

IV. Implementation

Plan Implementation Matrix

On page 56 is a matrix that summarizes the following information for each of the ten Public Vantage Point (PVP) viewsheds: priority level, greatest threats, and recommendations. The priority level for each viewshed is based upon the “Priorities” section of this plan in which every viewshed is categorized into four tiers of priority in accordance with three key considerations. Although most of the viewsheds face multiple threats to their integrity, the key one or two threats are recognized here. In most cases, those threats are in the form of development beyond the national park’s boundaries and the expansion of roads traversing the national park. The third issue addressed in the matrix for each viewshed is the recommendations, which primarily include a battlefield viewsheds protection area, landscape screening, and the use of federal regulatory tools to address road expansions.

Height Testing Tool Summary

As development proposals arise within the proposed Battlefield Viewsheds Protection Area (BVPA), the height of buildings and structures may need to be negotiated to preserve the battlefield viewsheds. Currently, however, no known computer programs exists that can map height thresholds for all distances and in all directions

from a specified viewshed anchor. Nevertheless, it is possible to test out various building heights at a particular point when viewed from a specific viewshed anchor through a trial and error process.

The process for conducting such a test is described in detail in Appendix B of this plan, and an example of such testing is illustrated on the following page. Page 55 tests an existing water tower located roughly one half mile south of the national park. The computer model indicates that this tower, at 148 feet in height, is visible from six of the ten PVP viewshed anchors. Clearly, this computer model developed specifically for this project can be an extremely useful tool in dealing with potential developments that might impact battlefield viewsheds.



The existing water tower shown above (circled in red) is 148 feet in height and located on Bethlehem Road roughly a half mile south of the battlefield park. The various colors superimposed on the water tower, related improvements and the ground surface reflect the number of PVP viewsheds (from 1 to 6 of 10) from which those site elements would be visible.

PVP Viewsheds Implementation			
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Viewshed	Priority Level	Greatest Threats	Recommendation
Matthews Hill	Tier 1	Expansion of Rt. 234	Utilize Section 106, Section 4(f) and other regulatory means to prevent expansion
Henry Hill	Tier 1	Development south of the park (com. college) Expansion of Rt. 234	Implement a Battlefields Viewshed Protection Area in Prince William County Utilize Section 106, Section 4(f) and other regulatory means to prevent expansion
Van Pelt	Tier 1	Expansion of Rt. 29 Development northeast of park	Utilize Section 106, Section 4(f) and other regulatory means to prevent expansion Implement Battlefields Viewshed Protection Areas in Loudoun & Fairfax Counties
Brawner House	Tier 1	Expansion of Rt. 29 Development southwest of park	Utilize Section 106, Section 4(f) and other regulatory means to prevent expansion Provide vegetative screen along east side of Pageland Lane out of utility easement
Deep Cut	Tier 1	Expansion/improvements to Featherbed Lane Development south and southwest of park	Utilize Section 106, Section 4(f) and other regulatory means to prevent expansion Implement a Battlefields Viewshed Protection Area in Prince William County
Sudley	Tier 1	Expansion of Rt. 234 Development north of park	Utilize Section 106, Section 4(f) and other regulatory means to prevent expansion Implement Battlefields Viewshed Protection Areas in Loudoun & Fairfax Counties
Stuart's Hill	Tier 1	Development south and southwest of park	Provide vegetative screen along east side of Pageland Lane out of utility easement Implement a Battlefields Viewshed Protection Area in Prince William County
Stephen D. Lee Artillery Position	Tier 1	Development east & west of park	Implement Battlefields Viewshed Protection Areas in Prince William & Fairfax Counties
Chinn Ridge	Tier 2	Development east & south of park	Implement Battlefields Viewshed Protection Areas in Prince William & Fairfax Counties
Portici	Tier 3	Development east, north & south of park	Implement Battlefields Viewshed Protection Areas in Prince William & Fairfax Counties Provide a vegetative screen along the north side of I-66

APPENDICES

Appendix A: Funding & Entities

Appendix B: Height Testing Tool

Appendix A: Funding & Entities

APPENDIX A: Private Land Control Tools & Funding Sources

PRIVATE LAND CONTROL TOOLS

The following materials regarding land control tools are only for supplemental informational purposes and are not recommendations. For the purposes of this plan, the term “land acquisition tools” is used broadly to refer to the full range of levels of real estate control. For example, a fee simple purchase of land gives the owner the full range of property rights, while acquisition tools such as conservation easements give the owner of the easement more limited property rights. The following are land acquisition vehicles that might supplement the recommended regulatory tools if there is support from appropriate entities.

