5.68	2,074
LEAR35	3	22.93	3.96	22.93	3.96	26.89	26.89	53.77	19,626
MU3001	3	2.74	0.47	2.74	0.47	3.22	3.22	6.43	2,348
CVR580		2.75	1.91	2.75	1.91	4.66	4.66	9.32	3,403
DHC6		10.95	7.61	10.95	7.61	18.55	18.55	37.11	13,545
LEAR25	2	1.62	1.13	1.62	1.13	2.75	2.75	5.50	2,007
LEAR35	3	0.84	0.59	0.84	0.59	1.43	1.43	2.86	1,046
727EM2	3	0.91	0.77	0.91	0.77	1.68	1.68	3.37	1,229
74720B	3	0.36	0.30	0.36	0.30	0.66	0.66	1.31	479
757RR	3	1.30	1.10	1.30	1.10	2.40	2.40	4.81	1,755
A30062	3	0.07	0.06	0.07	0.06	0.13	0.13	0.26	94
DC870	3	1.23	1.04	1.23	1.04	2.28	2.28	4.55	1,661
DC8QN	3	0.19	0.16	0.19	0.16	0.35	0.35	0.70	256
DC95HW	3	0.25	0.21	0.25	0.21	0.46	0.46	0.92	338
DC8QN	3	0.20		0.20		0.20	0.20	0.39	143
737400	3	2.76		2.76		2.76	2.76	5.52	2,016
747400	3	0.01		0.01		0.01	0.01	0.03	10
757PW	3	0.86		0.86		0.86	0.86	1.72	627
767300	3	0.05		0.05		0.05	0.05	0.09	34
777200	3	0.26		0.26		0.26	0.26	0.52	190
DHC6	3	1.98	0.36	1.98	0.36	2.34	2.34	4.68	1,708
DHC8		0.50	0.09	0.50	0.09	0.58	0.58	1.17	427
GASEPV		28.34	4.81	28.34	4.81	33.15	33.15	66.29	24,196
DHC6		6.53	1.11	6.53	1.11	7.64	7.64	15.28	5,576
DHC8		2.18	0.37	2.18	0.37	2.55	2.55	5.10	1,863
LEAR35	3	6.54	1.11	6.54	1.11	7.65	7.65	15.30	5,584
74720B	3	0.34		0.34		0.34	0.34	0.67	245
DHC8		2.85		2.85		2.85	2.85	5.70	2,081
GIIB	3	0.92		0.92		0.92	0.92	1.85	674
TOTAL		368.09	73.80	368.09	73.80	441.90	441.90	883.80	322,591

Totals may not equal due to rounding.

Updated Noise Exposure Maps

The Updated Existing Noise Exposure Map is presented in the following figure entitled, *REVISED EXISTING NOISE EXPOSURE MAP, 2003*. The following table, Table S4, *EXISTING NOISE EXPOSURE MAP LAND USE WITH EXISTING LAND USE, 2003*, presents the number of people, housing units, schools, and historic sites, along the number of acres of each specific land use type. It is of interest to note, the number of individuals in this updated contour is significantly larger than that reflected in the original Part 150 document due to the fact that the existing 1999 noise contours utilized population data based on 1990 U.S. Census information and this revised contour reflects the population produced as part of the 2000 Census.

Table S4
EXISTING NOISE EXPOSURE MAP WITH EXISTING LAND USE, 2003
King County International Airport FAR Part 150 Supplemental Report

Land Use	DNL 55 Contour	DNL 60 Contour	DNL65 Contour	DNL70 Contour	DNL75 Contour
Residential	4,182 Ac	1,915 Ac	490 Ac	82 Ac	7 Ac
People	53,021	17,670	5,230	890	60
Housing Units	19,673	6,910	2,140	400	20
Schools ¹	3	2	1	0	0
Historic Sites ²	2	2	2	2	0
Fire Stations	2	2	2	0	0
Commercial/Retail	557 Ac	437 Ac	198 Ac	93 Ac	3 Ac
Manufacture	3,322 Ac	1,984 Ac	863 Ac	356 Ac	108 Ac
Other	8,299 Ac	2,483 Ac	1,386 Ac	717 Ac	438 Ac
Total Acres	16,360 Ac	6,819 Ac	2,937 Ac	1,248 Ac	556 Ac

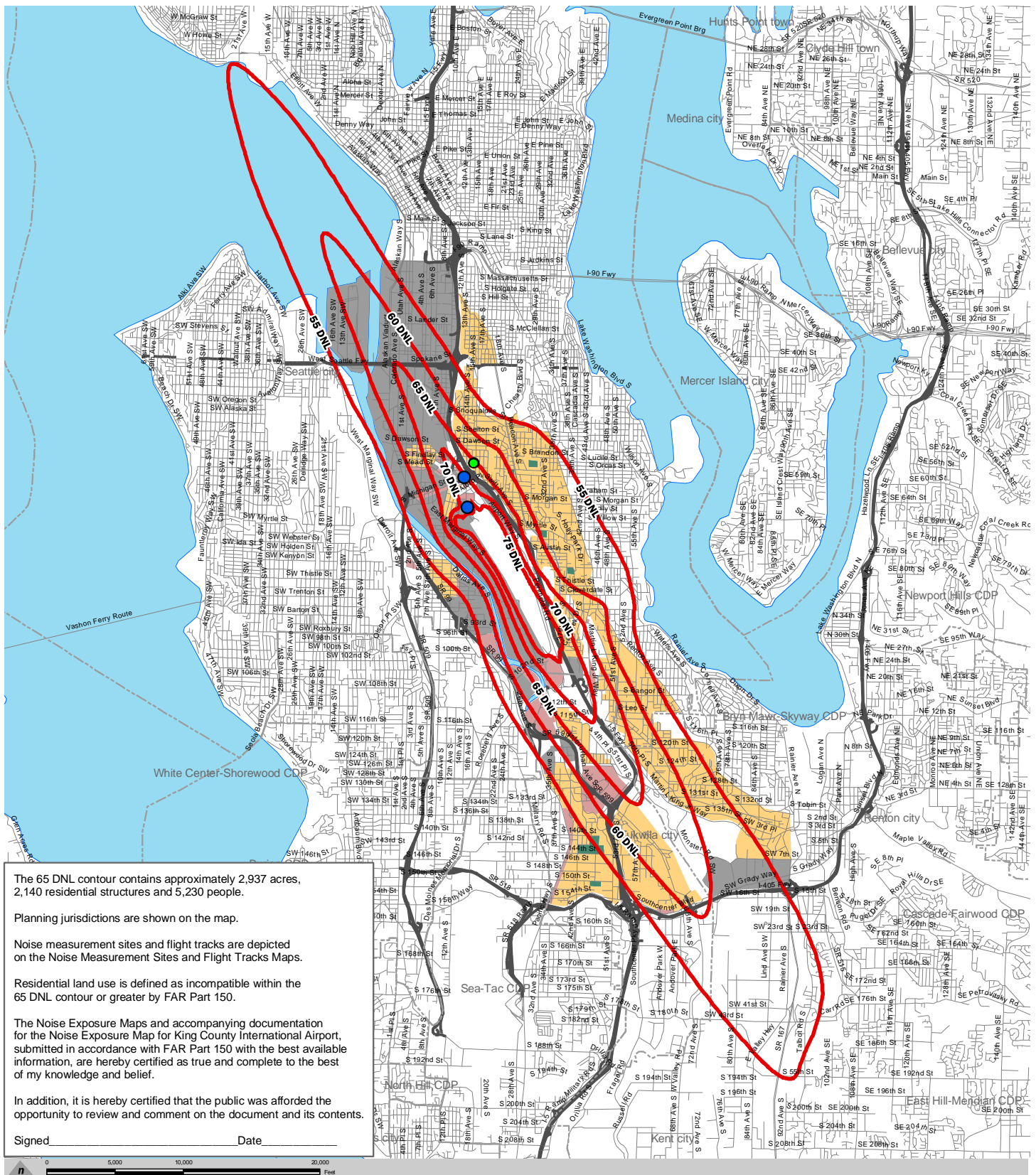
Source: Aerial Photography, 2000 U.S. Census Data, BDC Analysis.

Total figures for each contour are cumulative. The figures for the larger contours contain the area within the smaller contours.

Other includes Airport, Public, Transportation Right-of-Way, etc.

¹ Cleveland High School.

² Historic Sites refer to the Georgetown Steam Plant and the Old Georgetown City Hall.



The 65 DNL contour contains approximately 2,937 acres, 2,140 residential structures and 5,230 people.

Planning jurisdictions are shown on the map.

Noise measurement sites and flight tracks are depicted on the Noise Measurement Sites and Flight Tracks Maps.

Residential land use is defined as incompatible within the 65 DNL contour or greater by FAR Part 150.

The Noise Exposure Maps and accompanying documentation for the Noise Exposure Map for King County International Airport, submitted in accordance with FAR Part 150 with the best available information, are hereby certified as true and complete to the best of my knowledge and belief.

In addition, it is hereby certified that the public was afforded the opportunity to review and comment on the document and its contents.

Signed _____ Date _____

Figure S1 Revised Existing Noise Exposure Map, 2003

- Existing Land Use (Within Study Area)**
- Public/Government
 - Industrial
 - Residential
 - Retail/Commercial
 - Historical Landmark
 - School

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The updated Future Base Case Noise Exposure Map is presented in the following figure, Figure S2, *REVISED FUTURE BASE CASE NOISE EXPOSURE MAP, 2008*. The following table, Table S5, *FUTURE BASE CASE NOISE EXPOSURE MAP WITH EXISTING LAND USE, 2008* presents the number of acres of different land use types within the Future Noise Exposure Map contours, as well as the number of people, housing units, schools, and historic sites.

Table S5
FUTURE BASE CASE NOISE EXPOSURE MAP WITH EXISTING LAND USE, 2008
King County International Airport FAR Part 150 Supplemental Report

Land Use	DNL 55 Contour	DNL 60 Contour	DNL65 Contour	DNL70 Contour	DNL75 Contour
Residential	4,087 Ac	1,804 Ac	449 Ac	68 Ac	4 Ac
People	52,177	16,322	4,790	784	35
Housing Units	19,652	6,469	2,001	357	12
Schools	3	1	1 ¹	0	0
Historic Sites ²	2	2	2	2	0
Fire Stations	2	2	2	0	0
Commercial/Retail	557 Ac	429 Ac	192 Ac	85 Ac	1 Ac
Manufacture	3,286 Ac	1,963 Ac	842 Ac	326 Ac	95 Ac
Other	9,248 Ac	2,450 Ac	1,367 Ac	47 Ac	206 Ac
Total Acres	17,178 Ac	6,646 Ac	2,850 Ac	526 Ac	306 Ac

Source: Aerial Photography, 2000 U.S. Census Data, BDC Analysis.

Total figures for each contour are cumulative. The figures for the larger contours contain the area-within the smaller contours.

Other includes Airport, Public, Transportation Right-of-Way, etc.

¹ Cleveland High School.

² Historic Sites refer to the Georgetown Steam Plant and the Old Georgetown City Hall.

