

Preliminary Study Report

**IMPACT ON VALUE OF HIGH VOLTAGE TRANSMISSION LINES**  
Towns of Deerfield & Littleton  
Rockingham & Grafton Counties, New Hampshire

**Prepared for:**

Mr. George Dana Bisbee, Esquire  
Devine, Millimet & Branch, P.A.  
111 Amherst Street  
Manchester, New Hampshire

**Date of Study:**

May 27, 2011

May 27, 2011

George Dana Bisbee, Esquire  
Devine, Millimet & Branch, P.A.  
111 Amherst Street  
Manchester, New Hampshire 03101

Re: Preliminary Study of HVTL Impact on Value  
Towns of Deerfield and Littleton  
Rockingham & Grafton Counties  
New Hampshire

Dear Mr. Bisbee:

At your request, I have prepared the following preliminary study report in summary format to determine if the value of residential properties that abut or bisect existing high voltage transmission lines (HVTL) is impacted. It is my understanding that the use of this summary study is for internal purposes and may be disclosed to others outside your office in conjunction with legislative, legal, and application proceedings. It is important to note that this study does not include analysis of any one specific property; rather looks broadly across the market spectrum to analyze and determine the impact on value, if any.

The scope of this preliminary study was to research two towns: one in the North Country and one located in the southern tier of New Hampshire. Littleton was selected in the North Country due to the presence of an existing high voltage direct current transmission line (HVDC) similar to the proposed Northern Pass project. Deerfield was selected in the southern tier due to the presence of a large high voltage alternating current (HVAC) transmission line.

The methodology in this preliminary study was to review all parcels that are either bisected by or abutting existing HVTL corridors. More than 150 parcels were initially reviewed as part of this study in Deerfield and Littleton. These parcels are all located along the existing HVDC line in Littleton and the existing double 345kV transmission running north / south in Deerfield. In addition to sale transactions, vacant parcels of land that were improved with a home since 2000 have also been analyzed. The initial data research began with a review of tax assessment cards in both towns. The data was confirmed with MLS, where available, and a person directly involved in the transaction. Sales that included distressed conditions such as a foreclosure were not relied upon due to extenuating circumstances that make it difficult to measure impact on value. For example, loan to value ratios, borrower's personal circumstances, and bank's disposition strategy all factor into foreclosure sales. Therefore, these external factors unrelated to the real estate market can vary greatly; thus rendering this type of data unreliable.

Four properties were identified in each town. These properties were either sales transactions or vacant land parcels that were improved with homes. The sale data was compared against all other similar properties that sold within the town during the same year. The sale data was also compared against the equalized assessed value.

The factors in the study include: marketing period, vacant land with new improvements, the principle of substitution, equalized assessed value, and comparing all other sale data in the town during the same year. The summary analysis and conclusions follow:

▲ **Marketing Period**

In transactions where marketing period data was available, there was no evidence of increased marketing times compared to the average marketing periods during the same time period. In fact, the marketing periods were shorter than the mean for the marketplace in each transaction.

▲ **Vacant Land with New Improvements**

There are three examples of vacant land in Littleton underneath the HVDC located in the pristine Connecticut River Valley with waterfrontage on the Connecticut River where houses were constructed since 2000. As shown on the sale data pages that follow, significant investment in improvements (homes) are being made despite the presence of the HVDC transmission line.

▲ **Principle of Substitution**

Based on a review of MLS data, market participants in the two towns had alternatives within the marketplace to purchasing property abutting or bisected by HVTLs. There were other alternative locations that provided similar amenities and characteristics without being near a HVTL; yet market participants chose properties that abut or are bisected by the HVTL paying market value.

▲ **Equalized Assessed Value**

Comparison of the sale price to the equalized assessed value of the property was analyzed. For the transaction in Littleton, the property sold for significantly more than the equalized assessed value. In Deerfield, the town's historical assessment data was not available at the time of sale. The tax assessment cards in both towns did not reflect any discount for the presence of the HVTL.

