



The University of Vermont

July 17, 2018

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205 Billings Farm road, Building #4
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RE: End of Field Letter for an Archaeological Phase II Site Evaluation for the proposed GMP Microgrid-Ferrisburgh Project, Ferrisburgh, Addison County, Vermont

Dear Lincoln,

On June 11-15 and June 18-22, 2018, the University of Vermont Consulting Archaeology Program (UVM CAP) conducted a Phase II Site Evaluation survey at previously identified site VT-AD-1734, as well as a Supplemental Phase I Site Identification survey, within the Area of Potential Effects (APE) for the proposed GMP Microgrid-Ferrisburgh Project in Ferrisburgh, Addison County, Vermont (Figures 1 and 2). The site was identified during the Phase I Site Identification survey conducted by the UVM CAP in November of 2017 (Rich and Knight 2017) as part of the Section 248 permitting process (Figure 3).

Site VT-AD-1734 was identified with both the northern and southern fields of the APE, consisting of four spatially distinct loci (Figure 3). Locus 1, 2, and 3 are located within the northern field of the project APE, and Locus 4 in the southern field. Because all four loci of site VT-AD-1734 are located directly within the proposed APE, a Phase II Site Evaluation survey was recommended in order to further investigate the size, extent, and potential significance of these site areas. As part of the Supplemental Phase I survey, two locations within the proposed solar array and one location of a new proposed power pole at the intersection of Greenbush Rd. and Long Point Rd. were investigated. The investigations at the location of the power pole placement resulted in the identification a newly identified site, designated as VT-AD-1743

Methods and Results

Supplemental Phase I Testing

Solar Array APE

Two locations of the project APE were surveyed through test pit excavations, due to their locations in wooded areas which were not plowed and harrowed to facilitate coverage during the initial Phase I survey (Figure 4). These locations are both situated in the southern field of the

APE, one existing within the northern central portion, at a 90 degree turn in tree line. The other exists in the northwestern portion of the southern field, within a cleared, grassy area which was not plowed during the Phase I visual surface inspection.

In the northern central portion of the southern field, two parallel transects were established, Transects 1 and 2, each containing three test pits. Transect 1 contained three test pits spaced at 10 m (33 ft) intervals, while Transect 2 contained two test pits spaced at 10 m (33 ft) intervals, and the third test pit at a 7 m (23 ft) interval due to an immovable tree. No cultural materials were identified within these excavations.

In the northwestern portion of the southern field, two transects, situated perpendicular to one another, were established along a large swale/relict drainage which appears to have once fed into the East Slang Creek, just north of the APE. Transect 3 was established parallel to the swale/relict drainage, containing four test pits spaced at 10 m (33 ft) intervals. Transect 4 was established at a 90 degree angle off of the last test pit on Transect 3, containing two test pits spaced at 10 m (33 ft) intervals. No cultural materials were identified within these test pit excavations.

Power Pole Placement: Greenbush Rd. and Long Point Rd.

In addition to the proposed solar array, several power pole placements will be replaced, as part of the additional plans related to the solar array installation. One of these power pole locations was designated as archaeologically sensitive, due to its location overlooking a low swale and associated drainage, as well as its proximity to the Lewis Creek. Three test pits were excavated at five meter (16 feet) intervals in the general location of the existing power pole. All three produced pre-Contact Native American artifacts in the form of quartzite lithic debitage, with one of these test pits (TR7 TP2) uncovering the remains of an infilled cellar hole. No additional excavations were undertaken during this Supplemental Phase I survey.

Phase II Site Evaluation Survey

The Phase II Site Evaluation involved the excavation of test pits and test units in and around the artifact concentrations identified during the Phase I visual surface inspection (Figures 3 and 4). Initially, a cluster of five test pits was planned to be excavated around each isolated find, and a larger grid of small intervals test pits around each larger concentration of artifacts. Due to the density of the clay soils, and the long periods of time it takes to screen these soils, efforts were focused on the concentrations of artifacts following the excavation of one cluster at Locus 1. Overall, a total of 39, 50 x 50 cm (20 x 20 in) test pits and two 1 x 1 m (3.3 x 3.3 ft) test units were excavated throughout Loci 1-4 of site VT-AD-1734.

