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**PART 150 NOISE LAND INVENTORY  
AND RE-USE PLAN**

# *Burlington International Airport*



**South Burlington,  
Vermont**

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Submitted by **BURLINGTON INTERNATIONAL AIRPORT**

Prepared by



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## 1.0 Introduction

Burlington International Airport (BTV) has prepared this Noise Land Inventory and Re-Use Plan to comply with the Airport Improvement Program (AIP) Grant Assurance No. 31. This assurance stipulates that “optimal use” must be made of the federal share of the proceeds from any subsequent disposal of noise land (originally acquired with AIP grant funds under a noise compatibility program) when that land is deemed to be no longer necessary for noise compatibility purposes. Theoretically, properties specifically acquired with grant funds that enable the removal and/or prevention of land uses incompatible with the high noise exposure areas are not typically intended to remain available for Airport development indefinitely. Simply stated, the Federal Aviation Administration (FAA) expects that land acquired for noise compatibility purposes will be disposed of at the earliest practical time after the land is converted to an airport-compatible use and no longer needed for noise compatibility purposes. However, under any disposal plan, the sponsor is obligated to retain sufficient interest in the land to ensure that the eventual “converted” land uses do remain compatible with the noise levels expected from the continued operation of the Airport. It is also very important to emphasize that the guidance clearly states that “disposal” of noise land does not necessarily mean that an airport must sell the property to another owner. Whether properties that are no longer needed for noise compatibility are sold, kept by the Airport and leased, converted to another airport use, or disposed of by other means is the Airport’s decision.

Detailed information describing how to satisfy the Grant Assurance No. 31 requirements is specified by the January 30, 2008 Program Guidance Letter (PGL 08-02) titled, “Management of Acquired Noise Land: Inventory-re-use-Disposal”, as amended on March 26, 2009. The timelines for preparing and submitting the



Inventory and Re-Use Plan to the FAA are established by Section 7 of the PGL guidance.

While this submittal will constitute the first documentation ever provided in this format by BTV, an inventory of all properties acquired by the Airport for development and noise/land use compatibility has historically been maintained on the sponsor's Airport Property Map on file with the FAA. Attached with this report are Exhibit A - Property Map and Exhibit B - Noise Compatibility Program Acquisition History showing the location, size, and relationship to the Airport of the lands that have been acquired to date under the Noise Compatibility Program (NCP). Likewise, the existing and planned use for all of these properties has historically been identified by the Airport Layout Plan (ALP). The intent of the new guidance is to create an inventory and Re-Use Plan that specifically identifies only those properties which have been acquired by AIP grant funds for noise compatibility purposes. This document is intended to supplement, not replace, the traditional Exhibit A and ALP which will continue to identify all properties owned and planned for development by the sponsor.

## 2.0 BTV Acquisition Program

### 2.1 Program History

Burlington International Airport is located within the City of South Burlington, Vermont (Figure 1, Location Map). BTV initiated its first Part 150 Noise Compatibility Program efforts in March of 1990. Numerous updates to the program eligibility requirements have been accomplished over the ensuing 18 years. The most recent update to the Noise Exposure Map (NEM) was approved by FAA on November 6, 2006. A corresponding update to the Noise Compatibility Program



(NCP) was then approved by FAA on July 14, 2008. FY09 property acquisitions for noise compatibility are currently underway consistent with this most recent update. The properties acquired under the NCP are shown on the Exhibit A - Property Map, and the acquisition history as detailed in the attached Exhibit B - Noise Compatibility Program Acquisition History.<sup>1</sup> Under the NCP, a total of 63 parcels have been acquired, totaling roughly 27.11 acres of land. An additional two (2) parcels totaling 50.25 acres were acquired by the Vermont Air National Guard.

Most of the parcels that have been acquired specifically for noise compatibility purposes are small (i.e.,  $\frac{1}{4}$  to  $\frac{1}{2}$  acre) individual residential lots located within the residential neighborhood known as the "Airport Parkway" neighborhood that is closest and directly adjacent to the Airport. House structures that once existed on the acquired lots typically have been removed and the vacant lots reseeded with grass and planted with basic landscaping materials to blend with the surrounding residential uses. Although the approved Part 150 program identifies additional noise impacted and potentially eligible properties in other areas around the Airport, the current priority is focused on the Airport Parkway neighborhood areas.

Since 1990, a large number of homeowners within the neighborhood have consistently been designated by the NEM and NCP updates to be eligible for program benefits. Many of the lots adjacent to those already acquired are also eligible for voluntary acquisition. Interest expressed by those owners suggest that most of the eligible lots will eventually be acquired over the next five to ten years as the owners request inclusion within the program and funds become available. As such, it is not practical for the Airport to consider any disposal or significant re-use or permanent redevelopment of the individual parcels at this time.

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<sup>1</sup> See the Airport Property Map on file with FAA to identify the exact location and more information about each of the parcels.



## 2.2 Planned Use of Acquired Properties

As additional contiguous eligible parcels are acquired and assembled into a large enough acreage to support a compatible and economical re-use of the properties, a comprehensive Re-Use Plan could be implemented as long as it was consistent with both the Airport noise environment and the surrounding residential uses that will remain. Because of the number ( $\pm 120$  home lots) and relative concentration of eligible properties within the Airport Parkway neighborhood and the obvious potential for unintended disruptive impacts to the integrity of the remaining neighborhood, a significant planning and coordination effort has been initiated with the City of South Burlington. The goal of this effort is to develop a mutually compatible long-term Re-Use Plan that will provide an appropriate and effective permanent noise buffer, as well as accommodate a redevelopment plan for the neighborhoods consistent with the local zoning and land use plans and goals.

As a result, at this time and for the projected effective period of this initial Inventory and Re-Use Plan, all noise lands currently owned and those expected to be acquired over the next five year period are considered "needed for noise compatibility purposes" or have already been redeveloped for Airport-related use as parking areas. Additionally, no land is planned to be disposed of or permanently re-used for anything other than for noise-compatibility purposes, which may include landscaped buffers consistent with local regulatory requirements. Exhibit A - Property Map and Exhibit B - Noise Compatibility Program Acquisition History indicate the location and status of all noise lands currently owned by BTV.

It is important to note that BTV is wholly owned and operated by the City of Burlington, but is physically located within the City of South Burlington. The Airport would generally be exempt from paying local personal property taxes to the City of South Burlington for those properties acquired from the Airport Parkway neighborhood. To assure that the City does not suffer a disproportionate financial



hardship as a result of the lost residential property tax revenues, both cities have reached an agreement to assure that the tax revenues lost to South Burlington are appropriately compensated by whatever long-term redevelopment plan is pursued.

The PGL requires that the Airport sponsor review “noise land” at least once every five years or when there is change to the Re-Use Plan, when the Airport undertakes a Master Plan Update (MPU), or when the noise contours are changed, whichever occurs first. The planning and coordination with the City of South Burlington for the potential long term re-use of the Airport Parkway neighborhood is being pursued simultaneously with the recently commenced Airport MPU.

Thus, consistent with the PGL guidance, some elements of this Re-Use Plan may require updating to reflect the progress of the voluntary acquisition program and the recommendations of the final MPU process when it is completed later in 2010.

The economic role and neighborhood setting of BTV represents important context for the long-term re-use concepts being considered for the Airport Parkway neighborhood. The Airport plays a major role in the region’s economy, as an employer, as the host to multiple aviation-related businesses, and as the major air transportation gateway for northern Vermont, northeast New York, and portions of southern Quebec.

Immediately to the west of the Airport’s main passenger terminal, and its main runways, is the Airport Parkway residential neighborhood (Figure 2, Land Use). The neighborhood includes roughly 800 residential units, a handful of commercial and office uses along Airport Drive, and Chamberlin Elementary School, which serves the immediate neighborhood as well as several other areas of South Burlington. Developed in the years immediately following World War II, the neighborhood’s homes flank Airport Drive and Airport Parkway extending north to



Kirby Road, where the area transitions into a mixed commercial and industrial zone. The area is zoned R4-Residential 4, which generally permits single-family and duplex housing at a density of four units per acre (Figure 3, Zoning Map).

It is within this neighborhood that 13 properties have been acquired to date for airport-related and/or noise compatibility purposes. Another 100 residential properties are proposed to be acquired, and the houses removed, over the next five to ten years. This represents roughly 14 percent of the neighborhood's housing stock. Since home values in this neighborhood are modest relative to values for single-family, detached housing elsewhere in South Burlington, the City has expressed concern about the potential impacts of losing these housing units. The Airport has engaged in a process with the City to identify potential sites outside the 65 DNL contour in this neighborhood, and other residential zoning districts, where infill housing could be promoted to ensure that similar housing opportunities can be provided for the City's residents (see Section 3.5 below).

### **2.3 Acquisition Decision Protocol**

In consultation with the South Burlington City Council, a decision protocol was agreed upon for future acquisition of noise lands. The program, which is entirely voluntary, has generated a great deal of interest and as a result, it is expected to take a number of years before all interested parties can enter the program. In an effort to minimize negative impacts on the neighborhoods from scattered acquisitions, BTV and the City will embark on an agreement that establishes the following protocol. The overarching goal is to accommodate requests into the program as soon as it is practical to do so, and to ensure that the program benefits noise impacted homeowners.



- General parameters for the acquisition program:
  - Properties along Airport Drive
  - Properties in specific groups and blocks defined by existing streets
  - Higher noise impacted areas
  - Avoid “patch-work” acquisitions
  
- These parameters are to be firm, but flexible enough
  - To adjust when practical to meet individual owner situations
  - To adjust for increased and decreased future funding levels
  - Accelerate program when groups and blocks are ready to participate

As shown in the Detailed Acquisition Plan (Figure 4), BTV expects to purchase 115 homes through FY 2019, based upon resident requests to enter the program to-date. In light of the decision criteria described above and the long list of interested homeowners, BTV requested that the South Burlington City Council consider approval of an acceleration of the acquisition program for FY 2010 and 2011. FAA has agreed to double the funding for acquisition of noise lands for the next two fiscal years, which can allow for the purchase of approximately 20 homes each year. BTV believes that increasing the pace of neighborhood transition would speed up landscaping efforts and alleviate concerns about a patchwork of vacated properties. At its meeting on February 17, 2009, the City Council conditionally approved this recommendation.

BTV will continually evaluate and update the program and these protocols. BTV and the City agreed to keep the neighborhood informed of acquisition progress and schedules by using BTV and City websites to disseminate information. If for some reason BTV needs to adjust these protocols, it will consult with the City to discuss potential changes. Finally, BTV agrees to implement a policy to assure tax revenues to the City are maintained as homes are demolished and removed from the tax rolls.



As agreed to with the City Council, BTV will remove vacated homes and implement a landscaping program within two years after acquisition. It will be accomplished in logical contiguous areas that are large enough to create desired landscaping effects and to ensure that the remaining residences are not isolated in areas with few neighboring structures. The demolition and landscaping activities will be concentrated to no more than a few months each year in order to minimize neighborhood disturbances and avoid attractive nuisance and vandalism issues.

### **3.0 Use of Existing Noise Lands**

At the present time, the Airport is using noise lands purchased within the Airport Parkway neighborhood for undeveloped greenspace. However, as additional land is acquired, several re-use concepts can be considered. As described below, these concepts for future re-use have been presented in preliminary form to the South Burlington City Council. It is important to note that no formal plans have been presented for approval by the City.

#### ***3.1 Potential Re-Use Concepts for Noise Lands***

In consultation with and with the participation of the City of South Burlington, several re-use concepts are being considered within the Airport Parkway neighborhood. While no specific plans have been endorsed by the City at this point, and no specific plans are pending before the City, BTV has presented several potential concepts to the South Burlington City Council and neighborhood residents at a series of public meetings held between November 2008 and February 2009. The presentation materials from these public meetings are attached as the Appendices to this report.



The existing alignments of Airport Parkway and Airport Drive have been considered to be inadequate, and not necessarily compatible with the adjacent residential area for a number of reasons. The road is heavily traveled, including trips generated by airport businesses and passengers.

Conceptually, those properties acquired for noise compatibility purposes could be used for one of three airport-related purposes, which will create three permanent, clearly designated land use zones that facilitate development of a permanent, landscaped buffer between the Airport and the Airport Parkway neighborhood; extension of necessary transportation facilities; and a zone for planned Airport use and noise-compatible, use necessary transportation facilities. The three zones shown on Figure 5 are:

1. Future Airport Drive Extension Right-of-Way;
2. Permanent Greenspace and Buffer Areas
3. Airport Use Expansion and Potential Disposal for re-use

An interim landscaping treatment will be used on all noise lands, as discussed in Sections 2.1 and 2.3 above. Table 1 shows the acreage intended for each of the planned land uses, which are described in further detail below.

Table 1: Potential re-use Concepts for Noise Lands		
Noise-Compatible Use	Total Acres	Planned Use
Future Airport Drive Extension Right-of-Way	12 - 15	Planned collector roadway extension with recreation path extension; ROW of 80 - 100 feet; implement interim landscaping treatments until roadway is developed
Permanent Greenspace and Buffer Area	20 - 25	Permanent landscaped noise buffer to insulate residential neighborhood from non-compatible airport noise and demarcate airport from residential land use; protects wetland/stream areas



Table 1: Potential re-use Concepts for Noise Lands		
Noise-Compatible Use	Total Acres	Planned Use
Airport Use Expansion and Potential Disposal for re-use	30 - 40	Provide land for airport-related facilities including terminal access road, parking capacity, and airport support functions; potentially evaluate land for noise-compatible economic development use

### 3.2 Land Use Area #1: Future Airport Drive Extension Right-of-Way

Roughly 12 to 15 acres of the current and future noise lands will be designated for the future Airport Drive Extension Right-of-Way. Based on the 2000-1 scoping studies prepared for this collector roadway, a right-of-way of between 80 and 100 feet is necessary to accomplish improve traffic flow and achieve the recommended pedestrian and streetscape improvements. The Airport Drive Extension is envisioned as a four-lane, boulevarded, limited access collector roadway with a landscaped median and an eight- to ten-foot recreation path to be located on the west side of the right-of-way, closest to the residential neighborhood. This collector roadway would substantially alleviate the impacts of truck, airport and commuter traffic on neighborhood streets and create a significant new bicycle and pedestrian connection benefiting the regional network. It would also create a permanent transitional land use element that segregated airport-related and noise-compatible uses on the east from the residential neighborhood to the west. A preliminary conceptual plan for a realigned and reconstructed Airport Parkway has been prepared by BTV that proposes this roadway, which was presented to the South Burlington City Council for informational purposes, as shown in Figures 6 (alignment) and 7 (conceptual cross-section).

As conceptually presented, the roadway extension is designed to accomplish the following:

- Collect/redirect traffic away from neighborhood streets



- Create a landscaped median with curb
- Include pedestrian sidewalks/trails/bike paths “connected” with other amenities
- Establish a buffer that creates significant width for noise attenuation (200 feet or more in many areas)
- Create a permanent boundary to segregate new uses from neighborhood

Noise lands acquired within this land use zone will all have transitional landscaping treatments until permanent development of the roadway occurs. The Airport will cooperate with the City to seek funding sources both for the transportation improvements, and for associated amenities such as lighting, connector parks, and other features that will benefit the neighborhood. The Airport also will work with the City and the roadway design engineer to ensure that neighborhood areas whose street network is affected by the Airport Drive Extension, as well as the noise compatibility program overall, are engaged in planning to create new street connectivity patterns to enhance the neighborhood.

Such a roadway improvement is a number of years from fruition and cannot move forward until the property acquisition program has substantially advanced. In the interim as described above, landscaping will be put in place until permanent redevelopment of roadway is achieved.

### **3.3 Land Use Area #2: Permanent Greenspace and Buffer Areas**

A significant portion of the acquired noise lands will function as permanent open greenspace and natural areas, providing a permanent noise buffer and visual resource to reduce the impacts of non-compatible airport noise on the residential neighborhood. These areas will be available for densely planted landscaping, and other permanent measures such as walls, berms, or “living walls,” consistent with



neighborhood aesthetics and help reduce ongoing airport noise. These features also will be designed to reduce ongoing noise impacts from the future Airport Drive Extension. It is also important to note that a sizable portion of the land in this land use area consists of steeply-sloped lands along Centennial Brook, and associated wetlands, which will remain undeveloped and preserved, and which can be integrated into the overall land use concepts for this area.

### **3.4 Land Use Area #3: Airport Use Expansion and Potential Disposal for re-use**

The largest portion of the lands acquired to-date, and planned to be acquired, will be designated as Airport Use Expansion and Potential Disposal for re-use. Roughly 30 to 40 acres are expected to fall into this type of use, which could eventually involve some disposal and re-use of noise lands. Interim landscaping will be installed within this area until redevelopment occurs.

The Airport recognizes that any use of these lands must be compatible with a high noise environment. Among the airport-related facilities that will be considered for this land use area, through the Airport's MPU, are terminal access road and other circulation improvements: additional parking capacity (both at-grade and structured) for public parking; rental and 'ready car' spaces; taxi/cell phone waiting lots; hotel shuttles and convenience vehicles; and employee parking. Parking has been in short supply with the Airport's recent growth, and it is reasonable to anticipate that there will need to be a substantial portion of land dedicated to meeting Airport parking needs in the period that this Inventory and Plan is in effect. Finally, airport support options (i.e., offices) may also be located in this land use area.

At such time as sufficient consolidation of noise lands has occurred, and plans for the Airport Drive Extension are fully developed, the Airport may wish to consider future disposal of some lands within this land use area for noise-compatible



commercial purposes such as offices, retail, commercial, lodging, or light industrial use. Such uses are expected to be consistent with the types of uses presently found near the Airport along Airport Parkway, such as Heritage Flight, various car rentals, and other similar commercial uses. This will require policy and land use planning coordination with the City of South Burlington.

