

**THE STATE OF NEW HAMPSHIRE
BEFORE THE
SITE EVALUATION COMMITTEE
DOCKET NO. 2015-04**

SUPPLEMENTAL PRE-FILED DIRECT TESTIMONY OF JAMES CHALMERS

**APPLICATION OF PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
D/B/A EVERSOURCE ENERGY
FOR A CERTIFICATE OF SITE AND FACILITY FOR CONSTRUCTION OF A
NEW 115 kV TRANSMISSION LINE**

THE SEACOAST RELIABILITY PROJECT

July 27, 2018

1 **Purpose of Supplemental Testimony**

2 **Q. Please state your name, title, and business address.**

3 A. My name is James Chalmers. I am the Principal of Chalmers & Associates, LLC
4 whose business address is 616 Park Lane, Billings, MT 59102.

5 **Q. What is the purpose of your Supplemental Testimony?**

6 A. My original testimony in this matter was filed on April 12, 2016. There was a
7 minor amendment to that Testimony dated March 29, 2017. The principal purpose of this
8 testimony is to address issues and new information that were not available or known to me at the
9 time I filed that original testimony. Since I filed that testimony the NH Site Evaluation
10 Committee (“SEC”) rendered a decision in another docket that led to updates and revisions to my
11 testimony and the research that underlies it. In addition, a study in other jurisdictions has
12 recently been completed that bears on the testimony I offer here.

13 **Q. How have you responded to the SEC decision you reference.**

14 A. The decision in SEC Docket No. 2015-06 specifically addressed elements of my
15 work which are relevant in this docket. I have carefully reviewed those comments and
16 criticisms, and addressed them in this updated material. The revisions and additions are
17 contained in High Voltage Transmission Lines and Real Estate Markets in New Hampshire: A
18 Research Report, June 30, 2015, Revised July 15, 2018 (the “NH Research Report”). *See*
19 Attachment A.

20 **Q. Please identify the new study you have recently completed.**

21 A. I have recently completed similar property value research in Massachusetts and
22 Connecticut that relate directly to the questions at issue here. That research has both case study
23 and statistical components. It is contained in a report titled High Voltage Transmission Lines
24 and Real Estate Markets in Massachusetts and Connecticut: A Research Report, July 15, 2018
25 (the “MA/CT Research Report”). *See* Attachment B.

26 **Q. Please describe the revisions that you have made to the NH Research Report.**

27 A. As I explain in the preface to the revised report, the most significant revision is
28 the addition of 20 case studies in the southeastern part of New Hampshire. These new case
29 studies provide additional support for the conclusions offered based on the original 58 cases. In

1 addition, five appraisals that are part of the case study research were reissued and changes were
2 made to a small number of sales included in the subdivision studies. None of these revisions
3 have any material effect on the individual case studies or subdivision studies or on the
4 conclusions of the case study research or the subdivision study research as a whole.¹

5 **Q. Does the new material you reference above affect the conclusions of your**
6 **original pre-filed testimony?**

7 **A.** No, but the additional information described above has provided further support
8 for my original conclusion that the number of residential properties that may experience market
9 value effects due to the Project is very small and, as a consequence, would not have a discernable
10 effect on local or regional real estate markets.

11 The additional research in New Hampshire consists of 20 new case studies. The new
12 research in Massachusetts and Connecticut consists of statistical analysis of 1,800 sales in eight
13 study areas and 42 case studies along overhead lines and six along underground lines. The
14 statistical analysis concludes that there is no evidence of systematic measurable effect of
15 proximity to, or visibility of, high voltage transmission lines (“HVTL”) on the price at which
16 nearby properties have sold. While the statistical analysis doesn’t rule out the possibility that
17 there are specific properties that may have experienced sale price effects, such properties are
18 apparently too small in number to produce statistically significant results.

19 The purpose of the case study research is to examine in detail the sale of properties
20 proximate to HVTL to supplement the statistical analyses. The new case studies reinforce the
21 findings of the earlier New Hampshire case study research that when a residential property has a
22 defined set of characteristics relative to nearby HVTL, the likelihood of sale price effects
23 increases should the property be sold. Specifically, when any of the case study properties
24 combined a house that was within 100 feet of the ROW boundary, a lot that was encumbered by
25 the ROW easement and had either partial or clear visibility of HVTL structures from outside the

¹ The addition of case studies together with revisions to the original case studies and subdivision studies renders the summary of these studies in my testimony of April, 2016 and at pp. 124 – 126 of the Application out of date. The substance of that testimony is unchanged but reference to specific numbers of cases, sales, etc. should be based on the NH Research Report as it has been revised effective July 15, 2018.

1 house, the likelihood of a price effect went up to about 50%. In the absence of any of these three
2 characteristics, the occurrence of price effects was close to zero.

3 The statistical research and the case study research both have important implications for
4 my opinions with respect to the likely effects of the Seacoast Reliability Project on property
5 values. The statistical studies present strong evidence that there are no consistent effects of
6 HVTL on property values in urban and suburban regions of Massachusetts and Connecticut.
7 Given the broad representation of locations in these studies, these results have relevance for New
8 Hampshire.

9 The case studies identify the characteristics of the small number of residential properties
10 that have experienced adverse sale price effects due to HVTL. I estimate that there are some
11 residential properties that will share these characteristics after construction of the Seacoast
12 Reliability Project. But, most of these properties already share these characteristics along the
13 existing Public Service Company of New Hampshire (“PSNH”) right-of-way (“ROW”). They
14 are encumbered by the ROW easement, the houses are within 100 feet of the ROW boundary,
15 and they have either unobstructed visibility or partial visibility of the structures that currently
16 exist in the ROW.

17 As a general statement, should these properties come to market subsequent to Project
18 construction under conditions similar to those that characterized the case study research, I would
19 expect that some would experience adverse sale price effects and some would not. To the extent
20 that there were adverse effects, some would be due to the pre-existing condition and some to the
21 Project. What would actually happen in the sale of a particular property, however, cannot be
22 presumed. The result for any individual property would be specific to the characteristics of the
23 property relative to what was available in the market at that time, to the particular motivations of
24 the seller and potential buyers, to overall market conditions at the time of the sale and to the
25 extent that mitigation actions had successfully reduced the effect of the HVTL on the property.

