



National Park Service
U.S. Department of the Interior

Manassas National Battlefield
Park

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Manassas Battlefield News Release

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Environmental Assessment for the BRAWNER FARM-DEEP CUT VISTA ENHANCEMENT in Manassas National Battlefield Park is Available for Public Comment

Manassas, VA -The National Park Service announces the availability for public review and comment of an Environmental Assessment (EA) for the BRAWNER FARM-DEEP CUT VISTA ENHANCEMENT at Manassas National Battlefield Park.

The purpose of this assessment is to implement an action approved in the Park's General Management Plan; the clearing of approximately 140 acres of timber between Brawner Farm and Deep Cut in Manassas National Battlefield Park. The mission of Manassas National Battlefield Park is to preserve the historic landscape containing historic sites, buildings, objects, and views which contribute to the national significance of the First and Second Battles of Manassas, for the use, inspiration, and benefit of the public. The non-historic woodlands impacted by the proposed clearing directly limits visitor understanding, specifically of the Second Battle of Manassas. Historically this area was pastureland and the fighting was almost entirely on open ground. Removal of these woodlands and restoration of the landscape is crucial to the purpose and reason for designation of this land as a National Park. Enhancement of this proposed vista will allow the public to experience a similar view as the combatants did during the battle, contributing to a better understanding of both battles.

Copies of the EA are available on request from: Superintendent, Manassas National Battlefield Park, 12521 Lee Highway, Manassas, Virginia 20109. Additional copies will be available at the following libraries: Bull Run Regional Library, Manassas Central Library, Centreville Regional Library, and in the Virginia Room of the Fairfax City Library. The EA is also available through the Internet in .pdf format at: www.nps.gov/mana (follow the "Management Docs link to find the EA) and at the Henry Hill Visitor Center (6511 Sudley Rd, Manassas).

The 30-day reviewing period will end October 28, 2005. All comments should be submitted to the Superintendent, Manassas National Battlefield Park, 12521 Lee Highway, Manassas, Virginia 20109 or by FAX 703/754-1107. Questions regarding this EA should be directed to Robert Sutton, Superintendent, at (703) 754 -1861.

-NPS-

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ENVIRONMENTAL ASSESSMENT

BRAWNER FARM-DEEP CUT VISTA ENHANCEMENT

**MANASSAS NATIONAL BATTLEFIELD PARK
VIRGINIA**

**United States Department of Interior
National Park Service**

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Sept. 22, 2005 - Oct. 28, 2005

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ENVIRONMENTAL ASSESSMENT

BRAWNER FARM-DEEP CUT SCENE RESTORATION

I. PURPOSE AND NEED

The purpose of this assessment is to implement an action approved in the Park's General Management Plan; the clearing of approximately 140 acres of timber between Brawner Farm and Deep Cut in Manassas National Battlefield Park. Historically this area was open pastureland. However, through the years this area has not been maintained and the current vegetation consists of a mix of mature Basic Oak-Hickory Forest interspersed with Virginia Pine-Eastern Red Cedar Successional Forest (Fleming and Webber 2003).

These non-historic woodlands directly impact interpretation of the battles, as the lines of sight that dictated troop movements and patterns are blocked by the woodland. More specifically, these non-historic woodlands directly impact interpretation of the Second Battle of Manassas, especially the fighting that occurred on August 28 and August 30, 1862. The battle lines on the evening of August 28 stretched from the Brawner Farm to the Dogan Farm. The fighting was almost entirely on open ground, on areas that are now wooded.

Likewise, the woodlands obstruct historic lines of sight and corresponding fields of fire important to understanding the nature of the fighting on the afternoon of August 30. This is one of the few battles of the Civil War where Confederate artillery dominated the field. Over 30 guns belonging to Shumaker's and S.D. Lee's artillery battalions were concentrated on Douglas Heights. Another four guns of Chapman's Dixie Artillery delivered a destructive raking fire from Battery Heights onto the Dogan Farm. The Confederate gunners had a clear field of fire all the way to the Groveton-Sudley Road. Fitz John Porter's Union attack failed largely because of this heavy concentration of Confederate artillery fire. It is difficult for visitors to comprehend the advantage of the Confederate position with the woodlands blocking those historic views.

Removal of these woodlands and restoration of the landscape is crucial to the purpose and reason for designation of this land as a National Park: "The purpose of Manassas National Battlefield Park is to preserve the historic landscape containing historic sites, buildings, objects, and views which contribute to the national significance of the First and Second Battles of Manassas, for the use, inspiration, and benefit of the public." Removal of trees will allow the public to experience a similar view as the combatants of these battles and therefore gain a better understanding of the military strategies that resulted from those views.

II. DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

A. Background Data

Manassas National Battlefield Park (MNBP), a unit of the National Park Service, is located in Prince William and Fairfax Counties, about 2.5 miles north of the city of Manassas, Virginia (Figure 1). The park was established in 1940 to preserve the sites of the First and Second Battles of Manassas.

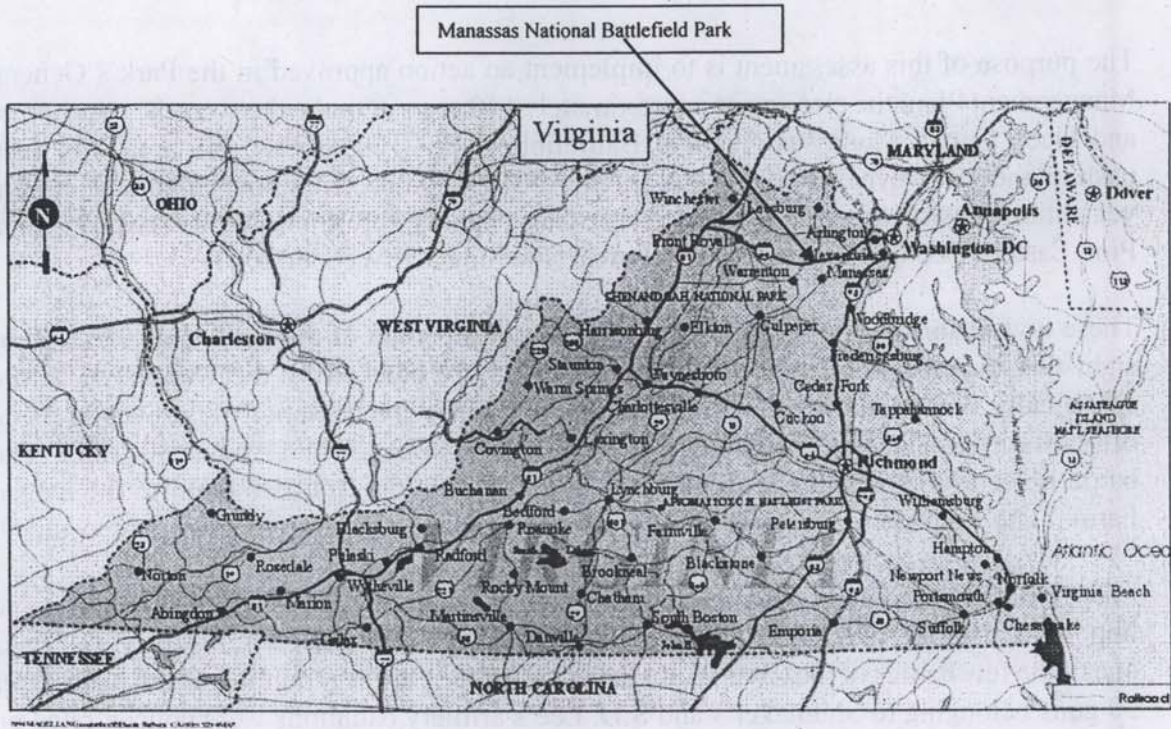


Figure 1. Location of Manassas National Battlefield Park.

