

McCann Appraisal, LLC

January 6, 2011

Christopher Senie
Attorney at Law
5 East Main Street, 2nd Floor
Westborough, MA 01581

Re: Property Value Impact & Zoning evaluation
Cape & Vineyard Electric Cooperative (CVEC)
Freeman's Way Municipal Wind Project
Commerce Park Road
Brewster, Massachusetts

Dear Mr. Senie:

As requested, I am submitting this real estate impact evaluation for your consideration and use in addressing the compliance of the proposed CVEC facility with the Town of Brewster Zoning Code, as described for Special Permit approval of Wind Energy Turbines.

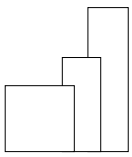
The approval criteria I have specifically evaluated are codified under **§179-40.2. J. (2) (a) & (b)**, as follows:

(a) The proposed WET will not have an undue adverse impact on historic resources, scenic views, natural resources, and/or residential property values;

(b) The applicant has agreed to implement all reasonable measures to mitigate the potential adverse safety, environmental, and aesthetic impacts of the WET.

Further Special Permit criteria have been evaluated pursuant to **§179-51.A.(5) (a) [2]**, as follows:

The location, type, character and size of the use/ building, or other structure in connection therewith, will be in harmony with the visual character of the neighborhood, including views and vistas and, where applicable, the historic character of the neighborhood.



Also applicable from a real estate, land use and zoning perspective are the requirements for a Special Permit described under **§179-67.E.(6)**, and all uses requiring a special permit under this Article shall meet the following standards as a condition of approval.

(6)Buildings and architectural design shall be compatible with the character and scale of the adjacent roadway and surrounding neighborhood.

Professional Opinions

My professional opinions are effective as of the current date. My evaluation and this Consulting Report have been prepared and submitted pursuant to applicable licensing laws that mandate compliance with the Uniform Standards of Professional Appraisal Practice (USPAP), and my opinions are certified accordingly.

Briefly stated, based upon my review of the proposed CVEC facility, location, the density, height, type and intensity of the proposed utility scale turbines, the proposed use does not comply with the applicable Brewster Code (Code), as it is not compatible with adjacent and nearby residential uses and, specifically, will have a significant adverse effect on the market value of the neighboring residential property.

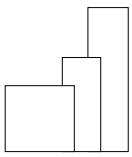
Further, the Applicant has failed to even attempt to mitigate the impact on aesthetics and values of residential properties, as could have been accomplished to some degree with the provision for an owner/developer Property Value Guarantee (PVG).

While the Brewster Code focuses on undue adverse impact criterion for residential property values, I am also aware of potential impacts on the ability to continue to use a radio transmission facility, a municipal golf course and two (2) facilities nearby that are currently used for elderly housing and care; the Pleasant Bay nursing home and the Woodlands assisted living facility, which are less than ½ mile from the nearest proposed turbine..

My specialized and unique experience with utility scale wind energy developments, as well as 30 years of real estate, land use evaluation and appraisal background has enabled and qualified me to evaluate whether the proposed CVEC facility meets the criteria described in the Brewster Code. The basis for my professional opinions are described and summarized herein.

CVEC Facility - Background

The developers for the CVEC facility seek to locate two (2) turbines of approximately 410 feet in height each (tip of blade) adjacent to single family homes, nursing/assisted living facilities, a municipal golf course, athletic fields, etc. The underlying land for the turbines is reportedly owned by the Town of Brewster, and comprises two (2) lots, (1 & 32) on Assessor's Map # 131. The site itself is zoned industrial, within the partially occupied Freeman's Way Commerce park development.



In order to better understand the character of the subject neighborhood and subject property setting therein, I have reviewed maps, photographs, the Special Permit Application prepared by Weston & Sampson dated October 18, 2010 and which has been submitted to the Brewster Planning Board Members, inclusive of the site plan photo simulations of the subject location, noise study, etc. I have also reviewed the CVEC website and documents, maps and photographs contained therein.

The issue of impact from industrial scale turbines on the property value of residential owners is the primary focus of the following property value evaluation, as property values are an objective measure of the desirable characteristics of any community.

The Brewster community, overall, and land uses nearest the subject property are also the focus of this evaluation, as the impacts from existing turbines are well documented as being present at residential homes and some impacts have been measured as distant as 2 to 3 miles from turbines.

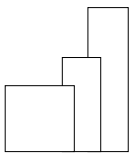
The contrast of such man made towers with natural views and the highly valued amenity derived from views is analyzed herein, with focus on ratings of the view from, or "Vista" of residential properties.

It is important to understand that high quality or natural views are an asset to real estate market values and, in particular, residential property and land. Other types of "value" can be identified and described in non-real estate terminology, but my focus as an appraiser is on the market value of property.

Similarly, detracting from such premium views can and does have a measurable adverse effect on residential property values. This is well studied in the real estate appraisal profession, and in fact by proponents of wind energy funded by the USDOE such as:

- ERNEST ORLANDO LAWRENCE BERKELEY NATIONAL LABORATORY The Impact of Wind Power Projects on Residential Property Values in the United States: Ben Hoen, Ryan Wiser, et al, Environmental Energy Technologies Division December 2009. (LBNL)

This USDOE funded study is often cited by wind energy developers to claim there is no value impact from such projects, even though the **study acknowledges that nearby properties may experience losses** and further recommends that more study in the immediate project areas is needed. This study is useful to understanding the probable impact from the CVEC turbine facility.



VISTA IMPAIRMENT

In the LBNL study, the authors attempt to analyze the impact of wind projects on residential property values. They also separately address the statistically measured impact on residential values from scenic vistas, or views based on **regression analysis of over 4,700 sale transactions**, for this component of the study.

As graphically depicted within the LBNL report (pg xiii) on Figure ES-2, the following observations are prima facie evidence that impairment of scenic views results in a measurable loss of property values, as follows:

- A premium Vista adds 13% of value over and above the value of an average vista.
- A poor vista results in values 21% below the base-line average vista.
- An above average vista adds 10% to the value of an average vista.
- A below average vista reflects values 8% lower than an average vista.

To illustrate examples of the LBNL findings as it applies to the impairment of vistas for residential property, it is first acknowledged that the vista of any given residential property is going to be rated differently before introduction of a utility scale wind energy facility which will later have a view of the facility, albeit at varied distances.

My review of photographic evidence of existing vistas in the immediate subject property location adjacent to the project area indicates similarity with premium, above average and average vistas, as defined and characterized in the LBNL report. On balance, the LBNL report provides examples of premium, above average, average, below average and poor vistas.

Less natural, industrialized vistas have inferior ratings, and the extremely close proximity of a 410 foot turbine, as represented by a distance of 1,800 feet to the nearest residence (McCann Exhibit C), and other distances to residential and senior housing/care uses of well under 1 mile, represents an extreme impairment of the existing neighborhood vista, and the character of the neighborhood that pre-exists the CVEC project.