Locus 1

Locus 1 was identified on the basis of a single piece of lithic debitage and a single projectile point, located approximately 70 m (230 ft) apart from one another. Cluster 1 was established around the piece of lithic debitage in the northern portion of Locus 1, containing five test pits spaced at five meter (16 feet) intervals. Test Pit 1 (CL1 TP1) was established on the

approximate location of the surface artifact, with four test pits established at each cardinal direction five meters from the initial test pit. No additional pre-Contact Native American artifacts were identified within these test pit excavations.

Initially, a second cluster formation of test pits was established within the southern portion of Locus 1, around the location where the projectile point was identified on the surface. Due to time constraints, however, only one test pit (CL2 TP3) was excavated within this portion of the locus. This test pit did not produce pre-Contact Native American artifacts. No additional investigations were conducted within Locus 1 of site VT-AD-1734.

Locus 2

Locus 2 was identified on the basis of three pieces of lithic debitage identified along the northern edge of the northern field, within an approximate 20 m (65 ft) distance of one another, and a single isolated piece of lithic debitage located approximately 75 m (246 ft) to the south. Four test pits were excavated along one transect within the general location of the three pieces of lithic debitage, with three test pits spaced at five meter (16 feet) intervals along the western part of the transect, and one test pit at a 10 m (33 ft) interval at the eastern edge of the transect. No pre-Contact Native American artifacts were identified within these excavations, and no test pit excavations were conducted around the single piece of debitage located in the southern portion of Locus 2.

Locus 3

Locus 3 contained the densest concentrations of surface artifacts identified in the northern field during the Phase I surface inspection, with 11 pieces of lithic debitage, two lithic projectile points, and one lithic groundstone tool within an approximate area of 0.3 ha (0.75 ac) (Figure 3). Two pieces of the lithic debitage and one of the projectile points, however, exist far from the core concentration where the densest concentrations of artifacts were identified. Phase II test pit excavations occurred within the denser concentration located in the central portion of the locus. Excavations within Locus 2 included 10, 50 x 50 cm (20 x 20 in) test pits and one 1 x 1 m (3.3 x 3.3 ft) test unit. With the exception of one test pit excavated in the general proximity of the projectile point and groundstone tool, all excavations occurred within the concentration of 10 pieces of lithic debitage identified on the surface.

A horizontal metric grid was established, with test pits spaced at 2.5 m (eight ft) intervals (Figure 5). A single test unit was excavated within the central portion of the grid. Of the 10 test pits and one test unit excavated, two test pits and two quadrants of the test unit produced additional pieces of lithic debitage, with a high count for a test pit/quadrant of two. The soils here were composed thick, sticky and hard clay, indicating that it is unlikely that any artifacts penetrated in the intact substratum below the upper plowzone strata.

Locus 3 exists on a slightly elevated terrace above a low, damp swale to the east. The lithic groundstone tool and lithic projectile point were identified within this low swale, and it was hypothesized that the swale represents a relict drainage which has since been filled in to facilitate

agricultural activities within the field. A single test pit was excavated in the general location of the two artifacts identified within the swale. No pre-Contact Native American artifacts were identified within this test pit, and the test pit soil profile revealed a deep plowzone, with a thin layer of hydric soil present beneath the plowzone, indicating that this location likely does represent a filled in relict drainage. It is likely that the two artifacts identified here were brought with the soils introduced to this location, likely from the denser concentration of Locus 3 to the west. No additional excavations were conducted within this portion of Locus 3.

Locus 4

A concentration of nine pieces of chert lithic debitage were identified within an area of approximately 25 sq m (270 sq ft) during the Phase I visual surface inspection, designated as Locus 4 of site VT-AD-1734 (Figure 3). Locus 4 is situated along the northern edge of the southern field, in the north-central portion of the field. While the remaining loci contained only quartzite lithic debitage, Locus 4 contains only chert lithic debitage. A horizontal metric grid was established at the locus, with a total of 19 test pits and one test unit excavated (Figure 5). Test pits were spaced at 2.5 and five m (eight and 16 ft) intervals.

