Appendix C

U.S. Department of the Interior, Fish and Wildlife Service Correspondence

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Field Office
70 Commercial Street, Suite 300
Concord, New Hampshire 03301-5087

January 7, 2008

Reference:	Project	Location
	Airport runway extension	Nashua, NH

William DeLuca
Baystate Environmental Consultants, Inc.
296 North Main St.
East Longmeadow, MA 01028

Dear Mr. DeLuca:

This responds to your recent correspondence requesting information on the presence of federally-listed and/or proposed endangered or threatened species in relation to the proposed activity(ies) referenced above.

Based on information currently available to us, no federally-listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service are known to occur in the project area(s). Preparation of a Biological Assessment or further consultation with us under Section 7 of the Endangered Species Act is not required.

This concludes our review of listed species and critical habitat in the project location(s) and environs referenced above. No further Endangered Species Act coordination of this type is necessary for a period of one year from the date of this letter, unless additional information on listed or proposed species becomes available.

In order to curtail the need to contact this office in the future for updated lists of federally-listed or proposed threatened or endangered species and critical habitats, please visit the Endangered Species Consultation page on the New England Field Office's website:

www.fws.gov/northeast/newenglandfieldoffice/EndangeredSpec-Consultation.htm

In addition, there is a link to procedures that may allow you to conclude if habitat for a listed species is present in the project area. If no habitat exists, then no federally-listed species are present in the project area and there is no need to contact us for further consultation. If the above conclusion cannot be reached, further consultation with this office is advised. Information describing the nature and location of the proposed activity that should be provided to us for further informal consultation can be found at the above-referenced site.

Thank you for your coordination. Please contact us at 603-223-2541 if we can be of further assistance.

Sincerely yours,

Anthony P. Tur
Endangered Species Specialist
New England Field Office

Memo

NH Natural Heritage Bureau

To: William DeLuca, Baystate Environmental Consultants, Inc.
296 North Main St.
East Longmeadow, MA 01028

From: Melissa Coppola, NH Natural Heritage Bureau
Date: 11/19/2007 (valid for one year from this date)
Re: Review by NH Natural Heritage Bureau
NHB File ID: NHB07-1861
Project type: Other: Airport improvements
Town: Nashua, Merrimack
Location: Tax Maps: sheet E and lot 60
cc: Kim Tuttle

As requested, I have searched our database for records of rare species and exemplary natural communities, with the following results.

Comments: NHB has concerns about the impact this project may have on plants and/or natural communities and would like more iformation about the project details.

Plant species	**State[1]**	**Federal**	**Notes**
Northern Blazing Star (*Liatris scariosa var. novae-angliae*)	E	--	Threats to this highly imperiled species are development activities that eliminate its habitat and invasion of its open, grassy habitat by trees and shrubs.
Wild Lupine (*Lupinus perennis*)	T	--	This wildflower grows in extremely dry, sandy openings and is easily identified in the field (see any wildflower guide) between early May and August. It is tolerant of surrounding disturbance and depends upon periodic mowing (or, historically, wildfire) to eliminate trees that would otherwise shade it out. It does not transplant well due to a tap root that can be more than three feet long.

Vertebrate species	**State[1]**	**Federal**	**Notes**
Banded Sunfish (*Enneacanthus obesus*)	--	--	Contact the NH Fish & Game Dept (see below).
Blanding's Turtle (*Emydoidea blandingii*)	--	--	Contact the NH Fish & Game Dept (see below).
Eastern Hognose Snake (*Heterodon platirhinos*)	T	--	Contact the NH Fish & Game Dept (see below).
Spotted Turtle (*Clemmys guttata*)	--	--	Contact the NH Fish & Game Dept (see below).

[1]Codes: "E" = Endangered, "T" = Threatened, "--" = an exemplary natural community, or a rare species tracked by NH Natural Heritage that has not yet been added to the official state list. An asterisk (*) indicates that the most recent report for that occurrence was more than 20 years ago.

Contact for all animal reviews: Kim Tuttle, NH F&G, (603) 271-6544.

A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on

information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. For some purposes, including legal requirements for state wetland permits, the fact that no species of concern are known to be present is sufficient. However, an on-site survey would provide better information on what species and communities are indeed present.

Department of Resources and Economic Development
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

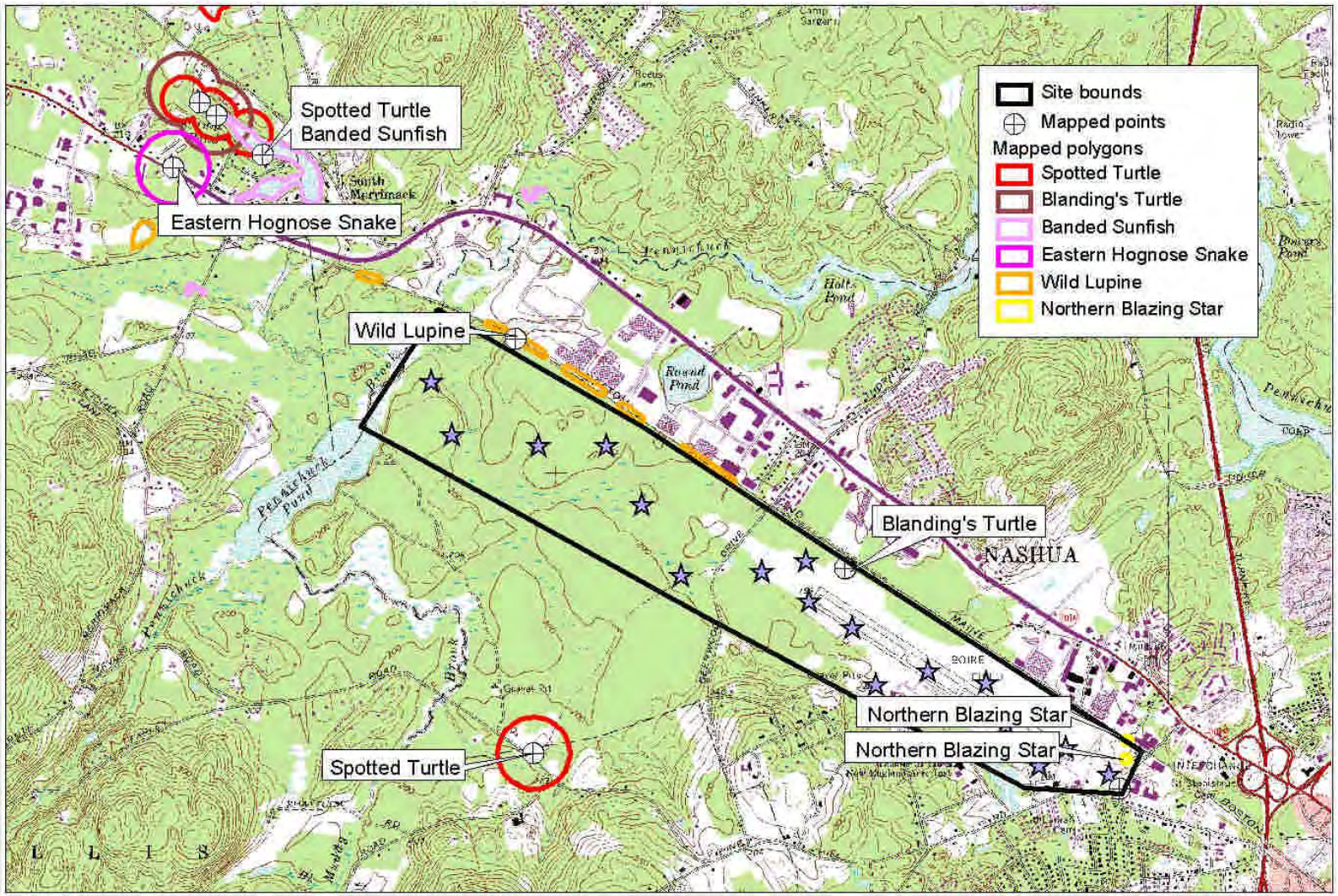
DRED/NHB
PO Box 1856
Concord NH 03302-1856

NHB07-1861

NH Natural Heritage Bureau

Known locations of rare species and exemplary natural communities

Note: Mapped locations are not always exact. Occurrences that are not in the vicinity of the project are not shown.



*Historical record

0.25 0 0.25 0.5 0.75 1 Miles

1:31000

Valid for one year from this date: 19 Nov 2007

New Hampshire Natural Heritage Bureau - Plant Record

Northern Blazing Star (*Liatris scariosa var. novae-angliae*)

Legal Status		Conservation Status	
Federal:	Not listed	Global:	Rare or uncommon
State:	Listed Endangered	State:	Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Not ranked
Comments on Rank:

Detailed Description: 2006: 401 stems counted, 35% in flower.2005: 12 plants, 8 in bud.

General Area: 2006: Dominant species were *Danthonia spicata* (poverty oatgrass), *Schizachyrium scoparium* (little bluestem), and *Festuca rubra* (red fescue). Associated species: *Rumex acetosella* (red sorrel), *Asclepias amplexicaulis* (blunt-leaved milkweed), *Lespedeza capitata* (round headed bush-clover), *Hypericum gentianoides* (orange grass), *Lechea maritima* (seabeach pinweed), *Lechea intermedia* var. *intermedia* (intermediate pinweed), *Carex tonsa* var. *rugosperma* (shaved sedge), *Juncus tenuis* (pointed auricle path rush), *Ionactis linariifolius* (stiff-leaved aster), *Dichanthelium linearifolium* (linear-leaved panic grass), *Oenothera biennis* (biennial evening primrose), *Carex pensylvanica* (Pennsylvanian sedge), *Hieracium* spp. (hawkweed), *Polygonella articulata* (jointweed), *Viola pedata* (bird's-foot violet), *Trifolium arvense* (rabbit-foot clover), and *Trichostema dichotomum* (bluecurls).2005: Grassy/sandy area within airport property, some near railroad and road. Dominant/characteristic species are *Danthonia spicata* (poverty oatgrass), *Schizachyrium scoparium* (little bluestem), and *Festuca rubra* (red fescue). An additional 19 herbaceous plant species are listed as occurring in the immediate vicinity of the *Liatris* plants.

General Comments: 2006: Much larger population than previously thought, and more plants are likely to occur elsewhere on the airport property or in nearby open areas and railroad corridor. Abundant suitable habitat nearby.

Management Comments: 2006: Mowing had cut off most flowering stems before maturity. Delay mowing in fence margin area until late fall to allow for seed production and dispersal.2005: Landowner is aware of plant and has been asked to delay mowing until late fall to allow for seed dispersal.

Location

Survey Site Name: Boire Field Airport
Managed By:

County: Hillsborough
Town(s): Nashua
Size: 1.4 acres
USGS quad(s): South Merrimack (4207175)
Lat, Long: 424633N, 0713010W
Elevation:

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Take NH Rte. 101A to Charron Ave. Take Charron Ave. SW about 150 m to gravel parking/pull-off on right next to airport fence. Plants are in grassy/sandy area mostly inside fenced airport property, but a few plants are located at the SW edge of the grass SW of the pull-off, and SW of nearby railroad that crosses Charron Ave.

Dates documented

First reported: 2005-06-23 Last reported: 2006-07-20

Kane, Chris. 2006. Field survey to Boire Field Airport on July 20.

New Hampshire Natural Heritage Bureau - Plant Record

Wild Lupine (*Lupinus perennis*)

Legal Status		Conservation Status	
Federal:	Not listed	Global:	Demonstrably widespread, abundant, and secure
State:	Listed Threatened	State:	Imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Fair quality, condition and/or lanscape context ('C' on a scale of A-D).
Comments on Rank:

Detailed Description: 2002: Five or more patches of varying size up to 50 x 100 feet in area, were found flowering and with immature seed pods, along ca. 0.5 mile of RR tracks. Several individual plants were scattered in vicinity. 1990: Nashua, ca. 150 plants. Amherst, 2 plants. Merrimack, 5 plants.
General Area: 1990: Alongside railroad tracks.
General Comments: 2002: RR track runs behind industrial/commercial businesses. To the south and west is the City of Nashua's Northwest Conservation Area (former Pennichuck-Westwood property). 1990: See quad sheet for specific locations along railroad tracks.
Management Comments:

Location

Survey Site Name: Nashua, B&M Railroad, Rte. 101A
Managed By:

County:	Hillsborough	USGS quad(s):	South Merrimack (4207175)
Town(s):	Nashua	Lat, Long:	424754N, 0713238W
Size:	14.3 acres	Elevation:	200 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: 2002: From Everett Turnpike, Exit 7W (Rte. 101A). Proceed 2 miles west. Turn left (SW) on to Deerwood Dr. Guilford Industries (B& M Railroad) track is at terminus. Gate marks rear entry to Boire Airport. Plants are distributed along RR tracks in northwest direction for ca. 0.5 mile. Patches are relatively large and interspersed within ca. 75 feet of track on northeast side. 1990: B & M Railroad, Rte. 101A. Along sides of railroad tracks. Populations mapped along tracks in Nashua, Amherst, and Merrimack.

Dates documented

First reported: 1990 Last reported: 2002-06-12

Poole, Eann, and D. H. Geiger. 2002. Field visit to Nashua, B& m Railroad, Rte 101a on June 12.

New Hampshire Natural Heritage Bureau - Animal Record

Banded Sunfish (*Enneacanthus obesus*)

Legal Status		Conservation Status	
Federal:	Not listed	Global:	Demonstrably widespread, abundant, and secure
State:	Not listed	State:	Rare or uncommon

Description at this Location

Conservation Rank: Not ranked
Comments on Rank:

Detailed Description: 2005: Area 4562M: 1 observed. Area 9018: 7 observed. 1998: Area 4562M: 100 observed, age and sex unknown (Obs_id 1896). 1938: Pennichuck Brook:Specimen.

General Area: 2005: Area 9018: Freshwater pond. 1998, 2005: Area 4562M: Freshwater pond (Obs_id 1896).1938: Pennichunk Brook: Brook, vegetation abundant. Water lily, Potamogeton, Ceratophyllum. Shore with rush marsh. Deep swamp stream.

General Comments: 1998: Area 4562M: Swampy pond with lots of pickerel weed, white and yellow water lily, watershield, coontail, Closely bordered by houses, lawns, trees where most of them are found. Seem to be somewhat abundant. ID verified by Larry Stolte USFWS National Fish Hatchery, Nashua.

Management Comments:

Location

Survey Site Name: Stump Pond
Managed By:

County:	Hillsborough	USGS quad(s):	South Merrimack (4207175)
Town(s):	Amherst	Lat, Long:	424827N, 0713340W
Size:	20.2 acres	Elevation:	

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: 2005: Area 9018: Witches Brook at South Merrimack Rd. 1998: Area 4562: Stump Pond in Amherst/Merrimack, NH. From nearby dock at 15 Willow Lane (Obs_id 1896).1938: Pennichuck Brook: 0.25 miles above T9, 0.6 miles E of South Merrimack.

Dates documented

First reported:	1938	Last reported:	2005-09-19

Bailey, R. M. 1938. New Hampshire Fish and Game. Field Notes, Coll. Blanks Corr. to STA. M-107, M1 to STA. M11-10, M160. Field data files.

New Hampshire Natural Heritage Bureau - Animal Record

Blanding's Turtle (*Emydoidea blandingii*)

Legal Status		Conservation Status	
Federal:	Not listed	Global:	Apparently secure but with cause for concern
State:	Not listed	State:	Rare or uncommon

Description at this Location

Conservation Rank: Not ranked
Comments on Rank:

Detailed Description: 1996: Area 6451: 1 adult.1992: Area 6604: 4 adults. Area 6606: 2 young. Area 2067: 2 adults.1990: Area 8845: 2 turtles.

General Area: 1996: Area 6451: Sedges/alder at pondside.1992: Area 2067: Basking on logs near Great Blue Heron nests in cattails/ open water.

General Comments: 1996: Area 6451: Observed by Trudy Loy. Also reported 2 fifty-cent sized Blanding's turtles at Tiffany Square, a vernal pool of unknown location in the same area.1990: Area 8845: Observed by Trudy Loy with David Carroll.

Management Comments:

Location

Survey Site Name: Stump Pond
Managed By:

County:	Hillsborough	USGS quad(s):	South Merrimack (4207175)
Town(s):	Amherst	Lat, Long:	
Size:	83.3 acres	Elevation:	195 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: 1996: Area 6451: [From South Merrimack, take the Boston Post Rd north ca. 1.0 mile to the inlet stream for Stump Pond. Site is downtream, near junction of inlet with the pond.] 2nd inlet above Stump Pond.1992: Area 2067: Terrault's marsh upstream from Stump Pond, across Boston Post Road [near trailer park]. Area 6604: Just upstream from McPhee's Landing, across from Jasper's Landing. Area 6606: Just below Jasper's Landing.

Dates documented

First reported:	1990-06-07	Last reported:	1996-03-27

Loy, Trudy. 1990. Rare turtle records at Stump Pond on June 7.