26

27

Project Description and Identification of Proximate Property Types

28

Q. Are you familiar with the Project location?

1 A. Yes, I have reviewed the entire Project location on four occasions, once in August
2 2015, twice in May 2018 and once in July 2018.

3 **Q. What was the purpose of your review?**

4 A. The purpose of the visits was to provide an in-depth understanding of the nature
5 of the Project and to observe the property types that might potentially be subject to sale price
6 effects due to the Project in light of questions raised in a recent NH Site Evaluation Committee
7 (“SEC”) proceeding.

8 **Q. Please describe the Project’s key components.**

9 A. The Project is approximately 12.9 miles in length and is located for the majority
10 of the route in an existing PSNH ROW that is approximately 100 feet wide and contains a 34.5
11 kV distribution line on wood pole structures that average about 40 feet in height. The Project
12 involves the construction of a new 115 kV line in the existing ROW with steel monopole
13 structures that will carry both the new line and, in most places, the existing 34.5 kV distribution
14 line. The monopoles vary considerably in height from 55 to 105 feet but are generally in the
15 range of 80 to 95 feet. While most of the Project is designed in an overhead configuration, four
16 segments of the Project will be placed underground—a segment on the UNH campus where the
17 line crosses Main Street, the submarine cable under Little Bay, a segment across Gundalow
18 Landing in Newington continuing east of Little Bay Road and a segment in the Newington
19 Historic District crossing the Frink Farm and continuing along Hannah Lane.

20 **Q. Please describe the property types near the Project that might be subject to**
21 **property value effects.**

22 A. The properties along the proposed route can generally be characterized as single
23 family residential, university-related institutional, commercial/industrial and undeveloped lands.

24 There are two clusters of residential development close to the Project in the Town of
25 Durham. One is a short segment along the east side of the Pan Am Railroad ROW between the
26 Project crossing of NH Route 4 and the UNH Campus. The other consists of properties in the
27 eastern part of Durham in a section of a little more than two and one-half miles between where
28 the Project crosses Newmarket Road and where it crosses Durham Point Road. In addition, in
29 the Town of Newington there are a few properties close to the Project where it is overhead near

1 Fox Point Road and several properties along underground segments of the Project at Gundalow
2 Landing and along Hannah Lane.

3 Institutional property occurs where the Project crosses the UNH campus. It enters the
4 UNH Campus from the north in an overhead configuration and then transitions to underground.
5 It proceeds under Main Street and then emerges overhead at Waterworks Road. There is a
6 variety of University facilities near the Project including parking lots, student housing, classroom
7 and office buildings, athletic facilities and a variety of other support facilities.

8 Commercial/industrial development is limited to the far eastern end of the route where
9 the Project passes along the Spaulding Turnpike parallel to the back of the Crossings
10 Commercial Center and the Fox Run Shopping Center. It then crosses the Turnpike and joins an
11 existing HVTL ROW that runs across the Fox Run Shopping Center Parking Lot, proceeds
12 across Woodbury Avenue and ends up at the Portsmouth Substation, its eastern terminus.

13 There is considerable undeveloped land along the Project route of which much is
14 conservation land. As noted in the "Review of Land Use and Local and Regional Planning: the
15 Seacoast Reliability Project", April 2016, Normandeau Associates, Inc., there do not appear to be
16 significant holdings likely to be developed into residential or commercial uses.

17

18 **New Research Relevant to Property Value Effects of the Project**

19 **Q. Is there new research on property value effects of HVTL relevant to New**
20 **England in general and New Hampshire in particular?**

21 **A.** Yes. I discussed the then existing studies in the original NH Research Report.
22 Since that report and my testimony of April, 2016 were submitted, the MA/CT Research Report
23 and the additional 20 New Hampshire case studies were completed and are important additions
24 to the basis for my opinions in this matter. There is now a total of 120 case studies of properties
25 that sold recently along existing, overhead HVTL in New England. Seventy-eight of the case
26 study properties are located in New Hampshire, 58 in the original Research Report and 20 new
27 ones, and 42 are located in Massachusetts and Connecticut. The case studies are purposely
28 selected from properties thought to be most vulnerable to property value effects -- namely,
29 properties encumbered by a ROW easement, properties adjacent to a ROW and properties,

1 neither encumbered nor adjacent, but located close to a HVTL ROW. Each case study involves a
2 careful description and mapping of the property, determination of the critical relationships of the
3 property to the HVTL, a retrospective appraisal of the property at the time of sale independent of
4 HVTL influence² and interviews of transaction participants. Each case study typically represents
5 30 to 40 person hours of effort.

6 **Q. Please explain the results of this New England-based research.**

7 **A.** In those 120 case studies, sale price impacts were determined to have occurred in
8 25 of the transactions studied and not to have occurred in 75. In 20 cases the evidence was
9 mixed, and a conclusion couldn't be drawn one way or the other.³ Table 1 shows the way in
10 which the proximity of the house to the ROW boundary and the visibility of structures is
11 associated with a finding that there was an adverse effect of the HVTL on sale price.

12

² The retrospective appraisal process is as follows. An historical sale is identified along a HVTL. The appraiser then goes back to the time of the sale and selects comparable sales appropriate to that time. Further, the comparable sales are selected so that there is a strong a priori case that they have no HVTL influence. The resulting appraised value is then compared to the sale price as an indication of whether the sale price was influenced by the HVTL.

³ The appraisal evidence and the interview evidence were typically given equal weight in reaching a conclusion with respect to HVTL effect. Where they were consistent, a reliable conclusion could be drawn. Where they were inconsistent there was no basis for resolving the inconsistency and the conclusion was left as indeterminate. There was no particular pattern to the inconsistency. In some cases the sale price was less than the appraised value implying an adverse effect but the interview evidence indicated no effect. In other cases, the sale price exceeded the appraised value implying no effect but the interview evidence indicated that there was an adverse effect.