B. Proposed Action

This project study area is located in the north western portion of the park, bounded by U.S. Routes 29 (Lee Highway) on the south, Virginia Route 705 (Pageland Lane) on the west and Virginia Route 622 (Featherbed Lane) on the east (Appendix B). Fields that are in hay lease are adjacent to the western portion of the woodlands. Access to the site will be through an existing farm road that enters from Pageland Lane under the power line. The staging area for timber operations will occur in a hay field west of the woodlands. We propose to have the timber cut (approximately 140 acres) and have all wood hauled away (Appendix C, Timber Contract). The large timber will be delimbed, cut into 8-foot lengths and stacked for removal. All saplings, brush, and limbs will be chipped and hauled away with some of the mulch spread over the cutting area. To prevent damage to the soil and archeological resources, stumps will not be ground, but cut 3-6 inches from the ground. All remnant stone walls and piles will be left undisturbed; these areas will be maintained in a shrub habitat type via periodic cutting. Other areas will be kept open by maintenance using a tractor with bush hog; eventually these areas will be converted to grasslands. Stumps that are too high and interfere with the bush hog operation will be ground by maintenance. The operation will only be allowed during dry and or frozen conditions, determined by park staff, to further insure minimal ground disturbance. A variety of harvesting techniques will be utilized to minimize soil disturbance. The harvesting operation will incorporate track operated timber harvesters, and either wheeled or wheel & track operated forwarders for hauling to the landing. Along with this process the harvesters will lay pine tops/limbs and smaller 4" and less stems down in a "bed" manner. The equipment will then be able to tram across that secondary surface and reduce the soil disturbance and compaction. This process will leave a broken down debris layer following harvesting, that will decompose and return to the soil. Visual impact of the debris layer will be 1 - 2 years. However, the interpretive benefit will be immediate, as lines of sight will be restored. The area will initially be left to re-vegetate on its own, and will be maintained in a mix of grass and shrubland community types via either mechanical means or if approved, through use of prescribed fire. As the stumps and debris decay, areas will be converted to grassland. The regional Exotic Pest Management Team will use herbicides to prevent encroachment of exotic plant species. Best forestry management practices will be employed with a 50ft buffer around all streams. In addition, a 100ft buffer will be maintained adjacent to the park boundary as a buffer from potential future development.

C. Alternatives

Alternative 1: No Action

This alternative would provide maximum protection for cultural and natural resources, as no new ground would be disturbed, however, it would not accomplish the objectives of the park's General Management Plan. The current woodland configuration obstructs the historical vista and therefore impacts the interpretation of the battle.

Alternative 2: Cut a corridor to provide a line of sight.

Under this alternative, a sight corridor would be cut (approximately 40 acres) to allow a view from firing positions. This would minimize impacts on woodland habitat and provide some interpretive benefits. However, it would not allow for full interpretive benefit as battle strategies involved more than just a direct line of sight, and this alternative would be in conflict with the over all objectives of the Park: to restore the landscape to near 1861-62 conditions. In addition, this alternative would not allow the park to convert a large area to a grass and shrubland community, which could benefit many species.

Alternative 3: Cut existing trees and maintain in grass and shrub land mix.

Under this alternative the woodlands would be cut and left to re-grow into a shrub and grass land community. Machine accessible areas would be cut, using a bush hog, every 1-2 years by park staff to maintain the vista and the grasslands. Areas around the lines and piles of stone would be kept clear of trees by hand cutting and would be maintained in shrubland. Prescribed burns may be periodically used, if approved, and if it is determined that fire would not have the potential to negatively affect cultural resources. This alternative would result in the restoration of the historic vistas allowing visitors to better visualize the strategies involved in this battle.

III. DESCRIPTION OF THE EXISTING ENVIRONMENT

A. Nonliving Components

Climate

Summers are warm and humid; winters are relatively mild. Generally pleasant weather prevails in spring and autumn. Mean annual temperature is about 55 degrees (F) and ranges from 42 to 65. The coldest period, when minimum temperatures average 21 degrees, occurs in late January. The warmest period, when mean maximum temperature may reach 88 degrees, occurs in the last half of July. Annual precipitation has ranged from about 25 inches to more than 55 inches. Rainfalls of over 10 inches in a 24-hour period have been recorded during the passage of tropical storms. The seasonal snowfall

is nearly 24 inches but varies greatly from season to season. Snowfalls of 4 inches or more occur only twice each winter on the average. Accumulations of over 20 inches from a single storm are extremely rare. Prevailing winds are from the south except during the winter months when they are from the northwest with the highest average wind speed occurring in March.

Land

- a. **Soils** - According to the Soil Survey of Prince William County, Virginia, the soil type for the study area predominately consist of Waxpool, Jackland-Haymarket, and Jackland soils. Waxpool soils are very deep and poorly drained with very slow permeability. They formed in residuum that weathered from diabase and basalt of the Northern part of the Piedmont Plateau. Slopes range from 0 to 3 percent. Soils of the Jackland series are very deep, moderately well drained and somewhat poorly drained with very slow permeability. They formed in residuum that weathered from diabase, basalt and gabbro of the Northern part of the Piedmont plateau. Slopes range from 0 to 15 percent.
- b. **Geology** - The study area is underlain by sedimentary, metasedimentary, and igneous rocks of Triassic and Jurassic age. Siltstone of the Ball's Bluff Formation is the most extensive bedrock type in the area. This material is a red to purplish-brown, iron-rich, micaceous siltstone with thin to medium bedding that tends to produce platy to slab-like fragments when weathered. Calcium is abundant in concretions, veins, and cement. Minor interbeds of red silty shale and arkosic sandstone are also present. This formation constitutes the parent material of almost all soils in the eastern half of the study area (Leavy *et al* 1983, Lee 1977).