Of the test pits and test unit excavated, 10 test pits and three quadrants of the test unit produced additional pre-Contact Native American artifacts. Artifact concentrations were relatively low, with the highest counts occurring in one quadrant of the test unit, including four pieces of lithic debitage and one fragmented lithic groundstone tool. The remaining positive test pits contained approximately 1-2 pieces of lithic debitage each. Negative boundaries were established to the east, west, and south, with the project APE delineating the site to the north. No additional excavations were conducted within Locus 4.

Conclusions and Recommendations

VT-AD-1734

Overall, Phase II investigations within Loci 1-4 of site VT-AD-1734 involved the excavation of a total of 38, 50 x 50 cm (20 x 20 in) test pits and two 1 x 1 m (3.3 x 3.3 ft) test units. Additionally, 12 test pits were excavated in two archaeologically sensitive portions of the APE which were not visually surface inspected during the Phase I investigation. Additional pre-Contact Native American artifacts were identified through the excavations within Locus 3 and 4, while excavations at Locus 1-2 and excavations within the previously uninspected locations did not produce pre-Contact Native American artifacts. No excavations were undertaken at the locations of five isolated artifacts, however it was determined that the visual surface inspection adequately covered these locations, determining that these locations represent isolated occurrences of artifacts rather than larger site areas.

Artifacts identified within excavations at Locus 3 and 4 served to better understand the concentration, extent, and integrity of these site areas. All artifacts were recovered within the upper, historic era “plowzone” (Ap), indicating that no intact subsurface cultural deposits are present within these loci of the site. Additionally, no subsurface cultural features were identified

within any of the excavations. Locus 3 and 4 appear to represent small, temporary encampments whose inhabitants were participating in stone tool manufacturing and/or refurbishment activities, however additional information may be revealed through further analysis of the artifacts recovered. Locus 1 appears to represent two isolated occurrences, with the projectile point likely representing an isolated hunting loss. Locus 2 represents a small activity area, consisting of only three pieces of lithic debitage, potentially a single occurrence of stone tool refurbishment or production. While no temporally diagnostic artifacts were recovered within the Phase II excavations, the four projectile points recovered from the Phase I visual surface inspection are all temporally diagnostic of the Late Archaic period, ca. 6,000 – 2,9000 cal. yrs. B.P.

VT-AD-1743

Supplemental Phase I survey at the power pole placement location at the intersection of Greenbush Rd. and Long Point Rd. resulted in the identification of combined Euro-American and pre-Contact Native American site VT-AD-1743. A wide variety of historic era cultural materials dating to the early to mid 19th century were recovered from one test pit, in addition to pre-Contact Native American cultural materials recovered in all three test pits. The two eastern test pits, in particular, produced large numbers of lithic debitage, with the central test pit (TR7 TP2) producing approximately 60 pieces of lithic debitage, in addition to the historic era artifacts recovered within the apparent cellar hole.

Ultimately, it was determined that all four loci of site VT-AD-1734 does not represent a significant archaeological site. This determination is due to the relatively low number of artifacts recovered from each site loci, the absence of artifacts recovered within intact deposits below the plowzone, the absence of subsurface cultural features, and the approximate extent of each loci being identified through Phase II excavations. As a result, no additional archaeological survey is recommended within the VT-AD-1734 portion of the project APE.

The portion of the APE which resulted in the identification of VT-AD-1743, however, represents a potentially significant archaeological site, with both the pre-Contact Native American and early Euro-American components of the site representing potentially significant sites. More information is needed regarding the proposed construction activities within this portion of the APE. If the proposed activities are determined to potentially threaten the site, a Phase II Site Evaluation is recommended in order to further investigate the extent, size, and integrity of VT-AD-1743. Please feel free to contact us within any question or concerns you may have regarding this study.

