

Draft

Environmental Assessment

Hampton Roads Community-Based

Outpatient Clinic

City of Chesapeake, Virginia

Prepared for:



U.S. General Services Administration
100 S. Independence Mall West
Philadelphia, PA 19106

January 2021

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**DRAFT ENVIRONMENTAL ASSESSMENT
FOR
HAMPTON ROADS COMMUNITY-BASED OUTPATIENT CLINIC
CITY OF CHESAPEAKE, VIRGINIA**

Lead Agency: U.S. General Services Administration

Action Proponent: U.S. Department of Veterans Affairs

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ACRONYMS AND ABBREVIATIONS

ADA	Americans with Disability Act
APE	Area of Potential Effect
BMP	best management practice
CBOC	community-based outpatient clinic
CBPA	Chesapeake Bay Preservation Area
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CZM	Coastal Zone Management
EA	environmental assessment
ESA	Environmental Site Assessment
GSA	U.S. General Services Administration
HCM	Highway Capacity Manual
HRT	Hampton Roads Transit
IPaC	USFWS Information for Planning and Consultation system
LOS	level of service
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
RPA	Resource Protection Area
TWSC	two-way STOP-controlled
U.S.	United States
USACE	U.S. Army Corps of Engineers
USC	United States Code
USFWS	U.S. Fish and Wildlife Service
VA	U.S. Department of Veterans Affairs
VDEQ	Virginia Department of Environmental Quality
VDHR	Virginia Department of Historic Resources
VPDES	Virginia Pollutant Discharge Elimination System

EXECUTIVE SUMMARY

The U.S. General Services Administration (GSA) proposes to award a long-term lease to develop a new community-based outpatient clinic (CBOC) for the U.S. Department of Veterans Affairs (VA) in the Hampton Roads region of southeast Virginia. This environmental assessment (EA) has been prepared as required in accordance with the National Environmental Policy Act of 1969 ([NEPA]; 42 United States Code [USC] 4321 et seq.), the President’s Council on Environmental Quality (CEQ) Regulations Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] 1500–1508) (CEQ 1978), and GSA’s *Public Building Services NEPA Desk Guide* (GSA 1999). This EA is required to determine if the Proposed Action would have significant environmental impacts.

Purpose and Need for the Proposed Action

The purpose of the Proposed Action is to award a long-term lease to develop a new CBOC in the Hampton Roads region to allow the VA to expand primary care, mental health, and eye clinic services and to provide specialty care and advanced imaging services to veterans in a right-sized, state-of-the-art, energy efficient health care facility. The Proposed Action would promote further accessibility to VA-provided health services for veterans who currently commute to the existing CBOC site in Virginia Beach.

The Proposed Action is needed because the Virginia Beach CBOC cannot meet the growing needs and services of the veteran population within the existing 13,000-square-foot facility. While the Virginia Beach site would continue to operate under the Proposed Action, expansion of the site is not feasible because of physical constraints.

Description of Proposed Action and Alternatives

The Proposed Action evaluated in this EA is the development of a new CBOC in the Hampton Roads region to be leased by the GSA for the VA and acquired, constructed, owned, and maintained by a selected developer. The new facility would increase health care service provision and provide modern facilities and new medical technologies. The CBOC would be developed to support identified program requirements generalized as up to 215,000 rentable square feet within two contiguous floors. The facility would include a minimum of 1,050 parking spaces to be located on a contiguous site with the CBOC.

The EA analyzes three Action Alternatives—one design option on one site (Clearfield Avenue) and two design options on a second site (Knells Ridge Boulevard). The proposed site designs that are under consideration are not publicly available because of procurement sensitivity, but they were used to analyze potential impacts in this EA. The EA also analyzes a No Action Alternative where a new CBOC is not developed.

The Clearfield Avenue site covers approximately 40 acres and crosses the boundaries of two existing parcels. The site is approximately 750-feet east of the intersection of VA 190 (Kempsville Road) and Clearfield Avenue; it is currently undeveloped and cleared for existing agricultural uses. On the Clearfield Avenue site, one design is proposed with a site plan that would cover 33.5 acres.

The Knells Ridge Boulevard site covers approximately 25 acres and is encompassed within the boundary of an existing parcel. The site is approximately 600-feet west of the intersection of VA 168 (North Battlefield Boulevard) and Knells Ridge Boulevard. The site is currently undeveloped and heavily forested. On the Knells Ridge Boulevard site, two alternatives are proposed with site plans covering between 21.5 and 22 acres. These alternatives are referenced in this EA as Knells Ridge Boulevard—Design A and Knells Ridge Boulevard—Design B.

Environmental Impacts

The affected environment of the Action Alternative sites and their immediate surroundings is discussed in Section 3 of this EA. The potential direct and indirect effects of implementing the Proposed Action at the two sites (three Action Alternatives) and the No Action Alternative are also identified in Section 3. Resource areas evaluated in this EA are water resources; wildlife and habitat; socioeconomics and environmental justice; land use; traffic, transportation, and parking; and utilities. No significant impacts on these resources were identified.