The western half of the Park contains substantial areas underlain by intrusive diabase, which occurs in irregular dikes, stocks, and sills. This diabase is a dense, medium-grained, dark-gray to black mafic, igneous rock composed primarily of feldspar and pyroxene (Lee 1979). This bedrock is well expressed in a narrow dike that originates near Wellington to the south of MNBP and extends northward through the Park, passing west of Groveton and ending just SE of Sudley. Other diabase intrusions are located in the vicinity of Stuarts Hill, south of Battery Heights, and on the ridge east of Brawner Farm (Leavy *et al.* 1983). The soil survey for Prince William County (Elder 1989) indicates that soils derived from diabase are also located in the vicinity of Bald Hill. Thick, residual soils cover most diabase intrusions but often contain spheroidally weathered boulders at the surface.

- c. **Physiography and Hydrology** - MNBP is located in the Piedmont physiographic province (Fennemann 1938), approximately 4 km (2.5 mi) northwest of Manassas City, Virginia and 42 km (26 mi) west of Washington, D.C. (Fig. 1). The elevation of the project area ranges from 300 to 310 feet. Most of the Park is in Prince William County, Virginia, with a very small portion extending into Fairfax County. The park is situated in the Culpeper Basin, a large Mesozoic trough that stretches across the central Piedmont from Culpeper County north through Fauquier, Prince William, and Loudoun Counties into Maryland (Lee 1979). The Culpeper Basin is a distinctive regional landscape with relatively low relief and gently rolling to nearly level topography. Manassas National Battlefield Park is very representative of the region, with broad, low ridges, extensive upland "flats" and shallow, sluggish drainageways.

Streams of the park are part of the Occoquan River watershed. Bull Run, one of the largest secondary streams of the region, borders much of the eastern edge of the Park. The watershed of Youngs Branch, a major Bull Run tributary, drains most of the study area. Well-developed floodplain landforms, including depositional bars, levees, and backswamps, occur only along Bull Run. Floodplains along Youngs Branch and several of its larger tributaries are much smaller and lack the microtopographic diversity of large-stream and river floodplains. Headwater drainages throughout the study area are characterized by very small, sometimes braided channels with little alluvial deposition, and are flanked by flats with ephemeral or seasonal flooding controlled by fluctuating groundwater. Similar but isolated, groundwater-influenced depressions are also scattered through the Park.

d. **Land Use** -

d. **Land Use** -

The project site is located north of U.S. Route 29 and west of VA Route 622 in the northwestern portion of the park and includes portions of the historic estates Bachelor's Hall (Douglas Hall) and Peach Grove. Historical background on the historic properties is provided in the 1996 Joseph report detailing the cultural landscape inventory of the northwest quadrant of Manassas National Battlefield Park and the 2004 Fanning and Earley report analyzing the cultural landscape of the Brawner Farm.

Early History and Ownership

The Bachelor's Hall and Peach Grove properties arose out of the division and sale of Carter family lands in the late 18th and early 19th centuries. Robert "King" Carter, land agent for Lord Fairfax's Northern Neck proprietary, had patented vast tracts of land for himself and his family during the early 18th century, including the three Bull Run tracts that encompass present-day Manassas National Battlefield Park. By the end of the century, much of these holdings were being subdivided and sold, with some of the land passing out of the Carter family's ownership.

George Tennille, a Revolutionary war veteran, acquired several parcels totaling over 629 acres before his death in 1840. Following the death of his wife in 1846, George A. Douglas, Tennille's grandson, acquired 326.5 acres from the estate, and the house became known as Bachelor's Hall around 1850. In 1854 Douglas sold a seven-acre swath to serve as the right-of-way for the proposed Independent Line of the Manassas Gap Railroad, located along the northern edge of the present project area. Except for the railroad alignment, the farm passed to Douglas' wife Augusta upon his death in 1856. She rented the property to John Brawner the following year.

Brawner, his wife Jane, and their five children (only the youngest was still a minor at 19) were recorded as residing on the farm in the 1860 census. The family cultivated most of the rented acreage, producing wheat, rye, corn, oats, and hay. In addition, they maintained some livestock, including nine sheep, four horses, five milk cows, nine other cattle, and nine swine. The uncultivated portion of the property included a 45-acre woodlot southeast of the house. This woodlot later became known as Brawner's or Gibbon's Woods due to its association with the actions of John Gibbon's Union brigade during the engagement at the Brawner Farm, which opened the Second Battle of Manassas.

Henry Dogan began to acquire the neighboring Peach Grove property in 1800 and expanded his holdings in 1810. On his death in 1823, portions of the estate passed to his son, William Henry Dogan. The younger Dogan continued to enlarge and improve the farm, amassing approximately 700 acres. Information from the agricultural census of 1850 indicates that Dogan owned considerable livestock, including 90 sheep, 25 swine, six milk cows, 22 other cattle, four oxen, and ten horses.

At his death in 1854, the estate was divided among his widow and seven children. As with the adjoining Douglas property, a narrow corridor was sold

to the Manassas Gap Railroad for its new alignment. Dogan's wife, Lucinda, and their children continued to reside at the main house at Peach Grove until its loss to fire in 1860, when they relocated to a smaller overseer's dwelling at Groveton, a crossroads community on the plantation adjoining the Warrenton Turnpike. The boundary between the antebellum Douglas and Dogan estates is still marked by a row of stones, the remnant of a fence, extending north-south through the present project area.

Civil War

During the First Battle of Manassas, July 21, 1861, the Brawner and Dogan farms played no role in the engagement, as the heaviest action was focused to the east primarily along the Manassas-Sudley Road corridor. Local residents, however, gathered on Douglas Heights on the farm that the Brawners rented from Augusta Douglas. The open ridge offered extensive vistas, and the civilians on the high ground observed the distant fighting on Matthews Hill and Henry Hill.

Both farms, however, witnessed substantial fighting during the Second Battle of Manassas, August 28-30, 1862, including action on all three days of the battle. After conducting a sweeping flank march in rear of the Union Army of Virginia and raiding the Federal supply depot at Manassas Junction, Major General Thomas J. "Stonewall" Jackson led his Confederate forces northward from the junction and placed his troops on the high wooded ground north of the Brawner and Dogan farmsteads. There they could observe Union movements from a position of cover and also await the arrival of the remainder of the Confederate Army of Northern Virginia under General Robert E. Lee.

At midday on August 28, a portion of Jackson's command on the Brawner farm briefly engaged the Union division of Brigadier General John F. Reynolds marching east along the Warrenton Turnpike. After a short skirmish, however, Reynolds turned southward along Pageland Lane, just west of the Brawner farm, and skirted past Jackson's position. A far more violent clash erupted when another Federal division passed in front of Jackson's position late in the day. As Brigadier General Rufus King's division marched eastward on the turnpike toward Centreville around 5:30 p.m., Jackson ordered his men out from their hidden positions on Stony Ridge to confront the passing Federals.