Sincerely,
D. Warren Rich
Research Supervisor



Charles Knight
Assistant Director

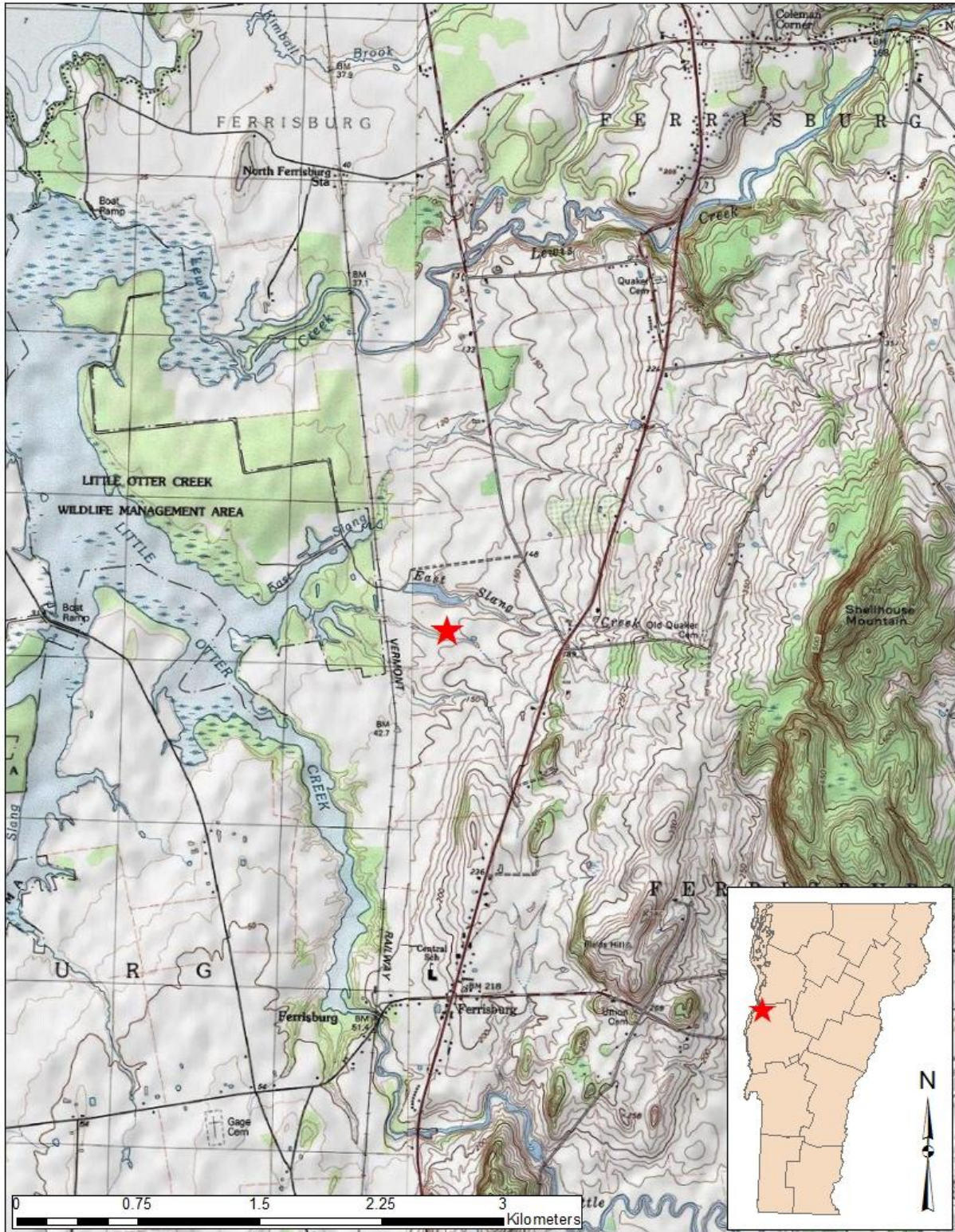


Figure 1. Map displaying the topographic location of the proposed GMP Microgrid-Ferrisburgh Project in Ferrisburgh, Addison County, Vermont.