Fee Simple Purchase

This acquisition method is the most controlling and costly, as it extends the entire “bundle of rights” to a land owner. Under fee simple ownership, there are no limitations on the landowner’s ability to use their property other than those imposed by governmental regulation. In light of battlefield viewshed protection efforts, fee simple acquisition provides the greatest level of control, but it is also the most costly approach, especially in areas which have

experienced inflated land values because of development pressures. Fee simple purchase is the most common form of Civil War site protection used in the past both nationally and in Virginia.

Conservation Easements

Conservation easements, sometimes referred to as scenic easements, are a tool which can be used to control one or more aspects of property development without having to actually purchase the parcel outright. To protect historic resources such as a battlefield viewsheds, an interested party may purchase a conservation easement so that a piece of property remains in agricultural use or some other undeveloped state. The easement owner or “holder” purchases the development rights to the property. The landowner continues to own the property and it remains on the property tax rolls. Conservation easements “run with the land” and are thus binding on subsequent owners.

A property owner may benefit from the sale of an easement through a lower property tax burden. By limiting the development potential of a parcel, a conservation easement reduces the property’s market value and associated tax liability. An exception to this rule is land located in very rural areas having no development pressure, in which case agriculture and similar uses are considered its “highest and best use.” However, that scenario does not currently apply to Manassas.

The advantage of an easement purchase is that it is typically less expensive than a fee simple purchase. On the other hand, owners of conservation easements generally lack most of the other land rights gained through fee simple purchases, such as unrestricted access to, and use of, the land. However, for the purpose of viewshed preservation, access to the land is not a high priority. One good example of the successful use of conservation easement purchases for battlefield preservation can be found in Maryland. The Maryland Department of Natural Resources, through its Program Open Space (POS), has purchased easements for numerous properties comprising those portions of the Antietam Battlefield peripheral to the National Park holdings. Closer to home, the Virginia Outdoor Foundation (VOF) has protected a total of 31,000 acres in Fauquier County through conservation easements at the time of the writing of that county's comprehensive plan.

Restrictive Covenants & Deed Restrictions

These two potential preservation tools are essentially identical to conservation easements in that they place certain limitations on the use of property. A covenant is simply a guarantee or formal agreement made by one party to another. In law, it is a written agreement under seal, in which the parties agree to do or refrain from doing something. In order for a grantor to enforce the covenant, it must "run with the land." According to *The Prentice Hall Real Estate Investor's Encyclopedia*, "a covenant is no better than the party or parties making the covenant." A deed restriction is a

limitation in a deed of conveyance in which future owners of the property are denied full ownership. For the restriction to prevail, the deed must clearly indicate the intent of the grantor to transfer less than a full estate. Although they are effectively the same as easements, restrictive covenants and deed restrictions are used less frequently than easements within the context of historic resource preservation.

Options / Rights of First Refusal

This preservation tool is a legally binding agreement between a property owner and a potential purchaser. An *option* agreement provides that, for a consideration (generally payment), a party may purchase a specific property at a previously agreed-upon price within a defined period of time. If the option is not exercised, the consideration is forfeited. In short, the property owner is compensated for having essentially removed the property from the sales market. A *right of first refusal* allows a potential buyer a fixed period of time (typically 10 to 90 days) to match any legitimate offer made to the owner for a parcel of real estate. Sometimes they are held for years and only come into play when an offer is accepted by the owner, but they can be effective in securing a long-term commitment from land owners. For accomplishing battlefield protection goals, the option or right of first refusal would typically be used in an emergency situation in which historic lands or resources are in imminent danger of injury. This approach is particularly

appropriate for stalling a development proposal while literally “buying time” to identify possible funding sources for fee simple acquisition.

Land Donations

Fee simple ownership of land or a limited interest in land, such as a conservation easement, may be conveyed by an individual or entity to a qualified non-profit organization or government which serves as the steward for such lands. In the case of a donation by an individual or private sector entity (i.e. corporation), the donor may be eligible for a federal and state income tax deduction for such a charitable contribution so long as the recipient is either a public agency or a private non-profit entity which conforms with section 501(c)(3) of the IRS code. Property owners contemplating the donation of land for tax benefits should consult an experienced accountant to insure that all Internal Revenue Service requirements are met in order to gain a tax deduction. Although the cost-saving advantages of land donations are obvious, they are a relatively uncommon occurrence. According to the Civil War Sites Advisory Commission’s “Report on the Nation’s Civil War Battlefields” (1993, pg. 27), “... tax benefits for land donations are impractical for most private owners of battlefield lands.”