1 **Table 1**
2 **Number of NH, MA, CT Case Studies Where Sale Price Effects Were Found in Each**
3 **Distance/Visibility Category⁴**
4

Structure Visibility	Distance from House to ROW Boundary									Row Totals		
	0 to 100 ft			101 to 200 ft			201 ft or more					
	Yes	Total	%	Yes	Total	%	Yes	Total	%	Yes	Total	%
Not Visible	0	2	0%	0	2	0%	0	17	0%	0	21	0%
Partially Visible	6	13	46%	0	10	0%	0	12	0%	6	35	17%
Clearly Visible	17	29	59%	2	13	15%	0	2	0%	19	44	43%
Column Totals	23	44	52%	2	25	8%	0	31	0%	25	100	25%

5
6 Each cell shows the number of cases in which an adverse sale price effect was found, the total
7 number of cases in that cell and the number of cases with an adverse effect as a percent of the
8 total number of cases. The two cells where almost all adverse effects have been found are
9 shaded in red. Most striking is the common characteristics of the properties where adverse sale
10 price effects from HVTL were found: Twenty-three of the 25 properties had homes located
11 within 100 feet of the ROW boundary (the average was 44 feet)⁵, all but six had clear visibility
12 of one or more structures, and 22 of the 25 were encumbered by the ROW.

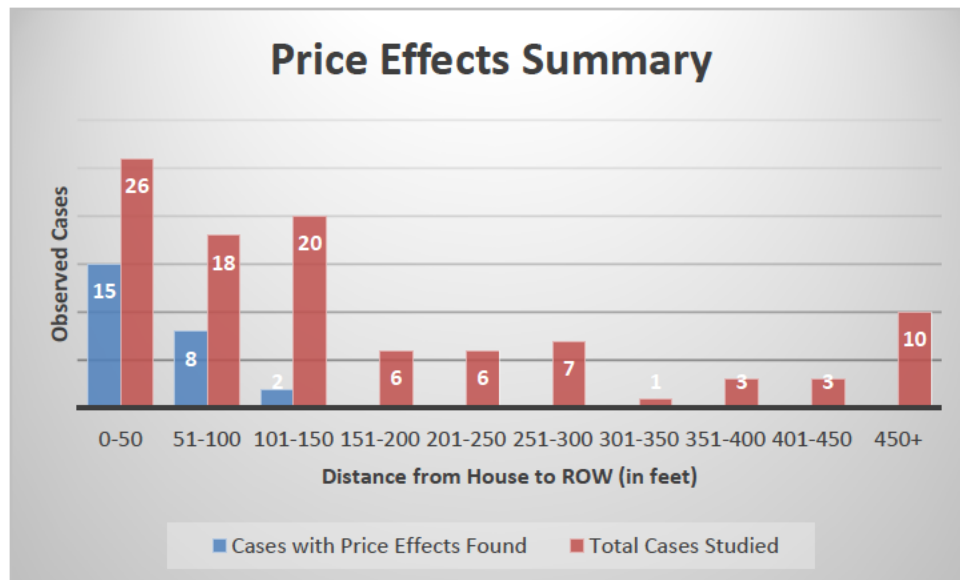
13 The pattern of effect is consistent across all the case studies. If a case study property
14 combined a house within 100 feet of the ROW boundary with clear structure visibility, adverse
15 effects were found in a little more than half the cases. If a property had a house located farther

⁴ Excluding indeterminate cases.

⁵ The other two had houses 106 feet and 110 feet from the ROW boundary with clear visibility of structures and they were both encumbered by the ROW easement.

1 than 100 feet of the ROW boundary, irrespective of structure visibility, there are only two cases
2 out of a total of 56 where an adverse effect on sale price was found and in those two cases, as
3 noted above, the houses were only slightly over 100 feet from the ROW boundary. The
4 association of sale price effects with proximity of the house to the ROW boundary is even more
5 obvious as shown in Figure 1.

6 **Figure 1. Incidence of Sale Price Effects by Distance of House from ROW Boundary: New**
7 **Hampshire, Massachusetts and Connecticut Cases**⁶
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11 I do not interpret these distance, visibility and encumbrance characteristics as
12 unchangeable descriptors of properties that may experience sale price effect. But the number of
13 cases and the consistency of the results provide the basis for reliable generalizations about the
14 way in which groups of properties with certain characteristics can be anticipated to experience
15 adverse sale price effects due to HVTL.

16 **Q. Where adverse sale price effects were found in the case study research, what**
17 **was the magnitude of the effects?**

18 **A.** The statistical research is better suited than the case studies to identify the
19 magnitude of possible sale price effects. The multiple regression work I have carried out in
20 study areas throughout Massachusetts and Connecticut has found no evidence of price effects.

⁶ The 20 indeterminate cases are excluded.

1 Due to relatively sparse and heterogeneous development patterns in much of New Hampshire, no
2 comparable statistical studies have been carried out there.

3 In the twenty five case studies in New Hampshire, Massachusetts and Connecticut where
4 it was determined that there was an adverse effect of the HVTL on the sale price, potential
5 evidence of the magnitude of effect is the difference between the sale price of the property and
6 the appraised value under the hypothetical assumption of no HVTL effect. These values varied
7 widely from a low of 1.6% to a high of 17.9 % with an average of 7.3%, but these values cannot
8 be taken literally as evidence of the magnitude of HVTL effect on sale price. A conclusion with
9 respect to the magnitude of the effect in any particular case would require a more complete
10 evaluation of the strength of the comparable sales in the appraisal, the interview evidence, other
11 particular characteristics of the property and its location and possible atypical motivations of the
12 buyer and seller.

13 **Q. To what extent is the case study research you have summarized above**
14 **relevant to the region in which SRP is proposed to be located and the type of project it**
15 **represents?**

16 **A.** The overall consistency of the case study research conclusions based on
17 transactions in many different locations in New Hampshire, Massachusetts and Connecticut
18 suggests that they have general applicability to the property value issue throughout New
19 England. Moreover, 29 case studies are located in towns in the southeastern region of New
20 Hampshire—generally south of Concord and east of I-93.⁷ Of these, 16 are located near a single
21 115 kV line on steel or wood laminate monopoles, four are near one or more 34.5 kV distribution
22 lines, five are near a single 345 kV line and four are close to a corridor with a 345 kV line as
23 well as additional lines. All but four of the 120 case study properties are located proximate to a
24 transmission corridor at least as large as the SRP line.

25 **Q. What are the implications of these research findings for the evaluation of**
26 **property value effects of new HVTL projects?**

⁷ The case study locations are Dover-11, Hooksett - 6, Danville - 4, Greenland - 2, and one each in Pembroke, Allenstown, Deerfield, Durham, Portsmouth and Newmarket.

