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PURPOSE AND NEED

This chapter describes the purpose and need for the Manassas National Battlefield Park Bypass Study. This chapter also discusses other elements relevant to the purpose and need, including the project history and current status of the project, the study area, other previous and current studies, and the relationship of this study to adopted plans. In addition, the elements of need are presented, as well as other considerations that need to be considered in completing the study.

1.1 STATEMENT OF PURPOSE AND NEED

The purpose for this study is to develop alternatives that will allow for the rerouting of the portions of US Route 29 and VA Route 234, which currently transect the Manassas National Battlefield Park (Manassas NBP or the Park), and to provide alternatives for the traffic traveling through the Park. As such, it is not the purpose of this project to provide additional capacity through the Park, but rather to study whether or not relocating the existing capacity in another location or by another means would allow for the closure of the roads within the Park.

The closure is needed to enhance Park experience, improve historic preservation efforts, and allow for better Park operation and management as intended by the Manassas National Battlefield Park Amendments of 1980 and 1988.

The project need is based on several elements. Cultural resource preservation, interpretation and visitor experience, as well as management and operations are negatively affected by traffic congestion within the Park from non-Park related cut-through traffic. These heavy volumes of non-Park related traffic impede access to historic sites and create public safety conflicts. Continued growth in areas surrounding the park will only worsen traffic conditions and impact cultural resources and the Park experience, although the primary element of need for closure of the roads is a result of the existing traffic congestion.

The purpose and need for this study is supported by the Manassas National Battlefield Park Amendments of 1988, which directed the study of closure of both US 29 and VA 234 in their current locations within the Park and relocation elsewhere. In addition to purpose and need, several goals and objectives have been established for this project and include the following:

- Preserve the historic and cultural integrity of the Park and its surrounding area.
- Accommodate existing traffic volumes now traveling through the Park.
- Separate Park and commuter traffic.
- Accommodate freight movements.
- Maintain or enhance transportation system linkage.
- Enhance multimodal access.
- Maintain access to the Park and to private in-holdings located within the Park.
- Coordinate the study process with other studies and agencies.
- Provide extensive opportunities for public involvement.

1.2 PROJECT HISTORY AND STATUS

The Secretary of the Interior established the Manassas National Battlefield Park in May 10, 1940 to preserve the scene of two major Civil War battles. The first major engagement of the Civil War, the First Battle of Manassas was fought on land that is now a part of the Park on July 21, 1861. A little over a year later, in August of 1862, the Second Battle of Manassas, a larger battle resulting in greater casualties, was also fought at the Park. The Park is one of 31 civil war sites in the National Park System and is visited by an average of 800,000 people every year. A map illustrating the Park's facilities is shown in **Figure 1-1**.

The conflict between Park-related activities and non-Park-related cut-through traffic on US 29 and VA 234 has resulted in several problems, including disturbance to historic resources, Park interpretation conflicts, serious impediments to public safety, traffic congestion and other concerns. Congress passed the Manassas National Battlefield Park Amendments of 1988 in response to these problems. The Act requires that the Secretary of the Interior, in consultation with the Commonwealth of Virginia, the Federal Highway Administration (FHWA), and Prince William County conduct a study to consider and develop plans for closing the portions of US 29 and VA 234 that transect the Park and to provide alternative routes for traffic now traveling through the Park. The legislation authorized funding up to \$30,000,000 to be appropriated by the Secretary of Interior for the study, improvement and construction of the project. However, Congress stipulated that federal funding for the project could not exceed 75% of the costs of construction and improvements. The remaining 25% or greater was to be provided by state or local governments from any source other than federal funds.

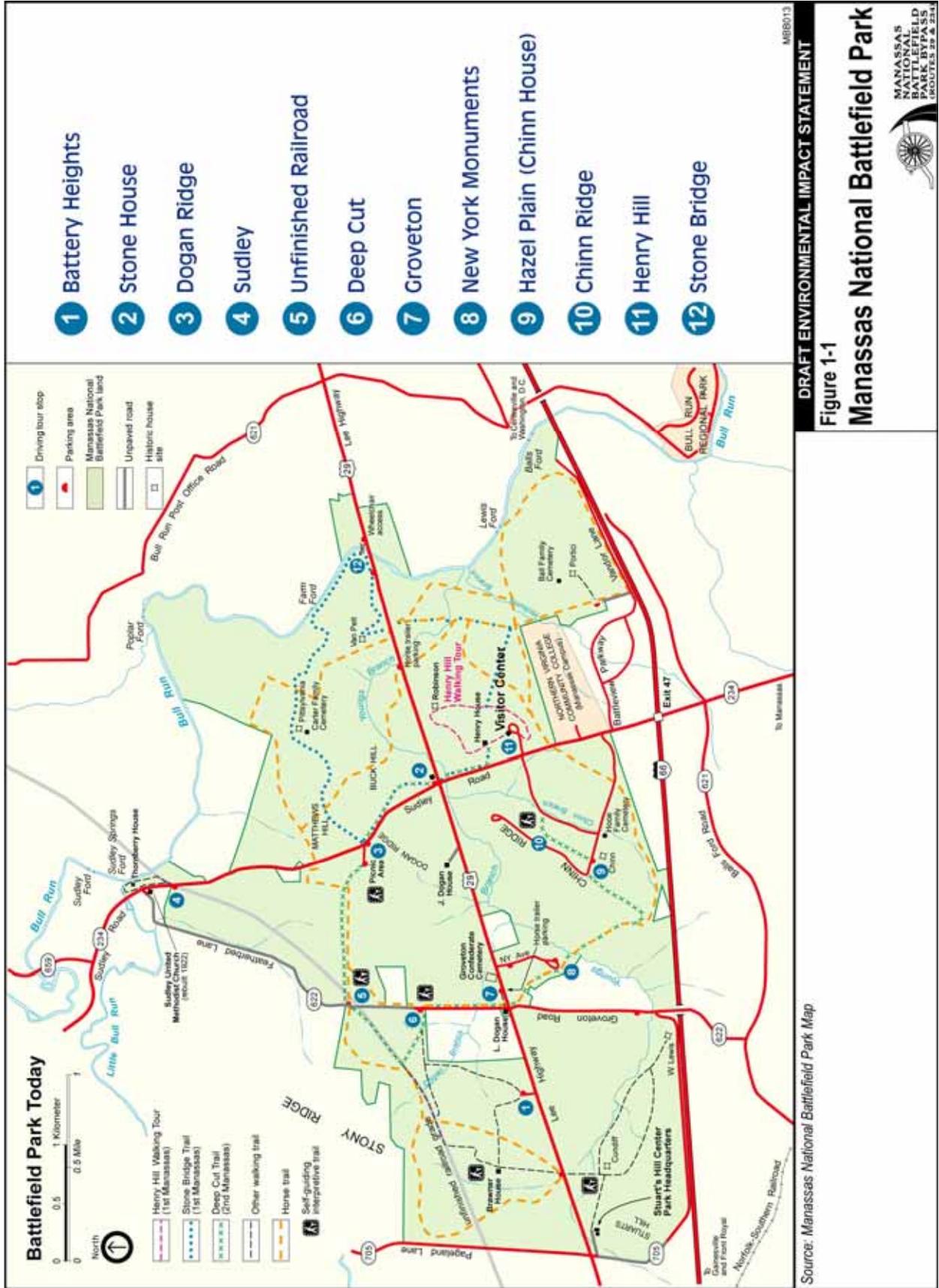
Although the study was originally scheduled to be completed within one year after the enactment of the law in 1988, the funding was only recently made available. A Memorandum of Agreement (MOA) was executed between NPS, FHWA, and the Virginia Department of Transportation (VDOT) to address the legislative directive. The MOA, signed on November 5, 1999, established the roles, responsibilities, and procedures under which work would be performed by each of the agencies for the preparation of an Environmental Impact Statement (EIS), and also for the design and construction of the bypass, if one was selected for construction following the environmental process.

