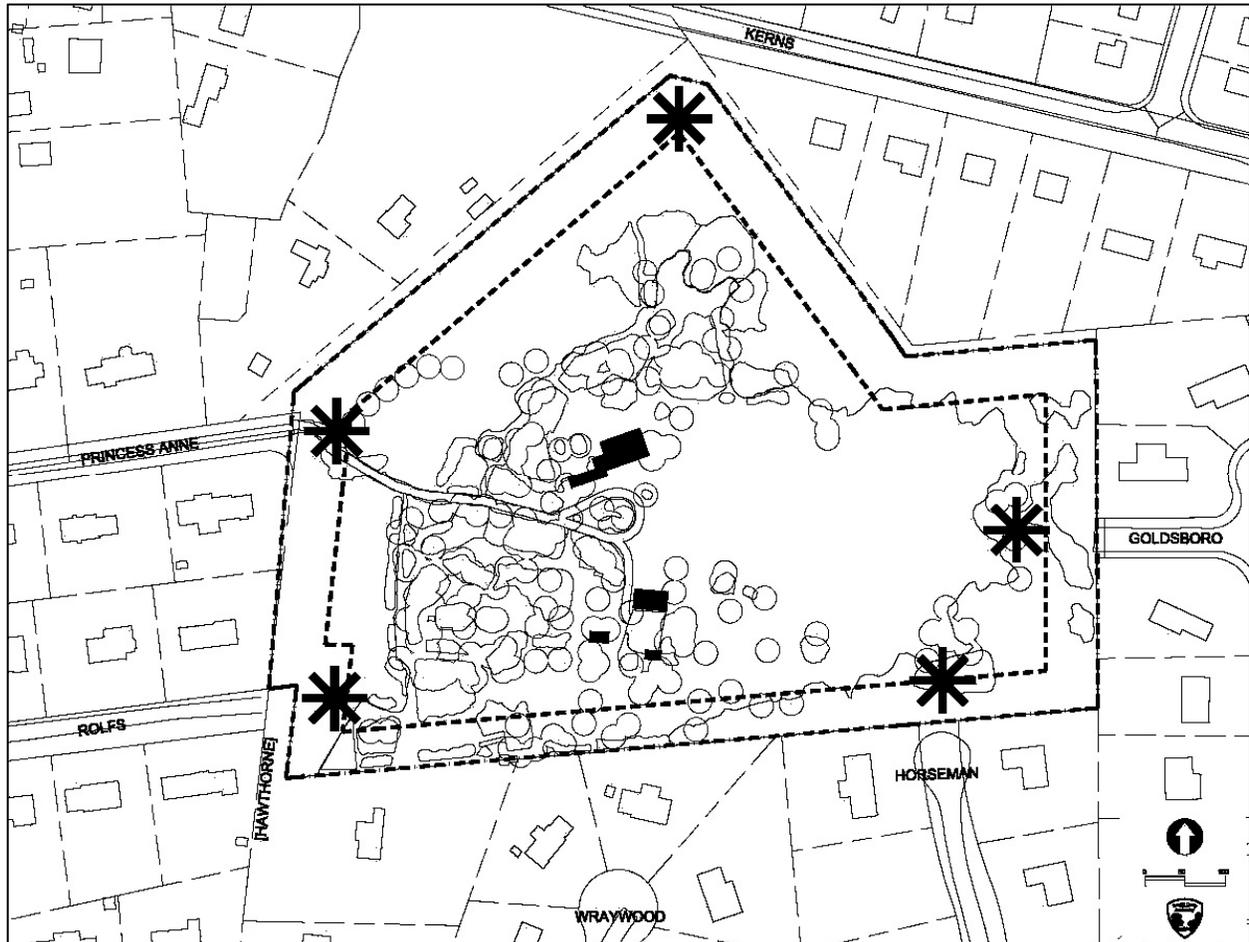


# White Horticultural Park Vehicle Access Report

Prepared by Fairfax County Park Authority, Planning & Development Division

March 6, 2006



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## Introduction

**NOTE:** The order of the alternatives discussed throughout this report is not intended to suggest preference.

The conversion of the White Horticultural Park from a private residence to a public park will require that safe vehicle access and on-site parking be provided to patrons. Based on proposed low-intensity park uses, it is anticipated that traffic volume generated will average up to 30 vehicles per day, or similar to what is generated by three residential households. During peak bloom times in the Spring, additional volume may occur, however, less traffic is anticipated during the winter months. Pedestrian access will also be planned and encouraged for neighboring residents.

The existing driveway is narrow, steep, and unstable, and cannot safely serve the park in its current condition. The property is adjacent to four other public streets where access is possible. Including the existing driveway at the end of Princess Anne Lane, five possible access alternatives have been explored as part of the Master Plan process, including Goldsboro Road, Horseman Lane, Kerns Road and Rolfs Road. Providing safe access to the park will require a modification of the existing entrance and driveway, or construction of a new entrance and driveway.

