



There has been a steady decline in the number of parkways designed and constructed since the 1930's. Parkway originally served as a form of recreation for the privileged few. Today's increased economic prosperity has resulted in an evolution in parkway usage. Parkway have outlived their function as a means of recreation, and now serve as a route to recreational facilities. Parkway provide relief to clogged urban arteries while simultaneously providing the motorist with an aesthetically pleasing entrance to recreational facilities. If indeed the elemental use of parkways has so drastically changed, questions of how and why beg to be answered. How has parkway design and construction changed from the early twentieth century to today in terms of views, alignment, vegetation, natural and cultural features, and parkway details. How does parkway design and construction differentiate itself from that of typical roadways; and how does this information contribute to the future design and construction of successful parkways in the landscape? In addition, why can parkways no longer serve the same purpose that they did in the early twentieth century? To fully interpret the changes that have occurred in parkway design, construction, and usage, a parkway must first be defined.

*"It is a wonder way over which the tourist will ride comfortably in his car while he is stirred by a view as exhilarating as the aviator, may see from the plane."*

*-U.S. Senator Harry F. Byrd*

*"A broad thoroughfare with a dividing strip or side strips planted with grass, trees, etc."*

*-Webster's Dictionary*

The complete definition of a parkway lies in examining the characteristics that comprise a parkway and understanding how those characteristics differentiate a parkway from a typical road. The first of these characteristics is the concept of views. Views are

important in two ways. First, the view from the landscape to the motorway is important in establishing aesthetically pleasing views of parkways. Secondly, the view of the landscape from a parkway is imperative in creating a motorway that people want to use. Views of the parkway itself are very important in the overall achievement of a successful parkway. This can be seen in the Barden State Parkway. There, service stations were designed along the route with greater setbacks than normal, and were sited within an enclave of existing vegetation to visually separate them from the roadway. This provided an unobstructed view of the parkway from the surrounding landscape (Hanes and Connors 1953, 42). In metropolitan Washington, D.C., the George Washington Memorial Parkway serves as a backdrop to the monuments and memorials located in the National Mall. In this case, the views from the National Mall are not to the parkway itself. Instead, the parkway acts as a pastoral backdrop to provide a pleasing view of the monuments and memorials in the foreground. Views to the landscape from the parkway are also vital to the successful design and implementation of a parkway. The George Washington Memorial Parkway and the Blue Ridge Parkway both use views very successfully, but in distinctive manners.

The George Washington Memorial Parkway aligns itself to views of Washington, D.C. as a means of visual introduction to the monuments and memorials of the city. Stunning views to and from the city from the parkway are created by careful placement of vegetation around the motorway. As one drives north along the George Washington Memorial Parkway, various views are presented of the city, none more striking than one of the first views as seen from Old Town Alexandria (Figure 1.1). Here, not only are views framed by the vegetation, but the horizontal and vertical alignments of the parkway were precisely calculated to align views to the Washington Monument. Along the George Washington Memorial Parkway there is a constant revealing and concealing of monuments and memorials in the city across the Potomac River.

While the George Washington Memorial Parkway introduces the motorist to many sights that are accessible in and around Washington, D.C., the Blue Ridge Parkway uses a different approach to views of the landscape. As it winds through the Appalachian Mountains, the Blue Ridge Parkway introduces the motorist to the rural Appalachian landscape and culture. This landscape is beautifully presented to the driver; however, much of it is only visually accessible to the motorist. The Blue Ridge Parkway uses the tremendous elevation changes present throughout the region to strengthen the views of the landscape. This is accomplished by alternating the motorists' vantage point to the surrounding landscape. At some points the motorist is in the valley looking upwards

towards the mountain tops, while at other points along the parkway, the viewer is atop of the mountains looking down into the valleys, and at still other points along the parkway, the viewer is between the valley and the mountain top with views both up and down. While it can be seen that views play a crucial role in parkway design, the vast majority of roadways do not rely or often consider views during their design process. This is evident in the fact that highways typically connect two points in a straight line, with little regard for the landscape they traverse.

The concept of views is closely related to the second characteristic of parkways, horizontal and vertical alignment. The alignment of a parkway, both horizontally and vertically, is the key to creating views. Some parkways utilize the change in vertical alignment to provide breathtaking views to the surrounding landscape that cannot be seen from any other vantage point. This is seen in the Blue Ridge Parkway which connects the Shenandoah and Great Smokey Mountains National Parks. In addition to creating breathtaking views, horizontal and vertical alignment is an aspect of parkway design and construction that is vitally important to create a safe traverse through the landscape for the motorist. Poor horizontal and vertical alignment has been shown to cause driver confusion resulting in accidents. Parkway construction works with the ebb and flow of the landscape, where highway and roadway design concentrate solely on providing a pathway without accounting for aesthetics.

Generally, parkways are landscaped with vegetation in a manner that distinguishes themselves from all other roads. The designed vegetation along the Blue Ridge Parkway was implemented so that it could not be discerned from the existing vegetation. When the parkway was cut into the landscape, much of the vegetation that was removed was set aside, and later replanted in a similar spatial arrangement. (O'Connell and Myers 2002, 70). Vegetation along parkways is instrumental as it creates many views to the



*Figure 1.1 View from Old Town Alexandria on the George Washington Memorial Parkway to city.*

landscape by opening corridors in some locations, and closing corridors to other less desirable sights. In addition, vegetation along a parkway is designed to radiate a naturalistic feeling. This natural feeling is the product of planting trees, shrubs, groundcovers, and bulbs in a non-geometrical manner imitating natural patterns. In contrast, many of the current planting designs that are produced for streetscapes place trees between twenty and thirty feet on center, and shrubs between five and ten feet on center. While this geometrical design provides easy installation of the plant material, it is by no means a design style that occurs in nature.

Natural and cultural features alongside, or incorporated as part of a parkway, also differentiate parkways from typical roads. The George Washington Memorial Parkway is the main motorway that connects Mount Vernon, the residence of George Washington, with Washington, D.C., the city that bares his name. The George Washington Memorial Parkway not only serves as a route of connection between natural and cultural features, but also as the sole access to natural features present in the context of the parkway including Glen Echo Park, Great Falls Park, and the Lyndon Baines Johnson Memorial Grove on the Potomac. In contrast, a typical roadway is generally the shortest route between two points, connecting neither naturally nor culturally significant features.

Parkway road details including signage, curbs, overpasses, and other site furniture are typically unique to the parkway for which they have been designed. These road details have always been very important to differentiate a parkway from other typical roads and highways. Railings that were specially designed for the Merritt Parkway in New York State are repeated throughout the parkway. Curb profiles specifically designed for the George Washington Memorial Parkway are seen only throughout the parkway thereby distinguishing themselves from the myriad of aesthetically pleasing curbs that are present in the Capital City. In fact, the Connecticut Trust and the Connecticut Department of Transportation carefully studied parkway road details along the Merritt Parkway including railing and bridge overpasses. Through their joint effort to preserve the parkway's historic character, they were awarded a 1995 National Preservation Honor Award (Connecticut Preservation News 1995, 1,3). The findings of their report will be used in future parkway designs to incorporate site-specific details throughout the projects. While details play a large role in parkway design, the same cannot be said for typical roadway design. In typical roadway projects, the site furniture, signage, curbs, and overpasses are usually designed as the lowest common denominator, that is, they follow strict zoning ordinances and local code. This produces 'cookie-cutter' designs that do not take in to account the landscape on which they are routed.

When all of these characteristics are combined, a ‘roadway,’ unlike conventional routes, is produced. A ‘roadway’ that is strongly connected in design and character to the natural landscape through which it courses. This strong connection between the landscape and the motorway transforms an ‘ordinary roadway’ into a vibrant and successful parkway. Wilbur Simonson once said that, “the complete highway is the product of the combination of good engineering design and good landscape design applied in balanced agreement” (Hanes and Conners 1953, 10).

From these examples, it is evident that parkway design and construction is dramatically different from that of typical roadways. With this difference in construction comes inherent differences in usage. Typical roadways serve to connect the motorist by creating the shortest route between two points. While this is straightforward, the usage of parkways presents a more convoluted history.

Modern technology aside, parkway design and construction in the 1930’s was significantly different than it is today. The historic boom in parkway construction and public works projects occurred in the wake of the stock market crash as an effort to decrease the number of unemployed workers. After the fall of the stock market in 1929, President Franklin Delano Roosevelt instituted a number of governmental organizations that would take advantage of the seemingly unending supply of highly skilled workers, while concurrently increasing and strengthening the federal infrastructure. It was these organizations that were commissioned with the construction of parkways, many of which are still in use today. In addition to extraordinary skill, the people who built these parkways also exhibited a great deal of pride in their creations as they were not only enhancing the growth of the United States, but they were also able to provide financial support for their families. While these skilled laborers toiled away, the few not affected by the events of the time, were living a comfortable life. It was for the recreational enjoyment of these privileged that parkways were built. Automobiles were expensive extravagances that few could afford. These people exemplified the American spirit of exploration and were able to traverse where and when they pleased in their vehicles. This vehicular freedom allowed them to enjoy the vibrant countryside and rural areas of America. Thus, parkways originally served as a recreational outlet since at the time, driving itself was a form of recreation. The George Washington Memorial Parkway serves as an example of this use of parkways. Not only designed as a link between Washington, D.C. and Mount Vernon, is also served as a form of recreation for the Washingtonians who were able to afford such a luxury. Today, parkways can no longer fit the same mold that they once did as driving itself is no longer a recreation but a means of getting to a recreational facility. This change in purpose must be taken into account when designing parkways in the future.

# Chapter 2

## What are Parkways Today and in the Future

More than seventy years have passed since the amplification of parkway construction. The characteristics of past parkways such as views, alignment, vegetation, natural and cultural features, and parkway road details, must be examined for their applicability in design and construction of parkways today and in the future. How must we address these components to

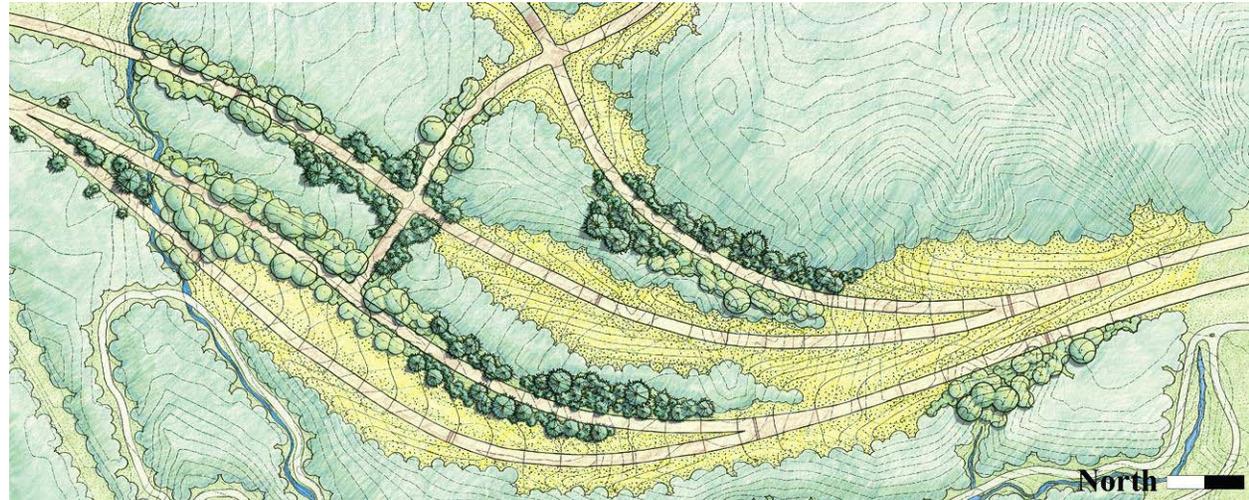


Figure 2.1 The Lorton - Laurel Hill Parkway (not to scale)

establish a vital route, not only for transportation, but also for recreation in today's relatively prosperous society that does not view driving as a form of recreation? The virtues and components of successful parkway design and construction have been studied and extrapolated into the creation of the Lorton - Laurel Hill Parkway, in an attempt to determine whether a viable parkway can be successfully created and implemented in today's culture. Parkway can no longer serve the same purpose that they did in the past; however, parkways can become and remain successful and beautiful paths of transportation and recreation. For parkways today to be as successful as they were in the past, they must serve a different purpose. Whereas parkways were once the destination for the recreational user, today and in the future they must become an introduction. They must open both the landscape and the recreational areas to the public for which they have been designed. Parkway characteristics are still applicable today, however, they too must continue to evolve in the same manner that the design and construction of parkways has changed throughout time.

# Chapter 3

## The Lorton - Laurel Hill Parkway

The Lorton - Laurel Hill site is located approximately twenty miles south of Washington, D.C., northwest of the intersection of Interstate 95 and the Occoquan River. The 3,100-acre site is one of the largest relatively undeveloped plots of land in the metropolitan region (Figure 3.1 and 3.2). It is the former home to a federal penitentiary managed by the D.C. Department of Corrections, including the maximum-security facility, youth correctional facility, and the minimum-security facility. The General Services Administration transacted the land to the Fairfax County, Virginia Park Authority, the current owner.

While the site is mostly undeveloped land, it does contain a number of buildings, many of which are considered historically significant, including the Nike missile site, the future home of the proposed historic interpretation park. It is these buildings and the landscapes' rich cultural history that make the Lorton - Laurel Hill site unique. In addition to the rich natural and cultural history of the site, it is rare that such a large parcel of land remains relatively untouched in the ever-expanding metropolitan Washington, D.C. area.