In my opinion, below average and poor vista ratings are consistent with the impairment of vistas that will be caused by the CVEC facility itself. **(see McCann Exhibit A)**

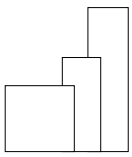
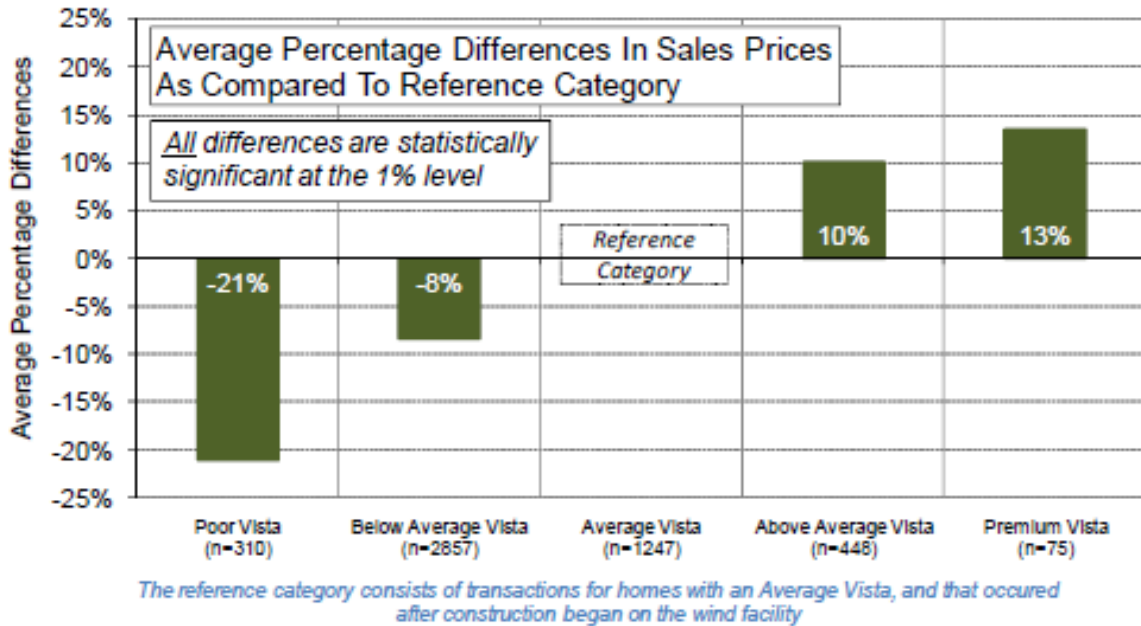


Figure ES-2: Base Model Results: Scenic Vista



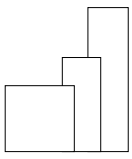
Source: December 2009 LBNL report

Thus, in project area residential locations with a premium vista, a turbine facility downgrading the amenity to a poor or below average vista will result in a **value loss of 21% to 34%**. Similarly, residential property possessing a current average vista, if downgraded to poor or below average vista from the CVEC facility will suffer **between 8% and 21% value diminution**.

At approximately 410 feet in height, the view of the FGWP facility will be present at considerable distances that extend beyond the nearest residential property, particularly if a blinking light is required at night for aviation safety purposes.

In addition to the findings of the LBNL research report, I have also considered several peer reviewed studies published in The Appraisal Journal, that relate to value losses and impairment caused by other industrial “towers”, such as cell towers, high voltage transmission lines, as well as the higher values that are derived from premium views from residential property.

Each of these studies generally confirms the findings summarized by the data reflected in LBNL Figure ES-2, and are maintained in the appraiser’s work file for future reference.



NUISANCE IMPAIRMENT

For many residents, the introduction of a utility scale turbine facility will constitute a nuisance, based on the unprecedented height and the impairment of aesthetics related thereto, the blinking aviation light in the night sky, if required by the FAA, etc.

Nuisances are also created by noise from wind generators, and have been well documented by the “market” as being highly disruptive to the peaceful use and enjoyment of residential homes at levels well below the 10 dBa above ambient standard cited in the Brewster Code. In short, compliance with noise codes does NOT insure against nuisances being created by actual noise levels.

The complaints, personal accounts and factual experiences described by hundreds of individual “neighbors” to turbines comport with the technical descriptions and medical studies of sub-audible noise, also referred to as ultra-sound, infra-sound, low frequency noise, and which is not audible to the typical human ear in the normally expressed manner.

These real-life (not “modeled”) nuisance descriptions are typically ignored, discounted or denied by wind developers, even though there are numerous examples of developers buying out or settling with nearby homeowners who have suffered from the same range of effects commonly known as “Wind Turbine Syndrome”. These noise effects and nuisances related thereto have been documented in excess of 2 to 3 miles from the nearest turbines.

The LBNL study attempts to separately isolate the impact of nuisance on value, as depicted in the following Figure ES-1 from the LBNL study.

This figure separates the nuisance by distance from residential property, and clearly reveals that properties in the 3,000 feet and less, and 3,000 feet to 1-mile range **suffer value loss of 5.3% to 5.5%**, respectively.

While the LBNL report author discounts the statistical significance of their own findings, this dismissal of relevance must be understood in the context of the largely irrelevant data from greater distances having provided the baseline property characteristics in a disproportionately sized data pool or sample, and which “waters down” the statistical indications.

The LBNL report must also be understood as a study commissioned with the intent of furthering the government policy of expanding wind energy development in the United States.

Nevertheless, even exclusion of certain impacted property data, or the disproportionate inclusion of data from 5 to 10 miles distant, did not eliminate the downward indication of value resulting from proximity to a nuisance, as depicted in the following figure:

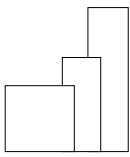
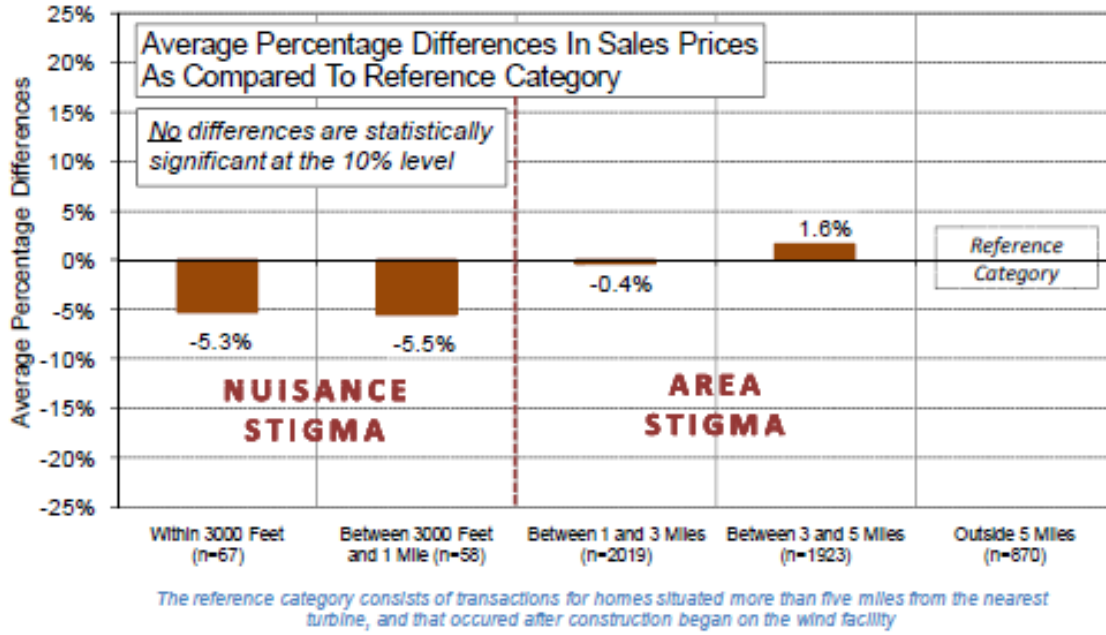
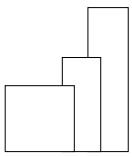


Figure ES-1: Base Model Results: Area and Nuisance Stigma



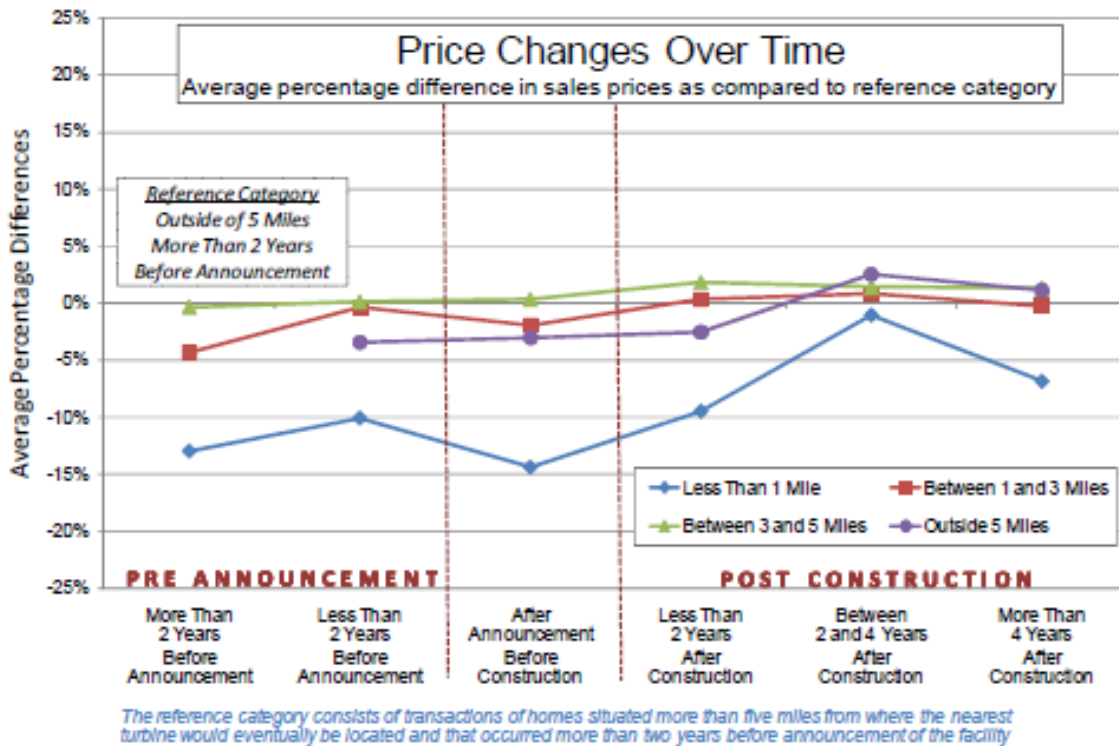
Source: December 2009 LBNL report



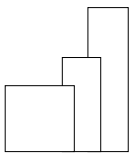
Pre-Construction “Constructive Notice” of Turbine Facilities

Further, the following LBNL study Figure ES-4 depicts value changes over time, at varied distance from wind turbines. The applicability of this focus of the LBNL study to the subject CVEC facility can be understood in the post-announcement but pre-construction phase of turbine projects, at which point “constructive notice” has been served on surrounding neighbors and property owners. Properties within 1-mile of such projects reflect the largest decline in value, and **confirm that a utility scale wind energy facility has measurable negative impact on property values within 1-mile.** Even the 3 to 5 mile range shows that values did not increase post-construction, when the control group of home sales outside 5 miles were increasing in value, nothing located within 5 miles indicated comparable value increases.

Figure ES - 4: Temporal Aspects Model Results: Area and Nuisance Stigma



The LBNL study is not the only pro-wind study that refutes the claims of developers regarding property value loss, due to their utility scale wind energy projects. A recent study focuses more on the pre-construction or “constructive notice” phase of development, as characterized by the pending application for the CVEC facilities.



A separate academic study conducted by Jennifer L. Hinman, Illinois State University, WIND FARM PROXIMITY AND PROPERTY VALUES: A POOLED HEDONIC REGRESSION ANALYSIS OF PROPERTY VALUES IN CENTRAL ILLINOIS

The background of this study author is a Master's Thesis, prepared by the author in partial fulfillment of degree requirements. ISU is heavily funded by wind energy developers, the American Wind Energy Association, the USDOE and other grant programs that are decidedly "pro-wind", and which seek to refute the actual experience of many neighbors to such projects.

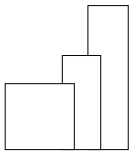
In fact, ISU newsletters disclose that "corporate partners" that include wind energy development companies have access to the renewable energy programs, include advising on research direction and the right to review any applied research developed by ISU.

