American Battlefield Protection Program (ABPP) Battlefield Mapping Methodology

The first step toward preserving a battlefield is defining exactly where the battlefield is located and what landscape remains to be preserved. This entails identifying features associated with the battle and then establishing defensible boundaries around the battlefield on a map. The boundaries encompass legitimate historic resources that are supported by historical evidence and source materials. The ABPP approach to mapping a battlefield is to first identify those features that define the overall battlefield landscape (Defining Features) and then draw historically defensible boundaries for sites(s) of combat and the battlefield at large (Core and Study Area boundaries). Additionally, a separate boundary is drawn around lands within the battlefield that remain to be preserved and are considered potentially eligible for inclusion on the National Register of Historic Places (Potential National Register [PotNR] boundary).

**Defining Features**

Defining features aid in establishing legitimate, historically defensible boundaries around a battlefield landscape. They are natural terrain features, manmade features, and place names found in battle descriptions or on historic maps that can be used to locate significant actions and events associated with a battle. A defining feature may be a place such as a town or farm, a structure such as a mill, house or church, a road, wood lot, earthwork, or farmfield; it may be a natural terrain feature, such as a stream, ridge, hill, ford, or ravine. These features define the battlefield on the landscape and serve to pin battle events to identifiable locations. Finding and mapping features helps to ensure that the battlefield is defined as objectively as possible and to accurately reflect the full extent of the battlefield.

A defining feature may be any feature mentioned in battle accounts or shown on historic maps that can be visually located on the modern landscape or under the landscape’s surface (archeological remains). Defining features must be topographically defensible. Any feature whose existence can be verified through physical evidence can be mapped as a defining feature. Features that no longer exist above or below the surface and therefore have no physical trace are still considered battle features but are not mapped as defining features.

Once the defining features are identified and drawn on the map, the battlefield boundaries can be deliniated.

**Study, Core, and Potential National Register (PotNR) Boundaries**

Study and Core Area boundaries delineate the historical extents of a battlefield. Potential National Register (PotNR) boundaries delineate areas within the Study and Core Area boundaries that still retain integrity and remain to be preserved. The Study and Core Area boundaries define the *historic* landscape of the battlefield while the PotNR boundaries define the *modern* landscape. For example, if a particular farm field was important during the battle but now is covered by a housing development, it would still be included in a Core or Study Area boundary because the farm field informs the history of the battle. That same farm field, however, would not be considered for inclusion in a PotNR boundary because it no longer has integrity (i.e. conveys a sense of the historic scene) and there is nothing left of the original farm field to preserve.
When surveying a battlefield the Study and Core Areas are identified first and then the portions of those Areas that retain integrity are identified as potentially eligible for inclusion on the National Register of Historic Places (PotNR boundary).

**Defining the Study Area Boundary**

The Study Area defines tactical context and visual setting and reflects the historic extent of the battle as it unfolded across the landscape. The Study Area contains all resources and related to or contributing to the battle event: where troops maneuvered and deployed, immediately before, during, and after combat, and where they fought during combat. The Study Area also includes all locations and geographic features that directly contributed to the development and ending of the battle (Defining Features).

The Study Area should include the following:

- Core Areas of combat (see Core Area below);
- Minor preliminary skirmishing if it led directly to the battle;
- Approach and Withdrawal routes of the military units. These should be drawn as corridors along the roads if movement was confined to a road, if not they should be drawn as corridors along the landscape if those corridors are known. In order to standardize corridors of movement along the routes, Infantry routes are buffered at 200 yards in width and Cavalry routes are buffered at 400 yards in width. These widths are roughly the frontage of an average regiment;
- Areas of maneuver and locations of deployed units on the field, even if these units were not engaged;
- Routes and locations of any units held off or sent out of range of the fighting (e.g. scouting) during the battle. Units that engaged in combat with enemy forces as a result of being held off or sent out of range should be included in a Core Area;
- Minor post battle skirmishing if it was part of a larger withdrawal;
- Geographic features that contribute to the flow of battle (mountains, ravines, hills, rivers, etc.);
- Encampments (if they were part of the initial position of the attacking/defending force(s); and
- Logistical areas - e.g. locations of ammunition trains, hospitals, headquarters, supply dumps.

The Study Area is restricted to the immediate flow of battle after one side or the other has moved to initiate combat. For example, if a unit left its encampments intending to attack the enemy, it is appropriate to include the encampments and the accompanying approach routes in the Study Area as the initial position of the attacking force. The route of the previous day's march to reach those encampments, however, would not be included.

The Study Area ends where the opposing forces disengaged and withdrew. Reasons for disengagement might include darkness or adverse weather conditions, pursuit of a retreating force being halted by a rear guard action, orders to disengage being received, or one force accomplishing its objective and choosing not to pursue its retreating foe. Withdrawal routes end where, logically, the combatants would not be expected to turn back and continue engaging in battle.
There is only one contiguous Study Area per battlefield. The Study Area boundary is generally drawn, where practicable, to follow natural features and contours identified on USGS 7.5 minute quadrangle maps.