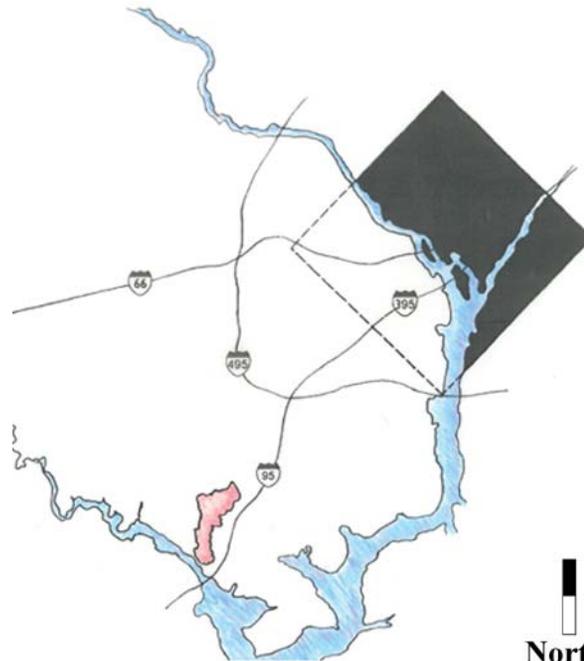


Figure 3.1 Contextual map of site (not to scale).  
Courtesy of Ryan Keith.



Figure 3.2 Enlargement of site contextual map (not to scale).  
Courtesy of Ryan Keith.

The current vehicular connection between Lorton Road and the southern portion of the site along the Occoquan River is Furnace Road, a nondescript two-lane road that through poor alignment uncomfortably winds through the site. In this design, Furnace Road has been removed and replaced with the Lorton - Laurel Hill Parkway. The Lorton - Laurel Hill Parkway, connects Lorton Road to Interstate 95. Lorton Road is the main vehicular connection between Route 123 on the western portion of the site and Interstate 95 on the eastern portion of the site. The proximity of the interstate has made Lorton Road a hectic route, used by both private vehicles and commercial trucks. In design, both the alignment and the spatial organization of Lorton Road have been adjusted. Westbound traffic on Lorton Road from Interstate 95 will have the option of continuing to Route 123, or taking the exit onto the southbound portion of the Lorton - Laurel Hill Parkway. Conversely, eastbound traffic on Lorton Road from Route 123 to Interstate 95 will not have the same option, as all traffic will exit onto the southbound portion of the Lorton - Laurel Hill Parkway. Eastbound drivers are not given the option of continuing on Lorton Road to Interstate 95 in order to detract motorists from using Lorton Road as a short cut through the site. Instead, eastbound traffic on Lorton Road will drive south on Route 123, cross the Occoquan River and connect to Interstate 95 through the exit which serves the town of Occoquan. Reducing this cut-through traffic will minimize noise pollution on the Lorton – Laurel Parkway, and will maintain an optimal level of traffic on the parkway itself.

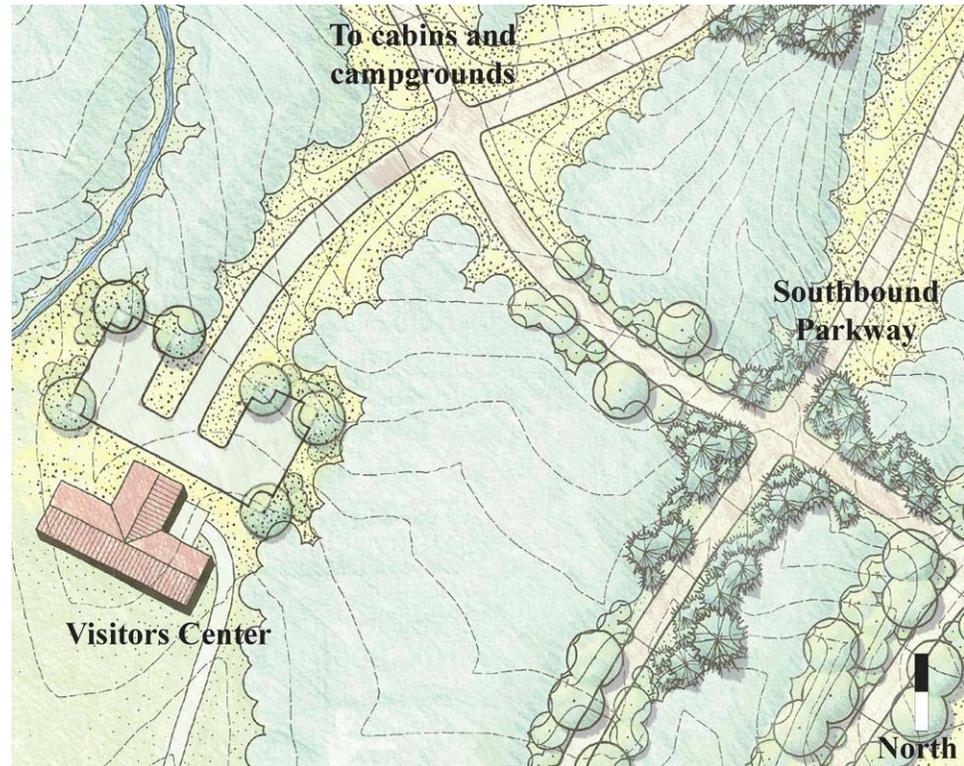


Figure 3.3 The Visitors' Center (not to scale)

A visitors' center, cabins, campgrounds, and access to the Occoquan River are incorporated into the design of the parkway. The visitors' center is located in the southern portion of the site, where the beginning point of the hiking trail that winds throughout the site can be accessed (Figure 3.3). The visitors' center will also provide entry to the cabins and campgrounds nearby (Figure 3.4). To access the Occoquan River from the parkway, motorists will need to go to the visitors' center where a road will lead them down to the river (Figure 3.5).

The major characteristics that were studied in the design of this parkway were views, alignment,

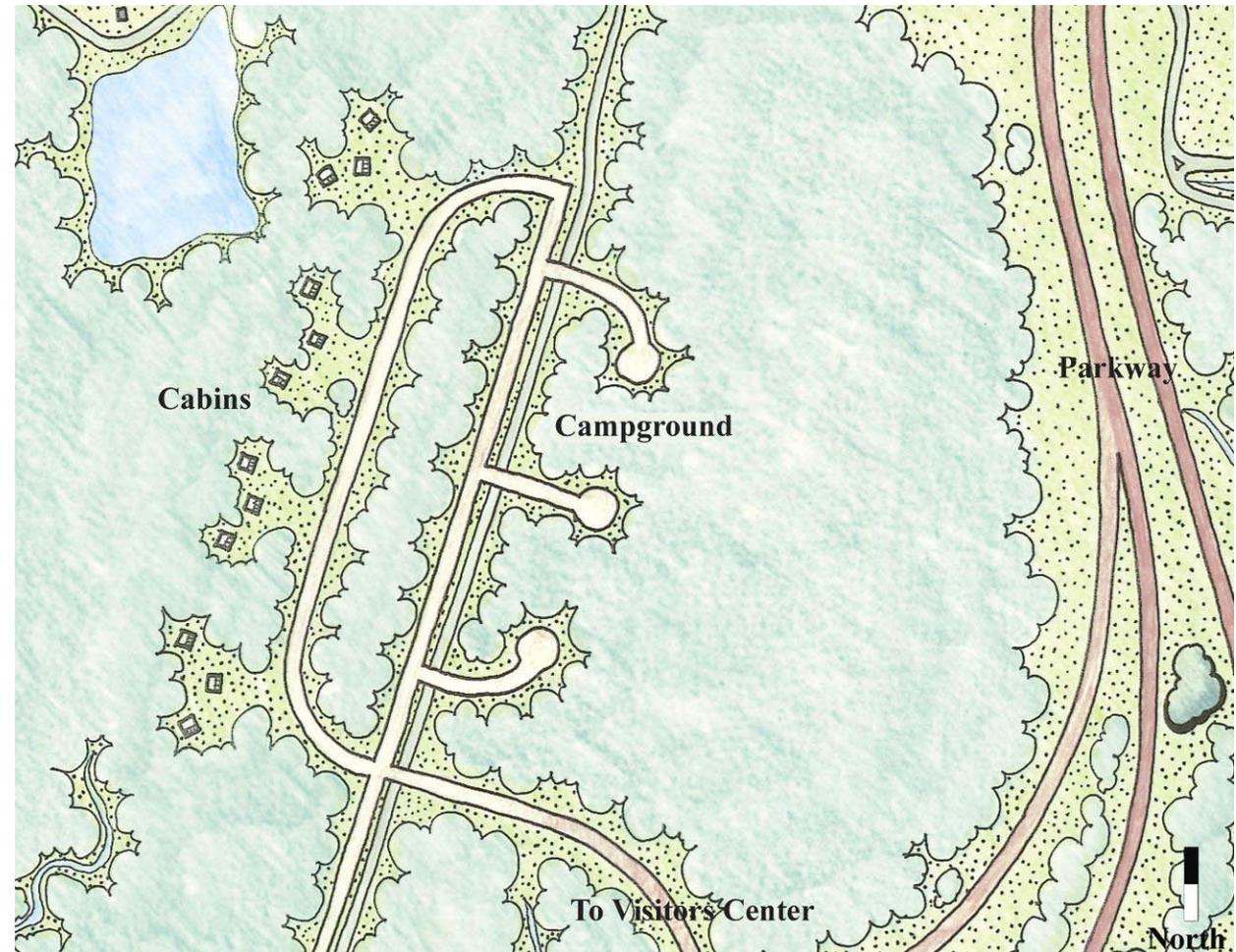


Figure 3.4 Cabins and campground (not to scale)

vegetation, natural and cultural features, and parkway details. In the design of this parkway, many examples of existing parkways were studied as a means for extracting the very best aspects of each, to form a potentially viable contemporary parkway.

Views along a parkway are dynamic in nature. This is due to the constantly changing landscape that is presented to motorists as they navigate the parkway. As with the George Washington Memorial Parkway and the Blue Ridge Parkway, views to and from the Lorton - Laurel Hill Parkway are key components of the design. The southern portion of the site introduces the motorist to the site itself by providing views to the

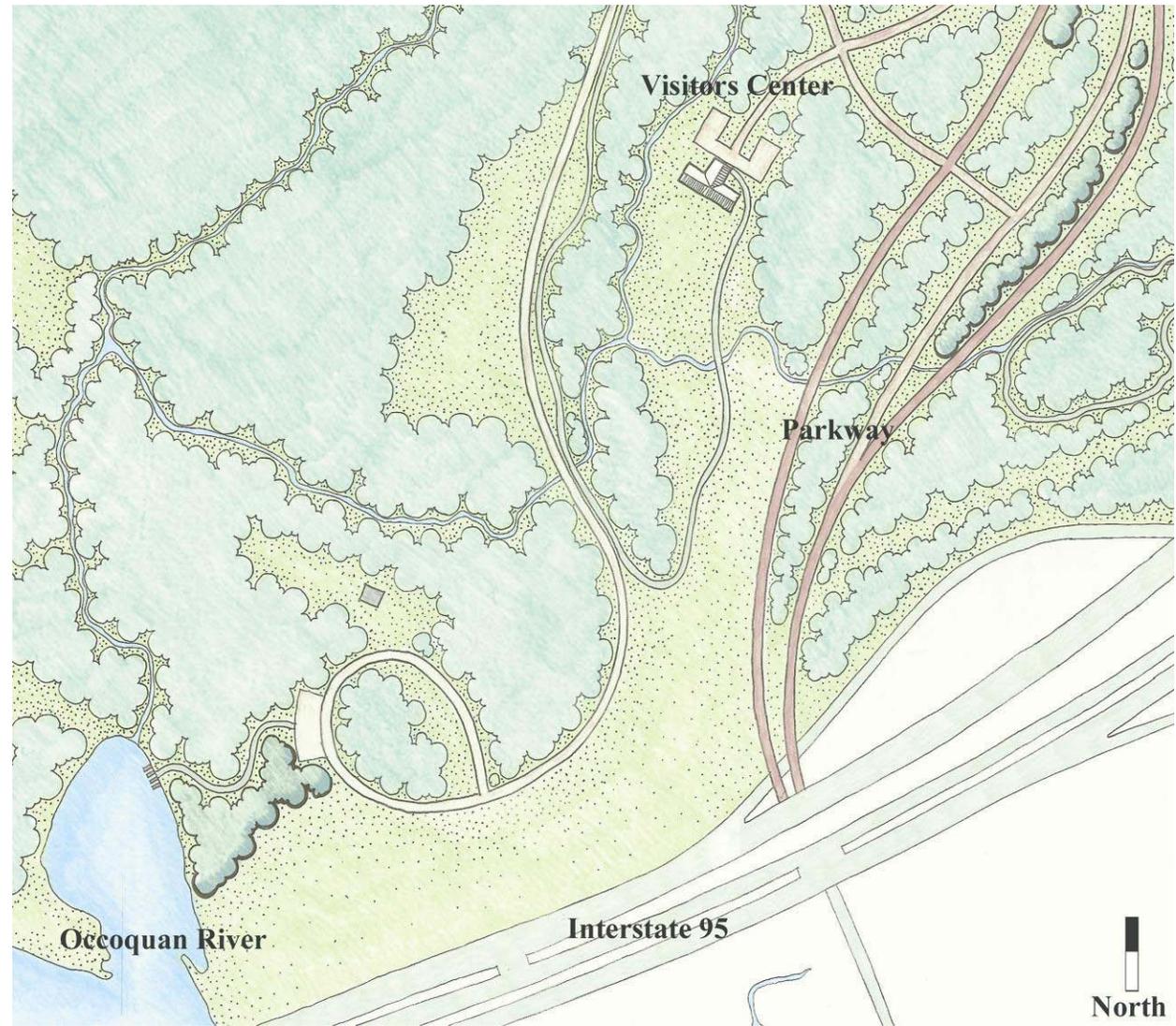


Figure 3.5 Access to Occoquan River (not to scale)

visitors' center, existing vegetation, and the existing stream. In addition, views from the visitors' center and hiking trail to the parkway

are created through manipulation of vegetation and parkway alignment. The views in the northern portion of the site introduce the motorist to the many cultural features of the site. Many views to the dairy farm are created through vegetation and alignment manipulations. Views within the parkway itself have also been created by strategically placing vegetation to open views through meadows, and direct other views with taller vegetation.