With Confederate artillery near the Brawner house firing on the Union column, a lone Federal regiment, the 2nd Wisconsin, peeled off of the turnpike and headed through the cover of the Brawner woods to attempt to capture the guns. Emerging east of the house, the Wisconsin troops soon

encountered the Stonewall Brigade marching to give battle. Other Union and Confederate units joined the fighting piecemeal until the opposing battle lines stretched for a half mile from the Brawner farmyard eastward onto the neighboring Dogan farm.

For nearly two hours, the fighting raged on the Brawner and Dogan farms, with darkness ending the combat. During the night, King's division slipped off the field and marched southward to Manassas Junction, leaving Jackson in control of the field.

During the next two days, the Brawner and Dogan farms served as the stage for significant military action. Jackson pulled back from his battle front of August 28 and took up defensive positions along the Unfinished Railroad, with his right anchored near the Brawner farm and his left near Sudley Church. There he withstood repeated Union attacks throughout August 29 and 30.

During August 29, Gen. Lee arrived with the remainder of his army under Major General James Longstreet and extended the Confederate positions south from the Brawner farm to the Manassas Gap Railroad. From his command post on Stuart's Hill, Lee communicated with Jackson north of the Brawner farm through the use of signal flags. While Jackson withstood repeated assaults, Lee awaited an opportunity to unleash Longstreet's troops on Major General John Pope's Army of Virginia.

During the afternoon of August 30, Pope launched an attack on Jackson's lines in the vicinity of the Deep Cut, where the excavated bed of the railroad ran across a hill on the Dogan farm. Marching over open ground on the farm, a Federal assault force under Major General Fitz John Porter crossed Schoolhouse Branch and pivoted toward the railroad grade. Although shaken by the assault, Jackson's infantry held its position. Meanwhile, Confederate artillery fire from the Brawner farm and from the Battery Heights area of the Dogan farm impacted on the fields that Porter's force had crossed on the attack. The damaging artillery fire thinned the ranks of supporting Union troops sent to sustain the attack and also made retreat risky for those Federal forces pinned down along the embankments of the Unfinished Railroad. With hope of success vanishing, the Union forces fell back off the field.

Following Porter's failed attack, Lee and Longstreet saw their opportunity to wreak havoc in the Union army. Around 4:00p.m., Longstreet's Confederates – 28,000 strong – advanced from their positions south of Brawner farm and headed eastward to drive on the Union left. Caught off-guard, Pope's army was unable to stop Longstreet's advance until the Confederate attack had rolled onto the western slopes of Henry Hill. A last ditch effort to stave off

disaster there and along the Sudley Road allowed Pope to pull his battered army back across Bull Run at dark.

Post-Civil War History

Both the Brawner and Dogan families remained on their farms during the war. Despite the damages to their rented farm, the Brawners returned after the Second Battle of Manassas and continued to farm the property for a time, though the historical record is unclear on how long they remained. At the war's conclusion, Union soldiers encamped nearby returned to the Manassas battlefields to erect monuments in commemoration of the Federals' efforts at First and Second Manassas. The monument for Second Manassas was erected adjacent to the Deep Cut area of the Unfinished Railroad on the Dogan farm.

After the war the Brawner family ended its tenancy of the Douglas farm. Augusta Douglas (now Lynn) died in 1876 and left the property to her son Pendleton Douglas, who continued to rent the farm before selling to William M. Davis in 1895. Davis enlarged the postwar house in the early 1900s (the wartime building having been dismantled at some unknown date), but Davis' heirs made few additional improvements to the property. By the late 1930s the eastern portions of the farm were no longer under cultivation. A 1937 aerial photograph depicts the farm, showing a belt of woods extending northward from the wartime Brawner woods and covering the previously open ground that lay between the Brawner and Dogan farmsteads. Today, this forested area has merged with the larger body of woods along the Unfinished Railroad on the slopes of Stony Ridge.

The Dogan farm remained largely in family hands well into the 20th century, with portions divided among family members. As with the former Brawner (Douglas/Davis) farm, though, portions of the farm were no longer being cultivated or used for pasture. The 1937 aerial image shows areas along the Unfinished Railroad, including the Deep Cut area, enshrouded in dense woods. The conversion of open fields and pastures to woodlands, meanwhile, continued until National Park Service acquisition of the several tracts that once comprised the Dogan estate. In the 1970s, the NPS opened a small vista in the Deep Cut area to allow visitors to view the historic monument and small portion of the slope where the Federal attack on Jackson's position crested on August 30, 1862.

Today, both the Brawner farm and the Deep Cut area of the Dogan farm are major interpretive sites on the Second Manassas battlefield. Interpretive trails connect significant battle positions in these areas and cross the proposed vista restoration at multiple locations.

B. Living Components

Vegetation

The entire study site consists of Virginia Pine-Eastern Red Cedar and Basic Oak-Hickory forest (Flemming and Webber 2003). The Basic Oak-Hickory vegetation type is the principal oak-hickory forest on basic substrates of the northern Virginia Culpeper Basin. It is distinguished by its diverse floristic composition, its abundance of *Carya* spp. and *Fraxinus americana*, and the patch-dominance of three distinctive forest grasses. It is quite similar to the Acidic Oak-Hickory Forest, but has lusher and more diverse shrub and herb layers that lack significant cover of *Vaccinium pallidum* (early lowbush blueberry) and other heath shrubs. This unit is largely confined to soils weathered from diabase, whereas the Acidic Oak-Hickory Forest is exclusively associated with soils weathered from siltstone.

The Virginia Pine-Eastern Red Cedar forest is the most abundant forest community in the Park, and is characteristic of ruderal habitats throughout the northern Virginia Culpeper Basin. This community type represents temporary, early-successional vegetation of abandoned fields. Although relatively short-persistent, this forest assemblage repeatedly develops on suitable habitats of the region. Composition varies from nearly monospecific stands of *Pinus virginiana* (Virginia pine) or *Juniperus virginiana* var. *virginiana* (eastern red cedar), to mixed stands with these trees in varying proportions. *Cornus florida* (flowering dogwood) and hardwood regeneration, particularly of *Fraxinus americana* (white ash), *Acer rubrum* (red maple), *Carya* spp. (hickories), and *Quercus* spp. (oaks), are often abundant in the understory. The herb layer varies from about 10% total cover to nearly absent on sites densely shaded by overstocked pines or cedars.

Wildlife

A list of animal species known to use the habitat of the park can be found at the Nature and Science section of the Manassas web page, www.nps.gov/mana. Many common species of wildlife have been observed near this site. Species include various Songbirds, White-tailed Deer (*Odocoileus virginianus*), Eastern Cottontail (*Sylvilagus floridanus*) and Red Fox (*Vulpes vulpes*). No rare or endangered species have been identified in the project area. Natural resource management personnel will closely monitor the operation to insure minimal impacts to wildlife. Adjacent habitat should be sufficient to accommodate any wildlife displaced from the timber cut area.