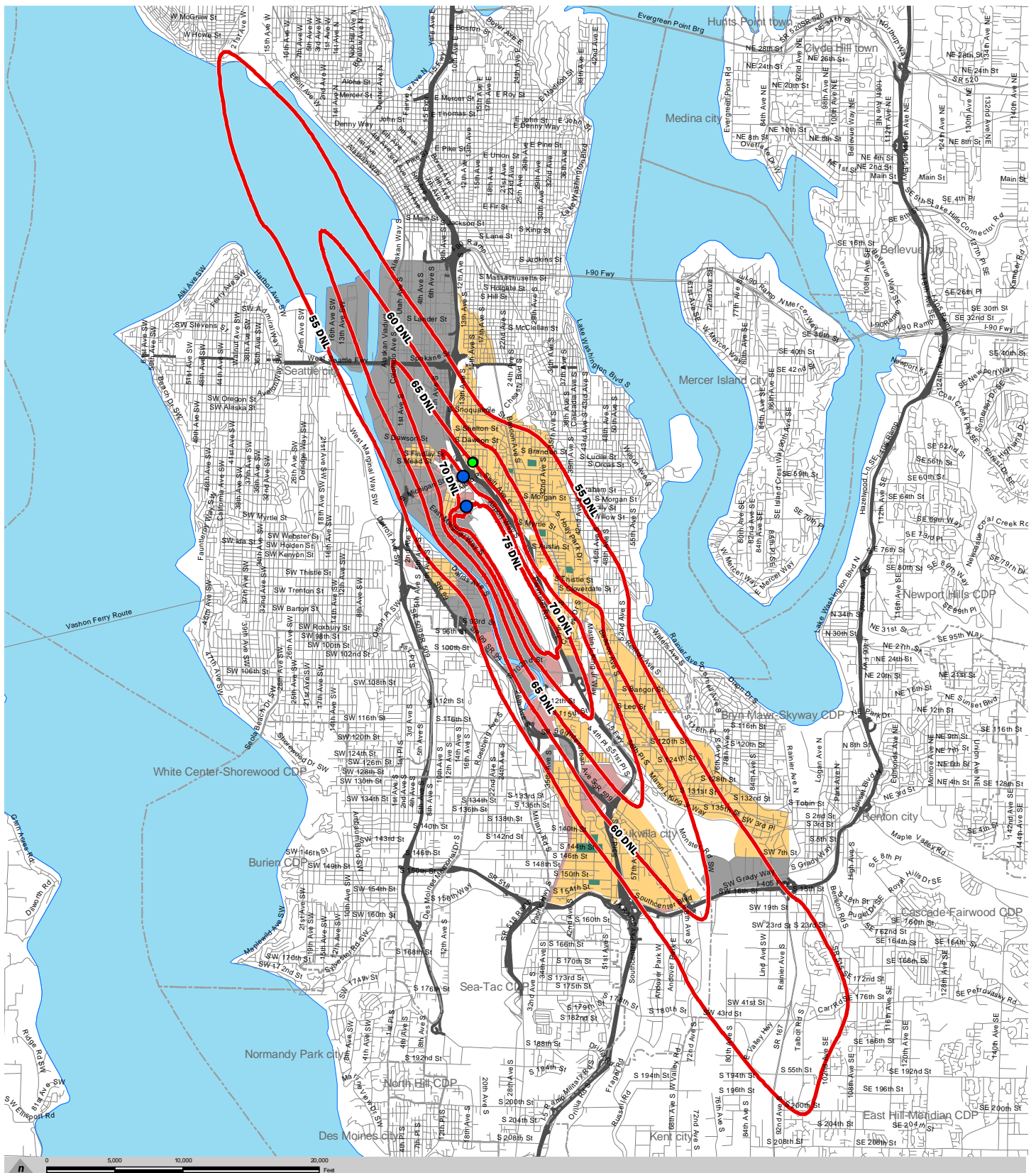


Figure S2 Revised Future Base Case Noise Contours, 2008

- Existing Land Use (Within Study Area)
- Public/Government
 - Industrial
 - Residential
 - Retail/Commercial
 - Historical Landmark
 - School

King County

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Updated Issues/Actions and Recommendations

This section, the *Issues/Actions and Recommendations* portion of the supplemental report, has been updated to reflect changes in the Recommendations that have occurred since the Public Hearing, due to implementation of a specific Recommendation, or other changed circumstances. This section will also present the recommended Noise Abatement Plan, which includes the Issues to be addressed, the Actions/Recommendations to be taken to address those Issues, the Responsible Parties involved for implementing those Actions and Recommendations, the Airport action to be taken, the Time Frame for implementation, and the Effectiveness of each. This section also recommends a Noise Exposure Map that should be used for the basis of the Noise Abatement Plan.

A recommended implementation schedule and sequence, in both narrative and graphic form, indicating the roles and responsibilities of the many parties involved in the Noise Compatibility Program for King County International Airport will be presented in a subsequent chapter. In addition, as part of the primary Part 150 document, the recommendations referring to Operations Review and Part 150 Updates and Establishing/Continuing an Advisory Committee have been withdrawn, as these duties have now become an inherent responsibility of the County.

Future Noise Exposure Map

The aircraft-generated noise contours used to identify areas eligible for various mitigation programs are the Future Noise Exposure Contours for King County International Airport. These contours represent the aircraft activity forecast for the next five years and includes the assumption that the Airport Master Plan will be adopted, with the proposed runway shift implemented. Although there are several recommendations that will reduce the size of the noise contours if they are implemented, the Future Noise Exposure Map contours reflect the largest number of structures eligible for noise mitigation programs, thus providing various options to the largest number of people. The following table presents the number of people, the number of residential units and other noise sensitive structures within the King County International Airport Future Noise Exposure Map contours.

The Revised Future Noise Exposure Map is illustrated on Figure S3, *REVISED FUTURE NOISE EXPOSURE MAP, 2008*. Similar to the Revised Existing Noise Contour, the generation of this contour involved using the updated version of the INM model that allows for more sideline generated noise. In addition, as previously mentioned, this contour accounts for the programmed runway extension at some time during the planning period. The specific noise abatement recommendations are contained on the pages following the Future Noise Exposure Map. They are categorized as Amended

Actions and New Actions for each specific noise abatement recommendation. The Amended Actions are those Actions which the Airport currently has in place but are recommended for some changes and the New Actions are those which would be implemented for the first time. Some are administrative in nature while others are land use or operational in nature. Table S6 shows the number of people, housing units and acres of land uses within the revised Future Noise Exposure Map Contours.

Table S6
FUTURE NOISE EXPOSURE MAP WITH EXISTING LAND USE, 2008
King County International Airport FAR Part 150 Supplemental Report

Land Use	DNL 55 Contour	DNL 60 Contour	DNL65 Contour	DNL70 Contour	DNL75 Contour
Residential	4,090 Ac	1,807 Ac	449 Ac	68 Ac	4 Ac
People	52,031	16,358	4,801	772	34
Housing Units	19,655	6,483	2,005	347	12
Schools	3	1	1 ¹	0	0
Historic Sites ²	2	2	2	2	0
Fire Stations	2	2	2	0	0
Commercial/Retail	557 Ac	429 Ac	192 Ac	83 Ac	1 Ac
Manufacture	3,279 Ac	1,963 Ac	820 Ac	323 Ac	95 Ac
Other	9,219 Ac	2,384 Ac	1,368 Ac	684 Ac	425 Ac
Total Acres	17,145 Ac	6,583 Ac	2,829 Ac	1,158 Ac	525 Ac

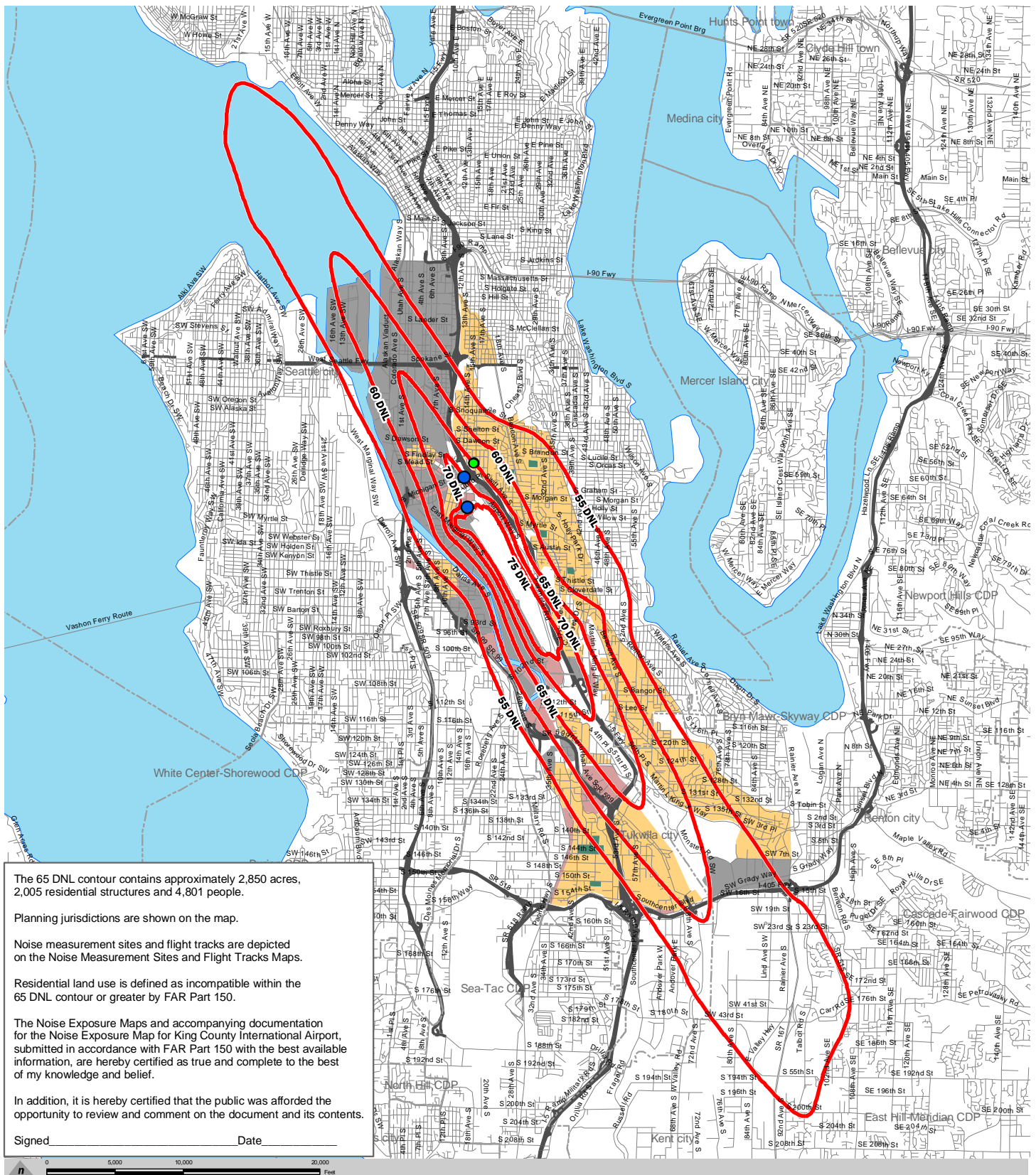
Source: Aerial Photography, 2000 U.S. Census Data, BDC Analysis.

Total figures for each contour are cumulative. The figures for the larger contours contain the area-within the smaller contours.

Other includes Airport, Public, Transportation Right-of-Way, etc.

¹ Cleveland High School.

² Historic Sites refer to the Georgetown Steam Plant and the Old Georgetown City Hall.



The 65 DNL contour contains approximately 2,850 acres, 2,005 residential structures and 4,801 people.

Planning jurisdictions are shown on the map.

Noise measurement sites and flight tracks are depicted on the Noise Measurement Sites and Flight Tracks Maps.

Residential land use is defined as incompatible within the 65 DNL contour or greater by FAR Part 150.

The Noise Exposure Maps and accompanying documentation for the Noise Exposure Map for King County International Airport, submitted in accordance with FAR Part 150 with the best available information, are hereby certified as true and complete to the best of my knowledge and belief.

In addition, it is hereby certified that the public was afforded the opportunity to review and comment on the document and its contents.

Signed _____ Date _____

Figure S3 Revised Future Noise Exposure Map, 2008

- Existing Land Use (Within Study Area)**
- Public/Government
 - Industrial
 - Residential
 - Retail/Commercial
 - Historical Landmark
 - School

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The Recommendations are summarized as follows.