▲ **Comparing Sale Data for Properties Abutting to All Other Similar Sale Data Within the Town**

MLS data for the five sales abutting the HVTL was compared to all other sales transactions within the town during the same time period. This analysis included review of sale data within the town of similar properties during the same time period in order to confirm whether the property sold at market value. The MLS sales data was reviewed on an individual basis

for each of the five sales. Without exception, the five transactions did not reflect a discount or a below market value transaction price.

All sale data has been confirmed from the municipal records. In addition, a party that was involved with the transaction was interviewed. Individuals that were directly involved in the transaction were asked if the presence of the HVTL impacted the listing price, the sale price, and marketing time of the property. Without exception, the parties interviewed indicated that the presence of a HVTL did not impact the market value of the property. In all cases, the sales were arm's length transactions.

The following pages include a summary of the data analyzed and considered as part of this preliminary study. The associated satellite images found on the following pages show the existing HVTL corridor in relation to the property analyzed. For the Littleton data, the parcel is shown in yellow and the HVTL corridor is shown in red. For the Deerfield data, the HVTL corridor is shown in pink.

LITTLETON, NEW HAMPSHIRE

**1314 Monroe Road  
Tax Map 40, Lot 3**

47.14 acres with 2,694 feet of waterfront on the Connecticut River. Improved with a single family house constructed in 2000 that contains 2,652 square feet of finished area with 3 bedrooms and 3 bathrooms.

The parcel is bisected by the HVDC line along the waterfront. The HVDC right of way is between the house and the waterfront. The property sold on May 10, 2010 for \$400,000 and was marketed for 69 days (mean marketing period was 105 days). The equalized assessed value at the time of sale was \$254,900 (not considering land in current use).

According to a participant in the transaction, the house sold at its “market value” and the transaction was arm’s length without any concessions paid by the seller.



**1996 Monroe Road  
Tax Map 27, Lot 4**

28.94 acres with 960 feet of waterfront on the Connecticut River.

In 1993, the parcel sold as vacant land for \$30,000. In 2011, a new 2,192 square foot house was constructed on the site at an estimated cost of \$264,598 (as completed) according to the tax assessment card. The HVDC power line bisects the property approximately halfway between the road and the water. The total equalized assessed value of the property as of April 1, 2010 was \$284,700.



**1950 & 1952 Monroe Road  
Map 27, Lot 5**

28.96 acres with 920 feet of waterfront on the Connecticut River. Improved with two homes: a 2,398 square foot gambrel house constructed in 1996 and a 795 square foot ranch house constructed in 2006.

The HVDC power line bisects the property approximately halfway between the road and the water. The property sold on March 29, 1994 for \$28,900 as vacant land. Since 1996, two years after the purchase of the raw land, according to the tax assessment data, the owner has invested \$311,600 in improvements. The total equalized assessed value is currently \$414,400.



**1174 Monroe Road  
Map 28, Lot 2**

11.74 acres with 677 feet of waterfront on the Connecticut River.

In 2008, a new 2,212 square foot house was constructed on the site at an estimated cost of \$150,000 according to the tax assessment card building permit data. The HVDC power line bisects the property approximately halfway between the road and the water. The total equalized assessed value of the property as of April 1, 2010 was \$248,200.