This report presents existing conditions, analysis, and impacts for each alternative. The public is invited to comment on the Vehicle Access Report at the master plan public hearing scheduled for May 2006.

In order to meet public safety requirements necessary to accommodate public use, the entrance and driveway will need to meet certain standards. Requirements and standards originate with Fairfax County, the Virginia Department of Transportation, and the Fairfax County Park Authority. Some of these elements will be constructed on-site and some may be required off-site. Detailed site engineering will take place after the Park Authority has possession of the property and the site design has been funded. No engineered site plans have been created as part of the master plan process, however, access requirements and standards are being generally addressed now to anticipate future park development and provide a basis for a cost estimate and alternative selection.

Below is a summary of the general site requirements and standards that provides the context for the analysis that follows in this document.

**Entrance and Driveway Geometry.** Generally, a park “entrance” consists of a 24’ wide concrete apron connecting to a 18’ to 24’ driveway. This width allows two-way traffic in and out of the park.

**Parking Lot.** The draft Master Plan recommends a parking lot with twenty-five (25) parking spaces to accommodate visitors and small group gatherings and programs. On-site parking will alleviate the need by daily visitors and meeting attendees to park on neighborhood streets.

**Road Classifications.** According to the Federal Highway Administration, travel ways may be characterized as follows: “arterial” provides the highest level of service at the greatest speed for the longest uninterrupted distance, with some degree of access control; “collector” provides a less highly developed level of service at a lower speed for shorter distances by collecting traffic from local roads and connecting them with arterials; and “local” consists of all roads not defined as arterials or collectors, with primary access to land with little or no through movement.

## Existing Conditions

It is important to consider existing conditions for each entrance alternatives in order to understand how changes might occur. This section includes photos of the existing conditions, a graphic showing proposed entrance, driveway and parking lot locations, road classification, and road conditions.



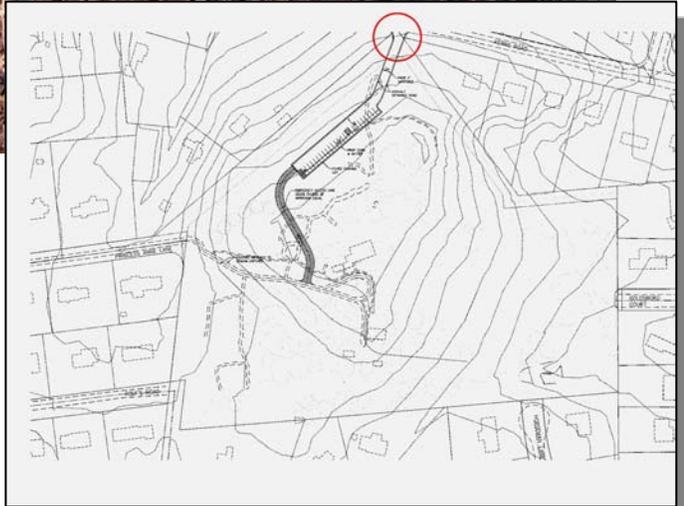
### Rolfs Lane

- Road classification is LOCAL.
- Road width varies from 15' to 19'.
- No curb and gutter.
- Shoulders are grass.
- No sidewalk.
- Terminates at private driveway.
- Average Daily Trips = 80



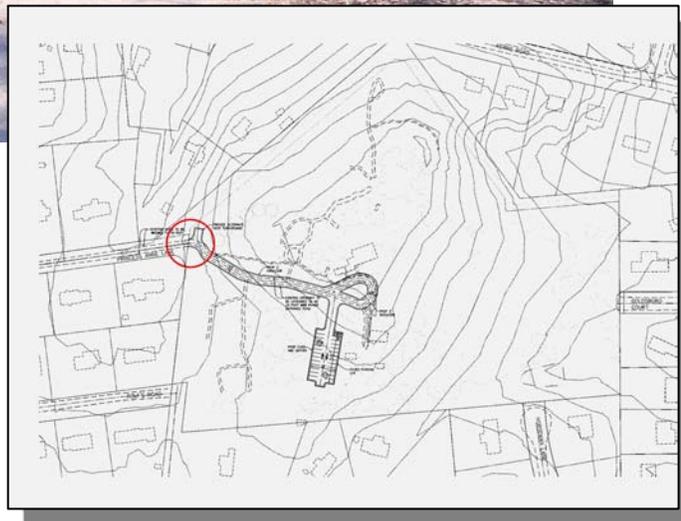
### Horseman Lane

- Road classification is LOCAL.
- Road is approximately 20' wide.
- No curb and gutter.
- Grass shoulders.
- No sidewalk.
- Terminates as a cul-de-sac.
- Abuts the southeast side of White property where a drainage ditch and the pond are located.
- Average Daily Trips = 80