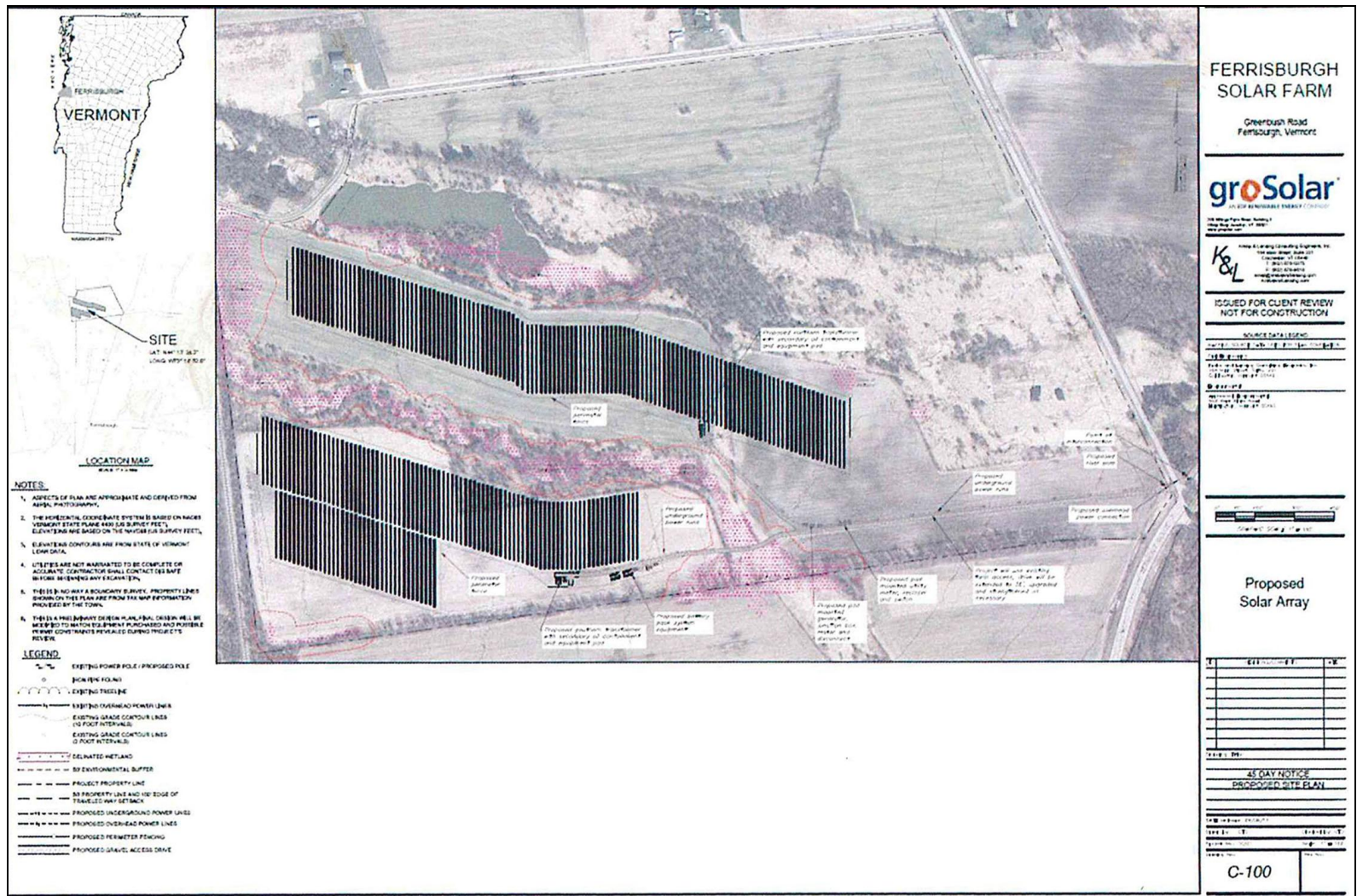


Figure 2. Proposed project design plans for the GMP Microgrid-Ferrisburgh Solar Project in Ferrisburgh, Addison County, Vermont.