1 **A.** The research is directly applicable to the effects of existing HVTL on nearby
2 residential properties. In applying this research to the assessment of the effects of a new project,
3 however, it is necessary to distinguish between a project being built in a new corridor and a
4 project being built in an existing corridor that already contains one or more HVTL. If a project
5 is constructed in an existing HVTL corridor in which the ROW boundary does not change, two
6 of the three property characteristics relevant to sale price effect will not change. The proximity
7 of the house to the ROW boundary will not change and the encumbrance of the property will not
8 change. What could change, however, is the visibility of structures. That will be investigated
9 below as it relates to the Seacoast Reliability Project.

10 **Q.** **What are the research implications with respect to market value effects on**
11 **the other, non-residential property types along the Project route?**

12 **A.** The university property would be classified by appraisers as special use property
13 and its value in this context would be determined by the function it serves in the mission of the
14 university, not by market forces. Given the Project's location overhead coming onto the campus
15 parallel to a large student housing parking lot, its location underground through the heart of the
16 campus and its location overhead as it leaves the campus in an area largely associated with
17 property maintenance and infrastructure facilities, it is unlikely that the Project will cause any
18 adverse effect on the functioning of University property. This conclusion is reinforced by my
19 understanding that the Applicant has worked with UNH to address concerns about University
20 operations.

21 There is significant commercial and industrial development at the east end of the Project
22 route but, like the rest of the route, the new line will be entirely within an existing ROW. Given
23 that there is no change in the ROW and therefore no change in the development potential of
24 nearby properties, national studies indicate that there will be no impact on the market value of
25 these properties.

26 The Land Use Report prepared by Robert Varney cited above, suggests that the vacant
27 land through which the Project passes is unlikely to experience significant new development.
28 Much of it is conservation land or is land owned by public sector entities with no development

1 agenda. As such, the presence of the Project in the existing ROW should have no effect on the
2 use or utility, and hence the value, of adjacent lands.

3

4 **Effects of the Seacoast Reliability Project on the Market Value of Nearby Properties**

5 **Q. What are your conclusions with respect to the likely effect of the Project on**
6 **the market value of nearby properties?**

7 **A.** I have examined the Project design and potentially affected properties proximate
8 to the Project. The focus of that examination was on residential properties but other property
9 types have been analyzed as well. For residential properties, emphasis was on the three variables
10 that research has shown best measure potential effect on the market value of a property -- the
11 proximity of the house to the ROW, the visibility of structures both before and after construction
12 of the Project, and the extent to which the property is encumbered by the ROW easement. I
13 examined those factors for all residential properties with homes located within 300 feet of the
14 ROW boundary along the proposed route.⁸

15 **Q. How did you assess visibility of structures from these properties?**

16 **A.** I determined potential visibility of both existing and proposed structures from my
17 site visits in August of 2015 and May and July of 2018, from examination of aerial imagery, and
18 from examination of engineering plans and profile sheets. The aerial imagery was used both to
19 compare “leaf-on” and “leaf-off” conditions⁹ and for line of sight calculations based on the
20 proximity of the tree line to the houses. At each location I and a colleague observed the property
21 from public roads or from the Eversource ROW.

22

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⁸ The Case Study research has studied properties with homes located as far as 1,000 feet from the ROW boundary but where effects have been found, with two exceptions, the homes have been within 100 feet or less of the ROW. In my analysis here, all residential development with homes within 300 feet of the ROW boundary is identified. Based on the research to date, this provides a comfortable margin beyond the distance at which effects have been found to gauge the potential for market value effects.

⁹ My site visits occurred during leaf-on conditions.

1 **Q. Can you describe your findings as one proceeds along the proposed route from the**
 2 **Madbury Substation to the Portsmouth Substation?**

3 **A.** Yes. I'll go segment by segment along the route and make reference to structure
 4 numbers as they appear on the Revised Environmental Maps dated 9/1/2017.

5 **1. Madbury Substation to NH Route 4: Structures 1-10**

6 There is only one single family residential property within 300 feet of the Project ROW
 7 along this segment. It is a heavily screened property on the east side of the railroad with a house
 8 located over 200 feet from the ROW which does not appear to have any structure visibility either
 9 now or after the proposed Project is constructed. Relevant information on the property is in
 10 Table 2.¹⁰

11

Table 2
Residences Within 300 feet of the Right of Way
Madbury Substation to New Hampshire Route 4: Structures 1-10

Line List	Owner Name (From Title Report or Tax Card)	Site Address	Site Town	Proximity of Residence to ROW (Feet)	Extent of Easement Impact	Structure Visibility Before & After Project	
						Before	After
202	Forrest, David	145 Madbury Road	Durham	235	Not Encumbered	None	None

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feet.

2. NH route 4 to UNH: Structures 10 -23

This segment proceeds south towards the UNH Campus. There are 18 properties along the
 east side of the railroad within 300 feet of the PSNH ROW. As shown in Table 3, only one is
 within 100 feet, eight are in the range of 101 to 200 feet and nine are in the range of 201 to 300

¹⁰ For this Table and Tables 3-7 that follow, the proximity of residence to the ROW was estimated by Cornerstone Energy from aerial imagery. Structure visibility was estimated by Chalmers & Associates from aerial imagery and field inspection.

Table 3
Residences Within 300 feet of the Right of Way
New Hampshire Route 4 to University of New Hampshire: Structures 10-23

