

APPENDIX H

Detailed Supplementary Guidance for Phase I Investigations.

I. Phase I Research Design Checklist.

___ 1. Objectives of the investigation.

a. Objectives will vary depending on the nature and size of the project, expected site types, proposed impacts, and other factors, but they will minimally include the identification of significant sites that may be impacted by the project.

___ 2. Project's area of potential effects (see Section 3.2.).

___ Describe the locations and extent of archeologically sensitive areas within the project's area of potential effects and describe why these areas are sensitive in terms of the VTSHPO's environmental predictive model, any applicable supplementary predictive model, background research, recorded sites in project area, and/or other relevant factors.

___ Indicate the sensitivity ranking on the VTSHPO's predictive model.

___ 3. Number of acres/hectares.

___ In project area

___ In study area.

___ 4. Describe expected results of the study.

___ Based on the precontact or historic sensitivity of the project area, discuss what kinds of significant sites are expected to be found and explain their potential significance:

___ Expected number of sites, expected site size, location, age, condition, and general characteristics of any anticipated or previously recorded sites and relevant important information about comparable sites.

___ Using the Vermont Historic Preservation Plan, other historic contexts, and the priority research topics in Section 4.5.2. as framework, assess how the expected site types will enhance the contexts and significantly contribute to our knowledge of Vermont precontact or post-contact history. What expected characteristics make the expected sites potentially National Register eligible? What are we expected to learn? Are there comparable sites that can inform this discussion? Provide specific, significant research questions relating to the geographic area and expected time period to support this discussion (see Section 4.0.). Use historic contexts to frame this discussion.

___ Familiarity with other investigations conducted in similar environmental contexts in Vermont and their results, including local and regional overviews and summaries of site investigations, site types, site sizes, and an understanding of site characterizations at

different phases of study, is essential in developing this part of the Research Design.

___ **5. Kinds of data that are likely to be found in such sites.**

___ Describe the specific research questions that these data can help answer.

___ **6. Sampling strategy and field methods.**

___ Use those most appropriate for locating the expected site types and data categories.

___ This includes a discussion about anticipated site size and relative distribution of data categories based on expected site type and the most suitable field methods that should be applied. For example, identifying some types of historic archeological sites and addressing relevant research questions may require different field methods than precontact sites (see Section 5.1.).

___ **7. Categories of data that will be collected in the field.**

___ Base this discussion on the types of sites that are expected.

___ Describe methods of analysis and interpretation.

___ **8. Expected effect of the project.**

___ Expected effects on significant archeological sites that are likely to exist.

___ **9. Possible outcomes of the Phase I investigation.**

___ Possible treatment alternatives, for example, site avoidance, additional background research, additional field investigation, or combination of options.

___ **10. Some limited additional background research or field investigation.**

___ May be warranted to expeditiously evaluate a site's significance, or lack of significance, at this phase.

___ Examples of situations in which this may be worthwhile involve historic archeological sites, a very small landform that severely proscribes a site's boundaries, and isolated finds in subsurface test pits. In such instances, describe what additional investigation or research might involve (for example, additional bracketed sub-surface test pits, larger test units, additional background research, or a combination of methods). Note that exercising this option is solely the decision of the project sponsor.

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II. Supplementary Guidance for Background Research.

1. Environmental background research:

Conduct pertinent environmental background research (for example, surficial and bedrock geology, geomorphology, ecology, soils, etc.) to establish the project area's environmental context(s) in terms of how it relates to the types and characteristics of expected significant sites and the methodologies that will be used to locate them. The extent and depth of the environmental background research depends on the scale of the project and must be directly tied into the Research Design.

Purposes:

- Establish the environmental context(s) of the project area and how it affects the potential existence, characteristics, and condition of the significant site types that may exist within it.
- Identify special environmental characteristics that may influence the field methodologies that should be employed to find particular sites (such as floodplain and other depositional settings).

2. Documents background research:

Conduct pertinent archival, literature, and files research. The extent and depth of the documents background research depends on the scale of the project and must be directly tied into the Research Design.

Purposes:

- Identify the approximate or exact locations and characteristics of recorded archeological sites within the general project area.
- Identify past and present land use patterns.
- Establish historic context(s) of the project area and potentially significant sites that may exist in it.