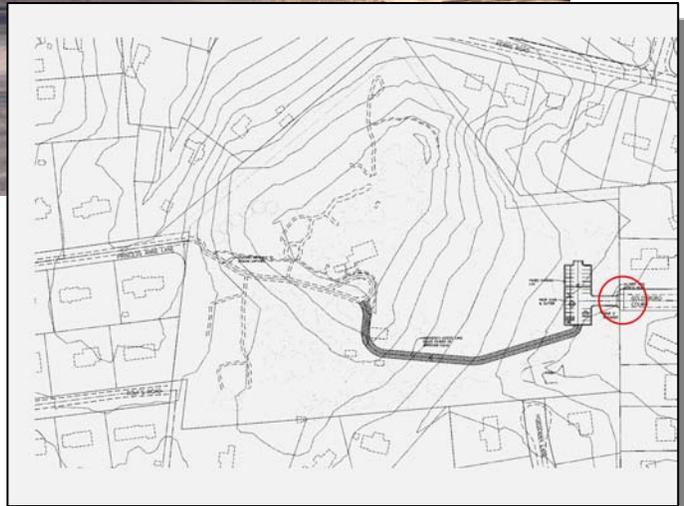
### **Kerns Road**

- Road classification is COLLECTOR. Serves as a collector between two arterials.
- Pavement is approximately 22' wide.
- Shoulders are grass.
- 4' wide asphalt trail along north side.
- Traffic calming devices (speed bumps) have been installed to slow traffic.
- Traffic lights at both ends at Sleepy Hollow and Annandale Roads.
- Average Daily Trips = 3,500



**Princess Anne Lane**

- Road classification is LOCAL.
- Pavement width varies from 11' to 14'.
- No curb and gutter.
- Shoulders are grass.
- No sidewalk.
- Terminates at the White site. The White existing driveway starts here.
- Average Daily Trips = 90



**Goldsboro Court**

- Road classification is LOCAL.
- Pavement is approximately 30' wide.
- Curb and gutter are present.
- Sidewalk along the north side only.
- Terminates at the eastern border of the White site.
- Stub street connection was abandoned in 1988 by an Order of Abandonment. A public hearing, authorized by the Board of Supervisors, is required to consider the reversal of the road abandonment.
- Average Daily Trips = 400

## Key Factors

The following key factors relate to consideration of the alternative entrance locations.

1. Transportation
2. Horticultural and natural resources
3. Emergency access and services compliance
4. ADA compliance
5. Land acquisition required
6. Utility connections
7. Estimated construction costs
8. Stormwater management
9. Achieving desired visitor experience

Impacts to surrounding neighborhoods are more subjective and are not addressed in this staff report. Rather, public comments provided at the public hearing and public input received throughout the public process will inform decision makers on potential neighborhood impacts from alternative entrance locations.

### 1. Transportation

The Park Authority requested VDOT examine the five alternative entrance locations and provide their assessment. The following is quoted directly from VDOT's response.

“In general, the traffic volumes predicted by the Park Authority for this park are very low and would not be expected to create any unusual transportation problems in the area. In fact the traffic volumes, except in the most extreme cases, would be less than that which would be expected if this property were to be developed to its currently allowed density. While many of the alternative entrances are serviced by older, narrow roadways, these are visually in good condition and would only require minor modifications, if any, unless problems were to develop in the future, particularly in regards to parking along the shoulders of the ditch section streets.

#### Princess Anne Street

The section nearest the park would have to be widened to 18', but the balance of the roadway would not appear to need additional work. It would appear that modifications to the existing culvert would need to be undertaken for this widening. If parking along the shoulders is a current or future concern, gravel shoulders may need to be installed or parking prohibited. It would appear that this could be accomplished with the removal of only a few, if any, trees. VDOT would request that a suitable turnaround be provided at the end of the roadway. This would normally require a cul-de-sac with a minimum 30' radius. However, as property acquisition and/or wetland

issues may become a concern, and traffic volumes are low, we would be willing to discuss alternative measures as indicated in the 2005 Subdivision Street Requirements (SSR).

#### **Rolfs Road**

This roadway would not appear to need additional work. If parking along the shoulders is a current or future concern, gravel shoulders may need to be installed or parking prohibited. It would appear that this could be accomplished with the removal of only a few, if any, trees. VDOT would request that a suitable turnaround be provided at the end of the roadway. This would normally require a cul-de-sac with a minimum 30' radius. However, as property acquisition may become a concern, we would be willing to discuss alternative measures as indicated in the 2005 Subdivision Street Requirements (SSR).

#### **Kerns Road**

The location of an entrance along Kerns Road would require land acquisition. The location would have to be carefully selected due to the limited sight distance available due to the vertical curve in the roadway in this area. With the projected traffic volume information provided a left turn lane would not be required, however, if a special event were to occur, the utilization of a police officer to direct traffic might be considered. It would not appear that a right turn lane would be needed, but an enlarged radius (50') would be helpful to maintain normal traffic operation.