An excerpt of the Hinman report is presented as follows:

*This study uses 3,851 residential property transactions from January 1, 2001 through December 1, 2009 from McLean and Ford Counties, Illinois. This is the first wind farm proximity and property value study to adopt pooled hedonic regression analysis with difference-in-differences estimators. This methodology significantly improves upon many of the previous methodologies found in the wind farm proximity and property value literature. **The estimation results provide evidence that a "location effect" exists such that before the wind farm was even approved, properties located near the eventual wind farm area were devalued in comparison to other areas.** Additionally, the results show that property value impacts vary based on the different stages of wind farm development. These stages of wind farm development roughly correspond to the different levels of risk as perceived by local residents and potential homebuyers. Some of the estimation results support the existence of "wind farm anticipation stigma theory," meaning that **property values may have diminished in "anticipation" of the wind farm** after the wind farm project was approved by the McLean County Board. Wind farm anticipation stigma is likely due to the impact associated with a fear of the unknown, a general uncertainty surrounding a proposed wind farm project regarding the aesthetic impacts on the landscape, the actual noise impacts from the wind turbines, and just how disruptive the wind farm will be*

Property Value Guarantee (PVG)

Approval of wind energy facilities have served as constructive notice of future plans for development of wind turbine projects, and property values have been shown to decline based on pre-construction anticipation of wind projects. As such, there is ample evidence to either deny such related projects within 1 to 3 miles of homes or require a PVG.



I note the CVEC application is devoid of any such guarantee for any home or property owner, much less the Town of Brewster residents who live within 1, 2 or 3 miles from the proposed turbines.

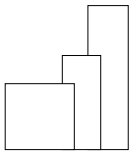
Despite all the industry claims to the contrary, significant value impacts have in fact occurred, and have even resulted in the abandonment of homes, as well as nuisances, health problems, etc. A sampling of nuisance and health testimonials from people living near turbines is included in **McCann Exhibit D**, which contains web page and news links.

As a personal observation, in 30 years of appraising and studying real estate values, damages claims, zoning and land use issues, I have never before observed such a widespread and consistent series of similar, negative reports coming from residents living by any other type of facility. It is an observable trend in the market, both for owner-occupants and the home-buying market.

Even the principal author of the LBNL study, Ben Hoen, now recommends implementation of Property Value Guarantees (PVG's) in the context of wind energy project mitigation of impacts.

(see page 32 of linked webinar)

http://www.windpoweringamerica.gov/newengland/pdfs/2010/webinar_neweep_property_values_hoen.pdf

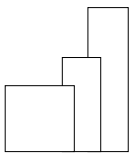


Property Value Risks Will Persist Unless They Are Measured, Mitigated and Managed

Manage

Manage risks in the short term for homeowners through tenable/workable measures

- Offer some combination of neighbor agreements/incentives and/or property value guarantees (e.g., Dekalb County, IL) to nearby homeowners as are economically tenable and legally workable
- Conduct follow up studies (e.g., surveys, appraisals)
- Realize that cumulative impacts may exist
- Realize that real or perceived risks may increase/decrease as more/better information become available



Nuisance can be manifest by close proximity of the CVEC facility to homes of less than 1 mile, and for other reasons. Distance includes visual impacts but that has more of an impact on marketing, and also leaves homeowners wishing to sell with the ethical dilemma of making full disclosure of known nuisances to potential buyers, or facing possible legal repercussions and financial liability for failing to make such a disclosure.

Despite the limited number of the (2) CVEC turbine developments, they will have a negative impact or “nuisance” due to the circumstances that the project and use has a dominant presence, impairs aesthetics, negatively changes the character of the neighboring residential property settings or perception thereof (single or multiple properties).

Any number of potential variable impacts has a demonstrable adverse impact on the use, enjoyment, marketability or value of the subject property neighboring use, and it creates a man-made detriment to neighboring property and results in a negative impact for any homes that “got in the way”. This is exactly why adequate setbacks are important. To mitigate against adverse impacts on neighboring property.

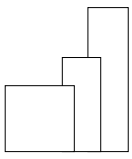
McCann Value Impact Study

Additional sale data studied by McCann for home values in a rural Illinois location adjacent to the Mendota Hills wind turbine project in Lee County is included in **Exhibit B** of this report. Despite the booming market conditions represented by the 2003-early 2005 sale dates, the homes within 2 miles of the nearest turbine reflect an average sale price per square foot that is 25% lower than homes located outside that 2-mile perimeter.

Thus an impaired view, inadequate setback, and stigma associated with noise and health impacts and concerns, measured to project value loss from a property possessing a “premium” vista, indicates that a 13% premium could become a 21% reduction, or a net property value reduction of 34%. This is well supported by the range of property case studies of value loss for individual homes that range from 20% to 40%, and in some instances a complete loss of equity when homes are completely unmarketable, or are acquired by wind developers and re-sold for losses up to 80%, or even demolition of the otherwise livable homes.

This range of value loss for the nearest residential properties is fairly classified as significant, preventable and “undue”. The probability of damages to the value of homes and other property is quantified with empirical data rather than speculation, and is clearly indicated to a high degree of professional certainty.

Further, the two property value studies cited in the CVEC website (Hoen & Hinman) were prepared by researchers who hold no appraisal licenses, designations, credentials or even any background in property sales or development. The industry-sponsored



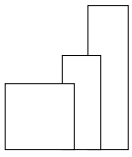
studies have also been selectively & partially quoted by the CVEC, to the extent that it would tend to mislead the public as to the conclusions of the study authors. A brief interview with Ben Hoen, which is available on the web, is contained in **McCann Exhibit E**. This exhibit contains a printed version of the Hoen comments about his study, as well as a link to listen to the audio recording.

Conclusion

After completing my review of the subject location, it is clear that numerous homes in the Town of Brewster will be adversely impacted, and the best available evidence indicates that **value loss of 25% or more will occur to homes within approximately 2 miles of the turbines**. This impact is not expected to be uniform, and some losses may well be lower and others higher.

The close proximity of the proposed turbines cannot meet the zoning requirements stated previously. The basis for this conclusion is the failure of the project to meet certain Special Permit and other approval criteria, as follows:

- ***It will have an undue adverse impact on scenic views and residential property values.*** This is supported by both industry studies, post publication author updates, and McCann independent study of property values. The LBNL study isolates and identifies value contribution to residential property when good or premium vistas are present, and the loss of such amenity is documented as the basis for lower values.
- ***The applicant has not agreed to implement any reasonable measures to mitigate the aesthetic impacts of the WET that result in value loss.*** Property Value Guarantees are effective tools, if carefully designed to leave property owners “whole”, and even the LBNL author now recognizes the validity of a PVG.
- ***The two (2) turbine structures will NOT be in harmony with the visual character of the neighborhood, including views and vistas and, the historic character of the neighborhood.*** There is nothing built in Brewster that is the height of a 40 story building, and the turbines will become the dominant presence within at least a mile of any other land use. Views and vistas create value for property, and impairment of vistas with non-compatible, immense, spinning machines simply can not blend in to any residential area or community.
- ***The turbines architectural design will not be compatible with the character and scale of the adjacent and surrounding neighborhoods.*** Turbines are not architecturally designed but, rather, utilitarian by design. Large steel poles and the spinning (or still) blades are completely disproportionate in scale and contrary to the character of small towns and neighborhoods. Despite the denial



of wind industry spokespeople of low-frequency or sub-audible noise impacts, the fact remains that a significant number of people are highly disturbed by this type of turbine impact, which clearly demonstrates a lack of compatibility for turbines to be placed in close proximity to residential uses. The design of turbines can not avoid the noise impacts, including sub-audible, amplitude modulation noise.