*“A drive must be so prepared that those using it shall be called upon for the least possible exercise of judgment as to the course to be pursued, the least possible anxiety or exercise of skill in regard to collisions or interruptions with reference to objects animate or inanimate.”*

*-Frederick Law Olmsted (Beveridge and Rocheleau 1998, 49)*

The horizontal alignment of the Lorton - Laurel Hill Parkway was arranged to closely regard the existing vegetation as well as the interaction between the northbound and southbound lanes. The horizontal alignment of the Lorton - Laurel Hill Parkway was also based on its connection to existing roads in and around the site and the specific organizational relationships between designed site uses.

The Lorton - Laurel Hill Parkway is divided into northbound and southbound lanes. The median width varies throughout the site. In some locations the median is a minimum size and the alignment of the northbound and southbound lanes of travel are close together. At other locations

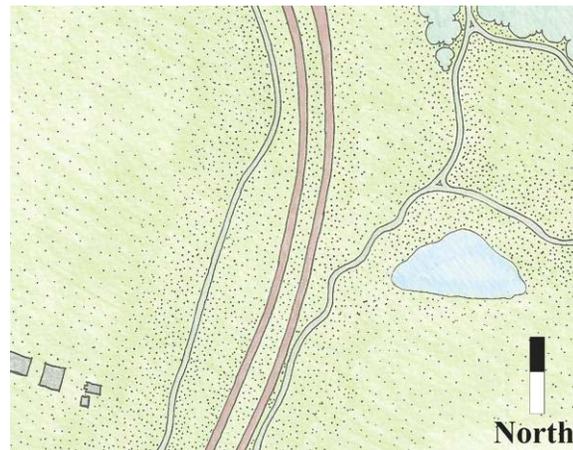


Figure 3.6 Narrow median (not to scale)

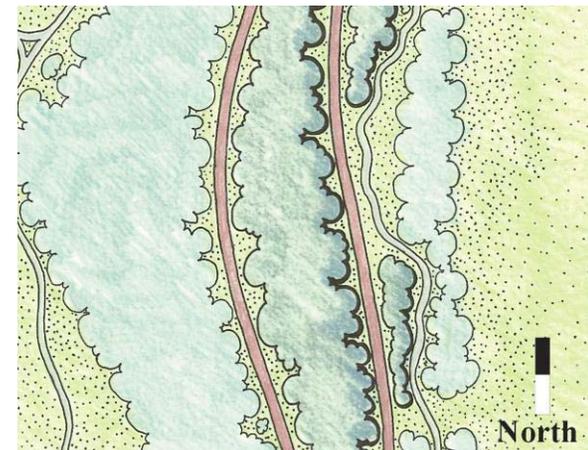


Figure 3.7 Wide median (not to scale)

the median is larger causing the northbound and southbound lanes to diverge from each other (Figures 3.6 and 3.7). Existing vegetation was the primary design consideration for the relationship between the northbound and southbound alignments. In areas where there was existing vegetation, the median was increased in width to provide the motorist with a sense of seclusion in both the northbound and southbound lanes. Visually surrounding the motorist in one lane with increased vegetation, and removing the visual connection between the lane's directional antitheses created this sense of seclusion. It is this constant rhythm of proximity and distance between the northbound and southbound alignments that presents the motorist with an appealing and ever-changing parkway to navigate (Figures 3.8 and 3.9).

The Lorton - Laurel Hill Parkway is the only vehicular connection to the proposed visitors' center, hiking trail, campground, and cabins all located in the southern portion of the site. Access to these site amenities is provided while maintaining continuous traffic movement along the parkway, by providing exits that depart the parkway to the visitor's center, and rejoin the parkway. The horizontal alignment of lanes were designed to allow easy access to these site features (Figure 3.10).

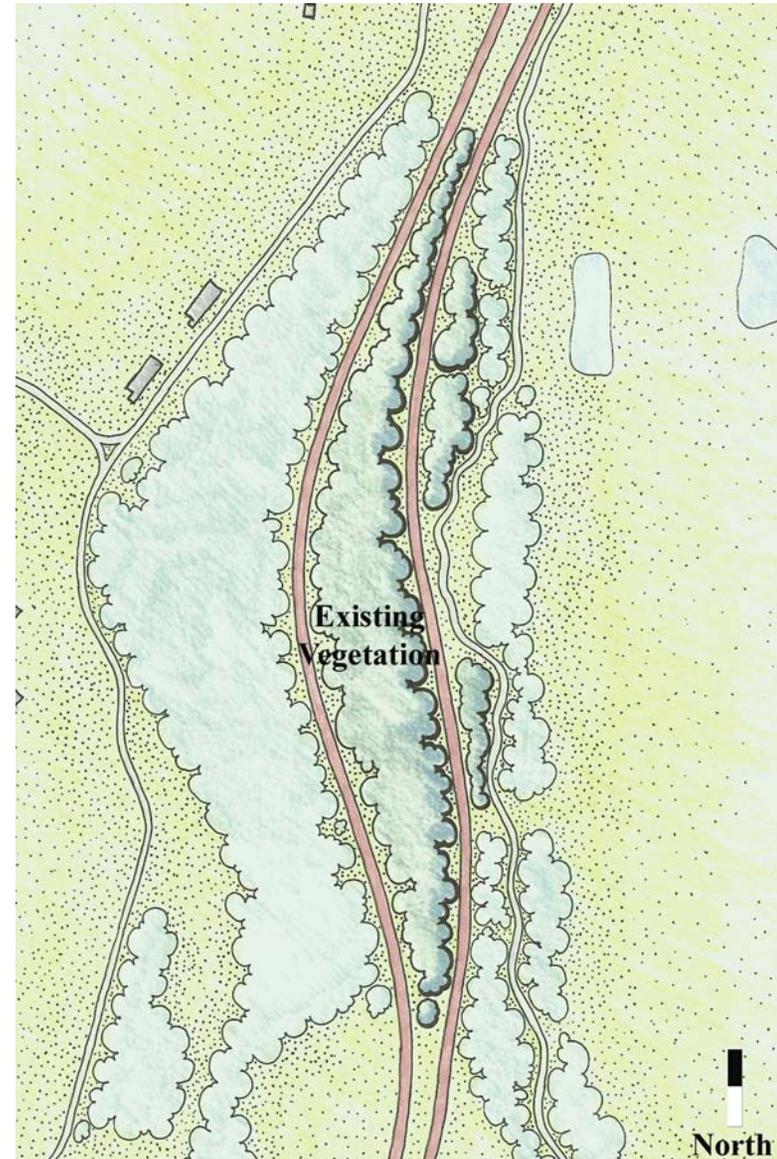


Figure 3.8 Parkway aligned around existing vegetation (not to scale)

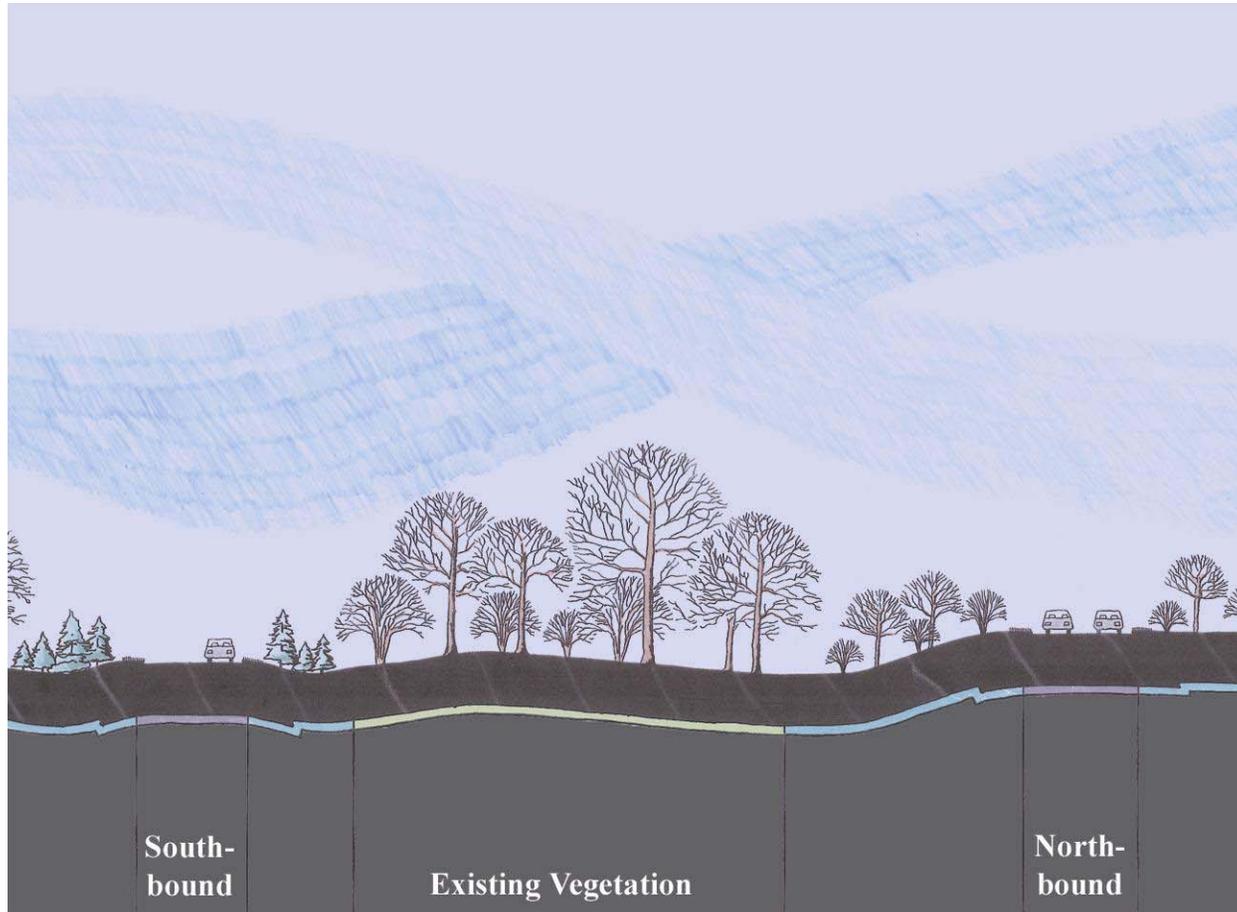


Figure 3.9 Section of northbound and southbound parkway aligned around existing vegetation (not to scale)

The vertical alignment of the Lorton - Laurel Hill Parkway was designed to create a safe motorway. The vertical alignment follows the existing topography of the land and expresses the existing topography where possible. Vertical alignment can significantly impact the safety of a roadway as sharp ascents or descents can confuse drivers as well as disguise potential safety hazards present in the road due to greatly decreased sight distances. The premise for the design of the vertical alignment was to provide safe transitions between the level and steeper areas of the site. In addition, a strong connection between the vertical alignment of the parkway and the existing topography of the site enhances the natural character of the landscape. While parkways are highly engineered roadways, they need to lay lightly on the landscape. Instead of using the parkway to interpret the character of the landscape; here, the physical characteristics of the landscape are the factors that influence the vertical alignment of the parkway. The horizontal and vertical alignments of a parkway must also work in unison to create continuity in three dimensions (Tunnard and Pushkarev 1963, 194). This combination between the horizontal and vertical alignment produces a helix, which mathematically is a line with a constantly varying pitch, wrapped around a cylinder (Tunnard and Pushkarev 1963, 195) (Figures 3.11 and 3.12).

