U.S. Transportation Security Administration

Lease Consolidation

Environmental Assessment

June 2015

Prepared by:
The U.S. General Services Administration

With Technical Assistance from:
Stantec

Environmental Assessment

Responsible Agency:

U.S. General Services Administration

National Capital Region
301 7th Street, SW
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U.S. Transportation Security Administration
Lease Consolidation in Northern Virginia

Abstract

U.S. General Services Administration (GSA), National Capital Region, has prepared this Environmental Assessment (EA) for the lease consolidation of U.S. Transportation Security Administration (TSA) offices in Northern Virginia. Currently, TSA has several leases throughout Northern Virginia, resulting in operational inefficiencies. GSA is proposing to acquire space through leasing in order to collocate four of TSA's current leased locations in Northern Virginia into one leased location to improve functional efficiency. The number of federal employees to be collocated is approximately 3,800. GSA would enter into a lease agreement for up to 625,000 rentable square feet of space. The delineated area for the lease is Northern Virginia, within Fairfax County, Arlington County, or the City of Alexandria, and within 2,640 walkable linear feet (approximately ½-mile) of a Metrorail station. GSA has received multiple offers for sites that are potential locations for the lease consolidation.

The EA has been prepared pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended. Probable environmental impacts and potential mitigation measures have been identified for two alternative locations for the TSA Lease Consolidation and the No-Action Alternative.

Questions or comments on the Final EA should be addressed to:

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List of Acronyms

ACHP	Advisory Council on Historic Preservation
ACOE	United States Army Corps of Engineers
ACM	Asbestos Containing Material
ACS	American Community Survey
ADT	Average Daily Traffic
AM	Ante Meridiem
APE	Area of Potential Effect
ASTM	American Society for Testing and Materials
AVO	Average Vehicle Occupancy
BMPs	Best Management Practices
C-4	Commercial (Zoning)
CAA	Clean Air Act
CBPA	Chesapeake Bay Protection Act of 1988
CDD	Coordinated Development District
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CLV	Critical Lane Volume
C-O	Commercial Office (Zoning)
CO	Carbon Monoxide
CWA	Clean Water Act
CZMA	Coastal Zone Management Act of 1972
DLA	Defense Logistics Agency
DOT	Department of Transportation
DSP	Development Site Plan

EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
ESD	Environmental Site Design
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FPPA	Farmland Protection Policy Act
GSA	General Services Administration
gsf	gross square footage
HCM	Highway Capacity Manual
HHS	U.S. Department of Health and Human Services
HRSA	Health Resources and Services Administration
HVAC	Heat, Ventilation, Air Conditioning
I-4	Industrial (Zoning)
ISC	Interagency Security Committee
ITE	Institute of Transportation Engineers
IWG	Interagency Federal Working Group
LEED®	Leadership in Energy and Environmental Design
LOA	Letter of Authorization
LOS	Level of Service
LUST	Leaking Underground Storage Tank

MAC	Major Activity Center
MBTA	Migratory Bird Treaty Act
mph	miles per hour
MSAT	Mobile Source Air Toxics
M-U-I	Mixed-use Infill
MWCOG	Metropolitan Washington Council of Governments
MXE	Mixed-use Employment
M-X-T	Mixed-use Transportation Oriented
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHD	National Hydrography Dataset
NHPA	National Historic Preservation Act
NO_X	Nitrogen Oxide
NO_2	Nitrogen Dioxide
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NVCC	Northern Virginia Community College
NWI	National Wetland Inventory
O_3	Ozone
OCH	Office-Commercial-High
OCM	Office-Commercial-Medium
OMB	Office of Management and Budget
Pb	Lead
PDC	Planned Development Commercial
PDH	Planned Development Housing

PEPCO	Potomac Electric Power Company
$PM_{2.5}$	Fine Particulate Matter (particles with a diameter 2.5 micrometers and smaller)
PM_{10}	Particulate Matter (particles with a diameter of 10 micrometers or less)
R-10	Multi-family High Density
R-18	Multi-family Medium Density
R-55	Single-family, Small-lot Residential Subdivision
RBC	Risk Based Concentration
RCP	Reinforced Concrete Pipe
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
RLP	Request for Lease Proposal
RMA	Resource Management Area
RPA	Resource Protection Area
rsf	Rentable Square Feet
SAP	Small Area Plan
SF	Square Feet
SFO	Solicitation for Offers
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
SWPPP	Stormwater Pollution Prevention Plan
T-D-O	Transit District Overlay
TDOZ	Transit District Overlay Zone
TMP	Transportation Management Plan

TMX-2	Transit Mixed-Use
TSA	Transportation Security Administration
USDA	United States Department of Agriculture
UT	Utility (Zoning)
FWS	United States Fish and Wildlife Service
USGBC	U.S. Green Building Council
UST	Underground Storage Tank
VAC	Virginia Administrative Code
VaFWIS	Virginia Fish and Wildlife Information Service
VCP	Virginia Coastal Zone Management Program
VDCR	Virginia Department of Conservation and Recreation
VDEQ	Virginia Department of Environmental Quality
VDGIF	Virginia Department of Game and Inland Fisheries
VDHR	Virginia Department of Historic Resources
VDOH	Virginia Department of Health
VDOT	Virginia Department of Transportation
VMRC	Virginia Marine Resources Commission
VOC	Volatile Organic Compound
VPDES	Virginia Pollutant Discharge Elimination System
VRP	Voluntary Remediation Program
VSMA	Virginia Stormwater Management Act
VSMP	Virginia Stormwater Management Program
WMATA	Washington Metropolitan Area Transit Authority
WOUS	Waters of the United States
WQIA	Water Quality Impact Assessment

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1.0 Introduction

The U.S. General Services Administration (GSA) is preparing this Environmental Assessment (EA) to assess and report potential impacts resulting from the acquisition of space through leasing for the Transportation Security Administration (TSA) Headquarters.

The National Environmental Policy Act (NEPA) requires federal agencies to prepare an EA to determine if an action has the potential to significantly affect the quality of the human environment. GSA has prepared this report to disclose to the public the potential environmental impacts that the lease consolidation of TSA in Northern Virginia may have on the human environment, including impacts to natural resources such as air and water quality, social resources such as community services and facilities, and cultural resources such as archeological resources.

In addition, GSA is integrating the Section 106 consultation process as required by the National Historic Preservation Act (NHPA) with the NEPA process. GSA is using this EA to provide information regarding potential adverse effects to historic resources that may result from the proposed lease consolidation.

The public is encouraged to review this document to learn more about the proposed TSA lease consolidation and its potential impacts. The public is also encouraged to provide comments on the Final EA.

Written comments on the Final EA may be sent to:

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1.1 What is GSA Proposing?

The GSA, National Capital Region, has prepared this EA for the lease consolidation of the TSA offices in Northern Virginia. Currently, TSA occupies leased space at four different locations (Figure 1):

- 601 and 701 South 12th Street in Arlington, VA;
- 6354 Walker Lane in Springfield, VA;
- 1900 Oracle Way in Reston, VA; and
- 45065 Riverside Parkway in Ashburn, VA.

GSA is proposing to acquire space through leasing in order to collocate these current leased locations in Northern Virginia into one leased location to improve functional efficiency. The number of federal employees to be collocated is approximately 3,800. GSA would enter into a lease agreement for up to 625,000 rentable square feet of space. The delineated area for the lease includes Fairfax County, Arlington County, and the City of Alexandria in Northern Virginia, and within 2,640 walkable linear feet of a Metrorail station.

The leased facility must be located in one location of no more than two buildings, and the Federal Government must be the sole tenant. Specifically, if there is more than one building, the proposed consolidation must adhere to the following requirements:

- The buildings offered can be no more than 1,320 walkable linear feet apart;
- The space must be contiguous on full and adjacent floors; and
- Each building must follow the most recent Interagency Security Committee's (ISC) Security Standards Level IV.

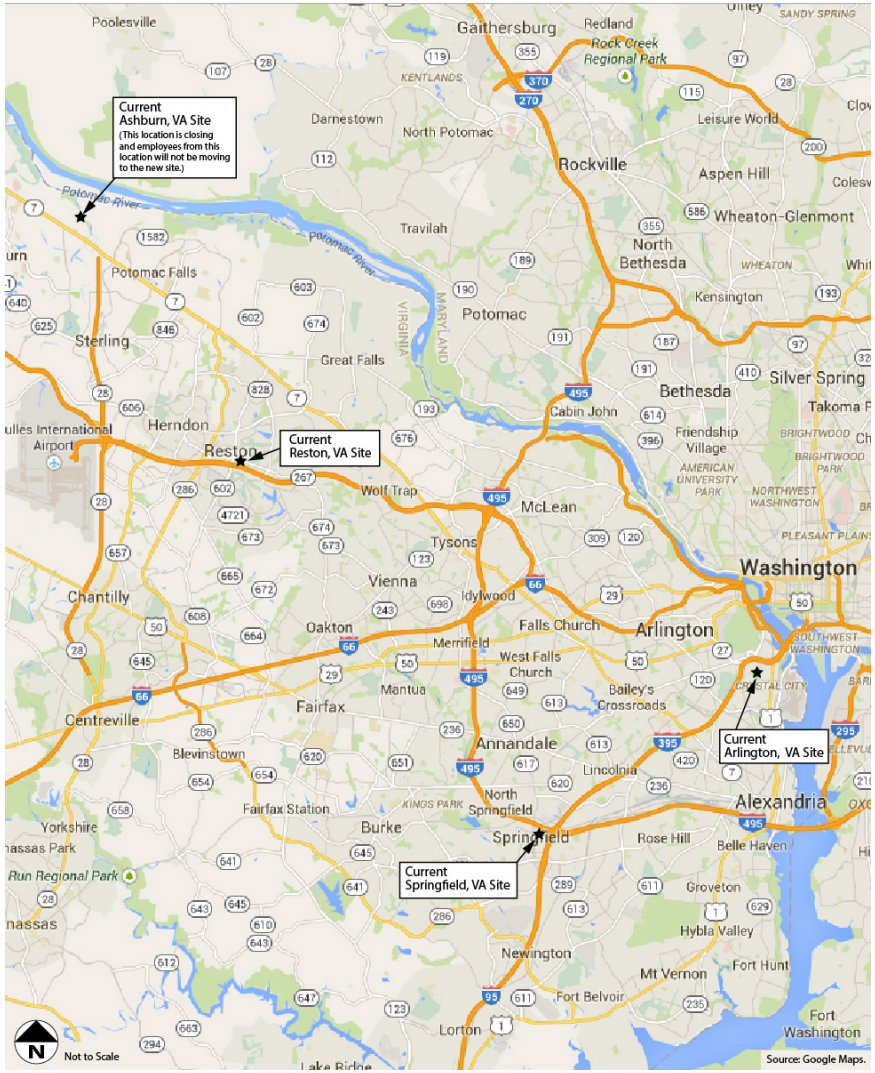

Figure 1: Current TSA Leased Locations to be collocated

Other requirements in the Request for Lease Proposals (RLP) include:

- The building(s) must meet the requirements of Leadership in Energy and Environmental Design for New Construction (LEED® NC) Silver level or LEED® – Existing Buildings (EB) Silver

level; and must meet the requirements of LEED®- Commercial Interiors (CI) Certified level; and

- The building(s) must be within 2,640 walkable linear feet from a Metrorail Station and two or more public or campus bus lines must be located within the immediate vicinity, but not exceeding 2,640 walkable linear feet.

In addition, approximately 740 square feet (SF) would be reserved for vending facilities in accordance with the Randolph Sheppard Act.

The proposed action is the consolidation of these four locations and a replacement lease of up to 625,000 rentable square feet of space, at 84 useable square feet of office space per person and 153 square feet overall utilization rate per employee, with 85 official parking spaces included in the lease. The number of TSA employees to be collocated is approximately 3,800.

1.2 What is the Purpose for the TSA Lease Consolidation in Northern Virginia?

TSA is currently occupying several leased locations throughout Northern Virginia. The purpose of the proposed action is to consolidate the various leased TSA headquarters offices into one location to improve efficiencies and reduce expenses for the federal government related to leasing multiple locations.

1.3 What is the Need for the Lease Consolidation of TSA Facilities in Northern Virginia?

Space is needed for TSA that will efficiently and effectively support the agency's mission. TSA's current multiple headquarters locations have created administrative inefficiencies such as duplication of resources that TSA seeks to rectify, which will reduce operational redundancies and foster increased efficiency. This collocation would reduce energy consumption, allow support for information technology, attract and retain employees in a consolidated facility, provide necessary security measures, and provide collaboration and cohesiveness throughout the TSA headquarters.

In addition, through consolidation of the TSA headquarters offices into one location, the Federal government would reduce expenses that are associated with having multiple leased locations.

This action is in accordance with Executive Order (EO) 13589 and Office of Management and Budget Memorandum M-12-12 Section 3 which require agencies to reduce their civilian real estate inventory through consolidation, collocation, or disposal of space from the inventory. GSA and TSA have also implemented a number of initiatives, such as a decrease in the amount of useable square feet per employee and teleworking.

Title 40 Code of Federal Regulations (CFR) Part 1500.1(b) states, "NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken."

1.4 Relevant Environmental Laws and Regulations

1.4.1 What is NEPA and the NEPA Process?

NEPA is the nation's legislative charter for protection of the environment. NEPA requires federal agencies to consider environmental impacts of their projects during federal agency planning and decision-making. NEPA requires federal agencies to prepare an EA if the significance of the impacts that may result from the proposed action is unknown. GSA's EAs and other NEPA documents are prepared in accordance with the Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 Code of Federal Regulations (CFR) 1500-1508), GSA Order ADM 1095.1F-Environmental considerations in decision making, and the Public Building Service (PBS) NEPA Desk Guide (October 1999). Public involvement is an important part of the NEPA process. Title 40 Code of Federal Regulations (CFR) Part 1500.1(b) states, "NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken." By involving citizens, stakeholder groups, and local, state, and federal agencies, the Federal Government can make better informed decisions.

NEPA PUBLIC INVOLVEMENT PROCESS

Scoping

Winter 2015

Publication of Final EA and FONSI

June 2015

Through the NEPA process, the public has had and will continue to have opportunities to comment on the lease consolidation of the TSA in Northern Virginia. GSA initiated the public involvement processes through the distribution of scoping letters to Federal, State, local agencies, elected officials, and other interested parties. "Scoping" is a tool for identifying the issues that should be addressed in the EA and Section 106 process. Scoping allows the public to help define priorities and express stakeholder and community issues to the agency through written comments. Scoping letters invited the public to provide comments regarding the proposed action. The scoping period

for the proposed action was open from March 17, 2015 through April 17, 2015. The key issue identified during scoping included impacts to traffic and access to mass transit.

Comments received during the scoping period were taken into consideration during the development of the EA. One comment was received from the Virginia Department of Rail and Public Transportation on April 7, 2015 and one from the County of Fairfax on April 16, 2015. The VDRPT stated they were in favor of the project and for GSA to consider multi-modal access to the selected site and to work with the local governments to promote local Transportation Demand Management programs. The County of Fairfax stated they were in favor of the TSA Facility Headquarters in Fairfax County. Scoping letters received can be found in Appendix B.

1.4.2 What is Section 106 of the National Historic Preservation Act?

The **National Register of Historic Places** is the nation's official list of cultural resources worthy of preservation. Properties listed in the register include districts, sites, buildings, structures, and objects that are significant in American history, architecture, Archaeology, engineering, and culture.

The NHPA of 1966, governs Federal agencies in their handling of historic properties. As with NEPA, Section 106 of the NHPA requires that federal agencies take into account the effects of their actions on historic resources. Under the NHPA, GSA must evaluate impacts to any district, site, building, structure, or object listed in or eligible for listing in the National Register of Historic Places (NRHP) that may be affected by the proposed action. Chapter 3: Affected Environment and Impacts to the Human Environment, describes the potential impacts to historic resources.

Section 106 review encourages preservation of historic properties; however, at times, impacts to historic resources cannot be avoided. When the government must impact historic resources, they are required to consult with local and federal agencies responsible for historic preservation, local citizens, and groups with an interest in historic preservation. GSA has initiated consultations with the Virginia Department of Historic Resources (VDHR) for this project.

The public will also be allowed to comment on historic preservation issues during the public review period of this EA.

STATUTES, REGULATIONS, PLANS, AND EXECUTIVE ORDERS (EOS)

Regulations

Council on Environmental Quality Regulations (40 Code of Federal Regulations Parts 1500-1508)

36 CFR Part 800 – Protection of Historic Properties

32 CFR Part 229 – Protection of Archaeological Resources: Uniform Regulations

40 CFR 6, 51, and 93 – Conformity of General Federal Actions to State or Federal Implementation Plans

33 CFR 320-330 – U.S. Army Corps of Engineers Regulations

40 CFR Parts 300 through 399 – Hazardous Substance Regulations

Secretary of the Interior Standards and Guidelines for Archaeology and Historic Preservation (48 Federal Register 44716)

Plans

Alexandria Master Plan

Eco-City Alexandria Environmental Action Plan

Fairfax County Comprehensive Plan 2013 Edition

Landmark/Van Dorn Small Area Plan

Springfield Connectivity Study

Executive Orders

Executive Order 11593 – Protection and Enhancement of the Cultural Environment

Executive Order 11988 – Floodplain Management

Executive Order 11990 – Protection of Wetlands

Executive Order 12898 – Environmental Justice

Executive Order 13287 – Preserve America

Executive Order 13327 – Federal Real Property Asset Management

Executive Order 13690 - Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input..

Executive Order 13693 – Planning for Federal Sustainability in the Next Decade

Executive Order 13589 – Promoting Efficient Spending

STATUTES, REGULATIONS, PLANS, AND EXECUTIVE ORDERS (EOS)

Clean Air Act of 1970 as amended (42 U.S.C. § 7401, et seq.)

Clean Water Act of 1977 as amended (33 U.S.C. § 1251, et seq.)

Comprehensive Environmental Response, Compensation and Liability Act of 1980 (42 U.S.C. § 9601, et seq.)

Archaeological Resources Protection Act of 1979 (16 U.S.C. §470aa-mm)

Endangered Species Act of 1973 (16 U.S.C. §1531-1544)

Section 5 of the National Capital Planning Act of 1952 (82 P.L. 592; 66 Stat. 781, et seq.); (codified as amended at 40 U.S.C. §8722(b)(1))

Resource Conservation and Recovery Act of 1976 (42 U.S.C. § 6901, et seq.)

National Energy Conservation Policy Act (42 U.S.C. §8231, et seq.)

Energy Independence and Security Act (42 U.S.C. §17001, et seq.)

National Historic Preservation Act of 1966 (16 U.S.C. § 470, et seq.) (89 P.L. 665 (1966)); (referred to herein as “Section 106”)

1.4.1 What Other Environmental Laws and Regulations are Relevant to This Project?

As a federal agency, GSA must also comply with applicable laws and regulations. GSA is incorporating compliance with these laws and regulations into their project planning and NEPA compliance. In compliance with Section 7 of the Endangered Species Act (ESA), GSA has received information from the U.S. Fish and Wildlife Service (FWS), the Commonwealth of Virginia Department of Conservation and Recreation (VDCR), and the Virginia Department of Game and Inland Fisheries (VDGIF) regarding any known threatened or endangered species or their habitat within the project area. Figure 3 provides a list of potentially applicable laws and regulations

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2.0 Alternatives Development

2.1 How Were the TSA Lease Consolidation Alternatives Determined?

GSA issued RLP Number 2VA0687 in 2014. The request outlined the minimum requirements that the Government was seeking for the proposed TSA Lease Consolidation. From this request, two of the offered sites met all the requirements and are described below and analyzed in this EA.

2.2 Alternatives Considered

2.2.1 What is the No-Action Alternative and Why is it Considered?

NEPA requires Federal agencies to consider a No-Action Alternative in their impacts analysis. Evaluating the No-Action Alternative provides a baseline for comparing the environmental impacts of the proposed alternatives for the TSA Lease Consolidation. Under the No-Action Alternative, the consolidation of the TSA at four leased locations spread across Northern Virginia would not occur. TSA would remain in leased space at 601 and 701 South 12th Street in Arlington, VA; 6354 Walker Lane in Springfield, VA; and 1900 Oracle Way in Reston, VA (Figure 1). No improvements to these buildings would occur. The location at 45065 Riverside Parkway in Ashburn, VA, which contains non-government employees under contract with TSA, would be permanently closed following the termination of the contract. Implementation of the No-Action Alternative would not provide TSA with a consolidated and more efficient work environment.

2.2.2 What Action Alternatives Has GSA Evaluated in This Document?

The proposed action assessed in this EA is the collocation of four TSA locations from other leased office buildings in Northern Virginia to a new location in Fairfax County, Arlington County, or the City of Alexandria. The proposed action assessed is the lease of up to 625,000 rsf of office space, which will yield approximately 550,000 SF of useable area and house approximately 3,800 federal employees and 85 official parking spaces dedicated for exclusive use of the Federal Government. The building's height and massing will be dependent on the layout of the selected site. The building must also follow the most current ISC Security Standards Level IV.

GSA would utilize the LEED® rating system to apply principles of sustainable design and development to this project. LEED® was developed by the U.S. Green Building Council (USGBC). LEED® consists of a set or prerequisites and credits with specific requirements for obtaining points in order to become a LEED® Green Building. LEED® follows consensus-based voluntary standards for sustainable buildings, while still meeting high-performance expectations. The LEED® rating system grades building plans on sustainable site design, energy savings, water efficiency, C0 emissions, indoor air quality, and building materials (USGBC, 2010). The rating scale is scored on a point system with four levels of certification, in order of rating: Certified, Silver, Gold and Platinum. Under any of the action alternatives, the consolidated leased space would be required to achieve a LEED® Silver Rating. This LEED® rating would increase energy conservation and water conservation for both building construction and design.

The EA considers two different sites within the City of Alexandria and Fairfax County (see Figure 2). These alternative sites were offered in response to the RLP 2VA0687 put out by GSA. Both locations are analyzed in further detail in this EA. They are:

Victory Center (Action Alternative)

The Victory Center site is located within the City of Alexandria, Virginia (see Figure 3). The site is located at 5001 Eisenhower Avenue. The site currently consists of an unoccupied 606,000 GSF office building and two surface parking lots. In addition, the site is within approximately 2,500 walkable linear feet (approximately ½-mile) from the Van Dorn Metrorail Station, located on the Blue and Yellow lines. The existing building would be renovated and a new 6-story parking garage would be built on top of one of the surface lots.

In order to meet the requirements of the RLP, the existing building would undergo an expansion consisting of 60,000 GSF of office space and 10,000 GSF of retail space. A structured parking garage will be provided that will include 85 reserved spaces for TSA use. It is expected that each of the existing lease sites will be back-filled once TSA vacates the buildings

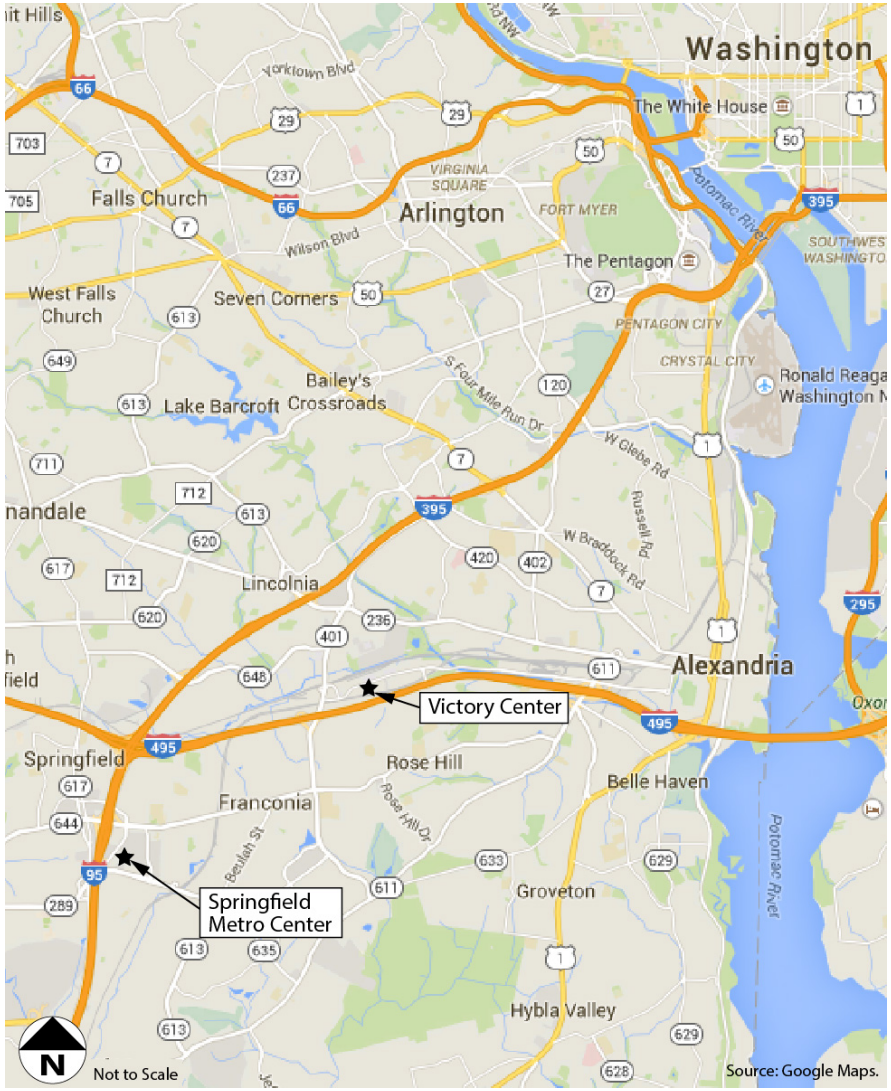

Figure 2. Location Map for Two TSA Lease Consolidation Sites

Figure 3. Victory Center Site Location Map

Springfield Metro Center (Action Alternative)

The Springfield Metro Center site is located in Fairfax, Virginia in Fairfax County (Figure 4). The site is bounded by 6699 Springfield Center Drive and 6700 Metropolitan Center Drive. The site currently consists of an open lot with few mature trees. In addition, the site is within approximately 2,200 walkable linear feet (approximately .4-mile) of the Springfield Metrorail Station, located on the Blue and Yellow lines. To accommodate the requirements of the RLP, this site would need to be cleared, graded, and a new parking garage would be built.

The developer has proposed one 653,000 GSF building with two adjacent towers that will be between nine- and ten- stories tall. A structured parking garage will be provided that will include 85 reserved spaces for TSA use. It is expected that each of the existing lease sites will be back-filled once TSA vacates the buildings.

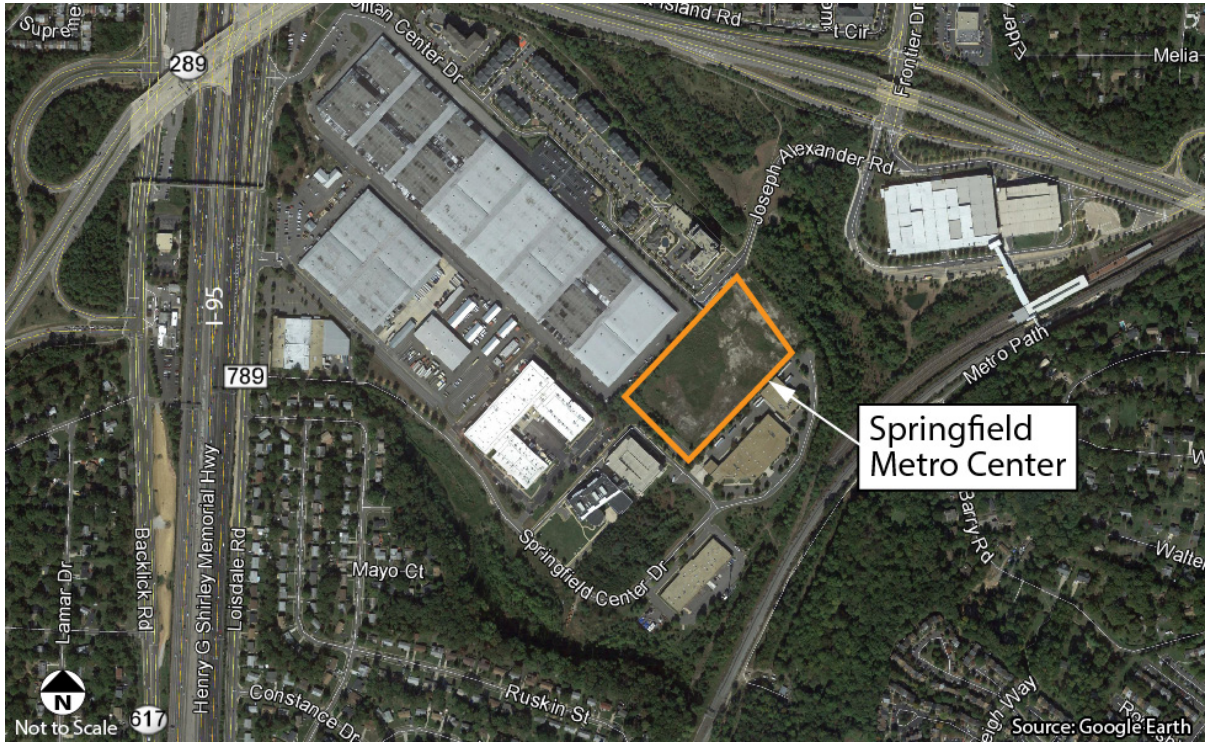

Figure 4. Springfield Metro Center Site Location Map

2.3 What Are the Impacts From Each Alternative?

Table 1 presents, for comparison purposes, a concise summary of each alternative's potential impacts by resource topic, including the No-Action Alternative.