New Hampshire Natural Heritage Bureau - Animal Record

Blanding's Turtle (*Emydoidea blandingii*)

Legal Status		Conservation Status	
Federal:	Not listed	Global:	Apparently secure but with cause for concern
State:	Not listed	State:	Rare or uncommon

Description at this Location

Conservation Rank: Not ranked
Comments on Rank:

Detailed Description: 2005: Area 9291: 1 adult male turtle.
General Area: 2005: Area 9291: Red maple forest/swamp, low wet depressions and even a bit of peatland according to airport employee.
General Comments:
Management Comments:

Location

Survey Site Name: Nashua Airport
Managed By:

County: Hillsborough
Town(s): Nashua
Size: 1.9 acres
USGS quad(s): South Merrimack (4207175)
Lat, Long:
Elevation:

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Area 9291: North side of Boire Field airstrip at Nashua Airport. Turtle was in wet grass between airstrip and forest to north of airport.

Dates documented

First reported: 2005-06-01 Last reported: 2005-06-01

The New Hampshire Fish & Game Department has jurisdiction over rare wildlife in New Hampshire. Please contact them at 11 Hazen Drive, Concord, NH 03301 or at (603) 271-2461.

New Hampshire Natural Heritage Bureau - Animal Record

Eastern Hognose Snake (*Heterodon platirhinos*)

Legal Status		Conservation Status	
Federal:	Not listed	Global:	Demonstrably widespread, abundant, and secure
State:	Listed Threatened	State:	Rare or uncommon

Description at this Location

Conservation Rank: Not ranked
Comments on Rank:

Detailed Description: 1998: 2 seen. Adults. (Obs_id 1998.0389).
General Area: 1998: Overgrown grass on sand bordering woods with many wood frogs in it. (Obs_id 1998.0389).
General Comments:
Management Comments:

Location

Survey Site Name: Pennichuck Pond
Managed By:

County:	Hillsborough	USGS quad(s):	South Merrimack (4207175)
Town(s):	Amherst	Lat, Long:	424825N, 0713402W
Size:	30.8 acres	Elevation:	

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: 1998: 124 Route 101A. Face rear of lot. Behind building on right (Obs_id 1998.0389).

Dates documented

First reported:	1998-07-15	Last reported:	1998-07-15

The New Hampshire Fish & Game Department has jurisdiction over rare wildlife in New Hampshire. Please contact them at 11 Hazen Drive, Concord, NH 03301 or at (603) 271-2461.

New Hampshire Natural Heritage Bureau - Animal Record

Spotted Turtle (*Clemmys guttata*)

Legal Status		Conservation Status	
Federal:	Not listed	Global:	Demonstrably widespread, abundant, and secure
State:	Not listed	State:	Rare or uncommon

Description at this Location

Conservation Rank: Not ranked
Comments on Rank:

Detailed Description: 1998: 1 male seen, notch code L3R9 (Obs_id 1992.1127). 1 female seen, notch code L2R2. Adult. (Obs_id 1998.038).1996: 2 adult females observed on 5/30 and 5/1. "30" (3?) adults reported seen on 3/27. 1992: 4 seen. Adults. (4/21 Obs_id 1992.0082, 5/7 1992.0318). 1 female seen. Adult. (Obs_id 1992.002). 1 adult seen, notch code L2 R3. 1993: 2 females seen, one with notch code L3R2 (Obs_id 1992.1127, 1993.0046). 1990: 12 individuals observed.

General Area: 1996: At or near inlet of pond, with sedge/alder vegetation (Obs_id 1996.0156). Also sighted were 2 Blanding's and 1 painted turtle. 1993: Sedge/alder/red maple, with painted turtles. 1992: Basking on logs near great blue heron nests in cattails/open water (Obs_id 1992.0318). Sedge/alder channels (Obs_id 1992.0082). Sedges, alders and red maples (Obs_id 1992.002).

General Comments: 1996: Observed by Trudy Loy. Basking on sedge (Obs_id 1996.0156) 1990: Observed by Trudy Loy and David Carroll.

Management Comments:

Location

Survey Site Name: Stump Pond
Managed By:

County:	Hillsborough	USGS quad(s):	South Merrimack (4207175)
Town(s):	Amherst	Lat, Long:	
Size:	43.0 acres	Elevation:	195 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: 1996: 2nd inlet bend above Stump Pond (Obs_id 1996.0156). 1993: Sedges at head of pond, just above Jasper's Landing (Obs_id 1993.0046, 1992.0082). 1992: 2nd inlet bend above Stump Pond (Obs_id 1996.0156), 2' upstream of "gold mine" at head of pond (Obs_id 1992.002). Stump Pond; first cove up from Jasper's Landing (Obs_id 1992.1127). [From South Merrimack, take the Boston Post Rd north ca. 1.0 mile to the inlet stream for Stump Pond. Site is downtream, near junction of inlet with the pond.] Sightings at "First bend inlet head of pond in sedges", "From 'Gold Mine' at head and McPhee's Landing", and "Within fifteen feet, either side McPhee's landing". Also Terrault's Marsh, upstream from Stump Pond, across Boston Post Rd. (Obs_id 1992_0318).

Dates documented

First reported:	1990-06-07	Last reported:	1996-05-30

Loy, Trudy. 1990. Rare turtle records at Stump Pond on June 7.

New Hampshire Natural Heritage Bureau - Animal Record

Spotted Turtle (*Clemmys guttata*)

Legal Status	Conservation Status
Federal: Not listed	Global: Demonstrably widespread, abundant, and secure
State: Not listed	State: Rare or uncommon

Description at this Location

Conservation Rank: Not ranked
Comments on Rank:

Detailed Description: 2004: 1 female seen. Adult. (Obs_id 2004.0097).
General Area: 2004: Lower part of the yard is swampy (Obs_id 2004.0097).
General Comments: 2004: Spotted turtle came up from the swamp and laid eggs in the sand (Obs_id 2004.0097).
Management Comments:

Location

Survey Site Name: Muddy Brook
Managed By:

County: Hillsborough
Town(s): Hollis
Size: 30.8 acres
USGS quad(s): South Merrimack (4207175)
Lat, Long:
Elevation:

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: 2004: Residence on Hollis/Nashua line. Muddy brook skirts edge of lawn, then crosses road (Obs_id 2004.0097).

Dates documented

First reported: 2004-06-09 Last reported: 2004-06-09

The New Hampshire Fish & Game Department has jurisdiction over rare wildlife in New Hampshire. Please contact them at 11 Hazen Drive, Concord, NH 03301 or at (603) 271-2461.

Appendix D

New Hampshire Natural Heritage Bureau's *Rare Plants, Rare Animals, and Exemplary Natural Communities in New Hampshire Towns 2007*

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN NEW HAMPSHIRE

COUNTY	SPECIES	FEDERAL STATUS	GENERAL LOCATION/HABITAT	TOWNS
Belknap	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Meredith, Alton and Laconia
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Carroll	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Albany, Brookfield, Eaton, Effingham, Madison, Ossipee, Wakefield and Wolfeboro
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Coos	Canada Lynx	Threatened	Regenerating softwood forest, usually with a high density of snowshoe hare.	All Towns
	Dwarf wedgemussel	Endangered	Connecticut River main channel and Johns River	Northumberland, Lancaster and Dalton
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Cheshire	Dwarf wedgemussel	Endangered	S. Branch Ashuelot River and Ashuelot River	Swanzey, Keene and Surry
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Grafton	Dwarf wedgemussel	Endangered	Connecticut River main channel	Haverhill, Piermont, Orford and Lyme
	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Holderness
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Hillsborough	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Manchester, Weare
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Merrimack	Karner Blue Butterfly	Endangered	Pine Barrens with wild blue lupine	Concord and Pembroke
	Small whorled Pogonia	Threatened	Forests	Bow, Danbury, Epsom, Loudon, Warner and Allenstown
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide

Updated 02/05/2016

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN NEW HAMPSHIRE

COUNTY	SPECIES	FEDERAL STATUS	GENERAL LOCATION/HABITAT	TOWNS
Rockingham	Piping Plover	Threatened	Coastal Beaches	Hampton and Seabrook
	Roseate Tern	Endangered	Atlantic Ocean and nesting at the Isle of Shoals	
	Red knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal towns
	Small whorled Pogonia	Threatened	Forests	Deerfield, Northwood, Nottingham, and Epping
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Strafford	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Middleton, New Durham, Milton, Farmington, Strafford, Barrington, and Madbury
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Sullivan	Northeastern bulrush	Endangered	Wetlands	Acworth, Charlestown, Langdon
	Dwarf wedgemussel	Endangered	Connecticut River main channel	Plainfield, Cornish, Claremont and Charlestown
	Jesup's milk-vetch	Endangered	Banks of the Connecticut River	Plainfield and Claremont
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide

[1]Migratory only, scattered along the coast in small numbers

-Eastern cougar, gray wolf and Puritan tiger beetle are considered extirpated in New Hampshire.

-Endangered gray wolves are not known to be present in New Hampshire, but dispersing individuals from source populations in Canada may occur statewide.-There is no federally-designated Critical Habitat in New Hampshire

Updated 02/05/2016

Appendix E

UMass Archaeological Services Literature Review and Walkover Survey

UNIVERSITY OF MASSACHUSETTS
AMHERST

Archaeological Services
Department of Anthropology
Blaisdell House
310 Hicks Way
Amherst, MA 01003-9280

voice: 413.545.1552
fax: 413.577.1458

Mr. Armand Dufresne
Gale Associates, Inc.
15 Constitution Drive
Bedford, NH 03110-6041

July 31, 2008

Re: Nashua Municipal Airport
Management Memorandum for Phase 1A Archaeological Assessment Survey

Dear Armand,

Enclosed please find a copy of the management memorandum that provides a summary of the findings of the archaeological Phase 1A assessment at the Nashua Municipal Airport. The airport in general exhibits low sensitivity for unrecorded Native American or historical archaeological sites. No additional survey or testing is recommended for the Runway and Taxiway Relocation and Expansion Project.

With your approval, a copy of this memorandum will be submitted to the NH SHPO. The comprehensive draft survey report is currently in preparation and will be provided for your review shortly. Thank you for your assistance on this project.

Best Regards,

Timothy Binzen

Management Memorandum

Phase 1A Archaeological Assessment Survey of Nashua Municipal Airport (Boire Field)
Nashua, New Hampshire

Submitted to Gale Associates Inc. on July 31, 2008 by Timothy Binzen, Project Archaeologist
UMass Archaeological Services (413) 577-0776. (tbinzen@tei.umass.edu)

Introduction

An archaeological Phase 1A Assessment survey was performed for the property of the Nashua Municipal Airport. The main focus of the survey was the Area of Potential Effects (APE) of the programmed Runway and Taxiway Relocation and Expansion Project at the airport. The survey was conducted in order to evaluate the level of archaeological sensitivity of the APE and the airport in general for unrecorded pre-Contact Native American and historical resources.

Section 4.8 of the 1998 EA indicates that the New Hampshire State Historic Preservation Office (SHPO) was last contacted in 1981 to determine whether there were historically significant areas or structures on the airport or in the vicinity of the project area. Apparently, the SHPO responded in 1981 that there were no such areas or structures known to exist on the airport or in the project vicinity. The current proposed improvements (except for two approach light stations) are located on airport property. However, the extent of previous historical or archaeological surveys at the airport was unclear and it was not known whether the areas slated for disturbance within the APE have been previously "cleared" by the New Hampshire SHPO. Further, standards and other information may have changed over the past 26 years that make it prudent to conduct the necessary literature reviews and field observations to confirm either that this project will not disturb any significant archaeological or historical resources.

Scope. Gale Associates, Inc. ("Gale") retained Archaeological Services at the University of Massachusetts-Amherst to perform an archaeological Phase 1A assessment survey in order to assess archaeological sensitivity at the airport. The Phase 1A archaeological assessment included background research, a field reconnaissance, and consultation with the airport manager, but no subsurface testing. This memorandum summarizes the results of the Phase 1A assessment and provides findings for archaeological sensitivity at the Nashua Municipal Airport.

Authority. Archaeological Services conducts archaeological investigations in accordance with federal and state legislation and regulations concerning the impact to archaeological properties from federally funded or permitted activities. Legislation and regulations include the National Historic Preservation Act of 1966 as amended (PL 89-665); the National Environmental Policy Act of 1969 (PL 91-190, 42 USC 4321); Executive Order 11593 of 1971 (16 USC 470); Procedures for the Protection of Historic and Cultural Properties (36 CFR 800); and the Archaeological and Historical Preservation Act of 1974 (PL 93-291). State legislation dealing with the protection of historical and archaeological resources is summarized in the New Hampshire Division of Historical Resources' *Procedures for Identifying Cultural Resources* (1992).

Survey Area Boundaries and Description

Geographic Setting. The City of Nashua is centrally located in the Merrimack River Valley, bounded to the east by the Merrimack River, situated to the north and south of the Nashua River and located south of the Pennichuck River. The Nashua Municipal Airport is located in the northwest part of Nashua, west of Route 3, south of Route 101A, and approximately 1.5 mile north of the Nashua River. The airport has an elevation of 200 feet, and contains approximately 355 acres.

Airport Layout. The runway at the airport is approximately 5,500 feet long and 100 feet wide, and is oriented from northwest to southeast. The parallel taxiway is on the southern side of the runway. Access to the airport is from Perimeter Road. The airport terminal, hangars, and other structural facilities are located on the southern side of the central section of the runway. The safety areas beyond the runway ends consist of level expanses of grass.

The APE for the proposed Runway and Taxiway Relocation and Expansion Project includes the safety areas extending 1,000 feet from both ends of the runway, relocation of the runway 300 feet to the north, construction of a taxiway where the current runway is located, and construction of light stations at the western end of the airport.

Results of the Phase 1A Assessment Survey

Background Research. Background research for the Nashua Municipal Airport and for the general Nashua area was conducted at the New Hampshire Division of Historical Resources, Department of Cultural Resources. The state archaeological site files were consulted.

Regarding Native American resources, Victoria Bunker Kenyon has written the most extensive reports concerning the pre-Contact period in the Merrimack River Valley, including areas around Nashua. Based on her work at the Mine Falls park sites (27 HB 32, 33, 34) and other sites, she has concluded that the area was widely used by Native American populations of the Valley. Terraces along the Merrimack River and numerous falls, streams and tributaries made the area rich for short-term sites for food collection, which is reflected in the preponderance of tools found that were designed for hunting and fishing (Kenyon, 1984:16).

The Price (1967) map of Major Historic Indian Trails of South Central New Hampshire indicates that the Nasamok Trail ran just north of Nashua and met with four other major trails at the Merrimack River, suggesting that this area was an important point for the region's Native population. More recent work has turned up a variety of Native American sites, supporting the likelihood that areas around Nashua may contain additional unrecorded ancient sites. However, Nashua has gone through significant growth, during which many sites may have been partially destroyed. The area around the airport was not excluded from this activity. Various Phase I surveys and impact evaluations conducted over the past 30 years in Nashua reveal limited finds, such as project C-330158-03 located under a kilometer southeast from the airport. Completed in 1979, the report determined that cultural resources "are no longer present within the project area due to massive landscaping, land-filling, and construction" (Nicholas:1979, 4). The Nashua Park and Ride project, which was located to the northeast of the airport, found no significant archaeological resources.

To date, there are 17 known Native American sites within a 5-kilometer radius of the airport, with approximately 10 sites located along the edge of this radius to the east and northeast. A cluster of 8 sites are positioned north, northwest of the airport. Southeast of the airport are the important Mine Falls Park sites. No Native American sites have ever been recorded on the Nashua Municipal Airport property, or in areas directly adjacent to the airport.

From the 17th century to present day, Nashua has been influenced by Euro-American settlement. The earliest Euro-American settlements tended to be around the areas of Salmon Brook and incorporated what was known as Dunstable Township, which included settlements south of the contemporary city center of Nashua. Expansion of the township grew along the Nashua River to its confluence with the Merrimack. The 19th century saw an explosion of development with first a system of canals and then the railroad being built to increase industrial production specifically for the Nashua Manufacturing Company and smaller firms associated with it. The period from about 1824 to about 1840 was dominated by shipping up the Merrimack with the building of a canal and lock system to connect the Nashua and Merrimack Rivers. The introduction of the railroad cut back the use of the rivers, thought they still played an important role in the development of the city. The Nashua and Wilton Railroad (now Boston to Maine line) ran along the road to the town of Merrimack. This was one of three main lines to depot in the city.

Because of the 19th century expansion and continued growth through to modern times, the remains of earlier settlements have been destroyed. Nashua does have a large amount of National Historic Register buildings and homes with the city center. Outside of the city of Nashua were family farms. Based on the 1857 map, the area around the modern-day airport was limited to agricultural holdings both to the west and east. By 1892, Hurd's map indicates a reduction in these family holdings.

Within a 5 km radius of the airport, there are only 3 recorded historical archaeological sites, none of which is located within 2 km from the airport. No historical archaeological sites are known on the airport property itself.