Sight distance was not field measured, but it would appear that sufficient sight distance would be available if the entrance location was carefully selected, particularly at the low vehicle speeds achieved through traffic calming along the roadway. An analysis would be required to determine if sufficient stopping sight distance is provided at the selected entrance to avoid rear end collisions of vehicles waiting to make a left turn into the park.

#### **Goldsboro Road**

This roadway would not appear to need additional work. VDOT would request that a suitable turnaround be provided at the end of the roadway. This would normally require a cul-de-sac with a minimum 30' radius and additional ROW. If appropriate easements were provided to allow VDOT maintenance vehicles to enter the property and a suitable area provided for snow operations, consideration would be given to waiving this requirement.

#### **Horseman Road**

This roadway would not appear to need additional work. If parking along the shoulders is a current or future concern, gravel shoulders may need to be installed or parking prohibited. VDOT would request that permanent ROW be acquired for the existing cul-de-sac.

### **Pedestrian Access**

The lack of shoulders or sidewalks along Princess Anne, Rolfs, or Horseman would make these unsuitable locations for pedestrian access points to the park. If sidewalks were to be constructed, VDOT would not maintain them on these ditch section streets. Installation of sidewalks could require removal of existing trees and/or create greater impacts on the existing residential properties.

Unfortunately the existing pedestrian trail on Kerns Road is located on the opposite side of the street. Given the limited sight distances at this entrance location, this would also require careful consideration as a pedestrian access.

The existing sidewalks along Goldsboro would make this the best candidate for pedestrian access to the park.

### **Traffic Concerns**

We do not have sufficient data to examine the magnitude of any existing cut through traffic in this area. However, given the low trip generation, and off-peak hours of operations, it would not appear that the park would exacerbate any current problem.

Again, given low trip generation and hour of operations, we cannot foresee any appreciable problem with school operations or other traffic activity in the general area. This is especially so given the assumption that any significant events at the park would occur on weekends or other off-peak hours.”<sup>1</sup>

## **2. Horticultural and Natural Resources**

This park site was offered to, and acquired by, the Park Authority with the condition that the horticultural and natural resources on the site would be protected. The Park Authority is entrusted with the stewardship of the site and therefore this item is a high priority. A horticultural landscape plan was prepared by John Milner and Associates (JMA) as part of the Master Plan. This plan includes an inventory of horticultural and natural resources and provides a recommended treatment plan to protect these resources. The plan also examines the potential impacts of each alternative vehicle access location on horticultural and natural features. JMA’s analysis and recommendation is as follows:

“Each entry and associated parking area carries with it potential impacts to horticultural and natural resources within the White property. These options and their associated potential impacts to on-site resources are as follows:

**Kerns Road Access.** Access from Kerns Road would result in the greatest impact to natural resources, as it would require the greatest amount of woodland removal. The field inventory identified the North Woodlands as having the highest quality woodland vegetation, both in terms of its condition and habitat potential (largest intact patch with diversity of species and vertical stratification and only a minor presence of invasive exotics). This woodland also provides a buffer between the traffic on Kerns Road and nearby residential development and the Upper Garden, which is considered to be the centerpiece of the horticultural park. The

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<sup>1</sup> December 15, 2005, letter from Paul Kraucunas (VDOT) to Lynn Tadlock, responding to 12/01/05 Tadlock letter.

character of the Upper Garden is most attractive in the northern quadrant of the property, as it has the highest quality plantings and landscape features in the park.

The wooded area between the Upper Garden and Kerns Road provides much of the needed shade for this garden. A loss of trees, and therefore shade, would be potentially damaging to the shade gardens present in this area. Grading and installations of walkway and emergency vehicle connections between the parking area and visitor orientation zone may require crossing parts of the Upper Garden that would produce significant impacts to the plant, shrub and tree root zones, the established landscape design and visual aesthetics. A parking area in this vicinity will also add noise and detract from the quiet and contemplative nature of the nearby garden.

**Goldsboro Access.** Access from Goldsboro Court would result in low impacts to the site's horticultural resources. Natural resources would also receive little to no detrimental impact, as the western woodland thins out in this area of the park. However, parking in this location could significantly impact the open views from the house overlooking the meadow, which are key character-defining features of the park. Substantial screening would be necessary to mitigate this intrusion. If this alternative is chosen, extending the forest edge further out into the meadow should be considered in order to interplant this area with evergreen shrubs and make planting buffers appear to better blend in with the character of the landscape. While emergency vehicle access between the parking area and the structures on the site can be accommodated by a grasscrete connection or similar pervious pavement material, it may impact the visual cohesiveness of the meadow if this area is planted in tall grasses or wildflowers. Parking in this area would also require the longest ADA compliant path between the parking area and the visitor orientation area.