A Notice of Intent to prepare the EIS was published in the *Federal Register* on November 1, 2001. This draft EIS (DEIS) was subsequently prepared and is now being made available for public review and comment. The alternatives that were developed and analyzed in this DEIS are described in Chapter 2. The affected environment and environmental consequences are described in Chapters 3 and 4. The list of preparers is in Chapter 5. The document has been distributed to the agencies listed in Chapter 6, and a notice of its availability will be published in the *Federal Register*. The public involvement and agency coordination activities are described in Chapter 7. Chapter 8 presents the 4(f) evaluation.

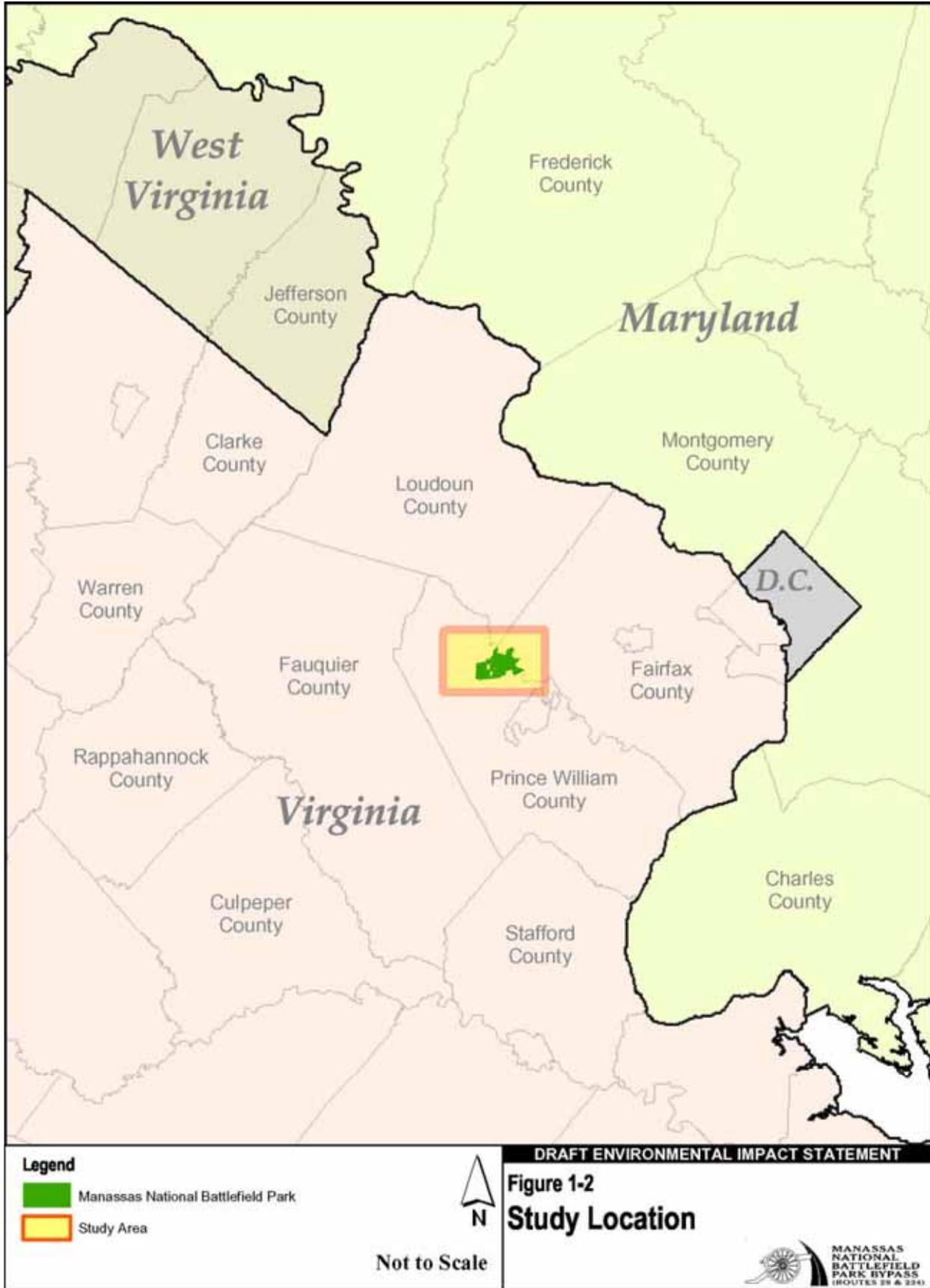
1.2.1 Study Area

The Manassas NBP is located in Prince William and Fairfax counties, on the western edge of the Washington, D.C. metropolitan area, as shown in **Figure 1.2**. Just to the north of the Manassas NBP is Loudoun county, one of the fastest-growing counties in the United States in the past few years. The study area is primarily known as a suburb within the greater metropolitan Washington, DC region, although this character is changing as the localities in the study area continue to expand employment within their jurisdictions.