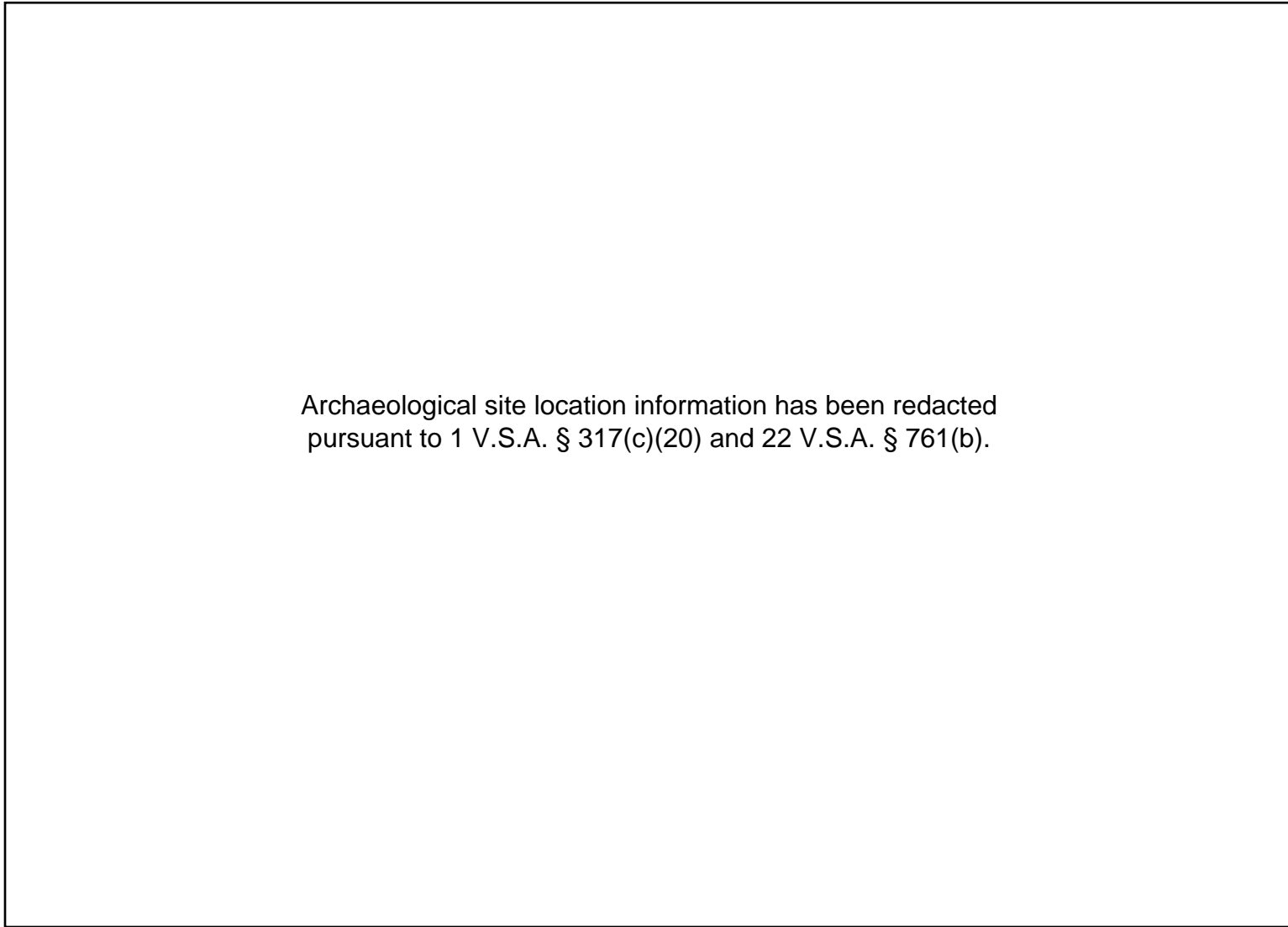


Figure 3. Map displaying the surface artifacts identified during the Phase I survey, resulting in the identification of site VT-AD-1734 and the four loci associated with the site, for the proposed GMP Microgrid-Ferrisburgh Project in Addison County, Vermont.



Figure 4. Map displaying the locations of Phase II excavations conducted at the four loci of site VT-AD-1734 for the proposed GMP Microgrid-Ferrisburgh Solar in Ferrisburgh, Addison County, Vermont.



Figure 5. Map displaying a close-up view of Phase II excavations undertaken within the two loci of site VT-AD-1734 containing the highest densities of artifacts, Locus 3 and 4, for the proposed GMP Microgrid-Ferrisburgh Solar Project in Ferrisburgh, Addison County, Vermont.