- Recommendation 1** **Develop Combined Noise Contours with Sea-Tac International Airport (Completed)**
- Recommendation 2** **The Airport is to work with the Appropriate Federal Agencies, Local Jurisdictions, Tenants, and Community to Implement a Public Instrument Approach Procedure over Elliot Bay to avoid Over-Flight of Residential Areas**
- Recommendation 3** **Implement Close-In Departure Procedure for North Departures**
- Recommendation 4** **Investigate the Viability of Undertaking a Part 161 Study for Stage 2 Jets and Maintain the Existing Curfew on Nighttime Engine Run-Ups**
- Recommendation 5** **Upgrade Flight Tracking and Noise Monitoring Program - Fly Quiet Program**
- Recommendation 6** **Conduct a Site Selection and Feasibility Study for Ground Run-Up Enclosure (GRE)**
- Recommendation 7** **Establish Building Design/Placement Standards to Reduce Off-Airport Noise Effects from Aircraft Movements on the Ground (In Progress)**
- Recommendation 8** **Provide a Variety of Sound Attenuation for Single-Family Residential, Schools and Public Buildings, Purchase of Avigation Easements and Sales Transaction Assistance in the 65 and 70 DNL Contours**
- Recommendation 9** **Investigate the Viability of the Voluntary Purchase of Homes within the 70 DNL Using Programs that are not Available Through Federal Programs (In Progress)**
- Recommendation 10** **Insulate Schools and Public Buildings**

It is the intent of the Airport to implement future noise mitigation programs as quickly as possible. However, it must be remembered that this will depend very heavily on the availability of funds and resources, especially the availability of Federal funding.

**RECOMMENDATION 1—DEVELOP COMBINED NOISE CONTOURS
WITH SEA-TAC INTERNATIONAL AIRPORT**

ISSUE

Recognize there are some residents which are not adversely impacted by either KCIA or Sea-Tac but are adversely impacted by the combined noise associated with both airports.

NEW ACTION

This Action has been initiated and completed.

COMMENTS

This Recommendation has been completed as combined contours were developed and presented to the Study committee.

COST

There is no cost associated with this Recommendation as it has been completed.

RESPONSIBLE PARTIES

No further action required.

AIRPORT ACTION

No further action required.

TIME FRAME

No further action required.

RECOMMENDATION 2—AIRPORT IS TO WORK WITH THE APPROPRIATE FEDERAL AGENCIES, LOCAL JURISDICTIONS, TENANTS, AND COMMUNITY TO IMPLEMENT A PUBLIC INSTRUMENT APPROACH PROCEDURE OVER ELLIOT BAY TO AVOID OVER-FLIGHT OF RESIDENTIAL AREAS

ISSUE

Reduce Aircraft Over Flights to Residential Areas North of the Airport.

NEW ACTION

Implement a public instrument approach procedure with an Elliott Bay ground track to avoid over flights of residential areas. New technology should be aggressively pursued with the FAA to implement such a procedure that would route approaching aircraft over the water instead of straight in over residential areas.

COMMENTS

The implementation of such a system for approaches from the north would enable aircraft to approach through the Bay and avoid over-flights of residential areas, especially Magnolia. This would have no effect on the size of the 65 DNL but it would provide substantial relief from single-event flyovers to these residential areas. This would be especially effective in reducing noise intrusion during sensitive nighttime hours.

COST

The cost for the Action is anticipated to be approximately \$1 Million dollars for the ground based equipment. It is anticipated that no additional airborne equipment would be required.

RESPONSIBLE PARTIES

The Airport is responsible for meeting with the FAA regarding instituting the program and procedure, (a KCIA pilot project at a minimum). A Formal Motion from County Council supporting program will be required, and the Airport will utilize a Technical Committee, including pilots and FBO's, to help move program forward.

The FAA is responsible for approving such a procedure, procuring the equipment and

implementing such a procedure. The operators are responsible for helping to implement the procedure when possible. The FAA would be responsible for completing the required environmental documentation.

AIRPORT ACTION

The Airport will seek a Motion from the County Council supporting the Recommendation, continue to meet with and support the FAA in approving and implementing the procedure and working with both based and transient pilots to use the procedure after it is implemented.

TIME FRAME

The Airport can initiate the discussions and dialog with FAA concerning such an approach immediately upon approval by the FAA. Implementation of the approach will depend upon FAA developing and publishing such an approach, purchasing of equipment, aircraft instrumentation and testing. This is not contingent upon other Recommendations.

**RECOMMENDATION 3—IMPLEMENT CLOSE-IN DEPARTURE
PROCEDURE FOR NORTH DEPARTURES**

ISSUE

Reduce the Size of the 65 DNL Noise Contour Over Residential Areas North of the Airport.

NEW ACTION

Implement the close-in departure procedure for northern departures.

COMMENTS

The FAA has approved specific Close-in Noise Abatement Departure Procedures for all aircraft types over 75,000 pounds and each aircraft operator has such a procedure for their specific aircraft types. The Airport Sponsor can request that each operator utilize this particular procedure when departing north from King County International Airport. FAA has previously approved the procedures for the specific aircraft, but will require some airspace review to ensure safety.

COST

No additional cost other than direct notification to users of the Airport and publication in Airman's Manuals. A Noise Abatement Brochure explaining the Recommendations will be prepared as part of the Part 150 Study.

RESPONSIBLE PARTIES

The Airport is responsible for notifying the operators to use the close-in departure procedure and to work with the pilots and FBO's to explain the reasoning behind the request. The FAA is responsible for approving this Recommendation and making an airspace review to ensure safety concerning the procedure. A Formal Motion from County Council supporting this procedure will be requested. The operators are responsible for helping to implement the procedure when possible.

AIRPORT ACTION

The Airport will seek a Motion from the County Council supporting the Recommendation, prepare request for FAA Airspace review and continue dialog with the Agency to ensure timely completion of review. Write request letters to users to implement close-in departure procedure (voluntary) for

each type of aircraft they fly. Work with the FBO's and pilots to explain the reasoning behind the request.

TIME FRAME

Can initiate immediately upon approval, approximately six months to fully implement upon approval by the FAA. Airport users will have to notify pilots and modify procedures manuals.

RECOMMENDATION 4—INVESTIGATE THE VIABILITY OF UNDERTAKING A PART 161 STUDY FOR STAGE 2 JETS AND MAINTAIN THE EXISTING CURFEW ON NIGHTTIME ENGINE RUN-UPS

ISSUE

Reduce noise impacts from loud jets.

NEW ACTION

This Action will investigate the viability of a Part 161 Study to prohibit the use of Stage 2 jets at the Airport while concurrently maintaining the existing ban during the nighttime hours (10:00 pm to 7:00 am).

COMMENTS

If the undertaking of a Part 161 Study ban on Stage 2 jets is approved, this Action will reduce the number of residents within the 65 DNL noise contour and will remove significant noise intrusion during the most noise sensitive time. This Action will reduce the 65 DNL noise contour over the area that is directly north and south of the Airport and will reduce loud single events for residents all around the Airport. Figure S4 on the following page illustrates the Future Noise Contour with and without the Stage 2 Ban in an attempt to visually indicate the incremental benefit this Recommendation has to the overall noise environment. Please refer to Table F1, as it indicates that there would be less people inside the 65 or greater DNL if this Recommendation is implemented.

It is recognized that such a restriction cannot be implemented without completing a FAR Part 161 Study. The Airport is requesting approval for such a study so that AIP funding may be made available.

COST

The cost to prepare such a Study is estimated to be in the range of \$850,000-1,500,000 including legal fees.

RESPONSIBLE PARTIES

The Airport is responsible for preparing such a Study through the use of consultants. The Airport would select the consultants, prepare the scope and application and accept FAA funding, if available. A Formal Motion from the County Council would be required. The FAA is responsible for approving the

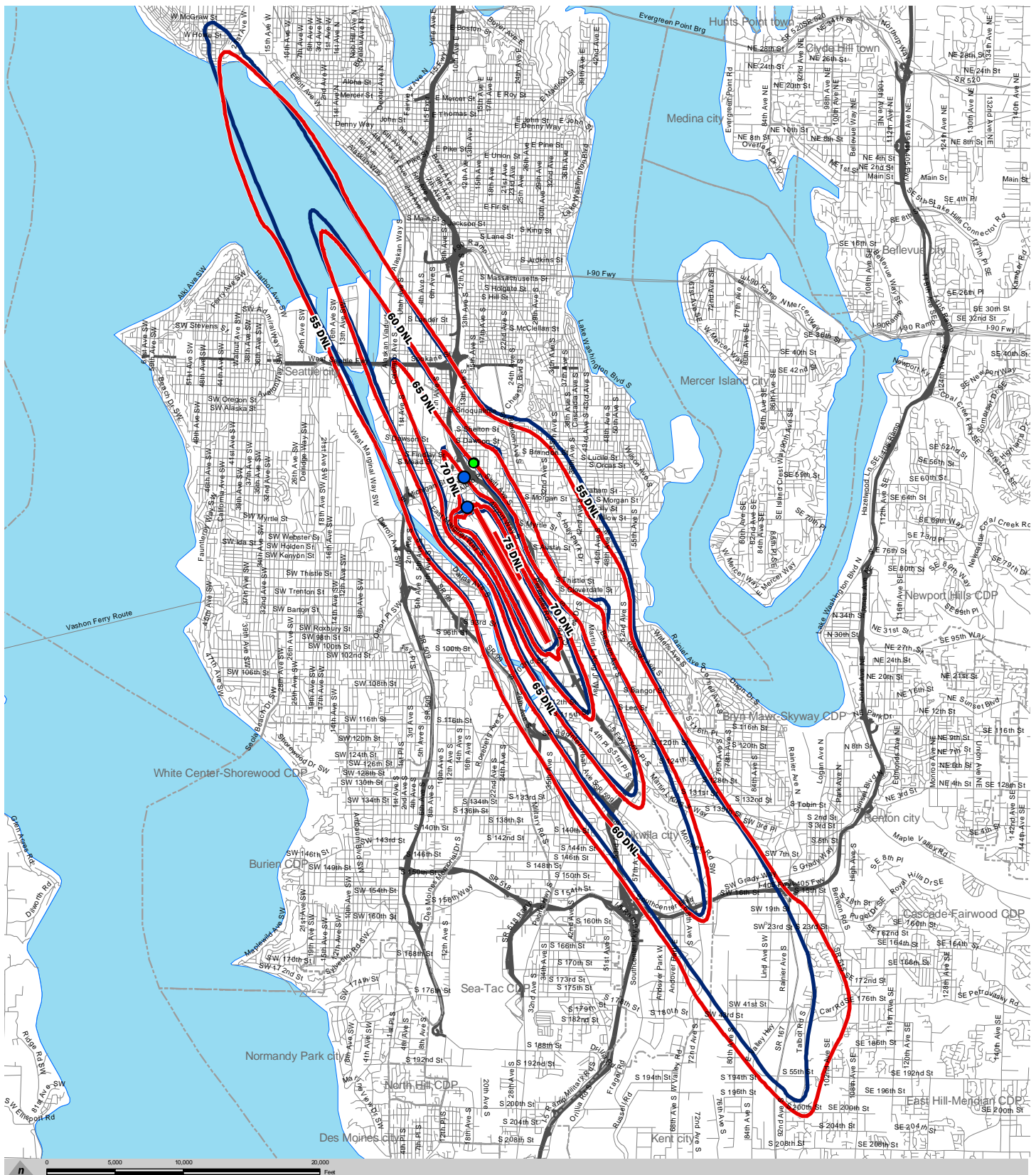


Figure S4 Future 2008 Base Case and Total Restriction of Stage 2 Operations DNL Contours

- 2008 Base Case Noise Contours
- Ban Stage 2 DNL Contours
- Historical Landmark
- School

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Recommendation and providing funding, if such funding is available and the number of people removed from the contour is significant.

AIRPORT ACTION

The Airport will select consultants to prepare such a Study and submit an application to the FAA upon approval of the Recommendation by the FAA.

TIME FRAME

The consultant could be selected, scope prepared and an application submitted within six months of approval of the Recommendation by the FAA. The Study itself will take approximately two to three years to complete. Implementation of the restriction will take approximately six to nine months after approval of the Study.