The preliminary study area was developed to accommodate a wide variety of alternatives both north and south of the Park that would allow for the relocation of traffic on US 29 and VA 234 from their existing locations



DRAFT ENVIRONMENTAL IMPACT STATEMENT
Figure 1-1
Manassas National Battlefield Park



within the park. The preliminary study area included portions of Prince William, Loudoun, Fairfax, and Fauquier Counties, the Cities of Manassas and Manassas Park, and the Town of Haymarket (see **Figure 1.3**). This preliminary study area served as the initial boundary for which resource data was collected and summarized in the *Existing Conditions Report* prepared for this environmental study.

The Park consists of approximately 5,100 acres of mostly rolling terrain. The borders of the Park are fairly well defined by the roads and natural features in the area: Interstate 66 (I-66) to the south, Pageland Lane (Route 705) to the west, and Bull Run to the north and east. The land directly surrounding the Park is mostly undeveloped land or low-density development with mostly rural residential areas to the north and west, and some slightly more intense commercial and residential land uses to the south and east. Two active rock quarries are currently in operation at points on the Park's northern and eastern borders.

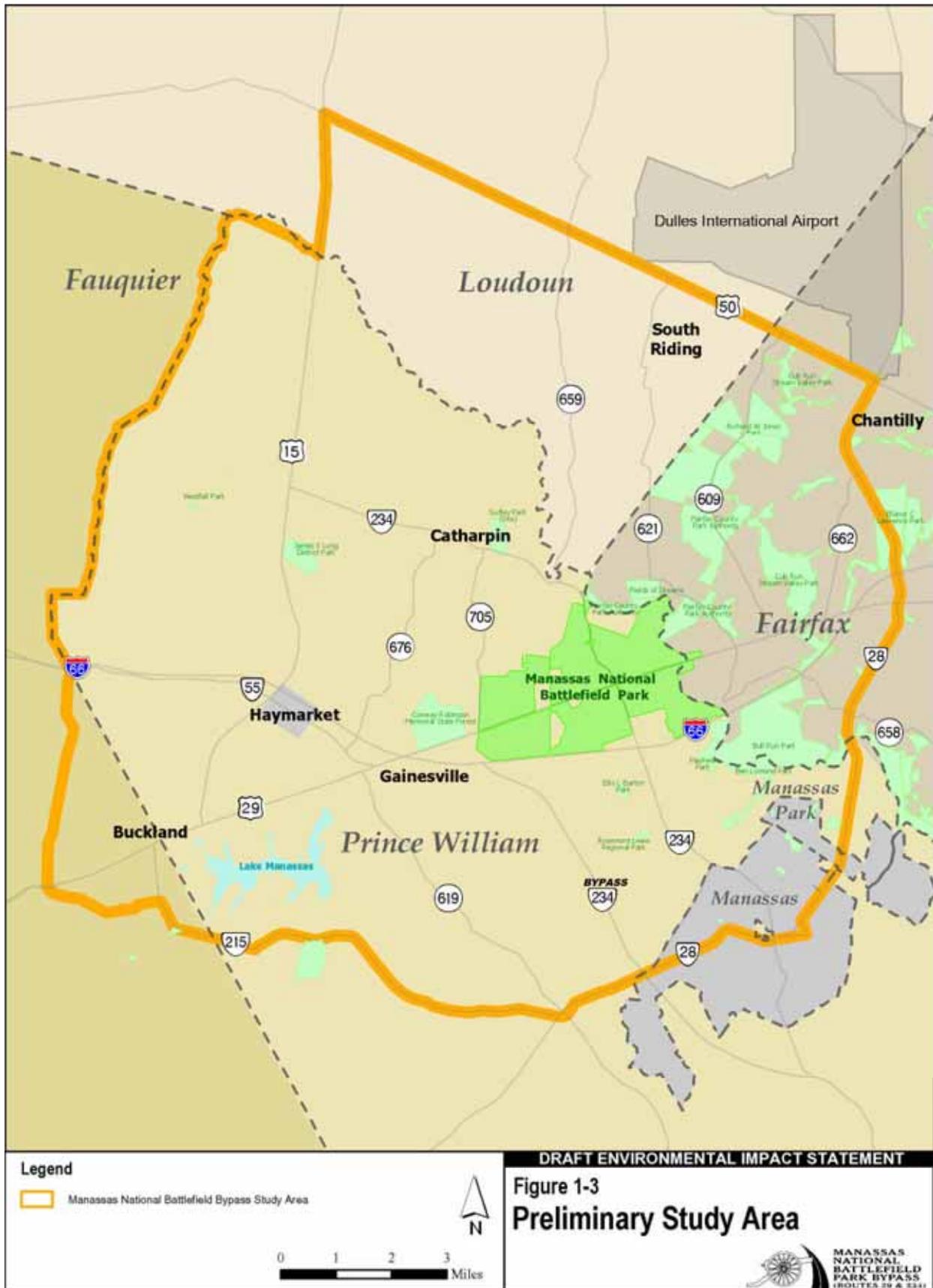
1.2.2 Previous and Current Studies

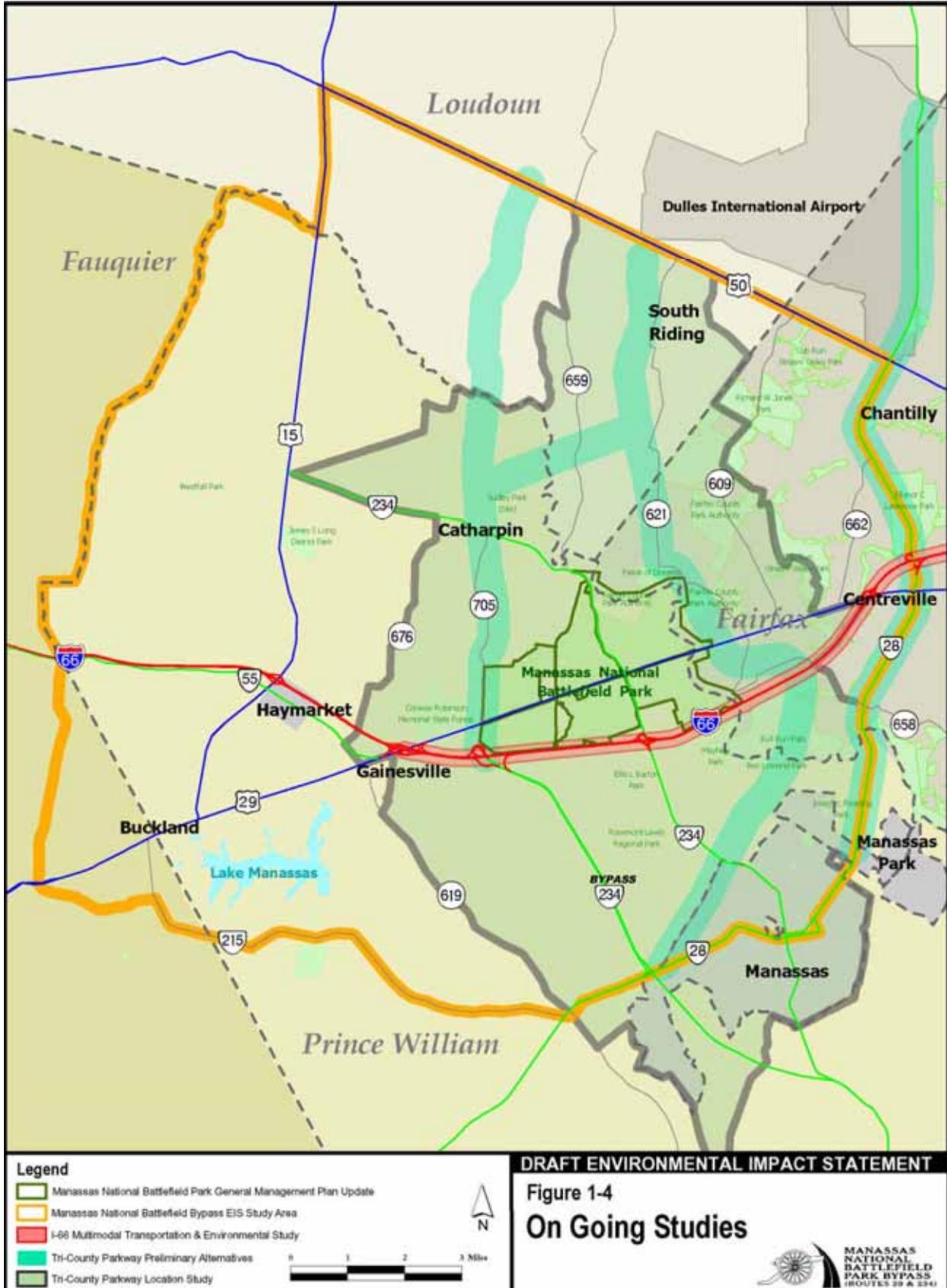
Options for a bypass of the Manassas NBP have been considered in several previous studies. Alternatives from these other studies were reviewed and provided a starting point in the development of preliminary concepts for this study. In particular, the EIS for the *VA Route 234 Bypass* provided a basis for options for relocating VA 234 from its current location within the Park. The *U.S. Route 29 Corridor Development Study: Warrenton to Centreville, Virginia* study provided several alternatives that served as preliminary concepts for relocating US 29 from its current location.

Coordination activities with other ongoing studies have occurred throughout the study process to reduce expenditures and maintain consistency. However, the purpose and need for each study is unique. The coordination process as it relates to alternative development is discussed in more detail in Chapter 2 and 6. The study areas for other ongoing studies are illustrated in **Figure 1-4**. Other relevant previous and current studies are listed and summarized below in their approximate chronological order.

VA Route 234 Bypass. Beginning in the late 1970's the FHWA and the Virginia Department of Highways and Transportation (now called the Virginia Department of Transportation or VDOT) developed plans for a VA 234 Bypass that would re-route north-south traffic west of the City of Manassas and the Manassas NBP. The proposed project would have begun southwest of the City of Manassas crossing I-66 and running along the western side of Pageland Lane, then reconnecting with the existing VA 234 at Catharpin Rd., northwest of the Park and extending westward to Route 15. A Final Environmental Impact