Table 1. Comparison of Impacts

	No-Action Alternative	Action Alternatives	
		Victory Center	Springfield Metro Center
Soils	There would be no ground disturbing activities; therefore there would be no impact to soils.	There would be a direct, permanent loss of soil due to excavation and construction of the parking garage and the 4-story addition. Some indirect, temporary impacts may occur as a result of construction activities. The impact from soil erosion and sedimentation would be expected to be negligible, direct and indirect, adverse, and both short- and long-term. See page 2-10, Section 2.4 for a description of proposed mitigation and BMPs.	There would be a direct, permanent loss of soil from construction. Some indirect, temporary impacts may occur as a result of construction activities. Soil erosion could cause sediments to enter storm drains and eventually streams. The impact from soil erosion and sedimentation would be expected to be minor, direct and indirect, adverse, and short- and long-term. See page 2-10, Section 2.4 for a description of proposed mitigation and BMPs.
Environmental Contamination	There would be no impact under this alternative.	Construction activities at the Victory Center site could disturb soils containing arsenic and lead. With the mitigation proposed, there would be no long-term impacts under this alternative. See page 2-10, Section 2.4 for a description of proposed mitigation and BMPs.	Petroleum impacted soils and VOCs were found at various soil test sites on the Springfield Metro Center site. Contaminated soils would be disturbed resulting in a moderate, short-term and adverse impact. Site workers would be required to follow a site safety plan when handling potentially contaminated soils, which would result in short-term, moderate, adverse impacts. See page 2-11, Section 2.4 for a description of proposed mitigation and BMPs.
Surface Water & Wetlands	There would be no ground disturbing activity; therefore, there would be no impacts to surface water or wetlands.	No direct impacts to streams, wetlands, RPAs, or City of Alexandria stream buffers are anticipated. Some short-term indirect adverse impacts to surface waters on adjacent properties are possible as a result of construction runoff from the construction of the parking garage and building addition. See page 2-11, Section 2.4 for a description of proposed mitigation and BMPs.	Due to distance from the project area, no direct impacts to Long Branch or its associated RPA are anticipated. Some indirect impacts to surface waters on adjacent properties are possible as a result of construction runoff. See page 2-11, Section 2.4 for a description of proposed mitigation and BMPs.
Groundwater & Hydrology	There would be no ground disturbing activity; therefore, there would be no impacts to groundwater or hydrology.	There will be a net decrease in impervious surface area on the 16-acre site due to the addition of landscaped areas and trees that would be created when the additional structures are built. Therefore, there would be minor, long-term, beneficial impacts to groundwater. See page 2-11, Section 2.4 for a description of proposed mitigation and BMPs.	The Springfield Metro Center site is currently undeveloped with no impermeable surface area. The proposed activity would result in a net increase in impervious surface area. Therefore, there would be a minor, long-term, adverse impact to groundwater. See page 2-11, Section 2.4 for a description of proposed mitigation and BMPs.

	No-Action Alternative	Action Alternatives	
		Victory Center	Springfield Metro Center
Stormwater Management	It is assumed the existing buildings employed stormwater management onsite according to state and local standards that were applicable at the time. With the No-Action Alternative there would be no additional direct or indirect impacts to stormwater.	In general, it is anticipated that the impact to stormwater would be minor, beneficial, long-term, and indirect for each this site. Some indirect impacts to surface waters on adjacent properties are possible as a result of construction runoff from the construction of the parking garage and building addition. Therefore, there would be negligible, short-term, adverse impacts related to stormwater. See page 2-12, Section 2.4 for a description of proposed mitigation and BMPs.	Development of the Springfield Metro Center site would result in an increase in impervious surface area. With mitigation measures in place, the Springfield Metro Center site would exceed stormwater volume reduction and phosphorus removal requirements. Therefore, there would be a minor, long-term, adverse impact to stormwater. Some indirect impacts to surface waters on adjacent properties are possible as a result of construction runoff. Therefore, there would be negligible, short-term, adverse impacts related to stormwater. See page 2-12, Section 2.4 for a description of proposed mitigation and BMPs.
Coastal Zone Management	Because there would be no ground disturbing activities, no impacts to the coastal zone would occur.	Construction of the TSA Lease Consolidation at the Victory Center or Springfield Metro Center sites would not have any foreseeable effects on sensitive resources within the coastal zone including air quality, wetlands, and water quality. All construction activities on the selected alternative site would comply with applicable federal, state, and county laws and regulations that affect the Coastal Zone, including sediment and erosion control and stormwater management regulations. Therefore, the proposed action would have minor, short-term adverse impacts to the Coastal Zone due to construction activities and would be consistent with the CZMA and Virginia's Coastal Zone Management Program. See page 2-12, Section 2.4 for a description of proposed mitigation and BMPs.	
Vegetation & Wildlife	There would be no ground disturbing activities; therefore there would be no impacts to vegetation and wildlife.	No natural vegetation would be removed during construction activities. The proposed site would include landscaping around buildings and parking lots after construction, increasing the total area of pervious surface. No impacts to the riparian area along the north boundary of the Victory Center site are proposed. Therefore, impacts to vegetation and wildlife from this alternative would be negligible, short-term, and beneficial. See page 2-13, Section 2.4 for a description of proposed mitigation and BMPs.	There would be loss of vegetative areas in place of buildings and wildlife may be temporarily displaced during construction activities, however, wildlife activity would return after the development of the site. Therefore, impacts to vegetation and wildlife from this alternative would be minor, short-term, and adverse. See page 2-13, Section 2.4 for a description of proposed mitigation and BMPs.
Air Quality	There would be no construction activities and no change in emissions. Therefore, there would be no impact to air quality.	Temporary minor to moderate adverse impacts would occur as a result of construction. Increases in traffic would result in minor, long-term, direct, adverse impacts. There would no appreciable increase in diesel fuel used and the project would be in compliance with the State Implementation Plan (SIP). See page 2-13, Section 2.4 for a description of proposed mitigation and BMPs.	
Land Use Planning & Zoning	There would be no change in land use or zoning; therefore, there would be no impact.	The proposed action is consistent with existing and planned development within the City of Alexandria. See page 2-14, Section 2.4 for a description of proposed mitigation and BMPs.	A Plan Amendment would need to be approved. If approved, the proposed activity would be consistent with the existing and planned development for the Springfield Metro Center site. See page 2-14, Section 2.4 for a description of proposed mitigation and BMPs.

	No-Action Alternative	Action Alternatives	
		Victory Center	Springfield Metro Center
Environmental Justice	There would be no disproportionate impacts to minority and low-income populations.		
Traffic & Transportation	No impacts to traffic and transportation would occur as there would be no change in traffic patterns.	Levels of Service (LOS) would be affected creating a minor, long-term, adverse impact. There would be no changes to Metrorail, Maryland Rail Commuter Service (MARC) rail, or bus systems. Bicycle and pedestrian access would not be affected. See page 2-14, Section 2.4 for a description of proposed mitigation and BMPs.	LOS would be affected creating a minor, long-term, adverse impact. There would be no changes to Metrorail, MARC rail, or bus systems. However, these systems would see an increase in patronage, which would create a minor, long-term, adverse impact. Bicycle and pedestrian access would not be affected. See page 2-15, Section 2.4 for a description of proposed mitigation and BMPs.
Utilities	No impacts would occur to local utilities as service would remain the same.	All sites would comply with EO 13693 and Energy Independence and Security Act (EISA). The lease consolidation would consume a negligible portion of the total water consumption. Electrical useage would consume a negligible portion of the total energy consumption throughout Dominion Virginia Power and Washington Gas systems. Small temporary disruptions would occur at all sites, creating direct and indirect minor, short-term, adverse impacts. See page 2-15, Section 2.4 for a description of proposed mitigation and BMPs.	
Waste Management	No impacts would occur as waste management would remain the same.	Waste would be generated during construction/renovation creating a negligible, short-term, adverse impact. Under any of the alternatives, the selected site would operate in a waste efficient manner which would reduce the impact to waste management and a recycling program would be established. See page 2-15, Section 2.4 for a description of proposed mitigation and BMPs.	

2.4 What Mitigation Measure Would Be Implemented Under Each Action Alternative?

The following measures would be implemented by the developer/owner for the TSA Lease Consolidation.

Aquatic Biota

Best Management Practices (BMPs) including but not limited to silt fence, hay bales, and revegetation of exposed sediment, would be employed throughout construction. A Stormwater Pollution Prevention Plan (SWPPP) would be developed, including a stormwater management plan, erosion and sediment control plan, pollution prevention plan, and description of necessary control measures would be developed in accordance with Virginia Department of Environmental Quality (VDEQ) Virginia Stormwater Management Program (VSMP) regulations for construction activities and maintained onsite throughout construction.

Soils

Under both action alternatives, the developer/owner would be responsible for developing and implementing an erosion and sediment control plan for approval by VDEQ and local jurisdictions. The plan would aim to reduce and control sediments entering storm drains and streams. For either alternative site, an Erosion and Sediment Control Plan will be prepared and approved in accordance with the Virginia Erosion and Sediment Control Manual. Best Management Practices (BMPs) would be used to control and minimize sediment movements, including but not limited to: silt fences and/or hay bales around the perimeter of the site, and revegetation of soils that will be exposed longer than 14 days.

Environmental Contamination

Victory Center (Action Alternative)

During construction, safety measures would be employed to keep site workers from direct contact with contaminated soils, which would result in short-term, minor adverse impacts.

Mitigation includes:

(a) Avoiding the impact altogether by not taking a certain action or parts of an action.
(b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
(c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.
(d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
(e) Compensating for the impact by replacing or providing substitute resources or environments.

(40 CFR 1508.20)

Springfield Metro Center (Action Alternative)

During construction, a site safety plan would be developed and employed to keep site workers from direct contact with contaminated soils. Any petroleum impacted soils not used for fill would be characterized, removed from the site, and disposed of in accordance with local, state and federal regulations. Contaminated soils would be taken to a landfill or facility permitted to accept petroleum impacted soils. Site workers would be required to follow safety protocols and the site safety plan when handling potentially contaminated soils.

The PCE found in the soil vapor would be abated by the use of engineering controls such as the installation of a subslab degassing system and enhanced chemical vapor barrier beneath the building.

Surface Water & Hydrology

Construction impacts would be avoided and minimized as much as possible by implementing BMPs during construction, including but not limited to silt fences, hay bales, and revegetation of exposed sediment. A SWPPP, including a stormwater management plan, erosion and sediment control plan, pollution prevention plan, and description of necessary control measures would be developed in accordance with VDEQ VSMP regulations for construction activities and maintained onsite throughout construction. In the event that encroachment into a RPA or buffer is proposed, a Water Quality Impact Assessment (WQIA) would be prepared that outlines impacts and mitigation measures.

Groundwater & Hydrology

The amount of impervious surface proposed at each of the alternative sites has been minimized as much as practicable. The proposed TSA Lease Consolidation would be constructed to meet or exceed all Virginia and locality regulations, as applicable. A SWPPP, including a stormwater management plan, Erosion and Sediment Control Plan, pollution prevention plan, and description of necessary control measures would be developed in accordance with VDEQ VSMP regulations for construction activities and maintained onsite throughout construction.

Stormwater Management

Victory Center (Action Alternative)

The Victory Center site would meet all VDEQ volume reduction, detention, and phosphorus removal requirements by reducing the impervious surface on the site by 4.5 acres. All water quality volume generated by impervious surfaces on the Victory Center site would be directed to Aqua-Swirl BMPs.

Prior to construction, a VSMP permit for discharges of stormwater from construction activities will be obtained. A SWPPP, including a stormwater management plan, erosion and sediment control plan, pollution prevention plan, and description of necessary control measures would be developed in accordance with VDEQ VSMP regulations for construction activities and maintained onsite throughout construction.

Springfield Metro Center (Action Alternative)

The proposed stormwater management system for the site includes two underground stormwater vaults. One vault is proposed on the northeast side of the site and would discharge to an existing 21-inch Reinforced Concrete Pipe (RCP) that runs underneath existing Springfield Center Drive and into Long Branch. The second vault is proposed on the southwest side of the site and would discharge into an existing 54-inch RCP. Phosphorus removal would be achieved with the use of six privately maintained stormfilters.

Prior to construction, a VSMP permit for discharges of stormwater from construction activities will be obtained. A SWPPP, including a stormwater management plan, erosion and sediment control plan, pollution prevention plan, and description of necessary control measures would be developed in accordance with VDEQ VSMP regulations for construction activities and maintained onsite throughout construction.

Coastal Zone Management

The site would be developed to meet all applicable state and local regulations. The site will be designed to meet the VDEQ BMP and volume reduction requirements. An Erosion and Sediment Control Plan will be prepared and approved in accordance with the Virginia Erosion and Sediment

Control Manual administered by VDEQ and enforced by the locality. Prior to construction, a Virginia Pollutant Discharge Elimination System (VPDES) permit and/or VSMP permit will be obtained for discharges of stormwater from construction activities.

Vegetation and Wildlife

The developer/owner of the proposed sites would minimize impacts to vegetation and wildlife by limiting the area of ground clearing for structural components (e.g., building, parking lot). Open space with no plans for development would not be used for parking or other construction related clearing unless it is the only feasible option.

Additional mitigation can be accomplished by improving remaining open space after construction activities. Landscaping would be accomplished using native plants to the extent feasible. Non-native plants would be removed and replaced with native plants to fill open spaces cleared during construction activities.

Air Quality

The developer/owner would be required to implement fugitive dust controls such as water spraying of access roads and stockpiles, the employment of dust covers on vehicles transporting dust-emitting materials, keeping disturbed areas to a minimum by developing the site in stages have been shown to be effective in controlling emissions. The developer/owner would also be required to implement a dust abatement/emissions control plan for any construction activities. The plan would include control measures to reduce emissions from construction equipment and control fugitive dust.

A LEED®-Silver rated building is proposed, which is consistent with the voluntary measures package presented in the SIP. Through the use of green building materials such as low-emitting materials in adhesives and sealants, paints and coatings, flooring systems, composite wood, and agrifiber products, indoor air quality would be maximized. Through the integration of design elements such as the use of modern heating and cooling equipment, onsite renewable energy sources, and the maximization of daylight, the demand for electricity would be reduced. Employees would be encouraged to use public transportation.

Land Use Planning and Zoning

Victory Center (Action Alternative)

A site plan amendment would be required to include the proposed retail use on the site.

Springfield Metro Center (Action Alternative)

A *Fairfax County Comprehensive Plan* amendment is required to increase the allowable square footage of office use as well as proposed retail onsite.

Environmental Justice

No mitigation required.

Cultural Resources

The developer/owner will develop an Archeology Discovery Plan to ensure that the following actions are taken:

1. Whenever a previously unidentified archeological resource is discovered during ground-disturbing activity, all work involving subsurface disturbance shall be halted in the immediate area of discovery.
2. The Owner shall promptly protect the area of the discovery, and once it has done so, construction may resume in those areas where there would be no physical impact to the discovery.
3. An archeologist meeting the Secretary of the Interior's Professional Qualifications, shall immediately inspect the work site to evaluate the nature and geographic area of the discovery, determine the measures needed to protect the discovery from construction impacts and investigate and make recommendations to GSA regarding the National Register eligibility of the discovery.
4. Within three (3) business days (not including federal holidays) of making the discovery, the owner shall submit written notification to GSA, and within 14 business days, shall submit the

archeologist's assessment of National Register eligibility of the discovery and, as appropriate, the actions the owner proposes to resolve adverse effects.

Traffic and Transportation

Victory Center (Action Alternative)

In order to mitigate the transportation impacts of the site, the developer has proposed and would implement the following transportation improvements including:

1. Eisenhower Avenue and S Van Dorn Street: Convert the protected southbound left turn on S Van Dorn Street to protected-permitted operation and optimize signal timing.
2. Summers Grove Road/Metro Road: Remove the east/west split phasing, providing protected permitted westbound left turn phase, and optimize signal timing.
3. Eisenhower Avenue and Metro Road: Optimize PM peak hour signal timing.
4. Eisenhower Avenue at Eisenhower Avenue Connector/Clermont Avenue: Optimize AM and PM peak hour sign timings.
5. Install a traffic signal at the eastern site driveway.
6. Install a new pedestrian traffic signal with accessible features at the western most driveway serving the site.
7. Provide bicycle facilities in accordance with TSA requirements.

Springfield Metro Center (Action Alternative)

In order to mitigate the transportation impacts of the site, the developer has proposed and would implement the following transportation improvements including:

1. Extend Springfield Metro Center Drive from its current terminus north to Joseph Alexander Drive;
2. Signalize the Loisdale Road/Metropolitan Drive intersection;
3. Restripe the Springfield Center Drive approach to Loisdale Road in order to provide for a westbound left-turn lane; and,
4. Signalize the Losidale Road/Springfield Center Drive intersection.

For both sites, a Transportation Management Plan (TMP) would be developed that identifies TDM strategies for reducing the number of single occupancy vehicles and encouraging alternate modes of traveling to the site. The TMP would need to be complete and implemented by the time all employees are expected at the site.

Utilities

The selected site would have to operate in a sustainable and energy efficient manner and a minimum rating of Silver on the LEED® scale for building design would be achieved. At the chosen facility a recycling program would be used and the developer would be responsible for maintaining energy conservation measures (e.g. use of energy star appliances and lights).

Waste Management

The developer/owner would reduce construction waste by recycling and reusing materials whenever possible in accordance with City of Alexandria's Code Title 5, Chapter 1 and Fairfax County's Code Section 109.1. The developer/owner would be required to divert recyclable material from the municipal solid waste to the maximum extent practical and in accordance the City of Alexandria or Fairfax County code by establishing a recycling program for (at a minimum) paper, corrugated cardboard, glass, plastics, metals, mercury containing lamps, toner and inject cartridges, and pallets. Recyclable and non-recyclable waste generated during construction would be disposed of at licensed facilities and would be the responsibility of the developer/owner. Furthermore, the developer/owner would be responsible for the proper management and disposal of any hazardous waste generated during construction.

No matter which offered site is selected, the developer/owner would operate the TSA Lease Consolidation facility in a sustainable and waste efficient manner in accordance with the conservation requirements of RLP 2VA0687 and in compliance with EO 13693 and EISA.

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3.0 Affected Environment and Impacts to the Human Environment

3.1 What is the Affected Environment and How Are Impacts Evaluated?

This chapter of the EA describes the existing conditions of the human environment at each of the alternative sites and the impacts the TSA lease consolidation would have on the alternative sites. Each of the alternatives described in Chapter 2.0, Alternatives Development would have varying impacts to natural resources, the social and economic environment, historic resources, and infrastructure (the transportation network and utilities).

Impacts can occur from construction as well as operations of the proposed TSA Lease Consolidation building(s). Impacts can also occur both directly at each of the alternative sites as well as off-site (for instance, employees commuting to the new/renovated building(s) would affect existing traffic on roads surrounding each alternative site). Cumulative impacts from the TSA lease consolidation, when added to other past, present, and future projects are further discussed at the end of this chapter.

Potential impacts are described in terms of:

- *Intensity* - are the effects negligible, minor, moderate, or major;
- *Type* - are the effects beneficial or adverse;
- *Duration* - are the effects short-term, lasting through construction or less than one year, or long-term, lasting more than one year; and
- *Context* - are the effects site-specific, local, or even regional.

Impacts include:

Direct impacts, which are caused by the action and occur at the same time and place.

Indirect impacts, are caused by the action and are later in time or further removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.

Cumulative impacts result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

(40 CFR 1508.7 and 1508.8)

The thresholds for the intensity of impacts are defined as follows:

- *Negligible*, when the impact is localized and not measurable at the lowest level of detection;
- *Minor*, when the impact is localized and slight, but detectable;
- *Moderate*, when the impact is readily apparent and appreciable; or
- *Major*, when the impact is severely adverse, significant, and highly noticeable.

The effects on the human environment were assessed using best available scientific studies, guidance documents, and information. Resources used to analyze the impacts were obtained from federal, state, and local agencies. These include, but are not limited to, the following:

- U.S. Environmental Protection Agency (EPA) analyses and reports
- U.S. Department of Agriculture (USDA) NRCS Soil Surveys
- Federal Emergency Management Agency (FEMA) Floodplain Maps
- U.S. Army Corps of Engineers (ACOE) wetland manuals
- U.S. Fish and Wildlife Service (FWS) threatened and endangered species lists
- Federal Highway Administration (FHWA) traffic guidance
- Environmental Site Assessments (ESAs)
- Virginia Department of Historic Resources (VDHR)
- Virginia Department of Environmental Quality (VDEQ) erosion and sediment control and stormwater design manuals
- Virginia Department of Conservation and Recreation (VDCR) Natural Heritage Data Explorer
- Virginia Department of Game and Inland Fisheries (VDGIF) Fish and Wildlife Information Service (VaFWIS)
- Metropolitan Washington Council of Government (MWCOG) reports
- Fairfax County and City of Alexandria guidelines

A complete list of references is included at the end of this EA. For resources that required additional analysis, methodologies are summarized later in Chapter 3.

3.2 What Resource Issues Have Been Eliminated From Further Analysis?

As with any environmental analysis, there are resource issues that are dismissed from further analysis because the proposed action would cause a negligible or no impact. Negligible impacts are effects that are localized and immeasurable at the lowest level of detection. Therefore, these topics are briefly discussed and then dismissed from further consideration or analysis. These resources are:

- Threatened, Endangered, and Sensitive Species
- Aquatic Biota
- Floodplains
- Population and Housing
- Economy and Employment
- Cultural Resources
    - Historic Resources
    - Archaeological Resources
- Noise
- Visual Quality
- Security
- Public Health and Safety
- Community Facilities and Services

3.2.1 Threatened, Endangered, and Sensitive Species

The federal Endangered Species Act (ESA) of 1973, the Virginia Endangered Species Act of 1972 (§ 29.1-563 through 570), and the Virginia Natural Area Preserves Act of 1989 (§ 10.1-209 through 217) prohibit the taking, transportation, processing, and sale of rare, threatened, or endangered species in Virginia and protect the ecosystems on which these species depend. GSA contacted the FWS, VDGIF, and VDCR for consultation in compliance with Section 7 of the ESA and Virginia law.

In a letter dated March 20, 2015, the FWS stated that no listed endangered or threatened species or critical habitats are known to exist on the alternative sites. The FWS also noted that while not listed as threatened or endangered, the Bald Eagle (*Haliaeetus leucocephalus*) is protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.). During site visits no evidence or observations of Bald Eagles were made. If Bald Eagles are discovered on any of the sites, GSA would require that the developer/owner follow the National Bald Eagle Management Guidelines, dated May 2007 (FWS, 2007). Furthermore, no threatened or endangered species were observed at any of the alternative sites.

The VDGIF Virginia Fish and Wildlife Information Service (VaFWIS) was consulted to determine federally- and state-listed endangered and threatened species with the potential to occur within a 3 mile radius of each alternative site. The following species were identified:

- Atlantic Sturgeon (*Acipenser oxyrinchus*): Federally listed endangered, state listed endangered
- Brook Floater (*Alasmidonta varicosa*): State listed endangered
- Wood Turtle (*Glyptemys insculpta*): State-listed threatened
- Peregrine Falcon (*Falco peregrinus*): State-listed threatened
- Upland Sandpiper (*Bartramia longicauda*): State-listed threatened
- Loggerhead Shrike (*Lanius ludovicianus*): State-listed threatened
- Migrant Loggerhead Shrike (*Lanius ludovicianus migrans*): State-listed threatened
- Henslow's sparrow (*Ammodramus henslowii*): State-listed threatened
- Appalachian Grizzled Skipper (*Pyrgus wyandot*): State-listed threatened

In addition, a letter was sent to VDGIF on April 10, 2015, to request a review of the project sites for the potential occurrence of any federally threatened, endangered and proposed or candidate species or critical habitats. VDGIF responded stating they recommend GSA access the VAFWIS for information on threatened and endangered species. Observations of the wood turtle and the peregrine falcon were documented within Huntley Meadows Park. This park is more than one mile

from both alternative sites. No confirmed occurrences of any other listed species have been recorded in the vicinity of either alternative site. Therefore, no listed species would be affected.

A portion of Cameron Run, located less than one mile east of the Victory site, is listed as a potential Anadromous Fish Use stream. A portion of Accotink Creek, located approximately 1.8 miles west of the Springfield Metro Center site, is listed as a confirmed Anadromous Fish Use stream. Dogue Creek and one unnamed tributary, located approximately 3 miles and 1.4 miles east of the Springfield Metro Center site, respectively, are identified as habitat for the Wood Turtle. No Bald Eagle nests or concentration areas were identified. No impacts to aquatic resources are anticipated. Therefore, no impacts to the Atlantic sturgeon, brook floater, wood turtle, or anadromous fish species would occur.

In a letter dated April 3, 2015, VDCR stated that no natural heritage resources or documented state-listed plants or insects would be adversely impacted by the project.

Because no known listed or endangered species would be impacted by the proposed actions, threatened, endangered, and sensitive species were dismissed from further analysis in this EA.

3.2.2 Aquatic Biota

There are no streams located onsite for either of the alternative sites. The Victory Center and the Springfield Metro Center sites are both located adjacent to streams which have forested buffers. No impacts to the aquatic biota in these streams would occur during operation of the facility. Some indirect impacts to surface waters on adjacent properties are possible as a result of construction runoff. These impacts would be temporary and would be avoided and minimized as much as possible by implementing BMPs during construction, including but not limited to silt fence, hay bales, and revegetation of exposed sediment. A SWPPP, including a stormwater management plan, erosion and sediment control plan, pollution prevention plan, and description of necessary control measures would be developed in accordance with VDEQ Stormwater Management Program (VSMP) regulations for construction activities and maintained onsite throughout construction. Because of these mitigation measures, no impacts to off-site streams or aquatic biota are anticipated under any of the Action Alternatives. Therefore, aquatic biota impacts were dismissed from further analysis in this EA.

3.2.3 Floodplains

Federal activities within floodplains must comply with EO 11988: Floodplain Management, 33 C.F.R. 1977; and EO 13690: Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input. Per these executive orders, federal agencies are required to avoid adverse effects associated with the occupancy and modification of floodplains to the extent possible, thereby minimizing flood risk and risks to human safety (FEMA, 2006). The Victory Center site is located outside of the 100-year and 500-year floodplains on Flood Insurance Rate Map (FIRM) panels 5155190036E and 5155190017E, effective June 16, 2011. The Springfield Metro Center site is found on FIRM panel 51059C0295E, effective September 17, 2010 and is located outside the 100-year and 500-year floodplains. Floodplain maps for the proposed sites can be found in Appendix A (Figures A-3 and A-4). Because neither alternative is located within the floodplain, neither alternative is expected to have a measurable effect on the frequency, elevation, intensity or duration of floods, nor would it impact floodplain function. Therefore, floodplains were dismissed from further analysis within this EA.

3.2.4 Taxes and Revenue

The Commonwealth of Virginia levies a six percent corporate tax on businesses; a five percent plus $120 personal income tax on incomes between $5,000 and $17,000 for single taxpayers; and a 5.75 percent plus $720 personal income tax on incomes greater than $17,000 for single taxpayers. A five percent sales and use tax (four percent state tax, one percent local tax) is imposed upon the sale or use of tangible personal property and certain services (Commonwealth of Virginia Department of Taxation, 201 1). Real estate taxes are administered separately by the state's cities, counties, and towns. The City of Alexandria's real estate tax rate is $1.043 per $100 of assessed value (City of Alexandria Finance Department, Tax Guide, 2015). The real estate tax rate in Fairfax County is $1.09 per $100 of assessed value (Fairfax County Tax Administration, Tax Rates, 2015).