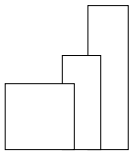
The CVEC Facility, does not comply with the relevant Brewster Code, as it fails to avoid or even to minimize impact on property value, impact on the character of the neighborhood, and is highly questionable as to safety of setbacks that do not even meet manufacturer guidelines for safety zone, or the code requirement for distances safe from “ice throw”. The proximity to Route 6 is several hundred feet closer to the turbine project than the 1,300 feet minimum to prevent ice throw hazards to this public roadway.

However, the preceding range of value and value damages is considered to be reasonably reliable for the purpose of determining whether the CVEC Facility meets Code requirements as to minimizing adverse impact on property values or on adverse impact to the character of the neighborhood.

Related Issues

Other property has been identified which, in my opinion, is likely to experience significant value loss.

- A nearby radio station will reportedly experience significant impact to its broadcast capabilities, which would have a significant detrimental effect on the continued use for that purpose and its underlying value.
- The Pleasant Bay nursing home is within shadow-flicker and noise distances, and the resulting disturbance to high-risk residents is likely to cause some residents to be relocated, or even to suffer health impacts. With 135 beds and a reported approximate revenue base of \$300 per day per bed, a drop in occupancy of only 10% would represent a \$1.48 million per year loss of revenue, which in turn would decrease the property value and the value of the nursing home business.
- The Woodlands assisted living facility consists of 59 units that reportedly rent for \$4,000 - \$6,000 per month. A 10% drop in occupancy would indicate a gross revenue loss of approximately \$354,000 annually, and the corresponding property value would also be impaired.
- A municipal golf course, which depends on a peaceful, serene setting, will now have visual and sometimes audible disturbances, and is likely to realize a loss of patronage from golfers who have other options and require a peaceful course.
- The Town Of Brewster’s assessed values are likely to experience justification for a significant decrease, as values and prices of residential property in Brewster



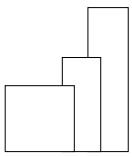
McCann Appraisal, LLC

begin to decline due to the close proximity and the resulting impacts of the turbines.

- Liability issues for the Town, as owner of the project, are likely to begin if the turbines are developed, as nuisance, health and property value damage claims are litigated. The fiscal impact to the Town of Brewster could very well suffer in the long-term, despite revenue and grant benefits cited by the CVEC.

Additional documents, facts, data and studies and market trend information is retained in the appraiser's work file, in the event expert opinions expressed herein and the basis for the opinions must be refined or given in testimony in any future legal proceedings.

I reserve the right to supplement my opinions at a later date, if the need arises and/or if additional information becomes available. Further, McCann's ongoing study of wind energy projects and their impacts may result in future disclosures and market information relevant to wind energy development issues.



McCann Exhibit A

Appendix D: Vista Ratings with Photos

POOR VISTA

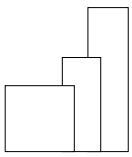


BELOW AVERAGE VISTA



AVERAGE VISTA

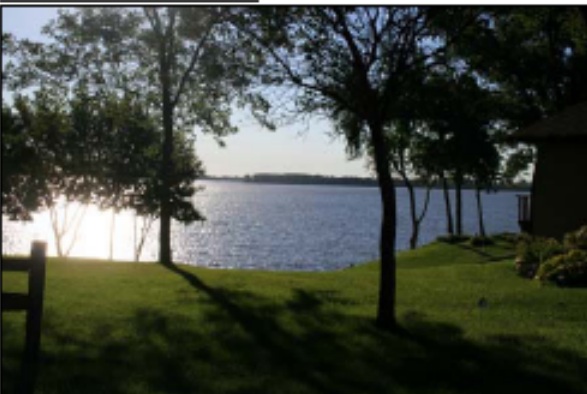




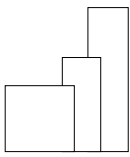
ABOVE AVERAGE VISTA



PREMIUM VISTA



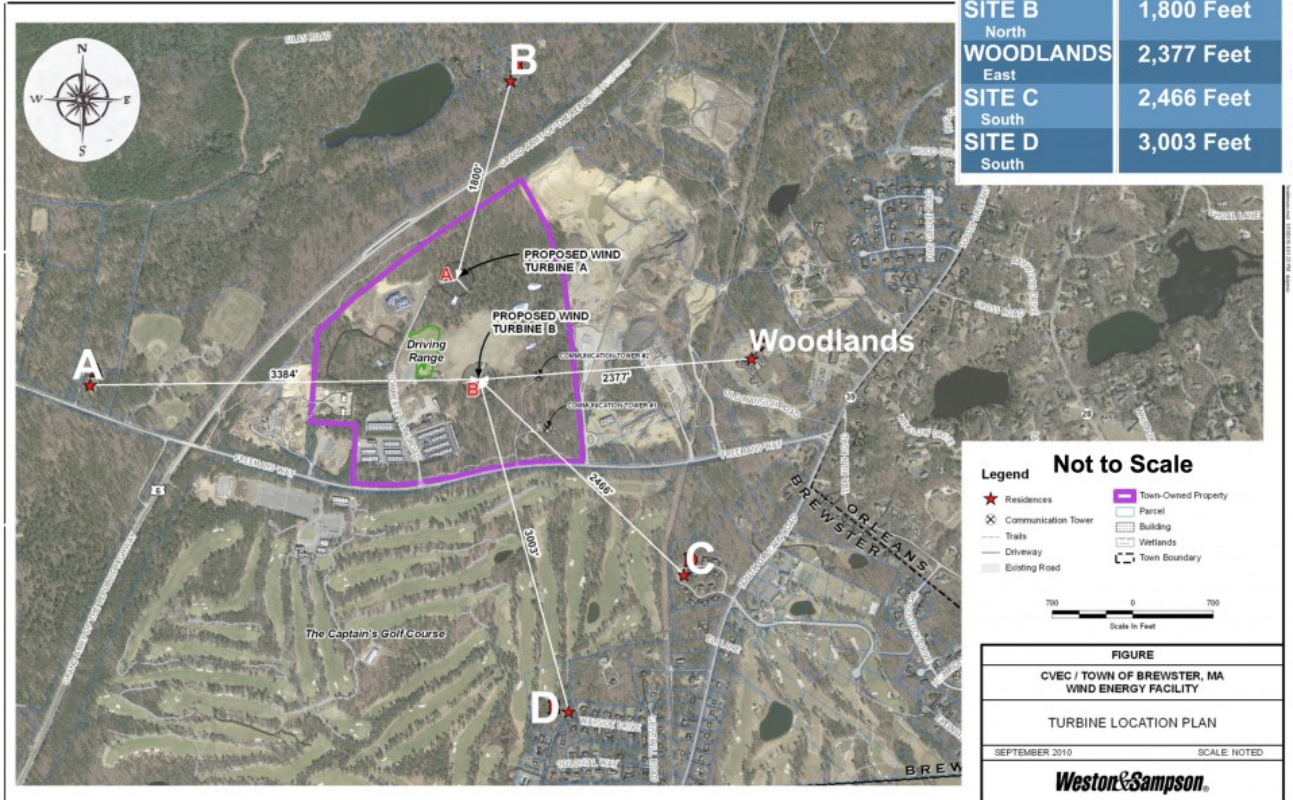
Source: LBNL Appendix D, report page 120 & 121