### **3.5 South Burlington Housing Issues**

One concern raised by the City of South Burlington is the issue of displaced housing during the acquisition process. The area where land has been acquired for noise compatibility purposes is substantially residential land, much of which is located on smaller lots and contain modest and affordable single-family homes. Given that these homes will ultimately be demolished, the City has expressed interest in identifying alternative sites in South Burlington where such housing could be located. To that end, BTV is working cooperatively with the City's Department of Planning and Zoning to identify such sites, and potential zoning amendments to implement such a plan, which will be submitted to the City in a separate report.

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## **4.0 Implementation**

Based on the findings of this Noise Land Inventory and Re-Use Plan, Burlington International Airport will continue to retain all acquired noise lands for noise compatibility or Airport related purposes, and will also proceed with the acquisition of additional noise-affected lands within the 65 DNL contour. As consolidation of properties occurs, following the Acquisition Decision Protocol in this report, houses will be removed and interim landscaping measures will be implemented. All acquired parcels will be noted on annually-updated maps and tables by the future use designation(s) of the parcel: Future Airport Drive Extension Right-of-Way,



Permanent Greenspace and Buffer Area, or Airport Use Expansion and Potential Disposal for re-use. This process is expected to require a minimum of five and up to ten years to implement. Once sufficient consolidation of lands in airport-related future areas has occurred, the Airport will evaluate the potential for lease, sale, or Airport development purposes on these lands in accordance with its Airport Master Plan Update. At this time, this Inventory and Plan can be updated to reflect the potential to re-use noise lands for airport-related purposes in that land use area.



Burlington International Airport  
Part 150 Noise Land Inventory and Re-Use Plan  
South Burlington, VT  
Exhibit A: Property Map

October 15, 2009

- Legend
- VT AWC/Acquisitions
  - Noise Compatibility Envelope
  - BTV Parcel
  - Parcel Boundary
  - Town Boundary
  - Roads

ESSEX

COLCHESTER



Source: Basepoint, NAFT, Photographic  
Map of Vermont, Vermont State  
Boundary and South Burlington, Vermont  
City, from other data downloaded from V.G.I.  
(2007).

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CITY OF  
SOUTH BURLINGTON

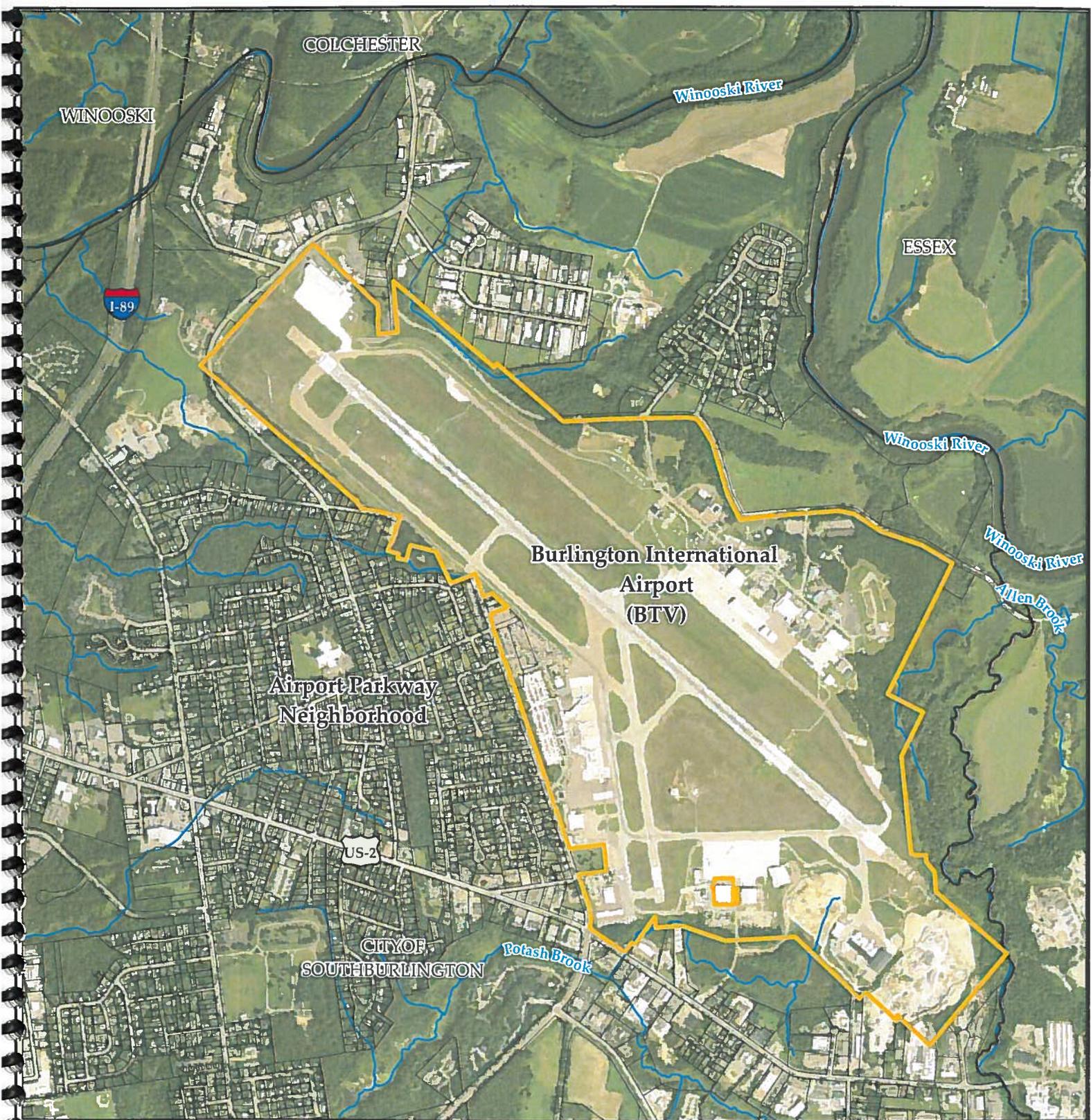
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Exhibit B: BTV Noise Compatibility Program Acquisition History

LUIRP PARCEL NUMBER	BTV Parcel Number	Area (acres)	Grantor	Grantee	Instrument	Recording	Date of Acquisition	AIP grant number	Federal share	Purpose of Original Acquisition	Street Name (Airport reference only)	CURRENT USE	CURRENT NOISE CONTOUR	CURRENT ZONING	Recommendation*	Lease status	Date for Further Review								
1	01N	0.38	A & R COTA	City of Burlington	Fee	BK 651, PG 534-5	12/23/03	AIP 3-50-0005-41	90%	Noise Compatibility	White Street	airport parking	70/75	Airport	AIRPORT USE - Pkg.		n/a								
	01O	0.43	R & L HAMEL	City of Burlington	Fee	BK 56, PG 378	07/28/99						65/70												
	01P		P & C LANDERL	City of Burlington	Fee	BK 188, PG 492-4	09/13/99						65/70												
2	01S		M. BURNOR	City of Burlington	Fee	BK 544, PG 408	06/10/02					65/70													
3	01Q	0.61	D & R SUTTON	City of Burlington	Fee	BK 139, PG 554-5	05/18/00				Shamrock Road	VT ANG Facility	65/70	Airport	Hold - Noise Comp.		2014								
4	01R	0.19	S & S CHARBONNEAU	City of Burlington	Fee	BK 644, PG 367-8	10/24/03				Airport Drive	Residential	65	Residential 4											
5	02A	5.06	GEORGE BRADY	City of Burlington	Fee	BK 88, PG 188	02/28/02	AIP 3-50-0005-46	90%	Noise Compatibility	Shamrock Road	VT ANG Facility	65/70	Airport	VT ANG Use		2014								
6	03A	0.48	O. KOPYSTIANSKYZ	City of Burlington	Fee	BK 621, PG 746-7	07/09/03				Shamrock Road	VT ANG Facility	65/70	Airport	VT ANG Use										
7	03B	0.28	J. DUFFY	City of Burlington	Fee	BK 628, PG 721-2	08/07/03				Kirby Road	Vacant	70	Airport											
8	03C	0.49	A. & P. ZENO	City of Burlington	Fee	BK 575, PG 5-6	10/22/02	AIP 3-50-0005-49	90%	Noise Compatibility	Airport Parkway	Residential	70	Residential 4	Hold - Noise Comp.		2014								
9	03D	0.31	R. DeBARGE	City of Burlington	Fee	BK 574, PG 776-7	10/30/02						70												
10	03E	0.30	R. ZENO	City of Burlington	Fee	BK 573, PG 1-2	10/22/02						70												
11	03F	0.16	C. & S. LETOURNEAU	City of Burlington	Fee	BK 610, PG 663-4	05/12/03						60												
12	03G	0.21	K. ASHTON	City of Burlington	Fee	BK 606, PG 129-130	04/16/03						60/65												
13	03H	0.16	D. ROBERTS	City of Burlington	Fee	BK 613, PG 476-8	05/29/03						65												
14	03I	0.15	A. PORTER	City of Burlington	Fee	BK 625, PG 749-50	07/24/03						65												
15	04A	0.91	B & S WHITEHILL	City of Burlington	Fee	BK 672, PG 113-4	06/18/04						70												
16	04B	0.20	R/S HAMEL	City of Burlington	Fee	BK 681, PG 135-6	09/01/04						60												
17	04C	0.20	K & G CRONIN	City of Burlington	Fee	BK 749, PG 204-205	05/17/06						60												
18	04D	0.32	R & D RODNEY	City of Burlington	Fee	BK 664, PG 336-7	04/28/04	60/65	AIP 3-50-0005-53	95%	Noise Compatibility	Airport Drive	Residential	Residential 4	Hold - Noise Comp.		2014								
19	04F	0.22	A. RENZONI	City of Burlington	Fee	BK 695, PG 315-6	01/20/05	60																	
20	05A	0.25	T. THIBAUT	City of Burlington	Fee	BK 743, PG 116	03/10/06	65/70																	
21	05B	0.23	G. WADE	City of Burlington	Fee	BK 715, PG 648-9	06/28/05	AIP 3-50-0005-55	95%	Noise Compatibility	Picard Circle	Vacant	65/70	Residential 4	Hold - Noise Comp.		2014								
22	05C	0.19	J. LONGTIN	City of Burlington	Fee	BK 677, PG 92-3	07/28/04						65/70												
23	05D	0.26	R. ENNIS	City of Burlington	Fee	BK 728, PG 523-4	09/30/05						70												
24	05E	0.20	R. BUSHY / L. WHITE	City of Burlington	Fee	BK 688, PG 688-9	11/18/04						65/70												
25	05F	0.39	B & M PASSUT	City of Burlington	Fee	BK 696, PG 128-9	01/28/05						70												
26	05G	0.30	G. HALL	City of Burlington	Fee	BK 711, PG 246	05/25/05						70												
27	05H	0.24	T. CORROW	City of Burlington	Fee	BK 237, PG 306-7	08/25/05						70												
28	05J	0.49	N & J PARROW	City of Burlington	Fee	BK 422, PG 124	08/01/05						70/75												
29	06A	0.51	M & D MORSE	City of Burlington	Fee	BK 687, PG 543-4	11/05/04						65/70												
30	06B	0.19	A. BARBER	City of Burlington	Fee	BK 715, PG 469-70	06/28/05						AIP 3-50-0005-64					95%	Noise Compatibility	Dumont Avenue	Vacant	65	Residential 4	Hold - Noise Comp.	
31	06C	0.18	G & B MAGLARI	City of Burlington	Fee	BK 732, PG 515-516	11/01/05	65/70																	
32	06D	0.36	R. FARR	City of Burlington	Fee	BK 750, PG 648-649	05/22/06	65/70																	
33	06E	0.24	G & L MOREAU	City of Burlington	Fee	BK 756, PG 680	08/01/06	65/70																	
34	06F	1.31	G & H WITHERS	City of Burlington	Fee	BK 755, PG 600	07/17/06	65/70																	
35	07A	0.16	H. LOSO	City of Burlington	Fee	BK 805, PG 130-131	07/16/08	AIP 3-50-0005-66	95%	Noise Compatibility	White Street	Vacant	65	Residential 4	Hold - Noise Comp.		2014								
36	07B	0.30	M. KERR	City of Burlington	Fee	BK 790, PG 654-655	07/30/07						65/70												
37	07C	0.29	N. WRIGHT	City of Burlington	Fee	BK 788, PG 116-117	06/29/07						65/70												
38	08A	0.15	C & F MYERS	City of Burlington	Fee	BK 796, PG 617-618	09/25/07						60/65												
39	08B	0.18	C & L PLOOF	City of Burlington	Fee	BK 810, PG 26-27	03/20/08						60/65												
40	08C	0.20	R. LAGROW	City of Burlington	Fee	BK 796, PG 131-133	09/18/07	65	AIP 3-50-0005-70	95%	Noise Compatibility	Airport Drive	Vacant	65	Residential 4	Hold - Noise Comp.	2014								
41	08D	0.28	C & R ROCHFORD	City of Burlington	Fee	BK 805, PG 574-575	01/28/08	65																	
42	08E	0.19	B. KOKINS	City of Burlington	Fee	BK 809, PG 172-173	03/11/08	65/70																	
43	08F	0.29	B & J BARRETT	City of Burlington	Fee	BK 809, PG 495-496	03/14/08	65																	
44	08G	0.32	P. BOWLER	City of Burlington	Fee	BK 794, PG 422-423	08/31/07	70																	
45	08H	1.29	N & C BICKFORD	City of Burlington	Fee	BK 819, PG 250-1	09/24/08	65																	
	98C	1.05	C&C GRIGGS	City of Burlington	Fee	BK 428, PG 484-5	05/20/98	AIP 3-50-0005-34						90%				Noise Compatibility	White Street	airport parking	65/70/75	Airport	AIRPORT USE - Pkg.		2014
46	98D		R & C GUILLETTE	City of Burlington	Fee	BK 436, PG 524-5	09/08/98														65/70/75				
	98E		R & L PARDY	City of Burlington	Fee	BK 436, PG 283-4	09/02/98														65/70/75				
	98L		R & R GERMAINE	City of Burlington	Fee	BK 443, PG 568-9	12/22/98														65/70/75				
	98F		R. PICKERING	City of Burlington	Fee	BK 439, PG 266-7	10/20/98		70/75																
47	98G		C. ROY	City of Burlington	Fee	BK 435, PG 347-8	08/25/98	AIP 3-50-0005-34	90%	Noise Compatibility	Shamrock Road	VT ANG Facility	70/75	Residential 4	VT ANG Use		2014								
	98H	E. DESAUTELS	City of Burlington	Fee	BK 441, PG 190-1	11/16/98	70/75																		
	98I	J & G GUSTAVSEN	City of Burlington	Fee	BK 453, PG 24-25	04/26/99	70/75																		
48	98M		H & J BRUNER	City of Burlington	Fee	BK 465, PG 421-3	11/09/99				Shamrock Road		65/70												
49	08I	47.06	SHELBURNE SHIPYARD	City of Burlington	Warrantee	BK 827, PG 107-111	10/09/08	Vermont Air National Guard	n/a	VT ANG	National Guard Ave.	open/forested	60	Residential 4/Mixed Industrial & Commercial	Hold - VT ANR Use		2014								
50	08J	3.19	SHELBURNE SHIPYARD	City of Burlington	Quit Claim	BK 827, PG 112	10/9/08				National Guard Ave.		60	Airport/Airport Industrial											
51	NA	0.15		City of Burlington	Fee					Noise Compatibility	Williston Road	Vacant	60/65	Airport Industrial	Hold - Noise Comp.		2014								
52	09A	0.67	D&R DUPONT	City of Burlington	Fee		4/13/09				White Street		65	Residential 4											
53	09B	0.33	W&M GRADY	City of Burlington	Fee	BK 877, PG 309-310	7/10/09				Dumont Avenue		65	Residential 4											
54	09C	0.28	M&L WILLETTE	City of Burlington	Fee	BK 857, PG 305-306	4/30/09				Dumont Avenue		65	Residential 4											
55	09D	0.21	J. KIRK	City of Burlington	Fee	BK 825, PG 180-181	09/04/08				Picard Circle		65	Residential 4											
56	09E	0.30	J&C DAVIS	City of Burlington	Fee	BK 832, PG 157-158	08/14/08	AIP 3-50-0005-74	95%	Noise Compatibility	Picard Circle	Residential	65/70	Residential 4	Hold - Noise Comp.		2014								
	09F		G&S LAMAY	City of Burlington	Fee		NOV 09						65/70												
	09G		C&C THIBAUT	City of Burlington	Fee	BK 853, PG 334-336	4/14/09						65/70												
57	09H		M&M HENRY	City of Burlington	Fee	BK 824, PG 581-583	8/29/08						65/70												
58	09I	0.43	D.A.P., M. MICHAELIDES	City of Burlington	Fee		NOV 09						65/70												
59	09J	0.47	J. RUSSELL	City of Burlington	Fee	BK 875, PG 195-196	06/03/09						65												
60	09K	0.14	A.DEAVITT	City of Burlington	Fee		OCT 09						65												
61	09L	0.15	E. LEMAY	City of Burlington	Fee		SEPT 09						65												
62	09M	0.27	T. DUNCKLEY	City of Burlington	Fee		FEB 10						65												
63	09N	0.23	D. BAILEY	City of Burlington	Fee		09/10/09	65																	
64	09O	0.37	CHERRY/CHAMPLAIN HOUS.	City of Burlington	Fee		04/09/09	65																	
65	09P	0.22	M. FRANCO	City of Burlington	Fee		6/29/09	65																	