Historically, the area now occupied by the airport was used for farming, and consisted primarily of open grazing land during the historic period. Sandy soils made the vicinity sub-optimal for cultivation. In the early 20th century, a small turf airfield was established where the eastern end of the runway is located. In 1934, the City of Nashua acquired the property. The runway was paved, and federally-funded airport facilities were constructed between 1934 and 1939.

Results of Walkover Survey at Airport. Staff from Archaeological Services consulted with Mr. Royce N. Rankin, Jr., the Airport Manager. Mr. Rankin provided an informative jeep tour of the airport property. Afterwards, a walkover survey was conducted for the north side of the runway, the safety areas and eastern and western ends of the airport, and in outlying areas.

Visual inspection confirmed that while the central part of the airport property was naturally quite flat, all infield areas, safety areas, and the northern side of the main runway were graded when the modern runway was constructed, and large piles of topsoil were pushed to peripheral sections of the airport. A low grassy ridge on the north side of the runway, opposite the terminal area, consists of an artificial mound of topsoil. The north and northwest ends of the

airport property are marshy or contain wetland soils, and are partially wooded with greater distance from the end of the runway.

Expected Cultural Resources at the Airport

Native American Sites. The likelihood for the Nashua Municipal Airport project area to contain pre-Contact Native American archaeological resources is based upon several criteria. These include proximity to previously recorded ancient sites, the types and condition of soils, surficial geology, degree of slope, slope orientation, proximity to freshwater sources and wetlands, and proximity to useful resources or raw materials. The degree of previous disturbance also is considered.

Historical Sites. The likelihood for historical archaeological sites to be present in the airport project area was assessed through historical documents, maps, and town histories that describe the settlement systems and land use seen in Nashua during the historic period.

Assessment of Archaeological Sensitivity. The assessment of sensitivity for unrecorded archaeological resources at the Nashua Municipal Airport addresses the likelihood for pre-Contact Native American sites as well as historic-period resources.

Native American Site Sensitivity. The likelihood for the airport to contain significant, unrecorded Native American archaeological deposits or sites is LOW.

Historical Site Sensitivity. The likelihood for the airport to contain significant, unrecorded historical archaeological resources is LOW.

Recommendations

Due to the findings of low archaeological sensitivity (likelihood) for either Native American or historical sites at the Nashua Municipal Airport, the proposed Runway and Taxiway Relocation and Expansion Project is unlikely to affect significant archaeological resources. No additional survey or testing is recommended for the project.

Appendix F

City of Nashua Land Use Code

City of Nashua, NH
Wednesday, January 31, 2018

Chapter 190. Land Use

Part 2. Zoning Districts and Supplemental Use Regulations

Article IV. Overlay Districts

§ 190-21. Airport Approach Zone.

Purpose and findings: The increasing aircraft activity that is occurring at the Boire Field Municipal Airport has created the need for special zoning restrictions for uses subject to the most recently adopted Part 150 Noise Compatibility Plan prepared by the Boire Field Airport Authority. To avoid land use conflicts with uses which may be incompatible with noise levels generated at the Boire Field Airport, the regulations of the Noise Overlay District provide for the exclusion of certain land uses, and for soundproofing to be required in the construction of other uses which may be compatible if mitigating action is taken to reduce noise interference with the use.

A. Applicability.

(1) In addition to the limitations and requirements set forth in the other articles of this Part **2** for various zoning districts within the City, any use, structure or object of natural growth situated within the limits of Airport Approach Zones and other restricted areas shall be further governed by the limitations of this section.

(2) All other articles of this Part **2**, including those relating to permits, nonconforming uses and variances, shall, where applicable, apply to the persons and subject matter governed by this Part **2**.

(3) Prior to filing an application for development approval within the Airport Approach Zone, the applicant shall submit a Federal Aviation Administration (FAA) Form 7460-1 to the FAA, and shall submit the comments of the FAA as part of the application for approval.

B. Establishment of airport approach plans. Any publicly owned airport or privately owned airport licensed for commercial operations, existing or which may be developed, shall have an airport approach plan prepared by the New Hampshire Aeronautics Commission in accordance with RSA 424 as last amended. The airport approach plan for the Boire Field, adopted by the New Hampshire Aeronautics Commission February 12, 1968, is hereby declared to be part of this section.

C. Boire Field airport approach plan.

(1) This airport approach plan, prepared under the authority of RSA 424:3, is based upon the ultimate development of a general aviation type airport with a runway 14/32 5,550 feet and a primary surface 5,900 feet by 1,000 feet.

(2) Federal Aviation Regulations, Part 77, effective May 1, 1965, establishes the standards used to determine the limit of height of obstructions in the vicinity of the airport.

(3) The limit of height of obstructions shall be:

(a) In the approach zone to Runway 32 (SE end), which is 500 feet wide at a point 200 feet from the end of the runway and 2,500 feet wide at a point 10,200 feet from the end of the runway, an inclined plane of 40:1 slope.

(b) In the approach zone to Runway 14 (NW end), which is 1,000 feet wide at a point 200 feet from the end of the runway and 7,000 feet wide at a point 10,200 feet from the end of the runway, an inclined plane of 50:1 slope, widening thereafter to 16,000 feet at a point 50,200 feet from the end of the runway, an inclined plane of 40:1 slope.

(c) On the sides of the primary and approach surfaces, an inclined plane of 7:1 slope from the edges of those surfaces. This subsection does not limit the height of a structure or tree to less than 30 feet above the ground upon which it is located.

(d) Within 7,000 feet of the airport reference point 150 feet above the airport, 349 feet above sea level.

(e) Between 7,000 feet and 12,000 feet from the airport reference point, a conical surface with a slope of 20:1 measured in a vertical plane passing through the center of the airport.

(4) The airport reference point is located on the center line of the runway, 2,750 feet from the southeast end of the runway, and the airport elevation is 199 feet above mean sea level (USGS Datum).

(5) Noise compatibility zones for the affected areas in the vicinity of the Boire Field Airport are hereby established based on the Ldn contours for aircraft noise as defined by the most recently approved Federal Aviation Regulation Part 150 Noise Compatibility Program for the Boire Field Airport. A generalized map of the approximate location of these zones is illustrated in the Noise Exposure Map. The boundaries of the Noise Overlay Zones are shown in the Part 150 Boire Field Airport Noise Compatibility Program.

D. Height limits. No structure or tree shall be erected, altered or allowed to grow within an airport approach zone and adjacent area above a height of 30 feet above the ground on which it is located unless the inclined plane is more than 30 feet above the ground, in which case a structure or tree may be erected, altered or allowed to grow up to the level of the plane or the height limitation of § **190-16**, whichever is less.

E. Permitted uses.

(1) Notwithstanding any other provisions of this Part 2 no use may be made of land within the airport hazard area in such manner as to:

(a) Create electrical or visual interference with any electronic facility or instrumentation, wherever located within the airport hazard area, including but not limited to, radio transmitters and receivers, radar installations, landing and navigational aids and weather instruments where such facilities are used in connection with the landing, taking off and maneuvering of aircraft;

(b) Make it difficult for flyers to distinguish between airport lights and others;

(c) Result in glare in the eyes of flyers using the airport;

(d) Impair visibility in the vicinity of the airport;

(e) Cause physical objects of any nature to penetrate, however briefly, the air space above the imaginary surfaces established in this article, such objects including but not limited to kites, balloons, projectiles, rockets, model aircraft, derricks and cranes, unless a special temporary permit be obtained from the authorities in charge of the affected airport;

(f) Establish or alter privately owned flying fields, strips or heliports, unless found not to be objectionable after a special aeronautical study by federal aviation authorities;

(g) Create bird strike hazards;

(h) Otherwise endanger the landing, taking off, or maneuvering of aircraft.

(2) Uses prohibited in the noise overlay zones shall be as specified in the Table of Land Use Compatibility Standards. Soundproofing shall be required for certain land uses in each of the noise overlay zones as shown in the Table of Land Use Compatibility Standards (Table 21-1 below). Where soundproofing is required, no building permits shall be issued until the applicant has demonstrated that the building design is capable of achieving the noise level reduction required in the Table of Land Use Compatibility Standards.

Table 21-1
Table of Land Use Compatibility Standards

	Yearly Day/Night Average Sound Level (Ldn) in Decibels					
Land Use	**Below 65**	**65-70**	**70-75**	**75-80**	**80-85**	**Over 85**
Schools (any category)	Y	N(1)	N(1)	N	N	N
Hospitals (any category)	Y	25	30	N	N	N
Churches; exhibition, convention or conference structures; performance theaters; or theaters	Y	25	30	N	N	N
Governmental offices	Y	Y	25	30	N	N
Transportation, communication, information and utilities (generally)	Y	Y	Y(2)	Y(3)	Y(4)	Y(4)
Parking lots	Y	Y	Y(2)	Y(3)	Y(4)	N
Office buildings	Y	Y	25	30	N	N
Warehousing and storage uses	Y	Y	Y(2)	Y(3)	Y(4)	N
Retail (general sales or service) uses	Y	Y	25	30	N	N
Utility uses and structures	Y	Y	Y(2)	Y(3)	Y(4)	N
Communication antennas, radio/television stations, telecommunication towers, telephone repeater stations	Y	Y	25	30	N	N
Industrial and manufacturing uses, general	Y	Y	Y(2)	Y(3)	Y(4)	N
Agriculture (except livestock)	Y	Y(6)	Y(7)	Y(8)	Y(8)	Y(8)
Excavation of sand, gravel and clay	Y	Y	Y	Y	Y	Y
Sports stadiums, arenas, coliseums, or assembly halls	Y	Y(5)	Y(5)	N	N	N
Amphitheaters, outdoor stages, band stands	Y	N	N	N	N	N
Golf courses	Y	Y	25	30	N	N

Source: 14 CFR Part 150, Article **X**, Division 1

Key to Table 21-1:

Numbers in parentheses refer to notes.

"Y (Yes)" means land use and related structures compatible without restrictions.

"N (No)" means land use and related structures are not compatible and should be prohibited.

"NLR" means noise level reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.

"25, 30, or 35" means that the land use and related structures are generally compatible; measures to achieve NLR of 25, 30, or 35 dB must be incorporated into design and construction of structure.

Notes to Table 21-1:

(1) Where school uses are permitted by a use variance, measures to achieve outdoor to indoor noise level reduction (NLR) of at least 25 dB and 30 dB should be incorporated into buildings. Normal residential construction can be expected to provide a NLR of 20 dB, thus, the reduction requirements are often stated as 5, 10 or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year-round. However, the use of NLR criteria will not eliminate outdoor noise problems.

(2) Measures to achieve NLR 25 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.

(3) Measures to achieve NLR of 30 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.

(4) Measures to achieve NLR 35 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal level is low.

(5) Land use compatible provided special sound reinforcement systems are installed.

(6) Residential buildings require an NLR of 25.

(7) Residential buildings require an NLR of 30.

(8) Residential buildings not permitted.

F. Signs. Within the fenced perimeter of Boire Field, a sign permit (see § **190-94**) for any proposed sign advertising a business or service located thereon may be issued by the airport manager or his designee, subject to review by the Nashua Airport Authority and in compliance with the requirements set forth below:

(1) No sign may be directed at or oriented to any street that serves the airport with the intent that the sign not be visible to or readable from said street, except as provided in the Boire Field Sign Standards booklet.

(2) The Administrative Officer shall assist the airport manager in the preparation and updating of the Boire Field sign standards booklet. In no event shall sign size exceed the maximum permitted in the PI Zoning District. (See Article **X** of this chapter.)

(3) The airport manager shall consult with the Administrative Officer as necessary concerning compliance with these requirements.

(4) The Administrative Officer may cause any sign to be removed that does not comply with these requirements, or as otherwise specified in the PI Zoning District. (See Article **IX** of this chapter.) Appeals concerning the removal of any sign shall be as set forth in § **190-136**.

G. Variances. In granting a variance from this article, the Zoning Board of Adjustment may, if such action is deemed advisable to effectuate the purposes of this article and is reasonable in the circumstances, condition the variance to require the owner of the structure or object of natural growth in question to permit the City, at its own expense, to install, operate and maintain thereon such markers and lights as may be necessary to indicate to flyers the presence of an airport hazard.

Appendix G

2015 MSGP, Parts 8.S.4-8.S.6

- Tenants independently perform, document and submit required information on their activities.

*Tenants who report their deicing chemical usage to the airport authority and rely on the airport authority to perform monitoring should not check the glycol and urea use box on their NOI forms.

8.S.3.3 ***SWPPP Requirements.*** A single comprehensive SWPPP must be developed for all stormwater discharges associated with industrial activity at the airport before submittal of any NOIs. The comprehensive SWPPP should be developed collaboratively by the airport authority and tenants. If any operator develops a SWPPP for discharges from its own areas of the airport, that SWPPP must be coordinated and integrated with the comprehensive SWPPP. All operators and their separate SWPPP contributions and compliance responsibilities must be clearly identified in the comprehensive SWPPP, which all operators must sign and certify per Part 5.2.7. As applicable, the SWPPP must clearly specify the MSGP requirements to be complied with by:

- The airport authority for itself;
- The airport authority on behalf of its tenants;
- Tenants for themselves.

For each activity that an operator (e.g., the airport authority) conducts on behalf of another operator (e.g., a tenant), the SWPPP must describe a process for reporting results to the latter operator and for ensuring appropriate follow-up, if necessary, by all affected operators. This is to ensure all actions are taken to correct any potential deficiencies or permit violations. For example, where the airport authority is conducting monitoring for itself and its tenants, the SWPPP must identify how the airport authority will share the monitoring results with its tenants, and then follow-up with its tenants where there are any exceedances of benchmarks, effluent limits, or water quality standards. In turn, the SWPPP must describe how the tenants will also follow-up to ensure permit compliance.

8.S.3.4 ***Duty to Comply.*** All individual operators are responsible for implementing their assigned portion of the comprehensive SWPPP, and operators must ensure that their individual activities do not render another operator's stormwater controls ineffective. In addition, the standard permit conditions found in Appendix B apply to each individual operator, including B.1 Duty to Comply (which states, in part, "You [each individual operator] must comply with all conditions of this permit."). For multiple operators at an airport this means that each individual operator remains responsible for ensuring all requirements of its own MSGP coverage are met regardless of whether the comprehensive SWPPP allocates the actual implementation of any of those responsibilities to another entity. That is, the failure of the entity allocated responsibility in the SWPPP to implement an MSGP requirement on behalf of other operators does not negate the other operators' ultimate liability.

8.S.4 Additional Technology-Based Effluent Limits.

8.S.4.1 ***Good Housekeeping Measures.*** (See also Part 2.1.2.2)

8.S.4.1.1 ***Aircraft, Ground Vehicle and Equipment Maintenance Areas.*** Minimize the contamination of stormwater runoff from all areas used for aircraft, ground vehicle and equipment maintenance (including the maintenance conducted on the terminal apron and in dedicated hangers) through implementation of control measures such as the following, where determined to be feasible and that accommodate considerations of safety, space, operational constraints, and flight considerations (list not exclusive):

performing maintenance activities indoors; maintaining an organized inventory of material used in the maintenance areas; draining all parts of fluids prior to disposal; prohibiting the practice of hosing down the apron or hanger floor; using dry cleanup methods; and collecting the stormwater runoff from the maintenance area and providing treatment or recycling.

8.S.4.1.2 ***Aircraft, Ground Vehicle and Equipment Cleaning Areas.*** (See also Part 8.S.4.6) Clearly demarcate these areas on the ground using signage or other appropriate means. Minimize the contamination of stormwater runoff from cleaning areas.

8.S.4.1.3 ***Aircraft, Ground Vehicle and Equipment Storage Areas.*** Store all aircraft, ground vehicles and equipment awaiting maintenance in designated areas only and implement control measures to minimize the discharge of pollutants in stormwater from these storage areas such as the following, where determined to be feasible and that accommodate considerations of safety, space, operational constraints, and flight considerations (list not exclusive): storing aircraft and ground vehicles indoors; using drip pans for the collection of fluid leaks; and perimeter drains, dikes or berms surrounding the storage areas.

8.S.4.1.4 ***Material Storage Areas.*** Maintain the vessels of stored materials (e.g., used oils, hydraulic fluids, spent solvents, and waste aircraft fuel) in good condition to prevent or minimize contamination of stormwater. Also plainly label the vessels (e.g., "used oil," "Contaminated Jet A"). To minimize contamination of precipitation/runoff from these areas, implement control measures such as the following, where determined to be feasible and that accommodate considerations of safety, space, operational constraints, and flight considerations (list not exclusive): storing materials indoors; storing waste materials in a centralized location; and installing berms/dikes around storage areas.