Statement (Final EIS) was approved in 1981 and Prince William County amended its comprehensive plan to include the bypass in 1982. Despite the approval, the project was delayed until late 1992. As right-of-way and construction plans were being formalized for the project, due to the 10 year lapse since the approval of the Final EIS, changes to the project, its impacts, and in the regulatory environment, preparation of a Supplemental Environmental Impact Statement (Supplemental EIS) was necessary to address those changes. The proposal for a Disney theme park in the vicinity was also an issue at the time. Disney later abandoned the project as a result of significant public opposition and criticism.

The Supplemental EIS was approved in September of 1994. However, sections of the bypass located north of I-66 were deferred for further study because the level of demand was much higher for sections of the bypass located on the south side of I-66. The Department of Interior registered disappointment at the exclusion of the northern section due to the Park's longstanding support of improvements necessary to close the portion of VA 234 inside the Park.





Manassas National Battlefield Park Transportation Study. In 1996 the National Park Service (NPS) commissioned a study that examined the operational and safety characteristics of traffic and parking conditions within the Park. The results of the study showed several problems associated with US 29 and VA 234.

Traffic engineers evaluated the traffic operations based on the level of service (LOS) concept with ratings from A to F. LOS A represents excellent traffic flow with minimal delays while LOS F represents failure in traffic operations and very long delays. For most non-urban areas, a LOS of A, B, or C is considered acceptable while a LOS of D, E, or F is considered unacceptable. The study determined that during peak periods the intersection of US 29 and VA 234 was already operating above capacity at LOS F and that by 2010 all four of the major intersections in the Park would be operating above capacity. Further analysis showed that the problems extended beyond the intersection. Analysis of the major corridors found all sections of US 29 and VA 234 within the Park to be operating at low service levels (LOS-E or worse) and that all corridors would be over-capacity by 2010.

According to the study, the largest number of accidents within the Park occurred at that the intersection of US 29 and VA 234. It was concluded in the study that many of the accidents occurred as a result of the traffic congestion caused by the intersection. The accident rate at the intersection of US 29 and VA 234 from data obtained from 1991-1994 was calculated to be 2.38 accidents per million vehicles entering (MVE). Since this rate is well over the high-accident threshold of 1 acc/MVE, the intersection was identified as a high-accident location. Additionally, the study identified concerns about pedestrian safety at the intersection. There is a major hiking trail crossing US 29 near the intersection, and at the time, there were no pedestrian facilities present.