RECOMMENDATION 5—UPDATE FLIGHT TRACKING AND NOISE MONITORING PROGRAM (FLY QUIET PROGRAM)

ISSUE

Verification of Noise Abatement Program and Flight Track Adherence.

NEW ACTION

It is recommended that the Airport upgrade the existing noise monitoring system, including flight track monitoring, to monitor noise levels and compliance with the noise abatement measures. **This Action has been initiated and is currently in progress.**

COMMENTS

This Recommendation includes upgrading the existing noise monitoring system to include flight track monitoring, which will be used to formulate voluntary Fly Quiet procedures, provide accountability in evaluating the success of the Program and provided information so that improvements can be made to the recommended noise abatement programs and procedures. Flight track and other operational changes are difficult to achieve without sufficient data to indicate problems with existing procedures, and this is the method to best gather defensible data.

The type of equipment and capabilities will be determined through the use of the Technical Committee and Airport Staff/Management. This may include additional monitors and computer hardware, updated software and Web capabilities. There is one permanent monitor in Beacon Hill and more will be required.

The Fly Quiet Program not only entails monitoring equipment, it includes (as described on page G.11 of the primary document) the production and distribution of a Fly Quiet brochure (currently 10,000 have been disseminated to pilots and the community), the printing of boards for pilots lounges and flight schools, a pilot resource working group that is highly interested in fly quiet procedures and education, plus printed materials for the new West Vashon Departure if it comes to fruition.

A committee could help identify the potential noise monitoring sites and review the specifications for the system. This process takes approximately two years to complete. The noise monitoring sites must be owned or long-term leased by the Airport, be secure and have electrical power/telephone access.

COST

It is estimated that consultant and equipment installation, approximately \$125,000-400,000. This includes conversion of portable monitors to permanent monitors (\$13,000 each), Fly Quiet Program compliance at \$43,000, compatibility with Sea-Tac software conversion at \$6,000, new digital recorder, PC server and software, installation and training at \$20,000, and annual maintenance at \$49,000. Additional new monitors may bring the cost up to around \$400,000, including consultants time. Preparation and Printing of materials/website, \$21,000.

RESPONSIBLE PARTIES

The Airport is responsible for hiring the consultant, identifying the sites, developing the specifications, budgeting for the equipment and installing the equipment through a contractor. The Airport is responsible utilizing the Technical Committee to help refine and compliment Fly Quiet Program, for engaging pilots in discussion and training about practices and encourage change; such as increase use of Charted Visual Path, Close-in departure, avoidance of residential areas, etc. and to promote incentives for pilot compliance. The Airport will produce materials and manuals for distribution to pilots and FBO's. The FAA is responsible for assisting the Airport with funding if such funding is available.

AIRPORT ACTION

The Airport will budget for monitoring, hire the consultant, prepare specifications and initiate the process as soon as possible. They will apply for Federal funds for the permanent system when such funds become available.

TIME FRAME

It will take approximately one year to acquire the equipment and become operational,

voluntary procedures can be implemented immediately, FAA airspace review could take approximately 7 –9 months, Fly Quiet Program development could take approximately 6 months to accomplish. Publication procedures in Airman’s Manual could take approximately 4 months.

**RECOMMENDATION 6—CONDUCT A SITE SELECTION AND
FEASIBILITY STUDY FOR GROUND RUN-UP
ENCLOSURE (GRE)**

ISSUE

Reduce Noise Associated with Ground Run-Up/Maintenance Activities.

NEW ACTION

This Action is to conduct a site selection and feasibility study for a Ground Run-up Enclosure (GRE). **This Action has been initiated and is currently in progress.**

COMMENTS

The Study Advisory Committee evaluated the noise reduction potential associated with a Ground Run-up Enclosure and determined that noise reduction could be achieved through the use of such a facility. The amount of reduction is dependent upon the number and type of run-ups conducted in the Airport, with the majority of those associated with the Boeing Company. The number and type of run-ups vary with the specific aircraft program that the Boeing Company is undertaking. Based on the existing uses on Airport property, it is difficult to determine a feasible site for such a facility at this time. Therefore, it is recommended that a more detailed site selection and feasibility study be undertaken.

COST

This Action is estimated to cost approximately \$100,000.

RESPONSIBLE PARTIES

The Airport is responsible for preparing the Request for Proposals (RFP), hiring the consultant and submitting a grant application to the FAA. The FAA is responsible for providing funding, if it is available.

AIRPORT ACTION

The Airport will prepare the RFP, hire the consultant, submit the grant application and manage the study.

TIME FRAME

This Action can be implemented as soon as the FAA has approved the Recommendation. It will take approximately 9-12 months to complete the study after consultant selection.

RECOMMENDATION 7—ESTABLISH BUILDING DESIGN/PLACEMENT STANDARDS TO REDUCE OFF-AIRPORT NOISE EFFECTS FROM AIRCRAFT MOVEMENTS ON THE GROUND

ISSUE	Reduce noise ground generated noise impacts to residents.
NEW ACTION	This New Action is to identify standards for building placement and design to act as barriers to reduce the effects of ground generated noise to adjacent residences.
COMMENTS	Proper placement and design of future landside facilities can be useful in reducing ground generated noise intrusion to adjacent residences. Proper acoustical treatment and placement can act as barriers to sound transmission, and such considerations should be incorporated, if feasible, in future landside development.
COST	The cost to prepare the study is approximately \$80,000.
RESPONSIBLE PARTIES	The Airport is responsible for developing the RFP, hiring consultants to develop the standards and for adopting such standards for building design and placement.
AIRPORT ACTION	The Airport would develop the RFP and hire the consultant as soon as funds are available. Funds will be budgeted as soon as possible.
TIME FRAME	This Action can be initiated immediately, the study will take approximately 9 months from consultant selection and is not dependent upon any other Action.

RECOMMENDATION 8—PROVIDE A VARIETY OF SOUND ATTENUATION FOR SINGLE-FAMILY RESIDENTIAL, SCHOOLS AND PUBLIC BUILDINGS, PURCHASE OF AVIGATION EASEMENTS AND SALES TRANSACTION ASSISTANCE IN THE 65 AND 70 DNL CONTOURS

ISSUE

Reduction of noise sensitive land uses within the Airport environs.

NEW ACTION

It is recommended that the Airport sound attenuate, on a voluntary basis, those single-family houses and multi-family structures within the 65 and 70 KCIA noise contours, which are economically feasible to attenuate. As an option, the Airport would offer Sales Assistance to homeowners wishing to sell their homes but are not able to do so due to proximity to the Airport. This would be a voluntary Action available to homeowners subsequent to sound attenuation of their homes. A third option would be the voluntary purchase of an avigation easement from those homeowners who do not want to take advantage of either the sound attenuation or sales assistance programs. Those properties within the Noise Mitigation Boundary that are eligible for participation can be seen in the following figures S5 through S9.

The Study Committee recommended that sound attenuation of single-family residences (FAA definition of 4-plex or smaller) and schools are a shared first priority, with multi-family attenuation second.

Even if all feasible noise abatement measures are implemented, there will still be residences within the significant noise contours associated with aircraft operations occurring at the Airport. As such, there are several land use options, which can be offered to residents in an effort to reduce inside noise levels or provide some type of relief. The following options are intended to be voluntary at the option of the homeowner.

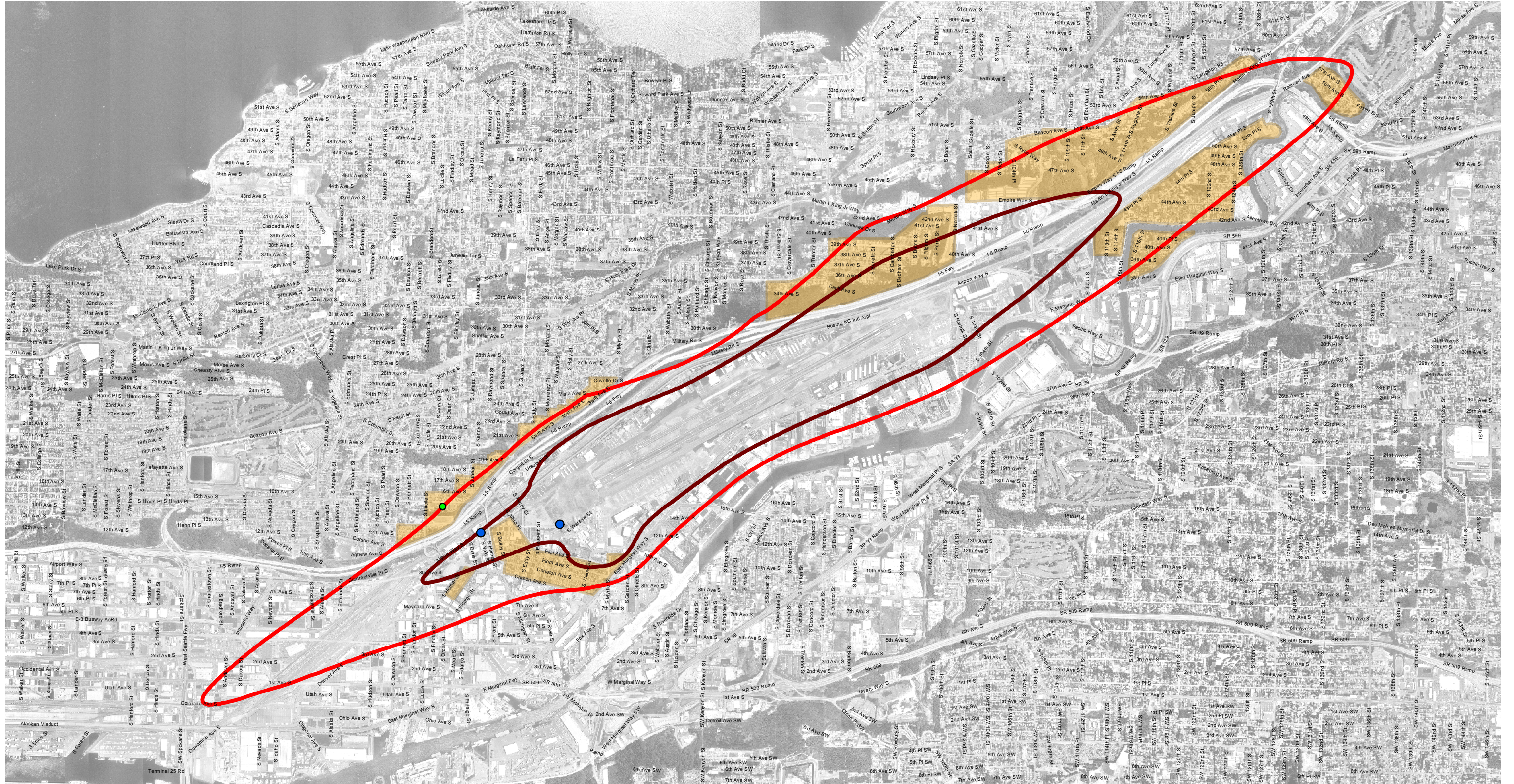
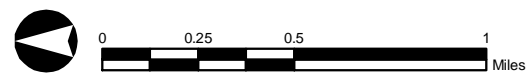


Figure S5 Noise Mitigation Boundary Indicating Eligible Properties (Future 2008 Noise Contour)

- Noise Mitigation Boundary
- 65 DNL Noise Contour
- 70 DNL Noise Contour
- Historical Landmark
- School