Other Land Acquisition Tools

Although their likelihood for preserving Manassas Battlefield viewshed lands is not strong, other potential preservation tools

include life estates, purchase and sell-back or lease-back, and property exchanges.

Life Estates

A life estate is a form of real estate ownership that is limited in duration to the life of the owner or some other designated person. Unlike an estate of inheritance, the ownership rights cannot be passed on to the owner’s heirs, with the exception of a designated person as limited to the duration of their lifetime. When an estate is passed on to such a third party, this form of life estate is termed “*pur autre vie*” (for the life of another). In entering into a life estate, the life tenant’s interest remains completely intact, and they are not answerable to the holder of future interests, referred to as the remainderman. The life tenant is responsible for all of the burdens of ownership, such as property taxes, and is also privileged to all benefits, such as income. Their only restriction is the performance of any acts which would permanently injure or waste the land.

Within the context of battlefield viewshed protection, a life estate is an excellent option for a property owner who wishes to remain on their land for the duration of their life, but who wishes that the integrity of the land remains protected after they are gone. The “*pur autre vie*” approach also gives a property owner a sense of peace that their relatives will be accommodated in the future. The advantage for the life tenant is that they can receive money for their property while still remaining on it, and the advantage to the

purchasing party is the immediate protection of threatened historic properties.

Purchase and Sell-Back or Lease-Back

This procedure entails the acquisition of land, typically by a public or private non-profit entity, which is then sold or leased back to the previous owner, but with restrictions placed on the land. In the case of a sell-back, such restrictions would usually be in the form of an easement, deed restriction or covenant, and the buyer (former owner) would generally pay less for the land than the original selling price because of a corresponding value decrease caused by the new restrictions. In the case of a lease-back, any specific restrictions on the land's use or development would be specified within the language of the lease agreement. The purchase and sell-back method is essentially the same as the purchase of a conservation easement because the entity seeking some aspect of control ends up paying for the value of that control as reflected in the reduced sales price.

Property Exchanges

Property exchanges are a valuable tool in those instances in which acquisition funds are limited or unavailable, yet a property owner is willing to give up battlefield viewshed lands in exchange for other non-historic lands having an attractive use/development potential. In the case of national parks, federal laws require that federal lands selected for exchange must be within the same state as the

national park to which the lands will be added. In those cases in which the exchanged lands are not of equal value, which is often the case, cash is used to equalize the difference. In those rare cases in which the lands exchanged are of equal value, the private individual or entity can avoid capital gains taxation per section 1031 of the IRS code. For rural properties which have steadily appreciated in value because of increasing development pressure, as in the case of the Manassas Battlefield area, the avoidance of capital gains tax can be quite significant. In certain situations, such property exchanges can be an effective tool for protecting Civil War resources.

FUNDING SOURCES

The primary source of funds for battlefield protection efforts come from governmental and private non-profit organizations. While governmental funding sources are relatively limited, the number of private non-profit organizations involved in battlefield protection issues has grown substantially over the last several years. There are a variety of private non-profit organizations that are involved with Civil War heritage protection, as well as those indirectly involved with related issues, such as open space and farmland preservation. These organizations include the following:

Private Organizations

Several historic preservation and Civil War organizations exist at the national, state and local levels, and some have considerable funds available for “eleventh hour” land acquisitions. Although environmental organizations do not typically give high priority to Civil War battlefield protection, they are certainly interested in protecting natural open spaces, so there is clearly an overlap of common interests. In particular, the following groups should be considered as allies for battlefield preservation:

Civil War Preservation Trust (CWPT)

The CWPT is a 60,000-member nationally-based non-profit entity that acquires Civil War battlefield lands to preserve them in perpetuity. Working with local partners, they have preserved more than 23,500 acres of endangered battlefield land in 18 different states.

National Parks Conservation Association (NPCA)

Founded in 1919, the 350,000- member NPCA is the country’s only private non-profit advocacy organization dedicated to the preservation and enhancement of the National Park System.

National Parks Mid-Atlantic Council

With a focus on National Parks located in Pennsylvania, Maryland, Virginia and West Virginia, this regional version of the NPCA was established in 1982.

National Trust for Historic Preservation (NTHP)

As the country’s leading national non-profit focused on preserving America’s history and historic resources, this 250,000-member organization is headquartered in Washington, DC and has a series of regional offices, including a Mid-Atlantic office in Philadelphia.

Preservation Alliance of Virginia (PAV)

As the state’s private, non-profit organization for historic preservation, it is essentially a state-level version of the National Trust. Its membership includes 140 local and regional preservation groups, 50 corporate members and nearly 1,000 individuals.