U.S. Route 29 Corridor Development Study: Warrenton to Centreville, Virginia. In March of 1998, the Virginia Department of Rail and Public Transportation (DRPT) and the Virginia Department of Transportation (VDOT) commissioned a study to find out if sufficient travel demand exists to warrant a bypass from Warrenton to Centreville that would allow for the removal of US 29 from the Manassas NBP, and if so, to determine viable alignment options for further study.

Using forecasts based on the *Constrained Long Range Plan for the National Capital Region (CLRP)*, it was determined that under a no-build or existing alignment scenario, traffic volumes along the portion of Route 29 that runs through the Park will reach levels beyond the roadway capacity and that consideration of a bypass route is warranted. If no improvements are made, queues and congestion on Route 234 and Route 29 will reach unacceptable levels.

Several alternative alignments for a bypass were considered and screened based on impacts to cultural and historical resources in the area, disruption to the physical environment, difficulty in construction, and public comments. The initial screening left four general options for further study. These included two possible alignments north of the Park, co-location with I-66 to the south, and a “no build” option in compliance with the requirements of the *National Environmental Policy Act (NEPA)*. The Prince William County Board concurred with the findings regarding the alternatives for future study.

Safety Improvements at the Intersection of US 29 and VA 234. In December 2001, many of the safety improvements recommended in the *Manassas National Battlefield Park Transportation Study* were completed at the intersection of US 29 and VA 234 including the relocation of the parking lot at the Stone House. Additional improvements included the re-timing of traffic signals and construction of a pedestrian bridge so pedestrians would not have to walk on the roadway shoulder to access the Stone House.

I-66 Multimodal Transportation and Environmental Study (I-66 MTES). VDOT and the Department of Rail and Public Transportation (DRPT) initiated the *I-66 MTES* to study mobility improvements along the I-66 corridor from just west of the I-66/I-495 (Capital Beltway) interchange in Fairfax County to the I-66/US Route 15 interchange near Haymarket in Prince William County.

In the Major Investment Study prepared for the project in 1999, DRPT projected that east-west traffic demand will increase due to population and employment growth within the I-66 corridor. The report states that additional transportation system capacity is needed to support the expected growth over the next 20-25 years. Both US 29 and VA 234 will also be impacted by this growth, and congestion and delays will worsen without the implementation of measures to alleviate impacts to the Park.

The most urgent issues that need to be addressed, according to the *Purpose and Need Report* in the current study, are traffic safety and congestion problems, as well as a lack of transit connectivity. The *I-66 MTES* Study Team is currently modeling and testing transportation conditions in the Study Area to determine the impact that improvements would have on the flow of travel in the I-66 corridor.

Tri-County Parkway Location Study (TCP Study). This study is evaluating a new north/south transportation link in Northern Virginia to connect the City of Manassas with I-66 and the Loudoun County Parkway in the Dulles area. The study extends from the Interchange of VA 234 and VA 28 in Prince William County, north through Fairfax County to US 50 in Loudoun County. Key elements of the purpose and need for this study include improving north/south access within the study area, reducing congestion, enhancing the linkage of communities and the transportation system, and improving safety.

Several candidate build alternatives have been developed as a part of this study, some of which overlap with alternatives for the Battlefield Bypass.

Manassas National Battlefield Park General Management Plan Update. The Manassas National Battlefield Park General Management Plan Update (GMP) is currently preparing a GMP update for The Park. This GMP Update will coordinate actions coming out of this study with the affected, existing, and proposed Park resources and Park management activities. The enhancement of Park experiences, improvement of historic preservation efforts, and allowances for improved Park operations and management that is the purpose and need for this study is a major consideration for the Manassas National Battlefield Park GMP update.

1.2.3 Relationship to Adopted Plans

A bypass of the Manassas National Battlefield Park is consistent with past and present local, regional, and state planning efforts. The following plans were reviewed to determine the status of transportation and land use objectives relevant to this project:

- Prince William County 2003 Comprehensive Plan
- I-66 and Route 29 Sector Plan (Prince William County)
- Fairfax County Comprehensive Plan (Policy Plan and Bull Run Sub Area Plan)
- Loudoun County Revised General Plan
- Countywide Transportation Plan for Loudoun County
- Fauquier County Comprehensive Plan, 1992–2010

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- Comprehensive Plan for the City of Manassas, 1989
- Town of Haymarket Comprehensive Plan, 1996-2001
- Constrained Long Range Plan for the National Capital Region
- Northern Virginia 2020 Transportation Plan

Several of the plans above include projects or policies that support or would contribute to a bypass of the Manassas NBP. The *Prince William County 2003 Comprehensive Plan* lists the “234 Bypass North (I-66 to Loudoun County)” to relieve traffic on Route 15, US 29, and VA 234. The main function of the extension will be to serve traffic between Prince William County and the Dulles Airport corridor in Loudoun County, and related areas in Fairfax County. Further study is recommended to set an exact alignment.

The *Loudoun County Comprehensive Plan* lists several policy goals, which include the need to develop and implement a strategy that will respect the valued rural, historic and environmental landscapes and other quality-of-life measures while providing affordable transportation choices for all county residents. Specific transportation projects listed in the *Loudoun County Transportation Plan* include a connection of the VA 234 Bypass (the northern extension, not yet constructed) with a relocated Route 659. The Plan acknowledges that VA 234 is not likely to be widened within the Park and thus relocation of the existing Route 659 would be coordinated with construction of the VA 234 Bypass.

The status of regional planning initiatives was also assessed through review of documentation from regional planning agencies, including, but not limited to, the *Constrained Long-Range Plan for the National Capital Region (CLRP)* and the *Northern Virginia 2020 Plan*. The National Capital Region Transportation Planning Board (TPB) is the federally designated Metropolitan Planning Organization (MPO) for the region, and plays an important role as the regional forum for transportation planning. The TPB prepares plans and programs that the federal government must approve in order for federal-aid transportation funds to flow to the Washington region. Members of the TPB include representatives of local governments; state transportation agencies; the Maryland and Virginia General Assemblies; the Washington Metropolitan Area Transit Authority; and non-voting members from the Metropolitan Washington Airports Authority and Federal agencies.