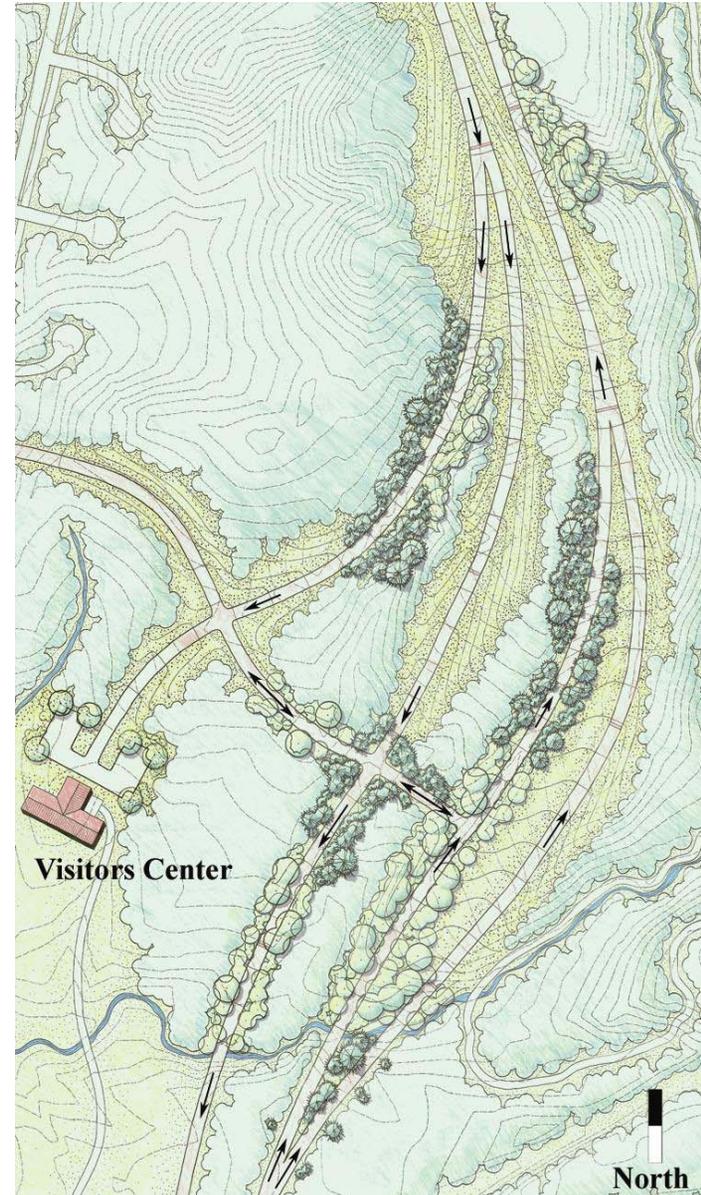
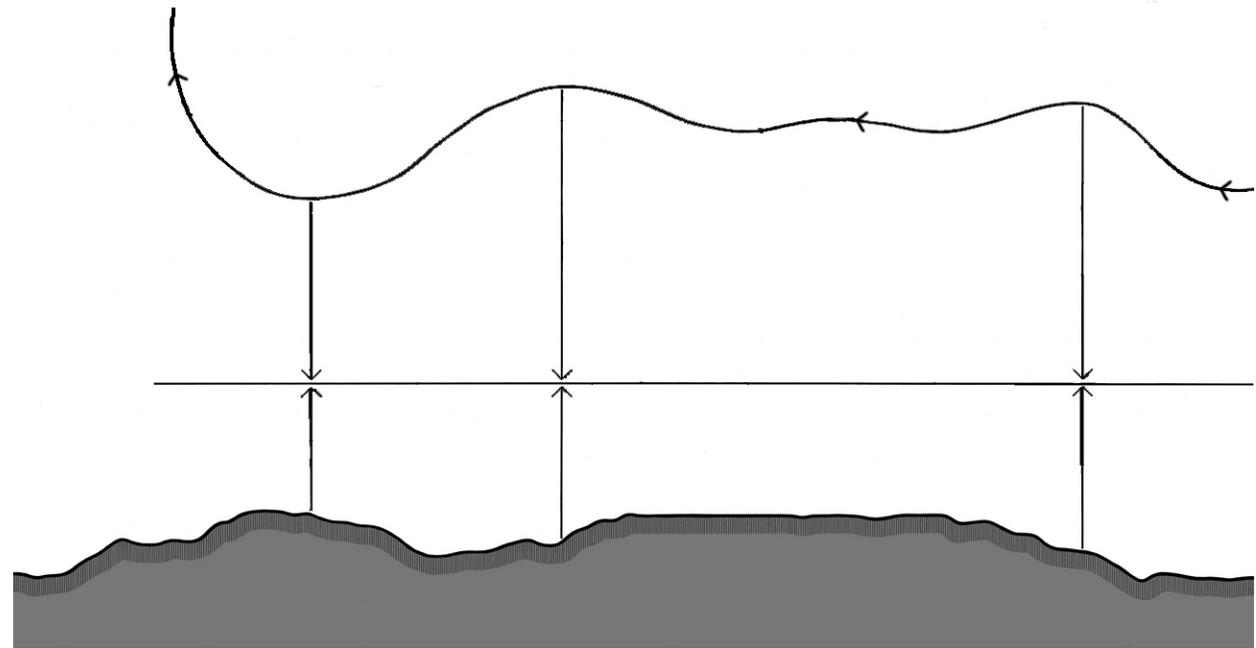


Figure 3.10 Vehicular organization of Visitors' Center exit (not to scale).

Alignment and vegetation were designed with mutual consideration as they are two very closely related characteristics of the Lorton - Laurel Hill Parkway. As previously stated, while the existing vegetation of the site dictated the horizontal alignment of the parkway, the proposed vertical alignment of the parkway dictates the planting strategy of the parkway. In areas where the vertical alignment of the parkway created a cut, a native grass and wildflower palette is proposed in place of the removed hardwood forest and would be maintained as a relatively low meadow mass. This low meadow contrasts the existing hardwood forest and represents the undressing of the parkway cut into the landscape. The diminished scale of the vegetation in these areas enhances the relationship of the parkway to the landscape through the decreased heights of the plants. In areas where fill was required to vertically align the parkway, proposed plant species similar to those that were removed were specified for re-vegetation. This planting not only enhances plant livelihood rates, but also provides a symbolic connection between the soil levels and the vegetation. As the earth mounds higher in sections of fill, proposing larger plants to mirror the higher soil level creates a connection between land and vegetation.

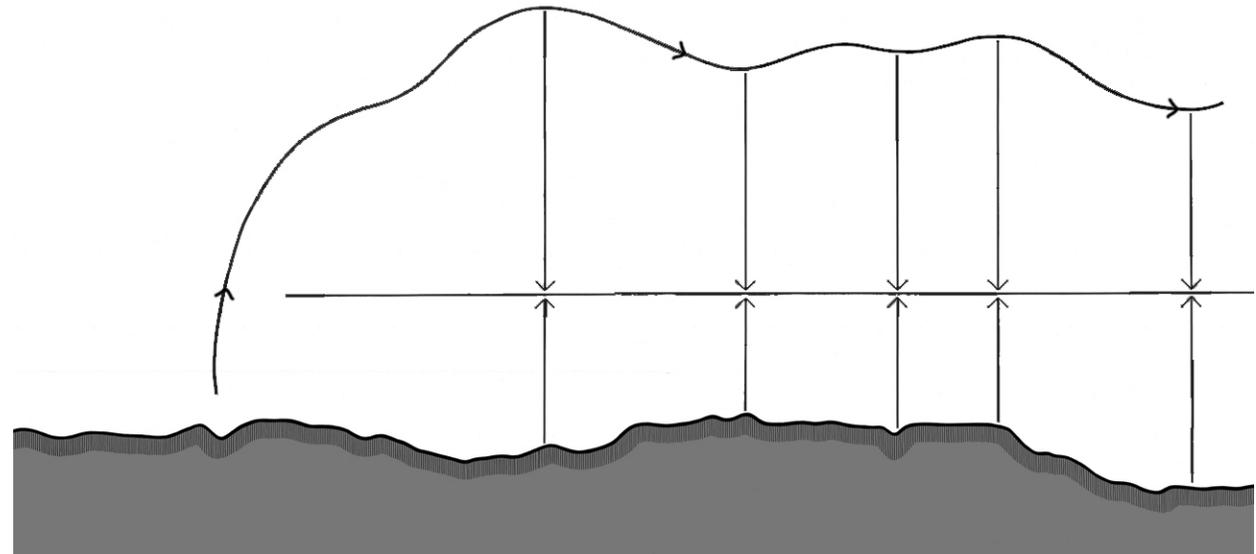


*Figure 3.11 Coordination between vertical and horizontal alignment of northbound parkway (not to scale).*

This low meadow contrasts the existing hardwood forest and represents the undressing of the parkway cut into the landscape. The diminished scale of the vegetation in these areas enhances the relationship of the parkway to the landscape through the decreased heights of the plants. In areas where fill was required to vertically align the parkway, proposed plant species similar to those that were removed were specified for re-vegetation. This planting not only enhances plant livelihood rates, but also provides a symbolic connection between the soil levels and the vegetation. As the earth mounds higher in sections of fill, proposing larger plants to mirror the higher soil level creates a connection between land and vegetation.

Where soil has been stripped, a meadow incorporating low-lying vegetation in the low height areas builds on the connection between land height and vegetation. Replanting of these areas was not random, but carefully designed to open views through low meadows and to direct other views with trees.

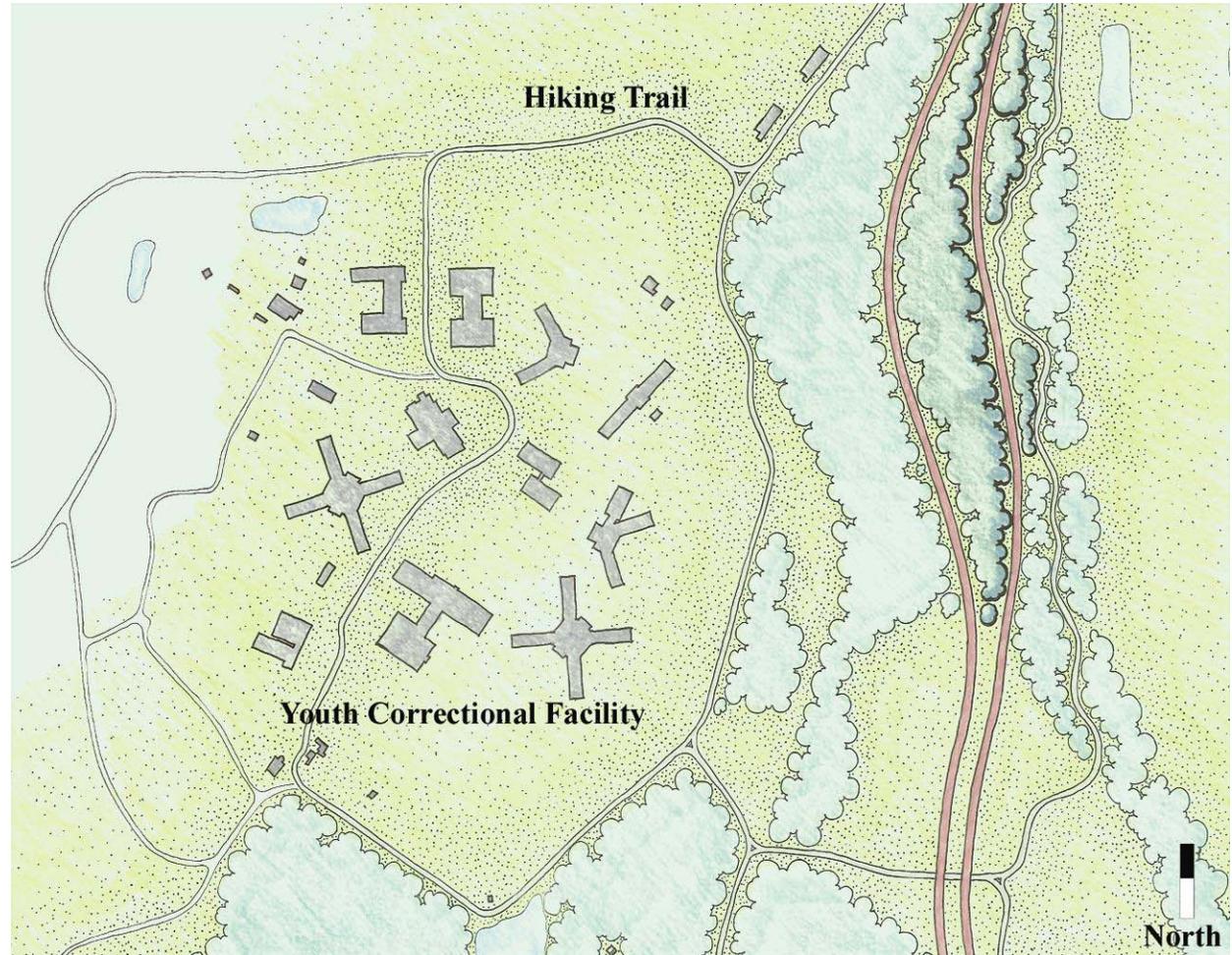
The Lorton - Laurel Hill Parkway was designed to traverse a variety of natural features thereby introducing the motorist



*Figure 3.12 Coordination between vertical and horizontal alignment of southbound parkway (not to scale).*

to the land. This introduction is further enhanced by landscape views created from the parkway, which highlight the variety of natural and cultural features present on the site. There are a variety of natural features on the Lorton - Laurel Hill site including streams, vegetation, open meadows, and hardwood forests. Many cultural features of the site were also instrumental in the design of the parkway; most notably, the former use of the site as a correctional facility. This influences the conceptual premise of the parkway, as the parkway controls the access and destination of the motorist.

The natural and cultural features of this site were instrumental in the design of the site's hiking trail. The hiking trail has been aligned throughout the parkway to serve as a link to the natural and cultural features of the site. The western portion of the hiking trail aligns along many cultural features, predominantly the Youth Correctional Facility (Figure 3.13). This western trail portion has been located along the former network of roadways that serviced the buildings and provided access to the dairy farm farther north (Figures 3.14 and 3.15).