Line List	Owner Name (From Title Report or Tax Card)	Site Address	Site Town	Proximity of Residence to ROW (Feet)	Extent of Easement Impact	Structure Visibility Before & After Project	
						Before	After
210	Hannon, Jeffrey j & Ashley	4 Hampshire Avenue	Durham	80	Not Encumbered	None	None
207	Dalton, John R & Dalton, Michelle B	4 Scotland Road	Durham	105	Not Encumbered	None	None
216 01	Karl A Van Asselt Liv Rev Trust; Houle Margaret	17 Fairchild Drive	Durham	105	Not Encumbered	None	None
205	Deturk, Mark S & Mary J	8 Scotland Road	Durham	125	Not Encumbered	None	None
206	Henri J Richard Rev Trust	6 Scotland Road	Durham	135	Not Encumbered	None	None
208	Skotko, Bradley & Smith, Heather	2 Scotland Road	Durham	135	Not Encumbered	None	None
209	Karola Luft Revocable Trust	4A Hampshire Avenue	Durham	135	Not Encumbered	None	None
216 02	Garofalo, Piero G & Dubois-Garofalo, Karen S	15 Fairchild Drive	Durham	160	Not Encumbered	None	None
216 09	Lewis, Kathleen S & Stephen E	1 Fairchild Drive	Durham	195	Not Encumbered	None	None
216 03	Pirie Family Rev Trust, J & L	13 Fairchild Drive	Durham	205	Not Encumbered	None	None
211	Graham, Crystal A	6 Hampshire Avenue	Durham	225	Not Encumbered	None	None
216 04	Davis, Wendell P & Pamela K	11 Fairchild Drive	Durham	240	Not Encumbered	None	None
212	Giroux, David L & Browne, Gretchen S	8 Hampshire Avenue	Durham	245	Not Encumbered	None	None
214	Peter M Ejarque Revocable Trust, C/O Herman	12 Hampshire Avenue	Durham	250	Not Encumbered	None	None
216 08	Charlotte A R Welsh Rev Trust & Carden N Welsh Rev Trust	3 Fairchild Drive	Durham	250	Not Encumbered	None	None
217 01	Willoughby, Darlene J	23 Davis Avenue	Durham	270	Not Encumbered	None	None
206 01	Charos, Maryann Andrews	1 Scotland Road	Durham	280	Not Encumbered	None	None
213	Corvini, Marguerite	10 Hampshire Avenue	Durham	300	Not Encumbered	None	None

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These homes are very heavily screened from the railroad and the PSNH corridor and there will be no clearing of vegetation on their side of the railroad. There is no visibility of structures now and none is anticipated with the Project, and I would expect no sale price effect on these properties.

Starting a little beyond Structure 16, the Project parallels the very large parking lot that serves the UNH student housing complex at the Gables. As explained earlier, these are special use properties whose value is determined by their relationship to the educational function of the University. There is no reason to think that the use or utility of these, or any other of the University facilities, will be adversely affected by the Project.

3. UNH: Underground Cable

The Project goes underground at Structure 23 and then emerges at Structure 24 on the south side of Main Street near Waterworks Road. There will be no effect on the use or utility of University property in this segment.

1 **4. UNH to Durham Substation: Structures 24 to 33**

2
3 Other than University property, there is no proximate development in this segment.

4
5 **5. Durham substation to Little Bay Crossing: Structures 33 to 101**

6
7 The new line proceeds south from the Durham Substation to the Packers Falls Substation and
8 then turns sharply east towards the Little Bay Crossing. There are no proximate structures until
9 the alignment parallels rural residential parcels along Bennett Road starting with Structure 52.
10 The Project then stays just north of the point where Bennett Road intersects Newmarket Road
11 from the west and Longmarsh Road comes in from the east. The project then crosses in
12 succession -- Timberbrook Lane, Cutts Road, Ffrost Drive and Sandy Brook Drive. This section
13 of Durham is well-developed with homes along existing roads, as well as in more recently
14 developed subdivisions. There are three homes along Bennett Road within 300 feet of the ROW
15 and an additional 25 homes in the stretch from Newmarket Road to Sandy Brook Drive. The
16 route then crosses undeveloped lands, largely conservation lands, before reaching Longmarsh
17 Road and Durham Point Road where there are an additional seven properties with homes within
18 300 feet of the ROW.

19 Unlike the residential properties north of UNH, several of these properties have homes very
20 close to the ROW from which there is partial or clear visibility of the existing 34.5 kV structures
21 and from which there would be visibility of the proposed 115 kV structures with the 34.5 kV
22 underbuild. Table 4 lists the 35 properties with their proximity to the ROW, the visibility of both
23 existing and proposed structures and whether the property is encumbered by the ROW easement.
24 All but one of these homes were built well after the existing 34.5 kV line was constructed in
25 1949.

Table 4
Residences Within 300 feet of the Right of Way
Durham Substation to Little Bay Crossing: Structures 33-101