**Existing Driveway Access from Princess Anne Lane.** If the existing entry drive were improved to provide vehicle or emergency access into the site, it would require regrading and widening of the existing 12-foot driveway to a minimum of 18 feet, with grass shoulders on either side. Widening of this road would result in moderate impacts to the existing natural and horticultural resources located along it, as several of the mature trees—many measuring over 25 inches in diameter—would require removal. Several shrub beds along either side of the existing entry drive containing mature azaleas and rhododendrons would also be impacted. Slopes over 15% located at the western end of the entry drive would also require regrading and result in the removal of the existing stone retaining wall and many of the large trees located in this vicinity.

Although not specified in the draft CDP, an adequate emergency vehicle turnaround area may be required and could be accommodated on-site in the existing driveway loop near the residence with minor improvements. This improvement would require regrading the area south of the drive to accommodate the enlarged turning radius, and resurfacing it with a firm and stable surface such as gravel or grasscrete. A few horticultural resources south of the drive would be impacted by this modification, including a small shrub bed containing mostly boxwoods, a few rhododendrons, two small American holly trees, and two southern magnolias. A large post oak and black walnut tree, as well as several boxwood shrubs located in the center of the existing drive may also be impacted by these improvements.

Locating the visitor parking area in the vicinity of the barn would result in little impact to the natural and horticultural resources on the site. There are no significant shrubs located here, and the two garden beds found in this area are infested with invasive species (bush honeysuckle, English ivy, and privet). Most of the trees located to the east and south of the

barn are fruit and nut trees (i.e., black walnut, pecan, Chinese chestnut) and reflect the historic utilitarian nature of this area. If parking were located in this area, it is recommended that it be placed further to the south in order to maintain a small maintenance area south of the barn, and also buffer this historic structure from the visual and physical impacts of the parking lot. Locating the parking lot further to the south of the barn would also mitigate impacts to potential archeological resources surrounding this historic structure. As the existing slope of the land between the proposed parking area and the visitor orientation zone averages 1:12, the accessible trail will need to deviate from the road edge to achieve a lesser slope and meet ADAAG specifications. A planted buffer zone should be located north of the lot to mitigate views from the visitor orientation zone.

**Rolfs Road Access.** An entrance at Rolfs Road would result in moderate impact to natural resources. While the West Woodland is smaller in size than the North Woodland, there are many large trees located in the vicinity of the proposed access road that would require removal. It would also impact a few shrub beds located in the Lower Garden. One of these shrub beds contains several azaleas and rhododendrons, while the other contains only grapevine, vinca, and bush honeysuckle. The character of this area of the Lower Garden is not as cohesive or well-defined as the Upper Garden because of the visual intrusions attributed to nearby residential development.

Locating the visitor parking area within the Lower Garden would result in significant impacts to the park's horticultural resources. Assuming that the parking area would occupy the land already disturbed by the demolished house, direct impacts would include required removal of a small shrub bed containing several rose bushes, spicebush, and hazelnut shrubs, as well as removal of shrubby vegetation surrounding the former house. This includes several spicebush, taxus, euonymus, and honeysuckle shrubs, as well as a few azaleas in poor condition. There are several large trees in good condition that would likely require removal, including a Norway maple, black walnut, and two pecans. While these horticultural resources are not necessarily high in ornamental value, locating parking here would add an intrusive element to the Lower Garden and alter the overall character of this space. Removal of the tree canopy on the eastern edge would also open up this space and diminish the feeling of an "outdoor room." A loss of trees within the Lower Garden would also cause a loss of shade and be potentially damaging to the shade gardens present in this area.

**Horseman Drive Access.** If access were provided from Horseman Drive, it would result in significant impacts to the spring-fed pond located in the southeast corner of the park, and likely necessitate its removal. This pond provides local wildlife a source of water and serves an ecological function. Access here would also require removal of several trees located along the property line and reduce buffering to adjacent residents.

### **Recommended Alternatives**

Based upon the likely impacts to the horticultural, ecological, and overall landscape aesthetic, Alternatives Two [Goldsboro] and Three [Princess Anne] are recommended for further consideration as they will result in the least amount of damage to site resources. Alternative Three [Princess Anne], improvement of the existing driveway, is only recommended if the parking area can be situated further to the south and east of the barn to better buffer this historic structure and be screened from view of the house with additional plantings. Likewise, Alternative Two [Goldsboro] is only recommended if the parking area can be adequately screened from view of the house without detracting from the existing character of the site. Alternatives One [Kerns], Four [Rolfs], and Five [Horseman] result in significant impacts to

the site's horticultural and natural resources and therefore are not recommended for implementation."<sup>2</sup>

### **3. Emergency Access and Services Compliance**

The Fairfax County Public Facilities Manual Section 9, Chapter 2 "Fire Marshal Requirements" sets out the requirements and standards that will allow fire trucks, ambulances, and other emergency vehicles to serve the site.

Compliance with emergency access requirements and standards can be met by each of the five potential access points.

Note, however, that because proposed parking lots associated with either Kerns Road or Goldsboro Court will be greater than 100' from the residence, a fire lane will have to be constructed from the parking lot to the residence. The impact of such a roadway may be minimized through the use of special pavers such as "Grasscrete."