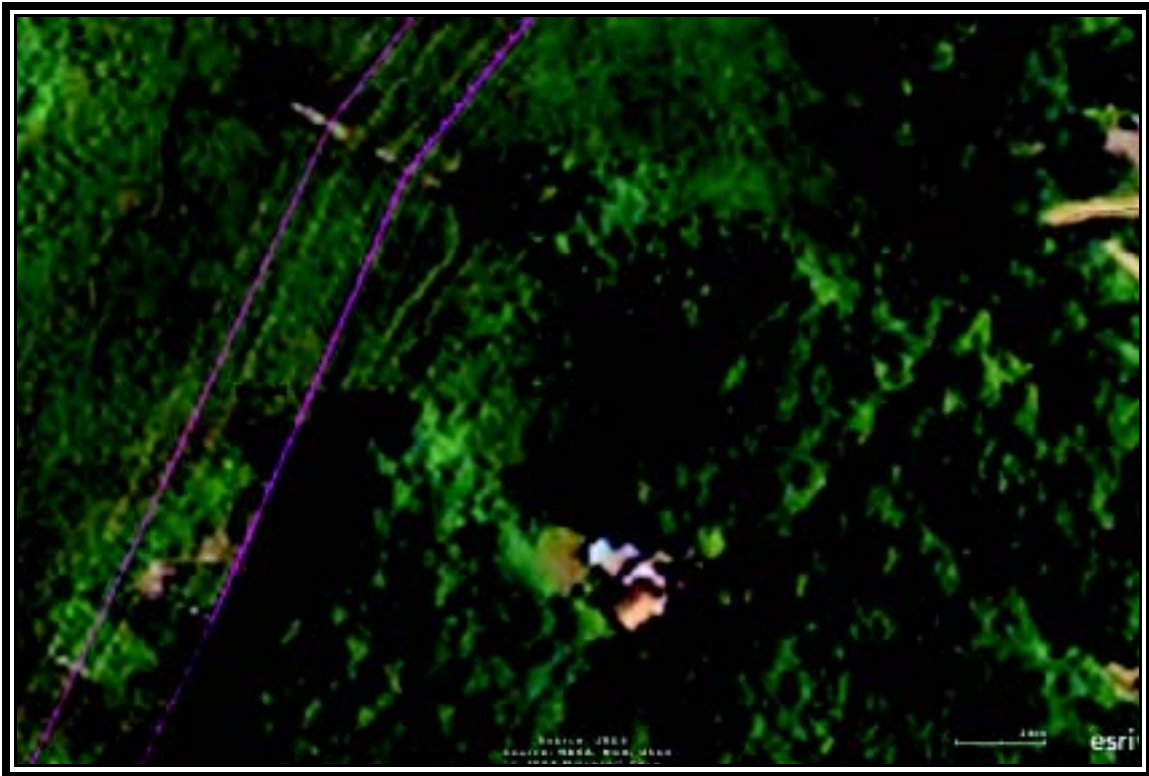
DEERFIELD, NEW HAMPSHIRE

**134 Mountain Road  
Map 415, Lot 69**

5.0 acres improved with a 2,800 square foot house with 3 bedrooms and 1¾ bathrooms constructed in 1988. The house has year round views of the power lines and abuts the HVAC corridor. The power lines can be clearly seen from not only the road in front of the house, but also from the house itself.

The property was marketed for 71 days (mean marketing period was 87 days) and sold for \$274,000 on August 12, 2005. The current equalized assessed value calculates to \$231,496.

According to a participant in the transaction, the HVTL did not impact the sale of this property despite the fact the power lines can be clearly seen not only from the road in front of the house, but also from the house itself. The transaction was arm's length.



**60 Reservation Road  
Map 418, Lot 32**

3.0 acres improved with a 2,652 square foot house with 3 bedrooms and 2½ bathrooms constructed in 2006. The house has year round views of the HVTL corridor and abuts the HVAC power lines.

The property sold on February 1, 2007 for \$265,000 near the peak of the real estate market. The tax assessment card notes that the property abuts the power lines, but makes no adjustment to the assessed value. The current equalized assessed value calculates to \$243,996 which reflects the downward trend of real estate values since 2007 in Deerfield.

According to a participant in the transaction, the power lines are “very close to the house” and in plain view year round. There was no consideration given to the presence of the HVTL corridor or the view shed from the property.



**204 Raymond Road  
Map 424, Lot 44**

2.51 acres improved with a 2,400 square foot house with 4 bedrooms and 1½ bathrooms constructed in 1750. The house has year round views and abuts the HVAC power lines.