The proposed action is the acquisition of space through leasing. GSA would lease space from a private developer/owner and the proposed site would remain under private ownership. Therefore, the local and state governments would see a minor, long-term, direct, and beneficial impact to tax revenue from the proposed action because the developer/owner would be required to pay local and State property taxes.

Additionally, the TSA lease consolidation would bring an additional 3,800 consumers to the alternative sites, which would result in an increase in spending by TSA employees at local businesses. This in turn would generate additional sales taxes and revenues for local and state governments. Secondary jobs related to the increased economic activity stimulated by the proposed action may also result in additional retail services and business employment opportunities through a multiplier effect, yielding additional sales and income tax revenues for local and state governments. This impact would have a negligible, long-term, indirect, and beneficial impact on sales and income taxes and revenues.

In the short-tem, construction workers would be employed during the construction period. The workers would be residing and paying taxes within the State. This would create a negligible, short-term, beneficial impact.

3.2.5 Population and Housing

Currently, GSA has several leased facilities for TSA throughout Northern Virginia. The total number of employees to be collocated would represent a temporary increase in daytime population at any of the offered sites. The alternative sites currently under consideration have no permanent residential populations onsite.

The Victory Center site is located within the boundary of the Landmark/Van Dorn Small Area Plan (SAP) as described in the City of Alexandria *Master Plan*, which designates the site for medium- to high-density commercial development. The site and most of the surrounding properties are currently zoned for office and commercial use. One 226-unit residential apartment building and one condominium complex are adjacent to the parcel to the south.

The Springfield Metro Center site is within the Franconia-Springfield Transit Station Area as described in the *Fairfax County Comprehensive Plan*, which includes five residential communities. Most housing in the area is comprised of single-family detached units with a few multifamily units located north and south of the Franconia Springfield Parkway (Route 289).

Both of the Action Alternatives are located in the local commuting area/duty station as defined by the U.S. Office of Personnel Management (OPM) and would not require the relocation of any TSA employees. Over time, some TSA employees may elect to move closer to the consolidated TSA

location; however, it is not possible to quantify the number of employees that would make this transition. Any impacts to population and housing would be negligible and handled by available housing in the area. In addition, there is no housing on any of the alternative sites. No housing immediately adjacent to the alternative sites would be adversely affected by the proposed action. Therefore, population and housing was not studied in further detail in this EA.

3.2.6 Economy and Employment

Table 2 provides a summary of employment by occupation in Virginia, the City of Alexandria, and Fairfax County, based on the most recent employment data available from the Decennial Census (2000) and American Community Survey (ACS) (2013). Table 3 provides total unemployment rates for Virginia, Alexandria, and Fairfax County (ACS, 2010-2013).

According to ACS, the median household income between 2008 and 2013 was $63,907 in Virginia, $85,706 in Alexandria, and $110,292 in Fairfax County.

Table 2: Employment by Occupation (U.S. Census Bureau, 2000; ACS, 2013)

	Commonwealth of Virginia		City of Alexandria		Fairfax County	
Occupation	2000 Census (%)	2011-2013 ACS (%)	2000 Census (%)	2011-2013 ACS (%)	2000 Census (%)	2011-2013 ACS (%)
Management, business, science, and arts occupations	38.2	42.1	56.2	55.5	55.7	39.1
Service Occupations	13.7	17.1	11.9	14.4	11.3	17.3
Sales and office occupations	25.5	22.9	21.2	19.9	22.9	25.5
Natural resources, construction, and maintenance occupations	10.1	8.4	5.5	0.1	5.5	0.1
Production, transportation, and material moving occupations	12.5	9.5	5.2	4.2	4.6	8.1

Table 3: Unemployment Rates of Population 16 Years and Over: 2010 Through 2013

Timeframe	Commonwealth of Virginia	City of Alexandria	Fairfax County
2013	7.2	5.0	5.2
2012	6.9	5.1	5.0
2011	6.5	4.5	4.7
2010	5.9	4.3	3.9

(ACS, 2010-2013)

No direct, long-term impacts to area employment are anticipated because the proposed action would not result in additional hires by TSA. While the relocation of existing employees to the site may result in some increase of patronage to area businesses, the impact would be negligible, short-term, and beneficial. There would be no change to property taxes, sales taxes, or income taxes as a result of the proposed action.

Therefore, Economy and Employment was dismissed from further study in this EA.

3.2.7 Cultural Resources

The National Historic Preservation Act (NHPA) of 1966, as amended, is the guiding legislation for the identification and preservation of historic properties. Section 106 of the NHPA requires federal agencies to consider the effects of their actions (undertakings) on historic properties. Per the implementing regulations of Section 106 (36 CFR § 800), a historic property is defined as "…any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places…"

As the lead agency, GSA has entered into consultation with VDHR and other interested parties on May 1, 2015 to identify historic properties that could be affected, to assess potential adverse effects, and to resolve the adverse effects through appropriate resolution strategies. To begin this process, a preliminary Area of Potential Effects (APE) was developed for each project site. As defined by 36 CFR § 800.16(d), the APE represents "the geographic area within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist." GSA has developed a Preliminary APE for each site that considers both

direct and indirect effects. The boundaries for direct effects are limited to the area in which the projects will cause ground disturbance. The boundaries for indirect effects capture all locations from which the projects may be reasonably visible or where they may result in changes to land use, public access, traffic patterns, etc.

Victory Center (Action Alternative)

The APE for the Victory Center Site is shown below in Figure A-5located in Appendix A.

The APE was defined to capture major east-west views along Eisenhower Avenue. Major transportation corridors in the area—a CSX railway line to the north and I-95 to the south—limit the depth of north-south views toward the project site. Wooded, sloping easement areas along these corridors further limit views. An inventory of historic and cultural resources within the APE follows.

Historic Resources

Existing development on site of former Bush Hill/Holly Hill School (VDHR ID: 100-5023), facing SE (*Source: EHT Traceries, Inc.)*

Holly Hill School (Bush Hill); 4840 Eisenhower Avenue - VDHR ID: 100-5023

Designation: Not evaluated for National Register eligibility (resource destroyed by fire in 1977)

This site was the former location of an eighteenth-century plantation estate, Bush Hill. After WWII, the primary manor house was converted to the Holly Hill School, which operated at the site until 1977. That same year, the building was completely destroyed by arson. The property was surveyed in 2002, which identified extant ruins associated with the manor house and garden terraces, but no additional architectural resources. Subsequent to the 2002 survey, a large apartment facility appears to have been constructed on that site (Figure 3). This site is no longer extant (VDHR 2015).

Archaeological Resources

VDHR ID: 44AX0111

Designation: Not evaluated for National Register eligibility

This site included the ruins of the former Bush Hill estate/Holly Hill School associated with architectural resource 100-5023 described above. The site has been surveyed several times

between 1979 and 2002. At the most recent survey, surface features were identified, although no subsurface testing was conducted. The site appears to have been subsequently redeveloped, and the extent of existing features is not known. This site has not been evaluated for National Register eligibility (VDHR 2015).

VDHR ID: 44AX0158

Designation: Not evaluated for National Register eligibility

This site included the remnants of a nineteenth-century raised railroad bed and stone bridge abutments (no rails were recorded). The site was surveyed in 1979 and 1991. This site has not been evaluated for National Register eligibility (VDHR 2015).

GSA has identified no historic resources within the project site or APE for this alternative that are listed in, or eligible for listing in, the National Register. Therefore, the proposed development project has no potential to adversely affect historic resources. In addition, concurred with GSA determination on May 29, 2015 stating that the proposed project will have *no adverse effect* to historic properties. Based on these factors, the Victory Center Alternative (Action Alternative) would result in negligible impacts to any historic resources.

Springfield Metro Center (Action Alternative)

The APE for the Springfield Metro Site is shown below in Figure A-6.

The APE was defined by the crossing of the Franconia-Springfield Parkway and I-95 corridor to the north and west; by the Washington Metropolitan Area Transit Authority (WMATA) Metrorail corridor and right-of-way to the east; and by a stream bed and ravine to the south. These major divisions, in addition to generally sloping topography and forested areas, limit views to and from the project site beyond the boundaries of the APE. An inventory of historic and cultural resources within the APE follows.

Historic Resources

GSA Warehouse Property (Parr-Franconia Warehouse); Metropolitan Center Drive (no property number) - VDHR ID: 029-5876

Designation: Recommended that it be determined not eligible for listing (no formal DOE completed)

GSA Warehouse Property (VDHR ID: 029-5876), facing SE along Metropolitan Center Drive (*Source: EHT Traceries, Inc.)*

Generally known as the GSA Franconia Warehouse (Figure 4), this property is a large complex with several buildings and associated surface parking. The first warehouse was constructed on the site in 1953 and several subsequent additions were made. Currently, there are three large warehouse buildings on the property and several smaller metal-frame buildings. Although not documented in the VDHR database, the small spur that extends along the northeast of the property was likely a current or former access road or rail spur for warehouse deliveries.

The property was surveyed in 2007. At this time, it was recommended that it be determined not eligible for listing in the National Register of Historic Places (Joseph and Price 2007; VDHR 2015).

Archaeological Resources

VDHR ID: 44FX0549

Designation: Not evaluated for National Register eligibility

One previously located archaeological site has been recorded within the APE, approximately 500 feet northeast of the project area. It was recorded in 1982 and consisted of a Late Woodland prehistoric Native American campsite, including a lithic scatter, fire-cracked rock, and small collection of tools.

This site was surveyed in 1982. At this time it was not evaluated for National Register eligibility (VDHR 2015).

GSA has identified no historic resources within the project site or APE for this alternative that are listed in, or eligible for listing in, the National Register. Therefore, the proposed development project has no potential to adversely affect historic resources. In addition, concurred with GSA determination on May 29, 2015 stating that the proposed project will have *no adverse effect* to

historic properties. Based on these factors, the Springfield Metro Alternative (Action Alternative) would result in negligible impacts to any historic resources.

3.2.8 Noise

Noise is regulated at local, state, and federal levels. The Noise Control Act of 1972 authorizes EPA to promulgate regulations establishing maximum permissible noise characteristics for products manufactured for interstate commerce. In addition, EPA was directed to publish information about the kind and extent of effects of various conditions to protect public health and welfare. This information has been used by other Federal agencies in establishing criteria applicable to their programs.

Both alternative sites are zoned for commercial use and are in close proximity to major transit routes; therefore, both sites are inherently subject to certain levels of ambient noise. Current noise sources include: traffic; heat, ventilation, air conditioning (HVAC) units; pedestrians; and nearby Metrorail and bus stations. If the proposed action occurs at either of the sites, the primary source of noise would be temporary and associated to construction activities. The operation of the TSA Lease Consolidation would generate additional noise similar to the current sources at the alternative sites, such as traffic and HVAC units. Because the additional noise would be negligible, except for temporary construction noises, noise was dismissed from further analysis.

3.2.9 Visual Quality

Renovation of the existing building at the Victory Center site would not result in impacts to the visual environment. The scale, design, and use of the building would be consistent with the surrounding development. Impacts related to nighttime light spillover to adjacent properties would be mitigated through the use of shielding around light fixtures and landscaping with native vegetation and trees. Overall, there would be a negligible, long-term, adverse, direct impact to the visual quality of the surrounding area.

The Springfield Metro Center alternative would add a multi-story building to the visual environment. The new construction would replace a grassy area with a new building, thus changing the existing aesthetics. However, the scale, design, and use of the proposed facility would be consistent with the surrounding development. Impacts related to nighttime light spillover to adjacent properties would

be mitigated through the use of shielding around light fixtures and landscaping with native vegetation and trees. Overall, there would be a negligible, long-term, adverse, direct impact to the visual quality of the surrounding area.

Due to the negligible impacts related to visual quality at either of the alternative sites, visual quality has been dismissed from further analysis.

3.2.10 Security

The safety of TSA employees would be provided by a number of security measures for each of the proposed site alternatives. The site design for both sites would comply with the Interagency Security Committee (ISC) Level IV Standards. The final list of security measures will be determined during the design phase and identified in the design and construction documents (RLP 2VA0687, 2014). Due to the security measures that would be implemented at any of the alternative sites, security impacts have been dismissed from further analysis.

3.2.11 Public Health and Safety

If the lease consolidation of TSA occurs at any of the proposed alternative sites, emergency services would not change, nor would the operation of the TSA facility put undue stress on these services. All of the alternative sites are included within the county or the city's planning forecast. Emergency services were taken into consideration in the approval of the developments by each of the counties. Furthermore; the TSA lease consolidation at any of the proposed alternative sites is not expected to affect the ability of the local fire and police departments or area hospitals to provide service to the surrounding residents. Therefore, public health and safety impacts have been dismissed from further analysis.

3.2.12 Community Facilities and Services

A wide variety of parks, recreation, community facilities, and open space are present in Fairfax County and the City of Alexandria. There are over 900 acres of protected open space in the City of Alexandria including 566 acres of City owned park land (City of Alexandria, 2015).Fairfax County has approximately 23,310 acres of park land (Fairfax County, 2015). Both jurisdictions have an extensive network of public space including community parks, trails, historic sites, nature centers, athletic facilities and indoor recreation centers.

The City of Alexandria public school system (ACPS) has 12 elementary schools, 2 middle schools, 1 high school (with 2 campuses) and 1 pre-K through 8th grade school. As of September 30, 2014, there were 14,457 students enrolled in schools within the city (ACPS, 2015). Of these, four elementary schools, one middle school, one library, nine child care facilities, 15 parks, one open space easement, one recreational center, and numerous places of worship are located within one mile of the Victory Center site.

Fairfax County's public school system has 139 elementary schools, 23 middle schools, 3 secondary schools, 22 high schools, 2 alternative high schools and 7 special education centers. Fairfax County is projecting 186,785 students to be enrolled in public schools for the 2014-2015 school year (Fairfax County Public Schools [FCPS, 2015]). Of these, two elementary schools, one high school, one community college campus, eight child care facilities, seven parks, and numerous places of worship are located within one mile of the Springfield Metro Center site.

Both jurisdictions also have a number of private schools that service preschool through high school students.

Under the Action Alternatives, the lease consolidation would not remove or affect any existing library, education/child care facility, parks and recreational facility, or religious facility, nor would it result in a substantial change to community population that would adversely affect library or church capacity. The surrounding child care facilities are able to handle the need for child care services including any potential needs from TSA employees. Because it is not expected that TSA employees would relocate, the TSA lease consolidation is not expected to affect the ability of the local facilities to provide service to the surrounding residents.

Most of the park and recreation facilities would be only slightly impacted from the consolidation of TSA at any of these sites. There may be a slight increase in use of community facilities and services, but the existing facilities and services would be able to handle the additional patronage and would not be adversely affected. Overall, the impact to community facilities and services at these sites would be negligible and this resource has been dismissed from detailed analysis.

3.3 What Resource Issues Have Been Included For Further Analysis?

As with any environmental analysis, there are resource issues that are analyzed in further detail to compare the environmental consequences of the No-Action and the five Action Alternatives. Each of the alternatives described in Chapter 2 would have varying impacts to natural resources, the social and economic environment, cultural resources, and infrastructure. The resources analyzed in detail in this EA are:

- Soils
- Environmental Contamination
- Water Resources
  - Surface Water and Wetlands
  - Groundwater, Hydrology, and Quality
  - Stormwater Resources
- Coastal Zone Management
- Vegetation and Wildlife
- Air Quality
- Land Use Planning and Zoning
- Environmental Justice
- Traffic and Transportation
- Utilities
- Waste Management

Soil Types

Loam - Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.
Silt - Soil that is 80 percent or more silt and less than 12 percent clay.
Gravelly soil material - Material that is 15 to 50 percent by volume, rounded or angular rock fragments, not prominently flattened, up to 3 inches in diameter.
Urban land - An area where more than 75 percent of the surface is covered by asphalt, concrete, buildings, or other structures.

3.4 Soils

3.4.1 What Are the Soil Conditions at Each of the Proposed Sites?

Victory Center (Action Alternative)

The soils of the Victory Center site are classified as 96 percent Urban Land and roughly 4 percent Codorus and Hatboro soils (NRCS, 2015) (See Table 4). The site is flat and previously graded. Much of the site is paved and/or developed aside from minor landscaping. The Codorus and Hatboro soils are listed as partially hydric. The soils of the Victory Center site are not classified as prime, unique, or statewide important farmland; therefore, the site is not subject to the requirements of the Farmland Protection Policy Act (FPPA). A soils map for this alternative can be found in Appendix A, Figure A-7.

Springfield Metro Center (Action Alternative)

The soils of the Springfield Metro Center site are classified as predominately Urban Land; approximately one percent is Sassafras-Marumsco complex (See Table 4). The site is flat and previously graded. None of the soils on the Springfield Metro Center site are classified as prime, unique, or statewide important farmland or as hydric soils. Therefore, the site is not subject to the requirements of the FPPA. A soils map for this alternative can be found in Appendix A, Figure A-8.

Table 3. Soil Types, Classifications, and Ratings at the Proposed Sites

Site	Soil Types	Percent of Site	Prime Farmland Soils? (Y/N)	Hydric Rating
Victory Center	Urban Land	96	N	Not Hydric
	Codorus and Hatboro soils	4	N	Partially Hydric
Springfield Metro Center	Urban Land	99	N	Not Hydric
	Sassafras-Marumsco complex	1	N	Not Hydric

3.4.2 How Would Soils be Affected by the Proposed Project?

No- Action Alternative

Under the No-Action Alternative, the consolidation of TSA employees would not occur. There would be no new development at the existing sites and therefore no impact to soils.

Victory Center (Action Alternative)

Under the Victory Center alternative, portions of the site would be excavated in order to build a new parking garage and a four-story addition to the existing building. Some paved portions of the site would be excavated and restored to greenspace. There would be a direct, permanent loss of soil due to excavation and construction of the parking garage. Some indirect, temporary impacts may occur as a result of construction activities. Soil erosion could cause sediments to enter storm drains and eventually streams. To avoid and minimize the impacts of soil erosion and sedimentation, an

erosion and sediment control plan would be developed, approved by VDEQ, and followed during construction. The impact from soil erosion and sedimentation would be expected to be negligible, direct and indirect, adverse, and both short- and long-term.

Springfield Metro Center (Action Alternative)

Under the Springfield Metro Center alternative, the site would be cleared and excavated for construction of new buildings. There would be a direct, permanent loss of soil from construction. Some indirect, temporary impacts may occur as a result of construction activities. Soil erosion could cause sediments to enter storm drains and eventually streams. To avoid and minimize the impacts of soil erosion and sedimentation, an erosion and sediment control plan would be developed, approved by VDEQ, and followed during construction. The impact from soil erosion and sedimentation would be expected to be minor, direct and indirect, adverse, and short- and long-term.

3.4.3 What Measures Will be Taken to Ensure That Erosion and Sedimentation Are Controlled?

Under both action alternatives, the developer/owner would be responsible for developing and implementing an erosion and sediment control plan for approval by VDEQ and local jurisdictions. The plan would aim to reduce and control sediments entering storm drains and streams. The developer/owner would be required to follow the erosion and sediment control plan during grading and other ground disturbing activities to ensure soil stability is maintained. BMPs would be used to control and minimize sediment movements, including but not limited to: silt fences and/or hay bales around the perimeter of the site, and revegetation of soils that will be exposed longer than 14 days. Information about the erosion and sediment control plan is also found in Section 3.6: Stormwater Resources.

3.5 Environmental Contamination

3.5.1 Are There Any Hazardous Materials or Contaminated Soils or Groundwater at the Proposed Sites?

Victory Center (Action Alternative)

A Phase I Environmental Site Assessment was performed for the Victory Center site by Professional Services Industries (PSI) in August 2004 to determine the potential for contamination to exist onsite. An updated Phase I ESA was performed by PSI in February 2009. These studies identified concentrations of arsenic and lead in near-surface (zero to six feet below ground surface) fill material which exceed the EPA Risk Based Concentrations (RBCs) for industrial and commercial properties and Virginia Voluntary Remediation Program (VVRP) Tier III Screening levels. No environmental contamination was detected in subsurface soils or groundwater (OSI, 2009).

Springfield Metro Center (Action Alternative)

An Environmental Summary of previous environmental investigations at the Springfield Metro Center site, prepared by ECS Mid-Atlantic in August 2014, indicates that petroleum impacted soils and VOCs (primarily Tetrachloroethylene [PCE]) were detected in subsurface soil vapor that appears to be emanating from groundwater. PCE is a commonly used solvent in a variety of industrial degreasing operations. Both the petroleum impacted soils and the VOCs are typical of former industrial properties in this area. No additional recognized environmental conditions were identified (ECS Mid-Atlantic, 2014).

3.5.2 Would Hazardous Materials, Contaminated Soils or Groundwater be Disturbed?

Victory Center (Action Alternative)

Construction of the proposed parking garage and addition would require the excavation of existing soils on the east and west sides of the existing building. It is unknown whether arsenic and lead are present in these areas as identified in the 2009 Phase I ESA update. Further characterization would be required as the location of contamination is unknown.

Construction activities at the Victory Center site could disturb soils containing arsenic and lead. The soils would be removed from the site separately from other excavated materials, characterized and disposed of in accordance with local, state and federal regulations. If regulatory closure for the impacted fill material onsite is desired, the property is eligible for the VVRP (PCI, 2009). With the mitigation proposed, there would be no long-term impacts under this alternative. With the mitigation proposed below, there would be no long-term impacts under this alternative.

Springfield Metro Center (Action Alternative)

Petroleum impacted soils and VOCs were found at various soil test sites on the Springfield Metro Center site. These areas would be excavated in order to construct buildings and parking areas. Therefore, contaminated soils would be disturbed resulting in a moderate, short-term and adverse impact. Groundwater will not be used or accessed during construction or occupation of the site. The building will tie into existing city water and sewer lines for use during operations.

Construction activities may disturb petroleum impacted soils throughout the Springfield Metro Center site. During construction, safety measures would be employed to keep site workers from direct contact with contaminated soils. Per VDEQ's "beneficial reuse clause", these soils may be used as fill material as needed during construction. Any petroleum impacted soils not used for fill would be characterized, removed from the site, and disposed of in accordance with local, state and federal regulations. Contaminated soils would be taken to a landfill or facility permitted to accept petroleum impacted soils. Removal of the soils would involve temporary covering to prevent soil runoff. Because the soils would be exposed for a relatively short amount of time, and would be unlikely to come in contact with any TSA employees. Site workers would be required to follow a site safety plan when handling potentially contaminated soils, which would result in short-term, moderate, adverse impacts.

The PCE found in the soil vapor poses a potential risk to human health. However, this risk is manageable and can be abated by the use of engineering controls such as the installation of a subslab degassing system and enhanced chemical vapor barrier beneath the building. The subslab degassing system provides an outlet for vapors beneath the building to be vented to roof level instead of entering interior spaces (ECS Mid-Atlantic, 2014). Overall this would result in long-term, minor, adverse impacts.

3.5.3 What Measures Would Be Taken to Protect Human Health and the Environment?

Victory Center (Action Alternative)

During construction, safety measures would be employed to keep site workers from direct contact with contaminated soils, which would result in short-term, minor adverse impacts.

Springfield Metro Center (Action Alternative)

During construction, a site safety plan would be developed and employed to keep site workers from direct contact with contaminated soils. Any petroleum impacted soils not used for fill would be characterized, removed from the site, and disposed of in accordance with local, state and federal regulations. Contaminated soils would be taken to a landfill or facility permitted to accept petroleum impacted soils. Site workers would be required to follow safety protocols and the site safety plan when handling potentially contaminated soils.

The PCE found in the soil vapor would be abated by the use of engineering controls such as the installation of a subslab degassing system and enhanced chemical vapor barrier beneath the building.

3.6 Water Resources

3.6.1 Surface Water and Wetlands

The U.S. EPA and the U.S. ACOE are responsible for enforcing certain provisions of the Clean Water Act (CWA) (33 U.S.C. §1251 et seq.) which was enacted by Congress "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters" including wetlands and Waters of the US (WOUS). One of the mechanisms adopted by Congress to achieve that purpose is a prohibition on the discharge of any pollutants, including dredged or fill material, into wetlands or WOUS except in compliance with other specified sections of the Act. In most cases, this means compliance with a permit issued pursuant to CWA §402 or §404. The CWA defines the term "discharge of a pollutant" as "any addition of any pollutant to navigable waters from any point source" and provides that "[t]he term `navigable waters' means the waters of the United States,

including the territorial seas[,]" (33 U.S.C. §1362(7), 33 C.F.R. §328.3(a), and 40 C.F.R. §230.3(s)). Discharges of dredged or fill material into wetlands and WOUS require a permit from the U.S. ACOE.

The U.S. ACOE defines wetlands as "areas saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for line in saturated soil conditions" (33 CFR 328.3). Wetlands generally include swamps, marshes, bogs, and similar areas. The technical approach for the identification and delineation of wetlands is that, except in certain abnormal situations, evidence of a minimum of one positive wetland indicator from each parameter (hydrology, soil, and vegetation) must be found in order to make a wetland determination.

The Chesapeake Bay Preservation Act of 1988 (CBPA) aims to protect and improve the water quality of the Chesapeake Bay, its tributaries, and other Virginia state waters by minimizing the effects of human activity upon these waters. The Bay Act requires all tidewater localities in Virginia to designate Resource Protection Areas (RPAs), which include lands adjacent to water bodies with perennial flow that have an intrinsic water quality value due to the ecological and biological processes they perform or are sensitive to impacts which may result in significant degradation to water quality. RPAs include: 1. Tidal wetlands; 2. Nontidal wetlands contiguous to and connected by surface flow to tidal wetlands or waterbodies with perennial flow; 3. Tidal shores; 4. Any other lands that the locality considers necessary to protect the quality of state waters, such as floodplains; 5. A buffer area at least 100 feet in width located adjacent to and landward of any of these resources and along both sides of any water body with perennial flow. All land disturbing activities proposed within a RPA must first be approved by the locality and will likely require a Water Quality Impact Assessment (WQIA) to describe the impacts and any avoidance or minimization strategies that will be employed. Additionally, the remainder of the land area within the locality is designated as a Resource Management Area (RMA). All development and redevelopment must engage in land management techniques designed to minimize adverse impacts on water quality in a manner that is consistent with the Act (9VAC10-20-120). Additionally, the City of Alexandria also requires a 50-foot buffer around intermittent streams pursuant to Section 13-109(E)(6)(c) of the Zoning Ordinance.

3.6.1.1 *Are There Surface Waters or Wetlands on the Proposed Sites?*

Victory Center (Action Alternative)

The Victory Center site is located in the Cameron Run sub-watershed of the Potomac River watershed. The site is within the City of Alexandria, which is a tidewater locality and therefore subject to CBPA regulations.

A desktop review of NWI and NHD mapping, topographic mapping, soils data, and Alexandria GIS data indicated that no wetlands, WOUS, or RPAs are present onsite.

A preliminary field evaluation of wetlands and WOUS was conducted on the Victory Center site in October 2014. No wetlands, WOUS, or RPAs were present onsite. A formal wetland delineation in accordance the U.S. Wetlands Delineation Manual (1987) has not been performed or verified by U.S. ACOE.

Several water features were identified adjacent to the Victory Center site. Several intermittent features originate at culverts located along the northern edge of the parcel. According to the City of Alexandria Zoning Ordinance, these features are intermittent and are therefore protected by a 50-foot buffer. These features flow into an unnamed, perennial tributary to Cameron Run, which flows west to east approximately 100 feet north of the project area. A second perennial tributary to Cameron Run is approximately 730 feet east of the project area adjacent to the existing parking lot (NHD, 2015). These tributaries are protected by a RPA. According to City of Alexandria RPA mapping, this RPA is partially within the Victory Center project area.

Springfield Metro Center (Action Alternative)

The Springfield Metro Center site is located in the Long Branch sub-watershed of the Accotink Creek watershed, which flows into Pohick Creek and ultimately the Potomac River, a tributary of the Chesapeake Bay. The site is within Fairfax County, which is a tidewater locality subject to CBPA regulations.