8.S.4.1.5 ***Airport Fuel System and Fueling Areas.*** Minimize the discharge of pollutants in stormwater from airport fuel system and fueling areas through implementation of control measures such as the following, where determined to be feasible and that accommodate considerations of safety, space, operational constraints, and flight considerations (list not exclusive): implementing spill and overflow practices (e.g., placing absorptive materials beneath aircraft during fueling operations); using only dry cleanup methods; and collecting stormwater runoff. If you have implemented a SPCC plan developed in accordance with the 2006 amendments to the SPCC rule, you may cite the relevant aspects from your SPCC plan that comply with the requirements of this section in your SWPPP.

8.S.4.1.6 ***Source Reduction.*** Consistent with safety considerations, minimize the use of urea and glycol-based deicing chemicals to reduce the aggregate amount of deicing chemicals used that could add pollutants to stormwater discharges. Chemical options to replace pavement deicers (urea or glycol) include (list not exclusive): potassium acetate; magnesium acetate; calcium acetate; and anhydrous sodium acetate.

8.S.4.1.6.1 ***Runway Deicing Operations.*** To minimize the discharge of pollutants in stormwater from runway deicing operations, implement source reduction control measures such as the following, where determined to be feasible and that

accommodate considerations of safety, space, operational constraints, and flight considerations (list not exclusive): metered application of chemicals; pre-wetting dry chemical constituents prior to application; installing a runway ice detection system; implementing anti-icing operations as a preventive measure against ice buildup; heating sand; and product substitution.

8.S.4.1.6.2 ***Aircraft Deicing Operations*.** Minimize the discharge of pollutants in stormwater from aircraft deicing operations. Determine whether excessive application of deicing chemicals occurs and adjust as necessary, consistent with considerations of flight safety. Determine whether alternatives to glycol and whether containment measures for applied chemicals are feasible. Implement control measures for reducing deicing fluid such as the following, where determined to be feasible and that accommodate considerations of safety, space, operational constraints, and flight considerations (list not exclusive): forced-air deicing systems, computer-controlled fixed-gantry systems, infrared technology, hot water, varying glycol content to air temperature, enclosed-basket deicing trucks, mechanical methods, solar radiation, hangar storage, aircraft covers, and thermal blankets for MD-80s and DC-9s. Consider using ice-detection systems and airport traffic flow strategies and departure slot allocation systems where feasible and that accommodate considerations of safety, space, operational constraints, and flight considerations. The evaluations and determinations required by this Part should be carried out by the personnel most familiar with the particular aircraft and flight operations and related systems in question (versus an outside entity such as the airport authority).

8.S.4.1.7 ***Management of Runoff*.** (See also Part 2.1.2.6) Minimize the discharge of pollutants in stormwater from deicing chemicals in runoff. To minimize discharges of pollutants in stormwater from aircraft deicing, implement runoff management control measures such as the following, where determined to be feasible and that accommodate considerations of safety, space, operational constraints, and flight considerations (list not exclusive): installing a centralized deicing pad to recover deicing fluid following application; plug-and-pump (PnP); using vacuum/collection trucks (glycol recovery vehicles); storing contaminated stormwater/deicing fluids in tanks; recycling collected deicing fluid where feasible; releasing controlled amounts to a publicly owned treatment works; separation of contaminated snow; conveying contaminated runoff into a stormwater impoundment for biochemical decomposition (be aware of attracting wildlife that may prove hazardous to flight operations); and directing runoff into vegetative swales or other infiltration measures. To minimize discharges of pollutants in stormwater from runway deicing, implement runoff management control measures such as the following, where determined to be feasible and that accommodate considerations of safety, space, operational constraints, and flight considerations (list not exclusive): mechanical systems (snow plows, brushes); conveying contaminated runoff into swales and/or a stormwater impoundment; and pollution prevention practices such as ice detection systems, and airfield prewetting.

When applying deicing fluids during non-precipitation events (also referred to as "clear ice deicing"), implement control measures to prevent unauthorized discharge of pollutants (dry-weather discharges of pollutants would need coverage under an NPDES wastewater permit), or to minimize the discharge of pollutants from deicing fluids in later stormwater discharges, implement control measures such as the following, where determined to be feasible and that accommodate considerations safety, space, operational constraints, and flight considerations (list not exclusive): recovering deicing fluids; preventing the fluids from entering storm sewers or other stormwater discharge conveyances (e.g., covering storm sewer inlets, using booms, installing absorptive interceptors in the drains); releasing controlled amounts to a publicly owned treatment works Used deicing fluid should be recycled whenever practicable.

8.S.4.2 ***Deicing Season.*** You must determine the seasonal timeframe (e.g., December-February, October - March) during which deicing activities typically occur at the facility. Implementation of control measures, including any BMPs, facility inspections and monitoring must be conducted with particular emphasis throughout the defined deicing season. If you meet the deicing chemical usage thresholds of 100,000 gallons glycol and/or 100 tons of urea, the deicing season you identified is the timeframe during which you must obtain the four required benchmark monitoring event results for deicing-related parameters, i.e., BOD, COD, ammonia and pH. See also Part 8.S.7.

8.S.5 Additional SWPPP Requirements.

8.S.5.1 ***Drainage Area Site Map***. (See also Part 5.2.2) Document in the SWPPP the following areas of the facility and indicate whether activities occurring there may be exposed to precipitation/surface runoff: aircraft and runway deicing operations; fueling stations; aircraft, ground vehicle and equipment maintenance/cleaning areas; and storage areas for aircraft, ground vehicles and equipment awaiting maintenance.

8.S.5.2 ***Potential Pollutant Sources.*** (See also Part 5.2.3) In the inventory of exposed materials, describe in the SWPPP the potential for the following activities and facility areas to contribute pollutants to stormwater discharges: aircraft, runway, ground vehicle and equipment maintenance and cleaning; and aircraft and runway deicing operations (including apron and centralized aircraft deicing stations, runways, taxiways and ramps). If deicing chemicals are used, a record of the types (including the Safety Data Sheets [SDS]) used and the monthly quantities, either as measured or, in the absence of metering, using best estimates, must be maintained. This includes all deicing chemicals, not just glycols and urea (e.g., potassium acetate), because large quantities of these other chemicals can still have an adverse impact on receiving waters. Deicing operators must provide the above information to the airport authority for inclusion with any comprehensive airport SWPPPs.

8.S.5.3 ***Vehicle and Equipment Wash Water Requirements.*** If wash water is handled in a manner that does not involve separate NPDES permitting or local pretreatment requirements (e.g., hauled offsite, retained onsite), describe the disposal method and include all pertinent information (e.g., frequency, volume, destination) in your SWPPP. Discharges of vehicle and equipment wash water are not authorized by this permit for this sector.

8.S.5.4 ***Documentation of Control Measures Used for Management of Runoff***. Document in your SWPPP the control measures used for collecting or containing contaminated melt water from collection areas used for disposal of contaminated snow.

8.S.6 Additional Inspection Requirements.

At a minimum conduct facility inspections at least monthly during the deicing season (e.g., October through April for most mid-latitude airports). If your facility needs to deice before or after this period, expand the monthly inspections to include all months during which deicing chemicals may be used. The Director may specifically require you to increase inspection frequencies.

8.S.7 Sector-Specific Benchmarks. (See also Part 6)

Table 8.S-1 identifies benchmarks that apply to Sector S. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table 8.S-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
For airports where a single permittee, or a combination of permitted facilities use more than 100,000 gallons of pure glycol in glycol-based deicing fluids and/or 100 tons or more of urea on an average annual basis, monitor the first four parameters in ONLY those outfalls that collect runoff from areas where deicing activities occur (SIC 4512-4581).	Biochemical Oxygen Demand (BOD_5)[1]	30 mg/L
	Chemical Oxygen Demand (COD)[1]	120 mg/L
	Ammonia[1]	2.14 mg/L
	pH[1]	6.0 - 9.0 s.u.

[1] These are deicing-related parameters. Collect the four benchmark samples, and any required follow-up benchmark samples, during the timeframe defined in Part 8.S.4.2 when deicing activities are occurring.

8.S.8 Effluent Limitations Based on Effluent Limitations Guidelines and New Source Performance Standards. (See also Part 6.2.2.1)

8.S.8.1 ***Airfield Pavement Deicing.*** For both existing and new "primary airports" (as defined at 40 CFR 449.2) with 1,000 or more annual non-propeller aircraft departures that discharge stormwater from airfield pavement deicing activities, there shall be no discharge of airfield pavement deicers containing urea. To comply with this limitation, such airports must do one of the following: (1) certify annually on the annual report that you do not use pavement deicers containing urea, or (2) meet the effluent limitation in Table 8.S-2.

8.S.8.2 ***Aircraft Deicing.*** Airports that are both "primary airports" (as defined at 40 CFR 449.2) and new sources ("new airports") with 1,000 or more annual non-propeller aircraft departures must meet the applicable requirements for aircraft deicing at 40 CFR 449.11(a). Discharges of the collected aircraft deicing fluid directly to waters of the U.S. are not eligible for coverage under this permit.

8.S.8.3 ***Monitoring, Reporting and Recordkeeping.*** For new and existing airports subject to the effluent limitations in Part 8.S.8.1 or 8.S.8.2 of this permit, you must comply with the applicable monitoring, reporting and recordkeeping requirements outlined in 40 CFR 449.20.

Appendix H

NHDOT Non-Aeronautical Use of Obligated Airports

Non-Aeronautical Use of Obligated Airports

Public-use airports that receive federal grant assistance are obligated to keep their airports open for aeronautical purposes. Once in a while there is a need in their communities to use a portion of the airport for some non-aeronautical purpose. This might come in the form of temporarily storing materials in a vacant building, one-day community outreach events, or on-going training sessions, but the request types could be endless. To ensure compliance with the airports' obligations under the federal grants, these airports are required to receive approval from either the FAA or the NHDOT/Bureau of Aeronautics. The NHDOT/Bureau of Aeronautics works with the Block Grant airport sponsors to review and approve or disapprove these non-aeronautical uses of their airports. In order to protect the continued safe use of these airports for aeronautical purposes, airport sponsors must submit sufficient information for NHDOT/Bureau of Aeronautics to be able to complete the review and issue a finding. This submission may be by electronic or hardcopy. If additional information is needed prior to a finding being issued, NHDOT/Bureau of Aeronautics will contact the airport sponsor. FAA reviews all non-aeronautical airport use requests for the non-Block Grant airports in New Hampshire.

SAMPLE REQUEST FOR NON-AERONAUTICAL USE OF OBLIGATED AIRPORTS

The _____, sponsor of _____ Airport, requests review and comment on the following proposed non-aeronautical use of _____ Airport.

- Description of activity including duration (including setup and teardown, if applicable).
- Identify the location of activity on the airport.
- Description of impact on aeronautical uses (include impacts on active aircraft movements, navigational aid critical areas, aviation fueling, airport safety/gate access).
- Description of any local permits needed, if any.
- Description of any environmental concerns and how they will be addressed (e.g., fuel leaks, smoke, fire).
- Explanation of fees to be charged by the airport; if no fees are to be charged, provide justification why no fees will be charged.
- Provide airport sponsor's plan to keep all parties safe while operating at the airport (i.e., Event Safety Plan); be sure to include FOD management, runway incursion prevention, NAVAID facility protection, UAS activity coordination, ATCT coordination, airport sponsor will be on site for the duration of the event ensuring compliance with these conditions and Event Safety Plan, UNICOM usage, issuance of NOTAMS, gate access, protection of airport design surfaces (RSA, ROFA, TSA, TOFA, etc.), and protection of airspace.

- Explain what other venues has the airport sponsor or proponent has investigated for this use and explain why none were suitable.
- Include the determination from FAA's OE/AAA evaluation, if appropriate.
- Explain how the event's location will not interfere with normal aeronautical use of the airport.
- Explain how adequate aeronautical facilities will remain open to air traffic.
- Explain the airport sponsor's efforts to coordinate this event with airport users; place coordination documentation in airport sponsor's files.
- Will obstructions, as determined by FAA to be hazards, be constructed for this event? If not, please state so.
- Explain that the airport sponsor will issue proper NOTAMs in advance of the event.
- Describe how the the portion of the airport to be closed or not available for aeronautical use will be properly marked, signed, or barricaded.
- Identify if FAA/Flight Standards District Office and/or air carriers will be notified, as appropriate.
- Explain that all markings, signage, and barricades will be removed and damage repaired, if any, within 24 hours of the end of the event.

The airport sponsor will comply with the following grant assurances even with the proposed non-aeronautical [use][activity]:

- Grant Assurance #19: State how the airport sponsor will continue to operate in a safe and serviceable manner.
- Grant Assurance #22: State if the airport sponsor is not preventing the aeronautical use of the airport. State if the airport sponsor be collecting the off-airport land lease rates ensuring economic non-discrimination for this event. State that the airport sponsor has established reasonable conditions to be met by the proponent to ensure the safe and efficient operation of the airport.
- Grant Assurance #24: State if the airport sponsor be collecting the off-airport land lease rate for the duration of this non-aeronautical use of airport property.
- Grant Assurance #25: State that the funds collected by the airport sponsor for this non-aeronautical use, if any, will be deposited in the airport sponsor's dedicated account for the operation and maintenance of the airport.

Appendix I

Exhibit A- Airport Property Plan

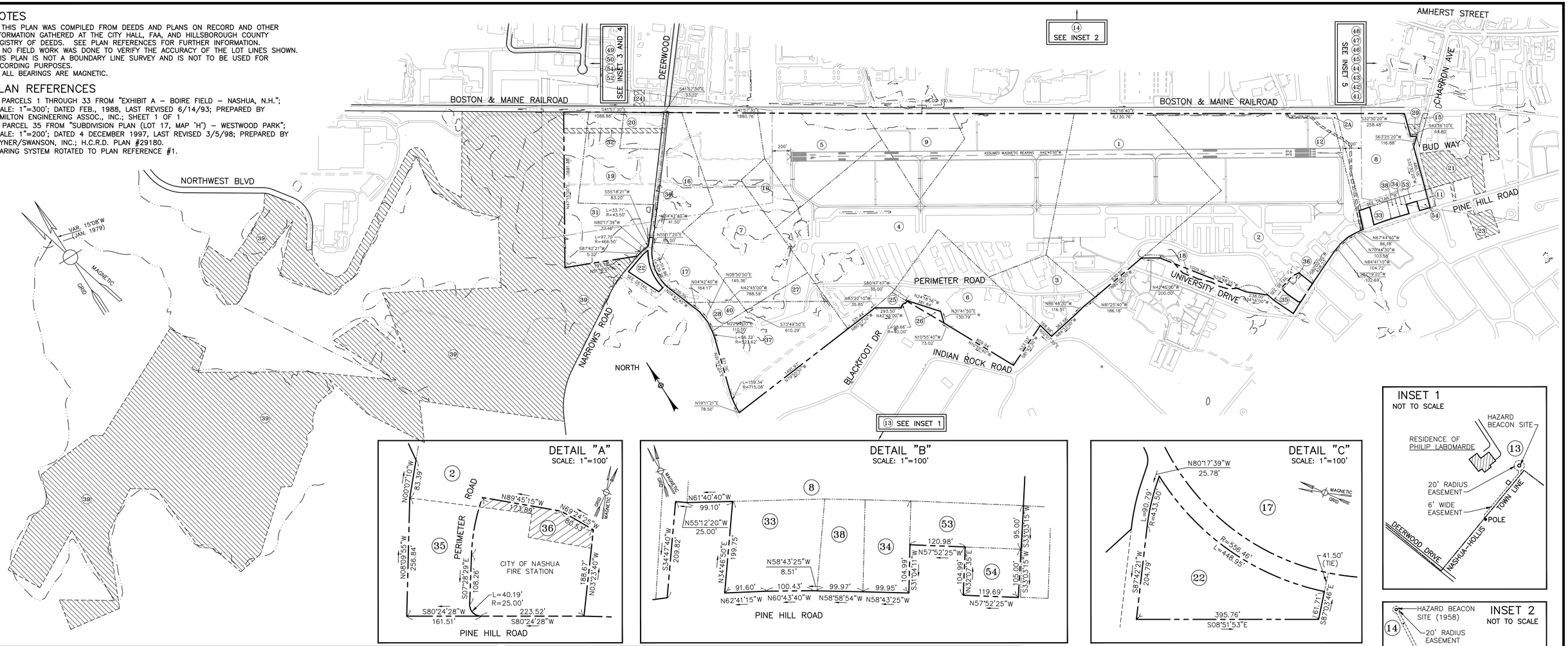
NOTES

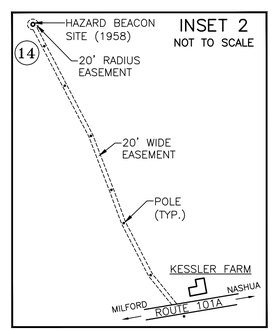
1. THIS PLAN WAS COMPILED FROM DEEDS AND PLANS ON RECORD AND OTHER INFORMATION GATHERED AT THE CITY HALL, FAA, AND HILLSBOROUGH COUNTY REGISTRY OF DEEDS. SEE PLAN REFERENCES FOR FURTHER INFORMATION.
2. NO FIELD WORK WAS DONE TO VERIFY THE ACCURACY OF THE LOT LINES SHOWN. THIS PLAN IS NOT A BOUNDARY LINE SURVEY AND IS NOT TO BE USED FOR RECORDING PURPOSES.
3. ALL BEARINGS ARE MAGNETIC.