The *CLRP* is a comprehensive plan of transportation projects prepared by the TPRB that includes strategies that can realistically be implemented over the next 30 years. The Transportation Improvement Plan provides detailed information showing which projects in the *CLRP* will be funded over a 6-year period. Construction of the VA 234 Bypass extension from its current terminus at I-66 northward to the Loudoun County border is included in the *CLRP*. The extension would consist of a 4-lane roadway and is scheduled for completion in 2010.

The *Northern Virginia 2020 Transportation Plan* was prepared based on the directive of the Virginia Senate through the guidance of locally elected officials representing the counties, cities and towns that comprise the Transportation Coordinating Council of Northern Virginia (TCC). The plan includes projects already listed in the *CLRP* plus additional improvements identified by the TCC. Projects not listed in the *CLRP* that are listed in the 2020 plan include a study to close and relocate portions of US 29 around the Manassas National Battlefield Park.

1.3 ELEMENTS OF NEED

The Manassas National Battlefield Park is one of the most significant civil war battlefield sites in the United States. The presence of US Route 29 and VA Route 234 within the Park boundaries creates daily conflicts with the overall purpose of the Park, which is to preserve and commemorate the activities associated with the First and Second Battles of Manassas. US 29 and VA 234 need to be relocated from within Park boundaries in order to meet Park historic preservation, interpretation and maintenance needs; to meet legislative intent; to better accommodate regional growth and development changes; to enhance regional transportation system linkage and traffic operations; and to improve public safety.

1.3.1 Historic Preservation Needs

Although the Park was created as a place to commemorate the two historic battle scenes, non-Park related cut-through traffic traveling on US Route 29 and VA Route 234 creates several problems that interfere with that purpose. The two roadways bisect the Park and are used by a conflicting combination of Park visitors, commuters, and commercial and industrial traffic. Park visitors need to use the highways in order access the historic and scenic sites within the Park, which can be particularly difficult during the peak travel periods when non-Park-related traffic is highest. Non-Park-related cut-through traffic impedes visitors' ability to enjoy the Park by creating congestion that impedes access to several areas of the park, generating visual and noise disturbance, and creating some dangerous conditions for Park visitors.

The most obvious traffic problem is at the intersection of US 29 and VA 234, which is located at the center of the Park near the Park's most popular site, the historic Stone House, a former Civil War field hospital. Traffic congestion at the intersection impedes access to the Stone House and causes visual, noise, and vibration impacts. During peak travel times, traffic queues of more than 2 miles in length have been observed at the intersection.

Non-Park-related cut-through traffic consists primarily of traffic generated by the surrounding suburbs and employment centers. The cut-through traffic includes commuter traffic from suburban areas to and from Washington, D.C. (east-west), as well as an increasing amount of north-south trips. Commercial and industrial cut-through traffic within the Park is higher than average and consists of large construction and dump trucks hauling dirt, gravel, and asphalt from nearby quarries and construction sites. Heavy vehicles and commercial truck traffic in the Park ranges from approximately 9 to 13 percent of all traffic, which is significantly higher than the 2 to 5 percent typically seen on most roads.

1.3.2 Park Interpretation and Operation Needs

The presence of US 29 and VA 234 within the center of the Manassas National Battlefield Park serves as an impediment to park interpretation and operations. These two routes serve not only as major commuter routes in Northern Virginia, but also as the primary means of access to the historic sites within the Park. These sites are shown in Figure 1-1 (shown previously). The presence of high volumes of cut-through traffic and peak-hour congestion on these routes, which are located within the center of the historic landscape associated with the Park, effectively divides the Park into four separate quadrants. There is a need to relocate the routes so that visitors can experience the Park without the interference of congestion, fast-moving commuter traffic, and commercial truck traffic. In addition, the poor traffic operations that occur on US 29 and VA 234 daily makes Park operations more difficult as support personnel and services are also subject to delays associated with congestion.

Park visitation tends to vary seasonally by both the amount and type of visitation. During the spring, visitation is heaviest on weekends and is usually concentrated around the visitor center and surrounding areas. Overall visitation

is highest during the summer due to increased visitation from families and other groups on extended vacations. Fall visitation includes visits from senior citizen and organized tour groups and is concentrated on weekends. Local residents also tend to make increased use of the Park in the fall. Visitation is lightest during the winter. Peak daily use generally occurs between 11:00 a.m. and 4:00 p.m. with the heaviest amounts on weekends.

Accounts of Park visitation over the last 15 years show a range of between 670,063 and 1,008,126 people per year. Park visitation has been relatively consistent over the 15-year period, with a slight decline over the past five years from the high in 1997. Average annual visitation for the 15-year period is slightly more than 839,621.

Park management and operations require use of Park roads throughout the day. Park visitors taking the park tours may need to cross Route 29 and Route 234 at several points (**Table 1-1**). Effective management and operation of the Park requires the development of alternatives that will provide improved access to and between sites of the Manassas National Battlefield Park.

TABLE 1-1: ROAD CROSSINGS FROM PARK TOURS

Trail	Route 29	Route 234
Stone Bridge Trail	2	-
Deep Cut Trail	2	2
Other Walking Trails	1	-
Horse Trail	2	3

1.3.3 Legislative Intent Needs

Congress passed the Manassas National Battlefield Park Amendments of 1988, which requires the analysis contained in this DEIS. The Act requires that the Secretary of the Interior, in consultation with the Commonwealth of Virginia, the Federal Highway Administration (FHWA), and Prince William County conduct a study to consider and develop plans for closing the portions of US 29 and VA 234 that transect the Park and to provide alternative routes for traffic now traveling through the Park. Relocation alternatives are presented that meet the intent of this legislation. The text of the Act is included as Appendix A.

1.3.4 Regional Growth and Development Needs

The study area surrounding the Park has grown significantly over the past few decades, resulting in increasing non-Park-related traffic using US 29 and VA 234 through the Park. The region, and in particular the areas surrounding the Park, are expected to continue to grow rapidly. This growth will contribute to increased use of area roadways, which will include increased use of roadways currently located within the Park.