A desktop review of NWI and NHD mapping, topographic mapping, soils data, and Fairfax County GIS data indicated that no wetlands, WOUS, or RPAs are present onsite. An unnamed tributary to Long

Branch was identified approximately 250 feet to the northeast of the site. The tributary flows northwest to southeast through a forested area and is protected by a Resource Protection Area (RPA).

A preliminary field evaluation of potential wetlands, WOUS, and RPAs was conducted on the Springfield Metro Center site in October 2014. No jurisdictional wetlands, WOUS, or RPAs were present onsite. A formal wetland delineation in accordance the U.S. Wetlands Delineation Manual (1987) has not been performed or verified by U.S. ACOE.

3.6.1.2 *How Would the Proposed Project Affect Surface Waters or Wetlands?*

No-Action Alternative

Under the No-Action Alternative, the consolidation of TSA employees would not occur. There would be no new development at the existing sites and therefore no impact to surface waters or wetlands.

Victory Center (Action Alternative)

No direct impacts to streams, wetlands, RPAs, or City of Alexandria stream buffers are anticipated. In the event that encroachment into a RPA or buffer is proposed, a Water Quality Impact Assessment (WQIA) would be prepared that outlines impacts and mitigation measures. A site-specific RPA assessment and a WQIA may be required (DSP#2013-0015, City of Alexandria, 2013).

Some indirect adverse impacts to surface waters on adjacent properties are possible as a result of construction runoff from the construction of the parking garage and building addition. These impacts would be temporary and would be avoided and minimized as much as possible by implementing BMPs during construction, including but not limited to silt fence, hay bales, and revegetation of exposed sediment. A SWPPP, including a stormwater management plan, erosion and sediment control plan, pollution prevention plan, and description of necessary control measures would be developed in accordance with VDEQ VSMP regulations for construction activities and maintained onsite throughout construction.

Springfield Metro Center (Action Alternative)

Due to distance from the project area, no direct impacts to Long Branch or its associated RPA are anticipated. Some indirect adverse impacts to surface waters on adjacent properties are possible as a result of construction runoff. These impacts would be temporary and would be avoided and minimized as much as possible by implementing BMPs during construction, including but not limited to silt fence, hay bales, and revegetation of exposed sediment. A SWPPP, including a stormwater management plan, erosion and sediment control plan, pollution prevention plan, and description of necessary control measures would be developed in accordance with VDEQ VSMP regulations for construction activities and maintained onsite throughout construction.

3.6.1.3 *What Measures would be Taken to Protect Surface Water and Wetlands?*

Construction impacts would be avoided and minimized as much as possible by implementing BMPs during construction, including but not limited to silt fence, hay bales, and revegetation of exposed sediment. A SWPPP, including a stormwater management plan, erosion and sediment control plan, pollution prevention plan, and description of necessary control measures would be developed in accordance with VDEQ VSMP regulations for construction activities and maintained onsite throughout construction. In the event that encroachment into a RPA or buffer is proposed, a Water Quality Impact Assessment (WQIA) would be prepared that outlines impacts and mitigation measures.

3.6.2 Groundwater Hydrology and Quality

The sites being considered for the TSA Lease Consolidation are located within two physiographic provinces, the Coastal Plain and the Piedmont. The Coastal Plain Province borders the Atlantic Ocean and is generally comprised of flat to seaward-sloping lowland underlain by semi-consolidated and unconsolidated sediments of silt, clay, and sand with minor amounts of lignite, gravel, and limestone. The Northern Atlantic Coastal Plain aquifer system is generally fed by surface water infiltration and consists of shallow groundwater which generally follows topography of the area (USGS, 1997). USGS quadrangle maps for each alternative are found in Appendix A (Figures A-1 and A-2).

The Piedmont Province forms at the Fall Line of the Piedmont and Coastal Plain Provinces. It is characterized by varied topography including predominantly hard bedrock, crystalline igneous and metamorphic rocks of Paleozoic age. Groundwater in the Piedmont is fed primarily through the infiltration of surface water (USGS, 1997).

3.6.2.1 *How would Groundwater be Affected by the Proposed Project?*

No-Action Alternative

Under the No-Action Alternative, the consolidation of TSA employees would not occur. There would be no new development at the existing sites and therefore no impact to groundwater.

Victory Center (Action Alternative)

The Victory Center site consists of an existing office building and parking areas. There will be a net decrease in impervious surface area on the 16-acre site due to the addition of landscaped areas and trees from the removal of part of the existing surface lot. Therefore, there would be minor, long-term, beneficial impacts to groundwater.

Springfield Metro (Action Alternative)

The Springfield Metro Center site is currently undeveloped with no impermeable surface area. The proposed activity would result in a net increase in impervious surface area. Therefore, there would be a minor, long-term, adverse impact to groundwater.

3.6.2.2 *What Measures would be Taken to Protect Groundwater?*

The amount of impervious surface proposed at each of the alternative sites has been minimized as much as practicable. The proposed TSA Lease Consolidation would be constructed to meet or exceed all Virginia and locality regulations, as applicable. A SWPPP, including a stormwater management plan, erosion and sediment control plan, pollution prevention plan, and description of necessary control measures would be developed in accordance with VDEQ VSMP regulations for construction activities and maintained onsite throughout construction.

3.6.3 Stormwater Resources

VDEQ is responsible for issuing individual and general permits that control stormwater discharges from construction activities. VDEQ administers this program through the VSMP Regulations, which are authorized by the Virginia Stormwater Management Act. Construction activities resulting in a land disturbance greater than or equal to one acre are covered by the construction general permit. Under this permit, the operator is required to implement a site-specific Stormwater Pollution Prevention Plan (SWPPP), which includes an erosion and sediment control plan, a stormwater management plan, a pollution prevention plan, and a description of necessary control measures (9VAC25-870-54). The SWPPP must be developed in compliance with the Virginia Stormwater Management Handbook, Volumes I and II (Second Edition, 2013) and the Virginia Erosion and Sediment Control Handbook (Third Edition, 1992). Land-disturbing activities permitted, approved, or funded prior to July 1, 2014 are subject to the Part II C technical criteria of 9VAC25-870.

3.6.3.1 *How Has Stormwater Management at Each of the Project Sites Been Provided?*

Victory Center (Action Alternative)

The Victory Center site is almost entirely impervious surface and generally slopes to the northeast towards a tributary to Cameron Run. The existing building on the Victory Center site was constructed in 1973; existing stormwater management onsite was constructed according to state and local standards that were applicable at that time. Onsite BMPs include drainage swales along the south and east boundaries of the site and a subsurface network of pipes and inlets under the existing parking areas that outfalls to the north into the tributary to Cameron Run.

Springfield Metro Center (Action Alternative)

The Springfield Metro Center site generally drains to the northeast into a tributary of Long Branch. No impervious surface or permanent stormwater management BMPs currently exist onsite.

3.6.3.2 *How Would the Proposed Project Affect Stormwater?*

No-Action Alternative

Under the No-Action Alternative, none of the alternative sites would be developed or renovated for the proposed TSA Lease Consolidation. TSA would continue to occupy three locations in Northern Virginia. It is assumed the existing buildings employed stormwater management onsite according to state and local standards that were applicable at the time. With the No-Action Alternative there would be no additional direct or indirect impacts to stormwater.

Victory Center (Action Alternative)

According to the Virginia Runoff Reduction Method ReDevelopment Worksheet, completed by VIKA Virginia, LLC, the proposed activity at the Victory Center site would result in a decrease in impervious surface at the site from removing part of the existing surface lots. This reduction would decrease the volume of stormwater runoff from the site as compared to existing conditions. Phosphorus loads would also be reduced by 20 percent as compared to existing conditions (VIKA, 2014). These volume and phosphorus reductions meet or exceed VDEQ and City of Alexandria requirements. Additional stormwater management facilities are proposed as discussed in Section 3.6.3, which would further minimize impacts. In general, it is anticipated that the impact to stormwater would be minor, beneficial, long-term, and indirect for each of these sites.

Some indirect impacts to surface waters on adjacent properties are possible as a result of construction runoff from the construction of the parking garage and building addition. These impacts would be temporary and would be avoided and minimized as much as possible by implementing BMPs during construction, including but not limited to silt fence, hay bales, and revegetation of exposed sediment. Therefore, there would be negligible, short-term, adverse impacts related to stormwater.

Springfield Metro Center (Action Alternative)

Development of the Springfield Metro Center site would result in an increase in impervious surface area. However, methods to reduce stormwater volume and phosphorus content are proposed, as discussed in Section 3.6.3. With these measures in place, the Springfield Metro Center site would

exceed stormwater volume reduction and phosphorus removal requirements. Therefore, there would be a negligible, long-term, adverse impact to stormwater.

Some indirect impacts to surface waters on adjacent properties are possible as a result of construction runoff. These impacts would be temporary and would be avoided and minimized as much as possible by implementing BMPs during construction, including but not limited to silt fence, hay bales, and revegetation of exposed sediment. Therefore, there would be negligible, short-term, adverse impacts related to stormwater.

3.6.3.3 *What Types of Stormwater Control Measures Would be Implemented Under the Proposed Action?*

Victory Center (Action Alternative)

The Victory Center site would meet all VDEQ volume reduction, detention, and phosphorus removal requirements by reducing the impervious surface on the site by 4.5 acres. All water quality volume generated by impervious surfaces on the Victory Center site would be directed to Aqua-Swirl BMPs.

Prior to construction, a VSMP permit for discharges of stormwater from construction activities will be obtained. A SWPPP, including a stormwater management plan, erosion and sediment control plan, pollution prevention plan, and description of necessary control measures would be developed in accordance with VDEQ VSMP regulations for construction activities and maintained onsite throughout construction.

Springfield Metro Center (Action Alternative)

The proposed stormwater management system for the site includes two underground stormwater vaults. One vault is proposed on the northeast side of the site and would discharge to an existing 21-inch Reinforced Concrete Pipe (RCP) that runs underneath existing Springfield Center Drive and into Long Branch. The second vault is proposed on the southwest side of the site and would discharge into an existing 54-inch RCP. Phosphorus removal would be achieved with the use of six privately maintained stormfilters.

Prior to construction, a VSMP permit for discharges of stormwater from construction activities will be obtained. A SWPPP, including a stormwater management plan, erosion and sediment control

plan, pollution prevention plan, and description of necessary control measures would be developed in accordance with VDEQ VSMP regulations for construction activities and maintained onsite throughout construction.

3.7 Coastal Zone Management

The Federal Coastal Zone Management Act of 1972 (CZMA) encourages states to "preserve, protect, develop, and where possible, restore or enhance the resources of the nation's coastal zone" (16 U.S.C. § 1456). All federal development projects inside the coastal zone must comply with Section 307 of the CZMA. Under Section 307, federal activities which are reasonably likely to affect any land or water use or natural resources of Virginia's coastal zone must be consistent with the enforceable policies of Virginia's Coastal Zone Management Program (VCP) (VDEQ, 2014). The VCP also has several advisory policies which were established to serve as guidelines during project planning. Effects include both direct effects which result from the activity and occur at the same time and place as the activity, and indirect (cumulative and secondary) effects which result from the activity and are later in time or farther removed in distance, but are still reasonably foreseeable. Cumulative effects are effects resulting from the incremental impact of the federal action when added to other past, present, and reasonably foreseeable actions, regardless of what person(s) undertake(s) such actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.

As the lead agency for the VCP, the VDEQ is responsible for coordinating the Commonwealth's review of federal consistency determinations and certifications with cooperating agencies and responding to the appropriate federal agency or applicant.

3.7.1 What Makes Up Virginia's Coastal Zone?

Virginia's Coastal Zone is comprised of 29 counties, 17 cities, and 42 incorporated towns in Tidewater Virginia, as defined in the Code of Virginia 28.2-100. Fairfax County and the City of Alexandria are both within the Coastal Zone. Therefore, both alternative sites for the proposed project are subject to Federal Consistency Review pursuant to the CZMA and Virginia VCP.

3.7.2 Is the Proposed Project Consistent with Virginia's Coastal Zone Program?

The TSA Lease Consolidation at either of these alternative sites would result in a direct federal action under the CZMA. Table 5 summarizes GSA's Federal Consistency Determinations (FCDs) for the Victory Center and Springfield Metro Center sites, pursuant to 15 CFR §930.39. VDEQ concurred that the FCDs for both sites are consistent with the VCP on June 15, 2015 (victory Center) and October 29, 2014 (Springfield Metro Center) (See Appendix D).

Construction of the TSA Lease Consolidation at the Victory Center or Springfield Metro Center sites would not have any foreseeable effects on sensitive resources within the coastal zone including air quality, wetlands, and water quality. All construction activities on the selected alternative site would comply with applicable federal, state, and county laws and regulations that affect the Coastal Zone, including sediment and erosion control and stormwater management regulations. Therefore, the proposed action would have minor, short-term, adverse impacts to the Coastal Zone due to construction activities and would be consistent with the CZMA.

3.7.3 What Measures Will be Taken to Protect the Coastal Zone?

The selected TSA Lease Consolidation site would be developed to meet all applicable state and local regulations. The site will be designed to meet the VDEQ BMP and volume reduction requirements. An Erosion and Sediment Control Plan will be prepared and approved in accordance with the Virginia Erosion and Sediment Control Manual administered by VDEQ and enforced by the locality. Prior to construction, a Virginia Pollutant Discharge Elimination System (VPDES) permit will be obtained for discharges of stormwater from construction activities.

Table 5: Federal Consistency Determination

Policy	Enforcing Agency	Victory Center	Springfield Metro Center
Fisheries Management	VDGIF, VMRC	The proposed project does not affect this enforceable policy due to the distance of both alternative sites from any commercial or recreational fisheries (WSSI, 2014).	No adverse impacts to listed species or designated resources would occur. Therefore, this alternative is consistent with this enforceable policy, assuming strict adherence to erosion and sediment controls.
Subaqueous Lands Management	VMRC	The proposed project does not affect this enforceable policy due to the absence of state-owned bottomlands within the boundaries of either alternative site (WSSI, 2014).	No state-owned subaqueous lands are present. Therefore, this alternative is consistent with this enforceable policy.
Wetlands Management	VDEQ; VMRC	No wetlands or WOUS were identified onsite. No permits are anticipated to be required for impacts to surface waters. Therefore, this enforceable policy is not applicable to this site.	No wetlands or WOUS were identified onsite. No permits are anticipated to be required for impacts to surface waters. Therefore, this enforceable policy is not applicable to this site.
Dunes Management	VMRC	The proposed project does not affect this enforceable policy due to the absence of dunes within the boundaries of either alternative site (WSSI, 2014).	Not Applicable

Policy	Enforcing Agency	Victory Center	Springfield Metro Center
Non-point Source Pollution Control	VDEQ	An Erosion and Sediment Control Plan, Stormwater Management Plan, and SWPPP will be prepared and approved by the City of Alexandria in accordance with the Virginia Erosion and Sediment Control Manual. A VPDES Permit will be obtained prior to construction. Therefore, this site is consistent with this enforceable policy. See Section 3.6: Stormwater Resources	An Erosion and Sediment Control Plan will be prepared and approved in accordance with the Virginia Erosion and Sediment Control Manual administered by VDEQ and enforced by the locality. Therefore, this alternative is consistent with this enforceable policy. See Section 3.6: Stormwater Resources
Point Source Pollution Control	VDEQ	The project will not introduce any new point sources of pollution. Therefore, this alternative is consistent with this enforceable policy. See Section 3.6: Stormwater Resources	Prior to construction, a VSMP permit for discharges of stormwater from construction activities will be obtained. Therefore, this alternative is consistent with this enforceable policy. See Section 3.6: Stormwater Resources
Shoreline Sanitation	DOH	The proposed project does not affect this enforceable policy as all wastewater from the project would be treated by the locality's sanitary sewer system (WSSI, 2014).	No septic tanks are proposed. Therefore, this enforceable policy is not applicable to this alternative.

Policy	Enforcing Agency	Victory Center	Springfield Metro Center
Air Pollution Control	State Air Pollution Control Board	As required by the State Implementation Plan (SIP), during construction, all construction and management personnel will take reasonable measures to ensure that particulate matter does not become airborne through the handling, transportation, storage, use, construction, alteration, repair or demolition of any materials or property. Fugitive dust will be minimized using control methods outlined in 9 VAC 5-50-60 as necessary. Reasonable precautions will be taken to minimize fossil fuel usage. See Section 3.11: Air Quality	As required by the State Implementation Plan (SIP), during construction, all construction and management personnel will take reasonable measures to ensure that particulate matter does not become airborne through the handling, transportation, storage, use, construction, alteration, repair or demolition of any materials or property. Fugitive dust will be minimized using control methods outlined in 9 VAC 5-50-60 as necessary. Reasonable precautions will be taken to minimize fossil fuel usage. See Section 3.11: Air Quality
Coastal Lands Management	VDEQ/Localities	This alternative site is entirely built out with impervious cover and is located within a Resource Management Area. Prior to construction, a SWPPP, including a stormwater management plan, erosion and sediment control plan, pollution prevention plan, and description of necessary control measures would be developed in accordance with VDEQ VSMP regulations (9 VAC 25-870-10). See Section 3.2.3: Water Resources	This alternative site is located within a Resource Management Area and is therefore subject to 9 VAC 25-830-130. Prior to construction, a SWPPP, including a stormwater management plan, erosion and sediment control plan, pollution prevention plan, and description of necessary control measures would be developed in accordance with VDEQ VSMP regulations (9 VAC 25-870-10). See Section 3.2.3: Water Resources

Policy	Enforcing Agency	Victory Center	Springfield Metro Center
Advisory Policies			
Coastal Natural Resource Areas		Not Applicable	Not Applicable
Coastal Natural Hazard Areas		Not Applicable	Not Applicable
Waterfront Development Areas		Not Applicable	Not Applicable

3.8 Vegetation and Wildlife

3.8.1 What Type of Vegetation and Wildlife are Located On or Near Each of the Proposed Sites?

Victory Center (Action Alternative)

The Victory Center site consists of an existing 13-story building, paved parking areas, and landscaped areas. An unnamed tributary to Cameron Run is adjacent to the site to the north, which is likely to attract native wildlife such as white-tailed deer (*Odocoileus virginianus*), grey squirrel (*Sciurus carolinensis*), and common raccoon (*Procyon lotor*). No other natural vegetation was observed onsite. No other animals were observed during the site visit, which was conducted in April 2015.

Springfield Metro Station (Action Alternative)

The Springfield Metro Station site consists predominantly of a sparsely vegetated open field with a small strip of forest and dense underbrush along the western boundary, which is likely to provide habitat for birds (e.g. American robin (*Turdus migratoris*)) and small mammals (e.g. cottontail rabbit (*Sylvilagus* spp.)). The site is adjacent to the forested riparian buffer of a tributary to Long Branch, which is likely to attract native wildlife such as white-tailed deer (*Odocoileus virginianus*), grey squirrel (*Sciurus carolinensis*), common raccoon (*Procyon lotor*), American robin (*Turdus migratoris*), and mourning dove (*Zenaida macroura*). The understory consists of grasses and shrubs, consistent with other urban, undeveloped lots of the area. Several white-tailed deer were observed along the unnamed tributary to Long Branch during a site visit conducted in April 2015.

3.8.2 How Would Vegetation and Wildlife be Affected by the Proposed Project?

No-Action Alternative

Under the No-Action Alternative, none of the alternative sites would be developed or renovated for the proposed TSA Lease Consolidation. TSA would continue to operate at the existing locations throughout Northern Virginia. Under this alternative there would be no impacts to the vegetation or wildlife at the proposed sites.

Victory Center (Action Alternative)

No natural vegetation would be removed during construction activities. The proposed site would include landscaping around buildings and parking lots after construction, increasing the total area of pervious surface. No impacts to the riparian area along the north boundary of the Victory Center site are proposed. Therefore, impacts to vegetation and wildlife from this alternative would be negligible, short-term, and beneficial.

Springfield Metro Center (Action Alternative)

The Springfield Metro Center site was previously cleared, and construction activities would not disturb any mature forest or important vegetative communities. There would be loss of vegetative areas in place of buildings, but many open areas would be re-vegetated and/or landscaped after construction. Wildlife may be temporarily displaced during construction activities, however, wildlife activity would return after the development of the site. Therefore, impacts to vegetation and wildlife from this alternative would be minor, short-term, and adverse.

3.8.3 What Efforts Would be Made to Protect the Vegetation and Wildlife?

Victory Center and Springfield Metro Center (Action Alternatives)

The developer/owner of the proposed sites would minimize impacts to vegetation and wildlife by limiting the area of ground clearing for structural components (e.g., building, parking lot). Open space with no plans for development should not be used for parking or other construction related clearing unless it is the only feasible option.

Additional mitigation can be accomplished by improving remaining open space after construction activities. Landscaping would be accomplished using native plants to the extent feasible. Non-native plants would be removed and replaced with native plants to fill open spaces cleared during construction activities.

3.9 Air Quality

3.9.1 Are There Any Air Quality Issues in the Washington Metropolitan Region?

Under the authority of the Clean Air Act (CAA) (U.S.C. Title 42, Chapter 85, 1970, as amended in 1990), the US EPA has developed National Ambient Air Quality Standards (NAAQS) for certain air pollutants (criteria pollutants) deemed harmful to public health and the environment. These criteria pollutants include: nitrogen dioxide (NO_2), sulfur dioxide (SO_2), carbon monoxide (CO), ozone (O_3), particulate matter ($PM_{2.5}$/PM_{10}), and lead (Pb). The EPA designates areas where ambient concentrations are below the NAAQS as being in "attainment" and designates areas where a criteria pollutant level exceeds the NAAQS as being in "nonattainment."

Each state (or regional government) is required by EPA to develop a State Implementation Plan (SIP) that identifies the NAAQS attainment status for each pollutant and accounts for planned projects within the region that have potential to increase pollutant emissions.

The City of Alexandria and Fairfax County are within the Washington Metropolitan Statistical Area (MSA) for air quality analysis. The Washington Metropolitan Region is designated as a non-attainment area for $PM_{2.5,}$ and for ground-level ozone under the 8-hour standard (MWCOG, 2008). The 8-hour standard is defined as the 3-year average of the fourth highest daily maximum 8-hour average ozone concentration. The Metropolitan Washington Council of Governments (MWCOG) prepared SIPs to reduce O_3 and $PM_{2.5}$ in the region. The SIP to meet O_3 attainment standards was adopted in May 2007 and the SIP to meet $PM_{2.5}$ standards was adopted in March 2008.

The CAA identified 188 air toxics also known as hazardous air pollutants. The EPA has assessed this expansive list of toxics and identified a group of 21 as mobile source air toxics (MSATs), which are set forth in an EPA final rule, Control of Emissions of Hazardous Air Pollutants from Mobile Sources (66 FR 17235). The EPA also extracted a subset of this list of 21 that it now labels as the six priority

MSATs. These are benzene, formaldehyde, acetaldehyde, diesel particulate matter/diesel exhaust organic gases, acrolein, and 1, 3-butadiene. These MSATs are considered the priority transportation toxics.

3.9.2 Will The Proposed Project Impact Air Quality in the Area?

Federal actions including the lease construction of new office facilities such as the TSA Lease Consolidation must be in conformity with the provisions of the CAA. General conformity requirements are applied to certain Federal actions within air quality nonattainment and maintenance areas.

No-Action Alternative

Under the No-Action Alternative, none of the alternative sites would be developed or renovated for the proposed TSA Lease Consolidation. TSA would continue to operate at the existing facilities throughout Northern Virginia. There would be no construction activities, changes in emissions from building equipment, or changes in traffic patterns. Therefore, the No-Action Alternative would be in conformance with the CAA and there would be no additional impacts to the air quality at the alternative sites.

Victory Center (Action Alternative)

Under this alternative, renovation of the existing Victory Center building would generate fugitive dust from interior demolition and construction activities. Fugitive dust would be contained within the existing building and measures would be taken to protect construction workers from exposure to particulate matter. Therefore, there would be a minor, short-term, adverse impact to air quality from the renovation of the Victory Center site.

Under this alternative, the renovation of the existing building and the addition of employees to the proposed site and subsequent increase in traffic would potentially result in a minor, long-term, direct, adverse increase in emission levels surrounding the project site.

EPA has developed a “Hot Spot Analysis” for determining if a project will have adverse impacts on levels of $PM_{2.5}$. This analysis is not required for the TSA Lease Consolidation because the project

does not meet EPA's criteria (40 CFR 93.123(b)(1) as amended), and, in accordance with FHWA guidance, "40 CFR 93.123(b)(1)(i) should be interpreted as applying only to projects that would involve a significant increase in the number of diesel transit buses and diesel trucks on the facility." The TSA Lease Consolidation project would not result in an appreciable increase in diesel vehicles.

The Victory Center building would be renovated to achieve a LEED®-Silver rating, which is consistent with the voluntary measures package presented in the SIP. Therefore, heating and cooling equipment would be modern, efficient units and it is not anticipated that they would generate emissions above de minimis thresholds. Projects with emission levels below de minimis thresholds are considered to be in conformity with the CAA. By achieving a LEED®-Silver rating, the proposed project would be in compliance with the MWCOG SIP and therefore in compliance with the CAA.

Springfield Metro Center (Action Alternative)

Air quality may be temporarily impacted by construction activities at the Springfield Metro Center site. Fugitive dust would be generated during construction resulting from site grading, wind erosion, and vehicular activities. Emissions from construction equipment, including earth moving equipment and paving equipment would generate particulate matter, VOCs, and NO_x which are the precursors to ozone. Construction activities for this site would extend over a multi-year period. The adverse impact would be minor to moderate, and would occur during construction.

Under this alternative, the addition of facilities and employees to the proposed site and subsequent increase in traffic would potentially result in a minor, long-term, direct, adverse increase in emission levels surrounding the project site.

EPA has developed a "Hot Spot Analysis" for determining if a project will have adverse impacts on levels of $PM_{2.}$ This analysis is not required for the TSA Lease Consolidation because the project does not meet EPA's criteria (40 CFR 93.123(b)(1) as amended), and, in accordance with FHWA guidance, "40 CFR 93.123(b)(1)(i) should be interpreted as applying only to projects that would involve a significant increase in the number of diesel transit busses and diesel trucks on the facility." The TSA Lease Consolidation project would not result in an appreciable increase in diesel vehicles.

Under this alternative, a LEED®-Silver rated building is proposed, which is consistent with the voluntary measures package presented in the SIP. Therefore, heating and cooling equipment for the building(s) would be modern, efficient units and it is not anticipated that they would generate emissions above de minimis thresholds. Projects with emission levels below de minimis thresholds are considered to be in conformity with the CAA. By achieving a LEED®-Silver rating, the project would be in compliance with the MWCOG SIP and therefore in compliance with the CAA.

3.9.3 What Would be Done to Protect Air Quality During Construction?

Air quality impacts for any of the Action Alternative sites could be considered significant during construction, even on a temporary basis, if VDEQ regulations and BMP control measures are not implemented. These short-term impacts would be minimized by adhering to accepted state and local construction site air quality control measures in the handling of materials and as part of any potential demolition or grading activities. The developer/owner would be required to implement fugitive dust controls such as water spraying of access roads and stockpiles, the employment of dust covers on vehicles transporting dust-emitting materials, keeping disturbed areas to a minimum by developing the site in stages have been shown to be effective in controlling emissions. The developer/owner would also be required to implement a dust abatement/emissions control plan for any construction activities. The plan would include control measures to reduce emissions from construction equipment and control fugitive dust. With these mitigation measures in place, construction activities would be expected to have minor, direct, short-term, adverse impacts on air quality.

3.9.4 What Permanent Measures Would be Taken to Reduce Long-Term Impacts to Air Quality?

Under each of the Action Alternatives, minimal changes in mobile source emissions would be anticipated. The TSA Lease Consolidation would provide convenient access to public transportation with each of the Action Alternatives. Even with the addition of parking spaces, TSA employees would be encouraged to use public transportation to commute to and from work. Each of the proposed alternatives provides employees with the benefits and amenities of being situated in a mixed-use development, with services and housing options located in close proximity to the proposed sites. Trip generation would be minimized. Additionally, the project would attract light-

duty gasoline vehicles, not heavy-duty diesel vehicles, which generally result in greater $PM_{2.5}$ impacts.

For each of the Action Alternatives, a LEED®-Silver rated building is proposed, which is consistent with the voluntary measures package presented in the SIP. Through the use of green building materials such as low-emitting materials in adhesives and sealants, paints and coatings, flooring systems, composite wood, and agrifiber products, indoor air quality would be maximized. Through the integration of design elements such as the use of modern heating and cooling equipment, onsite renewable energy sources, and the maximization of daylight, the demand for electricity would be reduced. This decreased demand would displace the power generation required from coal, oil, and/or gas fired sources, resulting in reduced emissions in the region (MWCOG, 2008).