PLAN REFERENCES

1. PARCELS 1 THROUGH 33 FROM "EXHIBIT A – BOIRE FIELD – NASHUA, N.H."; SCALE: 1"=300'; DATED FEB., 1988, LAST REVISED 6/14/93; PREPARED BY HAMILTON ENGINEERING ASSOC., INC.; SHEET 1 OF 1
2. PARCEL 35 FROM "SUBDIVISION PLAN (LOT 17, MAP 'H') – WESTWOOD PARK"; SCALE: 1"=200'; DATED 4 DECEMBER 1997, LAST REVISED 3/5/98; PREPARED BY HAYNER/SWANSON, INC.; H.C.R.D. PLAN #29180.

BEARING SYSTEM ROTATED TO PLAN REFERENCE #1.





PARCEL	GRANTOR	GRANTEE	INST.	DATE	BOOK/PAGE	REMARKS
1	ALICE T., CHARLES L. & ARTHUR H. COTTEN	CITY OF NASHUA, NH	FEE	5/19/34	932/182	
2	JOSEPH THERRIEN	CITY OF NASHUA, NH	FEE	5/19/34	932/199	
2A	JOSEPH THERRIEN	CITY OF NASHUA, NH	FEE	5/19/34	932/199	FORMER AIRPORT ROAD DISCONTINUED BY BOARD OF ALDERMAN, OCT. 13, 1964 (ORIGINALLY PART OF PARCEL 2)
3	JASON T. BICKFORD & HELEN B. HUBER	CITY OF NASHUA, NH	FEE	6/14/43	1049/334	
4	HARRY G. SPEAR	CITY OF NASHUA, NH	FEE	11/17/43	1056/222	
5	JOSEPH CERIER	CITY OF NASHUA, NH	FEE	12/7/43	1056/244	
6	JOSEPH A. LAMPRON	CITY OF NASHUA, NH	FEE	12/31/43	1056/358	
7	WILLIAM H. HALL	CITY OF NASHUA, NH	FEE	12/20/44	1075/21	
8	CLARA B. PARKER	CITY OF NASHUA, NH	FEE	11/26/49	1241/149	FAAP 9–27–017–901
9	J. BERNARD & DOROTHY DEPUNTE	CITY OF NASHUA, NH	FEE	1/24/50	1246/8	FAAP 9–27–017–901
10	DENNETT F. HOWE & NORMAN E. HOWE	CITY OF NASHUA, NH	FEE	1/19/51	1280/212 & 214	FAAP 9–27–017–901
11	AMY L. CALFEE	NASHUA AIRPORT AUTHORITY	FEE	4/5/63	1732/162	ACCESS ROAD CONSTRUCTION (NOW PART OF CHARRON AVENUE)
12	NASHUA AIRPORT AUTHORITY	PENNICHUCK WATER WORKS, INC.	ESMT	10/12/12	8482/0287	U/G UTILITY EASEMENT
13	PHILIP D. & FRANCES A. LABOMBARDE	NASHUA AIRPORT AUTHORITY	ESMT	6/19/63	1736/282	HAZARD BEACON EASEMENT FAAP 9–27–017–5903
14	KESSLER FARMS	NASHUA AIRPORT AUTHORITY	ESMT	1963		HAZARD BEACON EASEMENT FAAP 9–27–017–5903 (LIKELY ABANDONED)
15	SAMUEL A. TAMPOSI	NASHUA AIRPORT AUTHORITY	FEE	7/20/63	1742/119	ACCESS ROAD CONSTRUCTION (NOW PART OF CHARRON AVENUE)
16	JOSEPH E. A. LEVESQUE	CITY OF NASHUA, NH	FEE	12/16/66	1910/333	FAAP 9–27–017–C807
17	JOSEPH E. A. LEVESQUE	CITY OF NASHUA, NH	FEE	4/2/71	2125/388	FAA AIP 3–33–0012–01
18	AIRPORT PROPERTIES, INC.	CITY OF NASHUA, NH	AGRT	11/16/77	2580/241	BOUNDARY LINE ARGEEMENT
19	FRANK L. HARVEY	CITY OF NASHUA, NH	FEE	12/15/77	2579/670	FAA ADAP 7–33–0012–02
20	FRANK L. HARVEY	CITY OF NASHUA, NH	FEE	12/14/78	2661/24	FAA ADAP 5–33–0012–03
21	WILLIAM P. KORSAK DAVID M. HOLDEN	CITY OF NASHUA, NH	ESMT	4/24/80	2767/142	AVIGATION EASEMENT
22	JOHN P. HOWE & SALLY HOWE BIXBY	CITY OF NASHUA, NH	FEE	12/30/83	2980/176	FAA AIP 3–33–0012–01
23	NORMAN E. WRENN	CITY OF NASHUA, NH	ESMT	4/7/83	3009/484	AVIGATION EASEMENT

CONTINUED ON SHEETS 2 OF 3 AND 3 OF 3

PARCEL	GRANTOR	GRANTEE	INST.	DATE	BOOK/PAGE	REMARKS
24	RAYMOND G. & LILLIAN M. BARBOUR	CITY OF NASHUA, NH	ESMT	2/11/88	4620/23	AVIGATION EASEMENT
25	SAMUEL A. & BARBARA S. TAMPOSI	CITY OF NASHUA, NH	FEE	1/16/84	3122/397	LAND SWAP WITH PARCEL 26 FAA APPROVED NOV. 1983
26	CITY OF NASHUA, NH	S.A. & B.S. TAMPOSI	FEE	1/16/84	3135/3	LAND SWAP WITH PARCEL 25 FAA APPROVED NOV. 1983 (ORIGINALLY PART OF PARCEL 6)
27	FRANCES R. HOLDEN	CITY OF NASHUA, NH	FEE	8/30/93	5467/524	LAND SWAP WITH PARCEL 28 FAA APPROVED NOV. 1983
28	CITY OF NASHUA, NH	FRANCES R. HOLDEN	FEE	8/30/93	5467/526	LAND SWAP WITH PARCEL 27 FAA APPROVED NOV. 1983 (ORIGINALLY PART OF PARCELS 7 & 17)
29	PETER CAMPISI	CITY OF NASHUA, NH	ESMT	8/15/85	3375/757	AVIGATION EASEMENT
30	CITY OF NASHUA, NH	CITY OF NASHUA	–	12/10/85	–	STREET DISCONTINUANCE
31	PENNICHUCK CORP.	CITY OF NASHUA, NH	FEE	12/13/85	3431/62	FAA ADAP 5–33–0012–05
32	CITY OF NASHUA, NH	PENNICHUCK CORP.	ESMT	12/13/85	3432/89	U/G UTILITY EASEMENT
33	WILLIAM SHUBELKA	CITY OF NASHUA, NH	FEE	1/8/88	4580/281	FAA AIP 3–33–0012–08
34	MARGARET L. BROWN	CITY OF NASHUA, NH	FEE	9/24/91	5284/1074	FAA AIP 3–33–0012–1191
35	CITY OF NASHUA (NASHUA FIRE DEPARTMENT)	NASHUA AIRPORT AUTHORITY	–	6/18/92	–	LEASE AMENDMENT / LAND SWAP FAA APPROVED 5/28/92 (ORIGINALLY PART OF PARCEL 2)
36	NASHUA AIRPORT AUTHORITY	CITY OF NASHUA (NASHUA FIRE DEPARTMENT)	ESMT	6/18/92	–	AVIGATION EASEMENT RETAINED FAA APPROVED 5/28/92 (ORIGINALLY PART OF PARCEL 2)
37	FRANCES R. HOLDEN	CITY OF NASHUA	FEE	11/22/93	5494/1852	FAA AIP 3–33–0012–15 REFERENCE INCLUDES PREVIOUSLY DEEDED PARCEL 27 DOES NOT INCLUDE PARCEL 28 (SEE PARCEL 40)
38	HAZEL A. UPHAM	NASHUA AIRPORT AUTHORITY	FEE	11/12/99	6179/1550	FAA AIP 3–33–0012–19
39	CITY OF NASHUA	NASHUA AIRPORT AUTHORITY	ESMT	8/11/05 8/26/05	7521/1571 7533/1292	AVIGATION EASEMENT CORRECTIVE DEED TO ADD EXHIBIT 1
40	HEIRS AT LAW OF FRANCES R. HOLDEN	NASHUA AIRPORT AUTHORITY	FEE	4/16/12	8416/1911	CORRECTIVE DEED TO INCLUDE PREVIOUSLY OMITTED PARCEL 28 (SEE PARCEL 37)
41–48	SEE SHEET 3 OF 3					
49–52	SEE SHEET 2 OF 3					
53	JOLEEN T. KLISS	NASHUA AIRPORT AUTHORITY	FEE	5/20/14	8660/2858	NHDOT NO. SBG–12–13–2014
54	LORRAINE F. ALCORN, TRUSTEE OF THE LORRAINE F. ALCORN REVOC. TRUST	NASHUA AIRPORT AUTHORITY	FEE	9/18/14	8692/1462	NHDOT NO. SBG–12–15–2015

LEGEND

- OUTSALE PARCEL LINE
- AIRPORT PARCEL LINES
- AIRPORT BOUNDARY
- RUNWAY PROTECTION ZONE
- 3 — PARCEL, OUTSALE NUMBER
- 291.90' — DISTANCE IN FEET – BASED ON REFERENCED PLAN DIMENSIONS
- AVIGATION EASEMENT

Graphic Scale
0 500 1,000 1,500
SCALE: 1" = 500'

NOT FOR RECORDING PURPOSES

NO.	DATE	DESCRIPTION	BY	CHKD
2	4/3/15	AIRPORT PURCHASE LOT 53 AND 54	DCQ	EWS
1	6/6/12	ADD SHEETS 2 AND 3; AND PARCELS 41 THROUGH 52; AND ADD CORRECTIVE DEEDS FOR PARCELS 39&40	MEF	BLS

EXHIBIT A – AIRPORT PROPERTY PLAN

GALE
Gale Associates, Inc.
Engineers Architects Planners
15 Constitution Drive
Bedford, NH 03110
P 603.471.1887 F 603.471.1809
www.gainc.com
Boston Baltimore Orlando San Francisco

BOIRE FIELD
NASHUA MUNICIPAL AIRPORT
NASHUA, NEW HAMPSHIRE

Scale:	Date:	Drawn:	Reviewed:	Job No.
1"=500'	8/19/05	JAT	CLN	775911
			Cadd File: 775910–ExA	1 of 3

Easement on Lot H-634

LINE	BEARING	DISTANCE
L5	N 55°1' E	244'
L4	N 33°32' E	525'
L3	N 56°28' W	217'
L2	N 33°33' E	152'
L1	S 56°37' E	2065'
L13	S 33°23' W	937'
L12	N 27°35' W	269'
L11	N 7°22' E	393'

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	100'	222'	179'	S 56°4' E	126°57'

LINE	BEARING	DISTANCE
L10	S 60°25' W	688'
L9	N 14°58' W	316.'
L8	N 54°53' W	445'
L7	S 79°25' W	230'

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C6	360'	114'	114'	N 25°55' W	18°08'

LINE	BEARING	DISTANCE
L6	N 35°0' W	104'

Easement "A" on Lot H-523

LINE	BEARING	DISTANCE
L14	N 60°25' E	1257'
L15	S 07°22' W	424'
L16	S 27°35' E	356'
L17	S 42°22' E	414'
L18	S 30°49' W	222'
L19	N 65°56' W	1500'

Easement "B" on Lot H-523

LINE	BEARING	DISTANCE
L20	N 48°23' E	87'
L21	N 72°53' E	683'
L22	S 46°22' W	571'
L23	N 65°56' W	333'

Easement "C" on Lot H-523

LINE	BEARING	DISTANCE
L24	S 65°56' E	481'
L25	N 20°4' E	477'
L26	N 85°59' E	463'
L27	S 37°51' E	969'
L28	S 2°13' W	159'
L29	S 26°29' W	90'
L30	S 65°56' E	487'
L60	N 24°16' W	54'
L59	N 16°59' E	203'
L58	N 58°5' E	205'
L34	N 1°54' E	176'
L35	N 29°23' W	180'
L36	N 4°52' E	176'
L37	N 46°16' W	269'
L38	N 12°45' W	143'
L39	N 25°42' E	144'
L40	N 55°56' W	690'
L41	S 85°41' W	135'
L42	N 68°1' W	181'
L43	N 1°2' W	128'
L44	N 30°26' E	148'
L45	N 62°57' E	140'
L46	N 62°16' E	166'
L47	N 20°17' E	223'
L48	N 69°44' W	370'
Along CL of brook		2480'±

Easement "A" on Lot H-577

LINE	BEARING	DISTANCE
L46	S 56°37' E	1104'
L47	S 32°36' W	1258'
L48	S 65°55' E	720'
L18	N 30°49' E	222'
L17	N 42°21' W	415'
L16	N 27°35' W	356'
L15	N 7°22' E	424'
L14	S 60°25' W	1257'
L49	N 65°56' W	124'
L50	S 60°25' W	643'
L10	S 60°25' W	688'

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	100'	222'	179'	S 56°4' E	126°57'

LINE	BEARING	DISTANCE
L11	N 7°22' E	393'
L12	N 27°35' W	269'
L13	S 33°23' W	937'

Tie Lines from monuments to the centerline of the proposed relocated runway 14

LINE	BEARING	DISTANCE
L120	N 33°23' E	277'
L121	N 32°29' E	386'

S 57°23' E 5923' from the intersection of L120 and the proposed centerline of the relocated Runway 14 to the threshold of the proposed Runway 14

Easement "B" on Lot H-577

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C5	270'	75'	75'	N 43°12' W	15°58'

LINE	BEARING	DISTANCE
L53	S 34°57' E	215'

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C4	300'	367'	345'	S 0°7' W	70°07'

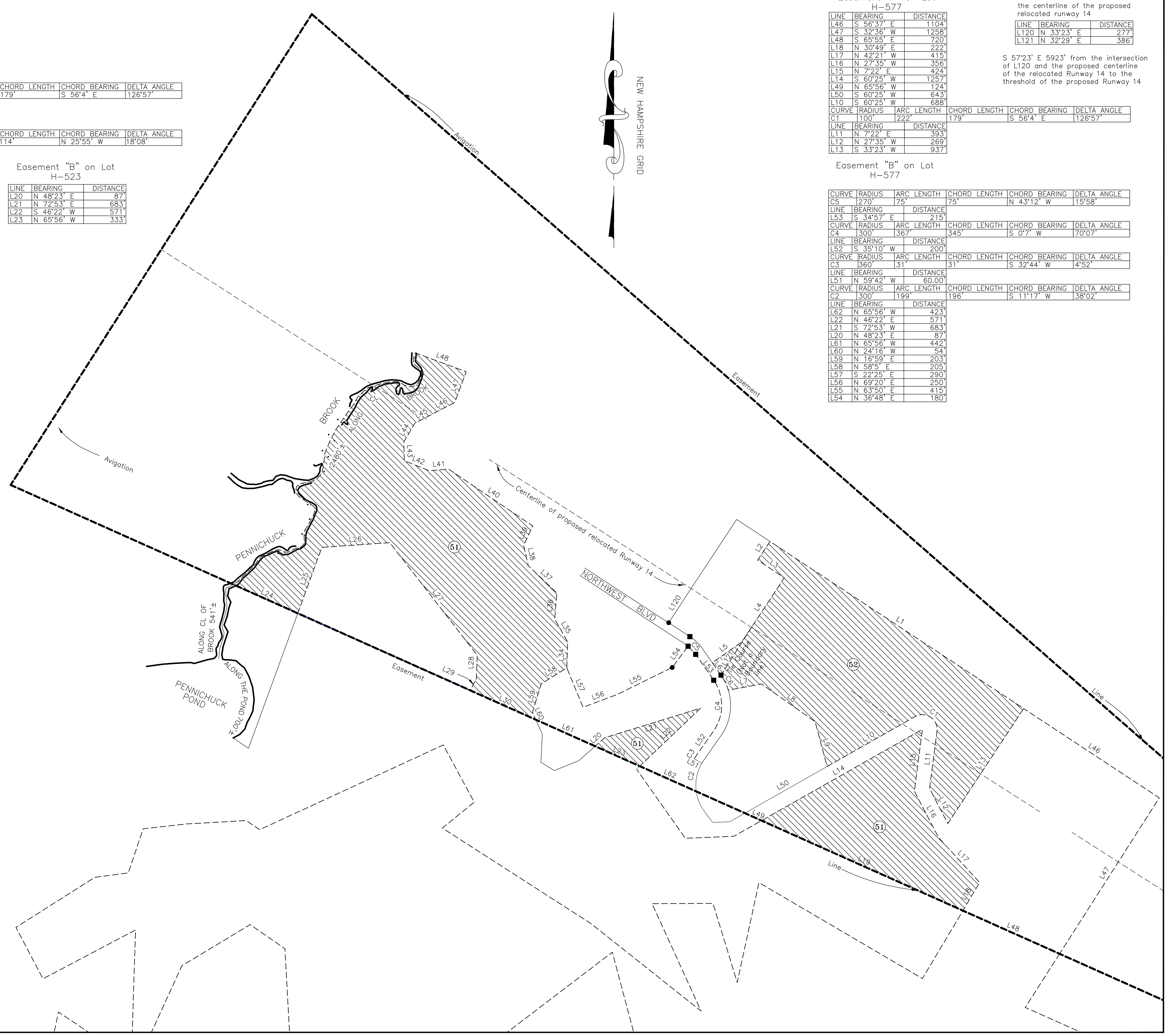
LINE	BEARING	DISTANCE
L52	S 35°10' W	200'