\*Airport Use - Pkg. - Already converted for Airport Use - Parking



**Legend**

- BTV Parcel
- Stream
- Parcel Boundary
- Town Boundary

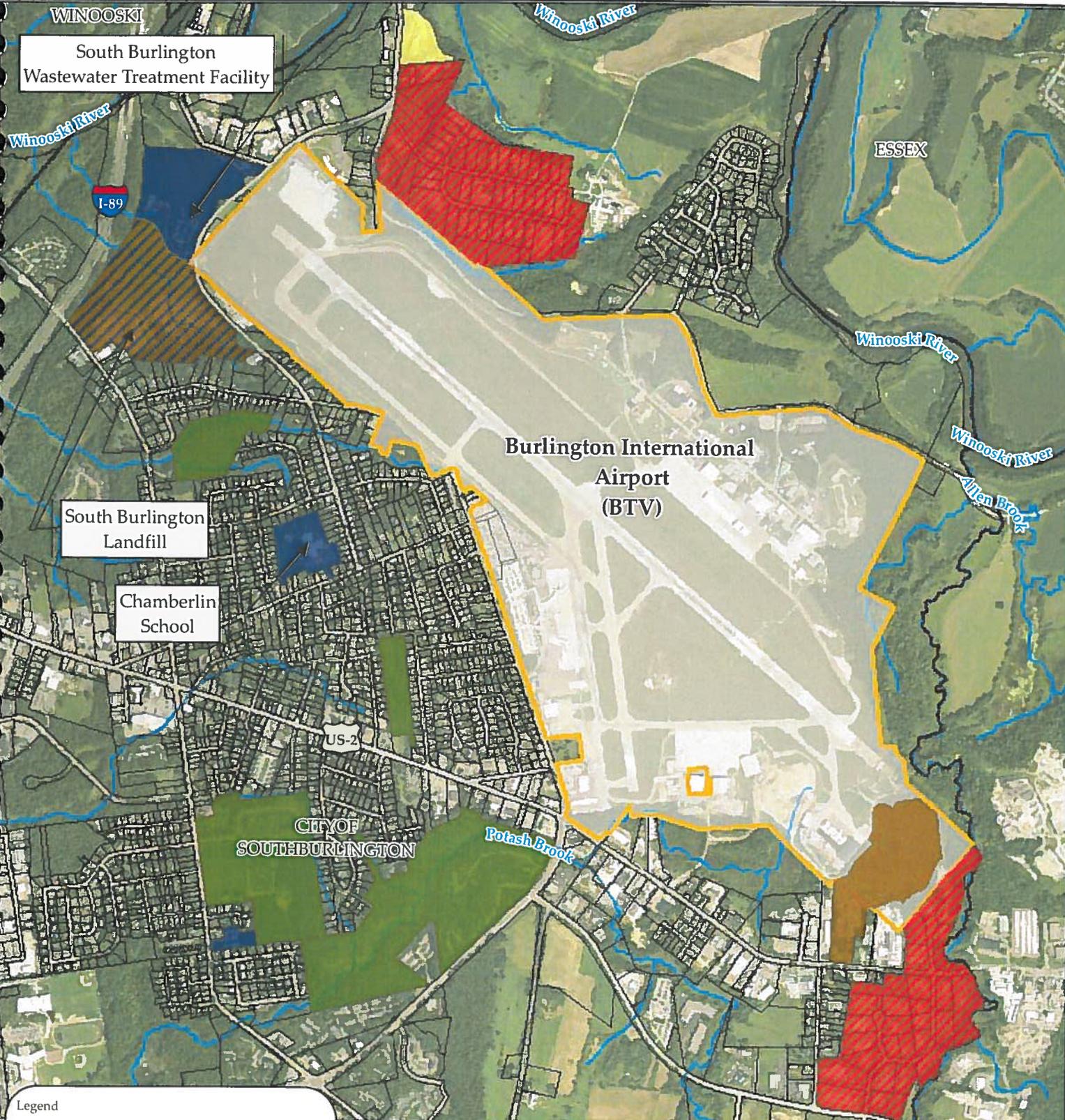
**Burlington International Airport**  
**Part 150 Noise Land Inventory**  
**and Re-Use Plan**  
**South Burlington, VT**  
**Figure 1: Location Map**

Sources: Background: NAIP Photography (2008); Parcel data provided by the Cities of Burlington and South Burlington, Town Boundary data downloaded from VCGI (2004); Streams data downloaded from VCGI (2007).

April 23, 2009



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**Legend**

Land Use Type:	Parcel Boundary
Commercial/Industrial	Town Boundary
Industrial	Stream
Natural Area - Park, Farm	
Residential	
School - Institutional	
Landfill	
Airport	

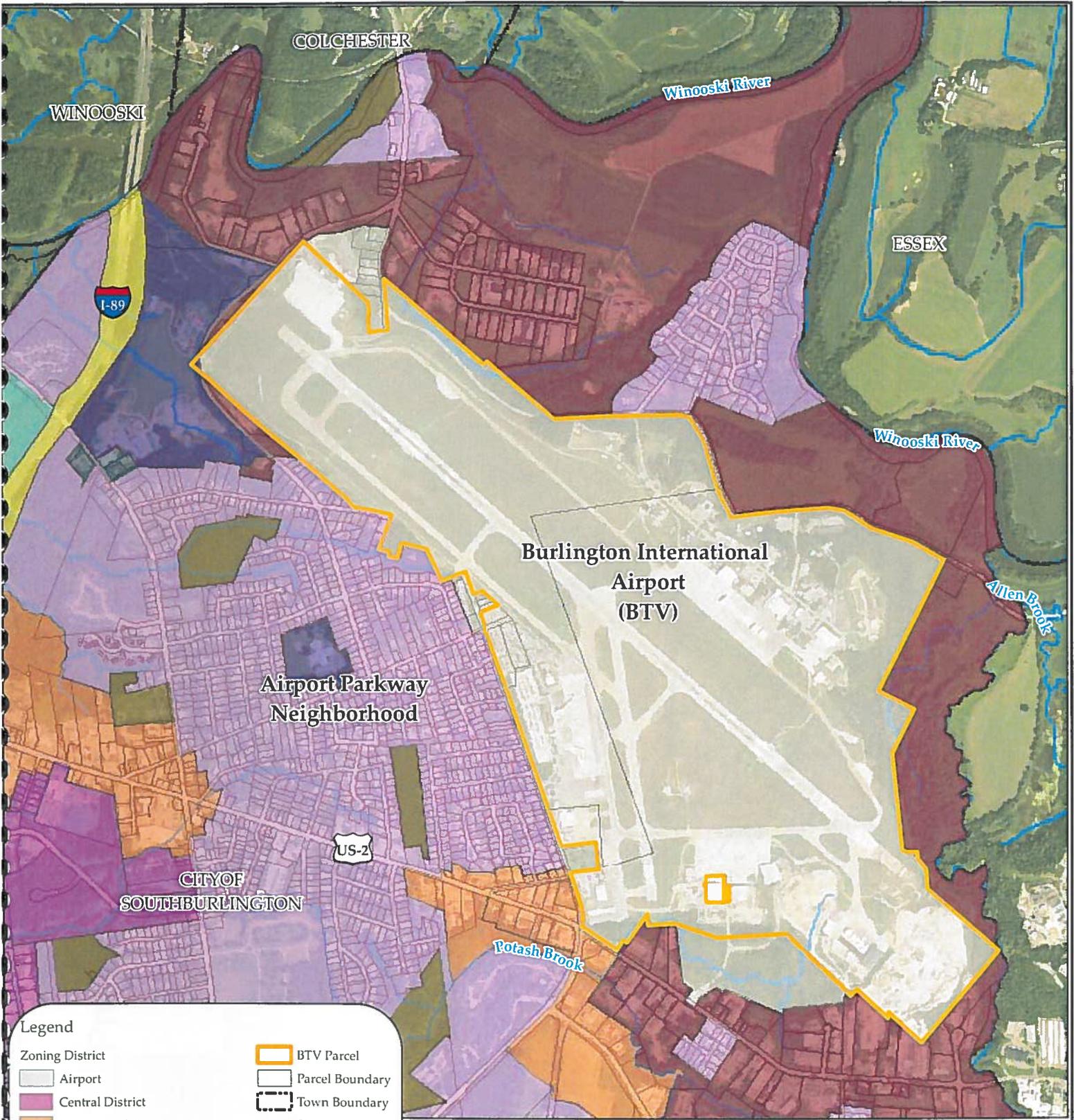
Burlington International Airport  
 Part 150 Noise Land Inventory  
 and Re-Use Plan  
 South Burlington, VT  
 Figure 2: Land Use

April 23, 2009

Sources: Background: NAIP Photography (2008); Parcel data provided by the Cities of Burlington and South Burlington, Town Boundary data downloaded from VCGI (2004); Streams data downloaded from VCGI (2007).



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**Legend**

Zoning District	BTV Parcel
Airport	Parcel Boundary
Central District	Town Boundary
Commercial 1	Stream
Commercial 2	
Institutional - Agricultural	
Interstate Overlay	
Mixed Industrial and Commercial	
Municipal	
Park and Recreation	
Residential	

**Burlington International Airport  
Part 150 Noise Land Inventory  
and Re-Use Plan  
South Burlington, VT  
Figure 3: Zoning Map**

April 23, 2009

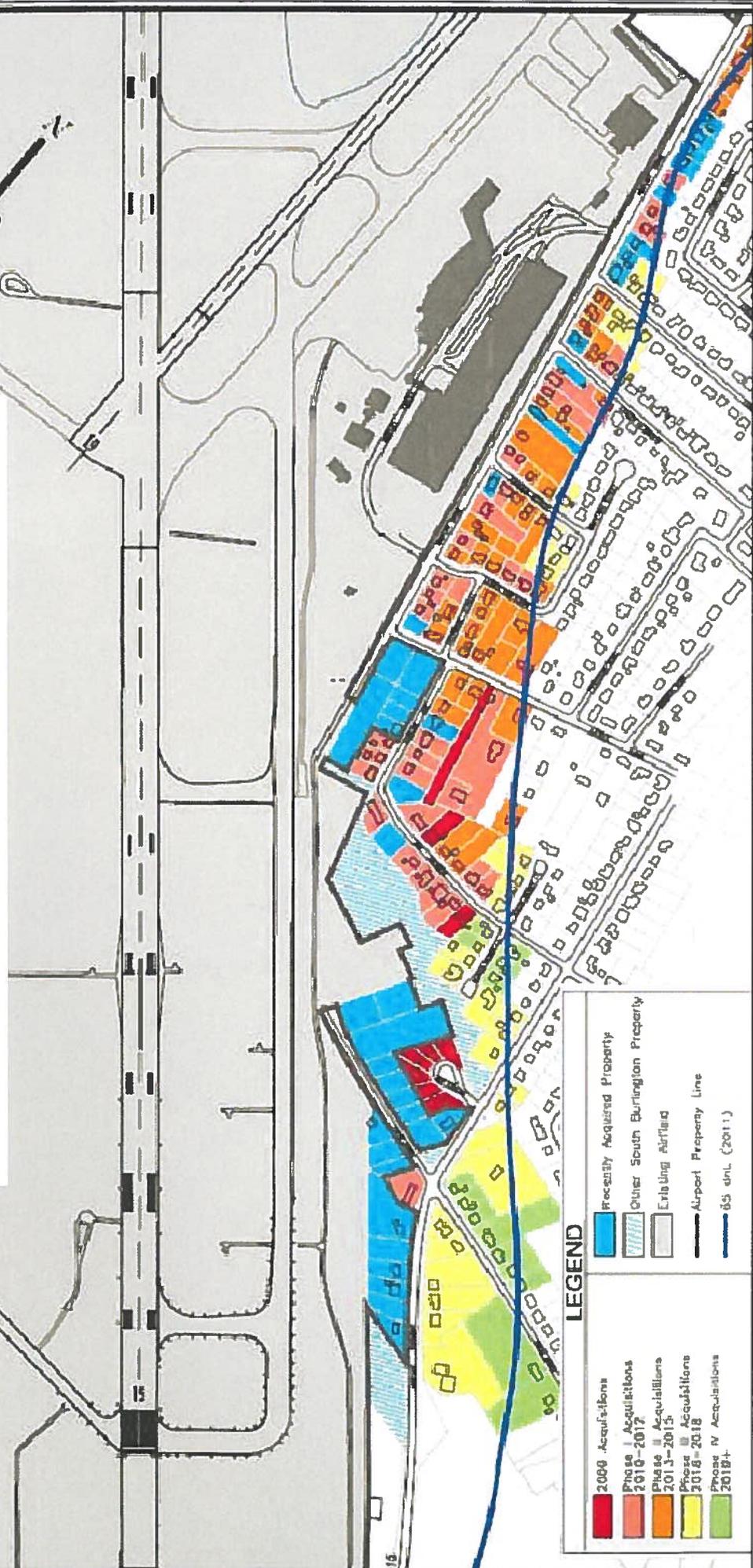
Sources: Background: NAIP Photography (2008); Parcel data provided by the Cities of Burlington and South Burlington, Town Boundary data downloaded from VCGI (2004); Streams data downloaded from VCGI (2007).



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# Proposed Property Acquisition Program

Burlington International Airport  
City of South Burlington, VT



**LEGEND**

<span style="color: red;">■</span> 2000 Acquisitions	<span style="color: blue;">■</span> Recently Acquiring Property
<span style="color: orange;">■</span> Phase I Acquisitions 2016-2017	<span style="background-color: #cccccc;">■</span> Other South Burlington Property
<span style="color: yellow;">■</span> Phase II Acquisitions 2013-2015	<span style="border: 1px solid black;">■</span> Existing Airfield
<span style="color: green;">■</span> Phase III Acquisitions 2018-2018	<span style="border-bottom: 1px solid black;">—</span> Airport Property Line
<span style="color: lightgreen;">■</span> Phase IV Acquisitions 2019+	<span style="border-bottom: 2px solid blue;">—</span> 65 dNL (2011)

Burlington International Airport  
Part 150 Noise Land Inventory and Re-Use Plan  
South Burlington, VT  
Figure 4: Detailed Acquisition Plan

Source: Cambell & Paris  
Engineers (2008-09).



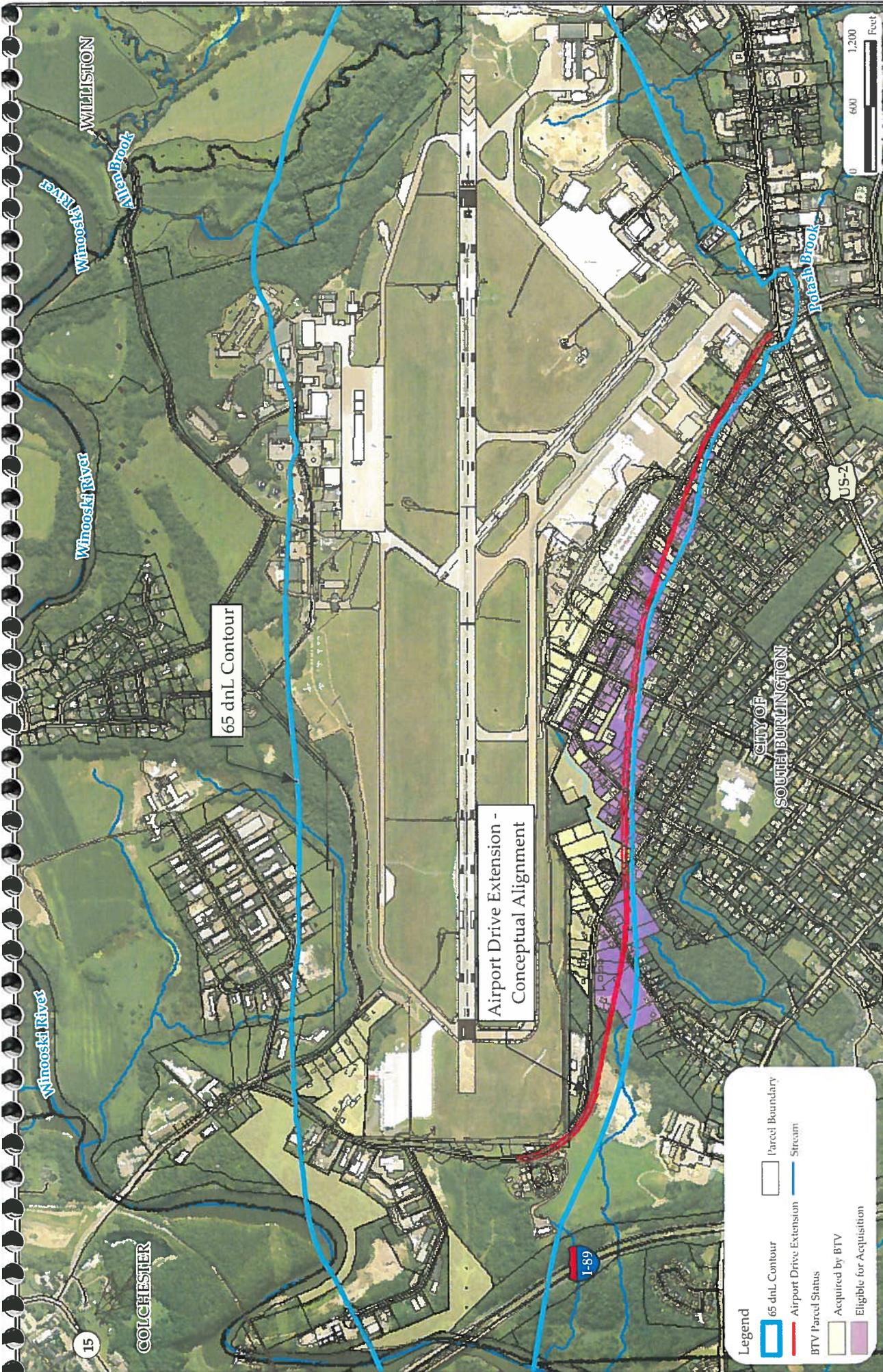
April 23, 2009



Burlington International Airport  
 Part 150 Noise Land Inventory and Re-Use Plan  
 South Burlington, VT  
 Figure 5: Land Use Zones