3.10 Land Use Planning and Zoning

3.10.1 What is the Land Use On and Surrounding Each of the Proposed Sites?

Victory Center (Action Alternative)

The Victory Center site is located on a 16-acre paved site with one existing, vacant office building. The site is zoned for office and commercial use (OCM-100). To the south are residential, industrial, and office uses, including the Eisenhower Industrial Center, apartment and condominium complexes, and Atlantic Self-Storage. The Florida Institute of Technology is located to the east. The new Eisenhower Fire Station #210, reconfigured impound lot, and the Covanta Plant are to the west.

Springfield Metro Center (Action Alternative)

The Springfield Metro Center site is an undeveloped parcel zoned for commercial use (C-4). According to the *Fairfax County Comprehensive Plan* (2013), the site is located in Land Unit O. This 93-acre land unit consists of residential, hotel, and industrial uses south of the Franconia-Springfield Parkway, south and west of the Long Branch Stream Valley, and west of the CSX Railroad right-of-way. The area includes the Joe Alexander Transportation Center; the Springfield Mall; retail, office, and hotel uses west of Loisdale Road; retail uses along the east side of Frontier Drive; the GSA Parr Warehouse; and the Springfield Center Industrial Park. It also includes the Springfield Crossing,

Springfield Station, Springfield Forest, Greenwood, and New Charleston residential and townhouse communities.

3.10.2 What Are the Local and Federal Planning and Zoning Ordinances?

Victory Center (Action Alternative)

The Victory Center site is located within the municipal boundaries of the City of Alexandria, and included in the City's *Master Plan*. The *Master Plan* is made up of Small Area Plans (SAPs) covering neighborhoods throughout the city, as well as citywide chapters on historic preservation, water quality, forestry, and other relevant topics. The Victory Center site is located within the boundary of the Landmark/Van Dorn SAP, which designates the site for medium- to high-density commercial development. The site will also be included in the Eisenhower West SAP, which is currently in the planning and public input stage.

The site and most of the surrounding properties are currently zoned Office-Commercial-Medium (100) (OCM-100) or Office-Commercial-High (OCH) by the City of Alexandria. The railroad tracks immediately adjacent to the property are zoned for utility (UT) use. The greater surrounding area is zoned as a Coordinated Development District, which is recommended for development of a cohesive mixture of uses, including open space and recreation, to serve residents and daytime users. A zoning map for this site is located in Appendix A, Figure A-9.

Springfield Metro Center (Action Alternative)

According to the *Fairfax County Comprehensive Plan*, the Springfield Metro Center site is in the northwest portion of Planning Area IV, in the Springfield East planning sector. The site is further guided by the Franconia-Springfield Transit Station Area requirements and the Springfield Connectivity Study, adopted in August 2008. These plans (as amended) state that the area is to be developed as a mixed-use center and regional focal point, with emphasis on the regional aspects of the Springfield Mall/Town Center. The goal is to discourage and phase out industrial uses and instead encourage multimodal, transit-oriented development. The Comprehensive Plan recommends up to 475,000 square feet of office use on the Springfield Metro Center site.

The Springfield Metro Center II development includes two (2) phases. Phase 1 was approved under RZ 2008-LE-015 in order to establish two (2) office buildings totaling 540,900 GSF (includes 66,900 GSF of office located in cellar space). Phase II was approved under RZ 2011-LE-022 in order to allow for the development of 517,600 gross square feet (GSF) of office space/support retail in two (2) buildings. In conjunction with the now planned development of Springfield Metro Center II, approximately 112,100 gross square feet of office development approved with the Phase II rezoning would be shifted to Phase 1 in order to provide for a total of 653,000 GSF of buildable office area. The remaining 405,500 GSF of overall office density would be retained and developed on the Phase II property. The TSA Consolidation would occur during Phase I.

The Springfield Metro Center site consists of 15.98 acres of land. The Fairfax County Zoning Map shows that Phase I (approximately 9.7 acres) is zoned for Commercial (C-4) use and Phase II (approximately 6.28) is zoned Planned Development Commercial (PDC). Surrounding parcels are zoned as Industrial (I-4) or Planned Development Housing (PDH-40) districts. The areas south of Springfield Center Drive are zoned for residential uses at various densities. A zoning map for this site is located in Appendix A, Figure A-10.

3.10.3 Is the Proposed Project Consistent With Federal and Local Planning and Zoning Ordinances?

No-Action Alternative

Under the No-Action Alternative, none of the alternative sites would be developed or renovated for the proposed TSA Lease Consolidation. TSA would continue to operate at its existing locations throughout Northern Virginia. There would be no change in land use or zoning.

Victory Center (Action Alternative)

The Alexandria City Council approved the existing Development Site Plan in September 2013, and it remains valid until September 2016. The City has agreed that the proposed improvements for the TSA Lease Consolidation are allowable under this DSP with an administrative review. The City also supports the addition of a retail use on the site.

The proposed TSA Lease Consolidation would integrate the use of green and sustainable technologies in the design of the building facility while promoting the use of existing transit networks and community facilities by employees. These qualities and missions are reflected in the Eco-City Alexandria Environmental Action Plan. Therefore, the Victory Center alternative is consistent with local planning and zoning ordinances.

Springfield Metro Center (Action Alternative)

The *Fairfax County Comprehensive Plan* recommends up to 475,000 square feet of office use on the Springfield Metro Center site. The developer has proposed up to 672,000 square feet of office and retail space for the TSA Lease Consolidation. Therefore, a Plan Amendment is required.

This proposed TSA Lease Consolidation would integrate the use of green and sustainable technologies in the design of the building facility while promoting the use of existing transit networks and community facilities by employees. These qualities and missions are reflected in the zoning ordinance and the countywide sections of the Comprehensive Plan. Therefore, if the Plan Amendment is approved, the proposed activity is consistent with the existing and planned development for the Springfield Metro Center site for the TSA Lease Consolidation.

3.10.4 What Efforts Would be Taken to be Consistent with Federal and Local Planning and Zoning Ordinances?

Victory Center (Action Alternative)

A site plan amendment would be required to include the proposed retail use on the site. The retail use will be connected to the proposed parking garage and will not be part of the main building. Retail uses are permitted under the current OCM-100 zoning district. No other efforts would be required to ensure that the proposed activity is consistent with Federal and local ordinances.

Springfield Metro Center (Action Alternative)

A *Fairfax County Comprehensive Plan* amendment is required to increase the allowable square footage of office use onsite. A Plan amendment has been submitted to the Planning Board and is currently under review. Once approved, the site would be consistent with local planning and zoning ordinances.

3.11 Environmental Justice

3.11.1 What Is Environmental Justice?

EO 12898 directs that "…each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and averse human health and environmental effects of its programs, policies, and activities on minority populations and low-income populations…." Although GSA is not a member of the Interagency Federal Working Group (IWG) on Environmental Justice, the agency, in accordance with the EO, complies with the provisions of the EO and assesses Environmental Justice issues as part of its NEPA review and analysis.

A low-income individual is defined as any individual receiving a total family income below the applicable poverty threshold, as derived from the Office of Management and Budget's (OMB) Statistical Policy Directive 14. A low-income population is defined as any census tract with a higher percentage of low-income individuals than the City or County population as a whole.

A minority individual is defined as any individual that is nonwhite or identifies as Hispanic or Latino. A minority population is defined as any census tract with a higher percent minority than the City or County population as a whole.

3.11.2 Are There Any Low-Income and/or Minority Populations Located Near Each Project Site?

Low-income and minority populations were identified through the review of U.S. Census Data from the 2010 Decennial Census and American Community Survey (ACS) 5-Year Estimates for 2013.

In the City of Alexandria, 8.4 percent of the population is below the poverty level and 46.5 percent is nonwhite and/or of Hispanic or Latino origin. The poverty rate in Alexandria is lower than the State of Virginia poverty rate (11.3 percent). The minority rate is higher than the State of Virginia minority rate (35.2).

In Fairfax County, 5.9 percent of the population is below the poverty level and 45.4 percent is nonwhite and/or of Hispanic or Latino origin. The poverty rate in Fairfax County is lower than the State of Virginia poverty rate (11.3 percent). The minority rate is higher than the State of Virginia minority rate (35.2).

Table 7 provides the total population, poverty level percentages, and minority populations within the State of Maryland, Montgomery and Prince George's Counties, and at each of the offered sites.

Victory Center (Action Alternative)

The Victory Center site is located within Census Tract 2004.03 in the City of Alexandria. According to ACS data, 2.8 percent of the population within this tract is below the poverty level and 45.7 percent is nonwhite and/or Hispanic/Latino. These percentages are lower than the City rates of 8.4 percent below poverty level and 46.5 percent minority. Therefore, this census tract is not considered a low-income or minority population.

Springfield Metro Center (Action Alternative)

The Springfield Metro Center site is located within Census Tract 4210.02 in Fairfax County. According to ACS data, 7.7 percent of the population within this tract is below the poverty level and 59.7 percent is nonwhite and/or Hispanic/Latino. These percentages are higher than the Fairfax County rates of 5.9 percent below poverty level and 45.4 percent minority. Therefore, this census tract is considered a low-income population and a minority population.

Table 5. Percentages of Low-Income and Minority Populations

	Total Population (Ppl)	Percent Low-Income (%)	Percent Minority (%)
Virginia	8,001,024	11.3	35.2
City of Alexandria	139,966	8.4	46.5
Fairfax County	1,081,726	5.9	45.4
Victory Center (Census Tract 2004.03)	1,364	2.8	45.7
Springfield Metro Center (Census Tract 4210.02)	4,947	7.7	59.7

Census, 2010

3.11.3 Would These Populations Be Disproportionately Impacted by the Proposed Project?

Victory Center (Action Alternative)

The Victory Center site is not located in the vicinity of a minority or low-income population; therefore, no disproportionate impacts to these populations would occur.

Springfield Metro Center (Action Alternative)

While there are minority and low-income populations in the vicinity of the Springfield Metro Center site, the TSA Lease Consolidation would not disproportionately affect these groups. For example, low-income and minority populations may be affected by increased traffic as described in Section 3.12, Traffic and Transportation; however, this impact would be similar to that experienced by the overall population. Low-income and minority populations would not be disproportionately affected by long-term increases in noise levels or changes in air quality. Therefore, the TSA Lease Consolidation to any of the proposed sites would not have disproportionate ecological or human health effects on low-income or minority populations.

3.11.4 What Measures Would be Taken to Reduce the Impacts to Low-Income and/or Minority Populations?

No mitigation is required.

3.12Traffic and Transportation

3.12.1 What Makes Up the Local Roadway Network?

The main roadways in the vicinity of each of the proposed sites are discussed below.

Victory Center (Action Alternative)

Regional access to the Victory Center site is provided from the Capital Beltway (I-495/I-95), S Van Dorn Street, and the Eisenhower Connector at Clermont Avenue via full-movement, grade-separated interchanges. Local access is provided by Eisenhower Avenue. Vehicular access to Victory Center would be provided by five (5) driveways on Eisenhower Avenue. The primary driveway for employees would be located on the east side of the building and would provide access to the 985-space parking garage. A secondary driveway is located on the west side of the building and would serve a visitor parking area of approximately 200 surface parking spaces.

Roadway Inventory

- The Capital Beltway (Interstate 495/95) is a multi-lane freeway with a posted speed limit of 55 miles per hour, and carries approximately 306,000 average daily vehicles (ADT) according to 2013 VDOT traffic data. Interchanges are provided at S Van Dorn Street and the Eisenhower Avenue Connector.
- S Van Dorn Street (Route 401/613) is a four-lane divided minor arterial with an at-grade signalized intersection at Eisenhower Avenue in the vicinity of the subject property. It has a posted speed limit of 35 miles per hour and carries approximately 100,000 ADT, according to the VDOT 2013 traffic data. A fully directional, grade-separated interchange provides access to I-495/I-95.
- Eisenhower Avenue is a four-lane minor arterial with a posted speed limit of 35 miles per hour and carries approximately 12,000 ADT, according to VDOT 2013 data. The roadway

provides direct access to the Victory Center site and has at-grade signalized intersections with S Van Dorn Street, Metro Road, the Metro Station bus access road, and Clermont Avenue/Eisenhower Avenue Connector. The roadway also has a two-way left-turn lane between Clermont Avenue/Eisenhower Avenue Connector and the Metro Bus Loop Driveway.

- Eisenhower Avenue Connector is a four-lane, median-divided, major collector roadway with a posted speed limit of 35 miles per hour. According to VDOT, it carries approximately 13,000 ADT between I-495 westbound ramps and Eisenhower Avenue. Access to I-495/I-95 is provided via a grade-separated interchange. The roadway has at-grade signalized intersections with Eisenhower Avenue and the I-495 eastbound ramps.

Springfield Metro Center (Action Alternative)

Regional access to Springfield Metro Center is provided via I-95 and the Franconia Springfield Parkway. Direct access to the site is provided by Loisdale Road (Route 789), Springfield Center Drive and Metropolitan Center Drive.

Roadway Inventory

- Interstate 95 is a multi-lane freeway with a posted speed limit of 55 miles per hour carrying approximately 241,000 average daily vehicles (ADT) according to 2013 VDOT traffic data. Interchanges are provided at Franconia Road, the Franconia-Springfield Parkway (Route 7900), and the Fairfax County Parkway (Route 7100). Directional HOV-3 lanes are provided within the corridor and operate between 6:00 – 9:00 AM (northbound) and 3:30 – 6:00 PM (southbound).
- Franconia Road (Route 644) is a six-lane divided minor arterial (Type "A") roadway with at-grade signalized intersections in the vicinity of the subject property. It has a posted speed limit of 35 miles per hour and carries approximately 58,000 ADT west of Loisdale Road according to the VDOT 2013 traffic data. A fully directional, grade-separated interchange is provided with I-95.
- Franconia-Springfield Parkway (Route 289) is a six-lane roadway with a posted speed limit of 50 miles per hour and carries approximately 45,000 ADT. The *Fairfax County Comprehensive*

Plan classifies the section from the Fairfax County Parkway to Beulah Street as a "Freeway/Expressway". Exclusive grade separated intersections provide access to and from Frontier Drive and the Franconia-Springfield Metrorail Station.

- Fairfax County Parkway (Route 286) is a four-lane, median-divided, principal arterial roadway with a posted speed limit of 50 miles per hour and according to VDOT carries approximately 40,000 ADT between Telegraph Road and I-95. Access to I-95 is provided via a grade-separated interchange.
- Loisdale Road/Commerce Street (Route 789) is a two-lane, minor arterial (Type "B") roadway providing a southbound center, two-way left-turn lane between Newington Road and Spring Mall Road; it expands to a four-lane roadway from Spring Mall Road through the overpass across I-95. The road has a posted speed limit of 35 miles per hour and carries approximately 9,600 ADT in the vicinity of the site based on VDOT traffic data. It provides vehicular and pedestrian access to the subject site at intersections with Metropolitan Center Drive and Springfield Center Drive.
- Frontier Drive (Route 2677) is a six-lane, divided, collector between Franconia Road and Joseph Alexander Transportation Center with a posted speed limit of 35 miles per hour. Based on 2013 VDOT ADT data, Frontier Drive carries approximately 34,000 daily vehicles between Spring Mall Road and the Franconia-Springfield Metrorail Station.
- Spring Mall Road (Route 4214) is a four-lane divided collector with a posted speed limit of 35 miles per hour and carries 17,000 ADT. Exclusive northbound egress is provided from I-95 onto Spring Mall Road via an at-grade intersection with Loisdale Road. The roadway provides direct access to the Springfield Mall and retail center.
- Springfield Center Drive is currently a two-lane, private roadway providing access to warehouse uses and the NVCC satellite campus. The intersection of Springfield Center Drive and Loisdale Road currently operates under STOP control.
- Metropolitan Center Drive is a two-lane private roadway providing access to residential and hotel uses north of the GSA warehouse. Joseph Alexander Road provides access for buses and pedestrians from Metropolitan Center Drive to the Franconia-Springfield Metrorail Station. The intersection of Metropolitan Center Drive and Loisdale Road currently operates under STOP control.

3.12.2 How were Impacts to the Local Roadway Network Assessed?

Traffic impact studies were conducted for the Victory Center (Wells & Associates, 2014a) and the Springfield Metro Center (Wells & Associates, 2014b) sites. A Traffic Technical Report was completed in April 2015 by Stantec Consulting Services. The results of this report are summarized in the following sections. Impacts to the local roadway networks were assessed by adding traffic that would be generated by the proposed TSA Lease Consolidation, along with other planned developments, to existing traffic levels.

Fairfax County and the Virginia Department of Transportation (VDOT) require that a capacity analysis be performed based on the Highway Capacity Manual (HCM). Capacity analysis, a procedure used to estimate the traffic-carrying ability of roadway facilities over a range of defined operating conditions, was performed using Synchro 8, which is based on the methodology of the *2010 Highway Capacity Manual* to establish average volume to capacity (v/c) ratios, delays, and Level of Service (LOS) for each intersection. Roadway geometry, signal timing, and traffic data were entered into the model.

The VDOT Traffic Operations Analysis Toll Guidebook (the "Guide"), recommends the use of HCM 2000 when using Synchro analysis software due to several restrictions with the HCM 2010 methodologies that are not fully incorporated into Synchro. Therefore, the HCM 2000 capacity analysis results were used in this analysis.

The v/c ratio relates the demand at a particular intersection (traffic volume) to the available capacity. The available capacity for each movement varies depending on number of lanes, lane width, perception/reaction time, green time, and cycle length, among others. A v/c ratio of 1.0 indicates that the demand for a particular movement is equal to the capacity. A movement with a v/c ratio at or over 1.0 is considered undesirable because the movement volume exceeds the capacity, which results in queuing, indicating unmet demand along that approach.

LOS is an evaluation of the quality of operation of an intersection and is a measure of the average delay a driver experiences while traveling through the intersection. LOS is dependent on a range of defined operating conditions such as traffic demand, lane geometry, and traffic signal timing and phasing.

LOS can range from A to F and is based on the average control delay per vehicle in seconds. For a signalized intersection, LOS A indicates operations with an average control delay less than 10 seconds per vehicle, while LOS F describes operations with an average control delay in excess of 80 seconds per vehicle. For an unsignalized intersection, LOS A indicates operations with an average control delay less than 10 seconds per vehicle, while LOS F describes operations with an average control delay in excess of 50 seconds per vehicle. The delay criteria for signalized and unsignalized intersections are summarized in Table 6.

Table 6: LOS Thresholds

Level of Service	Average Control Delay (seconds/vehicle)	
	Signalized	Unsignalized
A	Less than or equal to 10.0	Less than or equal to 10.0
B	>10.0 and ≤20.0	>10.0 and ≤15.0
C	>20.0 and ≤35.0	>15.0 and ≤25.0
D	>35.0 and ≤55.0	>25.0 and ≤35.0
E	>55.0 and ≤80.0	>35.0 and ≤50.0
F	Greater than 80.0 or v/c greater than 1.0	Greater than 50.0 or v/c greater than 1.0

Based upon industry standards, intersections operating at a LOS "D" or better are acceptable. However, the *Fairfax County Comprehensive Plan* establishes a LOS "E" as the threshold for adequate transportation facilities in the Franconia Springfield Planning Area – the area of the proposed Springfield Metro Center Site. At locations where the LOS "E" standard cannot be attained or maintained with planned development, remedies should be proposed to offset impacts using a tiered approach. This tiered approach includes the following:

- First, determine whether additional capacity and/or operation efficiencies is possible;
- Second, decrease future site-generated traffic by modifying the mix of uses, increasing transit mode shares, etc.;
- Lastly, if previous measures do not provide adequate improvement in LOS, the development may need to provide appropriate contributions to an area-wide transportation fund.

Each of the sites was analyzed for two different cases, Future Conditions without the TSA Lease Consolidation (No-Action) and Future Conditions with the TSA Lease Consolidation (Action Alternative). For the purposes of this study, the entire Springfield Metro Center Site is expected to be complete and fully occupied by 2019.

Under the No-Action analysis, each of the intersections were analyzed to determine future traffic levels without the proposed TSA Lease Consolidation, which provides a baseline for the comparison of the potential traffic impacts from the proposed action. The No-Action Alternative volumes were obtained by combining the existing traffic volumes with the traffic levels from planned development. Approved developments which are not yet constructed or occupied are included in the planned development traffic. A list of approved developments was obtained from the City of Alexandria and Fairfax County resources (See Tables 7 and 8).

Table 7: Pipeline Development Trip Generation Summary for the Victory Center Site

Development/Use	AM Peak Hour			PM Peak Hour			Weekday Average Daily Traffic
	In	Out	Total	In	Out	Total	
(1) Block 8: 585,000 SF Office and 22,120 SF Retail	360	60	420	122	359	481	4,004
(2) Block 9: 505 Residential Units	27	80	107	74	48	122	1,494
(3) Landmark Gateway: 494 Dwelling Units and 10,746 SF Retail	73	131	204	157	130	287	2,921
(4) Cameron Park: 468 Residential Units and 36,919 SF Retail	27	155	182	203	102	305	3,444
Total Pipeline Development Net New Trips	487	426	913	556	639	1,195	11,863

(1) Trip generation obtained from "Park Meridian at Eisenhower Station, Traffic Impact Study" completed by Kimley-Horn and Associates, Inc.
(2) Based on Trip Generation Memorandum prepared by Patton Harris Rust & Associates dated October 25, 2011.
(3) Trip generation calculations based on ITE *Trip Generation Manual* (9th Edition).
(4) Weekday ADT based on ITE *Trip Generation Rates* (9th Edition). Peak hour trips observed by Wells and Associates on 2-27-2013.
(5) Non-auto trip reduction is based on goals detailed in the Landmark/Van Dorn Corridor

Table 8: Pipeline Development Trip Generation Summary For the Springfield Metro Center Site

Development/Use	AM Peak Hour			PM Peak Hour			Weekday Average Daily Traffic
	In	Out	Total	In	Out	Total	
Loisdale Office Park (1): 59,500 GSF Office	109	15	124	25	120	145	894
Springfield Mall Town Center (2): Mix-Use	1,593	917	2,510	1,094	1,682	2,776	28,012
Patriot Ridge (3): 708,309 GSF Office	658	90	748	135	659	794	4,857
Lee Village at Silver Lake (4): 45,900 GSF Library; 84 Active Adult Apartments; 104 Work Force Housing Units	54	63	117	210	199	409	3,151
Kingstown Towne Centre Buildings M&N (5): 1.2 Million GSF Office	1,205	164	1,369	242	1,181	1,423	9,040
Liberty View (6): 250 Room Hotel; 735,962 GSF Office	1,033	181	1,214	249	905	1,154	9,805
Total Pipeline Development Net New Trips	4,625	1,430	6,082	1,955	4,746	6,701	55,759

(1) Loisdale Office Park trip generation based on "Loisdale Office Park - Traffic Impact Assessment" dated September 3, 2008 by Wells + Associates, Inc.
(2) Springfield Mall Town Center trip generation based on "Springfield Mall Town Center Traffic Impact Study" dated September 10, 2008 by Gorove-Slade Associates, Inc.
(3) Lee Village at Silver Lake (Kingstowne Library) trip generation based on "Kingstowne Library - Comparative Network Assessment" dated October 22, 2007 by Wells + Associates, Inc.
(4) Kingstowne Towne Centre Buildings M & N Trip Generation based on "Kingstowne Towne Centre Buildings M & N - Traffic Impact Study" dated August 29, 2006 by Wells + Associates, Inc.
(5) Liberty View trip generation based on "Liberty View Rezoning Traffic Impact Analysis" dated September 28, 2010 by Patton Harris Rust & Associates, Inc.

The Action Alternative analysis is an analysis of the future anticipated traffic volumes at the study intersections with the TSA Lease Consolidation. The Action Alternative analysis includes existing traffic volumes, approved developments which have not been constructed or occupied in the surrounding area, and the traffic that would be generated by the proposed TSA Lease Consolidation.

The number of trips that would be generated by the proposed collocation of the TSA employees and contractors to the Victory Center site (666,000 GSF of office space), as well as the 10,000 SF of retail, was estimated utilizing the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (9th Edition). A 30 percent transit trip credit was applied in the traffic analysis in order to be conservative. The 30 percent trip credit also is consistent with the transportation demand management (TDM) requirements specified by the City of Alexandria for the Victory Center site. Table 9 summarizes the site trip generation, which is the number of peak hour trips generated by the TSA Lease Consolidation for the Victory Center site. Table 10 summarizes the same for the Springfield Metro Center site.

Table 9. TSA Consolidation Site Trip Generation (Victory Center Site)

	Trip Generation	
	AM	PM
TSA Employees	3,800	3,800
Square Footage	625,000	625,000
Percent in Peak Hour (in bound direction)	86%	81%
Percent in Peak Hour (outbound direction)	14%	19%
Peak Hour Vehicle Trips (inbound direction)	556	120
Peak Hour Vehicle Trips (outbound direction)	92	504
Total Peak Hour Trips	648	624

Table 10. TSA Consolidation Site Trip Generation (Springfield Metro Center Site)

	Trip Generation	
	AM	PM
TSA Employees	3,800	3,800
Square Footage	653,000	653,000
Percent in Peak Hour (inbound direction)	88%	83%
Percent in Peak Hour (outbound direction)	24%	17%
Peak Hour Vehicle Trips (inbound direction)	756	138
Peak Hour Vehicle Trips (outbound direction)	103	672
Total Peak Hour Trips	859	810

3.12.3 How Would the Local Roadway Network Be Affected by the Proposed Project?

Victory Center Site

Existing Conditions

Based upon existing traffic volumes and lane geometries, all of the signalized intersections operate at overall acceptable levels of service (LOS D or better) during both peak hours, except:

- The signalized intersection of Eisenhower Avenue and S Van Dorn Street currently operates near capacity and an overall LOS E during both peak hours. It was noted in the field that queuing occurs on S Van Dorn Street in the peak direction during each peak hour and somewhat constrains traffic during these periods.
- The intersection of Summers Grove Road and Metro Road operates at LOS F during the AM peak hour and LOS E during the PM peak hour. This is in part due to the east/west split phasing and the heavy volume leaving the Kiss & Ride facility.

Future Conditions without the TSA Lease Consolidation (No-Action)

The No-Action Alternative capacity analysis results are shown in Table 11. Results of the analysis indicate that the following intersections would operate at acceptable LOSs during both the morning and evening peak hours: Eisenhower Avenue /Metro Bus Loop Driveway and the I-495 eastbound ramp/Eisenhower Connector. The intersection of Eisenhower Avenue and Metro Road would operate at an acceptable LOS in the morning peak hours. The results of the capacity analysis also indicate the following:

- As a result of background regional growth and pipeline development related trips, the intersections within the study area would see an increase in vehicle trips.
- In addition to the intersections of Eisenhower Avenue and S Van Dorn Street, Summers Grove Road and Metro Road, Eisenhower Avenue and Metro Road, and Eisenhower Avenue and Eisenhower Avenue Connector/Clermont Avenue would operate at LOS E or F in one or both peak hours.
- Specific and/or individual movements and approaches at some signalized intersections would continue to operate at LOS "F" during one or more peak hours.

Future Conditions with the TSA Consolidation (Action Alternative)

The Victory Center Action Alternative analysis results are shown in Table 11. The results of the analysis indicated the following:

- As a result of the site traffic, the intersections within the study area would see an increase in vehicle trips over background future conditions.
- Assuming completion of the site-specific improvements, all of the study area intersections would continue to operate at acceptable levels of service (LOS D or better) during both peak hours, with the exception of the intersection of S Van Dorn Street and Eisenhower Avenue, which would continue to operate at LOS F in both peak hours.
- Individual movements at some signalized intersections would continue to operate at LOS F during one or more peak hours.
- The intersections of Eisenhower Avenue with the East and West Site Driveways would operate at acceptable levels of service (LOS C or better) during both peak hours.

Overall, assuming the completion of site-specific improvements, the projected traffic increase is not expected to have an impact on the LOS, with the exception of the intersection of S Van Dorn Street and Eisenhower Avenue, which would continue to operate at LOS F in both peak hours. This would constitute have a minor, long-term, adverse impact on the LOS at this intersection.