The property was marketed for 57 days (mean marketing period was 87 days) and sold for \$147,000 on May 1, 2000. The original asking price was \$150,000. The current equalized assessed value calculates to \$255,906.

According to a participant in the transaction, properties in Deerfield that abut HVTLs are not impact by price or marketing time. They also indicated that while the “type” of buyer may be different for these properties, the marketing periods are not noticeably different.



**204 Raymond Road  
Map 424, Lot 45**

2.9 acres improved with a 1,974 square foot house with 2 bedrooms and 1 bathroom constructed in 1980. The house has year round views and abuts the HVAC power lines.

The property was sold for \$75,000 on January 27, 2003. The current equalized assessed value calculates to \$229,626.



REPRESENTATIVE IMAGES OF POWER LINE TRANSMISSION CORRIDORS



HVDC Lines Viewing from Monroe Road, Littleton Across Connecticut River to Vermont



HVAC Power Line Corridor in Deerfield

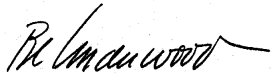
## Summary

The market data indicates that significant investment occurs on properties that are bisected by HVTLs. Marketing period data indicated the properties all sold faster than the mean marketing period during that time. There were no deductions noted on any of the municipal tax assessment cards reviewed for properties abutting or bisected by HVTLs. Based on the preliminary analysis contained herein, there is no market evidence in either Deerfield or Littleton that would indicate diminution of property value due to high voltage transmission lines. This conclusion is further supported by interviews conducted with individuals involved in the market transactions of properties abutting HVTL corridors.

It should be clearly understood, the acceptance of this assignment was not conditioned upon my reporting a specific (dictated) value; nor was the acceptance of the assignment conditioned on my concluding a requested result or outcome.

Respectfully submitted,

**B.C. UNDERWOOD LLC**



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Brian C. Underwood, CRE  
NHCG-394

## CERTIFICATION

Brian C. Underwood, CRE certifies that, except as otherwise noted in this report:

1. I have no present or prospective interest in the properties that are the subject of this report, and neither the employment to make the study, nor the compensation for it, is contingent upon the results of the study.
2. This assignment was not based on a requested result.
3. I have no personal interest or bias with respect to the parties involved or the subject matter of the study. The conclusions contained herein are not based in whole or in part on the race, color, or national origin of the owners, prospective owners, or occupants of the properties studied.
4. I have made a personal inspection of the properties part of this study. To the best of my knowledge, the statements of fact contained in this report are true and correct, and I have not knowingly withheld any significant information.
5. All contingent and limiting conditions are contained in this report (imposed by the terms of the assignment or by the undersigned affecting the analyses, opinions, and conclusions contained in the report).
6. My analyses, opinions and conclusions were developed and this report has been prepared in conformity with the requirements of the Code of Professional Ethics and Standards of Professional Practice of the appraisal organizations with which I am affiliated.
7. No one provided significant professional appraisal assistance to the appraiser signing this report. All conclusions and opinions concerning the real estate that are in the summary study were prepared by the appraiser whose signature appears on the report. No change in any item in the summary study shall be made by anyone other than the appraiser, and the appraiser shall have no responsibility for any such unauthorized change.



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Brian C. Underwood, CRE

## QUALIFICATIONS OF THE FIRM



B.C. Underwood LLC has completed a wide range of valuation, counseling, and mediation assignments. The following is a representative list of these assignments, the geographical areas covered, and clients served.