Human Population Density

The park has an annual visitation of approximately 900,000 visitors who spend anywhere from 30 minutes to 6 hours in the park. The heaviest concentrations of visitors come to the park on weekends. There is a 55-mile trail system that allows visitors easy access to nearly all portions of the Park. Primary access is by automobile, with secondary access from horse, motorcycle, and foot traffic.

Many people visit the project area for interpretive and other visitor uses. An interpretive loop trail near Deep Cut and another at Brawner Farm provide pedestrians the opportunity to trace the opposing battle lines on a portion of the Second Manassas battlefield. A bridle trail is also located within the project area. In addition, a contact station located at Brawner farm is planned to add to the interpretive opportunities for the Second Battle of Manassas.

IV. ANALYSIS OF PROPOSED ACTION

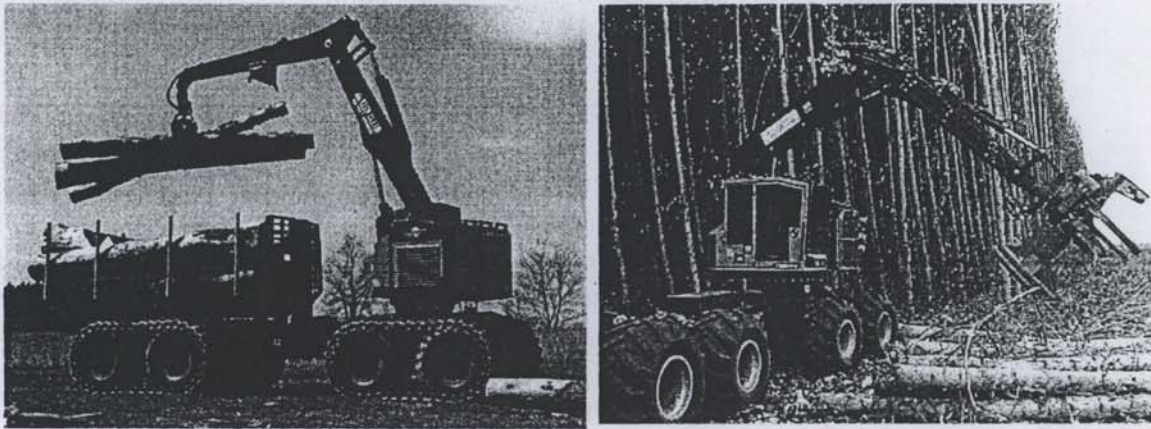
A. Alternative 3: Preferred Alternative

Impacts on Cultural Resources

The National Park Service will undertake formal consultation with the Virginia State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (ACHP) to address the potential adverse effects that may arise from the project. A phase I archeological survey has not been conducted for this area. In order to minimize any potential adverse effects to cultural resources, minimize the disturbance to archeological resources, and lessen the effect of soil compaction and erosion in the project area, the National Park Service will take the following steps:

- a. **Monitoring** - Prior to the start of the timber operation, NPS regional cultural resource staff and Manassas National Battlefield Park staff will assess and flag sensitive areas to further minimize any potential damage. As the project proceeds, one of the most critical monitoring measures will be that timbering operations will occur only during dry or frozen conditions as determined by park staff. In addition, during the vista clearing operations, NPS archeologists will make periodic visits to monitor the work.
- b. **Implementation** - Specialized harvesting equipment will be utilized to minimize soil disturbance including use of track-operated timber harvesters, and either wheeled or wheel & track-operated forwarders for hauling to the landing (see photos of equipment). The selection of this equipment will: Reduce soil disturbance that would have been caused by skidding operations dragging loads across the surface of the soil (i.e. no logs will be dragged or skidded). Also these equipment relationships will

help to meet the goals of production with least earth disturbance. A secondary surface of pine tops/limbs and smaller 4" and less stems will be laid down in a "bed" manner. The equipment will then be able to tram across the surface and reduce the soil disturbance and compaction. This process will leave a broken down debris layer following harvesting, that will decompose and return to the soil. Visual impact of the debris layer will be 1 – 2 years.



- c. **Management** - Complete restoration of this area will take approximately 10 years. Clearing of the trees will be followed by a maintenance period while we wait for the decay of the woody debris and stumps. During this time period, the vegetation in the area will be kept low to retain the historic viewscape using a combination of potential options including, but not limited to, bush hogging, manual cutting, and prescribed fire. When the debris has decayed, we will look at options to convert open, non-rocky areas, to grassland.

The impact this project may have on visitors touring the area during the timber cutting will be relatively short-term. For reasons of safety, the entire area will be closed to the public during the clearing operation, which may take as long as a year depending on weather. Moderate to low noise distraction will occur from equipment used to cut and haul the timber.

Impacts on Wildlife

Less mobile species such as amphibians and invertebrates will be directly impacted by this operation. More mobile species such as deer and smaller forest dwelling mammals such as grey and fox squirrels should be able to easily relocate to adjacent forest stands. Avian species will also relocate easily. Long term impacts from habitat conversion are also important to consider. Removal of forests has the potential to impact many species, the most

notable of which are forest dwelling birds.

The State of Birds USA 2004 report by the Audubon Society assigned species to one of three color categories; Green (of low conservation concern), yellow (of moderate concern) and red (of high concern). Manassas National Battlefield Park has on its bird list 6 woodland species from the yellow category (Wood Thrush, Red-headed woodpecker, Bay-breasted warbler, Worm-eating warbler, Kentucky Warbler, and Canada warbler) and one species from the red category (Cerulean Warbler). This restoration project will remove some of this habitat for these species. However, there are large stands of comparable and larger woodlands close to the project area, both inside and outside of the park. We believe those areas will accommodate these species.

The park has recently been nominated as an Important Bird Area (IBA), based primarily on the grassland habitat in the park. The Important Bird Areas program is a global program started by an organization called BirdLife International. Audubon is the official U.S. partner designate of BirdLife International and runs the program on a state by state basis in the U.S.. Each state has a Technical Committee that is designated to be the official review board for nominations that come in. This committee is composed of ornithologists, ecologists, land managers etc. from across the state. They are the ultimate authority over which sites become IBAs and they accomplish this through regular meetings and a vote on each site. The site report explanation of the ornithological significance states; "Manassas NBP supports one of the best grassland and shrubland species suites in the region, with healthy populations of Eastern Meadowlarks, Grasshopper Sparrows, Field Sparrows, Prairie Warblers, Brown Thrashers, and Eastern Towhees - all state species of conservation concern. In 2005, a Henslow's Sparrow pair, a state threatened species, was reported on the site - the first reported at Manassas in years. In addition to this suite of species, Manassas is known to support over 150 species throughout the year - 54 of them confirmed breeders." This project will result in additional grassland and shrubland habitat, helping contribute to this rapidly declining habitat type.