April 23, 2009





**Legend**

- ▬ 65 dnL Contour
- ▬ Airport Drive Extension
- Parcel Boundary
- ▬ Stream
- BTV Parcel Status
- Acquired by BTV
- Eligible for Acquisition

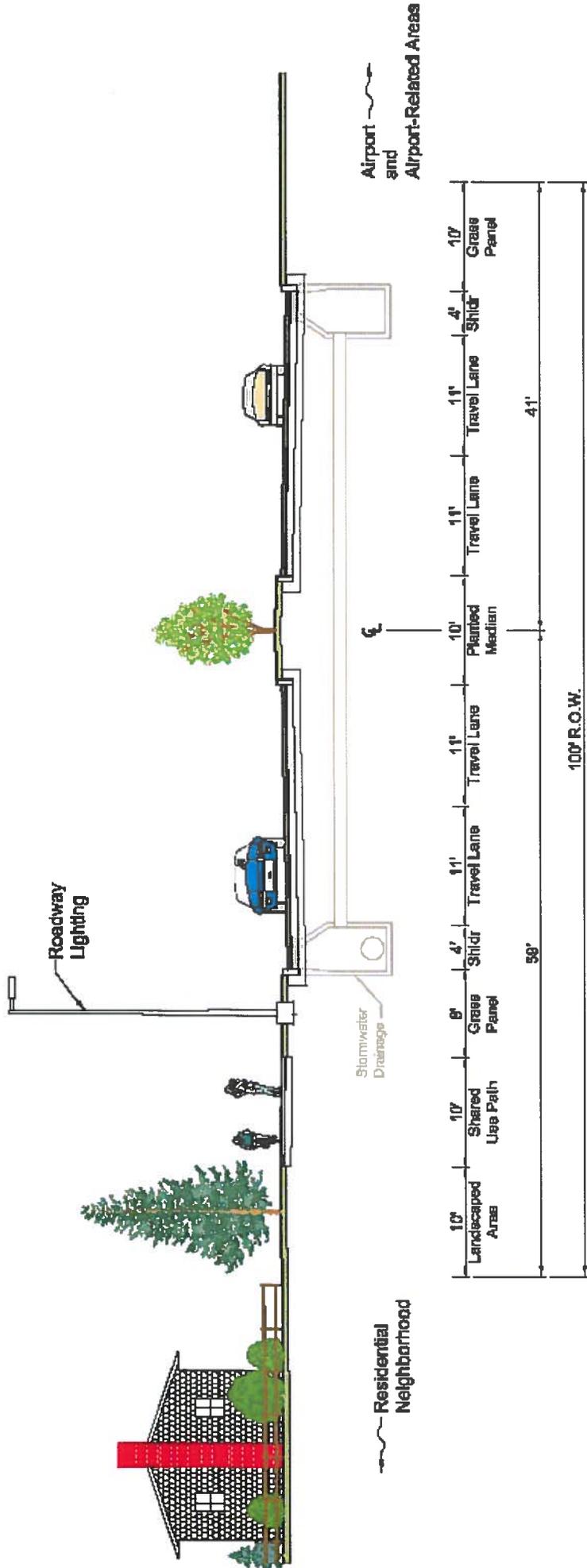
Sources: Background: NAIP Photography (2008); Parcel data provided by the Cities of Burlington and South Burlington; Town Boundary data downloaded from VCGI (2004); Streams data downloaded from VCGI (2007).



**Burlington International Airport**  
**Part 150 Noise Land Inventory and Re-Use Plan**  
**South Burlington, VT**  
**Figure 6: Airport Drive Extension:**  
**Conceptual Alignment**  
**April 23, 2009**



  
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Burlington International Airport  
 Part 150 Noise Land Inventory and Re-Use Plan  
 South Burlington, VT  
 Figure 7: Conceptual Cross Section  
 Airport Drive Extension



April 23, 2009

Region:	NE										
ADO:	ANE										
Worksite: Burlington, VT		Locid: BTV		Worksite Name: Burlington International		Current Service Level: P		Current Hub Type: S		Total	
Grant Nbr	FY	Project Code	Descr	Entitlement	Discretionary						
001-1982	1982	CA AP CO	Construct Apron	\$382,461.00	\$0.00					\$382,461.00	
002-1983	1983	RE RW IM	Rehabilitate Runway	\$106,500.00	\$0.00					\$106,500.00	
		SP RW FR	Groove Runway	\$10,400.00	\$0.00					\$10,400.00	
		ST AP LI	Install Apron Lighting	\$4,950.00	\$0.00					\$4,950.00	
		ST EQ MS	Acquire Aircraft Rescue & Fire Fighting Safety Equipment	\$7,000.00	\$0.00					\$7,000.00	
		ST RW SR	Install Runway Sensors	\$7,000.00	\$0.00					\$7,000.00	
		Grant Total		\$135,850.00	\$0.00					\$135,850.00	
003-1984	1984	RE RW IM	Rehabilitate Runway	\$225,823.00	\$979,401.00					\$1,205,224.00	
		ST AP LI	Install Apron Lighting	\$169,200.00	\$0.00					\$169,200.00	
		ST EQ SE	Install Perimeter Fencing	\$90,276.00	\$0.00					\$90,276.00	
		ST RW IM	Extend Runway	\$50,363.00	\$0.00					\$50,363.00	
		ST RW SR	Install Runway Sensors	\$219,338.00	\$0.00					\$219,338.00	
		Grant Total		\$755,000.00	\$979,401.00					\$1,734,401.00	
004-1984	1984	PL PL MA	Conduct Airport Master Plan Study	\$92,617.00	\$0.00					\$92,617.00	
005-1985	1985	RE RW IM	Rehabilitate Runway	\$1,186,217.00	\$271,884.00					\$1,458,101.00	
		SP RW FR	Groove Runway	\$0.00	\$89,272.00					\$89,272.00	
		ST EQ SN	Acquire Snow Removal Equipment	\$0.00	\$134,480.00					\$134,480.00	
		ST EQ WX	Install Weather Reporting Equipment	\$0.00	\$66,768.00					\$66,768.00	
		Grant Total		\$1,186,217.00	\$562,404.00					\$1,748,621.00	
006-1985	1985	CA TE EX	Expand Terminal Building	\$1,070,259.00	\$0.00					\$1,070,259.00	
		RE AP IM	Rehabilitate Apron	\$0.00	\$5,208.00					\$5,208.00	
		Grant Total		\$1,070,259.00	\$5,208.00					\$1,075,467.00	
007-1985	1985	OT GT AC	Improve Access Road	\$12,500.00	\$0.00					\$12,500.00	
		RE AP IM	Rehabilitate Apron	\$52,000.00	\$0.00					\$52,000.00	
		RE TW IM	Rehabilitate Taxiway	\$45,580.00	\$0.00					\$45,580.00	
		ST AP IM	Expand Apron	\$52,000.00	\$0.00					\$52,000.00	
		Grant Total		\$162,080.00	\$0.00					\$162,080.00	
008-1986	1986	RE TW IM	Rehabilitate Taxiway	\$732,041.00	\$0.00					\$732,041.00	

# Grant History Report

FAA - Office Of Airports

Report Date

10/09/2008

Region:	NE								
ADO:	ANE								
Worksite:	Burlington, VT	Locid:	BTV	Worksite Name:	Burlington International	Current Service Level:		P	S
Grant Nbr	FY	Project Code	Descr	Entitlement	Discretionary	Current Hub Type:	Total		
009-1987	1987	CA AP CO	Construct Apron	\$219,312.00	\$0.00		\$219,312.00		
		RE AP IM	Rehabilitate Apron	\$653,100.00	\$0.00		\$653,100.00		
		Grant Total		\$872,412.00	\$0.00		\$872,412.00		
010-1987	1987	EN PL NO	Conduct Noise Compatibility Plan Study	\$0.00	\$138,429.00		\$138,429.00		
011-1988	1988	RE AP IM	Rehabilitate Apron	\$1,607,158.00	\$0.00		\$1,607,158.00		
013-1988	1988	ST AP LI	Install Apron Lighting	\$118,198.00	\$5,000.00		\$123,198.00		
		ST EQ MS	Acquire Aircraft Rescue & Fire Fighting Safety Equipment	\$32,805.00	\$0.00		\$32,805.00		
		Grant Total		\$151,003.00	\$5,000.00		\$156,003.00		
012-1989	1989	PL PL MA	Conduct Airport Master Plan Study	\$115,767.00	\$0.00		\$115,767.00		
014-1989	1989	ST AP IM	Expand Apron	\$621,078.00	\$0.00		\$621,078.00		
		ST EQ SN	Acquire Snow Removal Equipment	\$269,959.00	\$0.00		\$269,959.00		
		Grant Total		\$891,037.00	\$0.00		\$891,037.00		
015-1990	1990	RE TW IM	Rehabilitate Taxiway	\$734,900.00	\$0.00		\$734,900.00		
		ST AP LI	Install Apron Lighting	\$274,995.00	\$0.00		\$274,995.00		
		ST TW IM	Extend Taxiway	\$314,280.00	\$0.00		\$314,280.00		
		Grant Total		\$1,324,175.00	\$0.00		\$1,324,175.00		
016-1990	1990	ST LA MS	Acquire Miscellaneous Land	\$54,706.00	\$0.00		\$54,706.00		
018-1991	1991	ST BD MS	Improve Building	\$546,475.00	\$15,024.00		\$561,499.00		
		ST EQ SN	Acquire Snow Removal Equipment	\$68,315.00	\$0.00		\$68,315.00		
		Grant Total		\$614,790.00	\$15,024.00		\$629,814.00		
019-1992	1992	ST LA MS	Acquire Miscellaneous Land	\$596,520.00	\$30,926.00		\$627,446.00		
020-1992	1992	SA EQ SE	Acquire Security Equipment	\$259,190.00	\$0.00		\$259,190.00		
021-1992	1992	PL PL MS	Conduct Miscellaneous Study	\$181,001.00	\$0.00		\$181,001.00		
022-1993	1993	PL PL MS	Conduct Miscellaneous Study	\$70,876.00	\$0.00		\$70,876.00		
023-1993	1993	PL PL MS	Conduct Miscellaneous Study	\$52,117.00	\$0.00		\$52,117.00		
024-1993	1993	RE RW IM	Rehabilitate Runway	\$2,187,578.00	\$0.00		\$2,187,578.00		
		RE TW LI	Rehabilitate Taxiway Lighting	\$40,046.00	\$0.00		\$40,046.00		
		SA OT SG	Install Guidance Signs	\$416,360.00	\$0.00		\$416,360.00		

Grant History Report

Region:	NE								
ADO:	ANE								
Worksite: Burlington, VT		Locid: BTV		Worksite Name: Burlington International		Current ServiceLevel: P		Current Hub Type: S	
Grant Nbr	FY	Project Code	Descr	Entitlement	Discretionary	Total			
		ST EQ MS	Acquire Aircraft Rescue & Fire Fighting Safety Equipment	\$33,357.00	\$0.00	\$33,357.00			
		ST RW SR	Install Runway Sensors	\$60,770.00	\$0.00	\$60,770.00			
		<u>Grant Total</u>		<u>\$2,738,111.00</u>	<u>\$0.00</u>	<u>\$2,738,111.00</u>			
025-1993	1993	OT GT SV	Improve Service Road	\$218,658.00	\$0.00	\$218,658.00			
		PL PL MS	Conduct Miscellaneous Study	\$131,400.00	\$0.00	\$131,400.00			
		ST EQ SE	Install Perimeter Fencing	\$361,260.00	\$0.00	\$361,260.00			
		<u>Grant Total</u>		<u>\$711,318.00</u>	<u>\$0.00</u>	<u>\$711,318.00</u>			
026-1994	1994	SA RW LI	Install Runway Lighting	\$627,952.00	\$0.00	\$627,952.00			
027-1994	1994	ST LA DV	Acquire Land for Development	\$785,574.00	\$19,525.00	\$805,099.00			
029-1995	1995	PL PL MA	Conduct Airport Master Plan Study	\$191,833.00	\$0.00	\$191,833.00			
028-1996	1996	EN OT MT	Environmental Mitigation	\$142,260.00	\$0.00	\$142,260.00			
		SA OT OB	Remove Obstructions	\$147,540.00	\$0.00	\$147,540.00			
		<u>Grant Total</u>		<u>\$289,800.00</u>	<u>\$0.00</u>	<u>\$289,800.00</u>			
030-1996	1996	ST LA MS	Acquire Miscellaneous Land	\$1,103,625.00	\$0.00	\$1,103,625.00			
031-1996	1996	PL PL MA	Conduct Airport Master Plan Study	\$48,188.00	\$0.00	\$48,188.00			
032-1996	1996	ST EQ SN	Acquire Snow Removal Equipment	\$412,024.00	\$0.00	\$412,024.00			
033-1997	1997	ST RW SF	Improve Runway Safety Area	\$2,443,869.70	\$1,738,672.30	\$4,182,542.00			
034-1998	1998	EN LA 70	Acquire Land for Noise Compatibility within 70 - 74 DNL	\$750,485.00	\$0.00	\$750,485.00			
		ST LA DV	Acquire Land for Development	\$688,734.00	\$0.00	\$688,734.00			
		<u>Grant Total</u>		<u>\$1,439,219.00</u>	<u>\$0.00</u>	<u>\$1,439,219.00</u>			
035-1999	1999	OT GT SV	Improve Service Road	\$50,000.00	\$0.00	\$50,000.00			
		RE RW IM	Rehabilitate Runway	\$1,405,292.00	\$1,213,895.00	\$2,619,187.00			
		<u>Grant Total</u>		<u>\$1,455,292.00</u>	<u>\$1,213,895.00</u>	<u>\$2,669,187.00</u>			
036-2000	2000	PL PL MA	Conduct Airport Master Plan Study	\$156,622.00	\$0.00	\$156,622.00			
037-2000	2000	ST LA MS	Acquire Miscellaneous Land	\$1,357,891.00	\$0.00	\$1,357,891.00			
038-2000	2000	ST EQ SN	Acquire Snow Removal Equipment	\$343,086.00	\$0.00	\$343,086.00			
039-2001	2001	ST EQ SN	Acquire Snow Removal Equipment	\$414,910.00	\$0.00	\$414,910.00			

# Grant History Report

FAA - Office Of Airports

Report Date

10/09/2008

Region:	NE								
ADO:	ANE								
Worksite:	Burlington, VT	Locid:	BTV	Worksite Name:	Burlington International	Current Service Level:	P	Current Hub Type:	S
Grant Nbr	FY	Project Code	Descr		Entitlement	Discretionary	Total		Total
041-2001	2001	EN LA 60	Acquire Land for Noise Compatibility outside 65 DNL		\$985,410.00	\$49,238.00	\$1,034,648.00		
042-2001	2001	EN PL MA	Conduct Environmental Study		\$198,958.00	\$0.00	\$198,958.00		
040-2002	2002	RE RW IM	Rehabilitate Runway		\$1,852,284.00	\$0.00	\$1,852,284.00		
044-2002	2002	PL PL MA	Update Airport Master Plan Study		\$95,662.00	\$0.00	\$95,662.00		
045-2002	2002	ST EQ SN	Acquire Snow Removal Equipment		\$245,093.00	\$0.00	\$245,093.00		
046-2002	2002	EN LA 65	Acquire Land for Noise Compatibility within 65 - 69 DNL		\$449,190.00	\$0.00	\$449,190.00		
047-2002	2002	SE SE SE	Security Enhancements		\$341,974.00	\$0.00	\$341,974.00		
048-2002	2002		No projects assigned: Withdrawn or being Initiated		\$0.00	\$0.00	\$0.00		
049-2003	2003	EN LA 65	Acquire Land for Noise Compatibility within 65 - 69 DNL		\$1,584,492.00	\$0.00	\$1,584,492.00		
050-2003	2003	ST EQ SN	Acquire Snow Removal Equipment		\$267,403.00	\$0.00	\$267,403.00		
051-2003	2003	SA EQ SE	Security Enhancements		\$136,878.00	\$0.00	\$136,878.00		
052-2003	2003	PL PL MA	Update Airport Master Plan Study		\$146,530.00	\$0.00	\$146,530.00		
053-2004	2004	ST LA DV	Acquire Land for Development		\$1,121,000.00	\$135,395.00	\$1,256,395.00		
054-2004	2004	ST RW SF	Improve Runway Safety Area		\$848,749.00	\$19,798.00	\$868,547.00		
055-2005	2005	EN LA 65	Acquire Land for Noise Compatibility within 65 - 69 DNL		\$387,250.00	\$1,890,511.00	\$2,277,761.00		
056-2005	2005	ST LA MS	Acquire Miscellaneous Land		\$753,250.00	\$0.00	\$753,250.00		
057-2005	2005	ST AP CO	Construct Apron		\$5,363,157.00	\$0.00	\$5,363,157.00		
		ST TE EX	Expand Terminal Building		\$2,474,343.00	\$0.00	\$2,474,343.00		
			<u>Grant Total</u>		<u>\$7,837,500.00</u>	<u>\$0.00</u>	<u>\$7,837,500.00</u>		
058-2005	2005	ST TW CO	Construct Taxiway		\$128,047.00	\$0.00	\$128,047.00		
059-2005	2005	SA EQ SE	Security Enhancements		\$207,057.00	\$0.00	\$207,057.00		
060-2006	2006	EN PL NO	Conduct Noise Compatibility Plan Study		\$126,474.00	\$0.00	\$126,474.00		
062-2006	2006	CA AP CO	Construct Apron		\$2,101,729.00	\$0.00	\$2,101,729.00		
		ST TW CO	Construct Taxiway		\$334,071.00	\$0.00	\$334,071.00		
			<u>Grant Total</u>		<u>\$2,435,800.00</u>	<u>\$0.00</u>	<u>\$2,435,800.00</u>		
063-2006	2006	EN OT MT	Environmental Mitigation		\$268,866.00	\$0.00	\$268,866.00		
064-2006	2006	EN LA 65	Acquire Land for Noise Compatibility		\$0.00	\$1,360,016.00	\$1,360,016.00		