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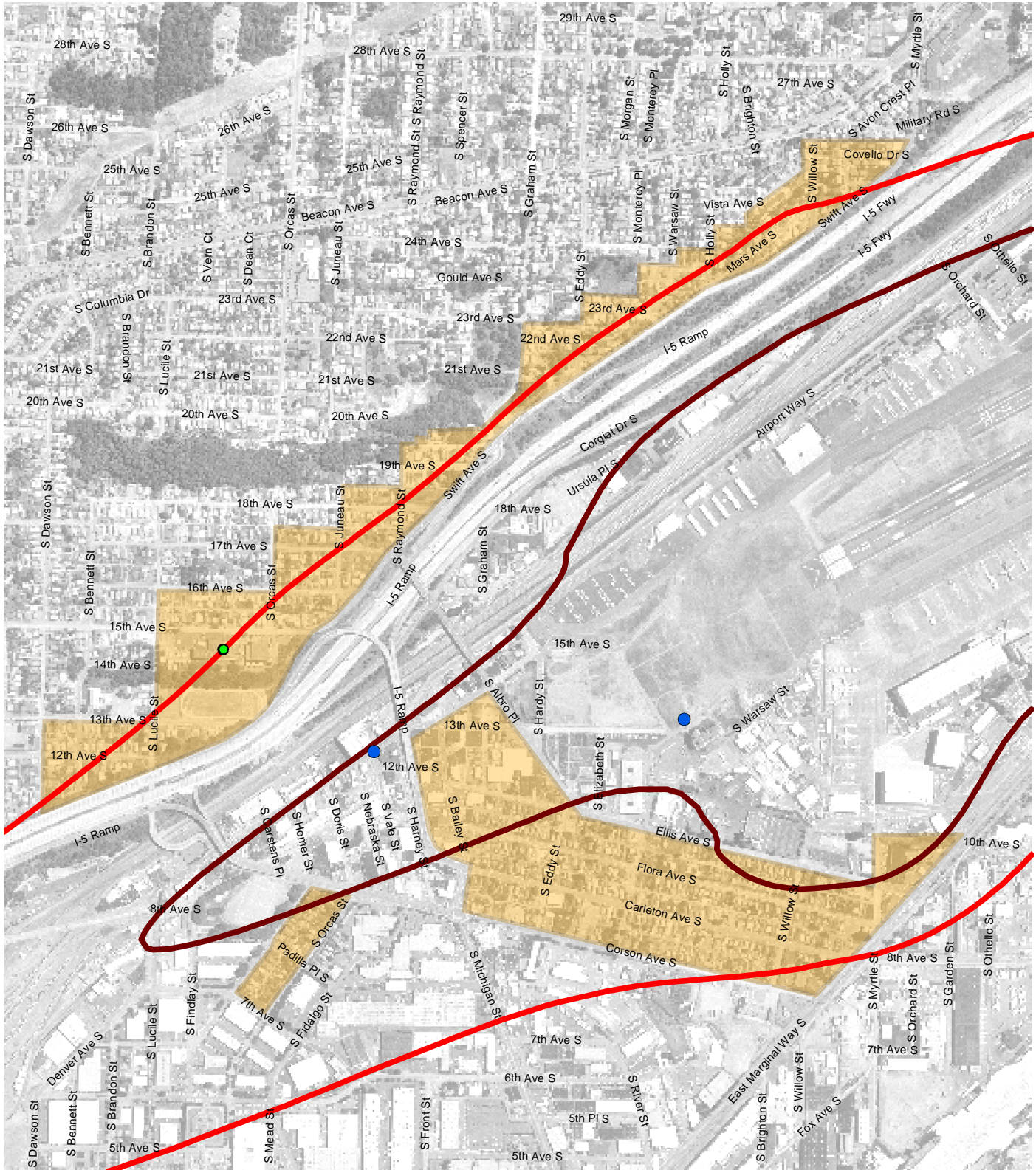
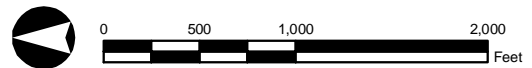


Figure S6 Noise Mitigation Boundary Detail Area 1
Indicating Eligible Properties (Future 2008 Noise Contour)

- Noise Mitigation Boundary
- 65 DNL Noise Contour
- 70 DNL Noise Contour
- Historical Landmark
- School



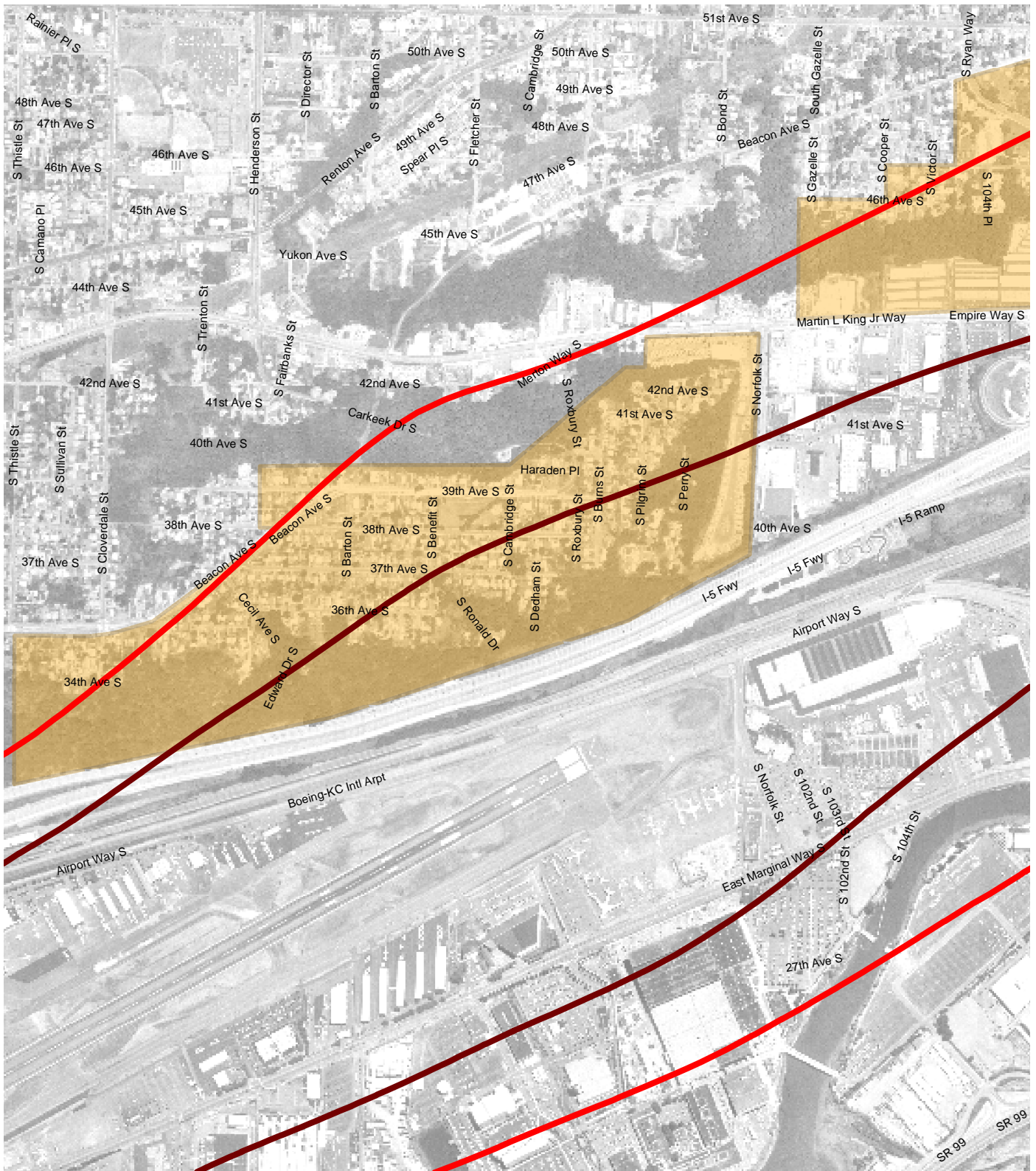



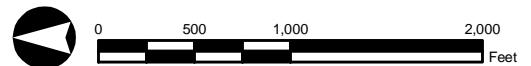


Figure S7 Noise Mitigation Boundary Detail Area 2
Indicating Eligible Properties (Future 2008 Noise Contour)

-  Noise Mitigation Boundary
-  65 DNL Noise Contour
-  70 DNL Noise Contour



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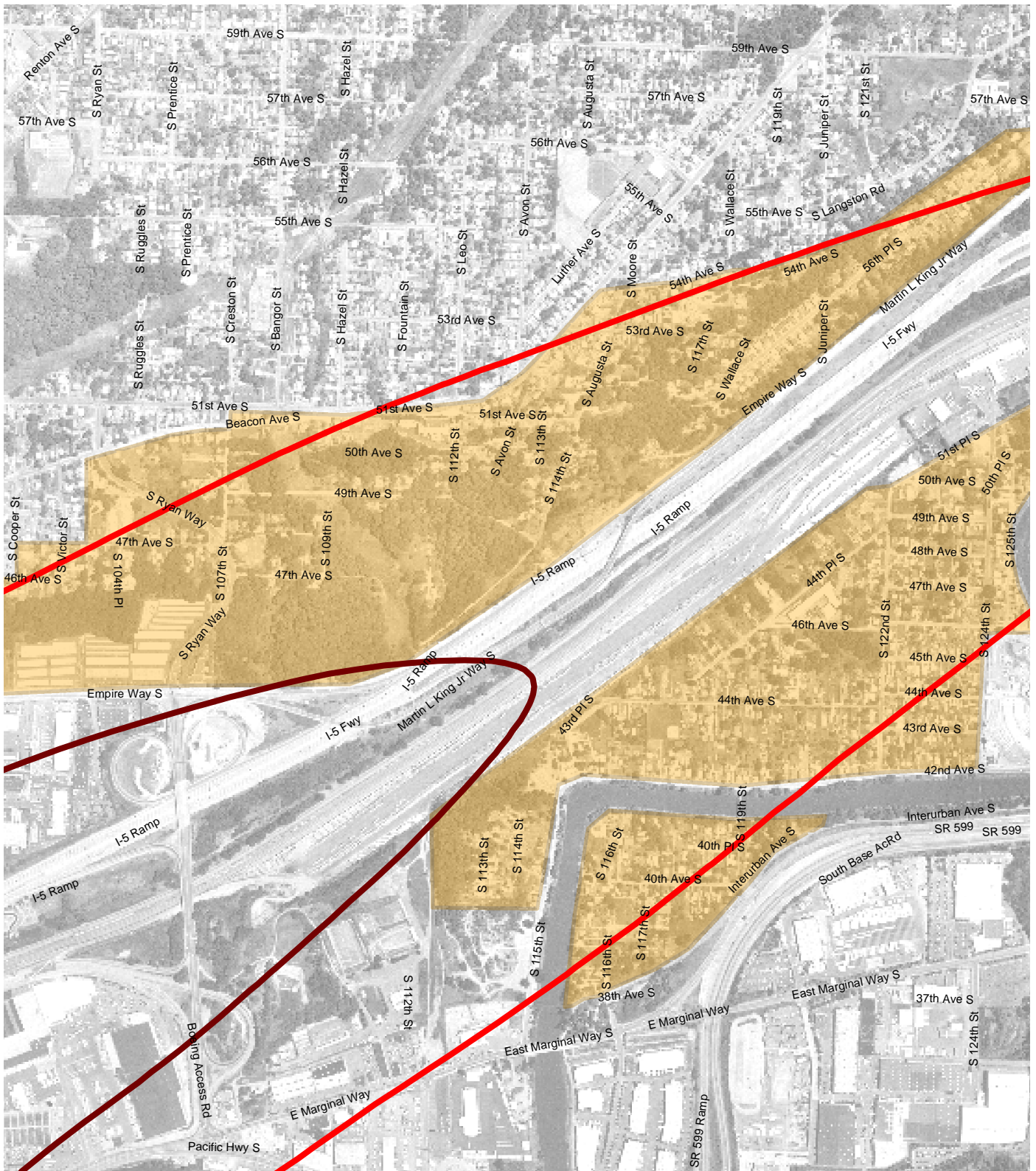



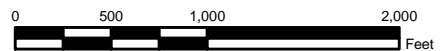


Figure S8 Noise Mitigation Boundary Detail Area 3
Indicating Eligible Properties (Future 2008 Noise Contour)