*Figure 3.13 Hiking Trail on western portion of site (not to scale)*

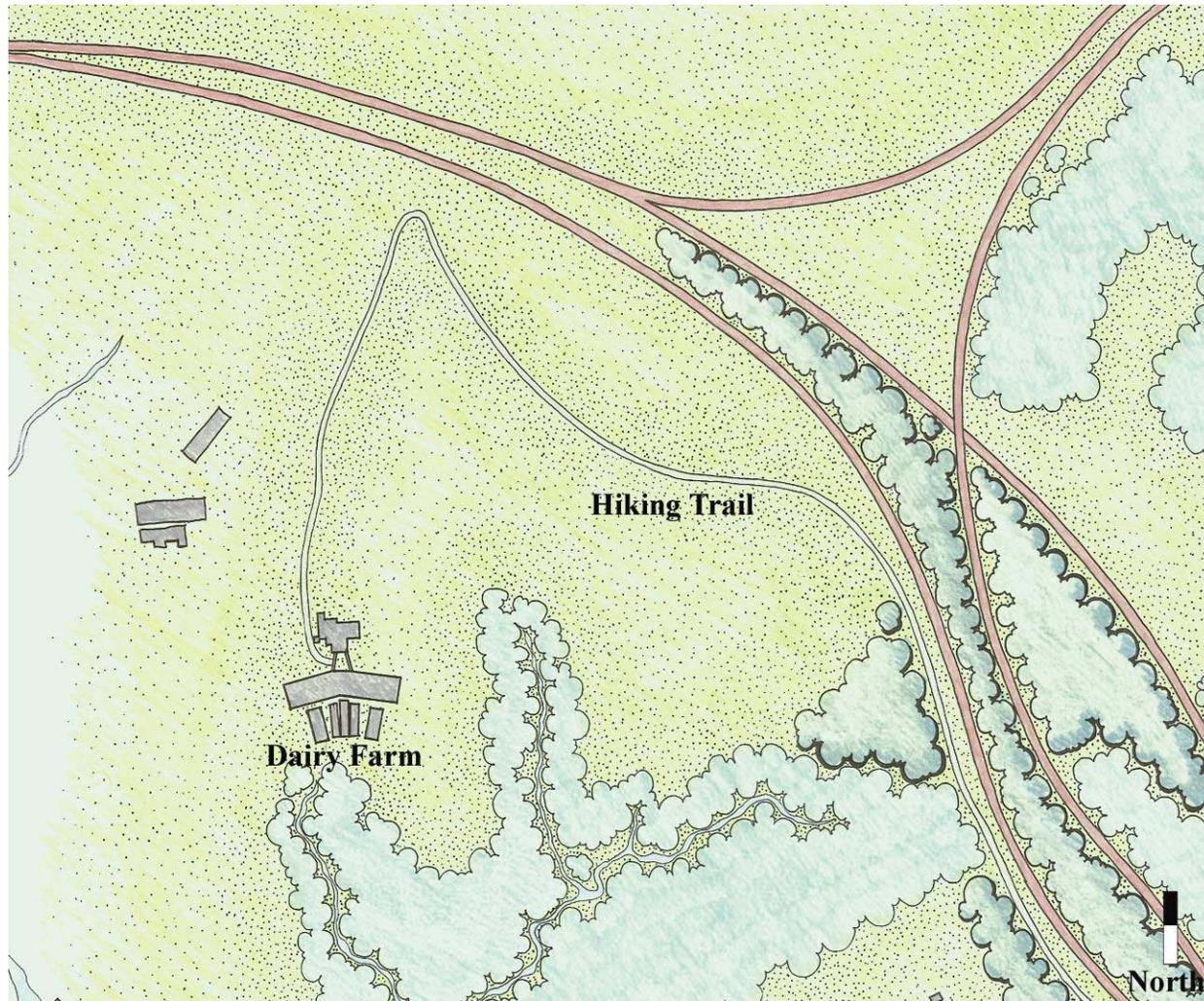
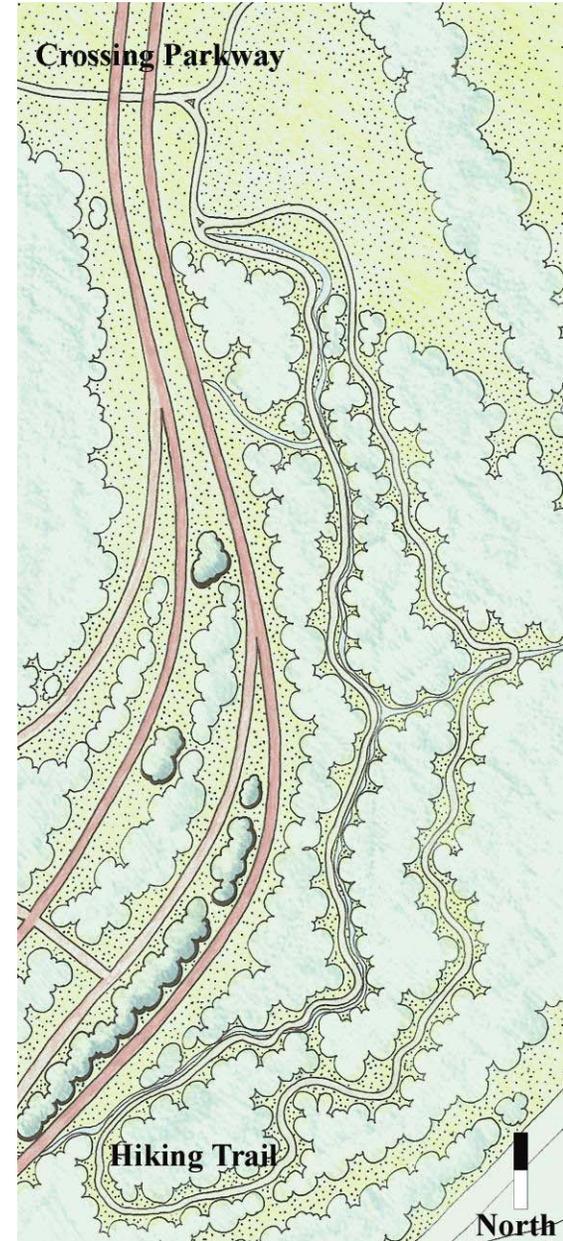


Figure 3.14 Dairy Farm and Hiking Trail (not to scale)



*Figure 3.15 Dairy Farm from approximate location of Lorton - Laurel Hill Parkway*

On the eastern portion of the site, the hiking trail has been aligned to the natural features of the site including existing streams, forests, and open meadows. The connection between the ‘culturally aligned’ hiking trail, and the ‘naturally aligned’ portion occurs at an on-grade crossing of the Lorton - Laurel Hill Parkway (Figure 3.16). The Lorton - Laurel Hill Parkway is the spine that serves as the connection between the natural and cultural features of the site.



*Figure 3.16 Hiking Trail on eastern portion of site (not to scale)*

Parkway details were also considered in the design of the Lorton - Laurel Hill Parkway. Minor subtleties have been introduced to the typical materials of which this parkway is constructed. At the southern portion of the site, adjacent to the Occoquan Regional Park, there is a brick kiln that was used for many years to produce clay bricks (Figure 3.17). It is the only kiln remaining today from the many that were once located on the site. Inmates of the correctional facility constructed many of the roads that connect the correctional facility's buildings using bricks produced at these kilns. While it is very difficult to utilize bricks in the construction of modern high-speed roads due to the inherent properties of the material, there was a deliberate intent to recognize the material elsewhere on site. The major ingredients used in the production of asphalt are "asphalt cement or 'binder' the basic cementitious material that is eventually mixed with aggregate to form pavements" (Harris and Dines 1998). The aggregate is responsible for the visual appearance of the asphalt. The Virginia Department of Transportation has been experimenting with specifying asphalt aggregate, which can be locally quarried instead of importing a tremendous amount of material to a job site from a distant location. In many parts of Virginia, locally quarried aggregate has a reddish tone, thus producing an asphalt roadway that minimizes roadway glare. This reddish hue of the road distinctly separates the road from the adjacent vegetation through its contrasting color schemes. Although the locally found aggregate at Lorton - Laurel Hill has a brown tone to it, a red aggregate has been used in the production of the asphalt for the parkway to represent the connection between the new parkway and the production of clay bricks in the past.



*Figure 3.17 Existing brick kiln located in the Occoquan Regional Park.*

Along with this attention to roadway materials, much consideration was given to the parkway details present on site. The curbs located along the entire length of the parkway are visually distinct from ordinary curbs (Figure 3.18). The curb intends to be mountable, as the shoulder of the parkway is unpaved and elevated from the parkway surface. The profile of the curb was important since the curb is a frame that encloses the parkway in the landscape. A wide curb would create a large frame, while a small thinly profiled curb in the landscape creates only a sliver of an edge between the parkway and the landscape, allowing a seamless transition from the parkway to the landscape. A thinly profiled, non-descript curb will allow the parkway to ultimately blend into the context of the surrounding landscape.

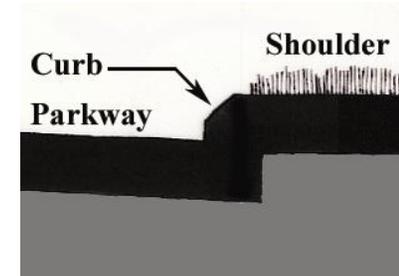


Figure 3.18 Curb Profile (not to scale)

Markers have been used for centuries to mark travel through the landscape, change in elevation, and safe crossing routes along rivers (Blanc 1996, 71). Time is very difficult to effectively indicate with markers because people and animals move through the landscape at different rates with different intentions. On a parkway, or any roadway for that matter, controlling the duration of travel is relatively straightforward due to the confinements of a speed limit. The speed limit of the Lorton - Laurel Hill Parkway is forty-five miles per hour, and while this is obviously not the maximum speed that people will travel the parkway, it is a design speed benchmark from which one can define a method of time measurement for the parkway. A typical motorist will drive the speed limit along a level stretch of road, increase their speed on a downward slope of a road, and decrease their speed on an uphill stretch of road. To mark time in a uniform manner, markers would have to be spaced out at distances related to the speed of travel. On uphill stretches of the parkway, where people are driving slower, the markers would be closer together. On the downhill portions of the parkway, where people are driving faster, the markers would be spaced farther apart. This allows the variable of time between markers to remain constant throughout. If the markers indicate the time traveled through the parkway, siting them along the road produces a question worth examining.

The markers for the Lorton - Laurel Hill Parkway are located in association with the asphalt surface of the parkway; thus, they do not create a visual obstruction from the parkway to the landscape. The markers are bands of brick that cross through the asphalt road. In addition to marking time traveled along the parkway, a rhythm is created as vehicles traverse the brick bands (Table 3.1).

Speed in miles per hour	Distance in feet traveled per ten second interval
40	586.67'
45	660.00'
55	806.67'

At the entrance and exit of the Lorton -Laurel Hill Parkway, the brick bands are combined with entry markers that introduce the materials of the parkway to the motorist and delineate the boundaries of the parkway from other surrounding roads. These entry markers are constructed using two shades of clay bricks, iron bars, and a concrete cap. Three courses of a running bond pattern of one shade of brick are followed by a header course of the other shade of brick. This pattern is repeated from ground level to approximately four feet above ground. These alternating shades and patterns of brick symbolize the symbiotic relationship that exists on site between the natural features of the landscape and the cultural aspects of the people that have lived, worked, and been incarcerated on the site. The iron bars that separate the brick from the concrete cap are reused from the prison cells. The cap of the entry markers is constructed of concrete, a material that is not very dominant on the existing site, thus symbolizing new uses and new construction. The profile of the concrete cap is similar to the profile of the proposed curb suggesting that it is this parkway that will be the leading future use of the site. The iron bars suggest a chasm between the past and the future, and signify the strong relationship that exists between the natural and cultural past uses of the site.



## Chapter 4

### Parkways in the Future

The Lorton - Laurel Hill Parkway indicates that past and present components of successful parkway design can be extrapolated to produce a viable, beautiful, and a harmonious ribbon of pavement through the landscape. Historically, views in the landscape were very important to the alignment of a parkway. The Blue Ridge Parkway and the George Washington Memorial Parkway were specifically designed to create breathtaking views. The Blue Ridge Parkway utilizes vertical alignment to create views of the landscape. The George Washington Memorial Parkway utilized horizontal alignment to create views of the city. Obviously, views are key characteristics of parkway design. Today, with the Lorton - Laurel Hill Parkway we see that views remain important to the landscape. The view of the landscape from a parkway, and the view from the landscape to a motorway creates a cohesive relationship between a parkway and the landscape it traverses. Views make the parkway unique and create a connection between the motorist and the landscape. In the future, views will continue to be vitally important to parkway design. Perhaps they will continue to evolve and become a mixture of not only views of the landscape and to the landscape, but also views that interpret the physical character of the landscape.

Historically, horizontal and vertical alignment of parkways has been meticulously studied and analyzed. Some of these same characteristics have been brought through in the design of the Lorton - Laurel Hill Parkway. As more of the available land for parkways is developed for other uses, especially in metropolitan areas, potential parkways will need to merge into the tight urban context and form a cohesive and fluid relationship between the motorway and the landscape. Computer technology, which many believe has hindered design, will continue to provide a useful tool for landscape architects. In fact, parkway design has always been at the leading edge of combining technology and design ever since Gilmore Clarke. Clarke was one of the first landscape architects to use aerial photography to study large areas of land and decipher existing vegetation and elevations, for use in his designs. (O'Connell and Myers 2002, 71-72).