Projections of population growth are displayed in **Table 1-2**. According to the forecast, the largest percentages of increase in population growth are in the outer suburbs of Loudoun and Prince William Counties. Loudoun's population will nearly triple by 2025, with an enormous increase of approximately 195%. The second highest percent increase will occur in Prince William County, where the population is expected to increase by 41%. The population of Fairfax County is expected to increase by 235,000, the largest total population increase next to Loudoun.

In Prince William County, much of the population growth will occur in the “Golden Triangle” area of the study area as demarcated by I-66, US 29, and Route 15. Much of this growth will be low-density residential growth. Additional growth in Prince William County is projected along the southern boundary of the study area, to the west of the City of Manassas.

Employment in the region will also grow rapidly. **Table 1-3** illustrates the projected employment growth for jurisdictions in the study area. The projected rate of employment growth is greatest in Loudoun County where the number of jobs will increase dramatically by 173% in the year 2025. Prince William County will also experience a rapid rate of job growth with an increase of 69%. Fairfax County is expected to add the largest total number of jobs with more than 200,000 new jobs in the county.

TABLE 1-2: POPULATION FORECAST BY JURISDICTION

Jurisdiction	Pop. 2000	Pop. 2025	% Change
Arlington County	192,000	207,200	8%
Fairfax County	968,200	1,203,700	24%
Fauquier County	55,139*	Not Available	Not Available
Loudoun County	172,200	508,200	195%
Prince William County	286,100	405,700	41%
Manassas and Manassas Park	43,200	46,400	7%
Town of Haymarket	756	990	31%

Source: MWCOG, Round 6.2 cooperative forecasts. Town of Haymarket forecast is based on MWCOG Round 5.2 cooperative forecasts.

*U.S. Census 2000

TABLE 1-3: EMPLOYMENT FORECAST BY JURISDICTION

Jurisdiction	Jobs 2000	Jobs 2025	% Change
Arlington County	201,200	294,700	43%
Fairfax County	526,400	727,800	38%
Loudoun County	85,300	232,800	173%
Prince William County	90,600	152,700	69%
Manassas and Manassas Park	21,600	25,400	17%

Source: Metropolitan Washington Council of Governments, Round 6.2 cooperative forecasts.

Much of the employment growth projected for Prince William and Loudoun Counties will occur in activity centers located near the Park. The Washington Metropolitan Council of Governments (MWCOG) defines activity centers as areas with more than 15,000 total jobs and as having a density of more than 10 jobs per acre. The study area includes 4 activity centers in addition to other significant business districts (**Table 1-4**).

1.3.5 Transportation System Linkage and Traffic Operations Needs

Both sections of US 29 and VA 234 within the Park provide important links in the local and regional transportation network. US 29 crosses I-66 at points located both east and west of the park. I-66 is one of the primary routes leading to Washington, D.C from Prince William and Fairfax counties. This section of US 29, which runs through the park, is often used as an alternate for people who are traveling on I-66 and is part of the larger US 29 corridor, providing statewide transportation access in Virginia. US 29 is four lanes on both sides of the Park but narrows to only two lanes within the Park's borders.

TABLE 1-4: JOBS AT ACTIVITY CENTERS

Activity Center	Jurisdiction	Jobs 2000	Jobs 2025	% Change
Bull Run–Sudley Area	Prince William County	13,185	16,813	28%
Innovation	Prince William County	1,573	18,209	1,114%
Dulles West	Fairfax County	20,271	35,996	78%
Dulles East	Fairfax County	17,009	30,574	80%

Source: MWCOG, Planning Directors Technical Advisory Committee

VA 234 also intersects with I-66 and provides other important links to the north and south. It extends southward to Interstate 95 (I-95) in Prince William County and provides a connection to Loudoun County and the Washington-Dulles International Airport to the northeast. The existing VA 234 Bypass is located southwest of the Park and ends at the intersection I-66. The planned extension of the VA 234 Bypass would continue the road north to the Loudoun County Border and reconnect with VA 234. This extension would provide a bypass route for the existing portion of VA 234 located within the Park.

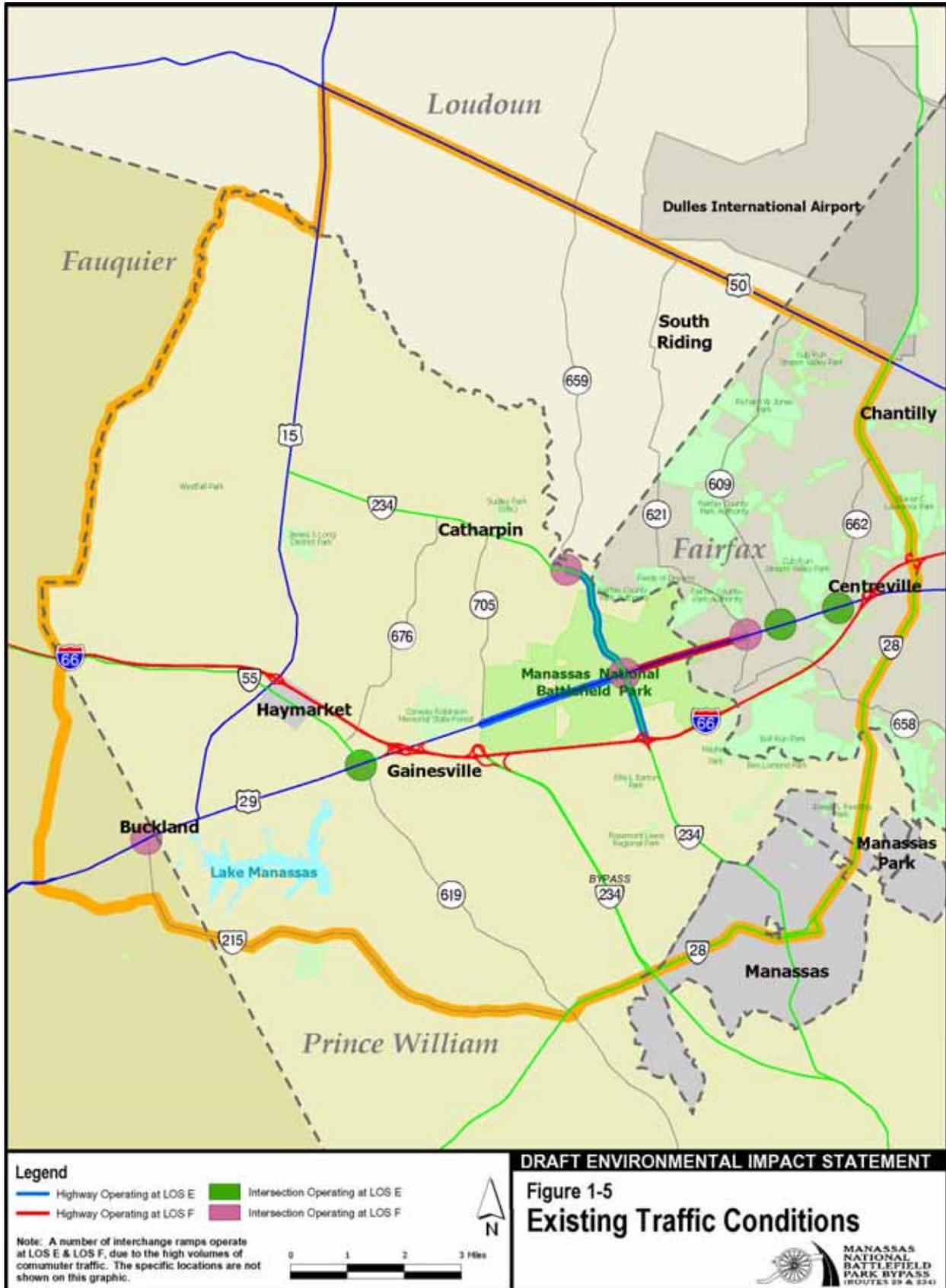
Traffic studies of the sections of US 29 and VA 234 located within the Park in 2002 showed average daily traffic volumes ranging from 9,089 to 13,166 vehicles on US 29 and 9,815 to 14,079 vehicles on VA 234, most of which is not Park related. All segments of US 29 and VA 234 within the Park were found to be operating at unacceptable levels (LOS E or worse) during the peak periods, with the intersection of the two roads operating at LOS F during both the AM and PM peak periods. Traffic operations are shown in **Figure 1-5**.