Line List	Owner Name (From Title Report or Tax Card)	Site Address	Site Town	Proximity of Residence to ROW (Feet)	Extent of Easement Impact	Structure Visibility Before & After Project	
						Before	After
255	Zhou, Zaixing & Zhao, Baorong	23 Ffrost Drive	Durham	1	Encumbered	Clear	Clear
250	Kraus Jr , John D : Kraus, Janice M	7 Cutts Road	Durham	5	Encumbered	Clear	Clear
254	Rappolt, Erik J & Paula M	24 Ffrost Drive	Durham	5	Encumbered	Clear	Clear
256	Fitzhenry, Robert & Michelle	25 Ffrost Drive	Durham	10	Encumbered	Clear	Clear
248	Sullivan, Ryan P & Morgan Roberta	10 Cutts Road	Durham	25	Encumbered	Clear	Clear
276	Gans, Lawrence S & Darragh, Anne	289 Durham Point Road	Durham	35	Encumbered	Partial	Clear
249	Bieniek, Richard D & Margaret T	9 Cutts Road	Durham	40	Encumbered	Clear	Clear
245	Oakes, George E & Julie P	12 Timberbrook Lane	Durham	60	Encumbered	Partial	Clear
271	Heald McCosker, Donna M	220 Longmarsh Road	Durham	65	Encumbered	Partial	Partial
247	Bornstein, Steven P	12 Cutts Road	Durham	80	Encumbered	Partial	Partial
262	Ackerman, Timothy R & Stafanie A	45 Sandy Brook Drive	Durham	80	Encumbered	None	Partial
254 05	Coleman, April	26 Ffrost Drive	Durham	115	Not Encumbered	Clear	Clear
277	Fitch, Matthew & Amanda E	291 Durham Point Road	Durham	125	Encumbered	Partial	Partial
259 01	Aggarwal, Sharad & Manisha	14 Sandy Brook Drive	Durham	130	Not Encumbered	Partial	Partial
261	Bliss, Stuart P & Susan K	43 Sandy Brook Drive	Durham	130	Encumbered	None	None
270	Covatis, Nicholas & Rivard, Amy	228 Longmarsh Road	Durham	130	Abuts ROW	Partial	Partial
246	Patricia M Farrell Rev Living Trust	10 Timberbrook Lane	Durham	135	Encumbered	Partial	Clear
254 01	Jenkins, Scott M & Lorie Ann	21 Ffrost Drive	Durham	145	Encumbered	None	None
257	David & Janice Kates Family Trust	15 Sandy Brook Drive	Durham	150	Encumbered	Partial	Partial
237	Moriarty, Heirs of Bertha; C/O Thomas B Moriarty Jr	4 Bennett Road	Durham	155	Encumbered	Partial	Partial
269 01	Hayes, Timothy P & Kathleen R	229 Longmarsh Road	Durham	165	Not Encumbered	None	None
239	Riggle, Justin	127 Newmarket Road	Durham	180	Encumbered	Clear	Clear
248 01	McDonough, Timothy P & Erin J	8 Cutts Road	Durham	180	Not Encumbered	Partial	Partial
254 06	Tillock, Paul	1 Cutts Road	Durham	180	Not Encumbered	None	None
244	Callander, Preston & Rachel	23 Timberbrook Lane	Durham	190	Encumbered	Partial	Partial
280 01	Miller Family Rev Trust	297 Durham Point Road	Durham	190	Not Encumbered	Partial	Partial
262 01	Lutze, Manuela	47 Sandy Brook Drive	Durham	215	Abuts ROW	None	None
250 01	Russell, Brian & Watts, Christine	3 Cutts Road	Durham	230	Not Encumbered	None	None
256 01	Little, Murray L & Rhondda A	27 Ffrost Drive	Durham	240	Not Encumbered	None	Partial
266	Devey, Wayne A & Ruth	146 Durham Point Road	Durham	240	Encumbered	None	None
236	Gregg, Bradford & Mary	Bennett Road	Durham	250	Encumbered	Partial	Partial
249 01	Halloran, Peter R & Tawny K	11 Cutts Road	Durham	250	Not Encumbered	None	None
240 01	Gantz, Benjamin L & Alexandra M	13 Longmarsh Road	Durham	275	Not Encumbered	Partial	Partial
234	Pratt, Albert N & Gengarely, Lara M	42 Bennett Road	Durham	285	Not Encumbered	None	None
246 03	Weisman, Gary R & Donna C	14 Cutts Road	Durham	285	Not Encumbered	None	None

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In summary, for this area of Durham, there is a relatively small group of properties that after construction of the Project will have the characteristics the case study research indicates is associated with an increased likelihood of sale price effect. Much of this is due to the pre-existing location of these properties along the PSNH ROW but, for some properties, the Project may incrementally increase the likelihood of sale price effect due to the increased visibility of structures.

1 **6. Little Bay Crossing to Little Bay Road: Submarine Cable, Underground Cable**
2 **and Structures 101 to 105**

3
4 The line will emerge from Little Bay but remain underground as it crosses Gundalow
5 Landing in Newington and then crosses Little Bay Road before going overhead again at
6 Structure 102. Table 5 shows the 12 properties in this segment that have homes located within
7 300 feet of the ROW boundary. As it emerges from Little Bay, the line is located on LL # 400
8 until it intersects the ring road. From that point the cable will be in, or very close to, the street
9 until it crosses Little Bay Road and then transitions to overhead at Structure 102 on property of
10 the Town of Newington.

11 Two of these properties have homes within 300 feet of the ROW where the lines are
12 overhead, LL# 405.5 and 406, but both are over 200 feet from the ROW. LL# 405.5 has no
13 structure visibility now and none is anticipated after Project construction. LL# 406, however,
14 has clear structure visibility both before and after Project construction. Of the other 10
15 properties, all located along the underground cable, the two closest to Little Bay Road, LL#
16 403.1 and 404, have partial visibility of structures of the existing line but none of the existing
17 structures appear to be visible from the other eight properties. None of these 10 properties will
18 have structure visibility after Project construction.

Table 5
Residences Within 300 feet of the Right of Way
Little Bay Crossing to Little Bay Road: Submarine and Underground Cable, Structures 101-105

Line List	Owner Name (From Title Report or Tax Card)	Site Address	Site Town	Proximity of Residence to ROW (Feet)	Extent of Easement Impact	Structure Visibility Before & After Project	
						Before	After
403	Hamelin, Richard P.	72 Gundalow Landing	Newington	75	Encumbered	None	None
403.01	Davis, Peter K. & Linda B.	10 Gundalow Landing	Newington	95	Not Encumbered	Partial	None
404	Raymond, Robert P. & Perna, Mary Jane	5 Gundalow Landing	Newington	104	Encumbered	Partial	None
400	Beswick, Paul R. 2008 Trust Ne; Beswick, Paul R.	44 Gundalow Landing	Newington	110	Encumbered	None	None
401	Joyce Crowqley Rev Trust	52 Gundalow Landing	Newington	177	Abuts UG ROW	None	None
402.01	Hebert Family 2012 Rev Trust	20 Gundalow Landing	Newington	177	Not Encumbered	None	None
402	Vietas, Lawrence W. & Suzanne M.	29 Gundalow Landing	Newington	195	Abuts UG ROW	None	None
403.06	Como, Richard A. & Como, Lynn M.	64 Gundalow Landing	Newington	205	Not Encumbered	None	None
405.05	Quinn, Steven C. & Donna L.	56 Captains Landing	Newington	235	Not Encumbered	None	None
406	Pickering, Curtis J.	293 Little Bay Road	Newington	245	Encumbered	Clear	Clear
405.01	Callahan, Martin J. & Teresa B.	195 Little Bay Road	Newington	250	Not Encumbered	None	None
400.01	Ross, Douglas A. & Angelita R.	40 Gundalow Landing	Newington	270	Not Encumbered	None	None

7. Little Bay Road to Newington Historic district: Structures 105 to 109

The route proceeds overhead in this segment before it goes underground again after Structure 109 at the Frink Farm which is part of the Newington Historic District. There is no nearby development along this segment.

8. Newington Historic District to Hannah Lane: Underground

There are 12 residential properties in this segment within 300 feet of the ROW boundary as shown in Table 6. As was the case at Gundalow Landing, once construction is complete and landscaping restored, there will be no visual evidence of the Project and no negative market value impacts are anticipated. Four of these properties currently have the characteristics associated with the potential for adverse sale price effect.¹¹ These are properties from which the existing structures are clearly visible, the residences are very close to the ROW and the property is encumbered by the ROW easement. Of course it depends on many other market factors, but once the overhead line is removed, the likely sale price effect from the Project should these properties be sold would be positive as compared to the “before” Project condition.