Conducting Documents Background Research:

As appropriate to the research design, research may include:

- Vermont Archeological Inventory
- Historic maps (See **Appendix J** for some selected maps available on the internet)
- Town histories
- State and county gazetteers
- Historic photographs
- Town files
- State Archeologist's Subject files
- Vermont Archeological Collections Analysis files

- Vermont Historic Sites and Structures Survey
- National Register files
- Historic Context files
- Additional files at the VTSHPO's Resource Center (see **Appendix D**)
- Primary and archival documents
- Other relevant information

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III. Detailed Guidance for Completing the Phase I End of Field Letter.

The Phase I End of Field Letter should include the following information. End-of Field Letters used as a basis for final project reviews and decision-making should be more detailed and comprehensive than those intended as status reports. If no site is found, or if a site is found but recommended to be not significant, the Short Report Format should be used.

1. ___ Project sponsor and all statutory jurisdictions within which the project development falls.
2. ___ Dates of field work and summary of the results of the field work.
3. ___ Detailed description of the proposed project and potential impacts to sites.
4. ___ Detailed description of the APE.
5. ___ Hand-annotated, dated site plans, sketches, and all applicable maps to help clarify findings and recommendations.
 - a. ___ The following areas should be mapped: the APE, areas tested, specific locations of test pits or other sampling units, site locations and estimated boundaries as known, sensitive areas to be avoided, and other relevant information.
6. ___ If a site is found, provide the VAI site number on all relevant maps.
7. ___ Any information or inferences about the site's potential or apparent significance using the information described in Section **4.0**.
8. ___ Description of the anticipated analysis and report writing schedule.
9. ___ Specific recommendations for avoidance or other treatment, additional research, additional field investigation, construction redesign, and so forth. If recommendations cannot be made at this stage, the letter report must indicate this.
 - a. ___ If applicable, identify any special project design and pre-construction requirements to avoid and protect site such as fencing site off prior to land clearing, perc testing, and/or construction.
10. ___ Completed Vermont Archeological Inventory form and map (copy of USGS map) with site mapped on it, if a site is found.

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IV. Detailed guidance for Short Report Format.

Instead of repeating some of the same elements as found in the Scope of Work, this and other relevant, existing documents should be referenced in the text and attached as an Appendix.

1. Report cover page that includes:
 - Report Title
 - Town/ County
 - Name of project
 - Name of consulting archeology organization
 - Project sponsor
 - Date of report
2. Abstract (see Phase I report writing requirements).
3. Number of acres/hectares in the area of potential effects.
4. Number of acres/hectares in the study area.
5. Detailed description of the proposed project and APE.
6. All statutory jurisdictions within which the project development falls.
7. Dates of the field work.
8. Brief description of the kinds of significant sites that were expected to exist in the study area.
9. Predictive model checklist or narrative summary with scoring.
10. Summary of the results of the field work.
11. Description of methodology employed:
 - background research
 - surface collection
 - subsurface shovel testing (including # and size of units)
12. If no site was found, explain this result using the Phase I Research Design expectations and predictive model as basis for discussion.
13. If a site was found and recommended to be not potentially significant, explain this conclusion.
14. Hand-annotated, dated site plans, sketches, and all applicable maps to help clarify findings and recommendations.
 - The following areas must be mapped: the APE, areas tested, specific locations of test pits or other sampling units, and sensitive areas to be avoided.
15. Topographic (or orthophoto) map showing area of study as a polygon, square, or rectangle with UTM coordinates (or VT State Plane Coordinates NAD83).
16. Completed report database form (submitted electronically).
17. Appendices:
 - Copies of field records, such as test pit profiles, and artifact inventory (since no site or no significant site was found, the inventory should include only non-significant cultural materials that will be discarded).
 - Scope of Work

- _____ MOA for project
- _____ Other relevant document
- _____ Completed Vermont Archeological Inventory form and map (copy of USGS map or Orthophoto) with site mapped on it, if a site is found.

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V. Detailed guidance for Phase I Investigation Reports.