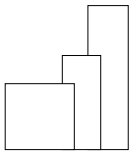
McCann Exhibit C

Distances to Closest Residences

HOME	DISTANCE
SITE A West	3,384 Feet
SITE B North	1,800 Feet
WOODLANDS East	2,377 Feet
SITE C South	2,466 Feet
SITE D South	3,003 Feet



Source: CVEC website



McCann Exhibit D

Author: National Wind Watch

Milner, Catherine (January 25, 2004). Telegraph. ["Wind farms 'make people sick who live up to a mile away'"](#).

Keller, James (May 13, 2006). Hamilton Spectator. ["Family says turbine vibrations made them ill enough to move"](#).

Kriz, Kathy (October 12, 2006). WHAM-TV. ["Could Wind Turbines Be A Health Hazard?"](#).

Chronicle Herald (August 27, 2007). ["Quietly sounding alarm: Forced from home after noise from wind farm turbines made family sick, d'Entremont telling others his story"](#).

St. James, Janet (July 29, 2008). WFAA-TV. ["Neighbors claim wind turbine makes them ill"](#).

CTV (September 28, 2008). ["Wind turbines cause health problems, residents say"](#).

Keen, Judy (November 3, 2008). USA Today. ["Neighbors at odds over noise from wind turbines"](#).

Tilkin, Dan (November 14, 2008). KATU-TV. ["Wind farms: Is there a hidden health hazard?"](#).

Sudekum Fisher, Maria (February 3, 2009). Associated Press. ["NW Missouri man sues Deere, wind energy company"](#).

Takeda, Tsuyoshi (February 6, 2009). Asahi Shimbun. ["Something in the Wind as Mystery Illnesses Rise"](#).

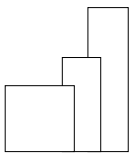
Blaney Flietner, Maureen. Bobvila.com. ["Green Backlash: The Wind Turbine Controversy"](#).

Nelson, Bob (March 2, 2009). Morning Show, KFIX. ["Wind farms: Interview of Malone and Johnsborg residents"](#).

Mills, Erin (March 8, 2009). East Oregonian. ["Loud as the wind: Wind tower neighbors complain of noise fallout"](#).

Miller, Scott. A-News, CTV Globe Media. ["Wind Turbines Driving People From Their Homes"](#).

Tremonti, Anna Maria (April 14, 2009). The Current, CBC Radio One. ["Wind Turbines: Health"](#).



CBC News. April 14, 2009. [“Wind turbines causing health problems, some Ont. residents say”](#).

Buurma, Christine (April 21, 2009). Wall Street Journal. [“Noise, Shadows Raise Hurdles For Wind Farms”](#).

CTV Toronto (April 22, 2009). [“Reports of wind farm health problems growing”](#).

Canadian Press (April 23, 2009). CBC News. [“Formal study needed into health effects of wind turbines, doctor says”](#).

Miller, Scott. A-News, CTV Globe Media. [“Daughter’s Earaches Blamed On Wind Farm”](#).

Epp, Peter (May 5, 2009). [“Survey points to health woes arising from wind turbines”](#).

Mayne, Paul (May 7, 2009). Western News. [“Is public’s health blowing in the wind?”](#).

Delaney, Joan (May 13, 2009). The Epoch Times. [“Wind turbines blamed for adverse health effects”](#).

Alteri, Beth (May 15, 2009). WLBZ2. [“Does wind turbine noise affect your sleep or health?”](#).

Hale, Caleb (May 23, 2009). Southern Illinoisan. [“Health can be a key issue when living near wind farm”](#).

Hessling, Kate (June 4, 2009). Huron Daily Tribune. [“Solutions sought for turbine noise”](#).

Boles, Stephen (June 7, 2009). Red, Green and Blue. [“Wind Turbine Syndrome: Are wind farms hazardous to human health?”](#).

Kart, Jeff (June 11, 2009). Bay City Times. [“Wind turbine noise is rattling some residents in Michigan’s Thumb”](#).

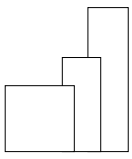
Walsh, Bill (June 19, 2009). WNEM. [“Wind Farms Ruining Quality of Life?”](#).

Hundertmark, Susan (June 24, 2009). Lucknow Sentinel. [“St. Columban residents get informed on wind turbine health concerns”](#).

Yoshida, Noriyuki; and Yasuda, Koichi (July 1, 2009). Daily Yomiuri. [“Wind power has its own environmental problems”](#).

ABC News (July 15, 2009). [“Wind turbine noise ‘forces’ couple out”](#).

Pagano, Margareta (August 2, 2009). The Independent. [“Are wind farms a health risk? US scientist identifies ‘wind turbine syndrome’”](#).



Martin, Daniel (August 2, 2009). Daily Mail. [“Living near a wind farm can cause heart disease, panic attacks and migraines”](#).

Stewart, Linda (August 3, 2009). Belfast Telegraph. [“Is it dangerous to live close to wind turbines?”](#).

Woodrow, Shane (August 6, 2009). WIN TV. [“Windfarm Research”](#).

Anne Ravana (August 7, 2009). Maine Public Broadcasting Network. [“Discontent of Mars Hill Residents Leads to Lawsuit Against First Wind”](#).

Baca, Nathan (August 11, 2009). KESQ. [“Migraine, Wind Turbine Connection Still Being Examined”](#).

Lynds, Jen (August 12, 2009). Bangor Daily News. [“Mars Hill windmills prompt civil lawsuit”](#).

A Current Affair (August 14, 2009). Nine-MSN. [“Electricity nightmares”](#).

Wind Concerns Ontario (August 16, 2009). [“Wind Victims Gagged and Silenced in Ontario”](#).

ABC News (August 18, 2009). [“Pyrenees Shire questions wind farm noise”](#).

Wilson, Lauren (August 22, 2009). The Australian. [“Farmers flee as turbines trigger despair”](#).