-  Noise Mitigation Boundary
-  65 DNL Noise Contour
-  70 DNL Noise Contour



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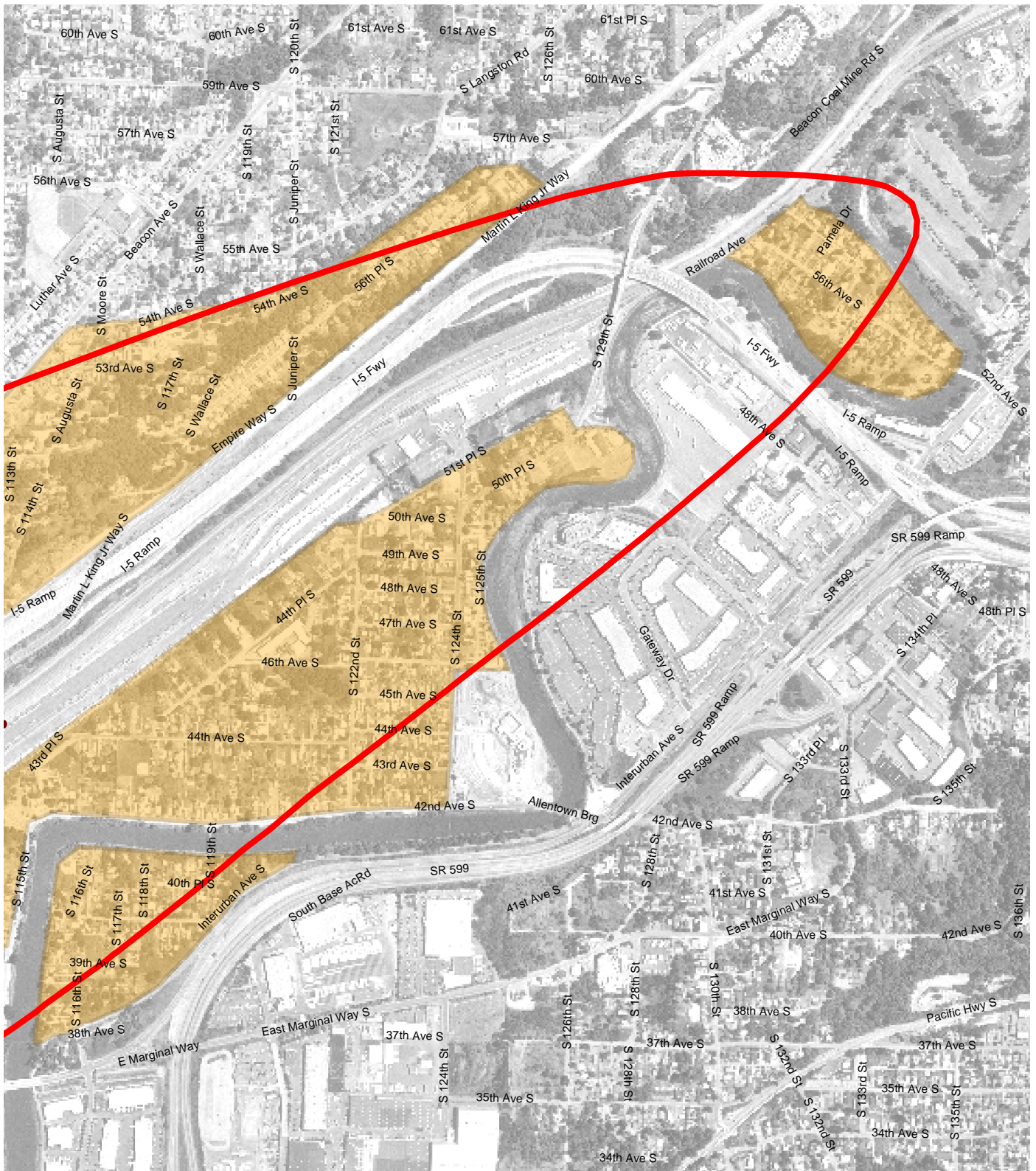



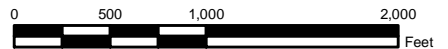


Figure S9 Noise Mitigation Boundary Detail Area 4
 Indicating Eligible Properties (Future 2008 Noise Contour)

-  Noise Mitigation Boundary
-  65 DNL Noise Contour
-  70 DNL Noise Contour



COMMENTS

This Action would allow those homeowners within the 65 and 70 DNL noise contours to receive sound attenuation for their homes to reduce the inside noise levels to 45 dB or below. The Federal Aviation Administration guidelines consider sound attenuated houses within the 65 DNL contour compatible if sound attenuation achieves 25 dB reduction and homes inside the 70 DNL if they receive 30 dB reduction. This Action would convert non-compatible uses to compatible uses and would reduce the noise intrusion to those residents who decide to take advantage of this offer. The Airport would receive a noise easement in return for the sound attenuation.

A Pilot Program could be developed so that a “Standard Package” for such attenuation would then be identified for both the 65 and 70 contours and utilized to sound attenuate houses within the same noise contours in approximately the same location. If attenuation is found to be economically unfeasible or if other circumstances exist, the Airport would determine if purchase of noise easements only would be more desirable.

The Sales Assistance Program would allow those residents within the 65 and 70 DNL who determine that sound attenuation is not desirable to sell their houses. The Program is intended to provide those residents within the contours an opportunity to sell their homes at fair market value. The Program is designed so that the homeowner places the home on the market at fair market value. If the home does not sell within the average time limit that homes in the immediate area sell, then the selling price is reduced a certain percentage and it is placed on the market again. This process is continued until the home sells. The Airport makes up the difference between the original sales price and the actual sales prices. Prior to closing, an aviation easement is placed on the property, and this is only available to homeowners after they have received sound attenuation. This assures that future

purchasers would have sound attenuation and be considered compatible.

The Avigation Easement Purchase Program would allow those homeowners with the 65 and 70 DNL contours to sell an avigation easement to the Airport, which would grant to the Airport the right for aircraft to fly over their home and generate noise. The easement would be attached to the property and would be binding on subsequent purchasers. This Action will be offered at the same time as sound attenuation. These programs are all contingent upon the availability of Federal funds. Additionally, Cleveland High School, which is within the 65 DNL contour is also recommended for sound attenuation.

COST

The cost to implement this Action is estimated to be approximately \$70 Million if all eligible structures take advantage of the programs. It is estimated to be approximately \$12 Million for the 70 DNL contour only. FAA funding anticipated at approximately \$5 Million per year, the maximum allowable.

RESPONSIBLE PARTIES

The Airport is responsible for preparing an RFP for consultant selection, preparing and submitting the FAA Grant Application, hiring the consultant, developing the priority system and priority manual, notifying eligible homeowners of options and implementing the program. The FAA is responsible for helping fund the programs if funds are available.

AIRPORT ACTION

The Airport will prepare an RFP for consultant selection, prepare and submit the FAA Grant Application, hire the consultant, develop the priority system and priority manual, notify eligible homeowners of options and implement the program upon receiving funding. The Airport will budget its funds to match the Federal grant, and hire approximately one more employee to manage the Program.

TIME FRAME

This Action is slated for implementation in approximately 2007, upon FAA approval and funding.

RECOMMENDATION 9—INVESTIGATE THE VIABILITY OF THE VOLUNTARY PURCHASE OF HOMES WITHIN THE 70 DNL USING PROGRAMS THAT ARE NOT AVAILABLE THROUGH FEDERAL PROGRAMS

ISSUE

Reduction of noise sensitive land uses within the Airport environs.

NEW ACTION

This Action will investigate alternative funding sources which are not available through federal programming channels for the voluntary purchase of those homes within the 70 DNL noise contour. **This Action has been initiated and is currently in progress.**

COMMENTS

This Action will provide funding assistance from sources other than the Federal Government for allowance of the airport to voluntarily purchase those individuals whose homes are within the 70 DNL noise contour. Once available monies have been procured, this Action will reduce the number of individuals affected by noise

COST

The cost to implement this Action is minimal and part of the normal planning process.

RESPONSIBLE PARTIES

The Airport is responsible for working with various funding agencies – local jurisdictions, state agencies – to determine which resources are available and plausible for this recommendation.

AIRPORT ACTION

The Airport will investigate all possible options available to aid in helping finance the voluntary purchase of those homes within the 70 DNL noise contour.

TIME FRAME

This Action can be implemented immediately, as it is not contingent on other programming recommendations.

RECOMMENDATION 10—INSULATE SCHOOLS AND PUBLIC BUILDINGS

ISSUE

Reduction of noise sensitive land uses within the Airport Environs.

NEW ACTION

This Action is to insulate schools and public buildings in the following order of priorities in the KCIA 65 and 70 DNL contours. Sound attenuate schools as a first priority (shared with single-family structures as outlined previously), with sleeping portions of fire stations (after multi-family structures) as the last priority.

COMMENTS

This Action will allow those schools and public buildings to receive sound attenuation based on the FAA guidelines to achieve attenuation for schools (Cleveland High) and sleeping portions of fire stations (#53, 4202 S. 115th St, Tukwila, WA, and #27, 1000 S. Myrtle, Seattle, WA). This Action would convert non-compatible uses to compatible uses and would reduce the noise intrusion to those facilities deciding to take advantage of this offer. The Airport would receive a noise easement in return for the sound attenuation.

COST

The cost to implement this Action is approximately \$10 Million.

RESPONSIBLE PARTIES

The Airport is responsible for preparing an RFP for consultant selection, preparing and submitting the FAA Grant Application, hiring the consultant, developing the priority system and priority manual, notifying eligible homeowners of options and implementing the program. The FAA is responsible for helping fund the programs if funds are available.

AIRPORT ACTION

The Airport will meet with representatives of the school and fire stations to discuss the project and process, submit application for funds, hire the consultant and develop policy and procedures manual, and implement the program.

TIME FRAME

This Action is anticipated to start in approximately 2005/6, depending upon the availability of funds.

Consultation

Introduction

The King County International Airport/Boeing Field (KCLIA) FAR Part 150 Study Update involved an extensive public consultation and involvement process, with many several components far exceeding the requirements of the regulation. This inclusive tone was set by the County from the very beginning as part of the public involvement plan which states: *“Part of the public involvement plan will be to provide a strategy that builds community trust in the process and provides channels and methods to communicate citizen concerns and opinions about the project.”*

The elements of the public consultation and involvement process were:

- Public Involvement Plan developed in consultation with staff and advisory committee members/community stakeholders
- Advisory Committee
- Five Open Houses
- Meetings with Community Groups and Individual Citizens
- Four Newsletters
- Website
- Numerous Working Papers and Technical Outlines
- Working Papers Available in Public Libraries
- An Extensive Technical Document
- One public hearing for the Noise Compatibility Program

The Public Involvement Plan is found in Appendix Two. The following is a brief description of the activities conducted in each of those categories.

Advisory Committees

The public involvement process began with the establishment of a Study Advisory Committee. Composition of the Study Advisory Committee (SAC) was developed to include representatives from interested parties including neighborhood representatives, businesses on the airport, airport users, city, county, and state representatives, and the FAA. Members of the SAC are listed in Appendix Four. The SAC met 19 times throughout the Study process.

The purpose of the Study Advisory Committee was to provide a broad and balanced range of perspectives on the Part 150 Noise Study and act as a forum for open dialogue in which to express the broad range of interests and points of view, explore and challenge the study assumptions, evaluate alternatives, help identify impacts and trade-offs of choices, and provide a base for testing responses to proposed solutions. The Committee worked with the consultant team to review the findings and recommendations and provide input and comment on the study elements.

The role of the Committee was one of working with the consultant team and airport staff during the course of the study, reviewing the various findings and recommendations coming forth from the study effort, providing input, and generally providing review and comment on the study elements. The Committee operated on a consensus basis and at the end of the process provided either unanimous recommendations or offered majority and minority reports. Decision making on the final elements of the study was ultimately the responsibility of King County with input from the Committee (which includes the Airport Roundtable) and the general public.