### TYPES OF ASSIGNMENTS:

Airport Land & Buildings	Marinas
Apartment Buildings	Market & Feasibility Studies
Appraisal Review	Mediation
Athletic Clubs	Mill Buildings
Automobile Dealerships	Mineral Rights
Bank Buildings	Mobile Home Parks
Bed & Breakfasts	Multi-Family
Business Valuation	Office Buildings & Parks
Campgrounds	Parking Lots
Commercial Land & Buildings	Planned Residential Developments
Condominium Buildings	Private Schools
Conservation Easements	Quarries
Convenience Store Chains	Railroad Tourist Attractions
Diminution in Value Projects	Restaurants
Easements & Rights of Way	Retail Petroleum Properties
Eminent Domain	Self Storage Facilities
Environmentally Contaminated Property	Service Garages
Fast Food Restaurants	Spring Water Plants
Forest Land	Shopping Malls
Group Homes	Single Family Homes
Going Concerns	Strip Centers
Golf Courses	Taverns & Inns
Hardware Stores	Tax Abatement
Horse Farms	Time Share Projects
Industrial Land & Buildings	USPAP & Appraisal Methodology
Lumber Yards	Waterfront Property

### GEOGRAPHICAL AREAS (COUNTIES):

<b>Connecticut:</b> New Haven	<b>New Hampshire:</b> Belknap, Carroll, Cheshire, Coös, Grafton, Hillsborough, Merrimack, Rockingham, Strafford, Sullivan
<b>Maine:</b> Androscoggin, Cumberland, York	<b>New York:</b> Kings
<b>Massachusetts:</b> Barnstable, Bristol, Middlesex, Nantucket, Norfolk, Plymouth, Suffolk, Worcester	<b>Pennsylvania:</b> Cumberland, Juniata, Lancaster, Northampton, York
<b>Georgia:</b> Fulton	<b>Rhode Island:</b> Providence
	<b>Vermont:</b> Rutland, Windham, Windsor



## QUALIFICATIONS OF THE FIRM, continued

### CLIENTS SERVED:

AMRESKO Commercial Finance  
Archibald, Nolan D.; Chairman, Black & Decker  
Arent Fox Kintner Plotkin & Kahn, PLLC  
Bald Peak Land Company  
Bank of America  
Bank of America Private Clients Group  
Bangor Savings Bank  
Beech River Mill, Inc.  
Brewster Academy  
Chase Manhattan Bank  
Citizens Bank  
Cleveland, Waters & Bass, P.A.  
Cooper, Cargill, Chant Attorneys at Law  
Dartmouth College  
Devine, Millimet & Branch, P.A.  
Federal Deposit Insurance Corporation  
First Pioneer Farm Credit  
Fletcher, Tilton & Whipple, P.C.  
Franklin, City of  
Gallagher, Callahan, & Gartrell, P.C.  
Godbout & Associates  
Governor Wentworth Regional School District  
Green Mountain Furniture, Inc.  
Grinnell & Bureau Attorneys at Law  
Haynes Management, Inc.  
Holland & Knight  
Huggins Hospital  
J.P. Noonan, Inc.  
Johnson & Dix Fuel Corporation  
Key Bank  
Lakes Region Conservation Trust  
Lakeview Management, Inc.  
Mallet Company  
Marriott, J. Willard Jr.; Chairman, Marriott International  
Martin, Lord, & Osman, P.A.  
Latici, P.A.  
McLane, Graf, Raulerson & Middleton  
Mobil Oil Corporation  
Mount Washington Observatory  
Mutual Oil Company  
North Conway Country Club  
Northway Bank  
Ocean Bank  
Orr & Reno  
Pace Academy  
Pike Industries, Inc.  
PriceWaterhouseCoopers  
Public Service of New Hampshire  
Sheehan, Phinney, Bass & Green, P.A.  
Sulloway & Hollis, PLLC  
Sullivan & Gregg Attorneys at Law  
TD Bank  
Taylor Community  
Town of Wolfeboro  
U.S. Trust Company  
Walker & Varney Attorneys at Law  
Wescott, Dyer, Fitzgerald & Nichols, P.A.