Table 11. 2014 Existing Condition, 2019 No Action and 2019 Action Victory Center Level of Service

Intersection	Existing (2014)*		Future Condition without TSA Lease Consolidation (2019 No-Action)		Future Condition with TSA Lease Consolidation (2019 Action Alternative)	
	morning (CLV)	Evening (CLV)	morning (CLV)	Evening (CLV)	morning (CLV)	evening (CLV)
1. Eisenhower Avenue/S Van Dorn Street	Acceptable E (64.2)	Acceptable E (79.7)	Acceptable F (108.8)	Acceptable F (146.7)	Unacceptable F (82.6)	Unacceptable F (98.3)
2. Summers Grove Road/Metro Road	Acceptable F (100.6)	Acceptable E (62.1)	Acceptable F (91.5)	Acceptable E (58.7)	Acceptable B (12.3)	Unacceptable B (12.3)
3. Eisenhower Avenue/Metro Road	Acceptable B (17.2)	Acceptable C (27.6)	Acceptable C (20.1)	Acceptable F (101.1)	Acceptable C (20.1)	Acceptable D (48.1)
4. Eisenhower Avenue/Metro Bus Loop Driveway	Acceptable A (3.4)	Acceptable A (3.6)	Acceptable A (3.4)	Acceptable A (4.6)	Acceptable A (3.3)	Acceptable A (4.6)
5. Eisenhower Avenue/Clermont Avenue/Eisenhower Avenue Connector	Acceptable C (30.2)	Acceptable D (51.3)	Unacceptable F (85.1)	Unacceptable F (86.0)	Acceptable C (32.4)	Unacceptable E (59.9)
6. I-495 WB Ramps/Eisenhower Avenue Connector	Acceptable A [0.0]	Acceptable A [0.0]	Acceptable A [0.0]	Acceptable A [0.0]	Acceptable A [0.0]	Acceptable A [0.0]

Intersection		Existing (2014)*		Future Condition without TSA Lease Consolidation (2019 No-Action)		Future Condition with TSA Lease Consolidation (2019 Action Alternative)	
		morning (CLV)	Evening (CLV)	morning (CLV)	Evening (CLV)	morning (CLV)	evening (CLV)
7. I-495 EB Ramps/Eisenhower Connector		Acceptable A (6.2)	Acceptable A (6.8)	Acceptable A (6.8)	Acceptable A (9.3)	Acceptable A (6.7)	Acceptable A (8.9)
8. Eisenhower Avenue/West Site Driveway	EBLTR	A [0.0]	A [0.1]	A [0.0]	A [0.1]	A [1.7]	A [1.0]
	WBLTR	A [0.1]	A [0.1]	A [0.1]	A [0.1]	A [0.2]	A [0.1]
	NBLTR	B [10.4]	C [15.2]	B [10.4]	C [15.2]	B [14.3]	C [22.9]
	SBLTR	B [10.3]	B [12.9]	B [10.3]	B [12.9]	D [27.0]	F [229.3]
9. Eisenhower Avenue/East Site Driveway		N/A	N/A	N/A	N/A	Acceptable A (8.6)	Acceptable C (26.0)

Notes: Analysis performed using Synchro, Version 8. Values in ( ) represent signalized delay in seconds.
Values in [ ] represent unsignalized delay in seconds *-Delay exceeds 999 seconds.

Springfield Metro Center Site

Existing Conditions

Based upon existing traffic volumes and lane geometries, all of the signalized intersections operate at overall acceptable levels of service (LOS D or better) during both peak hours. However, individual movements and approaches at some signalized intersections currently operate at LOS E or F during one or both peak hours.

Future Conditions without the TSA Consolidation (No-Action)

The No-Action Alternative capacity analysis results are shown in Table 12. The results of the capacity analysis indicated the following:

- As a result of background regional growth and pipeline development related trips, the intersections within the study area would see an increase in vehicle trips.

- Upon completion of the planned improvements associated with pipeline developments, all of the nine signalized study intersections would operate at overall acceptable levels of service (LOS "E" or better) during the AM and PM peak hours.
- Specific and/or individual movements and approaches at some signalized intersections would continue to operate at LOS "F" during one or more peak hours.
- The unsignalized intersection of Loisdale Road and Metropolitan Center Drive would operate at capacity (LOS "F") during the PM peak hour.
- The unsignalized intersection of Loisdale Road and Springfield Center Drive would operate at an acceptable LOS "C" during the AM and PM peak hours.

Future Conditions with the TSA Consolidation (Action Alternative)

The Springfield Metro Center Action Alternative analysis results are shown in Table 12. The results of the analysis indicated the following:

- As a result of the site traffic, the intersections within the study area would see an increase in vehicle trips over background future conditions.
- Assuming completion of the site-specific improvements, all of the study area intersections would continue to operate at acceptable levels of service (LOS E or better) during both peak hours.
- Individual movements at some signalized intersections would continue to operate at LOS F during one or more peak hours.
- The unsignalized intersection of Losidale Road and Lois Drive would operate at acceptable levels of service (LOS C or better) during both peak hours.

Overall assuming the completion of site specific improvements, all study area intersections would operate at acceptable levels of service. Therefore, it is concluded that the transportation improvements listed above, together with other planned improvements in the area, would be sufficient to accommodate the level of development associated with the Springfield Metro Center site.

Table 12. 2014 Existing Condition, 2019 No Action and 2019 Action Springfield Metro Center Level of Service

Intersection		Existing (2014)*		Future Condition without TSA Lease Consolidation (2019 No-Action)		Future Condition with TSA Lease Consolidation (2019 Action Alternative)	
		morning (CLV)	Evening (CLV)	morning (CLV)	Evening (CLV)	morning (CLV)	evening (CLV)
Franconia Road EB Ramps/ Loisdale Road/ Commerce Street		Acceptable C (31.7)	Acceptable D (41.8)	Acceptable D (44.1)	Acceptable E (55.8)	Unacceptable D (45.0)	Unacceptable E (71.5)
Franconia Road WB Ramps/ Loisdale Road/ Commerce Street		Acceptable C (28.3)	Acceptable C (32.0)	Acceptable C (29.6)	Acceptable D (35.6)	Acceptable C (29.4)	Unacceptable D (35.6)
Loisdale Road/ Loisdale Court/ Springfield Mall Entrance		Acceptable B (11.5)	Acceptable C (31.4)	Acceptable B (15.0)	Acceptable C (34.4)	Acceptable B (16.7)	Acceptable D (37.6)
Loisdale Road/ I-95 NB Ramp/ Spring Mall Road		Acceptable C (25.9)	Unacceptable D (36.1)	Unacceptable D (35.6)	Unacceptable D (36.0)	Unacceptable D (38.1)	Acceptable D (43.5)
Loisdale Road/ Metropolitan Center Drive		N/A	N/A	N/A	N/A	Acceptable A (9.9)	Acceptable B (14.0)
Loisdale Raod/ Springfield Center Drive		N/A	N/A	N/A	N/A	Acceptable B (14.7)	Acceptable B (16.5)
Loisdale Road/ Lois Drive	WBLR	B [12.3]	B [12.5]	B [14.3]	B [14.0]	C [15.6]	B [14.8]
	SBL	A [8.5]	A [8.2]	A [9.0]	A [8.6]	A [9.4]	A [8.6]
Loisdale Road/ Newington Road		Acceptable C (34.3)	Acceptable C (29.4)	Acceptable C (32.4)	Acceptable C (30.2)	Acceptable C 34.3)	Acceptable C (30.7)
Fairfax County Parkway/ I-95 NB Ramp/ Loisdale Road		Unacceptable D (35.7)	Acceptable C (31.9)	Unacceptable D (43.4)	Unacceptable D (39.5)	Unacceptable D (45.0)	Unacceptable D (41.0)

Intersection	Existing (2014)*		Future Condition without TSA Lease Consolidation (2019 No-Action)		Future Condition with TSA Lease Consolidation (2019 Action Alternative)	
	morning (CLV)	Evening (CLV)	morning (CLV)	Evening (CLV)	morning (CLV)	evening (CLV)
Franconia Springfield Parkway EB Ramps/ Frontier Drive	Acceptable C (34.3	Acceptable C (32.2)	Unacceptable D (46.7)	Unacceptable D (44.1)	Unacceptable D (47.0)	Unacceptable D (48.8)
Franconia Springfield Parkway WB Ramps/ Frontier Drive	Acceptable C (27.8)	Acceptable C (24.0)	Unacceptable D (38.4)	Acceptable C (32.9)	Unacceptable D (38.0)	Unacceptable D (43.7)
Frontier Drive/ Spring Mall Road	Acceptable C (26.3)	Unacceptable D (45.6)	Acceptable C (30.8)	Unacceptable E (55.1)	Acceptable C (30.8)	Unacceptable E (63.0)

Notes: Analysis performed using Synchro, Version 8. Values in ( ) represent signalized delay in seconds.
Values in [ ] represent unsignalized delay in seconds *-Delay exceeds 999 seconds.

3.12.4 What Public Transportation Facilities and Services are Available in the Vicinity of Each of the Proposed Sites? How Would They Be Affected By the Proposed Project?

Existing public transportation facilities that service Victory Center and Springfield Metro Center sites include Metrorail, Virginia Rail Extension (VRE) commuter rail, and bus routes. Descriptions of the available transit services are provided below.

Metrorail System

The Washington Metropolitan Area Transit Authority (WMATA) Metrorail system connects downtown Washington, D.C. to the adjoining areas in Maryland and Virginia (see Figure A-11). There are six lines on the Metrorail system, which are interconnected within Washington, D.C. The Metrorail system opens at 5:00 a.m. on weekdays and at 7:00 a.m. on weekends and closes at 12:00 a.m. Sunday-Thursday and at 3:00 a.m. Friday and Saturday. Trains arrive approximately every six minutes during the peak hours and every twelve minutes during the non-peak hours.

The Red Line operates between Shady Grove and Glenmont in Montgomery County. This line has 27 stations and has transfer points with the Orange and Blue Lines at Metro Center and the Yellow and Green Lines at Gallery Place and Fort Totten.

The Blue Line operates between Franconia-Springfield in Fairfax County, Virginia and Largo Town Center in Prince George's County. This line has 27 stations and has transfer points with the Red Line at Metro Center and the Yellow and Green Lines at L'Enfant Plaza. The line runs along the same path as the Yellow Line between King Street and Pentagon and runs along the same path as the Orange Line between Rosslyn and Stadium-Armory.

The Orange Line operates between Vienna/Fairfax-GMU in Fairfax County and New Carrollton in Prince George's County. This line has 26 stations and has transfer points with the Red Line at Metro Center and the Yellow and Green Lines at L'Enfant Plaza. The line runs along the same path as the Blue Line between Rosslyn and Stadium-Armory.

The Green Line operates between Branch Avenue and Greenbelt in Prince George's County. This line has 21 stations and has transfer points with the Red Line at Gallery Place and Fort Totten and with the Orange and Blue Lines at L'Enfant Plaza. The line runs along the same path as the Yellow Line from L'Enfant Plaza to Fort Totten.

The Yellow Line operates between Huntington in Fairfax County and Fort Totten in Washington, D.C. This line has 17 stations and has transfer points with the Red Line at Gallery Place and the Orange and Blue Lines at L'Enfant Plaza. The line runs along the same path as the Blue Line between King Street and Pentagon and runs along the same path as the Green Line from L'Enfant Plaza to Fort Totten.

The Silver Line is the newest line on the Metro system. The first phase of the Silver Line was completed to Wiehle-Reston East in 2014 and consists of five stations that extend off of the Orange Line in Fairfax County, Virginia. The second phase will continue into Loudoun County, consisting of six stations including Dulles Airport, and is anticipated to open in 2019. The Silver Line shares tracks with the existing Orange and Blue Lines as it travels across the region and will terminate at Largo Town Center.

The Victory Center site lies within one-half mile of the Van Dorn Metrorail Station along the Blue Line. The Blue Line operates at a12-minute headway during weekdays and Saturdays, and a 15-minute headway on Sundays. This station is also served by the Yellow Line during rush hour periods (6:30 AM – 9:00 AM and 3:30 PM – 6:00 PM). The Yellow Line operates at a six-minute headway during the AM and PM rush. The average number of weekday passenger boardings for the Franconia-Springfield Station was approximately 3,374 in 2014.

The Springfield Metro Center site lies within one-half mile of the Franconia-Springfield Metrorail Station along the Blue Line. The Blue Line operates at a 12-minute headway during weekdays and Saturdays, and a 15-minute headway on Sundays. This station is also served by the Yellow Line during rush hour periods (6:30 AM – 9:00 AM and 3:30 PM – 6:00 PM). The Yellow Line operates at a six-minute headway during the AM and PM rush. The average number of weekday passenger boardings for the Franconia-Springfield Station was approximately 8,175 in 2014.

Virginia Railway Express (VRE) Rail System

The VRE Rail System is a commuter rail system that connects Washington, D.C. to the surrounding counties in Northern Virginia (see Figure 10). There are two lines operated by VRE and all of the lines connect at four stations: Alexandria, Crystal City, L'Enfant Plaza, and Union Station (all of which provide connection to Metrorail).

The VRE Fredericksburg Line operates between Fredericksburg, Virginia and Union Station in Washington, D.C. This line connects with the Metrorail system at Franconia-Springfield, Alexandria, and Crystal City on the Blue and Yellow Lines, L'Enfant Plaza on the Yellow, Green, Blue, Silver, and Orange Lines, and Union Station on the Red Line. The Fredericksburg Line operates seven trains in the northbound (inbound) direction in the morning peak hour beginning at 5:05 AM and seven trains in the southbound (outbound) direction in the evening peak hour beginning at 12:55 PM. VRE also has an agreement with AMTRAK to cross-honor tickets to provide additional services on this line.

The VRE Manassas Line operates between Manassas, Virginia and Union Station in Washington, D.C. This line connects with the Metrorail system at Alexandria and Crystal City on the Blue and Yellow Lines, L'Enfant Plaza on the Yellow, Green, Blue, Silver, and Orange Lines, and Union Station on the

Red Line. The Manassas Line operates eight trains in the northbound (inbound) direction in the morning peak hour beginning at 5:05 AM and eight trains in the southbound (outbound) direction in the evening peak hour beginning at 1:15 PM.

The Victory Center site does not have direct access to VRE. Rather, VRE serves two locations which are only one stop on the Blue Line from the Van Dorn Street Metrorail Station. The Fredericksburg Line has a transfer point with the Metrorail Blue Line at the Franconia-Springfield Metrorail Station, and the Manassas Line has a transfer point with the Metrorail Blue and Yellow lines at the King Street Metrorail station.

The Springfield Metro Center site lies within one-half mile of the Franconia-Springfield VRE Station (immediately adjacent to the Metrorail Station), along the Fredericksburg Line. Six of the seven AM inbound trains stop at the Franconia-Springfield station, while all seven of the PM outbound trains stop at the station. The average daily ridership on the Fredericksburg Line in 2013 was just under 10,000 trips.

Metrobus and Fairfax Connector

The Springfield Metro Center site is directly served by Fairfax County Connector Route 334 (DLA Circulator), which currently stops at the NVCC Medical College on Springfield Center Drive. The route is a circulator service that operates between the Franconia-Springfield Metrorail and VRE station, the NVCC Medical College (on Springfield Center Drive), the Defense Logistics Agency (DLA), and the Gateway 95 business park. It operates on weekdays between 5:30 AM and 11:15 PM with AM peak headways of approximately 20 minutes during the AM and PM rush and 40 – 50 minutes during off-peak periods. The approximate travel time between the Franconia-Springfield Metro Station and the NVCC Medical College (adjacent to the proposed site), is 10 minutes.

Several other Metrobus, Fairfax Connector, and DASH routes serve the nearby Van Dorn Street Metrorail station, which lies within one-half mile of Victory Center (see Figure A-12 and Table 13). These routes could be accessed by employees and visitors of the proposed site.

Table 13: Metrobus, Fairfax County Connector, DASH Routes that Stop at the Van Dorn Metrorail Station

Route	Operating Hours (Monday – Friday)	Average Headway at Van Dorn Station
Metrobus Route 25B	6:00 AM – 10:30 PM	Peak: 30 minutes Off-Peak: 1 hour
DASH Route AT5	5:30 AM – 11:00 PM	30 minutes
DASH Route AT8	5:00 AM – 12:15 AM	20 – 30 minutes
Fairfax Connector Route 109 (Rose Hill)	5:00 AM – 11:30 PM	30 minutes
Fairfax Connector Route 321/322 (Greater Springfield Circulator)	4:00 AM – 11:00 PM	Peak: 30 minutes Off-Peak: 1 hour
Fairfax Connector Route 231/232 (Kingstowne Line)	5:00 AM – 10:00 AM 3:00 PM – 10:00 PM	30 minutes

Several other Metrobus and Fairfax Connector routes serve the nearby Franconia Springfield Metrorail and VRE station, which lies within one-half mile of Springfield Metro Center (see Figure A-12 and Table 14). These routes could be accessed by employees and visitors of the proposed site.

Table 14: Metrobus and Fairfax County Connector Routes that Stop at the Franconia Springfield Metrorail/VRE Station

Route	Operating Hours (Monday – Friday)	Average Headway at Franconia Springfield Station
Fairfax Connector Route 231/232 (Kingstowne Line)	5:00 AM – 10:00 AM 3:00 PM – 10:15 PM	30 minutes
Fairfax Connector Route 301 (Telegraph Road)	5:45 AM – 10:00 AM 3:00 PM – 8:30 PM	30 minutes – 1 hour
Fairfax Connector Route 305 (Newington Forest – Silverbrook Road Line)	5:00 AM – 9:45 AM 4:15 PM – 9:45 PM	30 minutes – 1 hour
Fairfax Connector Route 310 (Franconia Road – Rolling Valley Line)	4:15 AM – 1:00 AM	Peak: 20 minutes Off-Peak: 30 minutes – 1 hour
Fairfax Connector Route 321/322 (Greater Springfield Circulator)	6:00 AM – 11:15 PM	1 hour
Fairfax Connector Route 333 (Patriot Ridge/Saratoga Line)	5:30 AM – 10:15 PM	Peak: 20 – 30 minutes Off-Peak: 40 – 50 minutes
Fairfax Connector Route 335 (Fort Belvoir "The Eagle")	6:15 AM – 9:45 AM 3:00 PM – 6:30 PM	20 – 30 minutes
Fairfax Connector Route 371/372/373 (Lorton – Springfield)	4:00 AM – 1:15 AM	Peak: 10 – 20 minutes Off-Peak: 30 minutes
Fairfax Connector Route 401/402 (Backlick - Gallows)	3:30 AM – 2:30 AM	Peak: 15 minutes Off-Peak: 20 – 30 minutes
Fairfax Connector Route 494 (Franconia-Springfield-Tysons)	5:30 AM – 8:00 PM	Peak: 20 – 30 minutes Off-Peak: 50 minutes – 1 hour
Metrobus Commuter Route 18R/18S (Burke Center Line)	5:45 AM – 9:00 AM 3:45 PM – 9:00 PM	10 – 20 minutes
Metrobus Local Route S80/S91 (Springfield Circulator)	6:00 AM – 8:00 PM	15 minutes

3.12.5 How Would Pedestrians and Bicycle Commuters Access Each of the Proposed Sites?

Victory Center Site (Action Alternative)

Typical four-foot wide sidewalks exist on both the north and south sides of Eisenhower Avenue throughout the study area. A pedestrian signal with a marked crosswalk exists in front of the site. Marked crossings on Eisenhower Avenue are also present at the S Van Dorn Street, Metro Road, and Eisenhower Avenue Connector/Clermont Avenue intersections. Sidewalks exist on the east side of S Van Dorn Street, both sides of Metro Road, and the west side of Eisenhower Avenue Connector. Marked pedestrians are present at the intersections of Metro Road/Summer Grove Road and Eisenhower Avenue Connector/I-495 eastbound ramp.

Traditional man-hand pedestrian signals are provided at the majority of the nearby signalized intersections, as well as curb ramps. However, most curb ramps do not meet current Americans with Disabilities Act (ADA) guidelines.

Victory Center lies within 2,640 feet (or ½ mile) walking distance to a Metrorail station. A study was conducted to evaluate the optimal travel path between Victory Center and the Van Dorn Metrorail station (Figure A-14). The walking distance was measured from three (3) locations at the Metro station, the total distance from each location to the front door of Victory Center are summarized below:

- Station threshold to front door: 2,535 feet
- Metrorail turnstile to front door: 2,595 feet
- Accessible elevator to front door: 2,631 feet.

Pedestrians would access the site via two (2) crossings on Eisenhower Avenue to facilitate access to the Van Dorn Metrorail Station. A new signalized crossing would be located at the west driveway and augment the existing signalized crossing directly in front of the building.

The onsite portion of the travel path was reviewed to ensure that the travel path would meet ADA requirements of slopes of less than five (5) percent. Recommendations were made so that the estimated slope between Points A and B (Figure 39) would be approximately 1.4 percent and

approximately 0.8 percent between Points B and C. This could be accomplished by regrading the existing berm between the parking lot and Eisenhower Avenue during the time of construction.

According to the Alexandria Bike Map, Eisenhower Avenue from S Van Dorn Street to Cameron Run is classified as an On-Road Bikeway. East of Cameron Run, Eisenhower Avenue is classified as an Off-Road Bikeway. The Eisenhower Avenue Connector from is classified as an On-Road Bikeway. A bike/pedestrian connection exists south of the I-495 ramp, which connects to Clermont Avenue. In addition there are 20 bicycle parking spaces and six bicycle lockers located at the Van Dorn Street metro station.

Springfield Metro Center (Action Alternative)

There are sidewalk and pedestrian crossings along Joseph Alexander Road which provide the only connection between the Franconia Springfield Metrorail/VRE station and the Springfield Metro Center site. While the straight line distance between the station and the site is only approximately 0.25 miles, the actual walking distance from the Metrorail/VRE station to the center of the site is approximately 0.52 miles. The Springfield Metro Center site is also connected to the surrounding residential and commercial areas via sidewalks along Metropolitan Center Drive, which connects the site to Loisdale Road, and Joseph Alexander Road, which connects the site to the larger sidewalk network along Frontier Drive and Springfield Mall Drive. However, it should be noted that there are no sidewalks provided along Springfield Center Drive.

The existing sidewalks vary in width and appear to be in overall fair condition. Marked crosswalks are provided at all signals, as well as the majority of unsignalized intersections and driveways. Specifically, crosswalks are present at the following intersections:

- Loisdale Road/Franconia Road EB Ramps (southern, eastern and western legs)
- Loisdale Road/Franconia Road WB Ramps (northern, eastern and western legs)
- Loisdale Road/Loisdale Court (western leg)
- Loisdale Road/Spring Mall Road (eastern leg)
- Loisdale Road/Metropolitan Center Drive (eastern leg)
- Loisdale Road/Springfield Center Drive (southern leg)
- Loisdale Road/Lois Drive (northern leg)

- Loisdale Road/Newington Road (northern and eastern leg)
- Frontier Drive/Franconia-Springfield Parkway EB Ramps (southern, eastern and western legs)
- Frontier Drive/Franconia-Springfield Parkway WB Ramps (northern, eastern and western legs)
- Frontier Drive/Spring Mall Road (northern, eastern and western legs)

Traditional, man-hand pedestrian signals are provided at the majority of the nearby signalized intersections, as well as curb ramps. However, most curb ramps to not meet current Americans with Disabilities Act (ADA) guidelines.

There are no dedicated bicycle facilities which connect directly to the site. However, there is a variable-width (8-10 feet) multi-use path that runs along Loisdale Road, from the southern end of the project study area to Metro Center Drive, where it then travels parallel to the Franconia Springfield Parkway, connecting through the Franconia Springfield Metrorail/VRE station, and ending in a residential neighborhood on Seatrend Way. The Loisdale Road path also connects to a sidewalk and path network on the west side of I-95 via a pedestrian overpass over Loisdale Road, I-95, and Backlick Road, just south of the Franconia Springfield Parkway overpass. A second multi-use path is provided along the east side of Frontier Drive between the Franconia Springfield Metrorail/VRE station and the Best Buy driveway, where it becomes a standard-width sidewalk.

3.12.6 How Would Pedestrian and Bicycle Access be Affected by the Proposed Project?

Pedestrian and bicycle access would not be impacted at any of the proposed sites. The developer/owner would be required to build sidewalks on site to connect to the existing sidewalk network.

3.12.7 What Measures Would be Taken to Reduce Impacts to the Transportation Network?

Victory Center Site (Action Alternative)

In order to mitigate the transportation impacts of the site, several transportation improvements are proposed including:

1. Eisenhower Avenue and S Van Dorn Street: Convert the protected southbound left turn on S Van Dorn Street to protected-permitted operation and optimize signal timing.
2. Summers Grove Road/Metro Road: Remove the east/west split phasing, providing protected permitted westbound left turn phase, and optimize signal timing.
3. Eisenhower Avenue and Metro Road: Optimize PM peak hour signal timing.
4. Eisenhower Avenue at Eisenhower Avenue Connector/Clermont Avenue: Optimize AM and PM peak hour sign timings.
5. Install a traffic signal at the eastern site driveway.
6. Install a new pedestrian traffic signal with accessible features at the western most driveway serving the site.
7. Provide bicycle facilities in accordance with TSA requirements.

A Transportation Management Plan (TMP) would be developed that identifies TDM strategies for reducing the number of single occupancy vehicles and encouraging alternate modes of traveling to the site. The TMP would need to be complete and implemented by the time all employees are expected at the site.

Springfield Metro Center (Action Alternative)

In order to mitigate the transportation impacts of the site, several transportation improvements are proposed, including:

1. Extend Springfield Metro Center Drive from its current terminus north to Joseph Alexander Drive;
2. Signalize the Loisdale Road/Metropolitan Drive intersection;

3. Restripe the Springfield Center Drive approach to Loisdale Road in order to provide for a westbound left-turn lane; and,
4. Signalize the Losidale Road/Springfield Center Drive intersection.

A Transportation Management Plan (TMP) would be developed that identifies TDM strategies for reducing the number of single occupancy vehicles and encouraging alternate modes of traveling to the site. The TMP would need to be complete and implemented by the time all employees are expected at the site.

With the construction of the above-listed improvements, all study area intersections would operate at acceptable levels of service. Therefore, it is concluded that the transportation improvements listed above, together with other planned improvements in the area, would be sufficient to accommodate the level of development associated with the Springfield Metro Center site.

In addition to the proposed site-specific improvements, the Fairfax County Comprehensive Plan recommends that Frontier Drive be extended south from the Franconia-Springfield Metrorail Station to Loisdale Road. The County anticipates that the Frontier Drive extension would be completed between 2022 and 2024. The extension of Frontier Drive from the Franconia-Springfield Metrorail Station would have a positive impact on site traffic operations by providing a more direct connection to the Franconia Springfield Parkway.

3.13Utilities

3.13.1 Who Provides Utility Service to Each of the Proposed Sites?

In the vicinity of the Victory Center site, water and sewer utilities are provided by Virginia American Water. In the vicinity of the Springfield Metro Center site, water and sewer utilities are provided by Fairfax Water. Electricity is provided to both areas by Dominion Virginia Power (DVP), and natural gas by Washington Gas. Telecommunications in both areas are provided by Verizon, Comcast or Cox of Northern Virginia (City of Alexandria, Fairfax County; 2015).

3.13.2 How Would Utilities be Impacted by the Proposed Project?

No-Action Alternative

Under the No-Action Alternative, neither of the alternative sites would be developed or renovated for the proposed TSA Lease Consolidation. TSA would continue to operate at the existing locations in Northern Virginia. Under this alternative there would be no changes to the utilities serving the existing facilities.

Victory Center and Springfield Metro Center (Action Alternatives)

Operation of the buildings under any of the Action Alternatives would be in accordance with EO 13693 and the EISA of 2007. The EO 13693 requires each Federal agency to:

- Reduce energy consumption per square foot by 2.5 percent annually by 2025, relative to 2015 baseline;
- Ensure that 25 percent of the total amount of building electric and thermal energy should come from clean energy sources by 2025;
- Reduce water consumption intensity by 2 percent per year through 2025, relative to the 2007 baseline;
- Install appropriate green infrastructure facilities on federally owned property to manage storm and wastewater;
- Reduce greenhouse gas emissions from agency vehicles by 30 percent by the end of 2025.

The utilities systems required to serve the new or renovated site would not over burden existing systems. Water consumption would be a result of sanitary uses, human consumption, and landscaping. Due to the water conservation measures described above and the SFO requirement for LEED® Silver certification, the TSA Lease Consolidation would consume a negligible portion of the total water consumption in Virginia American Waters' and Fairfax Waters' wastewater and potable water systems.