The Committee helped assure that the planning process was open, responsive to public concerns and technically sound. Members were encouraged to express all points-of-view and perspectives on issues and alternatives and to seek to identify areas of agreement as well as reasons for differing points of view on the Part 150 Noise Study.

The Committee consisted of 23 members:

- All 16 members of the Airport Roundtable. The Airport Roundtable was established by the King County Council in June 1997 to advise and make recommendations to the airport management, county executive and county council on the airport budget, programs, regulations, master plans and noise reduction strategies and other related matters. The Roundtable operates by consensus. The 16 regular voting members include:
 - Eight representatives of communities directly affected by the airport, including one each from Georgetown, Magnolia/North Seattle, Tukwila, Renton/Kent/South King County, Beacon Hill/Rainier Valley, West Seattle, Unincorporated King County, and one at-large.
 - Four airport tenant representatives including one each from the cargo operation, small general aviation, corporate tenants, and the Boeing Company.
 - One representative from a pilots association
 - One representative from a commercial enterprise which is an off-site user or off-site provider of airport related services
 - Two labor representatives
- A representative from the Puget Sound Regional Council
- A representative from the Aeronautics Division of the WA State Dept. of Transportation
- A representative from FAA planning staff
- A representative from FAA Air Traffic Control staff
- Representatives from the governments of the two affected jurisdictions, Seattle and Tukwila.
- A representative from SeaTac Airport

Members of the Roundtable were appointed by the King County Executive and confirmed by the Council. The governmental units selected their own representatives.

Observers

Observers were welcome at all committee meetings but were not seated at the table or did not participate in the discussions. A time was set aside in the agenda of each meeting for comments or questions from observers.

Meeting Times and Location

The Committee met 19 times during the study in one of the airport conference rooms. Meetings generally were scheduled on the same date as a regularly scheduled Roundtable meeting, the second Monday of the month.

Meetings

The Study Advisory Committee met to review and discuss issues and material before it was presented at a community briefing or a larger public meeting held prior to the key planning and/or decision points. The purpose of the group was to reflect the interests and concerns of the KCIA community and others in the development of the Noise Study. Its role was to assist the County/project team by providing review and comment on study elements including the review of existing conditions, noise monitoring procedures and models, existing and future noise contours, the identification and evaluation of noise compatibility and land use alternatives, and recommendations as they emerged.

Members were encouraged to express all points-of-view and perspectives and issues and alternatives and to seek to identify areas of agreement as well as reasons for differing points of view on the development of alternatives and recommendations. The project team used feedback from the committee as a resource to them in developing the plan.

This process took a minimum of eight working sessions, each requiring staff preparation and response time, and each requiring committee members to do some reading and preparation outside the meetings. The project team was committed to listening and responding to the comments and information from the Study Advisory Committee.

The purpose of each meeting is listed below. Because of the complexity of the issue and the need to reach consensus, 16 instead of the eight originally anticipated, were held.

Table S7
ADVISORY COMMITTEE MEETING DATES AND PURPOSES
King County International Airport FAR Part 150 Study

Meeting Date	Meeting Purposes
June 17, 1999	Kick Off Meeting.
September 13, 1999	Introduce study and review committee procedures and groundrules.
November 8, 1999	Review airport inventory.
January 10, 2000	Review preliminary noise contours, public involvement plan, and community meeting schedule.
March 13, 2000	Discuss noise contours for KCIA, five-year base case noise contours, combined KCIA/Sea-Tac noise contours, and notice of upcoming public open house.
May 8, 2000	Review consultants noise abatement alternatives and develop criteria for evaluation.
September 11, 2000	Continued discussion on criteria for selection of alternatives and adopted first level criteria. Prepare for interest based bargaining training on September 18.
October 16, 2000	Presentation on Land Use Analysis, Abatement Alternatives Evaluation, and Decision Criteria Matrix.
November 13, 2000	Continued evaluation of alternatives.
December 11, 2000	Continued evaluation of alternatives.
January 8, 2001	Continued evaluation of alternatives.
February 12, 2001	Continued evaluation of alternatives; Decide on preliminary list of alternatives to carry forward for further analysis.
April 9, 2001	Presentation of consultant's recommendations; discussion on alternatives to identify preliminary SAC recommendations.
May 14, 2001	Report from additional community meetings and open house; development of preliminary recommendations (continued).
June 11, 2001	Report from additional community meetings; further discussion on alternatives to identify preliminary recommendations.
July 16, 2001	Review of Consultant's Recommendations, additional recommendations not included in consultant's list, and alternatives generated at community meetings to identify areas of consensus.
October 15, 2001	Review of draft recommendations report.
November 5, 2001	Presentation on sales assistance and acquisition programs at Sea-Tac; Review of updated draft recommendations report.

Meeting Summaries

A meeting summary was prepared after each meeting. The purpose of the summary was not to provide meeting minutes, but rather to record comments and questions raised by members of the committee. In this way, a record of discussion items was kept that can be referenced in the course of the project. Answers to questions raised were included in italics or clarified in a subsequent meeting.

Open Houses/Community Meetings

Five Open Houses were held during the Study where members of the public were able to interact directly with Airport and consulting staff on their noise related concerns. Display boards were available to present information being discussed among the different committees. At all Open Houses, members of the public were afforded the opportunity to provide written comments, have their questions answered, and to take away printed material on the items being discussed. Public input from these Open Houses was influential in prioritizing issues during the Study.

The Open Houses took place at the Airport in the Terminal Building and were advertised in local daily and weekly newspapers (*West Seattle Herald/White Center News, Highline Times, Beacon Hill News, Magnolia/Queen Anne News, South District Journal, Seattle Times/Post-Intelligencer, and South County Journal*), on the Study's Website, as well as in the Part 150 Update Newsletter mailed to approximately 2500-3500 area residents. Flyers were also mailed out and distributed at community meetings, particularly when the newsletter was sent out more than a month prior to the Open House.

Table S8
OPEN HOUSE MEETING DATES AND PURPOSES
King County International Airport FAR Part 150 Study

Meeting Date	Meeting Purpose
June 17, 1999	Kick Off Meeting; purpose of study.
April 5, 2000	Present existing and future noise contours; Roadmap to the study process.
January 18, 2001	Combined noise contours: current and projected impacts, Potential noise reduction alternatives, Criteria for reviewing alternatives.
June 6, 2001	Present preliminary alternatives.
March 12, 2002	Present Airport and Advisory Committee Recommendations.

In addition to the scheduled Open Houses, Airport Staff and Consultants attended numerous community and civic meetings to update and explain the Study findings, recommendations, and process. These meetings were attended by citizens, elected officials, civic groups, and community organizations, and were organized to present the Study findings and options to date. One or more meetings were held in August-September 1999, January 2000, and/or May 2001 for the following communities.

Table S9

PLACES AND DATES OF MEETINGS*King County International Airport FAR Part 150 Study*

Community	Dates
Allentown	May 30, 2001
Beacon Hill/Rainier Valley	September 27, 28, 29, 1999; January 19, 2000; May 10, 2001
South Beacon Hill	May 2, 2001
North Beacon Hill	May 8, 2001
Duwamish Central Committee	January 18, 2000
Duwamish Neighborhood Improvement Council/Foster Point Community Council	January 20, 2000
Georgetown Community	September 22, 1999; January 25, 2000; May 9, 2001
North Highline Unincorporated Council	January 20, 2000; May 3, 2001
Magnolia Community	September 23, 1999; January 26, 2000; May 16, 2001
Seattle School Board	October 24, 2001
Skyway/West Hill Community Council	August 20, 1999; May 29, 2001
Tukwila Community	September 16, 1999
Tukwila City Council	August 9, 1999; June 18, 2001
West Seattle/Admiral/Alki Community Councils	September 27, 28, 1999; January 27, 2000; April 26, 2001

Newsletters

Project newsletters were developed to provide information about the project status, current findings, and details on how citizens could find more detailed information both about the project and the results of committee meetings.

Newsletters were mailed to the airport mailing list and anyone who attended any of the open houses and community meetings at key project milestones and when feasible, to advertise an upcoming open house. In addition, the newsletter was posted on the airport website, distributed in project notebooks in libraries and at the open houses.

Table S10

NEWSLETTER DATES AND TOPICS

King County International Airport FAR Part 150 Study

Newsletter Date	Topic
March 2000	Noise monitoring results, noise exposure maps or contours, next steps, and how to be involved. Notice of April 5, 2002 Open House.
November 2000	Preliminary noise reduction alternatives and evaluation criteria; next steps and how to be involved. First Notice of January 18, 2001 Open House.
March 2002	Airport recommendations to reduce noise. Notice of March 12, 2001 Open House.
September 2002	County Executive Part 150 recommendations. Notice of September 16, 2002 Public Hearing.

Website

Early in the Study, a website was created to provide broad access to schedules, technical data, and other pertinent information. Among the items posted on this website were:

- Questions and Answers
- Technical Papers
- Summaries from all SAC meetings
- Schedules
- Notices of Open Houses and Community Meetings
- Newsletters
- Comment Form.

Project Notebooks

Project Notebooks were placed in 15 libraries located in areas around the airport. Notebooks included copies of all the technical papers distributed to advisory committee members, committee meeting summaries, notices of open houses, newsletters, and other relevant information.

Libraries included:

Seattle Public Libraries: Beacon Hill, Columbia, High Point, Holly Park, Magnolia, Rainier Beach, Southwest and West Seattle branches.

King County Public Libraries: Burien, Boulevard Park, Foster, Skyway, Tukwila, and White Center branches.

Renton Public Library.

Technical Outlines and Papers

Several technical Outlines and Working Papers were prepared and presented throughout the course of the Study. These included Inventory, Forecasts and Noise Analysis Working Papers, several Technical Outlines on Operational and Facility Alternatives, a Land Use Alternatives Technical Outline, as well as other papers. The Technical Outlines were updated and expanded during the many subcommittee meetings on the various subjects. The Technical Outlines served as the basis for the Alternatives Chapters in this document.

Public Hearing

A Public Hearing addressed the Noise Compatibility Program recommendations from the County Executive to the County Council. The Noise Compatibility Program contains recommendations on operations and land use issues addressed in the Study. A Public Hearing was held on September 16, 2002. The Public Hearing was held in the King County Administration Building at 9:30 am. An Open House on the recommendations had been held earlier in the year on March 12, 2002. At the Open House, displays indicated the Recommendations, the Existing and Future Noise Exposure Maps, and specific Noise Compatibility Program elements. Members of the Airport Staff and Consulting Team were available to answer questions and listen to public comments and input. Comment sheets were available for recording written

comments on the recommendations. In addition, the public was encouraged to send comments directly to the County Council.

A copy of the Resolution adopting the FAR Part 150 recommendations and forwarding the complete document, including the Noise Exposure Maps and Noise Compatibility Program, to the Federal Aviation Administration is found in Appendix Eight.

Introduction

Introduction

The King County International Airport (KCIA) Federal Aviation Regulation (FAR) Part 150 Study is a five-year program. The baseline year for this update is 1999 with the future baseline being 2006. The purposes of an FAR Part 150 Program are: to assess the noise environment, to prepare forecasts of aviation operations, to identify land uses within the airport environs, and to explore ways to mitigate land use compatibility conflicts.

FAR Part 150 requires the development of Noise Exposure Maps that depict the existing aircraft noise levels, expressed in terms of the Day-Night Noise Level (DNL) metric, and the five year future noise levels in terms of DNL. Thus the Study has a five-year planning horizon. The threshold DNL used for compatibility purposes is the 65 DNL noise contour. In addition to the Noise Exposure Maps, a Noise Compatibility Program (NCP) can also be prepared. The NCP contains the recommendations for noise mitigation and abatement that the sponsoring agency, the King County in this case, is recommending for implementation. A schedule for implementation, along with the parties responsible for that implementation, is also presented.

Summary

This document contains a review of the existing land use controls, available for implementation, future land uses, and existing zoning in the airport environs. A review of historical aviation activity is also presented and a forecast of activity for the study period. The information contained in this document relating to aviation forecast was derived from the forecast of aviation activity, developed and approved for the Airport Master Plan.