**BRIAN C. UNDERWOOD, CRE  
QUALIFICATIONS**

**PROFESSIONAL DESIGNATIONS**

Awarded the CRE designation, Counselor of Real Estate; The Counselors of Real Estate

**PROFESSIONAL PUBLIC APPOINTMENTS**

New Hampshire Real Estate Appraiser Board, Chairman  
*By Appointment of Governor John Lynch*

**PROFESSIONAL EXPERIENCE**

*B.C. Underwood LLC*, Rye Beach, New Hampshire: Principal of an east coast real estate and business valuation firm specializing in complex property types, litigation support, and mediation.

*Genesis Real Estate Synergy Partners LLC*, Portsmouth, New Hampshire: Managing Partner of a commercial real estate financing and private equity investment company.

*Atlantic Valuation Consultants, Inc.*, Meredith, New Hampshire: President of an east coast real estate and business valuation firm specializing in market / feasibility studies, and litigation support.

*I. J. Barkan, Inc.*, Boston, Massachusetts: Appraiser for a regional commercial and industrial real estate appraisal company.

*Schubert Appraisals, Inc.*, North Conway, New Hampshire: Appraiser for a regional, commercial and industrial real estate appraisal company.

*Conwood Group*, New Cumberland, Pennsylvania: Managing General Partner of a real estate investment company that owned and operated coin laundries.

**LICENSEE**

Certified General Real Estate Appraiser, State of New Hampshire  
License Number: NHCG-394 (expires December 31, 2011)

The State of New Hampshire maintains reciprocity with most other states.



## QUALIFICATIONS, BRIAN C. UNDERWOOD, CRE, continued

### PROFESSIONAL EDUCATION

#### Harvard Business School

- *Valuation*; Cambridge, Massachusetts; May 1999

#### American Society of Appraisers Seminars

- *The Expert Witness*; Manchester, New Hampshire; May 1996

#### Appraisal Foundation

- *Appraisal Investigator Training Level I*; Alexandria, Virginia; August 2009
- *Appraisal Investigator Training Level II*; Scottsdale, Arizona; November 2010

#### Appraisal Institute Courses

- 400: *National Uniform Standards of Professional Appraisal Practice (USPAP) Update Course* Manchester, New Hampshire; October 2004
- 410: *Standards of Professional Practice, Part A (Uniform Standards of Professional Appraisal Practice)*; Portland, Maine; September 1997
- 420: *Standards of Professional Practice, Part B*; Hershey, Pennsylvania; May 1993
- 110: *Appraisal Principals*; Hershey, Pennsylvania; March 1993
- 120: *Appraisal Procedures*; Hershey, Pennsylvania; March 1993
- 310: *Basic Income Capitalization*; Tallahassee, Florida; August 1993
- 320: *General Applications*; Boston, Massachusetts; September 1995
- 510: *Advanced Income Capitalization*; Tallahassee, Florida; August 1993
- 540: *Report Writing & Valuation Analysis*; Tallahassee, Florida; August 1995

#### Appraisal Institute Seminars

- *Subdivision Valuation*; Manchester, New Hampshire; September 2005
- *Automated Valuation Models*; Baltimore, Maryland; October 1997
- *Mock Trial*; Boston, Massachusetts; September 1995
- *Appraisal Practices for Litigation*; Boston, Massachusetts; September 1995
- *GIS Seminar*; Boston, Massachusetts; April 1995
- *Due Diligence, Contaminated Properties, & the Real Estate Appraiser*; Boston, Massachusetts; January 1995
- *Environmental Risk and the Real Estate Appraisal Process*; Rockport, Maine; October 1994
- *Uniform Standards of Professional Appraisal Practice - Update Course*; Concord, New Hampshire; October 2009

#### The Counselors of Real Estate Seminars

- *Global Economic Forces: The Deficit, the Dollar and Interest Rates*; Chicago, Illinois; April 2005
- *Real Estate Capital Markets*; Chicago, Illinois; April 2005
- *Big Thinkers on The Big Picture: Commercial Real Estate Markets*; Chicago, Illinois; April 2005
- *Hedging: Protecting Your Assets in a Rising Interest Rate Environment*; Chicago, Illinois; April 2005
- *Market Watch: A Real World View on Market Prospects*; San Francisco, California; October 2007