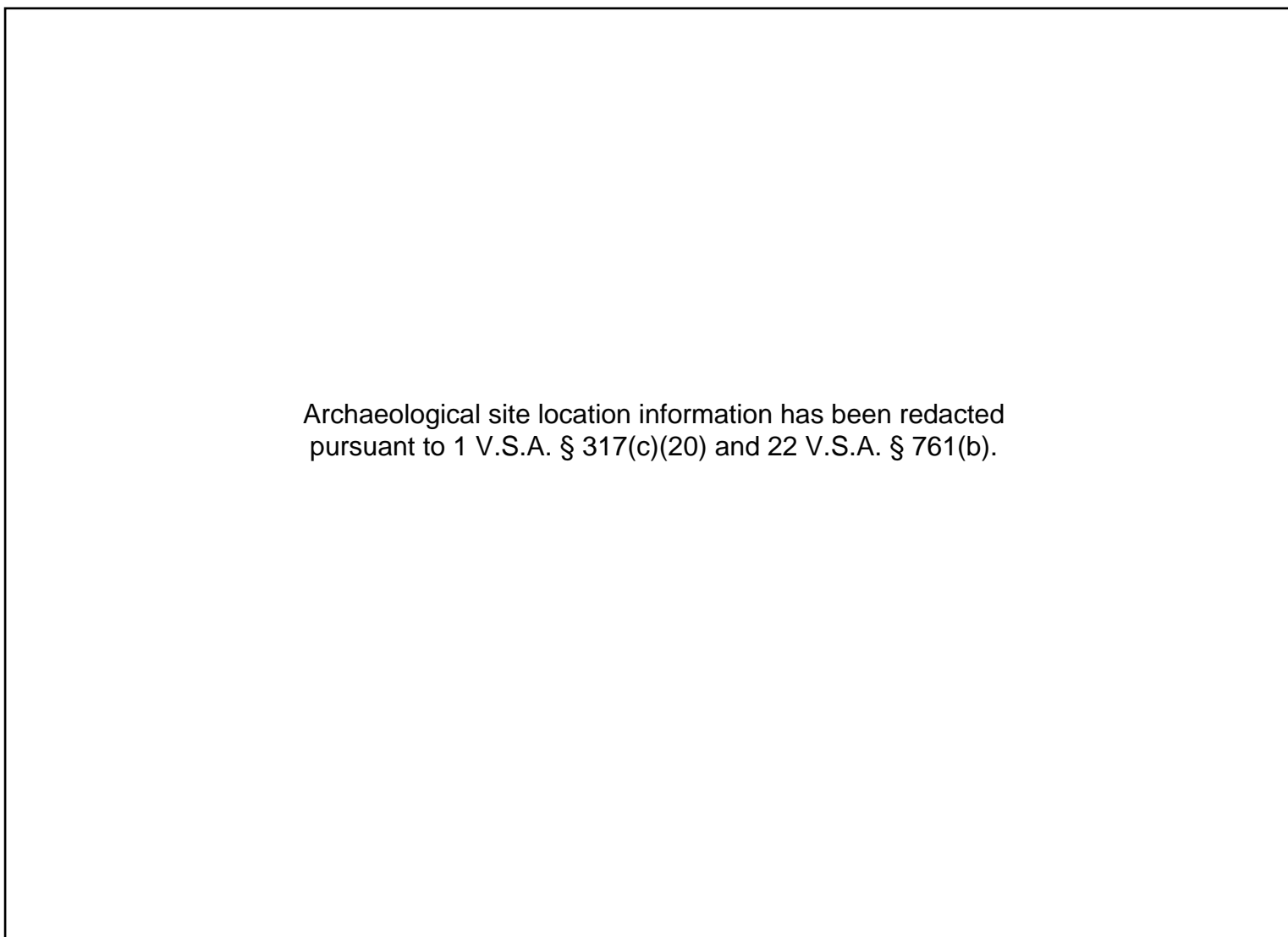


Figure 6. Map displaying the locations of test pit excavations as part of the Supplemental Phase I survey at the intersection of Long Point Rd. and Greenbush Rd., resulting in the identification of site VT-AD-1743, as part of the GMP Microgrid-Ferrisburgh Project in Ferrisburgh, Addison County, Vermont.