Franzreb and Rosenberg stated in their 1997 status assessment "Although much of the initial concern, especially in the popular press, was for forest-breeding species, especially forest-interior specialists, most recent analyses concluded that species inhabiting early successional habitats, especially grassland, may be experiencing more consistent declines than are most forest birds in the East" They reported that approximately 26 percent of forest species were in decline compared to 46-70 percent of grassland and successional species. Askins reported similar findings in his book *Restoring North America's Birds*. He reported that of the 40 species listed as endangered, threatened, or of special concern in three or more northeastern states, 13 are grassland or savanna specialists, and only 3 are forest specialists. In addition he states that since 1966 the BBS (breeding bird surveys) east of the Mississippi indicate that 15 of 19 grassland species have declined compared to only 2 of 40 forest dwelling migratory birds.

Conversion of this woodland to a habitat mix of grassland and shrubland does have benefits for some species of wildlife, most notably for bird species that utilize these habitats. The decline of grassland birds has been called the conservation crises of the 21st century (Brennen and Kuvlesky 2005). It is estimated that since the mid-1800s there has been an 80% decline in grassland ecosystems in North America. . In Virginia in particular it is estimated that idle grasslands have been reduced by 55% since 1945 (Watts 2000). This overall decline, especially in the eastern states, is attributed to afforestation and the subsequent lack of early successional habitat. The secondary and collateral goal of this project is to establish and maintain a grass and shrubland habitat mix. Conversion to this habitat type directly relates to one of the Park's primary natural resource management goals: managing the Park's habitats to help offset regional ecosystem deficiencies. This project will result in the establishment of an increasingly rare habitat type. Species of conservation concern that are expected to utilize this area include blue-winged warblers, prairie warblers and golden-winged warblers. In addition, Henslow's Sparrows, a red watchlist species, have recently been sighted in the park's grasslands. Additional habitat will hopefully serve to encourage even more grassland species to utilize the Park.

V. PUBLIC PARTICIPATION

The Environmental Assessment for this project will be advertised for a 30-day public review. A press release will be issued to the local newspapers advertising the availability of copies of this Environmental Assessment, Brawner Farm-Deep Cut Vista Enhancement, to local libraries and through the internet at www.nps.gov/mana/index.htm.

VI. LIST OF PREPARERS

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VIII. APPENDIXES

A. References

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Manassas National Battlefield Park Vista Clearing

National Park Service
U.S. Department of the Interior



Legend

- Western Cut
- Eastern Cut
- Park Streams
- Unfinished Rail Road
- Deep Cut Monument
- Brawner House
- Park Boundary
- 100 Foot Boundary Buffer
- Streamside management zones



B. Restoration Map

Produced by Resource Management



C. Timber Contract

UNITED STATES DEPARTMENT OF INTERIOR NATIONAL PARK SERVICE

TIMBER SALE CONTRACT SPECIFICATIONS

PS 1.0 Sale Area

PS 1.1 Sale Area Map

The boundaries of the "Area" and any Unit thereof, are as shown on the attached "Area Maps", which are made part hereof, and designate on the ground by the Park Service. The location of the "Area" and its approximate acreage is found in NPS-1.0. The Park Service shall subdivide units as required for protection of trench lines, stream courses, etc.

Where applicable, the following are also identified on the "Area Map":

- (a) Boundaries of Clearcutting Units
- (b) Specified Roads listed under PS 2.4
- (c) Roads where log hauling is prohibited or restricted PS 2.4

PS 1.2 Claims

Valid claims are excluded from the "Area" except those on which timber cutting is authorized in writing by the claimant. Claims which limit Purchaser's rights to operate under this contract and which the Park Service has been able to identify are shown on the "Area Map". Purchaser is not obligated to operate contrary to existing claim limitations. The Park Service shall designate boundaries of claims on the ground to the extent necessary to identify included timber.

PS 2.0 Transportation Facilities

PS 2.1 Use of Roads by Purchaser

Except as provided herein, Purchaser is authorized to use only identified existing National Park Service roads, when such use will not cause damage to the roads or National Park resources and when hauling can be done safely. If Purchaser's use of existing National Park roads cannot be satisfactorily accommodated without reconstruction, Purchaser shall be authorized to use such roads upon agreement as to the minimum reconstruction work which Purchaser shall perform before hauling.

PS 2.2 Road Maintenance

Purchaser shall perform or pay for road maintenance work, commensurate with Purchaser's use, on roads controlled by the Park Service and used by Purchaser in connection with this sale.

Purchaser's maintained cost responsibility on road sections customarily maintained by The Park Service shall not exceed the maintenance costs commensurate with the Purchaser's use.

PS 2.3 Use by Others

The Park Service shall have the right to use any road under this contract for any and all purposes in connection with the protection and administration of the National Park.

PS 2.4 Haul Roads

All Park roads may be used for hauling.

PS 3.0 Operations

PS 3.1 Representatives

Unless Purchaser is notified in writing otherwise by the Park Superintendent, the Natural Resource Program Manager is the representative of the Park Service to (a) receive notices in regard to performance under this contract, (b) take action in relation to this contract, and (c) be readily available to the are of logging action.

When Purchaser's operations are in progress, Purchaser shall have a representative, names in writing, readily available to the supervisor of such operations and authorized to receive notices in regard to performance under this contract and to take related action.

PS 3.2 Protection of Land Survey Monuments

Purchaser shall protect all survey monuments, witness corners, reference monuments and bearing trees against avoidable destruction, obliteration or damage during the Purchaser's operations. If any known monuments, corners, or accessories are destroyed, obliterated or damaged during Purchaser's operations, Purchaser shall hire at his cost, the appropriate county surveyor or a registered land surveyor to reestablish or restore at the same location the monuments, corners or accessories. Purchaser shall record such surveys in appropriate county records.

PS 3.3 Closed Area

Any and all Purchaser's operations shall be limited to the site and access fields shown on the attached "Area Map".

PS 3.4 Control of Operations

Under this contract, "Purchaser's operations" shall include activities of or use of equipment of Purchaser, Purchaser's employees, agents, contractors, subcontractors, their employees or agents, acting in the course of their employment in operations hereunder on National Park Service lands or within the Park Service protection boundary.

Purchaser's operations shall be conducted in a workmanlike and orderly manner.

"Release for Cutting" is written authorization to Purchaser to begin cutting in a unit. Upon Purchaser's request for release of a unit, the Park Service shall either, (a) give tentative approval, or (b) reject the request, stating reasons for rejection. Approval must be given before each unit is cut.

PS 3.5 Protection of Residual Trees

Purchaser's operations shall not unnecessarily damage young growth or other trees to be reserved. Any dead or leaning tree (s) outside the unit boundaries that constitute a safety hazard in the Purchaser's operations will be felled and removed.

PS 3.6 Safety

Purchaser's operations shall facilitate The Park Service's safe and practical inspection of Purchaser's operations and conduct of other official duties on sale area.