Wilson, Lauren (August 24, 2009). The Australian. [“No relief for land owners affected by wind farms”](#).

ABC News (August 28, 2009). [“Govt urged to probe wind farm illness claims”](#).

ABC News (September 4, 2009). [“Qld noise experts to test Waubra wind farm”](#).

Hall, Cheryl (September 4, 2009). Stateline Victoria, ABC. [“Wind Farms causing head spins”](#).

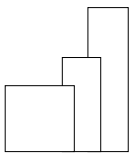
Reading, Lyndal (September 7, 2009). Weekly Times. [“Anger over wind turbine noise”](#).

Chatham Daily News (September 22, 2009). [“Wind turbines still a problem for some”](#)

Brown, Judy (September 30, 2009). Farm Country. “Wind turbines generate health, farming concerns”.

Stevens, Kim (October 15, 2009). The Courier. [“Health check at Waubra wind farm”](#).

Whittle, Julian (October 22, 2009). News & Star. [“Living near turbines is ‘mental torture’, Carlisle inquiry told”](#).



Vivian, Richard (November 12, 2009). Orangeville Banner. [“Answers definitely not blowing in the wind”](#).

Vivian, Richard (November 16, 2009). Orangeville Banner. [“No proven link exists between wind turbines, health problems”](#).

Vivian, Richard (November 19, 2009). Orangeville Banner. [“MOE pledges ongoing research on turbines, health”](#).

CBC News (November 18, 2009). [“Wind power health effects queried by municipal group”](#).

Annis, Robert (November 19, 2009). Indianapolis Star. [“Boone County looking into wind farm health fears”](#).

Crosby, Don (November 20, 2009). Owen Sound Sun Times [“Bruce seeks wind turbine health study”](#).

Lam, Tina (November 24, 2009). Detroit Free Press [“Living by wind farms no breeze, some say”](#).

Yomiuri Shimbun (November 29, 2009). [“Govt to study effects of wind farms on health”](#).

Leake, Jonathan, and Byford, Harry (December 13, 2009). Sunday Times. [“Officials cover up wind farm noise report”](#).

White, Leslie (December 24, 2009). Weekly Times. [“Report critical of wind farms”](#).

Braithwaite, Chris (December 30, 2009). [Chronicle](#). [“Wind tower neighbor bought out for health reasons”](#).

Schliesmann, Paul (January 16, 2010). Whig-Standard. [“Wind turbines: Expert says people are suffering health problems from being too close to structures”](#).

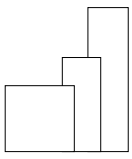
Ito, Aya; and Takeda, Tsuyoshi (January 19, 2010). Asahi Shimbun. [“Sickness claims prompt study of wind turbines”](#).

Squair, Sylvia (February 4, 2010). [“Throwing Caution to the Wind”](#).

Hall, Cheryl (February 19, 2010). Stateline Victoria, ABC News. [“Claims of wind farm illness”](#).

Bryce, Robert (March 1, 2010). Wall Street Journal. [“The Brewing Tempest Over Wind Power”](#).

ABC News (March 4, 2010). [“Govt to investigate wind farm complaints”](#).



Fox Business (March 4, 2010). ["Wind Farms Causing Health Problems?"](#).

Gray, Louise (March 6, 2010). Telegraph. ["Noise complaints about one in six wind farms"](#).

Martin, Steve (March 16, 2010). Ballarat Mornings, ABC Victoria. ["Wind Turbine Syndrome with Dr Nina Pierpont"](#).

Snyder, Paul (April 1, 2010). Daily Reporter. ["Landowners sue Invenergy over Forward Wind Energy Center"](#).

Spolar, Matthew (April 12, 2010). Concord Monitor. ["Effects of turbines in question"](#).

Kottke, Colleen (April 18, 2010). Fond du Lac Reporter. ["Oakfield couple files PSC complaint over wind farm"](#).

Roper, Matt (April 19, 2010). Daily Mirror. ["Couple driven out by noisy wind turbines sue for £380,000"](#).

BBC News (April 27, 2010). ["Lincolnshire windfarm rejected to help autistic boys"](#).

Oike, Yuki Tsuruta (April 30, 2010). ["Japanese conference against big wind"](#).

Mulholland, Jessica (March 1, 2010). Governing. ["Are Wind Farms a Health Risk?"](#).

Snyder, Paul (May 6, 2010). Daily Reporter. ["Wind farm property sells at sheriff's sale"](#).

O’Gorman, Josh (May 7, 2010). Rutland Herald. ["Hospital hosts wind debate"](#).

Craddock, Chelsea (May 16, 2010). Watertown Daily Times. ["Hospital shows off balance center"](#).

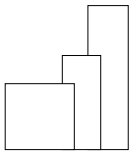
De Long, L. Sam (May 26, 2010). Watertown Daily Times ["Another health problem caused by turbines"](#).

AAP (May 27, 2010). Herald Sun. ["Sick residents claim wind farm 'torture'"](#)

WNEM (May 28, 2010). ["Homeowners File Lawsuit Over Wind Turbines"](#).

Weaver, Alex (May 29, 2010). The Standard. ["An ill wind blows in"](#).

McConville, Christine (June 2, 2010). Boston Herald. ["Falmouth wind-turbine noise has local residents whirling"](#).



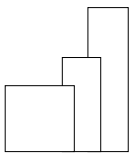
Simpson, Barbara (June 2, 2010). Delhi News-Record. [“A quiet room of their own: Residents impacted by wind turbines sleep in Delhi”](#).

Sellars, Paul (June 3, 2010). Weekly Times. [“Wind turbine illness claims”](#).

Lazzaro, Kellie (July 5, 2010). ABC News. [“Residents reject wind farm health findings”](#).

Australia.to News (July 27, 2010). [“Family First Senator seeks enquiry into health effects of wind farms”](#).

Hugus, Elise R. (July 27, 2010). [“Bylaw in the Works to Regulate Turbine Noise”](#).



McCann Exhibit E

posted: December 21, 2010 •

Ben Hoen on need for Property Value Guarantee

Author: Schneider, Clif

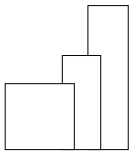
The following is an excerpt from a conversation I had in April 2010 with Ben Hoen, whose work with property value impacts associated with wind projects is widely referenced by developers, including those developers hoping to have wind projects approved here in Jefferson and St. Lawrence Counties. Hoen's comments below are very different from the spin suggested by Madden of BP Alternative Energy and Acciona's FEIS. Hoen indicates if developers believe turbines won't devalue neighboring property they should guarantee it, and he's right:

"You know we are very cautious about what happens close to the turbines. We really don't know what's going on there (e.g., 1,250 ft from turbines). I just spoke in Illinois about this. You might know about a Property Value Guarantee. It's a dicey situation and complicated, but I think homes that are very close, there is just too much unknown right now; that seems reasonable. I think **one of the things that often happens is that (wind) developers put our report forward and say look property values aren't affected, and that's not what we would say specifically.** On the other hand, they have little ground to stand on if they say we won't guarantee that. I think for homes that are close we have a lot more ambiguity and real issues. If we are talking about views that's one thing, if we are hearing it or shadow flicker that might be really regular, the kind of things that happen at night. ...