1. Abstract.

The Abstract should be limited to one (1) page. The Abstract is a factual summary of the contents and conclusions of the report and should emphasize new information. It is not an introduction to the report nor is it an outline of the report's contents. The Abstract should include the following information:

- ◆ Project title, name of Principal Investigator and organization conducting the investigation, specific statutory jurisdictions, project sponsor, specific state or federal government agency (if any), archeological consultant, and date of report.
- ◆ Town (or city) and county. If in multiple towns or multiple counties, list all towns and counties involved.
- ◆ Phase of study.
- ◆ Specific project location.
- ◆ Size of project area.
- ◆ Number of acres [hectares] surveyed.
- ◆ Dates of field work.
- ◆ Brief description of research design, methods used (i.e. background research, surface collection, subsurface shovel testing, including # and size of units, subsurface excavation units, including # and size of units, # and size of backhoe trenches, etc.), and any special analytical techniques (i.e. C14 dating, geomorphological analysis, etc.).
- ◆ Brief description of results including: number of sites found (identify them as precontact or historic period); VAI site numbers; site age; cultural affiliation; relevant historic contexts; estimated site size; data categories; site function; integrity; research potential; potential or demonstrated site significance (or lack of it).
- ◆ Recommendations about the site's eligibility (or lack of) for inclusion in the State and National Registers.
- ◆ Potential impacts to site or other outcomes.
- ◆ New information resulting from the investigation including how site will contribute to our knowledge of Vermont's precontact or post-contact history.
- ◆ Brief management recommendations.
- ◆ Topographic (or orthophoto) map showing area of study as a polygon, square, or rectangle with UTM coordinates (or VT State Plane Coordinates NAD 1983).

2. Table of Contents.

3. Management Summary and Recommendations.

Recommendations to the project sponsor for protecting, treating, mitigating impacts, or otherwise managing a site are generally included in the End of Field Letter. Nonetheless, such recommendations should be repeated at the beginning of the report, especially if the report is used for decision-making by project managers and VTSHPO, or if the project development has not yet commenced. The management summary and recommendations should clearly explain what actions, if any, must be taken by the sponsor to protect and preserve a site, obtain additional information, or mitigate project impacts, among various potential recommendations.

If site avoidance is recommended at this stage, specific recommendations to preserve and protect the site during and after project construction must be presented including, but not limited to, design and mapping of a not-to-be disturbed "buffer zone" or conservation area (s), temporary fencing during construction or permanent fencing, placement of filter fabric, and so forth.

If the report is written after the treatment actions have occurred (i.e. after construction has commenced), describe how the site was, in fact, treated.

4. Introduction.

- a. Describe the proposed project and APE in detail.
- b. Indicate the total APE of the project in acres/hectares.
- c. Indicate total number of acres [hectares] surveyed.
- d. Provide copy of a USGS map with project area marked and a larger scale map of the project area and proposed project.
- e. Indicate project sponsor, names of any state and federal agencies (if any), and all statutory jurisdictions within which the project falls.
- f. Indicate dates of the field study.
- g. Discuss disposition of the field notes and artifacts and any other data collected.

5. Research Design.

- a. Describe the Research Design including objectives.
- b. Describe any constraints on the field investigation, for example, limitations of access, poor ground visibility, and any other environmental limitation such as bad weather conditions.

6. Environmental and Historic Background Research.

Extent of this discussion should be based upon the intensity of research required by the Research Design. The background study must be explicitly tied into the project area.

- a. Project area should be placed in its regional setting with respect to the known precontact, ethnohistoric, and historic culture history and historic contexts. The text must address in detail how the results of the investigation contribute to or revise relevant historic contexts, priority research topics, and known property types.
- b. Discuss the expected sensitivity of the project area and provide the sensitivity scoring from the VTSHPO predictive model.
- c. Discuss the kinds of significant sites that were expected in reference to what was found.
- c. Identify individuals who provided used information, their addresses, and methods used to locate these persons (in some cases, it may be appropriate to include this information in an Appendix).

7.Results.