PS 3.7 Sanitation and Servicing

Purchaser shall take all reasonable precautions to prevent pollution of air, water, and soil by Purchaser's operations. Sanitary facilities will be provided by Purchaser.

Refuse resulting from Purchaser's use, servicing, repair or abandoned equipment shall be removed from National Park lands.

Purchaser shall not service tractors, trucks or other equipment on National park lands, unless a suitable container (s) provided by Purchaser and approved by Park Service is used for collection. The used oils and other items of pollution will be discarded into said container (s) and will be emptied as required outside Park Service lands and disposed of as required by State of Virginia requirements.

PS 3.8 Acceptance of Work

Upon Purchaser's written request and assurance that work has been completed within a Unit, Park Service shall perform an inspection promptly so as not to delay unnecessarily the progress of Purchaser's operations. Park Service may perform such inspections without request from Purchaser.

PS 3.9 Conduct of Logging

Unless otherwise specifically provided herein, Purchaser shall fell trees designated for cutting and shall remove all portions down to 3-inches diameter and 3-inches from ground level (when using harvesting equipment) and all slash from said trees. Standing dead trees will be cut and removed, down dead trees and logs will be removed.

PS 3.10 Felling and Bucking

Felling shall be done to minimize breakage of timber and damage to residual timber. Unless agreed otherwise, felling shall be done by saws or shears. Bucking shall be done if required to permit removal of all pieces. All cut material will be removed from Park lands.

PS 3.11 Felling in Clearings

Insofar as ground conditions, tree lean, and shape of clearing permit, trees shall be felled so that their tops do not extend outside clearcutting units.

PS 3.12 Stump Heights

Stumps shall not exceed 3-inches on the side adjacent to the highest ground (when using harvesting equipment); maximum of 20 stumps per acre of greater than 3-inch heights shall be acceptable when necessary for safe conduct of logging.

PS 3.13 Limbing

To minimize damage to soil exposed limbs and stubs shall be cut from products prior to moving.

PS 3.14 Trenches, Gun Pits, and Stream Courses

No felling, skidding or tractor driving shall be allowed over historic trenches or streambeds.

PS 3.15 Skidding and Yarding

To prevent damage to potential cultural resources, products shall not be skidded.

PS 3.16 Rigging

When needed, rigging shall be slung on stumps or trees designated for cutting only.

PS 3.17 Landings

Locations of all landings and tractor roads shall be agreed upon prior to their use.

PS 3.18 Skidding on Roads

Products shall not be skidded.

PS 3.19 Erosion Prevention

Purchaser's operations shall be conducted reasonably to minimize soil erosion. Equipment shall not be operated when ground conditions are such that excessive damage will result.

PS 3.20 Meadow Protection

Care shall be taken to avoid damage to the cover, soil and water in meadows. Vehicular equipment shall not be used on meadows. Unless otherwise agreed, trees felled into meadows shall be removed by end lining and resulting logging slash shall be removed.

No work shall be allowed for 24-hours following a rain accumulation of 1/4 inch during a preceding 24-hour period if the Park Service determines that unnecessary damage to the ground will occur. Restart of work after a rain event must be approved by Park Service staff.

Access into the units from roads shall only be allowed at specifically designated points, which will be determined before each cut.

PS 3.21 Tractor Treads

Tract-type tractor (s) with cleats may be used within the National Park boundary. Excessive ruts and earth dislocation will be back-bladed to the original contour.

PS 4.0 Fire Precautions and Control

PS 4.1 Fire Precautions

Specific fire precautionary measures shall be applicable during Purchaser's operations as described below in 4.2 and 4.3.

PS 4.2 Fire Fighting Equipment

When Park Service advises purchaser that local fire weather conditions are becoming critical, Purchaser shall keep with gasoline chain saws at all times a 2 1/2 lb. Dry chemical fire extinguisher. Each gasoline operated field tractor shall have mounted a 5 lb. Dry chemical fire extinguisher.

Park Service shall be reimbursed for any damage to or loss of fire fighting equipment furnished by Park Service which occurs on negligently caused fires or as a result of using equipment for unauthorized purposes.

PS 4.3 Truck, Tractor, and Power Saw Mufflers

Effective muffler systems installed by the manufacturer as standard equipment shall be maintained on exhaust of trucks, tractors, power saws and other internal combustion engines used in Purchaser's operations.

PS 4.4 Fire Control

Purchaser shall, both independently and in cooperation with Park Service, take all reasonable and practicable action to prevent and suppress any forest fire on the area. Purchaser's independent initial fire suppression action on such fires shall be immediate and shall include the use of all necessary manpower at Purchaser's disposal on the area.

PS 4.5 Purchaser's Reinforcement Obligation

Whenever an Operations Fire or Negligent Fire has not been suppressed by initial action and appreciable reinforcement strength is required, Park Service may require further actions by Purchaser until such fire is controlled and mopped up to a point of safety. Such actions may include any or all of the following as necessary to fight such fires:

- (a) To suspend any or all of Purchaser's operations, and
- (b) Release to Park Service any or all of Purchaser's manpower engaged in Purchaser's operation within the area. Any organized crew shall include Purchaser's supervisor, if any.

PS 4.6 Fire Suppression Costs

Purchaser's obligations for cost of fire suppression vary according to three classifications of fire as follows:

- (a) Operations Fire - An "Operations Fire" is a fire caused by Purchaser's operations other than a Negligent Fire.

Park Service shall perform fire suppression activities on Operations Fires. Purchaser agrees to reimburse Park Service for such cost for each Operations Fire.

- (b) Negligent Fire - A "Negligent Fire" is a fire caused by negligence of fault of Purchaser's operations, including but not limited to one caused by smoking persons engaged in Purchaser's operations during the course of their employment, or during rest or lunch periods; or if Purchaser's failure to comply with the requirements of PS 4.2, 4.3, and 4.4 results in a fire starting or permits a fire to spread. Damages and the cost of suppressing Negligent Fires shall be borne by Purchaser.
- (c) Other Fires on Sale Area - Park Service shall pay Purchaser, at fire fighting rates common in the area, for equipment or manpower furnished by Purchaser, or otherwise at the request of Park Service, on any fire on area other than an Operation Fire or Negligent Fire.

PS 4.7 State Law

Purchaser shall not be relieved by the terms of this contract of any liability to the United States for fire suppression costs recoverable in an action based on State Law. Amounts due Purchaser for fire fighting expenditures shall not be withheld pending settlement of any such claim or action based on State Law.

PS 4.8 Performance by Contractor

Where Purchaser's operations in connection with fire responsibilities are performed by employees, agents, contractors, subcontractors, their employees or agents, Purchaser's obligations shall be the same as if performance was by Purchaser.