For all entrances, the driveway surface must be "all-weather" and may be gravel, asphalt, or other pavement. As noted, "pervious" pavers, such as "Grasscrete," are acceptable. The driveway must be at least 18' wide to safely and efficiently accommodate emergency vehicles.

A chart describing emergency access and services compliance for each of the five alternatives follows on the next page.

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<sup>2</sup> John C. and Margaret K. White Horticultural Park Landscape Management Plan, prepared for Fairfax County Park Authority by John Milner & Associates, Charlottesville, Virginia, January 2006.

Requirements <sup>3</sup>		Goldsboro	Horseman	Kerns	P. Anne	Rolfs
<b>Distance from structure</b>	<p>100.0', maximum.</p> <p>An emergency vehicle must be able to get within 100' of the main or principal entrance of the residence.</p>	<p>Proposed driveway can meet access distance requirements through the creation of a new access lane at edge of field from parking lot to provide access to structures.</p> <p>Grasscrete pavers are recommended for the access lane.</p>	<p>Proposed driveway location can accommodate emergency access distance to structures.</p>	<p>Proposed driveway can meet access distance requirement through the creation of a new access lane through woodlands from parking lot to provide access to structures.</p> <p>Grasscrete pavers are recommended for the access lane.</p>	<p>Existing driveway meets access distance requirement, however will need to be modified to at least 18' width and less than 6% slope with a stable surface.</p>	<p>Proposed driveway can meet access distance requirement. Emergency vehicles can access existing drive, but drive will have to be modified to 18' width.</p>
<b>Radius of driveway loop or other turnaround)</b>	<p>40'</p> <p>The driveway loop or other turnaround must be capable of accommodating the largest emergency vehicles.</p>	<p>Proposed driveway compliant.</p>	<p>Proposed driveway compliant.</p>	<p>Proposed driveway compliant.</p>	<p>Proposed driveway compliant. Existing conditions must be modified. Work will require care to protect plants.</p>	<p>Proposed driveway compliant.</p>
<b>Slope</b>	<p>6%</p> <p>To ensure that an emergency vehicle may safely and efficiently reach its destination, any slopes over which the driveway passes may be no more than 6%.</p>	<p>Compliant</p> <p>The topography is relatively flat here.</p>	<p>Compliant</p> <p>The topography is relatively flat here.</p>	<p>Non-compliant</p> <p>The slope may exceed 6% in some areas and will require grading.</p>	<p>Non-compliant</p> <p>May require a retaining wall at the entrance because of the need to reduce the existing slope from approximately 10% to 6%.</p>	<p>Compliant</p> <p>The topography is relatively flat here.</p>
<b>Turnaround</b>	<p>Required at street terminus.</p> <p>A public, non-through driveway must provide adequate space for turning emergency apparatus around.</p>	<p>Can be provided on site if street connection is provided.</p>	<p>Adequate cul de sac currently exists</p>	<p>N/A, no street terminus</p>	<p>Can be provided on site and within right of way.</p>	<p>Can be provided on site if street connection is acquired from private owner.</p>

<sup>3</sup> Fairfax County Public Facilities Manual Section 9, Chapter 2 "Fire Marshal Requirements."

**4. ADA Compliance**

Any area of the site open to the public must be fully accessible to the extent feasible under site constraints. With respect to the residence, accessible restrooms, railings and ramps may be required. With respect to walkways and trails, surfaces must be “firm and stable.”<sup>4</sup> Woodland trails that do not access key features (e.g., parking areas, kiosk, house, gardens, demonstration areas), and are intended to be more rugged in character, will likely be designated as “backcountry” trails and as such do not need to be ADA compliant. The residence and pathways to key features may readily be made ADA compliant. ADA compliance difficulty lies with access from the parking lot to the core of the site located near the residence.

<b>Goldsboro</b>	<b>Horseman</b>	<b>Kerns</b>	<b>Princess Anne</b>	<b>Rolfs</b>
Parking lot would be substantial distance from residence.	Parking lot would be near barn.	Parking lot would be substantial distance from residence.	Parking lot would be near barn.	Parking lot would be near barn.

**5. Land Acquisition Required**

As an authority, the State has granted to the Park Authority the ability to acquire land through a variety of means, such as fee simple purchase, easement or eminent domain. Land acquisition matters are carefully considered and decided by the Park Authority Board. Three of the alternative entrances (Kerns, Rolfs, and Goldsboro) will require land acquisition. The chart below notes whether land must be acquired to accommodate the entrance.