Conservation Fund

Established in 1985, this self-described “non-membership, non-advocacy organization” has protected more than 5.5 million acres of natural land. The Conservation Fund’s Civil War Battlefield Campaign, with its partners, has protected over 8,000 acres on 33 battlefields.

Richard King Mellon Foundation

Working closely with the Conservation Fund, described above, this philanthropic entity has acquired historic lands on eight Civil War battlefields.

Other Relevant Organizations

Additional groups that might be looked toward to partner in viewshed preservation efforts related to the Manassas Battlefield include:

- Association for the Preservation of Virginia Antiquities
- Virginia's United Land Trusts
- Land Trust Alliance
- Land Trust of Virginia
- Trust for Public Land
- American Farmland Trust
- National Park Trust
- National Forestry Land Trust
- The Nature Conservancy
- Scenic Virginia
- Virginia Outdoors Foundation

Federal Funding & Incentives

Most governmental sources of funding for the protection of Civil War battlefield lands and their associated viewsheds are at the federal level or are locally derived funds generated by a specific tax or fee having a *rational nexus* (direct relationship) to the benefiting cause. While the following sources are not an exhaustive list of all possibilities, they do include the most frequently used funding methods. Of all governmental funding sources, the federal level has

the strongest track record in assisting with the preservation of Civil War battlefield lands during the past few decades. In addition to direct appropriations from Congress for national park acquisitions, the Department of the Interior and the federal transportation programs have been good funding sources in recent years.

Federal Appropriations

Federal appropriations sometimes fund additional land acquisitions at national parks for federally authorized lands, as was done during the late-1990s when the Stones River National Battlefield Park in Tennessee added approximately 700 acres to the park. National Park Service (NPS) funds for land acquisition are typically a result of direct line item appropriations from Congress. Efforts toward that end are generally sponsored by a Senator or Representative from the state in which the national park is located. In considering the acquisition of land for new parks, the following criteria are used in accordance with the 1988 *Management Policies: US Department of the Interior*:

- National significance of the site
- Availability of other protection options
- Whether the type of site proposed is already represented in the NPS system
- Size and configuration of the land
- Ability to accommodate public use
- Vulnerability to threats

- Administrative cost and feasibility
- Acquisition cost
- Management alternatives

The Land and Water Conservation Fund (LWCF) was established by Congress in 1964 to create parks and protect natural lands across the country. Since its inception, the fund has acquired nearly 7 million acres and developed more than 37,000 state and local projects. The program now provides up to \$900 million in funding for local and national projects. In recent years, Congress has appropriated funds from the LWCF to protect battlefields. Such funds require a one-to-two match of federal to local/private funds.

National Park Service: American Battlefield Protection Program

This program of the NPS focuses primarily on offering a balanced program of technical assistance and direct financial support to those organizations involved in preservation planning and coalition building to save battlefield resources. Although ABPP funding goes primarily toward planning activities, examples of the types of projects funded by the ABPP include:

- Historic sites surveys
- Resource preservation plans
- Interpretation plans
- Interpretive tools / products

- Educational efforts
- Consensus building projects

There is generally less emphasis on providing funding for interpretation plans and interpretive tools/products. Funding rounds occur annually, and those seeking funding must complete an ABPP application describing: the project need, the proposed methodology, intended results, merits of the project, and estimated costs. Funding typically averages between \$20,000 and \$25,000 per project, although grants can be for either larger and smaller amounts, depending upon the specific project. In fact, this very plan was funded by a grant from the ABPP to Prince William County.

Federal Transportation Enhancement Funds

The Safe, Accountable, Flexible, Efficient Transportation Equity Act (SAFETEA) of 2005 requires that each state use at least 10% of its federal surface transportation funds toward twelve types of transportation “enhancement” activities, such as pedestrian and bicycle paths, scenic easement acquisition, the restoration of transportation-related historic sites, landscaping and beautification for transportation facilities, removal of outdoor advertising, and similar activities. Of particular relevance to the Manassas Battlefield is the program’s funding of the “Acquisition of scenic or historic easements and sites.” Similarly, landscaping and scenic beautification are very relevant funded projects. However, lands

not visible from a public road are ineligible unless their development would otherwise negatively impact the viewshed as seen from the road. Regardless of such limitations, according to the American Battlefield Protection Program's *Battlefield Update* newsletter (Issue No. 70), this federal program "represents the largest source of funding for battlefield preservation and enhancement projects currently available."