- a. Provide detailed description of sampling strategies and field methodology, including the intensity of coverage, justification for methodology, and how the actual results compared to the expected results. If the methods actually used differ from those outlined in the Research Design, explain why. Justify in-field modifications of methods and research strategy.
- b. Discuss how the results met the objectives.
- c. Discuss boundaries of study area; provide map(s) of project area showing areas investigated and not investigated, and locations of surface survey and collection, sub-surface testing, backhoe trenches, etc.
- d. Using the environmental fields in the predictive model, provide feedback about the site's orientation to these different environmental features. Explain how the study results confirm, refine, modify, or otherwise affect the sensitivity model.
- e. Discuss each archeological site in the study area; reference the VAI number, although the site name can be used in the discussion. Describe number and kinds of sites. All sites should be described as systematically and fully as possible based on the available information at this phase of study. In many cases, sites are avoided after this phase of study and there may be no further opportunity to study these sites.
 1. Describe each archeological site in as much detail as possible including environmental and historic context, integrity, site boundaries, features, known or potential data categories, function, structure, and so forth. Address both individual sites and stratigraphic, cultural, and/or environmental relationships, or lack thereof, among and between sites.
 2. Discuss nature and extent of previous natural or historic disturbances, if any. Provide soil descriptions and discuss and interpret soils information in relation to the archeological sites identified.

3. Include important and representative soil profiles in report as an Appendix.
 - f. Provide precise site locations using GPS positioning and, as known at this phase of study, spatial boundaries of specific sites. All sites must be referred to by their Vermont Archeological Inventory site number.
 - g. Provide scaled, detailed site maps and photographs of site's environmental setting, testing areas, features and structures, etc.
 - g. Discuss and describe project areas examined that did not contain properties.
 - h. Describe and discuss laboratory methods and analytical techniques and the results of these analyses. Provide quantitative and qualitative summaries of artifacts, features, and other data recovered during the field investigations and relevant data viewed in collections. Provide artifact distribution maps and present other analytical summaries in narrative, chart, graph, table, and/or mapping formats. Identify and discuss C14 dates, if obtained, and other specific analyses.
 - i. Discuss threats to properties.
 - j. Describe and discuss the results of the investigation including: description and significance of archeological sites in relation to historic context(s), as known from this phase of study; if known, describe the site's integrity and data potential in comparison to the ideal characteristics (or registration requirements) of the site type(s), as established by background research. Refine and revise the historic context (s) to which the site belongs based on the new information. Discuss apparent or potential relationships among and between sites, or apparent lack of such relationships; site comparisons should address cultural, stratigraphic, and environmental factors.
 - k. Using the tools in Section **4.0.**, discuss in detail the site's potential or actual significance and how it meets or may meet the National Register criteria.
 - l. Discuss new information that may have resulted from the investigation and how this information contributes to our understanding of local or regional precontact or post-contact history.
 - m. Discuss any new environmental, geomorphological, and other non-cultural data and insights obtained in the course of the study.

8. Conclusions and Recommendations.

- a. Summarize the potential the significance of the archeological site specifically addressing the National Register criteria, if possible at this phase of study. The rationale for significance as well as non-significance should be clearly stated.
- b. Provide recommendations.

1. Describe the expected or potential direct impacts of the proposed project to archeological sites. Describe and discuss potential indirect impacts if these can be expected to occur.
2. Discuss management recommendations for mitigating potential adverse impacts, if appropriate, at this stage of project planning. Management options include, but are not limited to, site avoidance, additional research, and gathering additional information through field investigations. If site avoidance is recommended at this stage, specific recommendations to preserve and protect the site during and after project construction must be presented, including but not limited to design of a not-to-be disturbed "buffer zone" or conservation area (s), fencing (temporary during construction or permanent), and so forth.
3. If such a recommendation is being made, provide detailed recommendations for gathering additional information to evaluate the site. Describe possible methodologies and techniques that might be employed to obtain this additional information. If appropriate, make recommendations for gathering additional information to enhance project planning, for example, specific environmental, archival or laboratory research.
4. If appropriate to the type of project and required by the Scope of Work, provide a long-term management plan for the project area and the known and potential archeological sites within it.