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C3	360'	31'	31'	S 32°44' W	4°52'

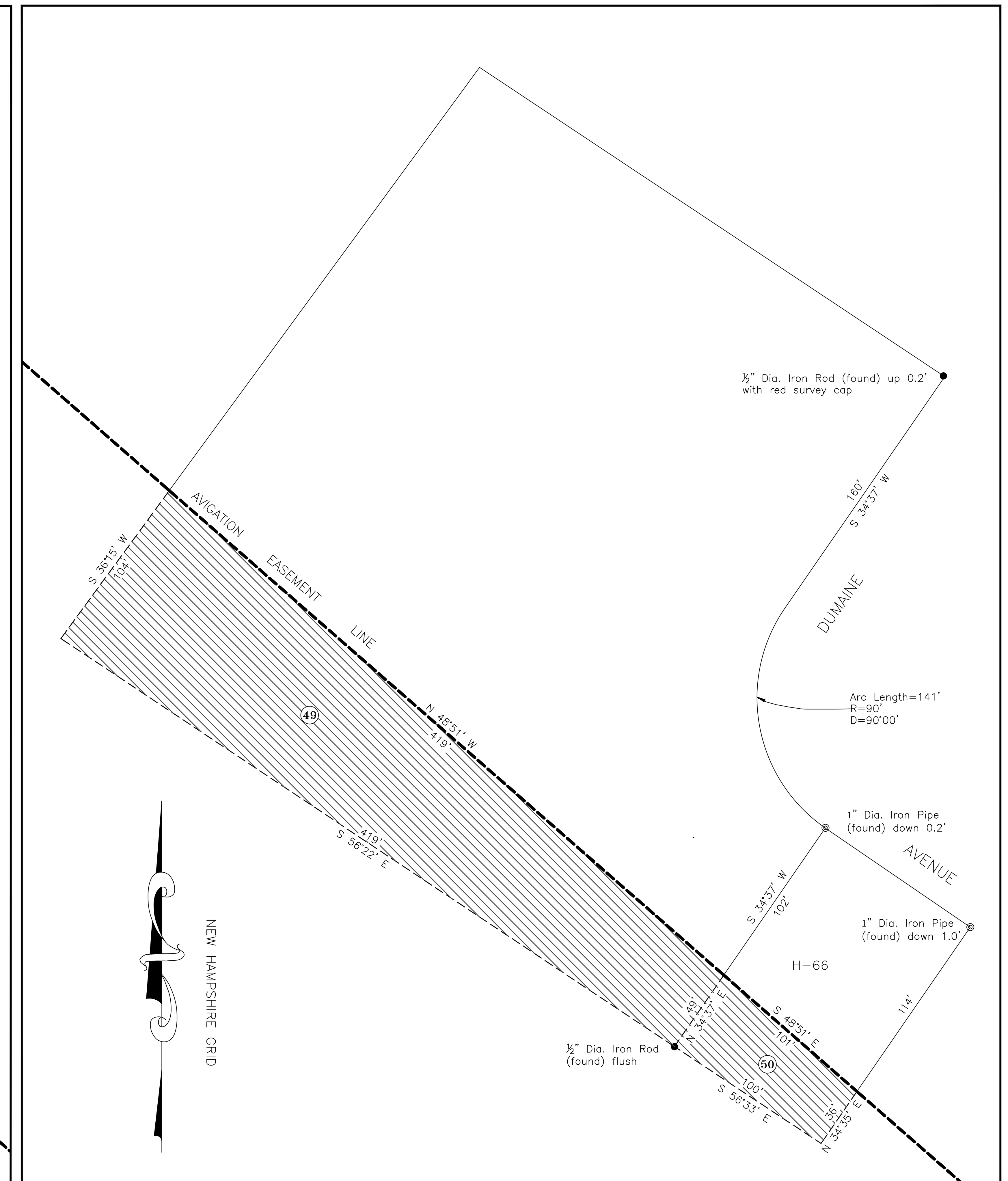
LINE	BEARING	DISTANCE
L51	N 59°42' W	60.00'

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C2	300'	199'	196'	S 11°17' W	38°02'

LINE	BEARING	DISTANCE
L62	N 65°56' W	423'
L22	N 46°22' E	571'
L21	S 72°53' W	683'
L20	N 48°23' E	87'
L61	N 65°56' W	442'
L60	N 24°16' W	54'
L59	N 16°59' E	203'
L58	N 58°5' E	205'
L57	S 22°25' E	290'
L56	N 69°20' E	250'
L55	N 63°50' E	415'
L54	N 36°48' E	180'



INSET 3
SCALE: 1"=400'



INSET 4
SCALE: 1"=50'

LEGEND

- OUTSALE PARCEL LINE
- AIRPORT PARCEL LINES
- AIRPORT BOUNDARY
- RUNWAY PROTECTION ZONE
- (3) PARCEL, OUTSALE NUMBER
- 291.90' DISTANCE IN FEET – BASED ON REFERENCED PLAN DIMENSIONS
- AVIGATION EASEMENT

NOT FOR RECORDING PURPOSES

Graphic Scale

0 500 1,000 1,500

SCALE: 1" = 500'

CONTINUED ON SHEETS 1 OF 3 AND 3 OF 3

PARCEL	GRANTOR	GRANTEE	INST.	DATE	BOOK/PAGE	REMARKS
49	FAT BOYS REALTY, LLC	NASHUA AIRPORT AUTHORITY	ESMT	10/21/11	8361/0009	AVIGATION EASEMENT
50	BARBOUR, LILLIAN	NASHUA AIRPORT AUTHORITY	ESMT	10/31/11	8363/2025	AVIGATION EASEMENT
51	PENNICHUCK WATER WORKS, INC.	NASHUA AIRPORT AUTHORITY	ESMT	9/30/11	8354/1548	AVIGATION EASEMENT
52	TWO C PACK SYSTEMS CORP.	NASHUA AIRPORT AUTHORITY	ESMT	11/7/11	8366/1576	AVIGATION EASEMENT

NO.	DATE	DESCRIPTION	BY	CHKD
2	4/3/15	AIRPORT PURCHASE LOT 53 AND 54	DCQ	EWS
1	6/6/12	ADD SHEETS 2 AND 3; AND PARCELS 41 THROUGH 52; AND ADD CORRECTIVE DEEDS FOR PARCELS 39&40	MEF	BLS

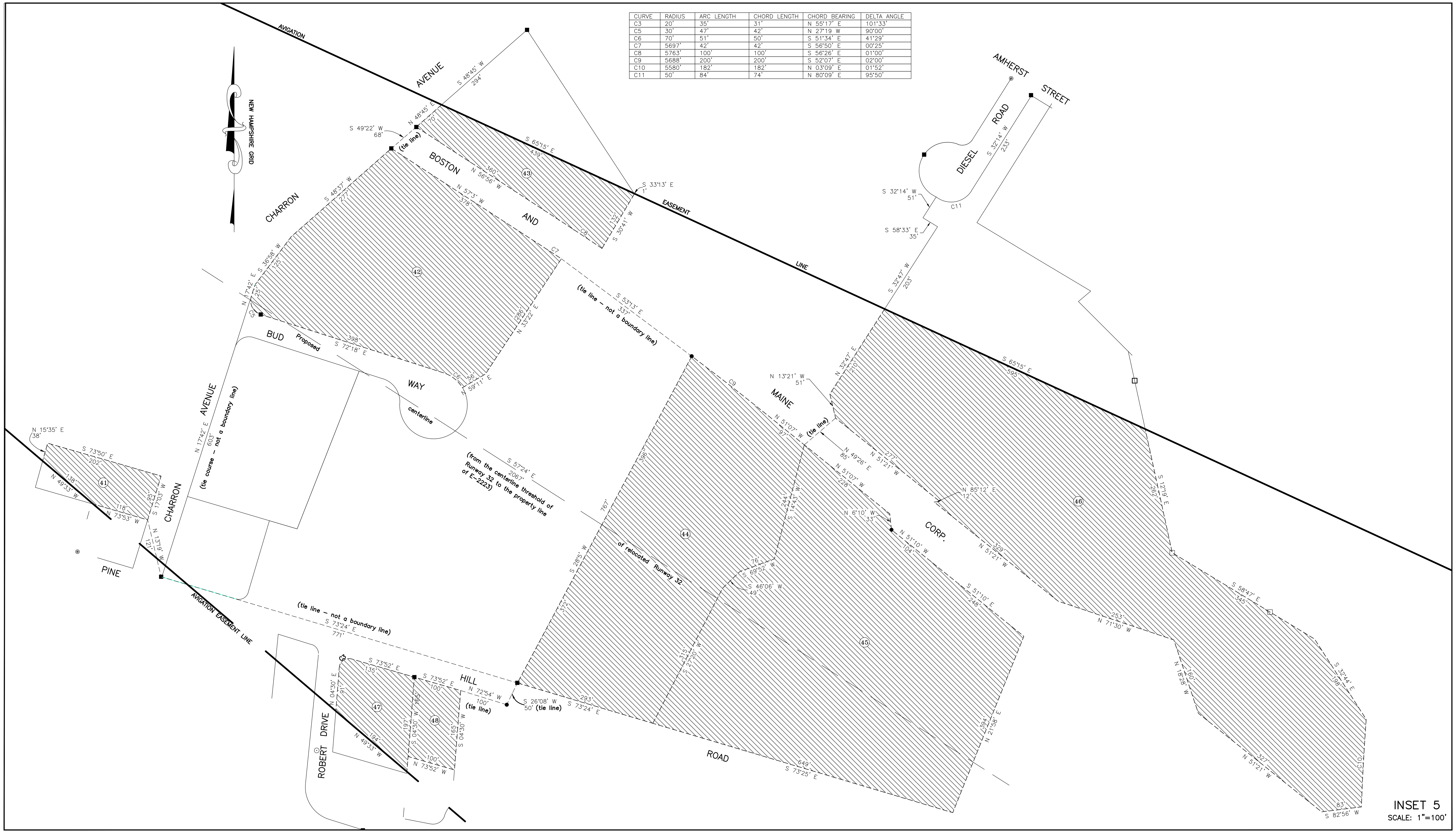
EXHIBIT A – AIRPORT PROPERTY PLAN

Gale Associates, Inc.
Engineers Architects Planners
15 Constitution Drive
Bedford, NH 03110
P 603.471.1887 F 603.471.1809
www.gainc.com
Boston Baltimore Orlando San Francisco

BOIRE FIELD
NASHUA MUNICIPAL AIRPORT
NASHUA, NEW HAMPSHIRE

Scale: AS SHOWN | Date: 8/19/05 | Drawn: JAT | Reviewed: CLN | Job No. 775911

Cadd File: 775910–ExA



CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C3	20'	35'	31'	N 55°17' E	101°33'
C5	30'	47'	42'	N 27°19 W	90°00'
C6	70'	51'	50'	S 51°34' E	41°29'
C7	5697'	42'	42'	S 56°50' E	00°25'
C8	5763'	100'	100'	S 56°26' E	01°00'
C9	5688'	200'	200'	S 52°07' E	02°00'
C10	5580'	182'	182'	N 03°09' E	01°52'
C11	50'	84'	74'	N 80°09' E	95°50'

NOT FOR RECORDING PURPOSES

CONTINUED ON SHEET 1 OF 3 AND 2 OF 3

PARCEL	GRANTOR	GRANTEE	INST.	DATE	BOOK/PAGE	REMARKS
41	KLISS, THOMAS S. AND RITA T.	NASHUA AIRPORT AUTHORITY	ESMT	8/16/11	8341/2162	AVIGATION EASEMENT
42	ATASANTE, LLC	NASHUA AIRPORT AUTHORITY	ESMT	8/25/11	8344/0754	AVIGATION EASEMENT
43	CITY OF NASHUA	NASHUA AIRPORT AUTHORITY	ESMT	9/30/11	8354/1555	AVIGATION EASEMENT
44	ROMAN CATHOLIC BISHOP OF MANCHESTER	NASHUA AIRPORT AUTHORITY	ESMT	8/25/11	8344/0749	AVIGATION EASEMENT
45	ROMAN CATHOLIC BISHOP OF MANCHESTER	NASHUA AIRPORT AUTHORITY	ESMT	8/25/11	8344/0744	AVIGATION EASEMENT
46	NEW NASHUA PROPERTIES LIMITED PARTNERSHIP	NASHUA AIRPORT AUTHORITY	ESMT	8/25/11	8344/0782	AVIGATION EASEMENT
47	DESRUISSEAUX, ROBERT N. AND JUDITH E.	NASHUA AIRPORT AUTHORITY	ESMT	8/16/11	8341/2166	AVIGATION EASEMENT
48	AULT, CAROLYN A.	NASHUA AIRPORT AUTHORITY	ESMT	8/16/11	8341/2172	AVIGATION EASEMENT

LEGEND

- OUTSALE PARCEL LINE
- AIRPORT PARCEL LINES
- AIRPORT BOUNDARY
- RUNWAY PROTECTION ZONE
- (3) PARCEL, OUTSALE NUMBER
- 291.90' DISTANCE IN FEET – BASED ON REFERENCED PLAN DIMENSIONS
- AVIGATION EASEMENT

NO.	DATE	DESCRIPTION	BY	CHKD
2	4/3/15	AIRPORT PURCHASE LOT 53 AND 54	DCQ	EWS
1	6/6/12	ADD SHEETS 2 AND 3; AND PARCELS 41 THROUGH 52; AND ADD CORRECTIVE DEEDS FOR PARCELS 39&40	MEF	BLS

EXHIBIT A – AIRPORT PROPERTY PLAN

GALE
Gale Associates, Inc.
Engineers Architects Planners
15 Constitution Drive
Bedford, NH 03110
P 603.471.1887 F 603.471.1809
www.gainc.com
Boston Baltimore Orlando San Francisco

BOIRE FIELD
NASHUA MUNICIPAL AIRPORT
NASHUA, NEW HAMPSHIRE

Scale:	Date:	Drawn:	Reviewed:	Job No.
1"=100'	8/19/05	JAT	CLN	775911
			Cadd File: 775910–ExA	3 of 3

Appendix J

ASH FY-2018-2020 Disadvantaged Business Enterprise Plan Methodology

ATTACHMENT 5

Section 26.45: Overall DBE Three-Year Goal Methodology

Name of Recipient: Nashua Airport Authority owner of Boire Field – Nashua Airport.

Goal Period: FY-2018-2019-2020 (October 1, 2017 through September 30, 2020)

DOT-assisted contract amount:	FY-2018	$	0.00
	FY-2019	$	1,000,000.00
	FY-2020	$	0.00
	Total	**$**	**1,000,000.00**

Overall Three-Year Goal: 1.0%, to be accomplished through 1.0% RN and 0% RC

Total dollar amount to be expended on DBEs: $9,741.87

Describe the Number and Type of Contracts that the airport anticipates awarding:

FFY-2018 Projects

Purchase SRE (Grader) – Not applicable (Equipment not counted toward participation goal)

FFY-2019 Projects

Rehabilitate Taxiway (Reclaim and Repave) – Phase II (Runway 14 End) – $1,000,000

FFY-2020 Projects

Purchase SRE (Loader & Wing Plow) – Not applicable (Equipment not counted toward participation goal)

Market Area: The NAA defines its market area as the State of New Hampshire. The contracting community that the NAA works with is relatively small and primarily New Hampshire-based. Although out-of-state firms to bid and subcontract on projects, because of high mobility costs and capacity, many out-of-state firms are less likely to mobilize to Nashua, New Hampshire to work on construction projects.

Step 1. 26.45(c) Actual relative availability of DBEs

Pursuant to 49CFR 26.45, the NAA has used the following methodology to determine the baseline figure for its 2018-2020 DBE goal. The NAA has used the most recent (2014) US Census data and the New Hampshire Department of Transportation (NHDOT) DBE Directory to determine the number of ready, willing, and able DBEs in the New Hampshire market area.

The NAA has carefully reviewed the area of work performed by DBEs in the NH market area to categorize each firm into specific areas of expertise through extensive research and outreach.