In the past, vegetation along a parkway was designed to provide a natural structure to the parkway, and to reveal particular views to the landscape. This is seen in the Blue Ridge Parkway where vegetation was replanted in the same spatial organization as it was prior to the parkway being routed through the landscape. Today and in the future, parkway vegetation cannot retain its previous purpose, but it may act as a reference to past patterns of settlement that have occurred on the landscape. As in the Lorton -Laurel Hill Parkway, existing vegetation that was removed to vertically align the parkway was replanted with similar vegetation or with native grasses and wildflowers. The existence of cut and fill on the parkway dictated which plant palette was to be used. Re-vegetation in this manner may be a subtle reference to the effects of the parkway on the land, while also enhancing the connection between a proposed parkway, and the existing character of the landscape.

In the future, it will become increasingly important to incorporate natural and cultural features into parkway design. As the Blue Ridge Parkway winds through the Appalachian Mountains, there is no doubt that natural features were weighed in the design of the parkway, however the culturally unique features do not seem to be a large component of the design. During the construction of the Blue Ridge Parkway, it was not uncommon for property owners along the route to greet the designers and builders of the parkway with shotguns drawn. Furthermore, as funding by the federal government is seen as necessary for highway design and construction, funding for ribbons of pavement to serve as entrances to recreational areas is seen as frivolous. Due to this type of funding, parkways will begin to move farther from rural areas and closer to dense urban centers, as the funding agencies will use parkways to relieve traffic from the congested urban arteries. This shift from rural to urban arenas will result in the enrichment of the cultural aspects surrounding the parkway and will force future parkway design to thoroughly incorporate cultural aspects.

Parkway details, including railings, curbs, and signage have always been very important to differentiate a parkway from other typical roads and highways. The markers found at the entrances of the Lorton - Laurel Hill Parkway follow the same genre of unique design details found in other successful parkway designs. The entry markers are unique to this particular site and signal to the motorist that they have officially entered the Lorton - Laurel Hill Parkway. A similar connection between, marker and roadway ownership can be found in the mile markers along the National Road, which runs from Cumberland, Maryland west to Illinois. Similar mile markers

are not found elsewhere, and although signage is limited along the National Road, these mile markers remind motorists that they are in fact on the same historic road that was used in the past.

In future parkway design, markers and general parkway details will need to be prudently studied and altered to account for the presence of entry signs that lack originality in the suburban areas. A successful sign does not necessarily need to have text on it to be effective. Instead, it must simply bring forth the personality and character of the landscape in a subtle manner (Figure 4.1).



*Figure 4.1 Plan and section of entry markers (not to scale)*



# Chapter 5

## Allusions for Parkway Designers in the Future

*Genius loci...*

*“The spirit of a place.”*

*“An engineer can tell you the exact cost of realigning a road around a tree, but the landscape architect’s task is much more difficult for he must determine the intangible value of seeing the tree for all the people who will travel on the road in the future.”*

*-Patrick A. Miller, FASLA*

*Landscape Architecture is...*

*“The science and art of design, planning, management and stewardship of the land. Landscape architecture involves natural and built elements, cultural and scientific knowledge, and concern for resource conservation to the end that the resulting environment serves a useful and enjoyable purpose. Successful landscape architecture maximizes use of the land, adds value to a project and minimizes costs, all with minimum disruption to nature.”*

*-American Society of Landscape Architects*

The future of parkway design and construction is very bright. Not only do many people appreciate existing parkways, but parkways can also be designed today and in the future to be just as successful as they have been in the past.

All parkways share similar characteristics, but it is the five main characteristics that have been studied in this thesis that will continue to be exceedingly important in future design and construction. Views, alignment, vegetation, natural and cultural features, and parkway details, must not only be defined for each particular site, but they must be developed in unison as a cohesive mixture that creates a viable, and beautiful motorway.

In addition, it has become evident through this thesis that parkways can no longer serve solely as a privileged form of recreation and reprieve from a bustling urban metropolis. Today many more people own cars than in the 1930's, and the quintessential 'Sunday drive' is no longer a weekly mainstay of suburban America. Today, people use their free time in different ways than in the past, and therefore the parkway has become less of a destination, and more of an introduction to a recreational facility.

Federal funding is very different for parkways today than it was after the Depression. The Depression era implementation of governmental agencies has become extinct and as such, locations for proposed parkways will need to be studied very carefully. This will force parkways to move closer to urban areas where funding is available.

Parkways cannot be designed and constructed anywhere there is available land. A parkway must have a harmonious relationship with the land that expresses and examines the natural and cultural uniqueness of the locations where they are to be constructed. The genius loci of a site must be studied and expressed in the design and construction of the parkway. No two parkways can be the same, just as no two sites are the same. In the future, a parkway may be determined unfeasible for a particular site. Understanding where not to locate and construct a parkway can be just as important as understanding where a successful parkway should be designed and constructed. Successful parkway principles must be instituted into the genre of highway and road engineering. In order to create a complete highway, principles of both good engineering and landscape design must be balanced and applied together. Horizontal and vertical alignment must be used in highway and road engineering in the same manner in which they are used in parkway design. In many cases, highways and roads are engineered to make the least impact on the land by connecting two points in a straight line. Where this occurs, the visual appearance of the roadway detracts from the visual character of the landscape and hinders the success of the project. Although visual appearance is not a tangible characteristic that can be defined in terms of cost, it is a characteristic of parkway design that can cross the line into highway design with minimal economic expense. In fact, the economic cost involved in designing a motorway with spiraling curves may actually increase the value of the adjacent land, which will cover the cost of the increased design fees.

The only way to institute parkway design principles into the design of typical highway and road construction projects is through education. Landscape architects must be educated in road and parkway design as well as construction, and a distinction

between the two must be made. Through this education landscape architects will be given the tools necessary to design and implement roadways that not only traverse but also enhance the landscape. This will create roadways that are useful and beautiful, in turn enriching the city which they serve. In order to accomplish this, more governmental agencies should employ landscape architects to assist in highway design. This shift in employment strategy will increase the parkway's viability and strengthen the relationship of the motorway to the landscape. Construction of motorways that incorporate parkway design principles will create more successful and vibrant routes between urban centers and their surrounding communities and in so doing increase the quality of life for its population.



**Parkway length**

Northbound	13,218 feet
Southbound	13,415 feet

**Parkway width** 24 feet

**Parkway total asphalt**

Northbound	317,232 square feet
Southbound	321,960 square feet
Total	639,192 square feet