# Grant History Report

FAA - Office Of Airports

Report Date 10/09/2008

Region:	NE		Worksite Name:	Burlington International		Current Service Level:	P	Current Hub Type:	S
ADO:	ANE		Locid:	BTV		Discretionary		Total	
Worksite:	Burlington, VT	Project Code	Descr	Entitlement	Discretionary	Total			
Grant Nbr	FY								
065-2006	2006	RE RW IM	within 65 - 69 DNL						
066-2007	2007	EN LA 75	Rehabilitate Runway	\$138,700.00	\$0.00	\$138,700.00			\$138,700.00
			Acquire Land for Noise Compatibility within 75 DNL	\$0.00	\$874,000.00	\$874,000.00			\$874,000.00
067-2007	2007	EN PL NO	Conduct Noise Compatibility Plan Study	\$132,997.00	\$0.00	\$132,997.00			\$132,997.00
068-2007	2007	ST LA DV	Acquire Land for Development	\$689,700.00	\$0.00	\$689,700.00			\$689,700.00
069-2008	2008	ST AP CO	Construct Apron	\$3,239,798.00	\$0.00	\$3,239,798.00			\$3,239,798.00
070-2008	2008	EN LA 65	Acquire Land for Noise Compatibility within 65 - 69 DNL	\$0.00	\$2,261,000.00	\$2,261,000.00			\$2,261,000.00
071-2008	2008	ST AP CO	Construct Apron	\$621,308.00	\$162,822.00	\$784,130.00			\$784,130.00
072-2008	2008	PL PL MA	Update Airport Master Plan Study	\$640,300.00	\$0.00	\$640,300.00			\$640,300.00
Report Total				\$51,707,261.70	\$11,461,264.30	\$63,168,526.00			\$63,168,526.00

Grant History Report - Addendum 10-3-2009

FAA - Office of Airports

Region: NE		Worksite Name: Burlington International		Current Service Level: P		Current Hub Type: S	
ADO: ANE				Discretionary		Total	
Grant Nbr	FY	Locid: BT	Project Code	Descr	Entitlement	Discretionary	Total
065-2006	2006	RE RW IM		Rehabilitate Runway	\$138,700.00	\$0.00	\$138,700.00
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<b>Report Total</b>					\$51,707,261.70	\$11,461,264.30	\$63,168,526.00
<b>OCTOBER 2009 ADDENDUM:</b>							
073-2009	2009			Engineering - 5 Projects	\$1,254,000.00	\$0.00	\$1,254,000.00
074-2009	2009			Acquire Land - 10 Parcels	\$0.00	\$3,274,515.00	\$3,274,515.00
075-2009	2009			ARRA - T/W C/G Construction	\$0.00	\$2,622,000.00	\$2,622,000.00
076-2009	2009			T/W - Construction	\$2,401,600.00	\$0.00	\$2,401,600.00
078-2009	2009			Acquire Land - 6 Parcels	\$0.00	\$1,909,500.00	\$1,909,500.00
079-2009	2009			T/W Lighting LED	\$0.00	\$549,100.00	\$549,100.00
080-2009	2009			T/W "c" reconstruction	\$0.00	\$836,000.00	\$836,000.00
<b>Report Total with October 2009 Addendum:</b>					\$55,362,861.70	\$20,652,379.30	\$76,015,241.00

**Burlington International Airport**  
**FAA Part 150**  
**Noise Land Inventory Update**  
**and Re-Use Plan**

Presented to the South Burlington  
City Council & Planning Commission  
November 17, 2008



# Airport Staff & Consultants

- Brad Worthen (Presenter)  
Community Facilitator, Burlington International Airport
- Michael Lawrence, ASLA (Presenter)  
Landscape Architecture
- George Paris, PE; *Campbell & Paris Engineers*  
Airport Engineering & Master Planning
- Ralph Willmer, AICP; *VHB*  
Land Use Study & Zoning
- Airport Staff: Brian Searles, Director of Aviation;  
Robert McEwing, Director of Planning & Development



CAMPBELL & PARIS



# Purpose of the Noise Land Inventory Update and Re-Use Plan

- ▶ “Part 150”: FAA funds to Airports to purchase land whose use is incompatible with the noise levels experienced near an Airport
- ▶ Plan identifies current use of land purchased with Part 150 or Airport Improvement Program funds and future use of Part 150 purchased land
- ▶ Incompatible noise level determined by noise contours from engineering studies
- ▶ Separate from the Master Plan Update (MPU)



# Planning for Use of Land Acquired with Part 150 funds

- ▶ Land use has been determined to be **NON-COMPATIBLE** with operation of an Airport, due to noise levels
- ▶ Federal regulations prohibit re-use of these properties for **non-compatible (residential) use**
- ▶ Eligibility for purchase determined by noise contours, but *purely voluntary*
- ▶ FAA does not require schedule or priority system but strictly limits re-use





Identified Non Compatible Properties >>

*Yellow: Airport owned;  
Pink: Eligible for Part 150 purchase;  
within 65 dbA contour*

# Future Use of Part 150 Funds: Airport and Compatible Uses

- FAA regulations: land exposed to 65 dbA is unsuitable for residential and most park uses; can be used for Airport or compatible purposes
  - Soundproofing considered a last resort
  - BIA intent to acquire ~100 dwellings within 65 dbA contour over 10 years, 2009–2019
  - Land Re-Use Study will identify infill sites within the neighborhood OUTSIDE 65 dbA contour
- ▶ Some Part 150 land may be needed for Airport-related purposes, to be determined in the Master Plan Update (begins Nov. 2008, City involved in public process)
- ▶ Other land may be utilized for noise-compatible purposes
  - Roads and landscaped buffer areas
  - Appropriate non-residential use, governed by South Burlington zoning

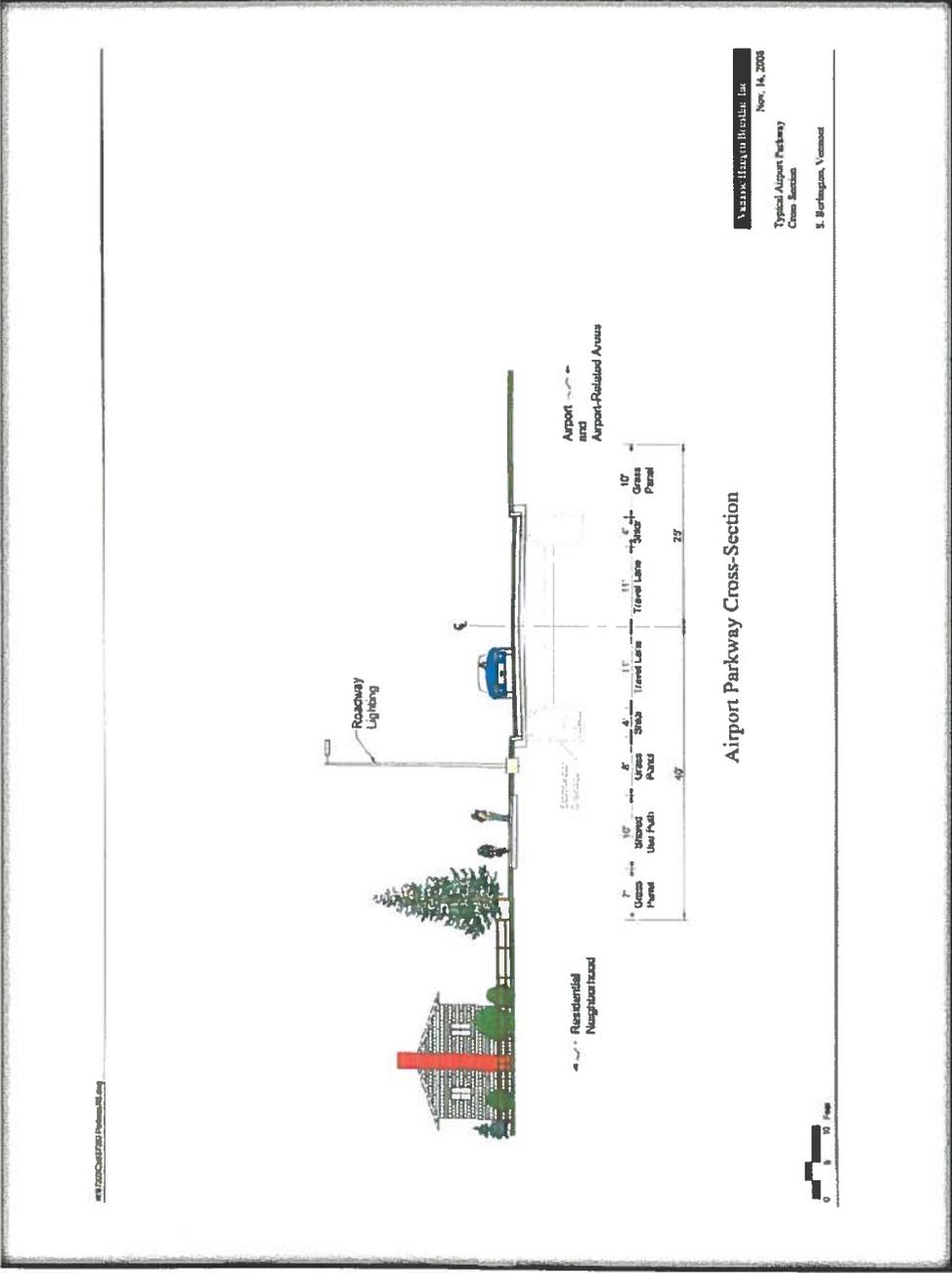


## Conceptual Land Use for the 65 dbA area:

- ▶ Airport uses
- ▶ Noise-compatible uses appropriate for an Airport setting, governed by SB zoning
- ▶ Roadway, recreation path, and buffering/landscape zone: Airport Drive extension
- ▶ Landscape and design transitions to protect the residential neighborhood







Vermont Transit Builders, Inc.  
 Nov. 14, 2008  
 Typical Airport Parkway  
 Cross Section  
 S. Burlington, Vermont

Airport Parkway Cross-Section

# Airport Parkway Cross-Section Concept >>





**Micro-Level Neighborhood  
Planning:  
Landscape Concepts for Re-Use  
Airport Parkway-Picard Circle Area**







Micro-Level Neighborhood Planning:  
Landscape Concepts for Re-Use  
1151-1153 Airport Drive





# Micro-Level Neighborhood Planning: Landscape Concepts for Re-Use 1151-1153 Airport Drive



Micro-Level Neighborhood Planning:  
Landscape Concepts for Re-Use  
Lots along White Street & Dumont Ave



## **BTV is one of only three airports in the country experiencing any growth at all.**

Additional aircraft seating capacity has increased by 9% this year

- ▶ Honolulu is off by 25%
- ▶ Arrival of discount carrier Air Tran
- ▶ Strong use of BTV by our neighbors from Quebec. The average round trip airfare savings realized by Canadians departing from BTV vs. Elliot Trudeau Airport in Montreal is \$350 per person.
- ▶ Our shops, restaurants, filling stations and hotels all benefit from Canadian activity.

BTV is home base to the Green Mountain Boys.

- ▶ The VT Air National Guard has taken on an ever expanding role in patrolling our nations skies and protecting USA global interest since 9-11.



# Burlington International Airport

## The Region's Largest Transportation Hub

- ▶ 1.4 million passengers use BTV annually
- ▶ BTV infuses tens of millions of dollars into the local economy.
- ▶ On the same scale as IBM, IDX, UVM, FAHC, Burton Snowboards, Ben & Jerry's, Dealer.com, VT Teddy Bear, The Lane Press.
- ▶ We need to plan for future growth and the related airport services that will be required to facilitate growth.
- ▶ We need to continue to dialogue with the surrounding communities and be ever mindful that cooperative planning efforts between BTV and the City of South Burlington are key to achieving mutual goals and the interest of our citizens, homeowners and businesses alike.



# Next Steps

BTV needs to continue the Acquisition Part 150

program:

- ▶ Proceed with FY09 plans and landscape strategies
  - Voluntary home sales; prompt removal and landscape plantings for Airport Drive properties
  - Work with Picard Circle, other landowners on voluntary acquisition so as not to lose Federal funding opportunity
- ▶ Continue Land Re-Use Planning
  - Development of “three-zone” concept with Airport Drive extension
  - Evaluation of infill sites
  - Develop neighborhood fabric/zoning strategies
- ▶ Coordinate next presentation date (2<sup>nd</sup> of 3 planned) with the City of South Burlington

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# **BURLINGTON INTERNATIONAL AIRPORT**

## **FAR PART 150 NOISE LAND RE-USE PLAN**

**Presentation  
To  
City of South Burlington**



*Burlington International Airport*

*Noise Land Re-Use Plan*

*January 5, 2009*

# AIRPORT STAFF AND STUDY TEAM

## **Burlington International Airport**

**Brian Searles**, Director of Aviation

**Robert McEwing**, Director of Planning & Development

**Brad Worthen**, Community Facilitator

## **Study Team**

**George Paris PE**

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**Ralph Willmer AICP**

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**Michael Lawrence ASLA**

Michael Lawrence Associates - Landscape Architecture



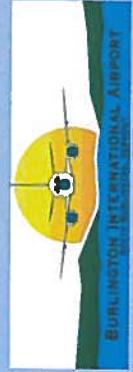
*Burlington International Airport*

*Noise Land Re-Use Plan*

*January 5, 2009*

Burlington  
International Airport  
(BTV)

October 2008

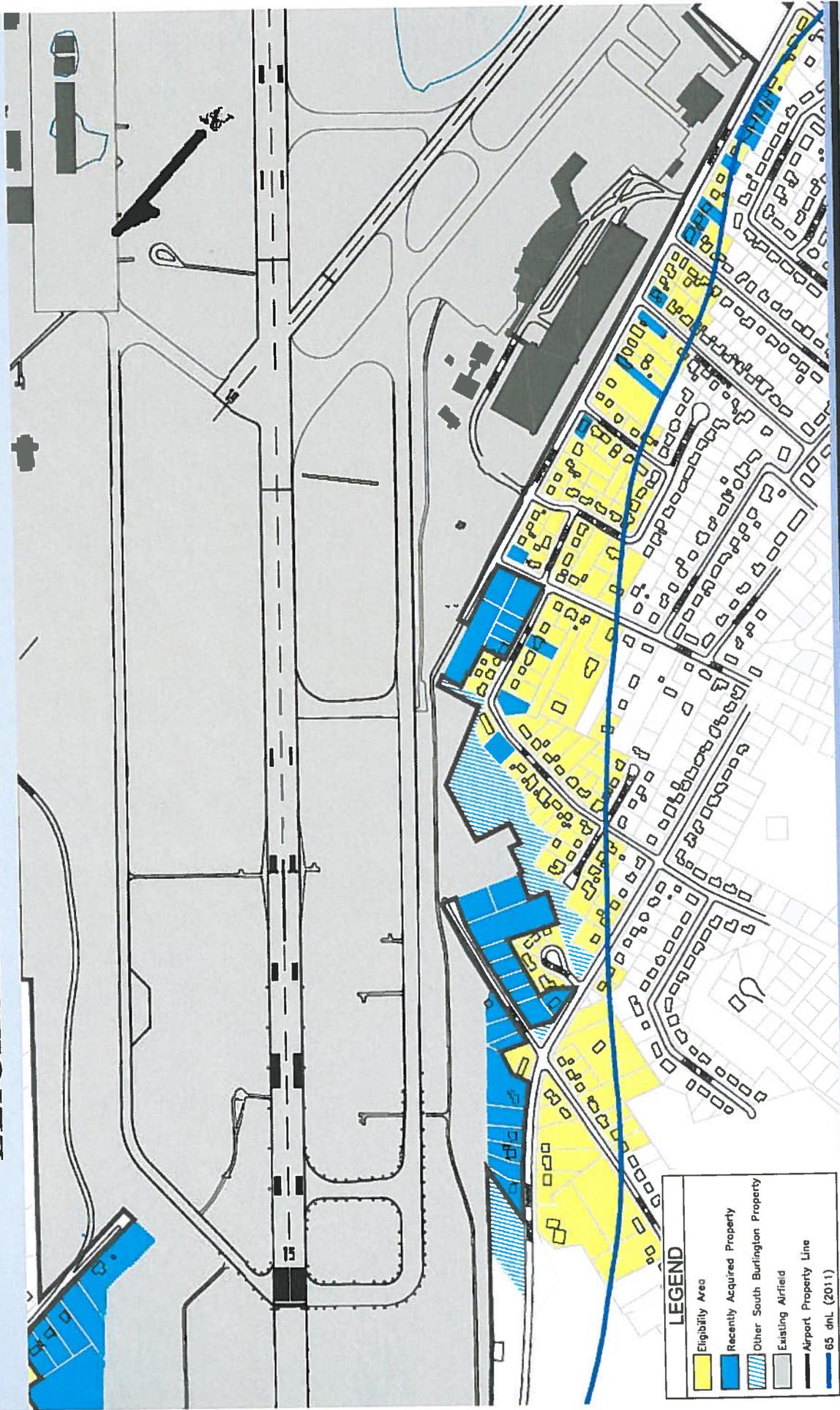


*Burlington International Airport*

*Noise Land Re-Use Plan*

*January 5, 2009*

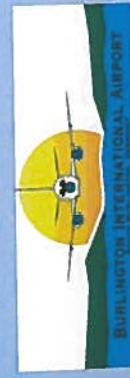
# ELIGIBLE NOISE IMPACTED PROPERTIES



*Burlington International Airport*

*Noise Land Re-Use Plan*

January 5, 2009



# Planned Uses within Acquired Areas

(Part 1 of 3)

## Permanent Buffering & Resource Areas ( $\pm$ 25 acres)

Provide noise and visual buffers

- Sound walls, earthen berms & densely planted landscaping features (i.e., Living Walls)
- Consistent with neighborhood aesthetics

Suppress traffic noise into the residential areas

Community parkland and recreational uses

Wetland resource areas remain preserved & undeveloped



*Burlington International Airport*

*Noise Land Re-Use Plan*

*January 5, 2009*

# The Living Wall

AN ECOLOGICAL SOUND BARRIER SOLUTION INC.