<b>Goldsboro</b>	<b>Horseman</b>	<b>Kerns</b>	<b>Princess Anne</b>	<b>Rolfs</b>
<p>YES</p> <p>A portion of the road right of way (ROW) connecting Goldsboro Court with the park was formally abandoned by the Board of Supervisors (BOS) in 1988 and title to this strip of land is held by the BOS. Providing an entrance in this location requires a formal request from the Park Authority Board to the BOS to authorize a public hearing to consider the reuse of the road for public street purposes. The BOS must choose whether to grant the Park Authority's request and take appropriate actions before this alternative can be used.</p>	<p>NO</p> <p>The ROW abuts the park. There is sufficient ROW to construct the entrance.</p>	<p>YES</p> <p>To ensure proper entrance width, and turn lanes, as needed, a portion of abutting private property will have to be acquired.</p> <p>Estimated land to be obtained = 200 sq. ft.</p>	<p>NO</p> <p>The ROW abuts the park. There is sufficient ROW to construct the necessary cul-de-sac.</p>	<p>YES</p> <p>Rolfs Road does not abut the site and thus will require acquisition of private property that is currently used as a private driveway and replacement of the driveway in order to accommodate an entrance in this location.</p> <p>Estimated land to be obtained = 190 sq. ft</p>

<sup>4</sup> Firmness means the surface does not give way significantly under foot; stability means surfaces do not shift from side-to-side or when turning. Source: National Center on Accessibility.

**6. Utilities**

The site is currently served by well and septic systems. Public water and sewer service connections are required for public use on the site. Water and sewer connections are available from all surrounding streets and should be connected at the time of site development. To avoid impacts to horticultural resources, utilities may be collocated with the entrance driveway. It is not anticipated that the existing electric and telephone power lines will need modification. Separate electric service lines serve the residence and the barn.

The chart below assesses the distance to connections from the five potential access locations.<sup>5</sup>

	<b>Goldsboro</b>	<b>Horseman</b>	<b>Kerns</b>	<b>Princess Anne</b>	<b>Rolfs</b>
<b>Sewer</b>	900' to residence.	800' to residence.	680' to residence.	420' to residence.	670 to residence.
<b>Water</b>	630' to residence.	700' to residence. Will require careful planning to protect natural resources.	560' to residence. Will require demolition and reconstruction of existing roadway.  Slope in area will result in need for substantial cut.	500' to residence.	710' to residence.

**7. Estimated Construction Costs**

Bowman Consulting Group (BCG) performed a site investigation of the White Horticultural Park to evaluate five alternate entrance locations and parking areas. BCG also reviewed available information including correspondence from the VDOT, and county mapping and regulations. Particular weight was given to the December 15, 2005 correspondence from Paul Kraucunas of VDOT. BCG prepared sketch plans of the various alternatives, as shown in the Existing Conditions section, along with engineer’s cost estimates. The engineer’s estimates reflect the conceptual stage of the development plans.

**“Princess Anne Entrance.** The Princess Anne access location involves widening of the existing entrance and improvement of Princess Anne Street. The Princess Anne Street improvements were estimated to consist of 330 lineal feet of widening. An alternate turn-around is proposed, with on-site dedication, in accordance with VDOT street standards and widening and paving of the existing driveway. This alternative does not appear to require any additional off-site dedication or off-site easement acquisition. No significant clearing or grading would be required to construct this alternative.

**Rolfs Street Entrance.** The Rolfs Street entrance will require dedication of right-of-way from the adjacent property to allow construction of the street extension and alternate turn-around in accordance with VDOT street standards. Clearing and grading through the on-site woods will be required to reach the parking lot area.

**Horseman Lane Entrance.** The Horseman Lane entrance location would be onto an existing cul-de-sac. According to VDOT, the cul-de-sac is contained within temporary easements and they would request permanent dedication of right-of-way from the adjacent properties. It has

<sup>5</sup> Measurements based upon Fairfax County GIS data. Tolerance = +/- 8’.

been BCG’s experience that if the adjacent owner’s refuse to dedicate right-of-way, a new entrance would still be allowed if it can be demonstrated a good-faith effort to acquire the right-of-way has been made. An entrance in this location will require filling and impact to the existing farm pond located on-site. Without detailed topographic information or design detail, it is not possible to determine the area of impact, but it appears permits from the Corps of Engineers and DEQ [Department of Environmental Quality] would be required.

**Goldsboro Street Entrance.** There are no significant physical constraints to construction of the proposed entrance and parking area in this location. The proposed parking lot area is level and clear. This location also will require a significant distance of emergency access roadway across the existing field to reach the existing residence. No research was done into the status of the abandonment of the Goldsboro Street stub.

**Kerns Road Entrance.** This location has limited available entrance sight distance. Speed bumps along the existing roadway reduce the travel speed of vehicles and may justify a waiver of entrance sight distance if the entrance cannot be located to yield the specified distance. It appears dedication of an access easement or grading easements from adjacent properties will be required to construct the entrance. This location will require a significant distance of emergency access roadway to reach the existing house. The roadway will require clearing and grading of significant natural wooded and sloped areas.”<sup>6</sup>

Cost estimates for each alternative are as follows. Figures have been rounded to the nearest \$1,000.

Goldsboro	Horseman	Kerns	Princess Anne	Rolfs
\$394,000	\$418,000	\$543,000*	\$730,000	\$537,000

- \* The figure for Kerns includes \$2,000 for land acquisition.
- \*\* The figure for Rolfs includes \$10,000 for land acquisition.