The most significant congestion through the park occurs in the eastbound direction on US 29 during the AM rush hour period. During this time period, queues were observed to extend 1.8 miles from the traffic signal at the intersection with VA 234. This congestion also occurs in the westbound direction on US 29 during the PM rush hour period, but not to the same extent as during the morning period. The queues at the signalized intersection of US 29 and VA 234 during the PM peak hour were observed to extend approximately ½ mile from the intersection.

The percentage of truck traffic was also measured and is very heavy within the Park. Heavy vehicles or commercial truck traffic in the park ranges from approximately 9 to 13 percent of all traffic, which is significantly higher than the 2 to 5 percent typically seen on most roads.

1.3.6 Public Safety Needs

The conflict created by heavy volumes of non-Park related traffic in the Park has led to several public safety concerns. VA 234 and US 29 cross the Park's interpretive trails used by walkers and horseback visitors at several



points. Park visitors traveling by automobile must share the roads within the Park with heavy cut-through commuter and truck traffic. Historically, the most significant public safety concern has been at the busy intersection of US 29 and VA 234.

Despite impacts to the Park, the Park did allow safety improvements to be completed in 2001, which included the addition of left turn lanes on all legs of the intersection and a new traffic signal system with pedestrian controls. Although these improvements were made, an increasingly high volume of traffic is still projected to pass through this intersection every year, resulting in continued congestion and the likelihood for accidents.

1.4 OTHER CONSIDERATIONS

The previous section defined the primary elements of need that have been identified for the Manassas National Battlefield Park Bypass Study. However, in conjunction with a Citizen's Advisory Board (CAB), localities, and the Virginia Department of Transportation (VDOT), a series of other related goals have been developed as part of the evaluation of alternatives in this DEIS. They include the following:

- Allow for Closure of Both Routes US 29 and VA 234 – this study will assess the impacts of closing both routes through the Manassas NBP. The purpose of this study is not to close one route or the other, but to provide relocation alternatives that will allow for the closure of both roads.
- Accommodate Existing Traffic Volumes – the primary objective of this DEIS is to develop alternatives that can accommodate existing traffic volumes. Existing traffic congestion interferes with historic preservation and park interpretation. Impacts will be assessed in accordance with the National Environmental Policy Act (NEPA) and a future scenario, defined as the No-Action Alternative, has been developed to meet those requirements. However, this study acknowledges that the elements of need defined in the previous section are applicable to current conditions, and are not dependent on future growth (although future growth pressures are expected to worsen conditions).
- Separate Park Traffic from Commuter Traffic – one of the goals of this study will be to develop alternatives that allow for Park visitor traffic to be separated from commuter traffic within the Park boundaries.
- Accommodate Freight Movements – the traffic analysis prepared for this DEIS indicates that much of the demand for travel on Routes 29 and 234 is generated by Luck Stone quarry operations that are located just to the east and north of the Park. As such, these businesses rely on these routes to provide access to their facilities. One of the goals of this study is to develop alternatives that still provide access to the quarry facilities.
- Maintains System Linkage – as discussed in the elements of needs, any alternative that allows for the closure of US 29 and VA 234 must also provide a re-connection to those routes. Since US 29 is on the National Highway System and serves as a major arterial in the Commonwealth of Virginia, any proposed relocation or alternative method of providing transportation must provide for a continuous Route 29 in the future. The same applies for VA 234.
- Enhance Multimodal Access – one of the goals for this study is to develop concepts that allow for multimodal components to be incorporated into their design. These components could include bus transit, bicycle, and pedestrian enhancements.
- Maintain Access to Park and Consider Private In-Holdings within Park – all alternatives should provide direct access to the Park and private in-holdings within the Park. Currently, there are several private properties that are located within the legislative boundary of the Park. All alternatives have been assessed in relation to the level of access provided to the private in-holdings and Park itself.

- Minimize Environmental Impacts – it is also the goal of this project to minimize environmental impacts as part of alternatives development process.
- Coordinate Results with VDOT, Localities, and Public- the alternatives presented in this DEIS have been developed in a collaborative process with VDOT and the localities affected. In addition, substantial public involvement efforts, including coordination with the CAB, multiple public workshops and community meetings, have been incorporated into the development of alternatives and assessment of impacts.

All of these considerations, as well as the primary elements of need, have been used to evaluate alternatives that are documented in this DEIS. The alternatives development process is described in Section 2 of this document.