Willow plantations

Privacy screen fence

Sound barrier with soil

Advantages and benefits

Info

Winner of:



2008



**The Living Wall** is a sound attenuation/privacy screening solution that incorporates ecological principals with engineering practices.

The vegetation used in **The Living Wall**, willow shrubs native to Canada and the US, has the ability to grow rapidly and thus provides an almost instant landscape. The construction is carefully planned to ensure the controlled growth of roots and shoots. As the vegetation spreads over it's biodegradable wooden framework, it matures into an integrated unit that is able to withstand harsh winters and hot summers, maintaining it's aesthetic appeal in all seasons.

**The Living Wall** naturalizes urban and rural environments while providing superior sound absorption and a substantial privacy structure. It is an organic manufacture that has enormous environmental benefits including: photosynthesis, pollution filtration, and soil stabilization.



*Burlington International Airport*

*Noise Land Re-Use Plan*

*January 5, 2009*

# Planned Uses within Acquired Areas

(Part 2 of 3)

## Relocated Airport Drive/Parkway ( $\pm 15$ acres)

Collect/redirect traffic away from neighborhood streets

Collector type roadway with limited access

- Sufficient ROW (100 ft) for two travel lanes each direction
- Landscaped median with curb
- Pedestrian sidewalks/trails/bike paths “connected” with other amenities
- Interim landscaping until permanent redevelopment of roadway

Combined ROW with buffer creates significant width for noise attenuation (200 ft or more in many areas)

Permanent boundary to segregate new uses from neighborhood



*Burlington International Airport*

*Noise Land Re-Use Plan*

*January 5, 2009*

# AIRPORT DRIVE/PARKWAY

## Typical 100-ft Right-Of-Way Reservation



*Burlington International Airport*  
*Noise Land Re-Use Plan*  
 January 5, 2009



# Planned Uses within Acquired Areas

(Part 3 of 3)

## Airport Re-Use Areas ( $\pm$ 30 acres)

Accommodate needs of the “traveling public”

### Public Transit Facilities

- Consistent w/ Regional Transportation Initiatives
- To Reduce On-Site Parking and Traffic Demands

### Airport Access /Circulation/Parking Improvements

- On Grade & Structured Public Parking
- Rental Car/Taxi/Shuttle/Cell Phone Waiting/Employee Parking Areas

## Economic Development Opportunities and Uses

Potential Hotel Operation

Office, Retail & Commercial Uses

*All uses must be compatible with “high noise” impacts*

*Interim landscaping provided until redevelopment occurs*

*Wetland resource areas remain preserved*



*Burlington International Airport*

*Noise Land Re-Use Plan*

*January 5, 2009*



# Acquisition Protocol

(Part 1 of 3)

All sales are voluntary & initial inquiries handled confidentially

Goal to accommodate requests into program as soon as practical

General preferences:

- Properties along Airport Drive
- Properties in “Groups” and “Blocks” defined by existing streets
- Higher noise impacted areas
- Avoid “patch-work” acquisitions

Firm but flexible policies:

- To adjust when practical to meet individual owner situations
- To adjust for increased and decreased future funding levels
- Accelerate program when “blocks” and “groups” are ready

**Overall Principle - Program benefits are intended for noise impacted homeowners**



*Burlington International Airport*

*Noise Land Re-Use Plan*

*January 5, 2009*

# Acquisition Protocol

(Part 2 of 3)

Continually evaluate and update program and protocols

Keep neighborhood informed of acquisition progress and schedules

Use BTV and City Websites to disseminate information

Consult City when acquisition requirements can't maintain protocol

Implement policy to assure tax revenues are maintained

*Overall Principle - Program benefits are intended for noise impacted homeowners*



*Burlington International Airport*

*Noise Land Re-Use Plan*

*January 5, 2009*

# Acquisition Protocol

(Part 3 of 3)

Remove vacated homes/implement landscaping program:

- Within 2 years after acquisition
- In logical contiguous areas
- Large enough areas to create desired landscaping effects
- So remaining residences are not “stranded”

Concentrate demolition and landscaping activities:

- To no more than a few months each year
- To minimize neighborhood disturbances
- Avoid “attractive nuisance” & vandalism issues

Overall Principle - Program benefits are intended for noise impacted homeowners



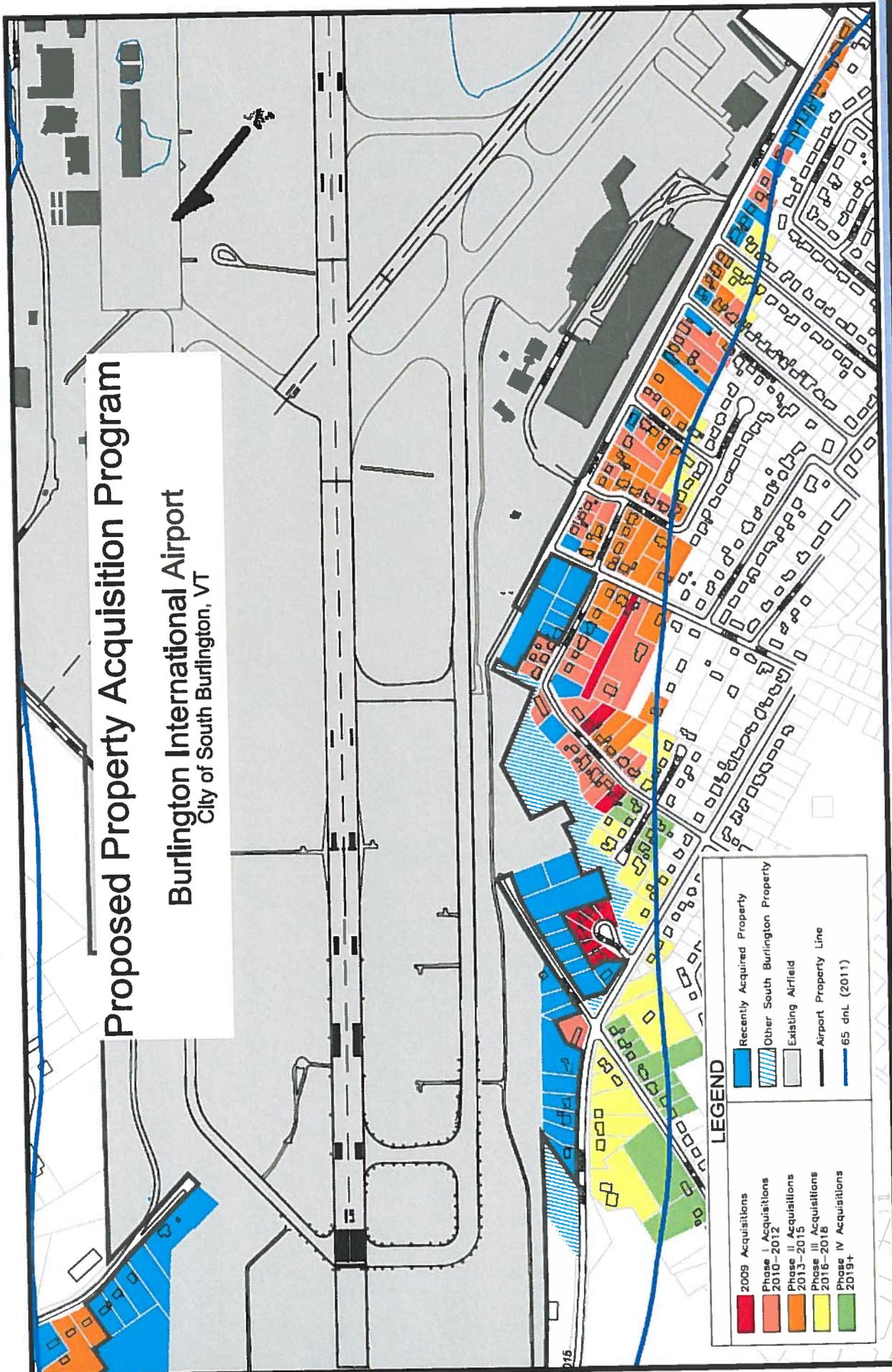
*Burlington International Airport*

*Noise Land Re-Use Plan*

*January 5, 2009*

# Proposed Property Acquisition Program

Burlington International Airport  
City of South Burlington, VT



LEGEND	
2009 Acquisitions	Recently Acquired Property
Phase I Acquisitions 2010-2012	Other South Burlington Property
Phase II Acquisitions 2013-2015	Existing Airfield
Phase III Acquisitions 2016-2018	Airport Property Line
Phase IV Acquisitions 2019+	65 dnL (2011)

## Burlington International Airport Noise Land Re-Use Plan

January 5, 2009



# DETAILED ACQUISITION PLAN

BURLINGTON INTERNATIONAL AIRPORT  
 LAND ACQUISITION SUMMARY/PLAN  
 PURCHASES: 1991-2008  
 TENTATIVE PLAN: 2009-2019

YEAR (FY)	AIRPORT DRIVE	SHAMROCK ROAD	AIRPORT PARKWAY	KIRBY ROAD	PICARD CIRCLE	DUMONT AVE	HENRY COURT	WHITE STREET	MARYLAND ST	LEDOUX TERR	ELIZABETH ST	DELAWARE ST	PATRICK ST	COMMERCIAL	YEARLY TOTAL
1990-2008 PURCHASES															
1990															0
1991	1														1
1992	3														3
1993															0
1994	3													1	4
1995															0
1996															0
1997	1							1							3
1998			1												1
1999	4	5	1												10
2000															3
2001	5	1								1				2	6
2002			2												2
2003	4	1	2	2											9
2004	4		1												5
2005	1		2	0											0
2006				3				1							6
2007	1					2									3
2008	3	1	2			2									8
TOTAL	30	8	11	11	0	6	0	2	0	1	0	0	0	4	113
2009-2019 PROPOSED PROGRAM															
2009		1	1		5	2		1							10
2010	3				7			2							12
2011	2		1		3				1	1				1	10
2012	3				4				1		1			1	10
2013	4				3			1		1	1			1	10
2014								4		2	1	3			10
2015								2	4	3					10
2016		1							2	2	1		5		10
2017			6				6								10
2018			6	2			2								10
2019				8			5								13
TOTAL	12	2	13	10	5	15	12	10	6	6	4	5	5	2	115

Burlington International Airport  
 Noise Land Re-Use Plan

January 5, 2009



# Infill Areas Studied For Residential Redevelopment

BTV and Study Team will continue to work closely with City

Address issues caused by displaced housing from the acquired areas

Recommendations will include:

- Where additional new housing opportunities could be created
- What areas might be available for potential infill housing development
- How best to promote development of a variety of housing types
- What possible zoning changes might be needed



*Burlington International Airport*

*Noise Land Re-Use Plan*

*January 5, 2009*

# City of South Burlington Actions

Concurrence with Acquisition Plan & Decision Protocol

Concurrence with overall Re-Use Concept Plan



FY09 Program (Red Properties)  
consistent with Plan and Protocol

Concurrence with resumption of FY 09  
Program Acquisitions

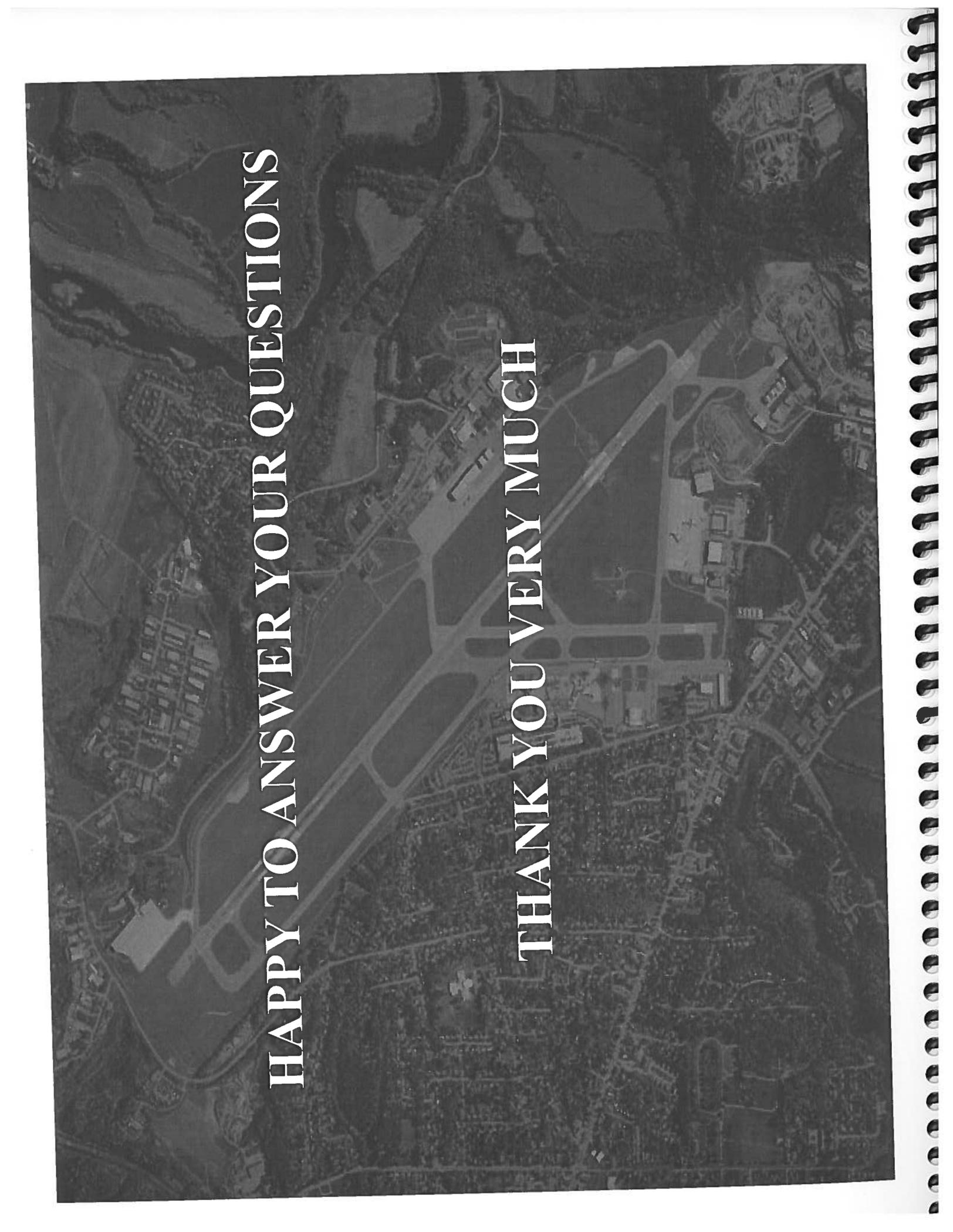
Future Comprehensive Planning and Zoning Updates Necessary



*Burlington International Airport*

*Noise Land Re-Use Plan*

*January 5, 2009*



HAPPY TO ANSWER YOUR QUESTIONS

THANK YOU VERY MUCH

# **BURLINGTON INTERNATIONAL AIRPORT**

## **FAR PART 150 NOISE LAND RE-USE PLAN**

**Presentation  
To  
City of South Burlington**



*Burlington International Airport  
Noise Land Re-Use Plan*

*January 20, 2009*

# AIRPORT STAFF AND STUDY TEAM

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*Burlington International Airport*

*Noise Land Re-Use Plan*

January 20, 2009

Burlington  
International Airport  
(BTV)

October 2008



*Burlington International Airport  
Noise Land Re-Use Plan*

*January 20, 2009*

# Airport Land Use Compatibility Activities

## Chronological Summary

- National FAA Part 150 Program initiated by 1979 legislation
- First Part 150 Study for BTV prepared in 1990
- Noise related acquisitions began in 1991 (inside LDN 70)
- BTV study was updated again in 1997
- Current updates began in 2006
  - November 2007 Public Workshop
  - March 2008 Public Workshop
- Expanded Eligibility (to LDN 65) approved by FAA in Sept 2008
- Presentations to City of South Burlington
  - November 17, 2008
  - January 5, 2009
  - January 20, 2009



*Burlington International Airport*

*Noise Land Re-Use Plan*

*January 20, 2009*

# Presentations to City of South Burlington

(November 17, 2008 - Meeting 1 of 3)

Introduce Reuse Study and background issues

Part 150 program funding requirements, restrictions and timetables

Describe eligibility areas, requirements and program goals

Introduce early concepts for reuse



*Burlington International Airport*  
*Noise Land Re-Use Plan*

January 20, 2009

# Presentations to City of South Burlington

(January 5, 2009 - Meeting 2 of 3)

Present acquisition plan and receive comments on reuse concepts

Review refined concepts for reuse and receive City comments

- Permanent Buffering & Resource Areas ( $\pm$  25 acres)
- Relocated Airport Drive/Parkway ( $\pm$  15 acres)
- Airport Re-Use Areas ( $\pm$  30 acres)

Describe details for acquisition plan and decision protocols

- Concurrence to resume FY 09 acquisition efforts
- Constructive comments received from residents and council