### Defining the Core Area(s) Boundary/Boundaries

The *Core Area* of a battlefield is the area of direct combat on the battlefield. A Core Area includes critical land where fighting occurred and casualties were sustained. There may be multiple Core Area boundaries on a battlefield, but all must fall fully within the Study Area boundary. Of note when drawing Core Area boundaries:

- **As a rule, the position of any unit that fired weapons or that came under fire is included within Core Area boundaries; however, minor skirmishing along approach or withdrawal routes is not included as it detracts from the primary area(s) of combat. It is, however, included in the larger Study Area boundary.**

- **Units held or sent out of range are generally not included within Core Area boundaries unless their being sent out of range caused them to engage in fighting with opposing forces.**

  For example, a unit was sent, during the battle, to verify reports of enemy forces being sited at a location removed from the main area of combat. If no enemy forces were found or engaged, the unit’s movements from and back to the main area of combat would be included in the Study Area boundary. If the unit found and engaged opposing forces, however, the action would be considered direct combat and would receive its own Core Area boundary.

- **Artillery positions are generally not included within Core Area boundaries unless they are attacked, give supporting fire, or are directly engaged in fighting with opposing forces.**

  For example, if cannons were massed to cover a road and their position led to an engagement through cannon fire or a direct attack on the guns, then the position would be included in a Core Area boundary. If, however, the cannons were not engaged but their mere presence caused the opposing force to move on a different road, then their position would be considered as playing a strategic role in the overall battle and would be included in the larger Study Area boundary.

Core Area boundaries are generally drawn, where practicable, to follow natural features and contours identified on USGS 7.5 minute quadrangle maps.
Defining a Potential National Register Boundary (PotNR)

Unlike the Study and Core Area boundaries, which are based only upon the interpretation of historic events (historic landscape), the Potential National Register (PotNR) boundary is based on the assessment of current landscape integrity (modern landscape). The PotNR boundary defines land that remains to be preserved and would be likely eligible for future listing on the National Register of Historic Places (NRHP) and likely deserving of future preservation efforts. All PotNR boundaries must fall fully within the Study Area. In some cases the battlefield landscape will no longer retain any integrity; therefore some battlefields will not have a PotNR boundary.

If a battlefield is already listed in the NRHP, the existing NRHP documentation is reassessed based on current scholarship and resource integrity. As a result, some PotNR boundaries will contain or share a boundary with lands already listed in the NRHP. In other cases, PotNR boundaries will exclude listed lands that have lost integrity.

A PotNR boundary does not constitute a formal determination of eligibility by the Keeper of the National Register of Historic Places. The PotNR boundary is designed to be used as a planning tool for government agencies and the public and places no restriction on private property use.

Assessing a Battlefield’s integrity

The degree to which post-war development has altered and fragmented the historic battlefield landscape or destroyed historic features and viewsheds is critical when assessing a battlefield’s current integrity to determine whether or not a PotNR boundary is warranted. Of note when assessing integrity:

- Changes in traditional land use over time do not generally diminish a battlefield’s integrity. For example, landscapes that were farmland during the battle do not need to be in agricultural use today to be considered eligible for listing in the NRHP so long as the land retains its historic rural character. Similarly, natural changes in vegetation – woods growing out of historic farm fields, for example – do not necessarily lessen a landscape’s integrity.

- Some post-battle development is expected; slight or moderate change within the battlefield may not substantially diminish a battlefield’s integrity. A limited degree of residential, commercial, or industrial development is acceptable. These post-battle “non-contributing” elements are often included in the PotNR boundary in accordance with NRHP guidelines.

- Significant changes in land use since the time of the battle do diminish the integrity of the battlefield landscape. Heavy residential, commercial, and industrial development; cellular tower and wind turbine installation; and large highway construction are common examples of such changes. Battlefield landscapes with these types of changes are generally considered as having little or no integrity and will be excluded from the PotNR boundary.
The concept of integrity for the purpose of drawing a PotNR boundary is defined in NRHP Bulletin #40 - *Guidelines for Identifying, Evaluating, and Registering America’s Historic Battlefield* (Chapter V, Section VII - Assessing Integrity) and NRHP Bulletin #15 - *How to Apply the National Register Criteria for Evaluation* (Chapter VIII).

NRHP Bulletins 40 and 15 can be found on the NRHP website at:

http://www.nps.gov/history/nr/publications/bulletins/nrb40/nrb40_5.htm

Generally when drawing a PotNR boundary, developed or altered portions of the battlefield landscape are omitted. It is sometimes necessary, however, to include these portions as noncontributing elements in order to maintain cohesion amongst the portions of the battlefield that retain integrity. Because the NRHP does not allow holes in the middle of historic district boundaries (battlefields are considered to be historic districts), developed areas in the *midst* of PotNRs are included in accordance with NRHP requirements. For example, if development has occurred on the edge of a Study Area, it would be omitted from the PotNR. If, however, development has occurred in the center of the Study Area, and that development is surrounded by land with good historic integrity, that development would be included in the PotNR so as not to create a “donut hole” in the middle of the boundary.
Battlefield Mapping Methodology - Defining Features and areas of combat
Battlefield Mapping Methodology – Potential National Register Boundary

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