**Table 6
Residences Within 300 feet of the Right of Way
Newington Historic District to Hannah Lane: Underground**

Line List	Owner Name (From Title Report or Tax Card)	Site Address	Site Town	Proximity of Residence to ROW (Feet)	Extent of Easement Impact	Structure Visibility Before & After Project	
						Before	After
412	Lee, John	20 Hannah Lane	Newington	10	Encumbered	Clear	None
413	Bagley, Paul L. & Sheryl A.	30 Hannah Lane	Newington	20	Encumbered	Clear	None
414	Bush, Steven J. & Carol A.	40 Hannah Lane	Newington	25	Encumbered	Clear	None
411	Abbott, M. Blanche, Trustee	12 Hannah Lane	Newington	70	Encumbered	Clear	None
415.04	Hart, William R.	12 Lydia Lane	Newington	90	Not Encumbered	None	None
415.03	Joanne Johnson Revocable Trust; Johnson, Trustees, Joanne & Bruce	10 Lydia Lane	Newington	105	Not Encumbered	None	None
411.01	Sabine, Stephen E. & Brenda J.	249 Nimble Hill Road	Newington	120	Encumbered	Clear	None
415.06	Witkop, Robert J. & Kathleen B.	8 Lydia Lane	Newington	120	Not Encumbered	None	None
415.05	Wright, William W. & Norma	6 Lydia Lane	Newington	175	Not Encumbered	None	None
414.01	Cooke, Russell J. & Margaret C.	41 Hannah Lane	Newington	235	Not Encumbered	None	None
417.06	Blonigen, Robert P. & Brenda	21 Hannah Lane	Newington	250	Not Encumbered	Partial	None
410.01	Hourihan, Thomas F.	248 Nimble Hill Road	Newington	260	Not Encumbered	None	None

¹¹ These are Line List properties #411, 412, 413 and 414.

9. Hannah Lane to Spaulding Turnpike: Structures 113 to 128

The only residential properties in this segment with houses within 300 feet of the PSNH ROW are located around the intersection of the Project and Fox Point Road. As shown in Table 7, there are seven such properties. Two of these are very close to the ROW boundary, are encumbered by the ROW easement and are anticipated to have unobstructed views of the new HVTL structures, although one already had clear visibility and one had partial visibility of existing structures.

**Table 7
 Residences Within 300 feet of the Right of Way
 Hannah Lane to Spaulding Turnpike: Structures 113-128**

Line List	Owner Name (From Title Report or Tax Card)	Site Address	Site Town	Proximity of Residence to ROW (Feet)	Extent of Easement Impact	Structure Vis bility Before & After Project	
						Before	After
416	Jacques, Trustees, Stephen G. Sr & Valerie A.	47 Fox Point Road	Newington	35	Encumbered	Partial	Clear
417	Cooley, Ralph & Barbara	37 Fox Point Road	Newington	40	Encumbered	Clear	Clear
419	Wendy Lou Sweeney Rev Trust.; Sweeny Trustee, Wendy Lou	28 Fox Point Road	Newington	130	Encumbered	Partial	Partial
418.01	Wong, Jim H. & Ruth H.	50 Fox Point Road	Newington	140	Not Encumbered	None	None
417.01	Geraci Jr, Santo & Jennifer 50% Cole, Jason & Geraci-Cole Heather 50%	27 Fox Point Road	Newington	270	Not Encumbered	None	None
415.02	Gregg, David C.	57 Fox Point Road	Newington	280	Not Encumbered	None	None
418.02	Mitchell, Joseph R. & Ruth	58 Fox Point Road	Newington	280	Not Encumbered	None	None

10. Spaulding Turnpike to Existing E194 Transmission Line: Structures 128 to 140

There is no proximate residential development along this segment of the Project. The route is separated from the back of the commercial development at the Crossings and the Fox Run Shopping Center by the Spaulding Turnpike. The Project then crosses the turnpike and merges in the Fox Run Shopping Center parking lot with the existing HVTL corridor containing two 115 kV lines and a 345 kV line.

11. E194 Transmission Line to Newington Generation Station: Structures 140 to 147

In this segment, the ROW is 300 feet wide and carries existing 115 kV and 345 kV lines as well as the new 115 kV line. It continues in an easterly direction across the Fox Run Shopping Center Parking lot, crosses Woodbury Avenue and continues on to the Newington Generating

1 Station where it is located on PSNH property. The project is entirely contained within the
2 existing ROW.

3

4 **12. Newington Generating Station to Portsmouth Substation: Structures 147 to 151**

5

6 This final segment is entirely on PSNH property and there is no adjacent private property
7 whose market value will be affected by the Project.

8

9 **Q. Given the location of these properties along the Project route, do you expect**
10 **that any of them will experience a decrease in property value due to the project?**

11 **A.** I will start with the 22 residential properties located along the underground
12 portion of the route. Once construction of the underground portion of the Project is completed
13 and landscaping is restored, there will be no visual evidence of the Project and no intrusion is
14 anticipated on the use and utility of the property beyond the effect of the easement, if any. On
15 that basis, it is my opinion that there will be no adverse effect on the market value of these
16 properties.¹² These properties are summarized in Attachment C.

17 Along the overhead portion of the route, there are 63 homes located within 300
18 feet of the ROW within which the Project is located. These properties are listed in Attachment D.
19 The number of properties arrayed by distance of the homes from the ROW boundary and the
20 visibility of structures before Project construction are summarized in Table 8.¹³

21

22

¹² There is support for this opinion in Section 4.0 of the MA/CT Research Report where the results are reported of six case studies of property sales bordering a street under which a 115 kV line was located. In carrying out those case studies, there was no indication that anyone was aware of the presence of the line, much less that it had any effect on the transaction.