Historical variations in the LDN 65 noise exposure limits

Incompatible noise for residential uses should not be confused with human safety

Noise exposures would have to continuously exceed LDN 75 to threaten hearing loss

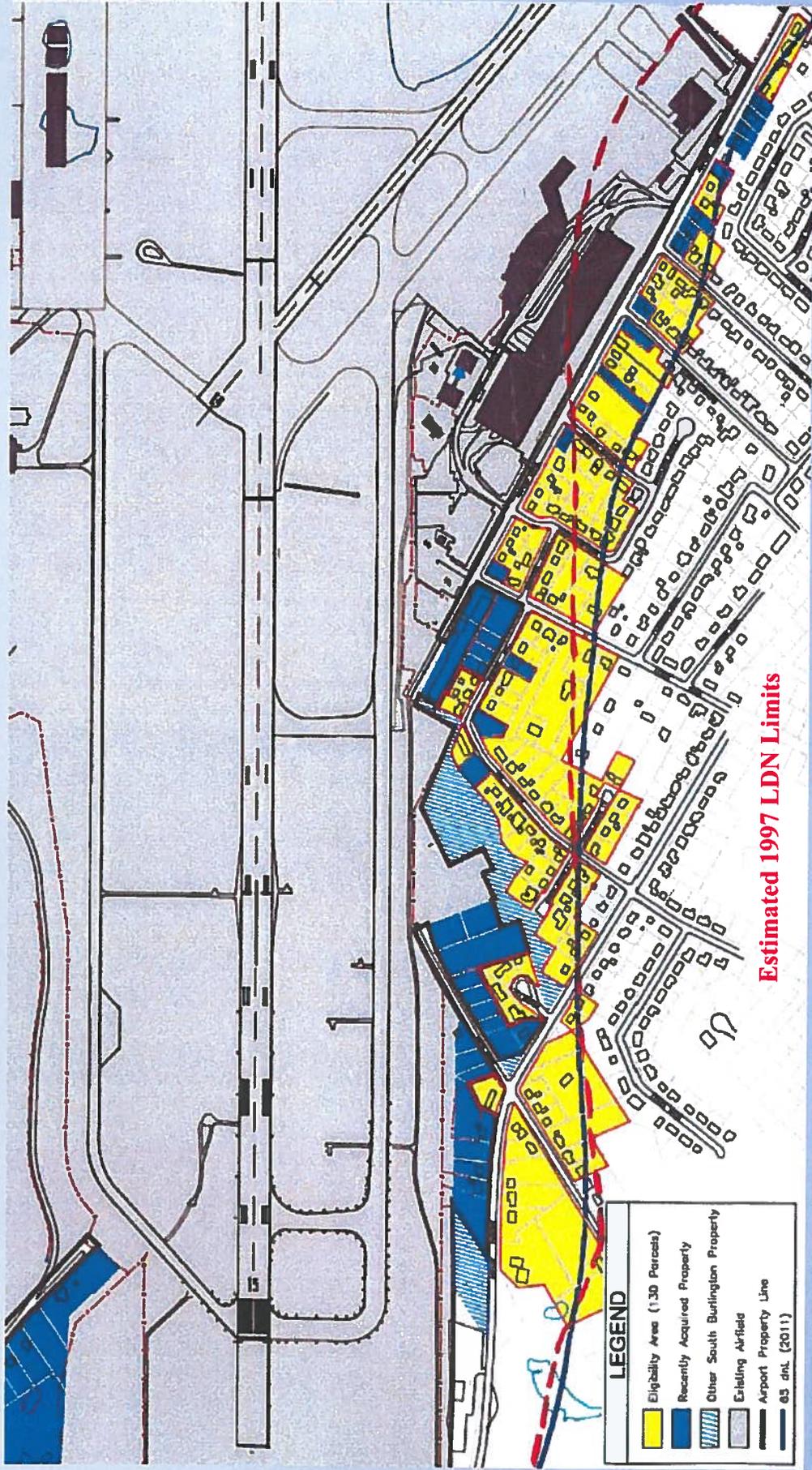


*Burlington International Airport*

*Noise Land Re-Use Plan*

*January 20, 2009*

# 1997 vs. 2011 ELIGIBLE NOISE IMPACTED PROPERTIES

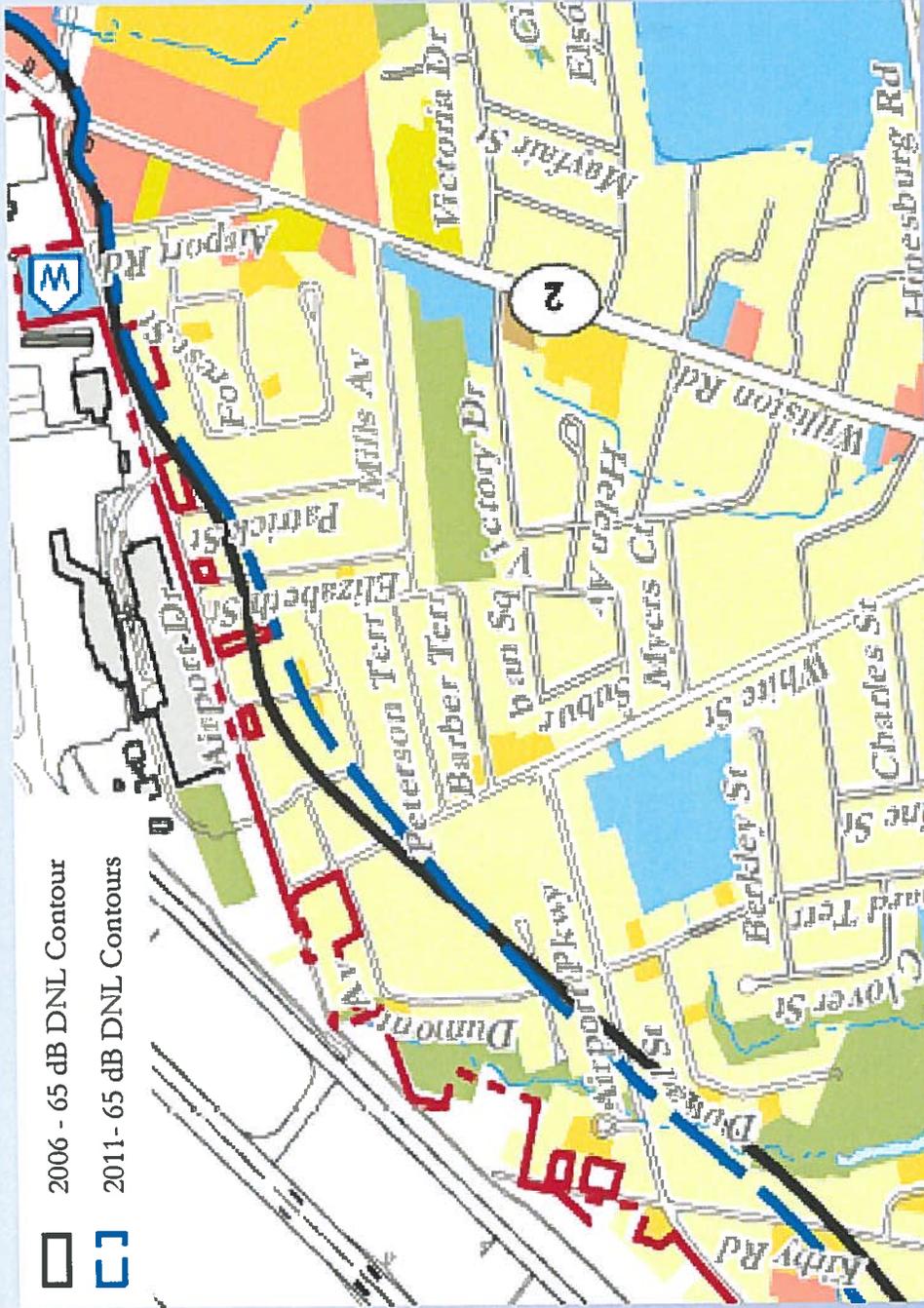


*Burlington International Airport*

*Noise Land Re-Use Plan*

*January 20, 2009*

# CURRENT STUDY NOISE EXPOSURE LIMITS



*Burlington International Airport*

*Noise Land Re-Use Plan*

January 20, 2009



# Presentations to City of South Burlington

(Tonight's January 20, 2009 - Meeting 3 of 3)

## Outline next steps in the process

### Submit Reuse Plan to FAA for concurrence in February 2009

- Incorporate/document City concerns and comments into plan
- Continue work with City to identify recommendations for housing infill areas
- Continue work with City to create useable and effective noise buffer policies
- Incorporate FAA approved Reuse Plan into a formal City to City Agreement

### Execute a written agreement between Cities to document and bind both parties

- To adhere to the acquisition plan
- To adhere to the decision protocols
- To adhere to the development guidelines established for the reuse areas
- To petition FAA together when properties request inclusion in the program along the "humanized" eligibility boundary



*Burlington International Airport*

*Noise Land Re-Use Plan*

*January 20, 2009*

# Presentations to City of South Burlington

(Tonight's January 20, 2009 - Meeting 3 of 3)

## Outline next steps in the process

### Implement reuse guidelines in Master Plan Update (MPU) recommendations

- City interests represented on the study's Technical Advisory Group (TAG)
- MPU efforts expected to take 12 to 18 months
- Briefings to be provided to the City throughout process

### Master Plan recommendations formally presented to the City for concurrence

- To receive and incorporate comments prior to finalizing
- Public workshops will be conducted during the review process

### Acquisition program continues based on the plan and protocol

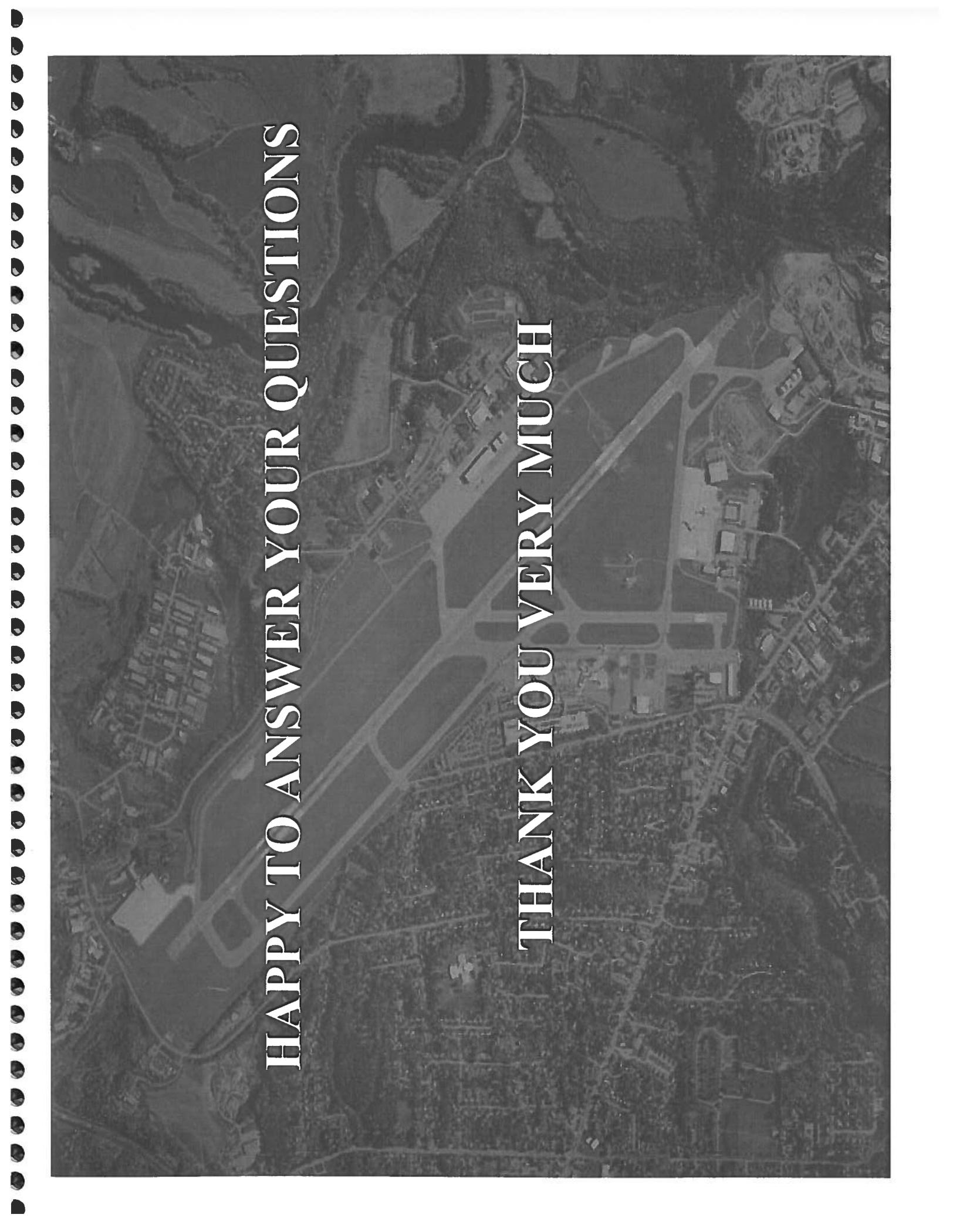
- Temporary landscaping measures implemented
- Final re-use concepts will be described by the MPU
- Acquisition program will be reviewed for consistency with final MPU



*Burlington International Airport*

*Noise Land Re-Use Plan*

*January 20, 2009*

An aerial photograph of an airport, showing a large terminal building, runways, taxiways, and surrounding infrastructure. The image is in grayscale and serves as the background for the text.

HAPPY TO ANSWER YOUR QUESTIONS

THANK YOU VERY MUCH

**Infill Housing Analysis and  
Zoning Strategies  
for the  
City of South Burlington, Vermont**

**July, 2009**

## Infill Housing Analysis and Zoning Strategies

---

*This report was developed by VHB Pioneer in July, 2009, in conjunction with the FAA Part 150 Noise Land Inventory and Re-Use Plan for Burlington International Airport, prepared by Campbell & Paris Engineers and VHB Pioneer.*

### 1.0 Introduction

In conjunction with the Part 150 Noise Land Inventory and Re-Use Plan prepared for Burlington International Airport in 2009, an analysis was performed to identify the number, location, and nature of potential infill housing sites in the City of South Burlington, Vermont. This report and analysis is intended to help support development of land use and housing policies by the City of South Burlington in conjunction with the Airport's planned and programmed acquisition of lands affected by Airport-related noise under the FAA's Part 150 program.

Removal of single-family housing stock, particularly moderately-priced units such as those eligible for acquisition under the Part 150 program, is of concern to the City of South Burlington. For many years, the City successfully has promoted policies to increase the quantity and price variety of its housing stock, encouraging infill development in commercial, residential and mixed use areas as one strategy to accomplish this goal. In light of the Airport's plan to remove single-family housing stock from eligible, noise-impacted areas under the Part 150 program, the City of South Burlington has requested analysis to identify the residentially-zoned parcels in South Burlington that have conditions suitable for infill housing development. This technical memorandum describes the parameters used to identify infill parcels, the analysis performed, and the resulting identification of infill parcels, both in the residential neighborhoods around the Airport, and City-wide.

### 2.0 Airport Acquisition Program and City Housing Stock

To facilitate its ongoing and planned operations, and complimentary transportation and land use activities that support Airport functions, the Airport has been utilizing Part 150 funds to acquire properties affected by Airport noise since 1991. Properties were deemed eligible for acquisition through modeling of expected noise levels performed by the Airport Engineer in accordance with FAA protocols. In September 2008, the Airport gained approval from the FAA to extend eligibility to those properties within or affected by a modeled contour line representing an expected noise level of 65 dnl. The prior eligibility area of properties exposed to 70 dnl was closer to the Airport, and involved fewer properties. The extension to the 65 dnl line added roughly 85 properties to the total number of houses eligible for acquisition under the Part 150 program.

Within the eligible area, the Airport has acquired 13 houses to date, and has planned to acquire and remove an average ten (10) houses per year for each of the next ten years. These acquisitions will enable development of transportation improvements, Airport facilities, noise-compatible land use activities, and appropriate buffer areas between Airport-related uses and adjacent residential areas. If completed as planned, the Part 150 acquisition program could result in the ultimate removal of a total of roughly 120 single-family housing units from the eligible area.

The City's major concern has been the impact of the acquisitions on the City's stock of detached single-family dwellings. Overall, South Burlington's housing stock has grown rapidly since 2000, adding an average of 125 single-family and 63 duplex or multi-family units annually between 2000 and 2008.

Housing Type	2000 Census	Percent	July 2009 <sup>1</sup>	Percent
Single-Family	3,813	58.7%	4,818	60.2%
Duplex/Multi-Family	2,685	41.3%	3,189	39.8%
Total Units	6,498		8,007	

While the number and proportion of single-family housing in South Burlington increased between 2000 and 2009, much of the new single-family detached units constructed during this period were larger and had substantially higher initial sales prices than the single-family detached residences in the Airport Parkway neighborhood. Therefore, the loss of units in the Airport Parkway neighborhood presents some concern with respect to the diversity of size and price in the City's stock of single-family detached dwellings.

Relative to the total number of single-family detached dwelling units existing as of 2008, the eventual acquisition and removal of 120 houses would represent the removal of approximately 15 percent of the current Airport Parkway neighborhood's housing stock (120 out of approximately 800 existing in 2009), approximately 2.5 percent of the City's single-family dwelling units, and approximately 1.5

<sup>1</sup> Data from the Department of Planning & Zoning, City of South Burlington, July 28, 2009 and <http://www.housingdata.org/profile/resultsMain.php?town=007070>, accessed July 28, 2009

percent of the City's total housing stock. In summary, while the overall housing growth in South Burlington is likely to replace the 120 units removed in a shorter timeframe than the timeframe expected for acquisitions, the City is seeking to support development of additional moderately-priced single-family detached housing, both in areas of the Airport Parkway neighborhood outside the 65 dnl contour and elsewhere, as part of its overall housing strategy.