The existing and future noise contours associated with the aviation activity is presented along with the noise measurement program and analysis used to develop these contours. Using these contours as a base, the noise compatibility process discusses the development of realistic and effective operational alternatives to mitigate the noise exposure. In addition to operational alternatives, a wide range of feasible land use alternatives, noise control actions, and noise impact patterns are evaluated and potential solutions which accommodate both airport users and inhabitants of the airport's environs within acceptable safety, economic and environmental parameters are discussed.

The various measures are listed and described, and each is evaluated in terms of its appropriateness with, and relationship to, King County International Airport. In addition, recommendations are made as to which alternatives should be implemented at the Airport. The document then presents a schedule for review and updating of the elements contained in this FAR Part 150 Plan and Program to ensure success of the program.

This document, in terms of content and recommendations, has culminated from many meetings, with the Study Advisory Committee, Airport Staff and Management, the King County Council, the Federal Aviation Administration and other interested parties.

All proposals contained in this document are consistent with the Approved Airport Layout Plan and the Airport Master Plan, the State System Plan, and the Puget Sound Regional Council Resolutions and plans.

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Illustrations (Con't)

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Illustrations (Con't)

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FAR Part 150 Noise Exposure Map Checklist

I. IDENTIFICATION AND SUBMISSION OF MAP DOCUMENT:	Page Number
<ul style="list-style-type: none"> A. Is this submittal appropriately identified as one of the following, submitted under FAR Part 150: <ul style="list-style-type: none"> 1. A NEM only 2. A NEM and NCP 3. A revision to NEMs which have previously been determined by FAA to be in compliance with Part 150? B. Is the airport name and the qualified airport operator identified? C. Is there a dated cover letter from the airport operator which indicates the documents are submitted under Part 150 for appropriate FAA determination? 	<ul style="list-style-type: none"> Cover, Cover Letter N/A Yes N/A Cover Yes
II. CONSULTATION: [150.21 (b), A150.(a)]	
<ul style="list-style-type: none"> A. Is there a narrative description of the consultation accomplished, including opportunities for public review and comment during map development? B. Identification: <ul style="list-style-type: none"> 1. Are the consulted parties identified? 2. Do they include all those required by 150.21 (b) and A150.105 (a)? 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 view, data, and comments during map development and in accordance with 150.21 (b)? 	<ul style="list-style-type: none"> K.1, Appendix K.1, Appendix Yes, K.1, Appendix Cover Letter, K.1, Appendix

- 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? K.1, Appendix

III. **GENERAL REQUIREMENTS:** [150.21]

- A. Are there two maps, each clearly labeled on the face with year (existing condition year and 5-year)? C.57, J.4
- B. Map currency:
1. Does the existing condition map year match the year on the airport operator's submittal letter? No, C.57
 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, J.4
 3. If the answer to 1 and 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? Cover Letter, Yes
- 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? Cover Letter
 2. If the 5-year map is based on program implementation:
 - a. are the specific program measures which are reflected on the map identified? Yes, J.1-J.35
 - b. does the documentation specifically describe how these measures affect land use compatibilities depicted on the map? Yes, J.1-J.35
 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 show program implementation conditions and which is intended to replace the 5-year NEM as the new official 5-year map? N/A

- IV. MAP SCALE, GRAPHICS, AND DATA REQUIREMENTS:**
[A150.101, A150.105, 150.21 (a)]
- A. Are the maps of 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, C.57, J.4
- B. Is the quality of the graphics such that required information is clear and readable? Yes, C.57, J.4
- C. Depiction of the airport and its environs.
1. Is the following graphically depicted to scale on both the existing condition and 5-year maps:
 - a. Airport boundaries Yes, C.57, J.4
 - b. Runway configurations with runway end numbers No, C.57, J.4
 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 the 65 Ldn (or beyond, at local discretion) Yes
- D. 1. Continuous contours for at least the Ldn 65, 70, and 75? Yes, C.57, J.4
2. Based on current airport and operational data for the existing condition year NEM, and forecast data for the 5-year NEM? C.57, J.4
- E. Flight tracks for the existing condition and 5-year forecast time frames (these may be on supplemental graphics which must use the same land use base map as the existing conditioned and 5-year NEM), which are numbered to correspond to accompanying narrative? C.37-C.40
- 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) C.26-C.30

- G. Non-compatible land use identification:
1. Are non-compatible land uses within at least the 65 Ldn depicted on the maps? Yes, C.57, J.4
 2. Are noise sensitive public buildings identified? Yes
 3. Are the non-compatible 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 non-compatible, explained in the accompanying narrative? N/A

V. **NARRATIVE SUPPORT OF MAP DATA:** [150.21 (a), A150.1, A150.103]

- A. 1. Are the technical data, including data sources, on which the NEMs are based adequately described in the narrative? Yes, A.3-A.31
2. Are the underlying technical data and planning assumptions reasonable? Yes, A.3-A.31, J.1-J.3
- B. Calculation of Noise Contours:
1. Is the methodology indicated? Cover Letter, C.26-C.66
 - a. Is it FAA approved? Yes, C.31
 - b. Was the same model used for both maps? Yes
 - 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
 - b. If so, does this have written approval from AEE? N/A
 3. If noise monitoring was used, does the narrative indicate that Part 150 guidelines were followed? C.26
 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? D.1-D.7, J.4
 2. Does the documentation indicate whether Table 1 of Part 150 was used by the airport operator? Cover Letter, A.9, C.22, D.3
 - 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 operator's complete substitution for Table 1? N/A
 3. Does the narrative include information of self-generated or ambient noise where compatible/non-compatible land use identifications consider non-airport/aircraft sources? N/A
 4. Where normally non-compatible 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? D.1-2, J.2-J.4

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? Cover Letter
- B. Has the operator certified in writing that each map and description of consultation and opportunity for public comment are true and complete? Cover Letter, C.57, J.4

FAR Part 150 Noise Compatibility Program Checklist

I. IDENTIFICATION AND SUBMISSION OF PROGRAM:	Page Number
A. Submission is properly identified:	
1. FAR 150 NCP?	Cover, Cover Letter
2. NEM and NCP together?	Yes
3. Program revision?	N/A
B. Airport and Airport Operator's name identified?	Cover, Flysheet
C. NCP transmitted by airport operator cover letter?	Yes
II. CONSULTATION:	
A. Documentation includes narrative of public participation and consultation process?	K.1-K.11, Appendix
B. Identification of consulted parties:	
1. All parties in 150.23(c) consulted?	K.1-K.11, Appendix
2. Public and planning agencies identified?	K.1-K.11, Appendix
3. Agencies in 2., above, correspond to those indicated on the NEM?	K.1-K.11, Appendix
C. Satisfies 150.23(d) requirements:	
1. Documentation shows active and direct participation of parties in B, above?	K.1-K.11, Appendix
2. Active and direct participation of general public?	K.1-K.11, Appendix
3. Participation was prior to and during development of NCP and prior to submittal to FAA?	K.1-K.11, Appendix
4. Indicates adequate opportunity afforded to submit views, data, etc.?	K.1-K.11, Appendix

D. Evidence included of notice and opportunity for a public hearing on NCP?	Appendix
E. Documentation of comments:	
1. Includes summary of public hearing comments, if hearing was held?	K.1-K.11, Appendix
2. Includes copy of all written material submitted to operator?	Appendix
3. Includes operator's responses/disposition of written and verbal comments?	Appendix
F. Informal agreement received from FAA on flight procedures?	N/A
III. NOISE EXPOSURE MAPS: [150.23, B150.35 (f)]	
(This section of the checklist is not a substitute for the Noise Exposure Map checklist. It deals with maps in the context of the Noise Compatibility Program submission.)	
A. Inclusion of NEMs and supporting documentation:	
1. Map documentation either included or incorporated by reference?	C.67, J.4
2. Maps previously found in compliance by FAA?	N/A
3. Compliance determination still valid?	N/A
4. Does 180-day period have to wait for map compliance finding?	N/A
B. Revised NEMs submitted with program: (Review using NEM checklist if map revisions included in NCP submittal)	
1. Revised NEMs included with program?	N/A
2. Has airport operator requested FAA to make a determination on the NEM(s) when NCP approval is made?	N/A
C. If program analysis used noise modeling:	
1. INM or HNM, or FAA-approved equivalent?	C.30
2. Monitoring in accordance with A150.5?	C.26-C.30
D. Existing condition and 5-year maps clearly identified as the official NEMs?	C.67, J.4

IV. CONSIDERATION OF ALTERNATIVES: [B150.7, 150.23 (e)]

- A. At a minimum, are the alternatives below considered?
1. Land acquisition and interest therein, including air rights, easements, and development rights? E.7, F.26, F.29
 2. Barriers, acoustical shielding, public building soundproofing E.6, E.11, F.17-F.28
 3. Preferential runway system E.12
 4. Flight procedures E.12-E.13, F.37-F.69
 5. Restrictions on type/class of aircraft (as least one restriction below must be checked)
 - a. deny use based on Federal standards E.4, F.3-F.9
 - b. capacity limits based on noisiness E.4
 - c. noise abatement takeoff/approach procedures E.12
 - d. landing fees based on noise or time of day E.5, F.9-F.16
 - e. nighttime restrictions E.6
 6. Other actions with beneficial impact E.1-E.13
 7. Other FAA recommendations N/A
- B. Responsible implementing authority identified for each recommendation? J.5-J.35
- C. Analysis of measures:
1. Measure clearly described? E.1-E.13, J.5-G.30
 2. Measures adequately analyzed? E.1-E.13, J.5-J.35
 3. Adequate reasoning for rejecting alternatives? E.1-E.13, J.5-J.35
- D. Other actions recommended by the FAA:
Should other actions be added? N/A

V. ALTERNATIVES RECOMMENDED FOR IMPLEMENTATION:
[150.23 (e), B150.35 (b), B150.5]

- A. Document clearly indicates:
1. Alternatives recommended for implementation? J.5-J.35
 2. Final recommendations are airport operator's, not those of consultant or third party? Cover Letter

- B. Do all program recommendations:
 - 1. Relate directly or indirectly to reduction of noise and noncompatible land uses? J.1-J.35
 - 2. Contain description of contribution to overall effectiveness of program? J.1-J.35
 - 3. Noise/land use benefits quantified to extent possible? J.2
 - 4. Include actual/anticipated effect on reducing noise exposure within noncompatible area shown on NEM? J.1-J.35
 - 5. Effects based on relevant and reasonable expressed assumptions? J.1-J.35
 - 6. Have adequate supporting data to support its contribution to noise/land use compatibility? J.2

- C. Analysis appears to support program standards set forth in 150.35 (b) and B150.5? J.2-J.4

- D. When use restrictions are recommended:
 - 1. Are alternatives with potentially significant noise/compatible land use benefits thoroughly analyze so that appropriate comparisons and conclusions can be made? N/A
 - 2. Use restriction coordinated with APP-600 prior to making determination on start of 180-days? N/A

- E. Do the following also meet Part 150 analytical standards:
 - 1. Formal recommendations which continue existing practices? J.5-J.35
 - 2. New recommendations or changes proposed at end of Part 150 process? J.5-J.35

- F. Documentation indicates how recommendations may change previously adopted plans? J.5, J.35

- G. Documentation also:
 - 1. Identifies agencies which are responsible for implementing each recommendation J.5-J.35
 - 2. Indicates whether those agencies have agreed to implement? N/A
 - 3. Indicates essential government actions necessary to implement recommendations? J.5-J.35

- H. Timeframe:
 - 1. Includes agreed-upon schedule to implement alternatives? J.5-J.35
 - 2. Indicates period covered by the program? Cover Letter, J.5-J.35

- I. Funding/Costs:
 - 1. Includes costs to implement alternatives? J.5-J.35
 - 2. Includes anticipated funding source? J.5-J.35

- VI. **PROGRAM REVISION:** [150.23 (e) (g)]
 - Supporting documentation includes provision for revision? N/A