## **QUALIFICATIONS, BRIAN C. UNDERWOOD, CRE, continued**

- *Institutional Investment: When Residential Real Estate Brings the Highest Yields*; San Francisco, California; October 2007

### **Massachusetts Board of Real Estate Appraisers Seminars**

- *Teamwork in Eminent Domain*; Boston, Massachusetts; September 1997

### **New Hampshire Association of Industrial Agents Seminars**

- *Redeveloping Contaminated Sites*; Center Harbor, New Hampshire; October 1994

### **New Hampshire Attorney General's Office**

- *Wynn Arnold Administrative Law Workshop*; Concord, New Hampshire; December 2009

### **New Hampshire Bar Association Seminars**

- *Managing, Buying, & Selling Contaminated Properties*; Concord, New Hampshire; March 1994

### **New Hampshire Superior Court, Office of Mediation & Arbitration**

- *NH Superior Court Rule 170 Civil Mediation Training*; Concord, New Hampshire; June 2010

### **University of New Hampshire**

- *Uniform Standards of Professional Appraisal Practice*; Portsmouth, New Hampshire; December 2001

## **ARTICLES PUBLISHED**

*How to Lower Real Estate Taxes, Coin Launderer & Cleaner*; February 1996

*Tax Abatements for Environmentally Contaminated Real Estate*, New England Service Station & Automotive Repair Association; January 1995

## **SEMINARS PRESENTED**

*Real Estate Appraisal Issues*, New Hampshire Chapter, Appraisal Institute; Concord, New Hampshire; January 2010

*Appraising Environmentally Contaminated Real Estate*, New Hampshire Bar Association; Concord, New Hampshire; March 1999

*Real Estate Tax Abatement & Eminent Domain*, [presented together with Jack B. Middleton, Esquire & Arthur G. Greene, Esquire; McLane, Graf, Raulerson & Middleton]; North Conway, New Hampshire; February 1999

*Real Estate Tax Abatement Process*, [presented together with Jack B. Middleton, Esquire; McLane, Graf, Raulerson & Middleton]; Hanover, Portsmouth, and Manchester, New Hampshire; December 1996

*Real Estate Tax Abatement Process*, [presented together with Jack B. Middleton, Esquire; McLane, Graf, Raulerson & Middleton]; Manchester, New Hampshire; November 1995

## **QUALIFICATIONS, BRIAN C. UNDERWOOD, CRE, continued**

*Tax Abatement for Environmentally Contaminated Real Estate*, Independent Oil Marketers Association of New England; Westborough, Massachusetts; October 1995

*Tax Abatement Issues for Campground Owners*, New Hampshire Campground Owners' Association; Laconia, New Hampshire; October 1995

### **LITIGATION EXPERIENCE**

- New Hampshire Superior Court: Admitted as an expert witness.
- New Hampshire Board of Tax and Land Appeals: Admitted as an expert witness.
- New York Family Court: Admitted as an expert witness.
- Massachusetts Appellate Tax Board: Admitted as an expert witness.
- United States Bankruptcy Court: Admitted as an expert witness.
- Vermont Family Court: Admitted as an expert witness.

### **PROFESSIONAL & PUBLIC AFFILIATIONS**

New Hampshire Real Estate Appraiser Board by appointment of Governor Lynch in 2008

The Counselors of Real Estate: Member

- *Real Estate Issues* Editorial Board (2005-2007)
- CRE Consulting Corps Steering Committee (2005 -2007)

Mount Washington Observatory; Board of Trustees. Served as Vice President & Treasurer

Town of Wolfeboro Zoning Board of Adjustment; Chairman (1995-2008)

Moderator, First Congregational Church, Wolfeboro, New Hampshire (2008- 2010)

Member of the Aircraft Owners and Pilots Association

### **CONTACT INFORMATION**

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