Each state allocates its transportation enhancement funds differently. Some states only fund projects having a strong link to transportation, while others will fund applications for projects having a looser connection to transportation. For example, the State of Maryland's Department of Transportation allocated federal transportation enhancement funds to match Program Open Space funds and purchase conservation easements on the Antietam Battlefield. Similarly, in 1992 the Kentucky Department of Parks used \$2.5 million of enhancement funds at Perryville to acquire battlefield lands, purchase property downtown, and create an interpretive plan. That funding was coupled with a required 20% match raised by the Perryville Battlefield Preservation Association.

In Virginia, the Virginia Department of Transportation (VDOT) manages this program and has its own specific criteria, although most mirrors the federal law. The maximum amount awarded per project is \$1 million. Eligible applicants, including State agencies, local governments and non-profit groups, must apply for funding

through an annual competitive grant process and must provide a 20% match to any funds received. However, such match can include land donations, volunteer work, and in-kind services.

State Funding & Incentives

At present, with the exception of the State's role in distributing federal transportation enhancement funds, the key source of State funding for preservation relevant to battlefield viewsheds is the Certified Local Government Grants program.

Certified Local Governments Program

This federal program, which is administered by DHR in Virginia, is intended to encourage local governments to engage in preservation. CLGs receive a minimum of 10% of the dollars distributed through the Federal Preservation Grants Program. In order to qualify as a CLG, local governments must engage in preservation activities such as historic sites surveys, historic designation, establishment of a preservation commission, and similar activities as determined by DHR. The types of activities funded by CLG grants include historic sites surveys, preservation plans, historic district design guidelines, historic interpretation, and the preservation and rehabilitation of publicly-owned historic sites. There are presently 31 CLGs in Virginia, including Prince William County.

Appendix B: Height Testing Tool

Development Height Testing Tool

Viewshed Procedure Log

This procedure documents the steps in illustrating the number of PVP's that have visibility to the buildings proposed for a proposed development named FutureDev. It uses as a base both the non-vegetation and the 40 foot vegetation DEM's prepared during the MNBP Viewshed Study.

Procedure:

1. Capture the proposed FutureDeve's Generalized Development Plan or its Site plan as a .jpg file named SitePlan.jpg.
2. Open ESRI ArcMap and load SitePlan.jpg and the LongRangeLanduse layer.
3. Georeference SitePlan.jpg.
4. Created Polygon Shape File:
 - Data Management Tool → Feature Class → Create Feature Class
Output Location ...\ViewStudy_02
Output Feature Class: Buildings
Geometry Type: Polygon
Coordinate System: NAD_1983_StatePlane_Virginia_North_FIPS_4501_Feet
5. Manually edit in all building polygons from SitePlan.jpg into Buildings file and entered Building ID's and Building Height in Feet.
6. Add Field to Buildings: BldgID, Text, 10
7. Add Field to Buildings: BldgHt_F, Integer
8. Add Field to Buildings: TotalHt_M, Float
9. Create Polygon Shape File of Viewshed Study Area → ThreePExt
10. Extract raster of Building Footprints from non-vegetation DEM.
 - Spatial Analyst Tools → Extraction → Extract by Mask
Input Raster: 97559082_spt
Feature Data Mask: Buildings
Output Raster: ...Viewstudy_02\SitePlan

11. Retrieved Data from SitePlan Properties dialogue.
 - Low: 87.607 Meters
 - High: 105.035 Meters
 - Average: 96.724 Meters
 - Standard Deviation: 4.066 Meters.
 (These numbers represent the height statistics for the land under the planned buildings)
12. Calculate TotalHt_M field in Building Shape File.
 - 1 Foot = 0.3048 Meters.
 - TotalHT_M = 96.724 + 0.3048 * [BldgHt_F]
13. Extract raster of Study Area from vegetation DEM.
 - Spatial Analyst Tools → Extraction → Extract by Mask
 - Input Raster: 40_tot_fix
 - Feature Data Mask: ThreePExt
 - Output Raster: ...Viewstudy_02\3base
14. Create raster from Building Shape File.
 - Conversion Tools → To Raster → Feature to Raster
 - Input Feature: Buildings
 - OutPut Raster: ...Viewstudy_02\Avg_Bldgs
 - Field: TotalHt_M
15. Mosaic to New Raster
 - Data Management Tools → Raster → Mosaic to New Raster
 - Input Rasters: 3base, Avg_Bldgs
 - Cell Size: 34.72813197 (same as in DEM rasters)
 - Output Raster: ...Viewstudy_02\Avg_Total
 - Pixel Type: 32-bit Float
16. Run Viewshed
 - Select all PVP sites in Viewshed Shape file
 - Spatial Analyst Tools → Surface → Viewshed
 - Input Raster: Avg_Total
 - Input Features: Viewshed
 - Output Raster v_pga_avg_all

Output Maps: see page 56 for an example of the output map.