Electricity consumption would be a result of lighting systems, and mechanical and electrical devices. New energy efficient equipment would be used for the TSA Lease Consolidation to minimize its energy demand and to meet the requirements of EO 13693, EISA and RLP 2VA0687 requirement for

LEED® Silver certification. Therefore, the total energy consumption from electrical usage would consume a negligible portion of the total energy consumption throughout DVP's systems.

Natural gas may be used for heating purposes. Because operation of the buildings under any of the Action Alternatives would be in compliance with EO 13693, EISA and RLP 2VA0687 requirement for LEED® Silver certification, the TSA Lease Consolidation would consume a negligible portion of the total energy consumption in Washington Gas' systems.

At both sites, small temporary disruptions to services to adjacent properties may occur as a result of construction activities. Any disruptions would be advertised to affected areas and care would be taken to minimize these disruptions. The action would result in direct and indirect, minor, short-term, adverse local impacts.

3.13.3 What Conservation Measures Would be Incorporated Into the Development at Each Site to Mitigate Impacts to Utilities?

While RLP 2VA0687 does not require the developer/owner to utilize alternative energy sources, the selected offeror would have to operate their facility in a sustainable and energy efficient manner for both Action Alternatives. Furthermore, in accordance with RLP 2VA0687, the developer/owner would be required to meet a minimum rating of Silver on the LEED® scale for building design. This LEED® rating would increase energy conservation and water conservation for both building construction. Energy conservation measures used to meet LEED® Silver requirements follow tenets of sustainability outlined in EO 13693. Sustainable design measures incorporated into achieving LEED® Silver rating includes: energy efficient lighting, HVAC systems, and passive solar heating and lighting. Water conservation measures include low flow water fixtures, automatic fixture sensors, drought tolerant plants, and potentially rainwater harvesting. Last, both proposed sites are in close proximity to Metrorail stations providing employees and visitors opportunity to reduce energy consumption from personal car use. At the chosen facility a recycling program would be used and the developer would be responsible for maintaining energy conservation measures (e.g. use of energy star appliances and lights).

3.13.4 How Will Operation at Each of the Proposed Sites Impact Energy Usage?

No-Action Alternative

Under the No-Action Alternative, neither of the alternative sites would be developed or renovated for the proposed TSA Lease Consolidation. TSA would continue to operate at four leased locations in Northern Virginia. Under this alternative there would be no changes to the HVAC systems serving the existing buildings. This impact on energy efficiency would be minor, long-term, and adverse. However, each Federal agency is required to reduce building energy consumption per square foot by 2.5 percent annually by 2025 relative to the 2015 baseline in accordance with EO 13693. Once these measures are put in place, the adverse impact would be reduced.

Victory Center and Springfield Metro Center (Action Alternatives)

Both of the proposed action alternatives are required at a minimum to achieve a LEED® Silver rating, which would increase energy efficiency and sustainability. Furthermore, in accordance with RLP 2VA0687, the developer/owner would be required to meet a minimum rating of Silver on the LEED® scale for building design. This LEED® rating would increase energy conservation and water conservation for both building construction. Energy conservation measures used to meet LEED® Silver requirements follow tenets of sustainability outlined in EO 13693. Sustainable design measures incorporated into achieving LEED® Silver rating include: energy efficient lighting, HVAC systems, and passive solar heating and lighting. Water conservation measures include low flow water fixtures, automatic fixture sensors, drought tolerant plants, and potentially rainwater harvesting.

In addition, the TSA Lease Consolidation project would comply with EO 13693 and EISA by reducing building energy consumption, greenhouse gas emissions, and water consumption relative to GSA's baseline. While RLP 2VA0687 does not require the developer/owner to utilize alternative energy sources, the selected offeror would have to operate their facility in a sustainable and energy efficient manner.

3.14Waste Management

3.14.1 How Will Waste be Managed at Each of the Proposed Sites?

In Virginia, general waste is regulated under Virginia Administrative Code Agency 20, Chapter 81. In the City of Alexandria and solid waste is regulated under City Code Title 5, Chapter 1. In Fairfax County, waste management is regulated under Fairfax County's Code Section 109.1. At each site, waste would be handled in accordance with these regulations. Two waste streams would be generated: solid waste and liquid waste. Solid waste would consist of non-hazardous, paper or food based waste that is not recycled or composted. Solid waste would be placed into designated waste receptacles in office and common use areas. On a regular basis the waste receptacles would be emptied and the waste would be collected in dumpsters. From the dumpsters the waste would be collected on a weekly basis by a contracted waste service. The waste service would be responsible for removing waste from the site and disposing of it at a licensed disposal facility.

Liquid waste would be generated in the bathrooms, and would be disposed of into the sewer system through the plumbing network of the facility. The sewer system would be operated by Virginia American Water or Fairfax Water, it would be their responsibility to treat and dispose of the waste stream once the waste water left the TSA consolidation site.

In accordance with Virginia state legislation, local governments must meet a mandatory recycling rate. Both the City of Alexandria and Fairfax County have single stream recycling plans, which remove the need for businesses to sort recyclable material prior to shipping.

The developer/owner would be required to divert recyclable material from the municipal solid waste to the maximum extent practical and in accordance with RLP 2VA0687 and City of Alexandria or Fairfax County Code. Furthermore, to meet the objectives of EISA and RLP 2VA0687, the developer/owner would reduce construction waste by recycling and reusing materials whenever possible. All recycled material would be shipped from the selected TSA Lease Consolidation site to end users by a contractor. All non-recyclable waste generated during construction would be disposed of at licensed facilities and would be the responsibility of the developer/owner. The developer/owner would also be responsible for the proper management and disposal of any hazardous waste generated during construction.

3.14.2 How Would the Proposed Project Affect Waste Management?

No-Action Alternative

Under the No-Action Alternative, none of the alternative sites would be developed or renovated for the proposed TSA Lease Consolidation. TSA would continue to operate at several locations in Northern Virginia. Therefore, the No-Action Alternative would have no additional impact to waste management.

Victory Center and Springfield Metro Center (Action Alternatives)

Under any of the Action Alternatives, during construction or renovation and/or demolition, waste would be generated. The impact to the solid waste stream would be negligible, short-term, and adverse.

Under any of the Action Alternatives, general waste would be generated by TSA employees collocated at a central location. Overall, the amount of waste generated by the TSA would have a minor, long-term, adverse impact on the overall waste stream in the region. However, regardless of which of the Action Alternative site is selected, the new facility would operate in a sustainable and waste efficient manner in compliance with EO 13693 and EISA, which would reduce the impact to waste management.

3.14.3 What Measures Would be Implemented to Reduce Waste Generated at Each of the Proposed Sites?

Victory Center and Springfield Metro Center (Action Alternatives)

To meet the objectives of EISA and RLP 2VA0687, the developer/owner would reduce construction waste by recycling and reusing materials whenever possible in accordance with City of Alexandria's Code Title 5, Chapter 1 and Fairfax County's Code Section 109.1. The developer/owner would be required to divert recyclable material from the municipal solid waste to the maximum extent practical and in accordance the City of Alexandria or Fairfax County code by establishing a recycling program for (at a minimum) paper, corrugated cardboard, glass, plastics, metals, mercury containing lamps, toner and inject cartridges, and pallets. Recyclable and non-recyclable waste generated during construction would be disposed of at licensed facilities and would be the responsibility of the

developer/owner. Furthermore, the developer/owner would be responsible for the proper management and disposal of any hazardous waste generated during construction.

No matter which offered site is selected, the developer/owner would operate the TSA Lease Consolidation facility in a sustainable and waste efficient manner in accordance with the conservation requirements of RLP 2VA0687 and in compliance with EO 13693 and EISA.

3.15 Cumulative Effects

3.15.1 What are Cumulative Effects and Why Are They Discussed?

CEQ regulations require federal agencies to assess the cumulative effects of federal projects during the decision making process. Cumulative effects are defined as:

> "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonable foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions" (40 CFR 1508.7).

In other words, would the proposed federal project add to or interact with the environmental impacts of past, present, or future projects, regardless of the agency or group implementing those actions? This section of the EA provides a description of the cumulative impacts that the proposed action, combined with other projects in the area, may have on the human environment. To help the reader gain a better understanding of cumulative effects, the text box provides further explanation.

Cumulative Effects: An Example

There is evidence that the majority of environmental effects may result not from the direct effects of a single action, but from the combination of individually minor effects of multiple actions over time. A hypothetical example of the type of cumulative effects that could result from GSA projects is as follows:

> A change in the character of a neighborhood resulting from federal office construction when added to local development.

In other words, a residential neighborhood may become increasingly more commercial as federal office and other local developments (office or mixed use retail) are constructed.

3.15.2 What Past, Present, and Future Projects Could Add to or Interact With the Impacts of the Proposed Project?

Past and Present Actions

Both of the alternative sites for the TSA Lease Consolidation are located in the suburbs of Washington, D.C. Following settlement of the region by English settlers, the areas in which the alternative sites are located were farmed for over 300 years. Development of the land spread out from Washington, D.C. with the earliest suburbs being located near the railroad and streetcars that

provided access to the city. This development accelerated following World War II and during the 1950s and 1960s with the expansion of the Federal government.

Future Actions

Information on approved future developments was obtained from City of Alexandria and Fairfax County. Tables 15 and 16 provide a list of planned developments in the vicinity of each alternative site.

Table 15: Victory Center Approved Background Developments

Land Use	Size	Unit
Block 8		
Office	585,000	Square Foot
Retail	22,120	Square Foot
Block 9		
Residential	505	Units
Landmark Gateway		
Residential	494	Units
Retail	10,746	Square Foot
Cameron Park		
Residential	468	Units
Retail	36,919	Square Foot

Table 16: Springfield Metro Center Approved Background Developments

Land Use	Size	Unit
Loisdale Office Park		
Office	59,500	Gross Square Foot
Springfield Mall Town Center		
Mix-Use		
Patriot Ridge		
Office	708,309	Gross Square Foot
Lee Village at Silver Lake		
Library	45,900	Gross Square Foot
Active Adult Apartments	84	Apartments
Work Force Housing	104	Units
Kingstown Towne Centre Building M&N		
Office	1.2 million	Gross Square Foot
Liberty View		
Hotel	250	Rooms
Office	735,962	Gross Square Foot

3.15.3 What Are the Cumulative Effects?

Past, present and future development has affected and will continue to affect the natural, cultural, and social environment at each of the alternative sites and surrounding areas. Current and future development continues to result in a loss of vegetation, putting pressure on natural habitats and adversely affecting wildlife. In addition, development increases impervious surfaces, which in turn increase stormwater runoff. Additional development continues to put pressure on community services and increases demand for utilities, particularly electrical and water supplies. With an increase in development there also comes an increase in roadway congestion and the LOS on our

roadways becomes problematic. Congestion and worsening LOSs contribute to poor air quality. The traffic analysis conducted for this EA took into account future development and thus represents cumulative impacts for traffic (See Section 3.12). Finally, future development projects may present views of a more densely developed environment and could affect historic and archeological resources.

Beneficial cumulative impacts associated with past, current, and future development include increased job opportunities, improved housing, and an increase in the regional and state tax base.

3.16 Are There Any Adverse Environmental Effects Which Cannot be Avoided Associated with the Proposed Project?

Environmental Impact for all action alternatives have been described in detail in the previous sections of this chapter. In general, there would be unavoidable adverse effects due to the type of lease consolidation project that is proposed. There would be a loss of land to building space under the Springfield Metro Center site for the TSA Lease Consolidation, which will include some vegetative areas. While some space would remain open, some areas would be paved, thereby not allowing vegetative growth. Under the Victory Center alternative, there would be no additional loss of vegetation. There would be permanent changes to the views surrounding the sites due to the shape of the site and the potential placement of building(s). There would also be an increase in traffic densities in the area surrounding each of the sites, due to commuting employees.

3.17 What Relationships Exist Between the Local Short-Term Uses of the Proposed Project and Maintenance and Enhancement of Long-Term Productivity?

The long-term benefits of the TSA Lease Consolidation would occur at the expense of short-term impacts in the vicinity of the selected site. These short-term effects would occur during the period of construction or renovation, and would include localized noise and air pollution, as well as some traffic detours and delays. However, these impacts are temporary and proper controls would be utilized to prevent these impacts from having a lasting effect on the human environment.

Short-term gains to the local economy would occur as local companies and workers are hired and local businesses provide services and supplies during the construction or renovation of buildings. However, upon completion of the project, the gains to the local economy would evolve into a long-term benefit as TSA employees move into the facilities and provide consistent business to the surrounding merchants.

Furthermore, upon completion of the TSA Lease Consolidation, there would be a long-term increase in efficiency of TSA operations, as coordination among various components would occur because they would be in one centralized location.

3.18 Are There Any Irreversible and Irretrievable Commitments of Resources Associated with the Proposed Project?

The TSA Lease Consolidation would require the commitment of land for construction under the Springfield Metro Center site. The total commitment would include a loss of vegetation currently present at each of the sites. The loss of vegetation would be permanent.

A commitment of fuel, including natural gas and energy would be required to construct or renovate building(s) under any of the proposed alternative sites. Other resource commitments during the construction or renovation period would include construction materials and labor. Once the TSA Lease Consolidation is in place, there is a commitment of utilities, fuel, and power. All of these resources relating to the construction and maintenance of the TSA Lease Consolidation and its infrastructure are considered irretrievably committed.

While there will be the above commitment of resources, through conservation and sustainability practices some of these resources, such as water supply, may be retrieved. In addition, the TSA Lease Consolidation would require a lower expenditure of funds, energy, and fuel than presently committed under the existing leased facilities in Northern Virginia. The TSA Lease Consolidation would reduce some of these expenditures once the lease consolidation occurs. TSA employees would be collocated into one building and would not be spread amongst four separate buildings in Northern Virginia.

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4.0 References

Federal Emergency Management Agency, 2006. *Executive Order 11988: Floodplain Management.* Accessed June 2010 from http://www.fema.gov/plan/ehp/ehplaws/eo11988.shtm.

NOAA, 2014. "Coastal Zone Management Act." Accessed May 2015 from http://coast.noaa.gov/czm/act/.

U.S. Census Bureau, 2010. *American FactFInder.* Accessed April 2015 from http://factfinder.census.gov.

U.S. Environmental Protection Agency, 2008. *The Green Book Nonattainment Areas for Criteria Pollutants.* Accessed April 2015 from http://www.epa.gov/air/oaqps/greenbk/

U.S. Environmental Protection Agency, November 2005. *Guideline on Air Quality Models (Revised).* 40 CFR Part 51, Appendix W.

U.S. Environmental Protection Agency, 2007a. *Air Data: Access to monitored air quality data from EPA's Air Quality System (AQS) Data Mart*. Accessed April 2015 from http://www.epa.gov/airdata/.

U.S. Environmental Protection Agency, 2014. Mobile Source Air Toxics. Accessed April 2015 from http://www.epa.gov/otaq/toxics.htm.

U.S. Environmental Protection Agency (EPA), 2007b. *Summary of Coastal Zone Management Act and Amendments.* Accessed April 2015 from http://www.epa.gov/oecaagct/lzma.html .

U.S. Fish and Wildlife Service, 2010a. *Birds Protected by the Migratory Bird Treaty Act*. Accessed July 2010 from, http://www.fws.gov/migratorybirds/RegulationsPolicies/mbta/mbtandx.html

U.S. Fish and Wildlife Service, 2015. *National Wetlands Inventory.* Accessed April 2015 from http://www.fws.gov/wetlands/Data/mapper.html.

U.S. Fish and Wildlife Service, 2015. Virginia Field Office: Endangered Species Project Review Process. Accessed April 2015 from http://www.fws.gov/northeast/virginiafield/endangered/projectreviewprocess.html

U.S. Geological Survey, 1997. *Ground Water Atlas of the United States: Delaware, Maryland, New Jersey, North Carolina, Pennsylvania, Virginia, West Virginia.* Accessed April 2015 from, http://pubs.usgs.gov/ha/ha730/gwa.html

U.S. Green Building Council, 2010. *Intro – What LEED Is*. Accessed: June 23, 2010. (http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1988.

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Appendix A – EA Figures

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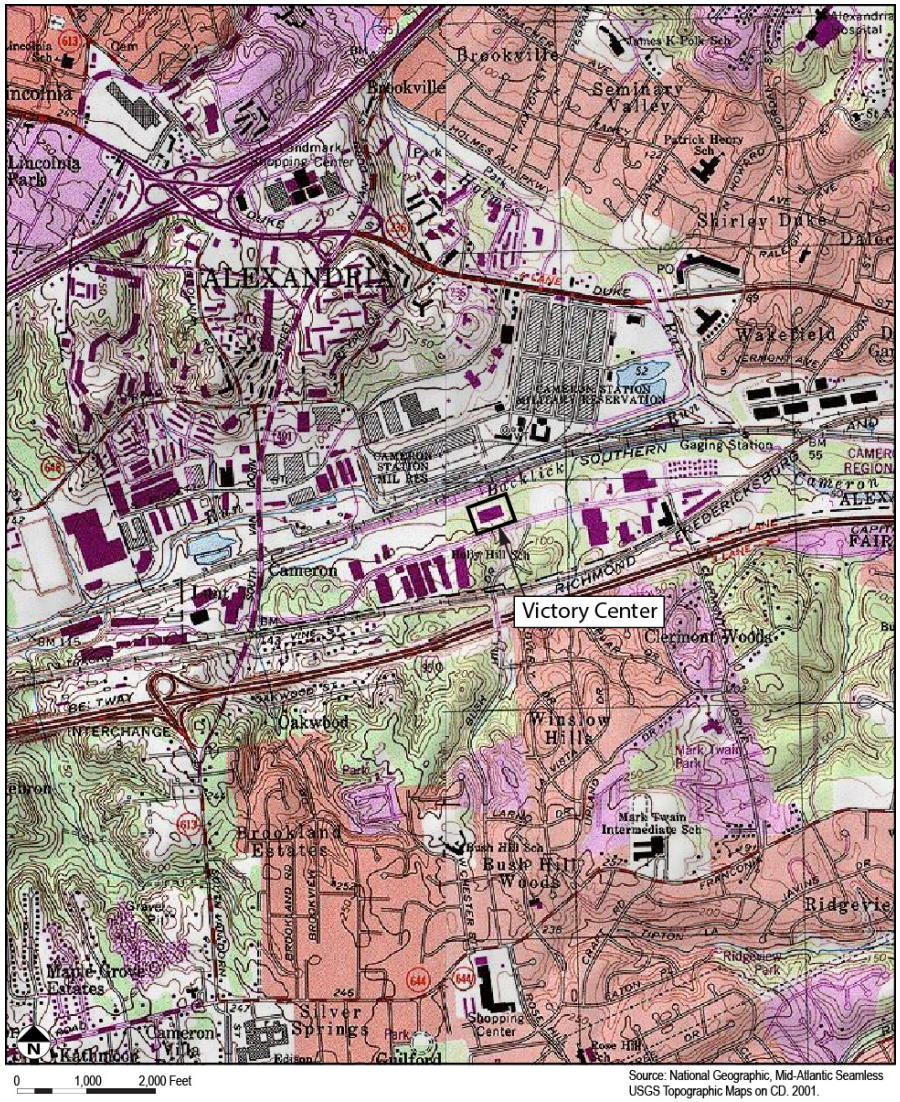