¹³ My testimony of April, 2016 identified 14 properties with houses within 100 feet of the ROW boundary, as does this supplemental testimony. There are, however two properties on the original list not on this list and two on this list not on the original. The two deletions are LL # 103 at 153 Madbury Road and LL # 246 at 10 Timberbrook Lane. LL #103 was eliminated because it is a duplex rental property not a single family home. LL #246 was eliminated because when it was re-measured, the nearest portion of the occupied structure was 135 feet from the ROW. The two additions were LL # 210 at 4 Hampshire Avenue and LL # 271 at 220 Longmarsh Road. For LL # 210, the measurement to the appropriate ROW boundary is 80 feet, so it is included. For LL # 271, the occupied structure was difficult to discern from the aerial imagery, but it has now been determined to be 65 feet from the ROW.

Table 8: Number of Properties with Houses within 300 feet of the Overhead ROW Arrayed by Proximity of House and Structure Visibility Before SRP Construction

Structure Visibility	Distance from House To ROW Boundary			Total Properties
	0 to 100 ft	101 to 200 ft	201 ft or more	
Not Visible	2	13	22	37
Partially Visible	5	10	2	17
Clearly Visible	7	2	0	9
Total Properties	14	25	24	63

Twelve of these properties are of the type where adverse sale price effects have been found in the case study research – they are within 100’ of the line, they have visibility of the line, and all but one are encumbered by the ROW easement. The implication of this result is that if these properties came to market over some period of time before construction of the Project and if the circumstances of the sales were similar to what was observed in the historical case studies, as many as half might experience some adverse sale price effect due to the existing ROW.¹⁴

After construction of the project the number of properties with houses within 100 feet of the ROW will not change and encumbrance will not change but the visibility of structures will change for some properties. Table 9 shows how these properties are arrayed by proximity to the ROW and visibility of structures after Project construction.¹⁵

¹⁴ This number is not intended as a definitive count of the properties that, if sold, necessarily experience a price effect. The total does, however, provide a reliable gauge of the order of magnitude of those properties where sale price may be affected given their proximity to, and visibility of, the line.

¹⁵ Visibility of structures does not account for successful visual mitigation strategies initiated by the Applicant in collaboration with property owners subsequent to Project construction.

Table 9: Number of Properties with Houses within 300 feet of the Overhead ROW Arrayed by Proximity of House and Structure Visibility After SRP Construction

Structure Visibility	Distance from House To ROW Boundary			Total Properties
	0 to 100 ft	101 to 200 ft	201 ft or more	
Not Visible	1	13	20	34
Partially Visible	3	9	3	15
Clearly Visible	10	3	1	14
Total Properties	14	25	24	63

Comparison of Tables 8 and 9 indicates that the Project may incrementally increase the chance of sale price effect for some of these properties within 100 feet because structure visibility will change from none to partial for one property and from partial to clearly for three properties. What would happen in fact, however, would depend on the specific circumstances of the parties to the transaction, the property and the market at the time of the sale.

Q. What about the other types of properties along the Project route?

A. I do not think there are potential property value concerns with any of the other property value types along the proposed route.

As I discussed above, the UNH properties would be considered by appraisers to be special use properties the value of which is determined by their function relative to the mission of the University, not the market. I have been informed by Eversource Project engineers that they worked very closely with University personnel to address their concerns that the Project was consistent with both current and planned University operations.

I do not anticipate any adverse effect to the commercial or industrial properties at the east end of the route. The Project is entirely located within an existing ROW and existing or future commercial or industrial development of nearby parcels will not be affected by the changes due to the Project within the ROW.

Finally, it is my understanding that it is unlikely there will be any significant development of vacant lands along the Project route. Given that the Project will be located in the

1 existing PSNH ROW, to the extent that development was to occur, adverse market value effects
2 on the land due to the Project are unlikely.

3 **Q. How do you square your opinion in this matter with the widely shared view**
4 **that HVTL must have widespread negative impacts on the value of nearby residential**
5 **properties?**

6 **A.** I am acutely aware of the tension between the empirical results of the research I
7 have been involved in for many years and the conventional wisdom that characterizes the public
8 view. This tension was apparent in a recent SEC decision, which prompts me to address it here
9 by summarizing the interview comments in the twenty recently completed New Hampshire case
10 studies. These interviews are reported in the case study summaries at Appendix H to the revised
11 NH Research Report. They are very helpful in understanding what actually goes on in the real
12 estate marketplace.

13 These interviews reflect the generally shared opinion that HVTL can affect the value and
14 marketability of nearby properties. In fact, the interviewees often reference personal experience
15 with situations where adverse marketing effects have occurred. But when asked about the
16 particular cases in question, in 17 of the 20 cases the interview participants concluded that the
17 HVTL did not affect the sale price of the transaction being studied. This was despite the fact that
18 nine of the properties were encumbered, thirteen had clear or partial visibility of structures and
19 seven had homes within 100 feet of the ROW.

20 They referenced a variety of factors that caused the HVTL not to adversely affect the
21 sale, including:

- 22 - the HVTL is distant,
- 23 - the HVTL is not very intrusive,
- 24 - the wooded backdrop of ROW corridor softens impact,
- 25 - the property was sold to an engineer who didn't care about HVTL
- 26 - the lines were far enough away,
- 27 - the buyer had some concerns but the tight market and limited inventory caused the
28 concerns to be set aside,
- 29 - the open space benefit of the ROW was greater than negative effect of the lines,
- 30 - mother-in-law apartment was just what we were looking for, and
- 31 - there was no effect because of very desirable neighborhood.

1 This provides a useful and necessary perspective on the market reality – HVTL are
2 generally seen as a negative attribute of a property, and there are circumstances where they can
3 be sufficiently intrusive that the market value of a property is affected. But there are many more
4 factors involved in the decisions of sellers and buyers, and ultimately those other considerations
5 often dominate any adverse effect of the HVTL on a transaction.

6 **Q. Would you please state your overall opinion on the Project’s effect on**
7 **property values?**

8 **A.** After construction of the Seacoast Reliability Project, there is a limited number of
9 properties with characteristics identified by the case study research that indicate the potential for
10 adverse market value effects due to the HVTL should they be put on the market. Some of this
11 potential effect would be due to increased visibility of structures associated with the Project, but
12 most would have occurred in any event due to the location of these properties along the existing
13 ROW. Given the small number of properties involved, it is my opinion that there will be no
14 discernible effects in local or regional real estate markets due to the Seacoast Reliability Project.

15 **Q. Does that conclude your supplemental testimony?**

16 **A.** Yes.

17