For each area of work, the total number of DBEs found in the NHDOT DBE Directory is divided by the total number of all firms found through analysis of the (2014) US Census data for New Hampshire to arrive at the percentage of DBE firms that are ready, willing, and able to perform contract work.

In order to determine the expected DBE participation in dollars, the estimated contracting dollars for each area of work is multiplied by the percentage of firms that are ready, willing, and able to perform contract work. To establish the DBE project goal, the overall projected DBE participation (in dollars) is divided by the estimated total project costs. This is the base goal for each project.

To determine the overall base figure for more than one project, the sum of all the dollars expected to be spent on DBE participation is divided by the estimated total of all project costs. This number is the overall base goal for the Airport. A breakdown of all mathematical calculations is provided in the table at the end of this section.

Step 2. 26.45(d): Adjustments to Step 1 base figure.

Insufficient historical DBE data for the NAA resulted in no adjustment to the Step 1 base figure; therefore, the Authority is adopting the Step 1 base figure as its overall goal for this three-year goal period.

26.51(b) (1-9): Breakout of Estimated "Race and Gender Neutral" (Race Neutral) and "Race and Gender Conscious" (Race Conscious) Participation.

The NAA will meet the maximum feasible portion of its overall goal by using Race Neutral means of facilitating DBE participation.

1. Arranging solicitations, times for the presentation of bids, quantities, specifications, and delivery schedules in ways that facilitates DBE, and other small businesses, participation;
2. Carrying out information and communications programs on contracting procedures and specific contract opportunities;
3. Providing services to help DBEs and other small businesses improve long-term development, increase opportunities to participate in a variety of kinds of work, handle increasingly significant projects, and achieve eventual self-sufficiency;
4. Ensuring distribution of DBE directory, through print and electronic means, to the widest feasible universe of potential prime contractors;

The NAA will meet the maximum feasible portion of its overall goal by using Race Neutral means of facilitating DBE participation.

The NAA estimates that in meeting its overall goal of 1.0%. It will obtain 1.0% from Race Neutral participation and 0% through Race Conscious measures.

PUBLIC PARTICIPATION

Consultation: Section 26.45(g)(1).

In establishing the overall goal, the NAA provided for consultation and publication. This included consultation with minority, women's and general contractor groups, community organizations, and other officials or organizations which could be expected to have information concerning the availability of disadvantaged and non-disadvantaged businesses, the effects of discrimination on opportunities for DBEs, and the NAA's efforts to establish a level playing field for the participation of DBEs. The consultation included a scheduled, direct, interactive exchange (e.g., a face-to-face meeting, video conference, teleconference) with as many interested stakeholders as possible focused on obtaining information relevant to the NAA's goal setting process, and it occurred before it was required to submit its goal methodology to the operating administration for review pursuant to paragraph (f) of this section.

Notwithstanding paragraph (f)(4) of this section, the NAA will not implement its proposed goal until it has complied with this requirement.

The NAA submits its overall DBE three-year goal to DOT on August 1 as required by the set schedule.

Before finalizing the overall goal, the NAA consulted with the Greater New England Minority Supplier Development Council, Women's Business Enterprise National Council, Center for Women & Enterprise, Associated General Contractors of NH, and the Nashua Chamber of Commerce without limiting consultation to these persons or groups, to obtain information concerning the availability of disadvantaged and non-disadvantaged businesses, the effects of discrimination on opportunities for DBEs, and the NAA efforts to establish a level playing field for the participation of DBEs.

The NAA received responses via email from the Associated General Contractors of NH, the Center for Women and Enterprise, and the Greater Nashua Chamber of Commerce requesting to review the program goals and methodology. Despite attempts to follow up for comment, the NAA received only one response from the Executive Vice President of the Associated General Contractors of NH, Mr. Gary Abbott, who stated, "I did look over the proposal and have no recommendations at this time."

The NAA also published a notice in the Nashua Telegraph of the proposed overall goal, which informed the public that the proposed goal and its rationale were available for inspection during normal business hours at the airport administration building for 30 days following the date of the notice. The NAA and DOT accepted comments on the goals for 30 days from the date of the notice. No comments were received.

CONTRACT GOALS

The NAA will use contract goals to meet any portion of the overall goal that it does not project being able to meet using Race Neutral means. Contract goals are established so that, over the period to which the overall goal applies, they will cumulatively result in meeting any portion of the NAA's overall goal that is not projected to be met through the use of Race Neutral means.

The NAA will establish contract goals only on those DOT-assisted contracts that have subcontracting possibilities. It need not establish a contract goal on every such contract, and the size of the contract goals will be adapted to the circumstances of each such contract (e.g., type and location of work and availability of DBEs to perform the particular type of work).

The NAA will express its contract goals as a percentage of the total amount of a DOT-assisted contract.

2018 Project Name: Purchase SRE (Grader)

Contract Amount
$333,333.00

DBE Participation		
in dollars	in percentage	
$0.00	0.0%	**STEP 1: Calculation of Goal**
		STEP 2: Goal Adjustment
$0.00	0.0%	PROJECT DBE PARTICIPATION GOAL

Not Applicable (Equipment not counted toward eligible participation)

2019 Project Name: Rehabilitate Taxiway (Reclaim and Repave) - Phase II (Runway 14 End)

AIP Eligible Amount
$1,000,000.00

DBE Participation		
in dollars	in percentage	
$9,741.87	1.0%	**STEP 1: Calculation of Goal**
		STEP 2: Goal Adjustment
$9,741.87	1.0%	PROJECT DBE PARTICIPATION GOAL

2018 Project Name: Purchase SRE (Loader & Wing Plow)

AIP Eligible Amount
$333,333.00

DBE Participation		
in dollars	in percentage	
$0.00	0.0%	**STEP 1: Calculation of Goal**
		STEP 2: Goal Adjustment
$0.00	0.0%	PROJECT DBE PARTICIPATION GOAL

Not Applicable (Equipment not counted toward eligible participation)

TOTAL FOR ALL BOIRE FIELD/NASHUA AIRPORT PROJECTS

Overall Project Costs
$1,000,000.00

DBE Participation		
in dollars	**in percentage**	
$9,741.87	**1.0%**	**STEP 1: Calculation of Goal**
		STEP 2: Goal Adjustment
$9,741.87	**1.0%**	

$9,741.87	***1.0%***	***FINAL OVERALL AIRPORT DBE PARTICIPATION GOAL***

2018 Project Name: Purchase SRE (Grader)

Overall Project Cost: $333,333.00
Federal Share: $300,000.00

STEP 1: Calculation of Goal Not Applicable (Equipment not counted toward eligible participation)

Description of Services	NAICS Code	Available Business	Available DBEs**	% of Avaliable DBEs	Project Costs	DBE Participation in Dollars
Professional/Consultant Contract						
Engineering and Management Services	541330	359	7	1.9%		$0.00
Engineering Construction Phase Services	541330	359	6	1.7%		$0.00
Acoustical/Noise Engineering	541330	359	1	0.3%		$0.00
Aerial Mapping and Photogrammetry (Survey)	541370	61	7	11.5%		$0.00
Architect	541310	67	6	9.0%		$0.00
Geotechnical	541330	359	2	0.6%		$0.00
Demolition and Removal of Structures	238910	367	13	3.5%		$0.00
Electrical Design Consultant	238210	484	0	0.0%		$0.00
Electrical Engineering Subconsultant	541330	359	2	0.6%		$0.00
Engineering / Environmental	541330	359	8	2.2%		$0.00
Engineering/Subconsultant Specialty (FAA Flight Check)	541330	359	0	0.0%		$0.00
Environmental Engineering, Compliance and Permitting Subconsultant	541620	55	12	21.8%		$0.00
Erosion Control Engineering	541690	77	0	0.0%		$0.00
Historical /Archaeological Investigation Subconsultant	541720	7	0	0.0%		$0.00
Legal Services	541110	683	1	0.1%		$0.00
Materials Testing (Soils Investigation) Subconsultant	541380	39	3	7.7%		$0.00
Negotiation & Relocation Services (Property Services)	531390	43	0	0.0%		$0.00
Real Estate Appraisal / Review Appraisal	531320	41	0	0.0%		$0.00
Reprographics Subconsultant	561439	18	0	0.0%		$0.00
Structural Engineer	541330	359	7	1.9%		$0.00
Survey (GIS) Subconsultant	541370	61	4	6.6%		$0.00
Survey (Land) Subconsultant	541370	61	8	13.1%		$0.00
FAA Airways Facilities	NA	0	0			$0.00
				Subtotal	$0.00	$0.00
				% DBE Participation		0.00%
Independent Fee Estimate Contract						
Engineering/Specialty Subconsultant - IFE	541330	359	0	0.0%	$0.00	$0.00
				Subtotal	$0.00	$0.00
				% DBE Participation		0.00%
Construction and Project Improvement						
(Electrical Power Distribution) Utility Backcharges	221122	48	0	0.0%		$0.00
Airport Runway Lighting Contractors/Electrical Contractors	238210	484	0	0.0%		$0.00
Asbestos Removal/Remediation	562910	28	3	10.7%		$0.00
Asphalt Paving	237310	73	1	1.4%		$0.00
Building Demolition	238910	367	1	0.3%		$0.00
Drainage Subconsultant	237310	73	1	1.4%		$0.00
Electrical Contractors (Electrical Installation)	238210	484	0	0.0%		$0.00
HazMat Inspection/Remediation	541620	55	10	18.2%		$0.00
Hydroseeding/Seeding	561730	834	2	0.2%		$0.00
Landscaping	561730	834	2	0.2%		$0.00
Lead Paint Inspection Services	541620	55	5	9.1%		$0.00
Masonry (Block Retaining Wall)	238140	98	1	1.0%		$0.00
Pavement and Pavement Markings (Painting) Subconsultant	237310	73	0	0.0%		$0.00
Remediation (UST Removal) Subconsultant	562910	28	3	10.7%		$0.00
Sedimentation and Erosion Control (Landscaping)	561730	834	1	0.1%		$0.00
Site Preparation (Land/Tree Clearing)	238910	367	3	0.8%		$0.00
Specialty Contractor (Fence and Gate)	238990	156	1	0.6%		$0.00
Specialty Contractor (Install Aboveground Fueling System)	238990	156	1	0.6%		$0.00
Specialty Contractor (Irrigation)	561730	834	0	0.0%		$0.00
Specialty Contractor (Underground Storage Tank Removal)	238990	156	1	0.6%		$0.00
Rare Species Habitat Replication	541620	55	3	5.5%		$0.00
Trucking (hauling of bulk materials, gravel, sand etc.)	484220	128	1	0.8%		$0.00
Unclassified Excavation	238910	367	3	0.8%		$0.00
Construction Material Providers:						
* Asphalt	324121	17	0	0.0%		$0.00
* Castings (die)	331511	2	0	0.0%		$0.00
* Concrete	327320	18	0	0.0%		$0.00
* Electrical supplies	423610	77	8	10.4%		$0.00
* Geotechnical Fabrics	313230	2	0	0.0%		$0.00
* Pipe & Pipe Fitting Suppliers	332996	3	0	0.0%		$0.00
* Pre-cast Concrete Pipe Manufacturer	32733	5	0	0.0%		$0.00
* Safety Equipment	444190	238	0	0.0%		$0.00
5% Contingency	NA	NA	NA	0.0%		$0.00
				Subtotal	$0.00	$0.00
				% DBE Participation		**0.00%**
Non - Contributive Expenses						
Sponsor Admin Fee	N/A	N/A	N/A	0%		$0.00
Acquisition of Parcel	N/A	N/A	N/A	0%		$0.00
				Subtotal	$0.00	$0.00
				% DBE Participation		**0.00%**
				Overall Total	$0.00	$0.00
				% Overall DBE Participation		**0.00%**

*based on the 2014 U.S. Government Economic Census for New Hampshire
**based on the NHDOT DBE Directory (January 2017) with adjustments for specific discipline

STEP 2: Goal Adjustment

% Goal Adjustment **0%**

FINAL PROJECT DBE PARTICIPATION GOAL ***0.0%***

2019 Project Name: Rehabilitate Taxiway (Reclaim and Repave) - Phase II (Runway 14 End)

Overall Project Cost: $1,000,000.00
Federal Share: $900,000.00

STEP 1: Calculation of Goal

	Description of Services	NAICS Code	Available Business	Available DBEs**	% of Avaliable DBEs	Project Costs	DBE Participation in Dollars
Professional/Consultant Contract							
X	Engineering and Management Services	541330	359	7	1.9%	$75,000.00	$1,462.40
X	Engineering Construction Phase Services	541330	359	6	1.7%	$100,000.00	$1,671.31
	Acoustical/Noise Engineering	541330	359	1	0.3%		$0.00
	Aerial Mapping and Photogrammetry (Survey)	541370	61	7	11.5%		$0.00
	Architect	541310	67	6	9.0%		$0.00
X	Geotechnical	541330	359	2	0.6%	$15,000.00	$83.57
	Demolition and Removal of Structures	238910	367	13	3.5%		$0.00
X	Electrical Design Consultant	238210	484	0	0.0%	$10,000.00	$0.00
	Electrical Engineering Subconsultant	541330	359	2	0.6%		$0.00
X	Engineering / Environmental	541330	359	8	2.2%	$5,000.00	$111.42
	Engineering/Subconsultant Specialty (FAA Flight Check)	541330	359	0	0.0%		$0.00
	Environmental Engineering, Compliance and Permitting Subconsultant	541620	55	12	21.8%		$0.00
X	Erosion Control Engineering	541690	77	0	0.0%	$5,000.00	$0.00
X	Historical /Archaeological Investigation Subconsultant	541720	7	0	0.0%	$5,000.00	$0.00
	Legal Services	541110	683	1	0.1%		$0.00
	Materials Testing (Soils Investigation) Subconsultant	541380	39	3	7.7%		$0.00
	Negotiation & Relocation Services (Property Services)	531390	43	0	0.0%		$0.00
	Real Estate Appraisal / Review Appraisal	531320	41	0	0.0%		$0.00
X	Reprographics Subconsultant	561439	18	0	0.0%	$5,000.00	$0.00
	Structural Engineer	541330	359	7	1.9%		$0.00
	Survey (GIS) Subconsultant	541370	61	4	6.6%		$0.00
X	Survey (Land) Subconsultant	541370	61	8	13.1%	$10,000.00	$1,311.48
	FAA Airways Facilities	NA	0	0			$0.00
					Subtotal	$230,000.00	$4,640.17
					% DBE Participation		2.0%

Independent Fee Estimate Contract							
X	Engineering/Specialty Subconsultant - IFE	541330	359	0	0.0%	$3,500.00	$0.00
					Subtotal	$3,500.00	$0.00
					% DBE Participation		0.00%

Construction and Project Improvement							
X	(Electrical Power Distribution) Utility Backcharges	221122	48	0	0.0%	$10,000.00	$0.00
	Airport Runway Lighting Contractors/Electrical Contractors	238210	484	0	0.0%	$0.00	$0.00
	Asbestos Removal/Remediation	562910	28	3	10.7%	$0.00	$0.00
X	Asphalt Paving	237310	73	1	1.4%	$195,000.00	$2,671.23
	Building Demolition	238910	367	1	0.3%	$0.00	$0.00
X	Drainage Subconsultant	237310	73	1	1.4%	$10,000.00	$136.99
X	Electrical Contractors (Electrical Installation)	238210	484	0	0.0%	$15,000.00	$0.00
	HazMat Inspection/Remediation	541620	55	10	18.2%	$0.00	$0.00
X	Hydroseeding/Seeding	561730	834	2	0.2%	$40,000.00	$95.92
X	Landscaping	561730	834	2	0.2%	$40,000.00	$95.92
	Lead Paint Inspection Services	541620	55	5	9.1%	$0.00	$0.00
	Masonry (Block Retaining Wall)	238140	98	1	1.0%	$0.00	$0.00
X	Pavement and Pavement Markings (Painting) Subconsultant	237310	73	0	0.0%	$30,000.00	$0.00
	Remediation (UST Removal) Subconsultant	562910	28	3	10.7%	$0.00	$0.00
X	Sedimentation and Erosion Control (Landscaping)	561730	834	1	0.1%	$30,000.00	$35.97
X	Site Preparation (Land/Tree Clearing)	238910	367	3	0.8%	$20,000.00	$163.49
X	Specialty Contractor (Fence and Gate)	238990	156	1	0.6%	$5,000.00	$32.05
	Specialty Contractor (Install Aboveground Fueling System)	238990	156	1	0.6%	$0.00	$0.00
	Specialty Contractor (Irrigation)	561730	834	0	0.0%	$0.00	$0.00
	Specialty Contractor (Underground Storage Tank Removal)	238990	156	1	0.6%	$0.00	$0.00
	Rare Species Habitat Replication	541620	55	3	5.5%	$0.00	$0.00
X	Trucking (hauling of bulk materials, gravel, sand etc.)	484220	128	1	0.8%	$75,000.00	$585.94
X	Unclassified Excavation	238910	367	3	0.8%	$30,000.00	$245.23
	Construction Material Providers:						
X	* Asphalt	324121	17	0	0.0%	$150,000.00	$0.00
X	* Castings (die)	331511	2	0	0.0%	$10,000.00	$0.00
X	* Concrete	327320	18	0	0.0%	$10,000.00	$0.00
X	* Electrical supplies	423610	77	8	10.4%	$10,000.00	$1,038.96
X	* Geotechnical Fabrics	313230	2	0	0.0%	$10,000.00	$0.00
X	* Pipe & Pipe Fitting Suppliers	332996	3	0	0.0%	$10,000.00	$0.00
X	* Pre-cast Concrete Pipe Manufacturer	32733	5	0	0.0%	$14,000.00	$0.00
	* Safety Equipment	444190	238	0	0.0%	$10,000.00	$0.00
	5% Contingency	NA	NA	NA	0.0%	$36,000.00	$0.00
					Subtotal	$760,000.00	$5,101.71
					% DBE Participation		**0.7%**