### 3.0 Identification of Infill Parcels

To identify potential infill parcels, parcel and assessment data from the South Burlington assessor's office were combined with parcel maps, zoning district boundaries, and dimensional zoning requirements from the South Burlington Land Development Regulations<sup>2</sup>. These data were used to identify sites with different levels of development potential. All zoning districts that allow residential use were evaluated for potential infill development sites.

#### 3.1 Infill Development Definitions

Infill development can be defined as the creation of new or more intensive land uses on a parcel that is at least partially surrounded by existing developed land uses. It is distinguished from "Greenfield" development because it occurs in the context of developed areas and established neighborhoods, rather than in rural or otherwise undeveloped areas. Infill development may be more or less intensive than the land uses and buildings surrounding the site, and may or may not involve the demolition or re-use of existing buildings.

Three types of infill sites were identified for purposes of this study :

- 1 Vacant parcels of sufficient size to support new housing development. This captured any parcel with sufficient land area to support one single-family, one duplex, and/or three multi-family housing units in accordance with the dimensional standards of the underlying zoning district.
- 2 Parcels of sufficient size to support new housing development per the underlying zoning district regulations that contain structures with an assessed value less than 60% of the average for comparable properties (i.e. residential, duplex, commercial, etc.) in the surrounding area. This analysis was intended to find parcels with under-market structures, whose value relative to other assessed values in the immediate area indicates that a tear-down or other building redevelopment may be economically feasible.

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<sup>2</sup>Dimensional standards from the South Burlington Land Development Regulations dated February 25, 2008 were used for this analysis. While amendments to the Land Development Regulations were approved December 15, 2008, at the time of writing, these amendments had not yet taken effect. No changes to any applicable dimensional standards were made in the December 2008 amendments that would affect use of the February 25, 2008 version of the Regulations for purposes of this analysis.

- 3 Parcels of sufficient size to support new housing units in addition to those already located on the site. Parcels containing a structure with an assessed value of at least 60% of the average for comparable properties (i.e. residential, commercial, etc.) in the surrounding area were further evaluated to identify those with sufficient lot size to support additional residential units through subdivision or planned unit development (PUD).

### 3.2 Assumptions Regarding the Land Development Regulations

The dimensional standards from the South Burlington Land Development Regulations (SB LDRs) were used to evaluate whether tax parcels had sufficient area to support the development of infill or additional housing units. Two parameters are important: the minimum lot size per dwelling unit, which may be waived under the SB LDRs in a PUD application; and the maximum density per acre, which in most cases may not be waived.

The zoning districts in the SB LDRs were evaluated to determine which should be evaluated. Those zoning districts that permit new residential land use per Table C-2, and were included in this analysis, are:

- Residential 1, 2, 4, 7, 7-NC, 12
- Residential 7-NC
- Lakeshore Neighborhood
- Queen City Park
- Southeast Quadrant NRT, NR, VR, VC (SEQ-NRP excluded)
- Commercial 1 and Commercial 1-LR
- Commercial 2
- Central District 1, 2, 3, 4

For this analysis, the first step was to identify those parcels meeting the minimum lot size for some residential development, whether single-family, duplex, or multi-family (3 or more units). While lot sizes can be waived, the need to provide off-site parking, landscaping, and required yards typically precludes more intensive development on small parcels of four or fewer housing units. Thus, if the parcel's size was sufficient to support four or fewer new units based on the minimum required lot size, the minimum lot size was used as the controlling parameter. In cases where a parcel was of sufficient size to support more than four new units, regardless of type, the number of units assumed to be achievable on the parcel was evaluated based the maximum density in the zoning district.

Finally, this analysis took property boundaries as fixed, and did not evaluate the potential to create additional units if lot line adjustments, lot mergers, or other parcel adjustments were made. It is clear that in some specific cases, lot line adjustments, mergers or subdivision could create additional opportunities for infill beyond those described herein. Since this type of analysis would involve private property transactions, it was not performed for this report; however, the City may wish to evaluate

further those lots and areas where parcel mergers or lot line adjustments could create additional opportunities.

### 3.3 Residential 4 Zoning District

For the Residential 4 zoning district, which includes the Airport Parkway residential area where the Airport's acquisitions are planned, the standard for the amount of lot area required to support a single-family housing unit in this district was reduced from as-of-right minimum of 9,500 SF per unit to 6,500 SF for purposes of this analysis. The maximum density, however, was kept at four units per acre. Two factors argue for this approach. First, under the City's Planned Unit Development (PUD) regulations, the minimum lot size requirement is eliminated for application submitted under the PUD provisions. Second, there have been recent approvals in the City (under the PUD provisions) of smaller single-family units on 'footprint' lots, in which the land around the dwelling unit is commonly owned rather than being subdivided. 'Footprint' lots allow for more efficient use of land and can enable the design of infill projects on lots that might not be large enough to accommodate standard, subdivided lots.

## 4.0 Analysis and Mapping

With these parameters established, a query was performed in ArcGIS for parcels that met the minimum lot size standards for the applicable zoning district, with an adjustment to the zoning standards made for the Residential 4 district as noted above. The initial screening was for lots that had sufficient lot size to meet the applicable requirements. A second screening then was performed by VHB Pioneer staff based on additional GIS layers, including topography, wetlands, streams, and stream setbacks, to evaluate the physical conditions on each of the sites. The analysis was intended to determine if there was sufficient physical space on the parcel for reasonable development of access and a footprint for a new dwelling unit, based on the location and configuration of existing structures, the location and availability of public roadway access, and the presence or absence of limiting natural features such as wetlands and streams.

The attached map indicates in **yellow** those parcels that had sufficient land area to support more than one housing unit under the applicable zoning district standards, in the existing parcel configuration, but that were judged to have insufficient physical space to support an additional housing unit whether due to access limitations, lot configuration, or environmental constraints. The map indicates in **red** those parcels that were judged to have sufficient land area in a sufficient configuration to support the development of at least one additional single family or duplex dwelling unit, depending on the allowances of the underlying zoning district. Airport noise contours projected for 2011 conditions are shown in blue, as indicated on the map legend.

## 5.0 Findings

Key findings of the analysis are presented below.

1. There is substantial infill potential in developed, core districts of South Burlington. Much of this is within the C1-R15 mixed-use district along upper Shelburne Road, and along Swift Street near the Swift Street-Spear Street intersection. In addition to the larger potential subdivision parcels, such as the O'Brien Farm and Farrell Estate, there are many infill opportunities within existing neighborhoods. These, however, tend to be challenging and controversial in the permitting process.
2. In the predominantly commercial mixed-use zones, such as C1-R15, many existing commercial uses are subject to permit conditions related to parking (including shared parking agreements among properties) that would represent a challenge for permitting additional use. However, residential infill on a second floor or on an existing impervious surface still is considered a possibility in this analysis.
3. A majority of the R-4 residential parcels in the Airport Parkway neighborhood are at least twice the minimum lot size for this zoning district. While this indicates substantial infill potential, limitations include a property ownership pattern that would require multiple properties to be assembled for most infill; the need for access to the rear of many lots to add units; and the high degree of impervious cover in the Centennial Brook watershed, which is small relative to the size of other South Burlington watersheds.
4. The R1 zoning district along Spear Street is similarly limited. Most of the lots are more than twice the minimum one-acre lot size; however, the pattern of lot ownership with multiple narrow, deep lots and need for access onto Spear Street limits development options unless properties are assembled and some form of rear or secondary access is created.

## 6.0 Zoning Strategies

Based on this analysis, discussions with Staff of the City of South Burlington Department of Planning and Zoning, and the planned land use areas outlined in the Part 150 Noise Land Inventory and Re-Use Plan, a number of zoning strategies were recommended to the City to explore as part of its planning around both housing and Airport development. While the principal focus of these recommendations concerns the provision of additional smaller-scale, detached single-family housing, other Airport-related issues were considered as well.

## 6.1 Ensure Affirmative Language Supporting Infill Housing Development in City Comprehensive Plan and LDRs

To be most effective, all of the strategies discussed below should be supported by affirmative language in the City's Comprehensive Plan and Land Development Regulations that clearly articulates the City's support for the development – especially the infill development in existing neighborhoods and built areas – of new, single-family detached housing of a size and scale comparable to the Airport Parkway neighborhood's existing housing stock.

## 6.2 Density Bonus and PUD Provisions Encouraging Detached Single-Family Housing

South Burlington's land development regulations include a density bonus provision that grants additional units above the maximum allowed density for the provision of affordable housing units. The same approach could be extended to grant additional a density bonus for the provision of small single-family detached units in a development. This type of approach could help tip the balance in favor of small single-family in districts where townhouse development otherwise would maximize the return on a project, notably parcels in the R2, R4, R7 and R12 districts. A bonus could be based either on standard units per acre, or on overall floor area ratio (FAR) for a project or parcel.

This approach also could be applied to certain large, undeveloped parcels that are zoned for residential use and have substantial infill potential. Parcels such as the O'Brien Farm on Old Farm Road, the Rye Farm on Hinesburg Road within the Southeast Quadrant, and lands of the Farrell Estate in the R1-Lakeshore District could be designated for additional residential density if small single-family detached residences are provided.

Another approach with similar effect would be to create an overlay district within portions of the residential zones where small single-family detached dwellings are seen as being most desirable to the City. An overlay district could either provide a density bonus for single-family detached in certain areas, or limit the allowable housing types to single-family detached (as is the current case in the Southeast Quadrant-Natural Resource Protection sub-district).

## 6.3 Standard Subdivision Process and Dimensional Standards Favorable to Small Single-Family Units

One of the limitations noted for infill housing concerns the lack of flexibility in standard subdivisions, which are the most commonly used method of creating an additional housing lot on parcels that can

support more than one unit under prevailing zoning, such as those identified in this analysis. The prospects for infill housing would be improved by a process that provides overall flexibility for site design in standard subdivisions through reduced setbacks, reduced parking standards, and possibly higher allowable lot coverage in areas targeted for infill housing. As with the recommendations in (2) above, these provisions could be employed in all residential districts, or targeted to priority parcels or areas.

#### 6.4 Create a Higher-Density Sub-District at the Corner of White Street and Airport Parkway

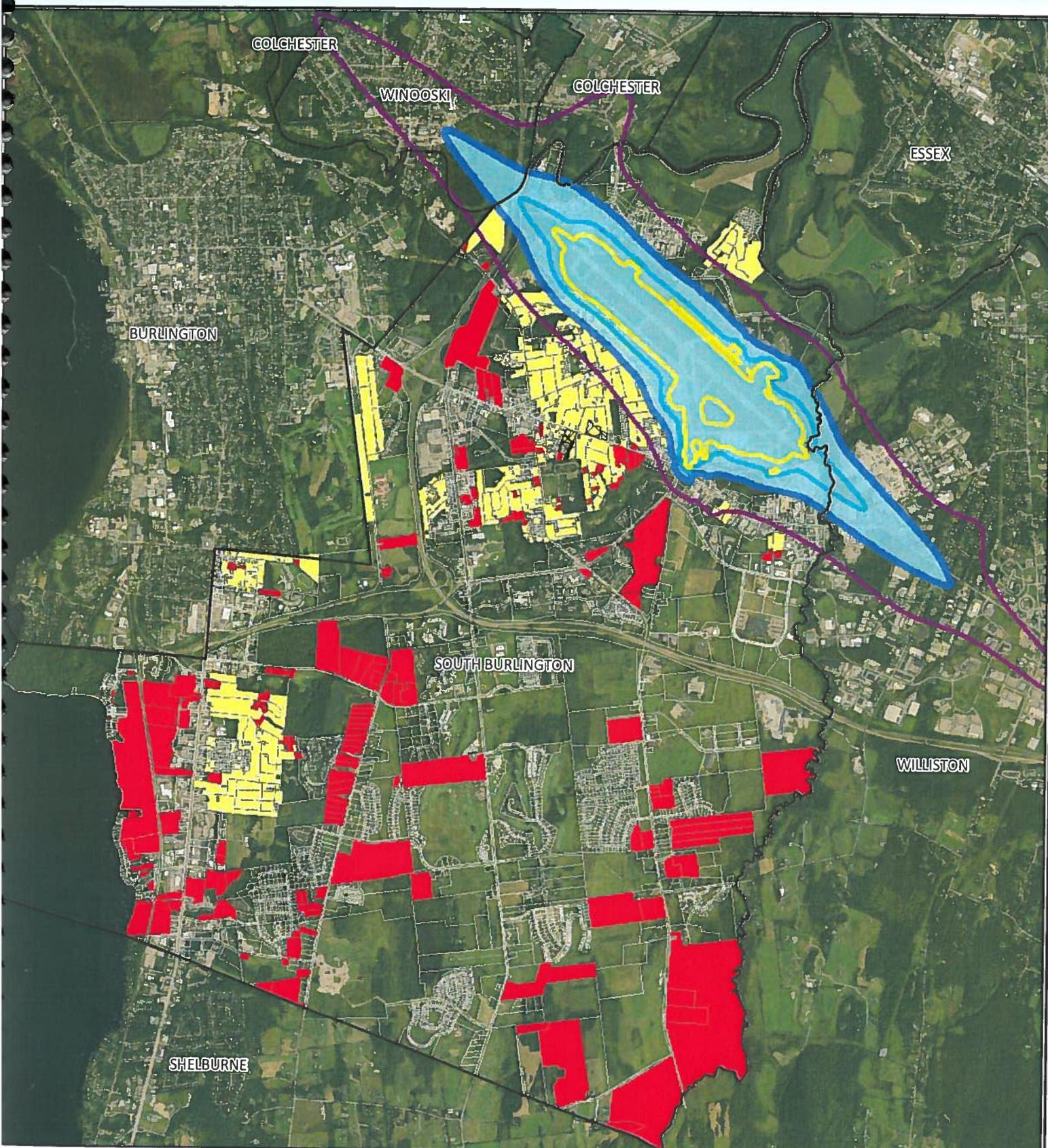
In the land use analysis completed for this report, the area at the present corner of White Street and Airport Parkway was identified as a location where higher-density residential development could be considered in the future, as the Airport's planned acquisition program proceeds. As existing structures are removed and the Airport begins creating a transitional zone, this site may represent an opportunity to do a higher-density infill project that acts as a further transition between more intensive uses in the Airport area, and the residential neighborhoods to the west.

#### 6.5 Consider Transition Zone Provisions for Areas within the 65 dnl Contour

One of the most pressing zoning issues for South Burlington will be the treatment of lands within the 65 dnl contour, where a gradual phasing out of residential uses through property acquisition, along with transportation improvements and creation of a linear buffer area, is planned. The South Burlington Planning Commission will have a number of zoning strategies to consider, including:

- (a) Developing a re-zoning protocol as acquisitions occur. The Airport and the Planning Commission may wish to consider developing an agreed protocol for the Airport to request the rezoning of properties as acquisitions and removal of dwelling units occurs. Currently, the City must consider whether to initiate a formal rezoning process to adjust the boundary between the Residential 4 and Airport zoning districts each time the Airport seeks to re-use land for uses other than landscaping. One option would be to re-evaluate the appropriate boundaries of the Residential 4 zoning district, and create a transitional or "holding" zoning district within the 65 dnl contour. The most important area to address in this manner is the area where acquired lands are intended for Airport and Airport-related use, as discussed in the Part 150 Noise Land Inventory and Re-Use Plan. In this area, the City could adopt a provision that changes a property's zoning from R4 to a transitional district when the property is acquired by the Airport. This would save the time and expense of formally rezoning these properties, but would require careful thought with respect to the uses that become permitted or conditional and any zoning boundary issues affecting neighboring residential properties. In any event, some understanding as to the protocol for this type of zoning amendment would provide greater certainty to the City, Airport, property owners, and public.

- (b) Addressing Residential Uses within the 65 dnl Contour. The City may wish consider different strategies to limit the potential that new residential construction (or substantial residential investments) will take place within the 65 dnl contour in the area where acquisitions are planned. If new residential construction occurs or new investments are made under the current Residential 4 zoning standards, this would create the potential for future conflict among land uses as the Airport continues acquisition and housing removal. While making residential a non-conforming use would be a very strong step, the City may wish to consider a prohibition on new residential construction, a limit on the percent of value that may be invested in an existing residential unit, or prohibiting the physical expansion of residential structures other than for handicapped access or structural repairs.
- (c) Establishing landscaping standards for the “buffer zone.” The landscaping and management of lots where houses have been removed has been an important consideration for the City, and is addressed in the Part 150 Noise Land Inventory and Re-Use Plan. Besides the desire to screen the residential neighborhood from Airport-related and transportation uses, the City has expressed a desire to ensure that landscaping is attractive and somewhat porous, creating views into and out of a buffer area. Within this area, standards and approaches to landscaping and screening will be especially important, and special provisions in the Land Development Regulations may be warranted. A separate zoning district or sub-district, or an overlay zone, could be created to accomplish this.
- (d) Establishing the road right-of-way for an extension of Airport Drive. The City may wish to consider whether the Official Map should be amended to recognize the road right-of-way contemplated in the Part 150 Noise Land Inventory and Re-Use Plan. This would enable the City to work with the Airport on the implementation of the roadway.



**Legend**

2011 Future Airport dnl Contours

- DNL\_60
- DNL\_65
- DNL\_70
- DNL\_75

Selected Infill Parcels

- Selected Infill Parcels
- Parcels Selected by Lot Size
- Town/City Boundary

### Infill Housing Analysis South Burlington, VT

July 28, 2009



Prepared by: JAT

Sources: Background: USDA NAIP 2008  
Photography; Parcel data provided by the  
City of South Burlington (2009).

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