**Parkway total time to drive**

Northbound	200 seconds
Southbound	203 seconds

**Parkway speed limit** 45 miles per hour

**Hiking trail length** 40,987 feet

**Hiking trail width** 15 feet

**Hiking trail total asphalt** 614,805 square feet

# Appendix B

## Lorton - Laurel Hill Parkway Drawings

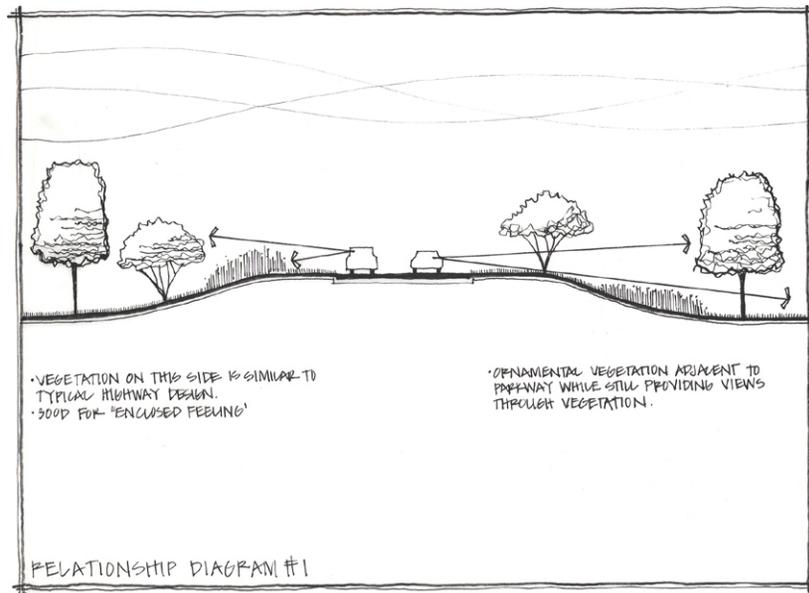


Figure B.1 Relationship diagram 1

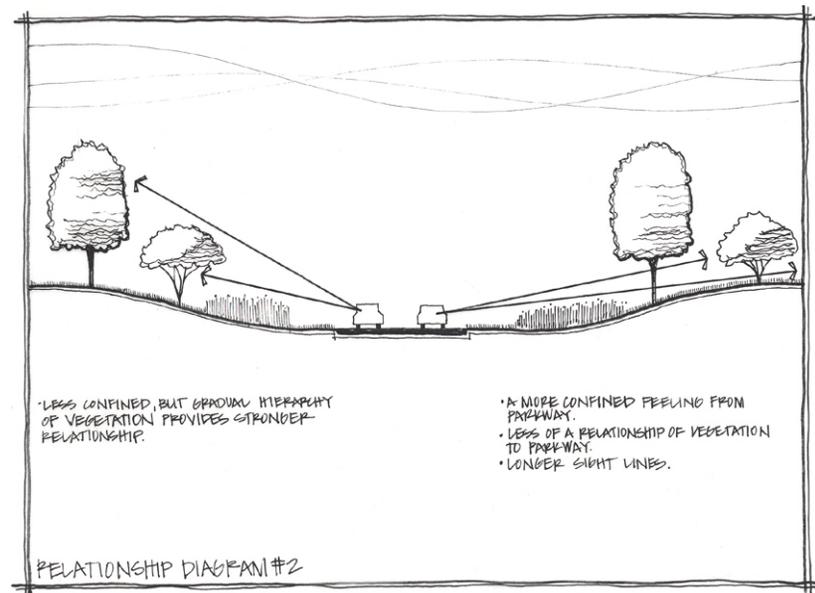


Figure B.2 Relationship diagram 2

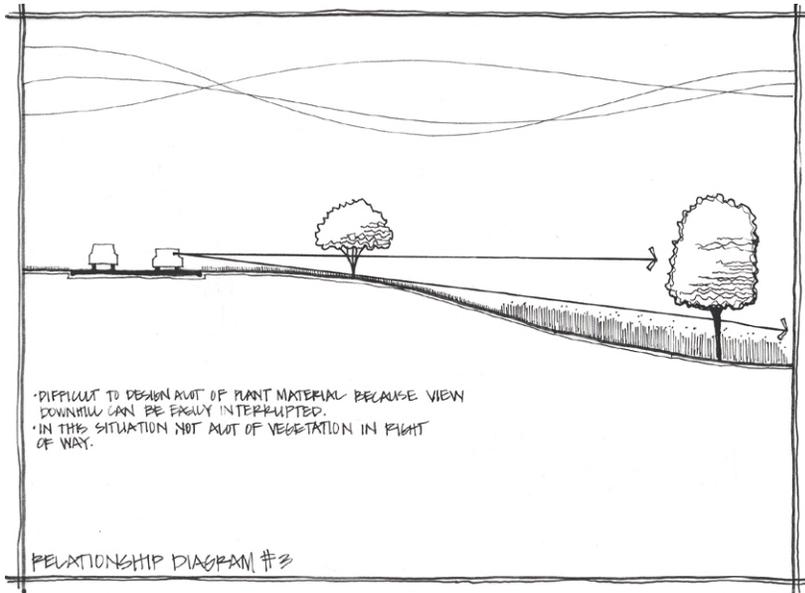


Figure B.3 Relationship diagram 3

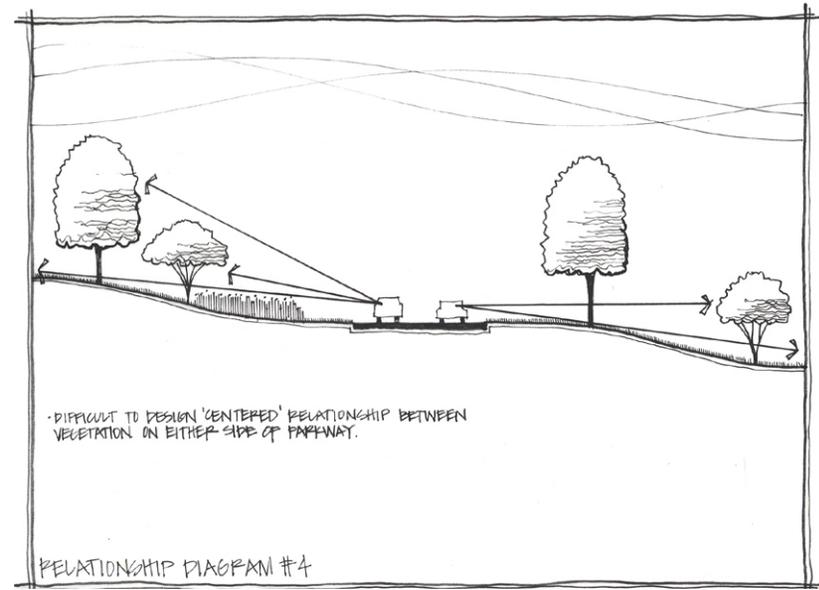


Figure B.4 Relationship diagram 4

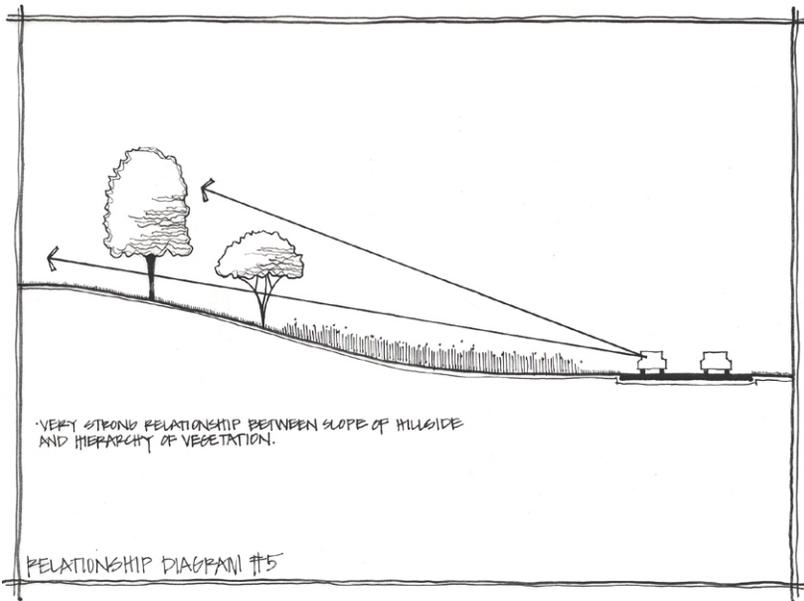


Figure B.5 Relationship diagram 5

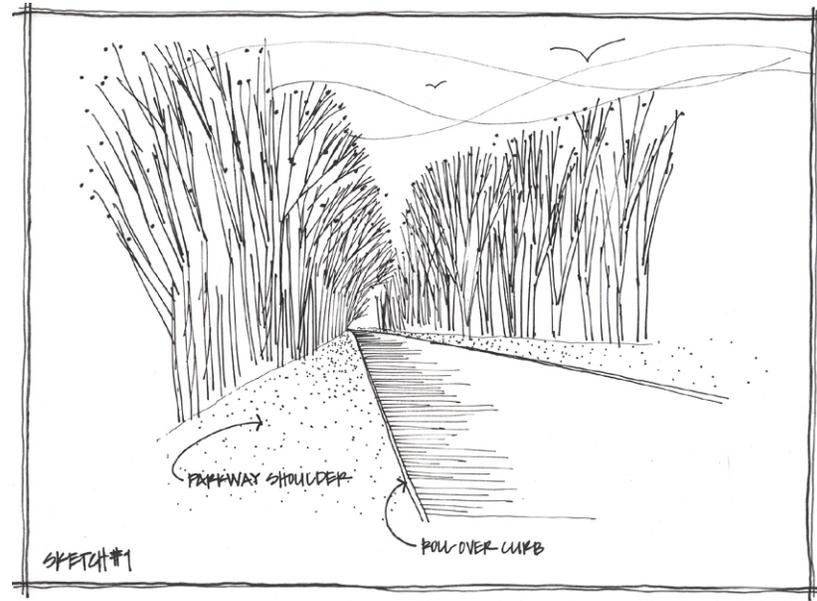


Figure B.6 Sketch 1

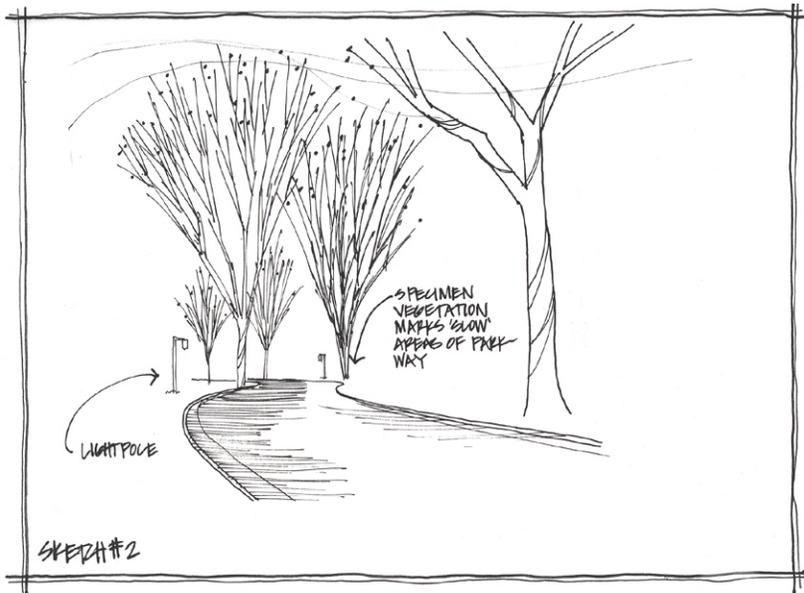


Figure B.7 Sketch 2



Figure B.8 Sketch 3

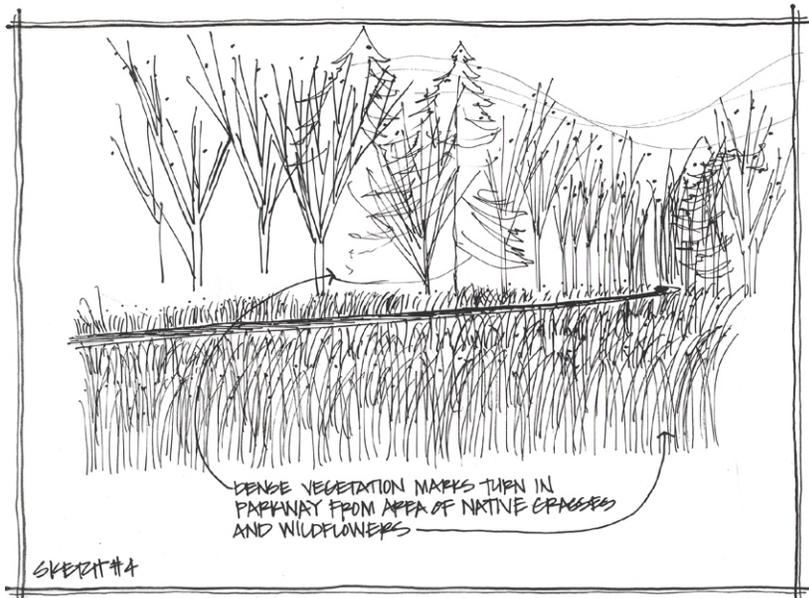


Figure B.9 Sketch 4

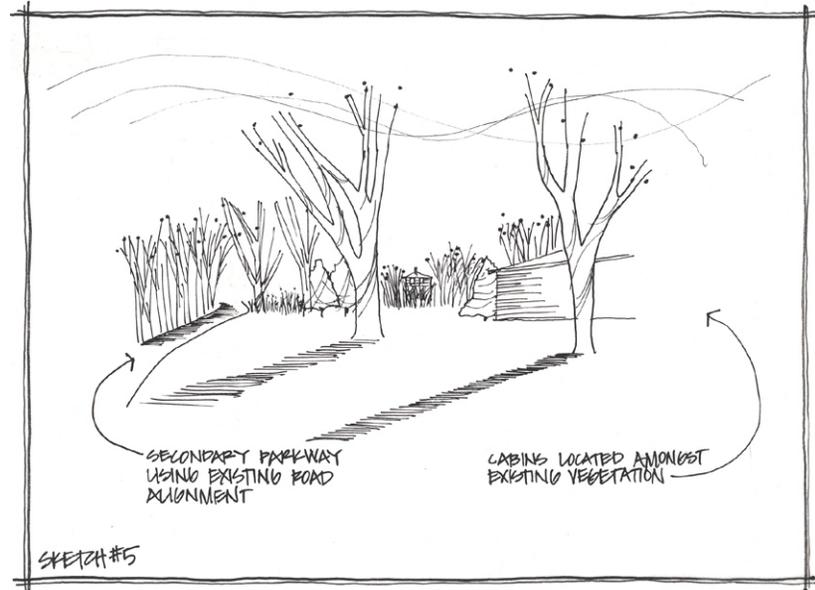
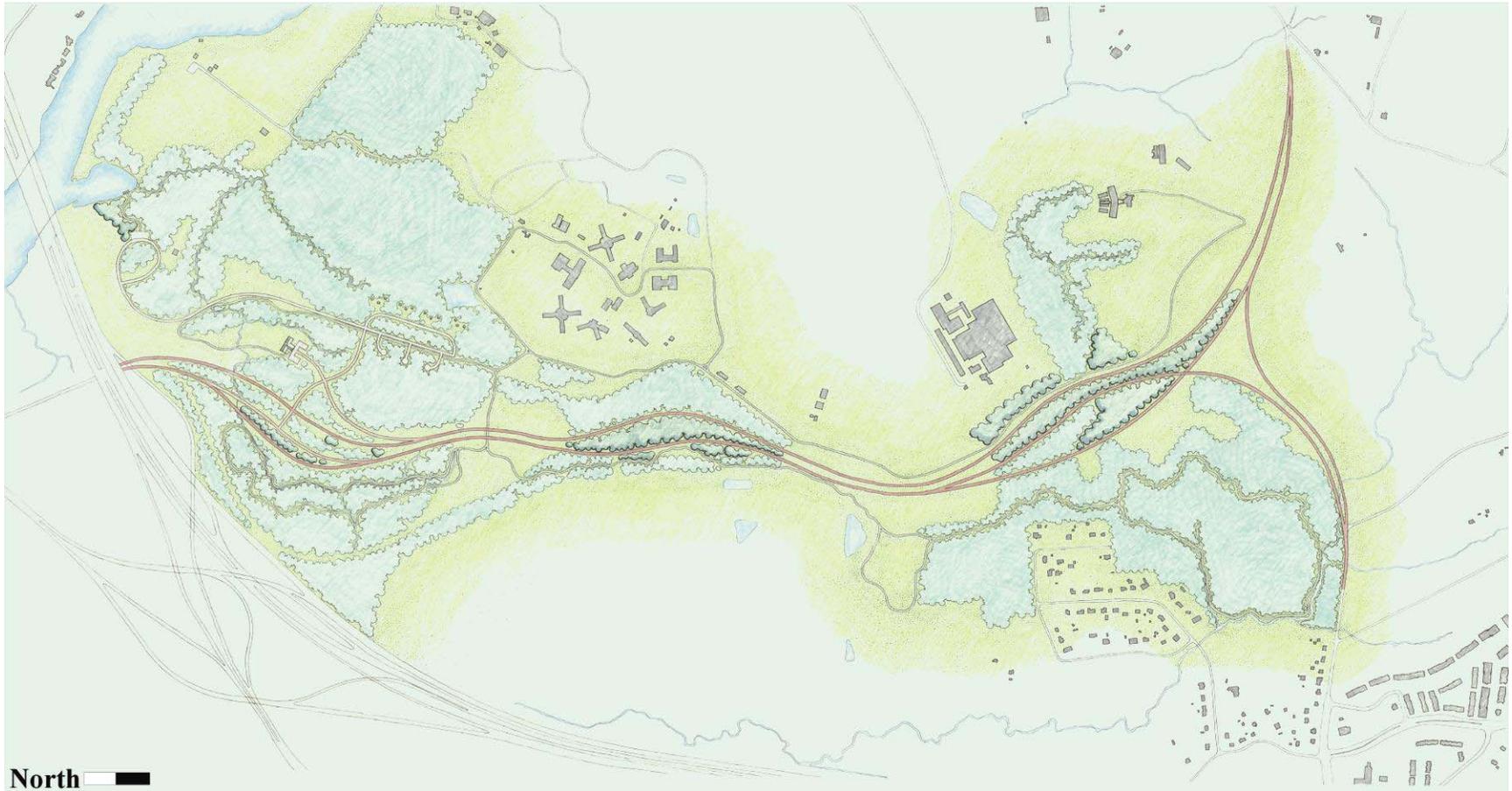