Figure A-1. Victory Center USGS Quad

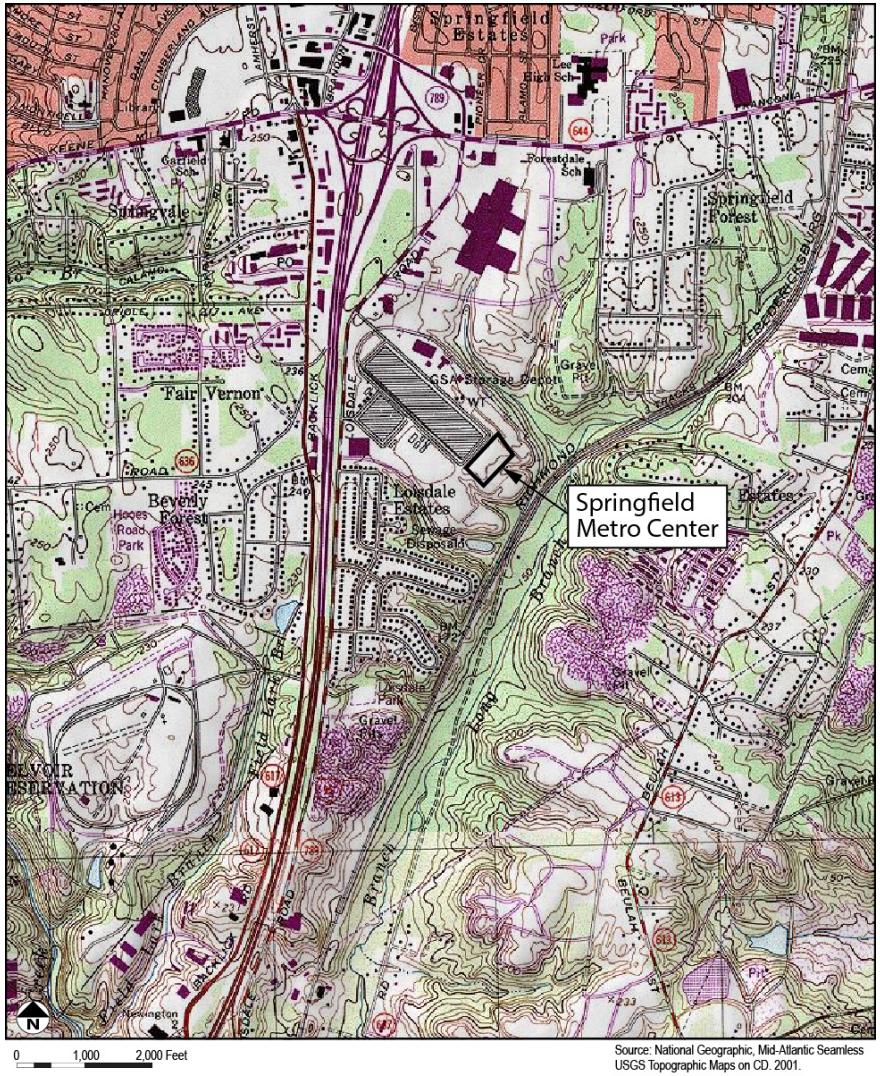


Figure A-2. Springfield Metro Center USGS Quad

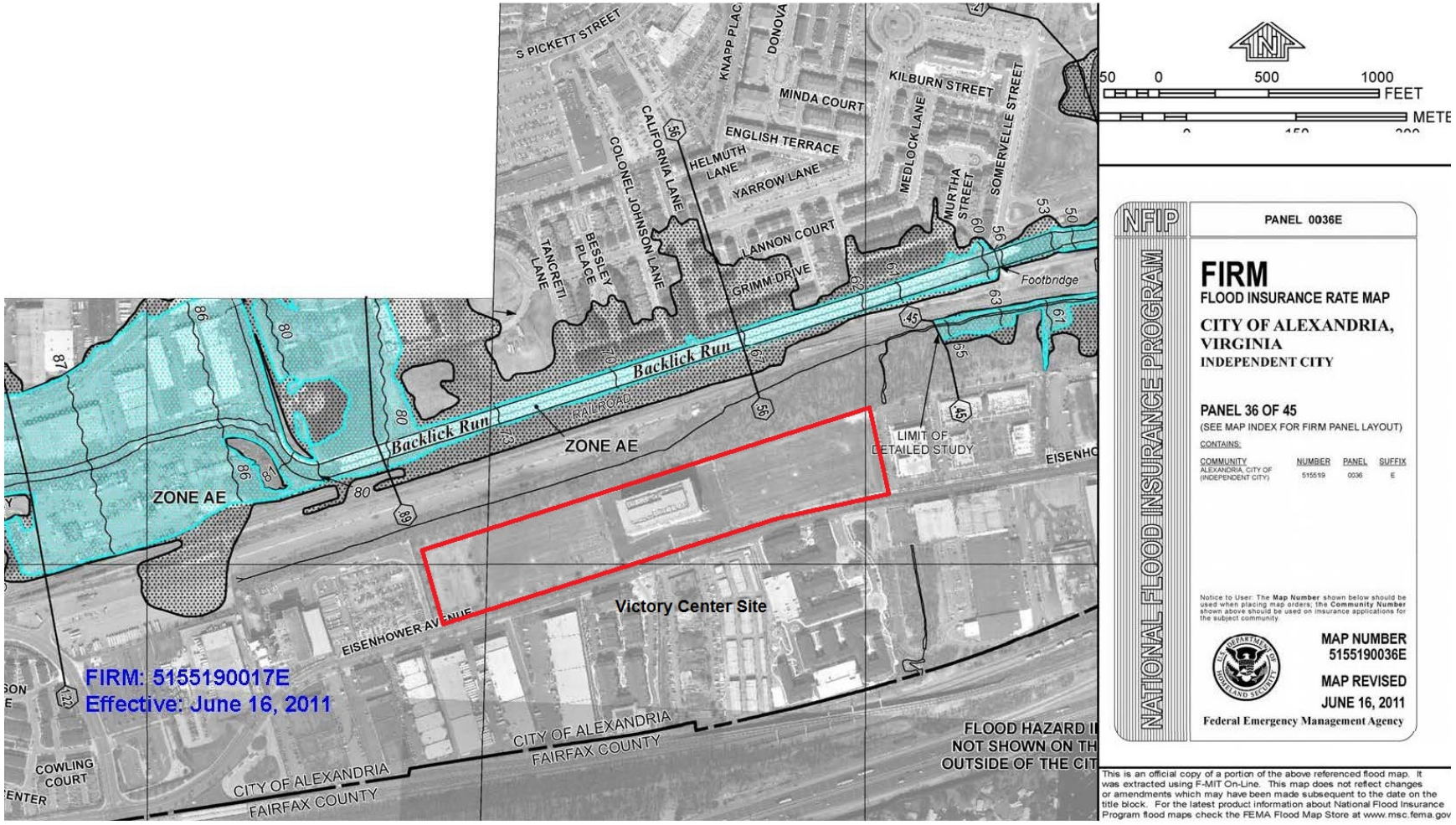


Figure A-3. Floodplain Map Victory Center Site

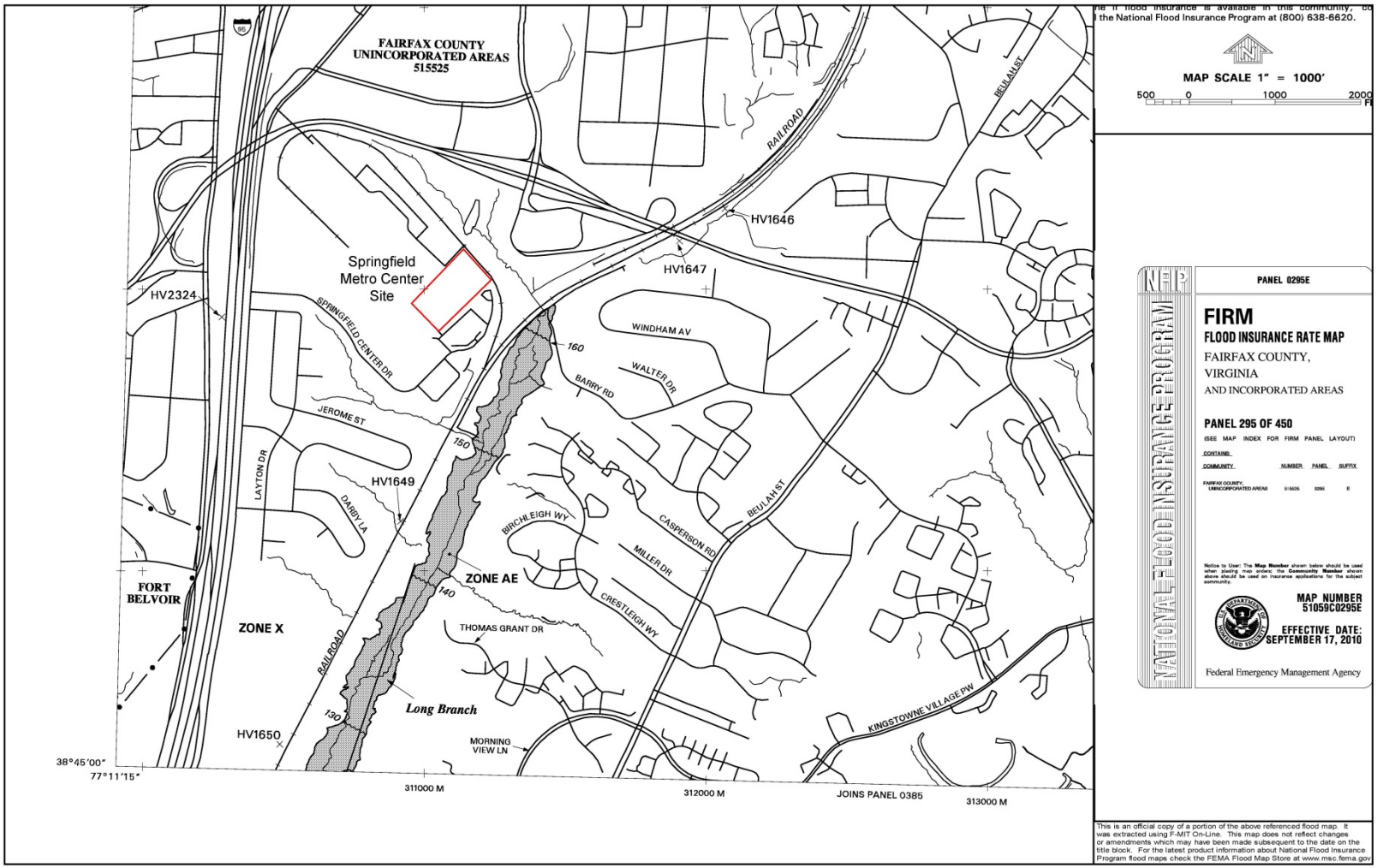
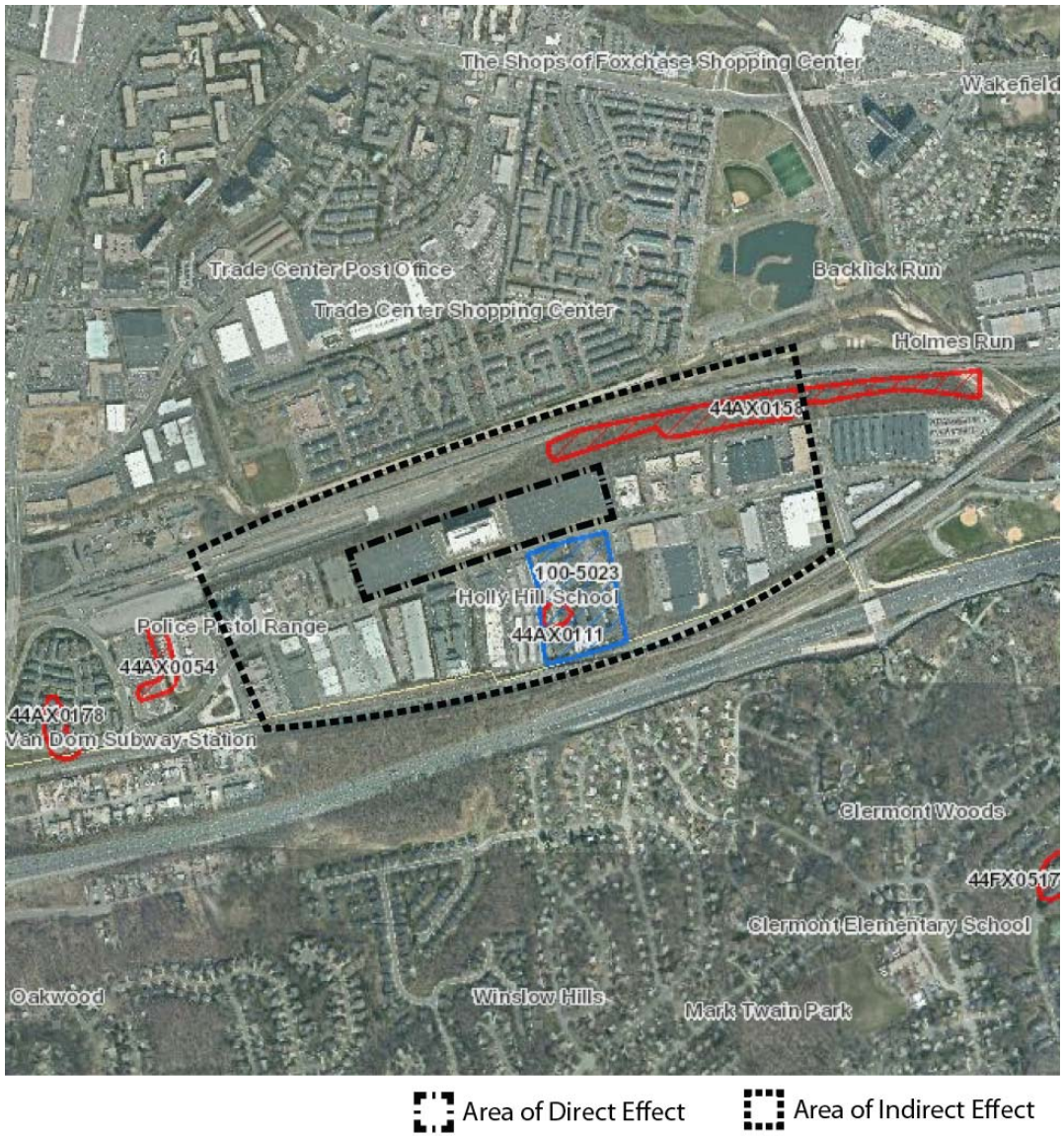


Figure A-4. Floodplain Map Springfield Metro Site



Source: VDHR MapViewer, April 2015

Figure A-5: Area of Potential Effects (APE), Victory Center Site

Source: VDHR MapViewer, April 2015

Figure A-6: Area of Potential Effects (APE), Springfield Metro Alternative

Figure A-7. Victory Center Soil Map

Figure A-8: Springfield Metro Center Soil Map

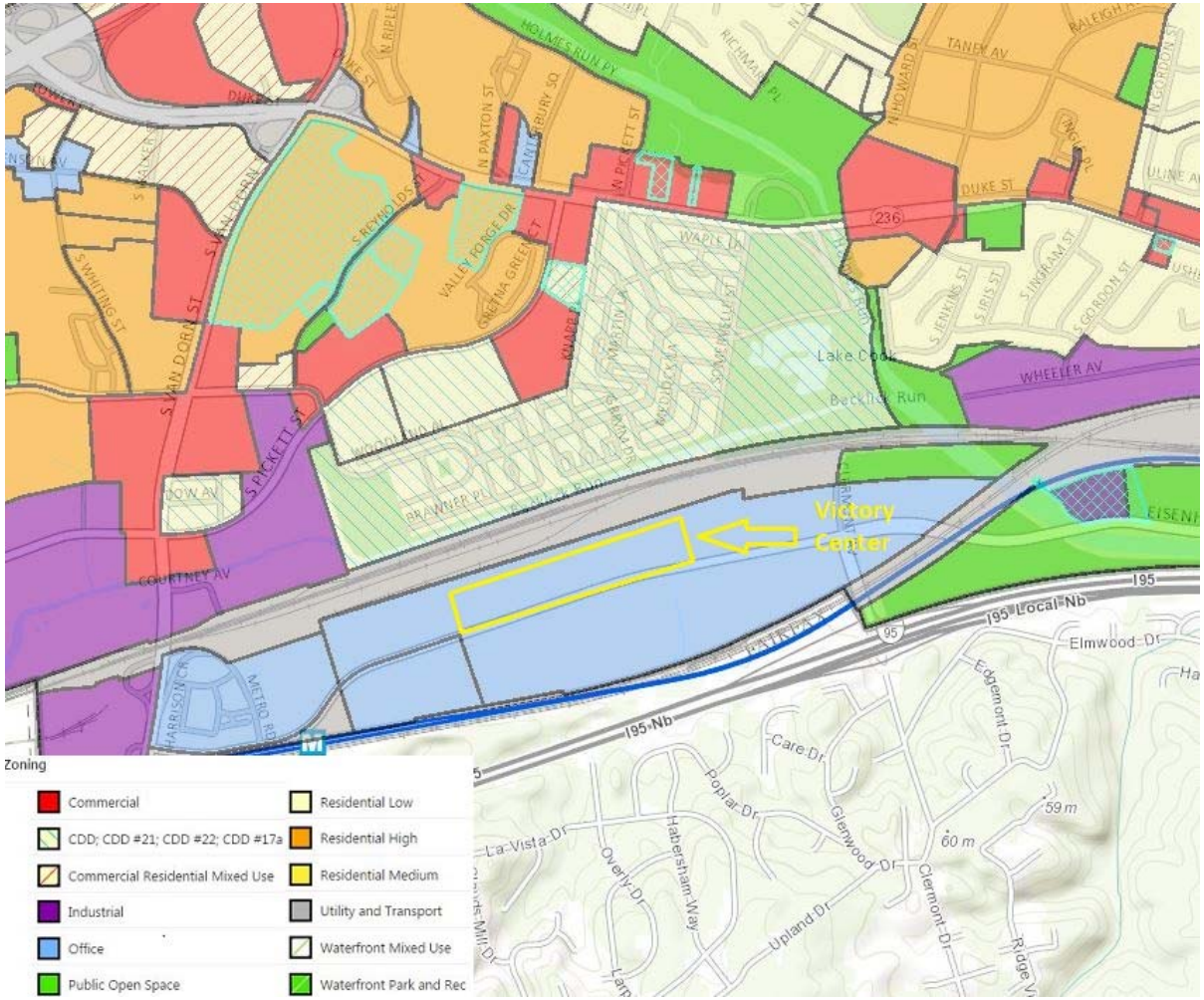


Figure A-9. Victory Center Zoning Map

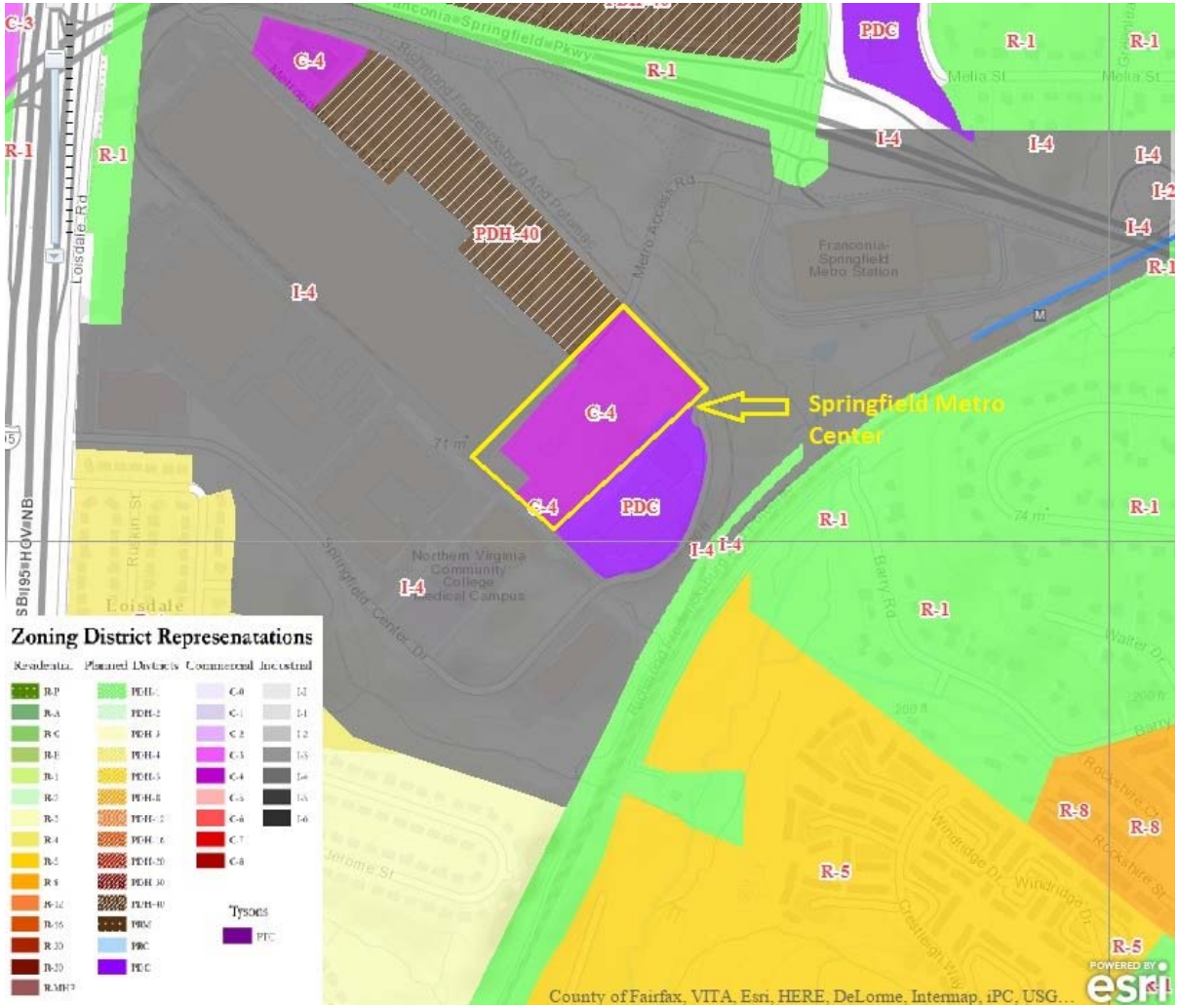


Figure A-10. Springfield Metro Center Zoning Map

Figure A-11. Metrorail System Map

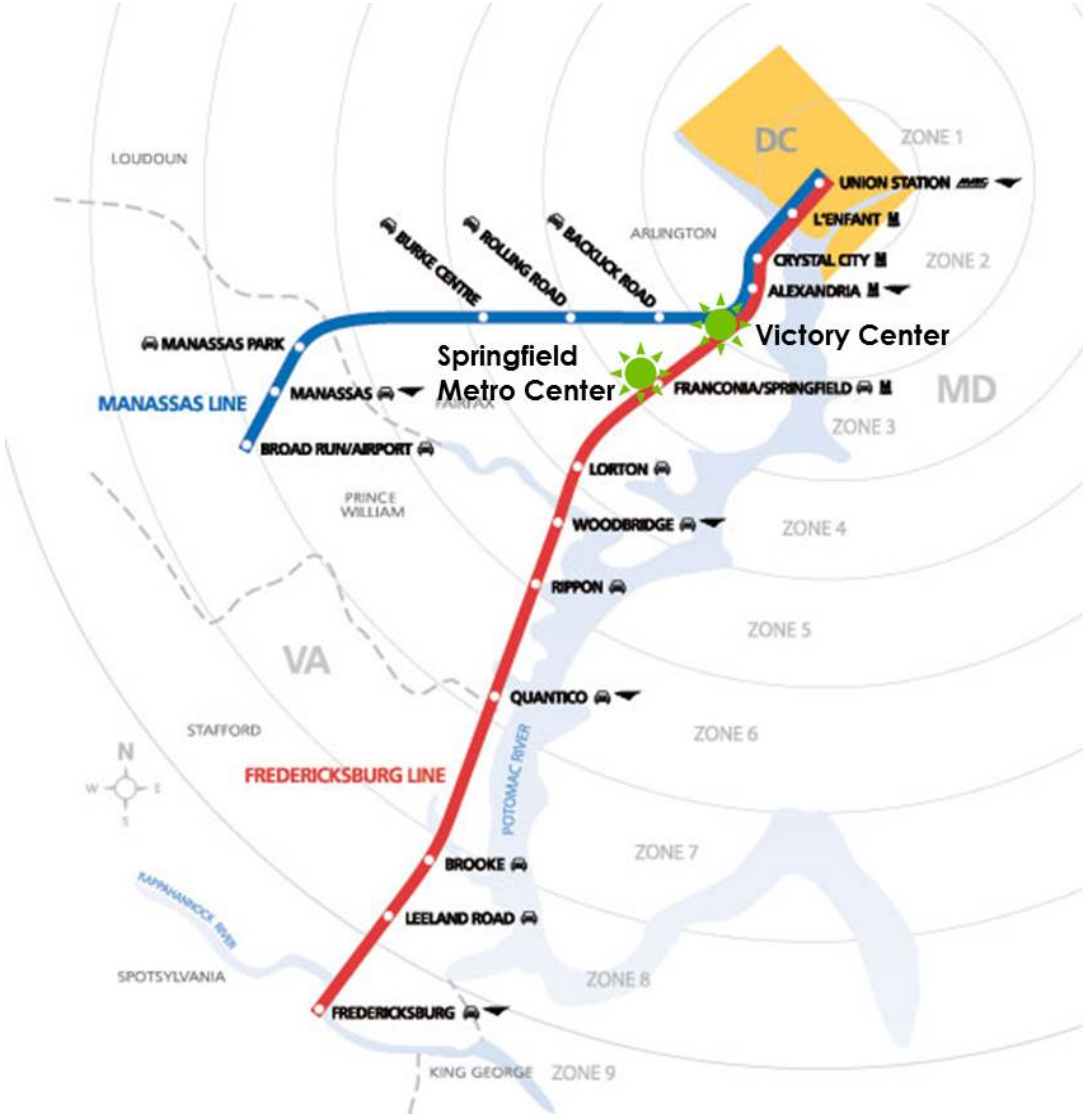


Figure A-12. VRE Rail System Map

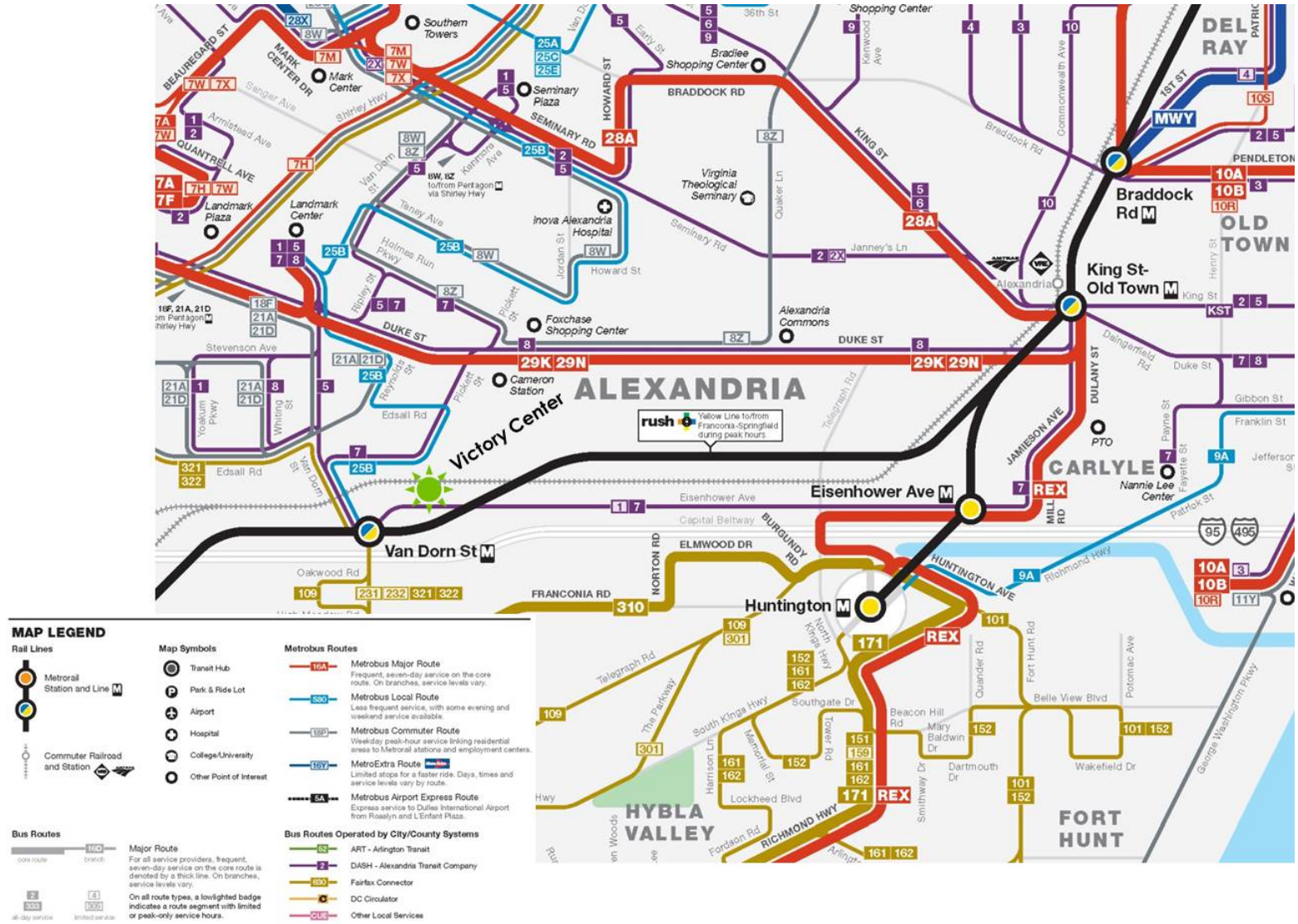


Figure A-13. Metrobus, Fairfax Connector, and DASH Routes for the Victory Center Site

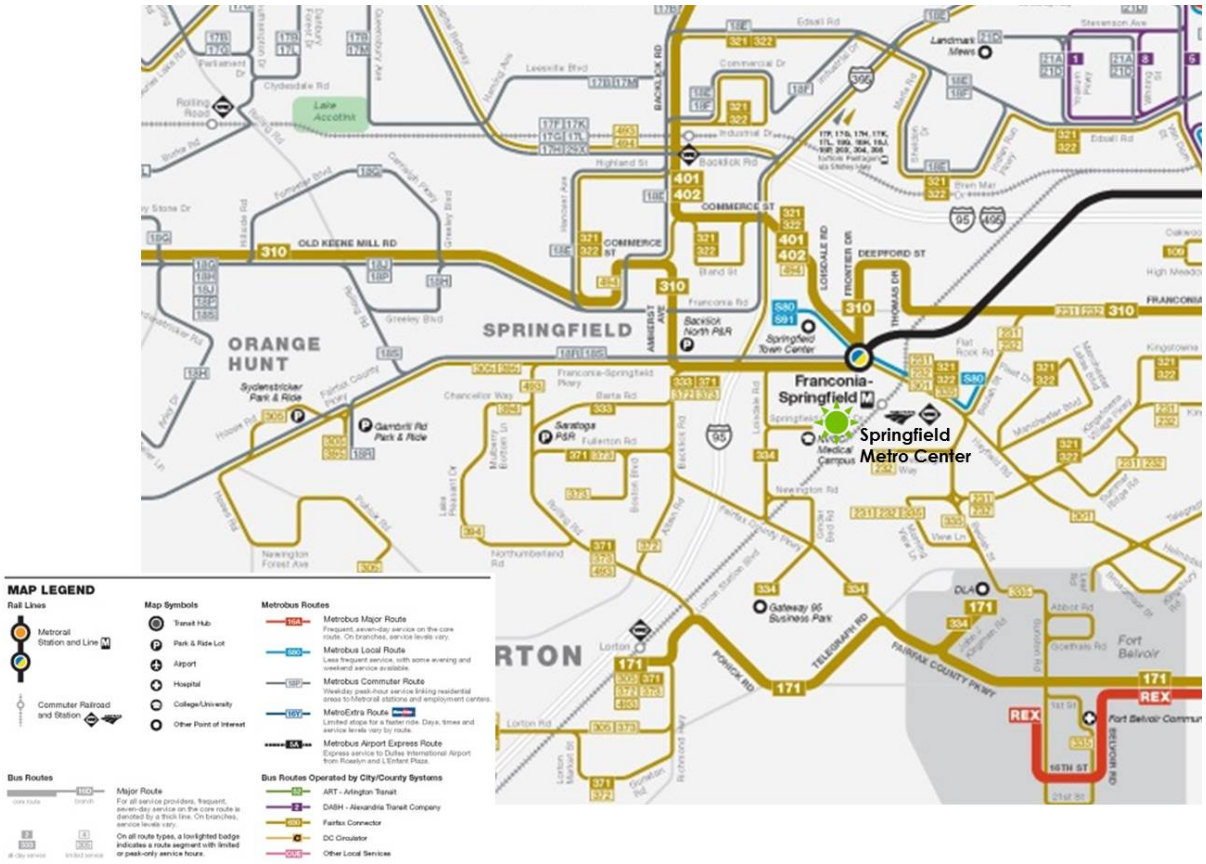


Figure A-14. Metrobus and Fairfax Connector Routes for the Springfield Metro Center Site

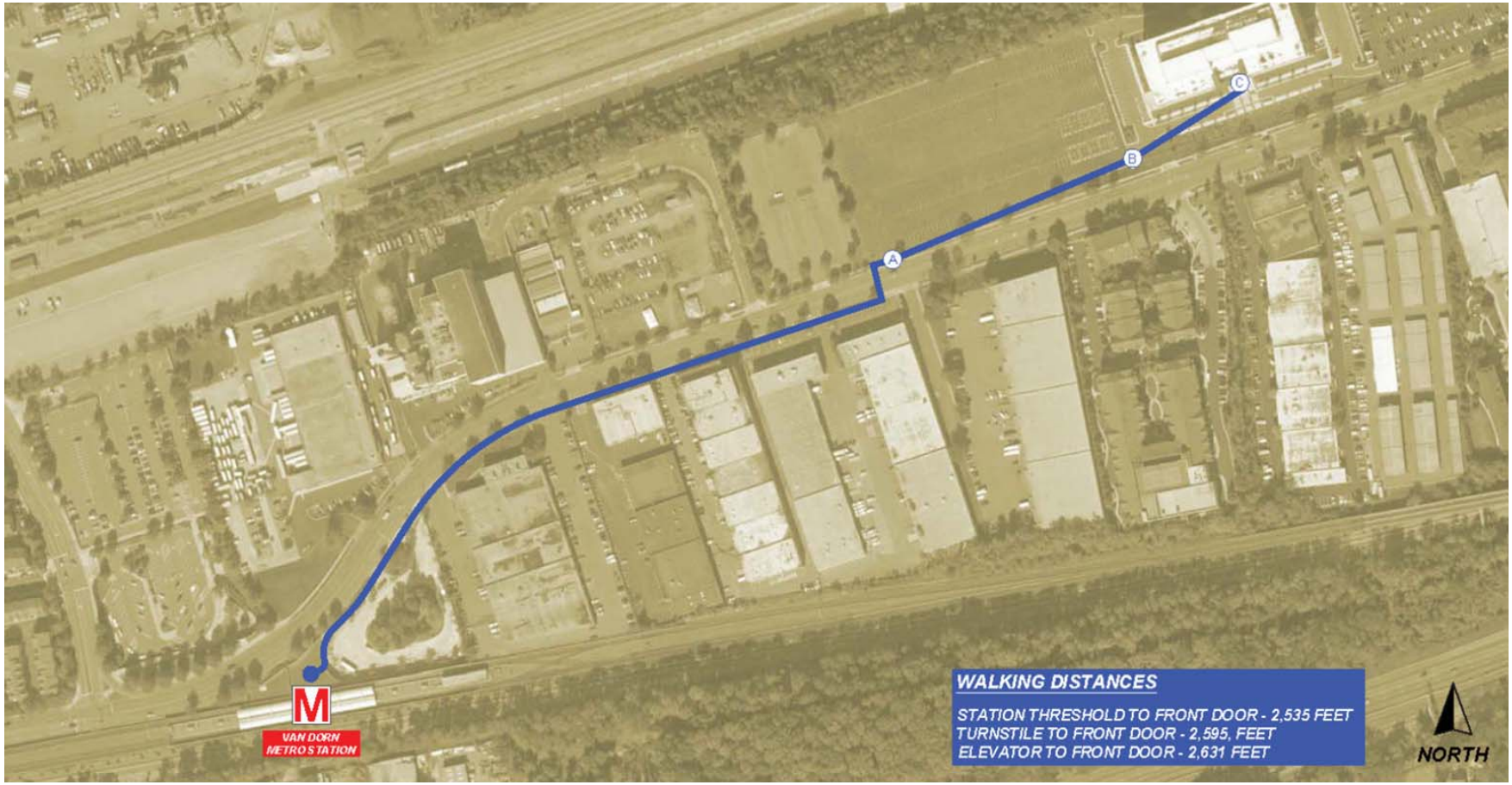


Figure A-15: Walking Path from Van Dorn Metrorail Station to Victory Center

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Appendix B – Scoping Letters

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Appendix C – Section 106 Consultation

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Appendix D –Agency Coordination

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Appendix E – Traffic Impact Study

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