PS 5.0 Other Conditions

PS 5.1 Title Passage

All right, title, and interest in and to any included timber shall remain in Park Service until it has been removed from the sale area, at which time title shall be vested in Purchaser. Title to any timber which has not been removed from sale are by Purchaser on or prior to "Termination Date", shall remain in Park Service.

PS 5.2 Period of Contract

All obligations of Purchaser shall be discharged no later than "Termination Date", unless it is adjusted or extended, excepting only those obligations for which Park Service has given written permission to delay performance upon written request of the Purchaser. Such written permission shall be considered a contract term adjustment for the purpose of Purchaser completing performance of obligations covered by such permission. All work will be completed within 1 year of contractor receiving a notice to proceed for each unit

PS 5.3 Contract Term Adjustment

"Contract Term Adjustment", means adjustment only as provided in PS 5.2 and for the two circumstances, the contract term shall be adjusted in writing to include additional calendar days equal to the actual time loss.

To qualify for such adjustment, Purchaser shall give written notice of the lost time 30-calendar days before termination date. Park Service shall make prompt written acknowledgment of such notice indicating its concurrence with number of days Park Service considers as qualifying for the adjustment.

- (a) Purchaser experiences delay in starting scheduled operations or interruptions in active operations either of which stops removal of included timber from area through curtailment in felling and bucking, yarding, skidding and loading, hauling or road construction, for 10 or more consecutive calendar days during the operations due to causes beyond Purchaser's control, including but not limited to acts of God, acts of the public enemy, acts of government, labor disputes, fires, insurrections or floods.
- (b) Purchaser accepts Park Service written request to interrupt or delay operations for any purpose other than suspension or suffers an interruption or delay of Purchaser's operations affecting skidding, yarding and loading because of fire emergency closure ordered by Park Service, and the total of such lost time is 10 or more calendar days.

PS 5.4 Contract Modification

The conditions of this sale are set forth in this contract. This contract can be modified only by written agreement of the parties. Contract modifications, and termination shall be in writing and may be made on behalf of Park Service only by the Park Service officer signing this contract or superior officer.

PS 5.5 Performance by Other Than Purchaser

The acquisition of assumption by another party under an agreement with Purchaser of any right or obligation of Purchaser under this contract shall be ineffective as to Park Service, until Park Service has been notified to such agreement and has given written approval by the Park Service officer who approved this contract, his successor or superior officer; and in no case shall such recognition or approval:

- (a) operate to relieve Purchaser of the responsibilities or liabilities he has assumed hereunder; or
- (b) be given unless such party:
 - (i) is acceptable to Park Service as a Purchaser of timber and assumes in writing all of the obligations to Park Service under the terms of this contract as to the uncompleted portion thereof; of
 - (ii) acquires the rights in trust as security and subject to such conditions as may be necessary for the protection of the public interests.

PS 5.6 Covenant Against Contingent Fees

Purchaser warrants that no person or agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial agencies maintained by Purchaser for the purpose of securing business. For breach or violation of this warranty, Park Service have the right to annul this contract without liability or to require Purchaser to pay, the full amount of such commission percentage, brokerage, or contingent fee.

PS 6.0 Performance and Settlement

PS 6.1 The successful bidder shall, together with payment of the purchase price, be required to post a Performance Bond to insure the faithful performance of the obligation of Purchaser under the contractor for sale of timber with regard to cutting and removal from the Park, including site clearance and cleanup, and all related functions to be performed by the purchaser under the contract for sale and removal.

Payment must be made within ten (10) days after notice of award. A check made payable to the "National Park Service" for the entire purchase price is required.

Performance bonds equaling \$15,000 must be paid by certified check or by an acceptable Security Bond (SF-25 Performance Bond) before commencement of work, . In the case of

multiple awards to the same bidder, as each unit is completed the bond may be transferred to the next unit, increasing it or decreasing it as necessary.

All bonds will be returned upon successful completion of the contract.

Any adjustment or extension of time for completion of this contract beyond six months may be granted only with the consent of surety on said Performance Bond or delivery of a new bond. Should the sureties on the bond delivered herewith, or any bond delivered hereafter in connection with this contract, become unsatisfactory to Park Service. Purchaser shall, within 15 calendar days or receipt of demand, furnish a new bond with surety satisfactory to Park Service.

PS 6.2 Disputes

Except as otherwise specifically provided, it is the intent of this contract that Purchaser and Park Service shall agree upon the interpretation and Performance of this contract. Upon failure to reach an agreement on a question of fact, the decision of law (16 U.S.C. 34911).

PS 6.3 Breach

In event Purchaser breaches any of the material provisions of this contract, Park Service shall give Purchaser notice of such breach and, allowing reasonable time to remedy of such breach and of Park Service's election to suspend, may give notice to suspend all or any part of Purchaser's operations. Such notice of breach and notice to suspend Purchaser's operation shall be written to human life or a threat of immediate and irreparable damage to National Park Service resources. Notwithstanding, such oral suspension notice may be given to Purchaser's work supervisor or, in his absence, to those performing the operation. An oral suspension notice shall be promptly followed by telephone notice and a written explanation from Park Service to Purchaser.

Immediately upon oral or written suspension, Park Service representative shall notify the Park Superintendent of the suspension and related circumstances. The Park Superintendent shall promptly review the suspension to determine if the suspension should be continued or lifted. Such suspension shall be lifted as early as conditions permit.

Upon receipt of oral or written notice of such breach, Purchaser shall remedy the breach as follows:

- (a) If remedying such breach requires on-the-ground action by Purchaser, Purchaser shall have 5 days to do so, except under emergency conditions when action should not be delayed to prevent major damage.
- (b) If such breach does not require on-the-ground action by Purchaser, such breach shall be remedied within 15 calendar days.

If such breach is not remedied within the above time limits, Park Service may terminate this contract. Notwithstanding the foregoing, in the event Purchaser designates or marks or causes to be designated or marked any timber on area, any such action shall constitute an irreparable

breach on the contract and Park Service may immediately terminate the contract by written notice to Purchaser of such breach. Such timber, if felled shall be paid for at twice the prevailing rate as set by the Virginia Bureau of Forestry.

PS 6.4 Failure to Cut

If Purchaser has failed to cut individual trees in the portions of the area cutover, Purchaser shall pay Park Service for cost of felling and removal or otherwise eliminating such uncut trees.

PS 6.5 Settlement

If obligations of Purchaser have not been fully discharged by termination date, the Performance Bond shall be retained to be applied toward unfulfilled obligations of Purchaser without prejudice to any other rights or remedies of Park Service. Such funds may be treated as cooperative deposits for uncompleted work 30 calendar days after receipt of written notice from Park Service to Purchaser of work to be done and Purchaser's failure to deny the obligation or to do the work.

PS 6.6 Contract Closure

The Park Service officer signing this contract, his successor or superior officer shall give appropriate written notice to Purchaser when Purchaser has complied with the terms on this contract.