Non - Contributive Expenses							
X	Sponsor Admin Fee	N/A	N/A	N/A	0%	$6,500.00	$0.00
	Acquisition of Parcel	N/A	N/A	N/A	0%	$0.00	$0.00
					Subtotal	$6,500.00	$0.00
					% DBE Participation		**0.0%**

Overall Total	$1,000,000.00	$9,741.87
% Overall DBE Participation		**1.0%**

*based on the 2014 U.S. Government Economic Census for New Hampshire
**based on the NHDOT DBE Directory (January 2017) with adjustments for specific discipline

STEP 2: Goal Adjustment

% Goal Adjustment **0%**

FINAL PROJECT DBE PARTICIPATION GOAL ***1.0%***

2018 Project Name: Purchase SRE (Loader & Wing Plow)

Overall Project Cost: $333,333.00
Federal Share: $300,000.00

STEP 1: Calculation of Goal Not Applicable (Equipment not counted toward eligible participation)

Description of Services	NAICS Code	Available Business	Available DBEs**	% of Avaliable DBEs	Project Costs	DBE Participation in Dollars
Professional/Consultant Contract						
Engineering and Management Services	541330	359	7	1.9%		$0.00
Engineering Construction Phase Services	541330	359	6	1.7%		$0.00
Acoustical/Noise Engineering	541330	359	1	0.3%		$0.00
Aerial Mapping and Photogrammetry (Survey)	541370	61	7	11.5%		$0.00
Architect	541310	67	6	9.0%		$0.00
Geotechnical	541330	359	2	0.6%		$0.00
Demolition and Removal of Structures	238910	367	13	3.5%		$0.00
Electrical Design Consultant	238210	484	0	0.0%		$0.00
Electrical Engineering Subconsultant	541330	359	2	0.6%		$0.00
Engineering / Environmental	541330	359	8	2.2%		$0.00
Engineering/Subconsultant Specialty (FAA Flight Check)	541330	359	0	0.0%		$0.00
Environmental Engineering, Compliance and Permitting Subconsultant	541620	55	12	21.8%		$0.00
Erosion Control Engineering	541690	77	0	0.0%		$0.00
Historical /Archaeological Investigation Subconsultant	541720	7	0	0.0%		$0.00
Legal Services	541110	683	1	0.1%		$0.00
Materials Testing (Soils Investigation) Subconsultant	541380	39	3	7.7%		$0.00
Negotiation & Relocation Services (Property Services)	531390	43	0	0.0%		$0.00
Real Estate Appraisal / Review Appraisal	531320	41	0	0.0%		$0.00
Reprographics Subconsultant	561439	18	0	0.0%		$0.00
Structural Engineer	541330	359	7	1.9%		$0.00
Survey (GIS) Subconsultant	541370	61	4	6.6%		$0.00
Survey (Land) Subconsultant	541370	61	8	13.1%		$0.00
FAA Airways Facilities	NA	0	0			$0.00
				Subtotal		$0.00
				% DBE Participation		0.0%
Independent Fee Estimate Contract						
Engineering/Specialty Subconsultant - IFE	541330	359	0	0.0%	$0.00	$0.00
				Subtotal	$0.00	$0.00
				% DBE Participation		0%
Construction and Project Improvement						
(Electrical Power Distribution) Utility Backcharges	221122	48	0	0.0%	$0.00	$0.00
Airport Runway Lighting Contractors/Electrical Contractors	238210	484	0	0.0%	$0.00	$0.00
Asbestos Removal/Remediation	562910	28	3	10.7%	$0.00	$0.00
Asphalt Paving	237310	73	1	1.4%	$0.00	$0.00
Building Demolition	238910	367	1	0.3%	$0.00	$0.00
Drainage Subconsultant	237310	73	1	1.4%	$0.00	$0.00
Electrical Contractors (Electrical Installation)	238210	484	0	0.0%	$0.00	$0.00
HazMat Inspection/Remediation	541620	55	10	18.2%	$0.00	$0.00
Hydroseeding/Seeding	561730	834	2	0.2%	$0.00	$0.00
Landscaping	561730	834	2	0.2%	$0.00	$0.00
Lead Paint Inspection Services	541620	55	5	9.1%	$0.00	$0.00
Masonry (Block Retaining Wall)	238140	98	1	1.0%	$0.00	$0.00
Pavement and Pavement Markings (Painting) Subconsultant	237310	73	0	0.0%	$0.00	$0.00
Remediation (UST Removal) Subconsultant	562910	28	3	10.7%	$0.00	$0.00
Sedimentation and Erosion Control (Landscaping)	561730	834	1	0.1%	$0.00	$0.00
Site Preparation (Land/Tree Clearing)	238910	367	3	0.8%	$0.00	$0.00
Specialty Contractor (Fence and Gate)	238990	156	1	0.6%	$0.00	$0.00
Specialty Contractor (Install Aboveground Fueling System)	238990	156	1	0.6%	$0.00	$0.00
Specialty Contractor (Irrigation)	561730	834	0	0.0%	$0.00	$0.00
Specialty Contractor (Underground Storage Tank Removal)	238990	156	1	0.6%	$0.00	$0.00
Rare Species Habitat Replication	541620	55	3	5.5%	$0.00	$0.00
Trucking (hauling of bulk materials, gravel, sand etc.)	484220	128	1	0.8%	$0.00	$0.00
Unclassified Excavation	238910	367	3	0.8%	$0.00	$0.00
Construction Material Providers:						
* Asphalt	324121	17	0	0.0%	$0.00	$0.00
* Castings (die)	331511	2	0	0.0%	$0.00	$0.00
* Concrete	327320	18	0	0.0%	$0.00	$0.00
* Electrical supplies	423610	77	8	10.4%	$0.00	$0.00
* Geotechnical Fabrics	313230	2	0	0.0%	$0.00	$0.00
* Pipe & Pipe Fitting Suppliers	332996	3	0	0.0%	$0.00	$0.00
* Pre-cast Concrete Pipe Manufacturer	32733	5	0	0.0%	$0.00	$0.00
* Safety Equipment	444190	238	0	0.0%	$0.00	$0.00
5% Contingency	NA	NA	NA	0.0%	$0.00	$0.00
				Subtotal	$0.00	$0.00
				% DBE Participation		0%
Non - Contributive Expenses						
Sponsor Admin Fee	N/A	N/A	N/A	0%	$0.00	$0.00
Acquisition of Parcel	N/A	N/A	N/A	0%	$0.00	$0.00
				Subtotal	$0.00	$0.00
				% DBE Participation		#DIV/0!

*based on the 2014 U.S. Government Economic Census for New Hampshire
**based on the NHDOT DBE Directory (January 2017) with adjustments for specific discipline

Overall Total	$0.00	$0.00
% Overall DBE Participation		**0.0%**

STEP 2: Goal Adjustment

% Goal Adjustment **0%**

FINAL PROJECT DBE PARTICIPATION GOAL ***0.0%***

Appendix K

Post Inspection Land Use Report – August 18, 2005

POST INSPECTION LAND USE REPORT

Date: August 18, 2005

Prepared By:

Donna R. Witte
Airports Program Specialist
Airports Division, New England Region

Inspection Site Location: Boire Field, Nashua, New Hampshire

FA**A Representatives:** Donna R. Witte, Airports Program Specialist and Tracey McInnis, Program Analyst

Sponsor Representative: Roy Rankin, Airport Manager

Date of Inspection: June 29, 2005

Background: The following is based on records and files maintained by the FAA, Airports Division, New England Regional Office:

Grant Acquired Land:

Federal Aid to Airport Program (FAAP):

1) 9-27-017-4901: Fee simple interest in Parcels 8, 9 & 10 shown on Exhibit "A"dated 8/15/05.

2) 9-27-017-5903: Perpetual easement and right-of-way for hazard beacon shown as Parcel Nos. 13 and 14 on the Exhibit "A" Property Map dated 8/15/05.

3) 9-27-017-C807: Fee simple interest in Parcel 16 shown on Exhibit "A" dated 8/15/05.

Airport Development Airport Program (ADAP):

1) 7-23-0012-02: Fee simple interest in Parcel 19 on Exhibit "A" dated 8/15/05.

2) 5-33-0012-04: Fee simple interest in Parcel 20 on Exhibit "A" dated 8/15/05.

3) 5-33-0012-05: Fee simple interest in Parcel 31 on Exhibit "A" dated 8/15/05.

Airport Improvement Program (AIP):

1) 3-33-0012-01: Fee simple interest in Parcels 17 and 22 on Exhibit "A" dated 8/15/05.

2) 3-33-0012-08: Fee simple interest in Parcel 33 on Exhibit "A" dated 8/15/05.

3) 3-33-0012-11: Fee simple interest in Parcel 34 on Exhibit "A" dated 8/15/05.

4) 3-33-0012-15: Fee simple interest in Parcel 37 on Exhibit "A" dated 8/15/05.

5) 3-33-0012-19: Fee simple interest in Parcel 38 on Exhibit "A" dated 8/15/05.

FAA Releases Airport Property:

1) In November of 1983, FAA approved two land swaps: The swaps are shown on the 8/15/05 Exhibit "A" as Parcels 25 for 26 and 27 for 28.

2) On May 18, 1992, the FAA authorized a land swap of Parcels 35 and 36 of the 8/15/05 Exhibit "A" Property Map.

The City of Nashua and Nashua Airport Authority are obligated as follows:

1) FAAP and ADAP Land: Although the grant obligations have expired, the Sponsor is still prohibited from placing any encumbrances on the airport property unless approved by FAA. Title VI and Exclusive Rights provisions continue as long as the property is used as an airport.

2) AIP Land Acquired for Airport Development: The grant assurances require that land no longer needed for airport purposes be disposed of at current fair market value. The pro-rata share of the proceeds fro the sale of property must be returned to the FAA or be reinvested in an FAA eligible project. FAA approval of any disposal is required. Sufficient property interests must be retained by the Sponsor to protect the airports interests.

Findings:

1) During our review it was learned that the deed transferring Parcel 28 of the referenced Exhibit "A" was never recorded.

   Recommendation: The sponsor must have the deed recorded.

2) There were several errors on the Exhibit "A" Property Map.

   Recommendation: As of the date of this report, the sponsor has already made the necessary corrections.

There were no instances of unauthorized land uses found.

Donna R. Witte
Airports Program Specialist

Appendix L

Hangar Use Policy Letter – January 8, 2018

New Hampshire DOT
Department of Transportation

Victoria F. Sheehan
Commissioner

THE STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION

William Cass, P.E.
Assistant Commissioner

January 8, 2018

Mr. Chris Lynch, Airport Manager
Boire Field
93 Perimeter Rd.
Nashua, NH 03063

RE: Use of T-Hangar at Boire Field – Acceptance

Dear Mr. Lynch:

Thank you for organizing the meeting with the affected parties on December 8, 2017. This meeting was very worthwhile. I believe that we all found common ground on this issue going forward.

We are in receipt of your response letter dated December 12, 2017 in which you have adequately addressed all three conditions (no further automobile maintenance activities in the hangar; removal of automobile parts from the hangar; and on-airport building access by the Nashua Airport Authority) identified in my letter dated November 17, 2017. Nashua Airport Authority is returned to substantial compliance with FAA's hangar-use policy for obligated airports.

As non-aeronautical use of on-airport structures are proposed at Boire Field in the future, please don't hesitate to contact our office to request approval using the template on our website (https://www.nh.gov/dot/org/aerorailtransit/aeronautics/programs/blockgrants.htm#NonAero) as a guide. I remain available to answer any questions you or your Authority may have on this issue (603-271-1675 or carol.niewola@dot.nh.gov).

Sincerely,

Carol L. Niewola, PE, CM
Senior Aviation Planner
Bureau of Aeronautics

cc: Jorge Panteli, Compliance, FAA/New England Region

Appendix M

Notice of Potential Non-Compliance and Request for Corrective Actions Relative to Hangar Use at Boire Field

New Hampshire DOT
Department of Transportation

THE STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION

Victoria F. Sheehan
Commissioner

William Cass, P.E.
Assistant Commissioner

November 17, 2017

Mr. Chris Lynch, Airport Manager
Boire Field
93 Perimeter Rd.
Nashua, NH 03063

RE: Use of T-Hangar at Boire Field – Findings

Dear Mr. Lynch:

Thank you for responding to the remaining questions in your November 1, 2017 letter to me.

During our meeting on November 7, 2017 with Jorge Panteli (FAA Airports Compliance Specialist) and Sandra Cushing and Farrell Woods (Nashua Airport Authority), we were able to clarify the following:

- This hangar is a "double-unit" in a nested-T-hangar structure designated as Hangar 19 with two operable hangar doors…one to each unit. No access to this hangar was available at the time of the meeting.
- The easterly unit of this hangar has a door that faces roughly north and it houses a Vans RV-4 (N654ML) that is currently in NY having work done on its engine.
- The westerly unit of this hangar has a door that faces roughly south and it houses the hangar owner's aircraft building activities, along with at least two automobile chassis, their associated parts, a third apparently intact automobile, and other miscellaneous items.
- The Nashua Airport Authority (Authority) currently has a $0.05/SF aeronautical land lease rate and a $0.15/SF non-aeronautical land lease rate assumed to be annual rates. These rates are re-evaluated every two years by the Nashua Airport Authority to ensure current fair-market value.

There were a number of other issues that were discussed as a result of this inquiry. One concern related to the airport's policing powers of the privately owned hangars on the airfield. A review of a lease indicated that there is a subordination clause within that lease that connects the lessee's activity with your grant assurances. If this is representative of your other land and hangar leases, any activities occurring within the hangars are subject to the Authority's review and, if found to be illegal or not permissible, then corrective actions must be implemented. The lease provided to your tenants is a legal document detailing what can and cannot be done on the airport's property and is the controlling mechanism for the Authority.

The lease we reviewed, as written, satisfies the basic requirements outlined in Grant Assurance 5, Rights and Powers. However, the lease did not appear to define the ability for the Authority to access tenants' buildings for compliance with federal, state, or local laws, regulations, and requirements such as periodic hangar inspections or fire and safety inspections. Although existing leases are already in place, both NHDOT and FAA suggest that the Authority review its leases and, if not already in place, develop an agreement with all tenants of privately owned buildings on airport property such that the Authority has access rights as required from time to time for inspections. This agreement can be amended to the existing lease or held as a separate document. If the Authority does not have inspection rights, the Authority would be liable for any illegal or non-permissible actions or accidents occurring within the hangars.

Therefore, we find that the referenced "double-unit" hangar in Hangar 19 **is substantially compliant with the FAA's hangar-use policy for obligated airports conditioned on the following three items**:

1. The automobiles and all associated parts are to be removed from the hangar and no further automobile maintenance activity is to be completed in the future within this hangar unless approval is first obtained from NHDOT for a temporary non-aeronautical use and the Authority collects non-aeronautical lease rates for this hangar. Aircraft maintenance and amateur-built aircraft construction remain acceptable activities within this hangar as is the temporary parking of an automobile while the aircraft usually stored in that hangar is flying.
2. The Authority is to provide NHDOT with verification of the automobile parts removal through either a letter from the Authority or on-site inspection by NHDOT no later than December 20, 2017.
3. The Authority will develop an action plan to address the on-airport building access issue and develop a schedule to implement the action plan. This action plan and schedule need to be submitted to NHDOT and FAA no later than February 1, 2018.

The Authority has responsibility under its grant assurances to continue to monitor hangar usage at Boire Field. We hope that we've been able to give you the tools that you need to be good stewards of airport to benefit public aviation. We look forward to confirmation of the three conditions stated above. In the meantime, if you or your team has any questions on FAA's hangar-use policy, please feel free to contact me at 603-271-1675 or carol.niewola@dot.nh.gov.

Sincerely,

Carol L. Niewola, PE, CM
Senior Aviation Planner
Bureau of Aeronautics

cc: Jorge Panteli, Compliance, FAA/New England Region