9. References Cited.

10. Appendices, as appropriate.

- a. In some cases, to protect sites or at the request of the landowner or other interested party, it may be appropriate to exclude specific site location information from the main text and instead include it in a Confidential Appendix. All confidential maps, appendices, etc., should be clearly marked "***Not For Public Distribution in accordance with 1 VSA 5 section 317(20) and 22 VSA 14 section 761.***" Such confidential site location information should be distributed only to the project sponsor, regulatory agencies, and the VTSHPO except on a need-to-know basis. (see Section **5.7.**)
- b. Where appropriate, append relevant complimentary documentation, for example, predictive model checklist, End of Field Letter, Scope of Work, Memorandum of Agreement, or Programmatic Agreement.
- c. Copies of C14 laboratory results should be submitted in the report appendix.
- d. Field record forms, artifact catalogs, and similar technical documentation should be included in the appendix. When appropriate, this can be assembled in a second, separate volume. NOTE: Copies of reports distributed to

landowners, communities, agencies, and other interested parties may not warrant inclusion of this technical information.

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VI. Supplementary Detailed Guidance for Phase II Investigation Reports.

1. Management Summary and Recommendations.

The management summary and recommendations should clearly explain what actions, if any, must be taken by the sponsor to protect and preserve a site (before, during, and after construction), obtain additional information, and mitigate project impacts, among various potential recommendations.

- a. Provide detailed recommendations to the project sponsor for protecting, treating, mitigating impacts, or otherwise managing a National Register eligible site. If this information was previously presented in an End of Field Letter, repeat it here. If there is new information that complements or supplements what was presented in the End of Field letter, provide that new information here.
- b. If whole or partial site avoidance is recommended for a site, discuss detailed site preservation requirements for each site before, during, and after construction to ensure that the site is not inadvertently impacted. Such requirements may include but are not limited to temporary or permanent fencing, special plantings and landscape considerations, special construction specifications, pre-construction on-site meetings with contractors and sub-contractors, permanent conservation easements , and so forth.
- c. If data recovery of all or part of a site is recommended as the mitigation option, provide recommendations for a data recovery program. Note: The Data Recovery Plan for Phase III investigation does not need to be included as an actual component of the Phase II report but can be if required by the Phase II Scope of Work.

2. Introduction.

- a. Provide a summary of the Phase I results. The Phase I Abstract can be used for this purpose.
- b. Describe project objectives specifically as they relate to Phase I findings.

3. Background research.

Discuss in detail comparable site information from Vermont and, if appropriate, regional examples of similar investigated site types to support the site's significance.

4. Results.

- a. Provide detailed maps of the site showing specific testing areas and estimated or established site boundaries.
- b. Analyze the site's integrity in relation to the level of integrity needed to contribute to our understanding of the relevant historic context(s).
- c. Discuss how the data collected and interpreted in Phase I relate to the Phase II results, site evaluation, and interpretation of findings.
- d. Discuss data categories, features, deposits, structures, etc., that were discovered or may be expected at this type (s) of site. Discuss specific important research questions that can be investigated using known or expected data categories.
- e. Evaluate the site's significance in accordance with the tools provided in Section **4.0**. If the site is precontact, use the matrix in Section **4.4**. If the site pertains to the historic period, apply the analyses in Section **4.5**.
- f. Develop, or refine an existing, historic context(s) relating to the site type(s) if the site meets the National Register criteria and VTSHPO's significance considerations. Discuss the site in relation to its historic context(s) and describe its significance to our understanding of the historic context. Identify ideal characteristics of the site type(s); compare the site's characteristics with those ideally expected for this site type; describe how this site meets (or does not meet) the ideal; and describe specific registration requirements met or not met by this property type.

5. Conclusions.

- d. Summarize the site's significance, or lack of significance. Each of the applicable National Register criteria for evaluating significance must be explicitly discussed in detail (see Section **4.1**). The rationale for site significance, or non-significance, must be clearly stated and supported (see Sections **4.4** and **4.5**).
- e. If more than one site was evaluated, provide a list of sites that 1) meet the criteria for inclusion in the National Register and indicate the criteria met by each site; and 2) are not eligible for the National Register.
- f. Discuss the impacts likely to occur to each site if the project proceeds and summarize the management recommendations for mitigating impacts.

6. Appendices.

- a. As appropriate, attach a revised Vermont Archeological Inventory form that includes information developed during Phase II.
- b. As appropriate, attach a National Register nomination for the site.
- c. As appropriate, attach the Data Recovery Plan.
- d. Attach a copy of the Memorandum of Agreement or Programmatic Agreement if one has been executed for the project.