"I'm not a lawyer and I'm not the developer, these (PVGs) are just options in the tool kit. I don't know whether it's reasonable to put together, I have looked at one, I don't know if there is a better way to write it or whether the one I read from Illinois is good or bad. They have to be thought about, they all probably have cost implications, so the developer is not going to give away the house if they were too generous; on the other hand if they are not generous enough they don't have any impact. That's just one of the tools available, there are neighbor agreements that may be more applicable whether folks nearby get compensation, if they are not a participating land owner. One of the things I've always hoped is somebody would offer one or the other and see what landowners would do."

Reported by:
Clif Schneider
April 12, 2010

[Listen to the recording of Hoen's comment:](#)



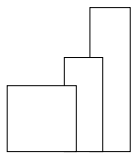
CERTIFICATION

The undersigned, representing McCANN APPRAISAL, LLC, do hereby certify to the best of our knowledge and belief that:

- FIRST: The statements of fact contained in this consulting report are true and correct.
- SECOND: The reported analyses, opinions and conclusions are limited only by the reported assumptions and limiting conditions and represents the personal, impartial and unbiased professional analyses, opinions, and conclusions of the undersigned.
- THIRD: We have no present or prospective interest in the property that is the subject of this report and no personal interest with respect to any of the parties involved.
- FOURTH: We have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.
- FIFTH: Our engagement in this assignment was not contingent upon developing or reporting predetermined results.
- SIXTH: Our compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
- SEVENTH: Our analysis, opinions, and conclusions were developed, and this report has been prepared in conformity with the Uniform Standards of Professional Appraisal Practice.
- EIGHTH: No physical inspection was made by McCann Appraisal, LLC of the property that is the subject of this report. The undersigned utilized photographs, maps and property record card data for characterizing and understanding the character of the subject property:
- NINTH: No one other than the undersigned provided significant real property appraisal assistance to the person signing this certification.
- TENTH: Neither the undersigned nor McCann Appraisal, LLC has previously appraised the subject property.

IN WITNESS WHEREOF, THE UNDERSIGNED has caused these statements to be signed and attested to.

Michael S. McCann, CRA
State Certified General Real Estate Appraiser
License No.553.001252 (Expires 9/30/2011)



PROFESSIONAL BIOGRAPHY

MICHAEL S. MCCANN, CRA

Michael S. McCann has been exclusively engaged in the real estate appraisal profession since 1980, and is the owner of McCann Appraisal, LLC.

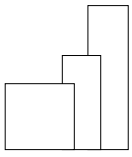
EXPERIENCE

His appraisal experience has included market value appraisals of various types of commercial, office, residential, retail, industrial and vacant property, along with a wide variety of unique or special purpose real estate, such as limestone quarries, hotels, contaminated properties, etc. He has gained a wide variety of experience in real estate zoning evaluations and property value impact studies, including analysis of utility scale wind turbine generating facilities, gas-fired electric generating plants, shopping centers, industrial facilities, limestone quarries, sanitary landfills and transfer station waste disposal facilities. He has been retained as an independent consultant to municipalities, government agencies, corporations, attorneys, developers lending institutions and private owners, and has spoken at seminars for the Appraisal Institute, the Illinois State Bar Association and Lorman Education Services on topics including the vacation of public right of ways (1986), and Property Taxation in the New Millennium (2000), Zoning and Land Use in Illinois (2005, 2006).

In addition to evaluation of eminent domain real estate acquisitions for a wide variety of property owners & condemning authorities, Mr. McCann has served as a Condemnation Commissioner (2000-2002) appointed by the United States District Court - Northern District, for the purpose of determining just compensation to property owners, under a federal condemnation matter for a natural gas pipeline project in Will County, Illinois.

EXPERT TESTIMONY

Assignments include appraisals, studies and consultation regarding real estate located in 21 states. He has qualified and testified as an expert witness in Federal Court, and for condemnation, property tax appeal and zoning matters in the Counties of Cook, Will, Boone, Lake, Madison, St. Clair, Iroquois, Fulton, McHenry, Ogle & Kendall Circuit Courts, as well as the Chicago and Cook County Zoning Boards of Appeal, the Property Tax Appeal Board (PTAB) and tax court & Commissions of Illinois, Wisconsin, and Ohio, Circuit Courts in New Jersey and Indiana, as well as zoning, planning, and land use and County Boards in Texas, Missouri, Idaho, Michigan, New Mexico and various metropolitan Chicago area locales. He has also been certified as an expert on the Uniform Standards of Professional Appraisal Practice (USPAP) by the Cook County, Illinois Circuit Court. Mr. McCann has substantial experience in large-scale condemnation and acquisition projects and project coordination at the request of various governmental agencies and departments. These include appraisals for land acquisition projects such as the Chicago White Sox Stadium project, the Southwest Transit (Orange Line) CTA rail extension to Chicago's Midway Airport, the United Center Stadium for the Chicago Bulls and Blackhawks, the minor league baseball league, Silver Cross Field stadium in Joliet, Illinois, as well as many other urban renewal, acquisition and neighborhood revitalization projects.



REAL ESTATE EDUCATION

Specialized appraisal education includes successful completion of Real Estate Appraisal Principles, Appraisal Procedures, Residential Valuation, Capitalization Theory and Techniques Part A, Standards of Professional Practice Parts A, B and C, Case Studies in Real Estate Valuation, Highest and Best Use and Market Analysis, Advanced Income Capitalization, Subdivision Analysis and Special Purpose Properties, Eminent Domain and Condemnation, and Valuation of Detrimental Conditions in Real Estate offered by the Appraisal Institute. In addition, he has completed the Society of Real Estate Appraisers' Marketability and Market Analysis course, the Executive Enterprises - Environmental Regulation course, and a variety of continuing education real estate seminars.

DESIGNATIONS & PROFESSIONAL AFFILIATIONS

Mr. McCann is a State Certified Associate Member of the Appraisal Institute, and the National Association of Review Appraisers & Mortgage Underwriters designated him as a Certified Review Appraiser (CRA). He was elected in 2003 as a member of Lambda Alpha International, an honorary land economics society, and he served several years as a member of the Appraiser's Council of the Chicago Board of Realtors.

LICENSES

State Certified General Real Estate Appraiser in the State of Illinois (License No. 533.001252) and is current with all continuing education requirements.