Figure B.10 Sketch 5



North 

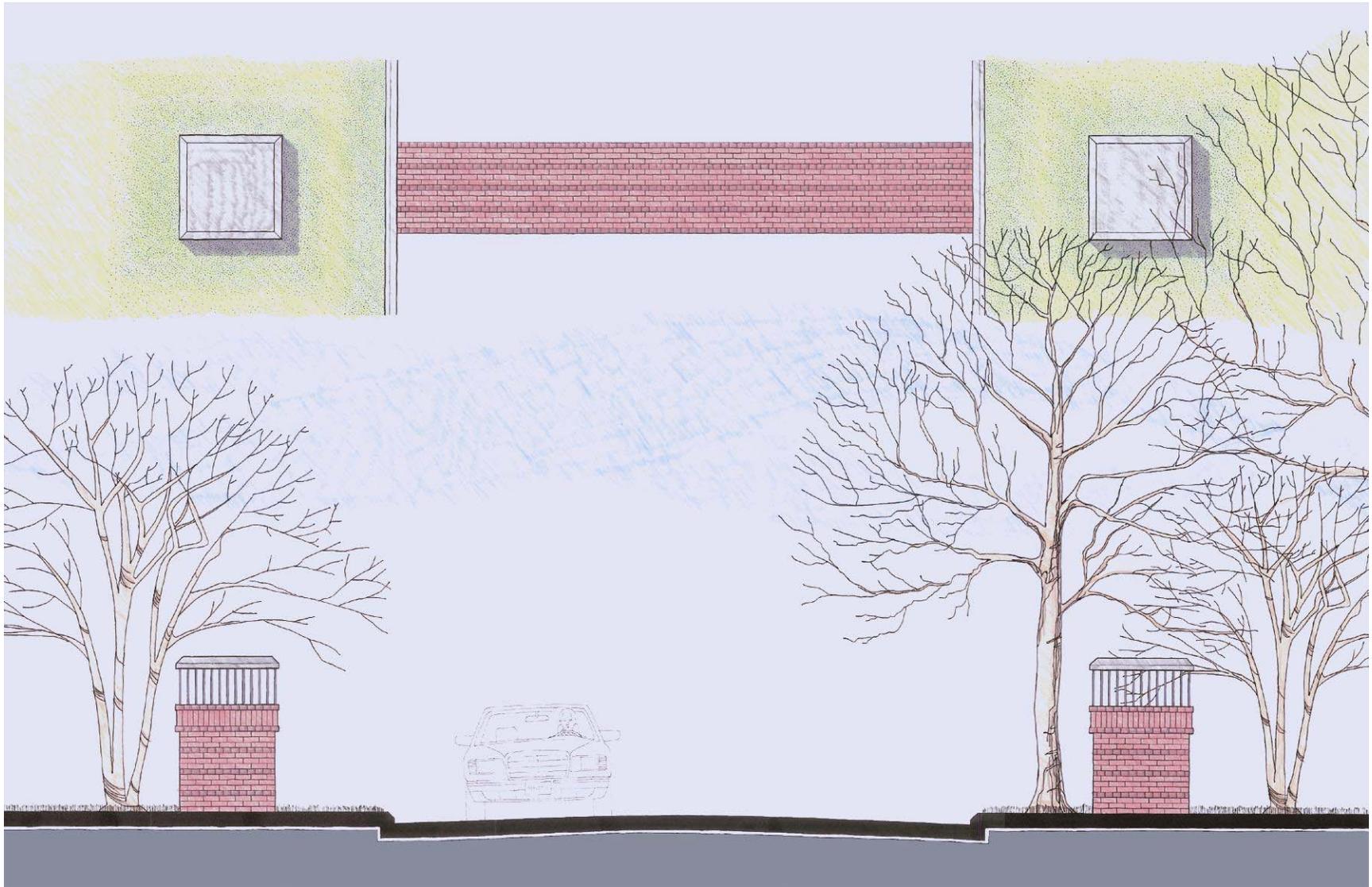
*Figure B.11 The Lorton – Laurel Hill Parkway (not to scale)*



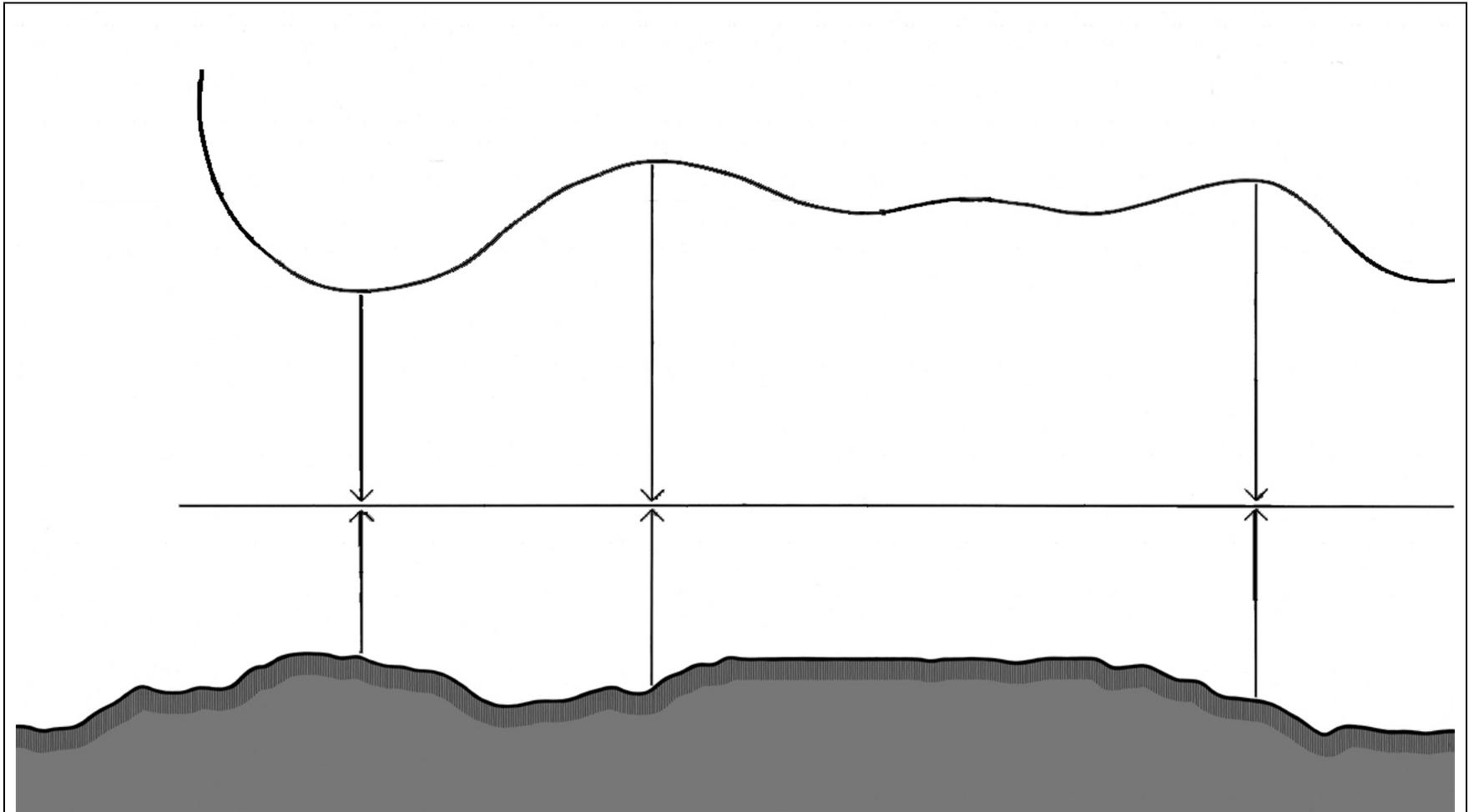
*Figure B.12 Enlargement of The Lorton - Laurel Hill Parkway (not to scale)*



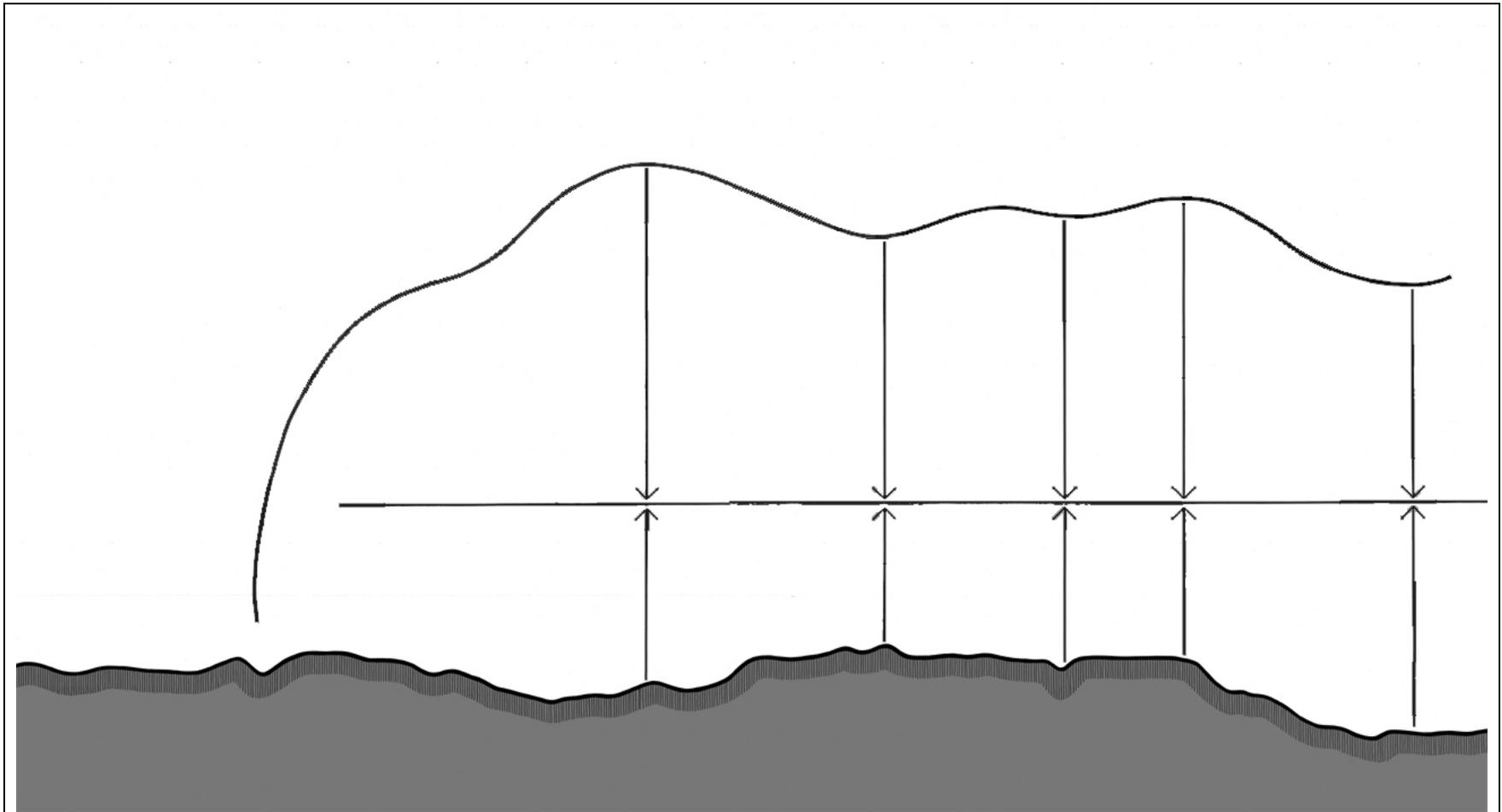
*Figure B.13 Section through four lanes of The Lorton - Laurel Hill Parkway (not to scale)*



*Figure B.14 Lorton – Laurel Hill Parkway Markers (not to scale)*



*Figure B.15 Coordination between vertical and horizontal alignment of northbound lanes of The Lorton - Laurel Hill Parkway (not to scale).*



*FigureB.16 Coordination between vertical and horizontal alignment of southbound lanes of The Lorton - Laurel Hill Parkway (not to scale).*



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## **Education**

*May 2003 Virginia Polytechnic Institute & State University  
Washington Alexandria Architecture Center Alexandria, Virginia*

- Master of Landscape Architecture in the College of Architecture and Urban Studies.

*June 1999 The Ohio State University  
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- Bachelor of Science in Landscape Architecture from a design-oriented program at the Austin E. Knowlton School of Architecture.

## **Teaching Experience**

*The George Washington University  
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*January 2002-Present  
Position: Instructor*

- Instructed Site Engineering and Landscape Technology courses in the Landscape Design Program.

## **Professional Work Experience**

*Lewis Scully Gionet, Inc.  
Vienna, Virginia*

*August 2001-Present  
Position: Landscape Designer*

- Manage commercial projects from initial project start-up through completion, including schematic design, cost estimation, design development, construction drawings, and construction administration.
- Assist in managing and preparing drawings for residential and commercial projects including planting plans, grading plans, layout plans, construction documents, writing landscape specifications, and reviewing landscape submittals.
- Proficient with:
  - Construction techniques including steps, concrete, retaining walls, wooden arbors, trellises and screens.
  - Grading plans including site grading, drainage, and catch basin sizing.

- Site planning and project phasing.
- Layout plans including location of walls, steps, terraces, and all designed elements

*Stangeland and Associates, Inc.*

*Eugene, Oregon*

*July 1999-July 2001*

*Position Held: Landscape Designer / Project Manager*

- Conduct client meetings.
- Manage residential and commercial projects from initial project start-up to completion.
- Attend monthly Oregon Chapter Willamette Valley Section meetings of the ASLA.
- Developed office CADD standards and templates.

## **Honors and Professional Memberships**

*Scholarships:*

Fall 2001 Scholarship in the amount of \$1000 awarded by the Department of Landscape Architecture for academic excellence in the field of Landscape Architecture.

*Honors:*

*Dean's List – The Ohio State University*

Winter Quarter 1998, Autumn Quarter 1998, and Winter Quarter 1999.

*Design Honors:*

- Competed in extra-curricular design competition for The Village of Channahon, IL (2 member team collaboration). Program elements of the design included schools, recreation facilities, commercial shopping areas, and a variety of residences. Design placed 27<sup>th</sup> in a field of 130 professional and non-professional competitors (Spring 1999).
- Undergraduate design for railroad underpass was used as a template by the City of Hilliard, OH for the redevelopment of Cemetery Road (Winter 1998).

*American Society of Landscape Architects:*

- Student member.  
Chair Elect of the Student Chapter of the American Society of Landscape Architects at Virginia Polytechnic Institute and State University, Washington – Alexandria Architecture Center.