**8. Storm Water Management**

Any increase in stormwater runoff and/or outfall (e.g., as a result of improvements such as a paved driveway and parking lot) must be detained on site. Low impact development techniques, such as bioretention, rain gardens and specialized planting areas are highly appropriate techniques for this site.

Goldsboro	Horseman	Kerns	Princess Anne	Rolfs
Stormwater may be sheet drained to surrounding utilitarian area and supplemented by sumps.	The pond captures runoff from the meadow and partial filling of pond to accommodate drive will require alternative SWM feature.	Parking lot will require SWM to prevent sheeting onto neighboring lot.	Stormwater may be sheet drained to surrounding utilitarian area and supplemented by sumps. Suggests potential for environmental interpretation, e.g., rain harvesting demonstration area.	Stormwater may be sheet drained to surrounding utilitarian area and supplemented by sumps. Suggests potential for rain harvesting.

<sup>6</sup> February 6, 2006, report by Bowman Consulting Group. Costs for any plant relocation have not been included in these estimates.

**9. Achieving Desired Visitor Experience**

A visitor to the White Horticultural Park will enjoy the park setting and learn about its horticultural, natural, and historic resources from interpretive panels and public programs. The most common visit will be a self-directed stroll among the natural and horticultural resources. A unique part of the experience at White Horticultural Park will be that of the transition from the more formal horticultural gardens to the naturalistic woodlands.

Some visitors may be interested in participating in small-scale tours, programs, and special events. However, the program and subsequent design of the site should accommodate all types of users by incorporating amenities such as trails, benches, and interpretive signage that will allow those not participating in planned activities to experience and enjoy the site.

The design of the entrance approach and first impression of the site is an important factor in creating a quality and enjoyable visitor experience. Convenience and ease of access is also an important consideration. Therefore, the relationship of the vehicle access elements (entrance, driveway and parking lot) to the core area of the site near the residence are considered.

The chart below assesses the experiential impact on the desired visitor experience as the site is entered and traversed to reach the core area.

Goldsboro	Horseman	Kerns	Princess Anne	Rolfs
<p>The visitor would be approaching the house and gardens from below, with a view across the field, looking up towards the house.</p> <p>The parking lot may be visible from the garden and core areas.</p> <p>This entrance includes a long walk from the parking lot to the core of the site.</p>	<p>Traveling over the pond and seeing the gardens from across the meadow creates a positive arrival sequence.</p>	<p>The visitor would approach from behind the house and gardens, essentially entering the site through the back door.</p>	<p>The house and gardens were originally developed to be experienced from this approach. This approach preserves historical accuracy.</p>	<p>The visitor would approach the core by first passing by the lower garden area to one side and then proceeding into the site's utilitarian zone.</p>

## Staff Recommendation

Of the five alternatives, staff recommends three alternatives be eliminated as follows:

**Rolfs Road.** The required land acquisition across a private driveway and the need to remove large trees in the woodland area suggest the elimination of this alternative.

**Horseman Lane.** Damage to the pond and wetlands at this location render this alternative undesirable and less feasible.

**Kerns Road.** The need to remove large trees in an area considered the best quality woodlands and shrubs in the upper garden area argue against this alternative. The area's slopes and the parking lot's distance from the site's core pose challenges to emergency and ADA access. An entrance behind the site's core area (the house and environs) does not lend itself to the best quality visitor experience. Additional land required at this location may be difficult and expensive to acquire.

Staff recommends consideration by the public and the Park Authority Board of the two remaining alternatives, **Goldsboro Court** and **Princess Anne Lane**. Both alternatives have positives and negatives as outlined in this report, but offer feasible access solutions and should be publicly debated. The order of the alternatives shown below is not intended to suggest preference; the alternatives are listed in alphabetical order.

**Goldsboro Court.** An entrance at this location will have less of a destructive impact on horticultural and natural resources, as there are only scattered immature trees here and no formal gardens. The proposed parking lot location minimizes impacts to the meadow, pond and viewshed, but is a far distance from the site's core. This proposed location poses a challenge to ADA access, and the need for an emergency access lane proposed along the edge of the meadow, near the pond, may compromise views. The cost estimate is the lowest for this alternative. If this alternative is selected, it will require a formal request from the Park Authority Board to use the BOS owned property for public street purposes. If the Board of Supervisors grants this request, a public hearing will need to be authorized by the Board of Supervisors and held to consider reuse of the road for public street purposes.

**Princess Anne Lane.** An entrance at this location will have less of a destructive impact on horticultural and natural resources, as only a few large trees will need to be removed, and shrubs can be relocated. The grounds were historically designed to be approached from this entrance and continued access using this alternative creates a high quality visitor experience. Emergency and ADA access requirements may be readily met. The cost estimate for entrance-related improvements is the highest for this alternative. No land acquisition will be required for this alternative.