Agency and Public Involvement

This Draft EA was released for a 15-day agency and public review period on January 26, 2021. Public notification was advertised in the *Virginian Pilot* on January 26, 2021.

Agencies and the public are encouraged to provide written comments regarding the findings and analysis of the Draft EA. Comments must be received by February 9, 2021. Please submit written comments by email (VA.HamptonRoads.CBOC@gsa.gov) or by Postal Mail/Commercial Delivery (Portfolio Division ATTN: VA Hampton Roads CBOC, General Services Administration, 100 South Independence Mall W, Room 2191, Philadelphia, PA 19106).

For further information contact: General Services Administration, Mid-Atlantic Region, VA.HamptonRoads.CBOC@gsa.gov.

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1.0 PURPOSE AND NEED

1.1 Introduction

The U.S. General Services Administration (GSA) proposes to award a long-term lease to develop a new community-based outpatient clinic (CBOC) for the U.S. Department of Veterans Affairs (VA) in the Hampton Roads region of southeast Virginia. The new site would support the growing number of veterans in the Hampton Roads region by increasing the availability of health and wellness services. While an existing 13,000-square-foot CBOC is in operation in Virginia Beach, Virginia, this site cannot support necessary expansion to support growing health care needs. The Proposed Action would consist of awarding a long-term lease for a developer to acquire property to construct a stand-alone building to provide primary care, mental health, and eye clinic services. The selected developer would be responsible for acquiring the selected site, constructing the proposed facility, and assuming ownership and maintenance of the site.

This environmental assessment (EA) has been prepared as required in accordance with the National Environmental Policy Act of 1969 ([NEPA]; 42 United States Code [USC] 4321 et seq.), the President’s Council on Environmental Quality (CEQ) Regulations Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] 1500–1508) (CEQ 1978), and GSA’s *Public Building Services NEPA Desk Guide* (GSA 1999). This EA is required to determine if the Proposed Action would have significant environmental impacts.

1.2 Proposed Action

Under the Proposed Action, GSA would award a long-term lease for the development of a new CBOC. The selected developer would acquire the site, build the proposed stand-alone CBOC, and assume ownership and maintenance of the site. The CBOC would be developed to support identified program requirements generalized as up to 215,000 rentable square feet within two contiguous floors and a minimum of 1,050 parking spaces on a contiguous site. The existing CBOC in Virginia Beach would continue to operate under the Proposed Action.

1.3 Background

In 2019, the GSA issued a Prospectus for Lease (Prospectus Number PVA-01-HA20) for a new CBOC in the Hampton Roads region with a proposed maximum leasing authority of 20 years.

The Prospectus identified an Area of Consideration for the Proposed Action described as: “North: start at the intersection of Tidewater Drive (Route 168) and E Virginia Beach Blvd. (Route 58) to Virginia Beach Blvd.; East: S Independence Blvd. (Route 225) to Holland Road, south onto Dam Neck Road, continue onto Elbow Road, continue on Indian River Road; South: at the intersection of Indian River Road and Elbow Road, head south on Elbow Road, west on Butts Station Road, west on Clearfield Eve., west on Kempsville Road (Route 190); West: north on Battlefield Blvd. N (Business 168), onto Oak Grove Connector (Chesapeake Expressway –

Route 168), onto Hampton Roads Beltway (Route 64), onto Battlefield Blvd. N (Business 168), onto Campostella Road, onto E Brambleton Ave., onto Tidewater Drive (Route 168).” Figure 1 provides a map of the Area of Consideration.

GSA is preparing this EA as part of a pilot program where GSA conducts project delivery on the VA’s behalf. Concurrent with the preparation of this EA, GSA is undergoing a two-phased design-build-procurement process to identify a developer to be responsible for acquiring the site, and constructing, operating, and maintaining the proposed facility. A Request for Lease Proposals was issued in 2019 to solicit interested developers. During Phase I of the procurement process, submitting developers were evaluated based on previous experience and qualifications, and a shortlist of developers was selected. As part of Phase II of the procurement process, the shortlisted developers submitted bids that identified a specific site location and prepared a preliminary site plan for evaluation. The sites identified by the developers are the Action Alternatives evaluated in this EA.

The bids submitted under Phase II also needed to meet the criteria outlined in the Request for Lease Proposals issued in 2019. These criteria included but were not limited to:

- Provide a facility with the capacity to provide adequate levels of health care services. A facility with an American National Standards Institute/Building Owners and Managers Association Office Area square footage between 167,583 and 186,203 square feet with a maximum of 215,000 rentable square feet has been determined sufficient to address increasing health care service needs.
- Provide enough developable land to accommodate the necessary facility square footage and a minimum of 1,050 parking spaces while complying with local zoning requirements.
- Provide a lease term of 20 years, with two additional 5-year options.
- Identify a site in an established and well-maintained area with a variety of amenities and services adjacent to the identified site.

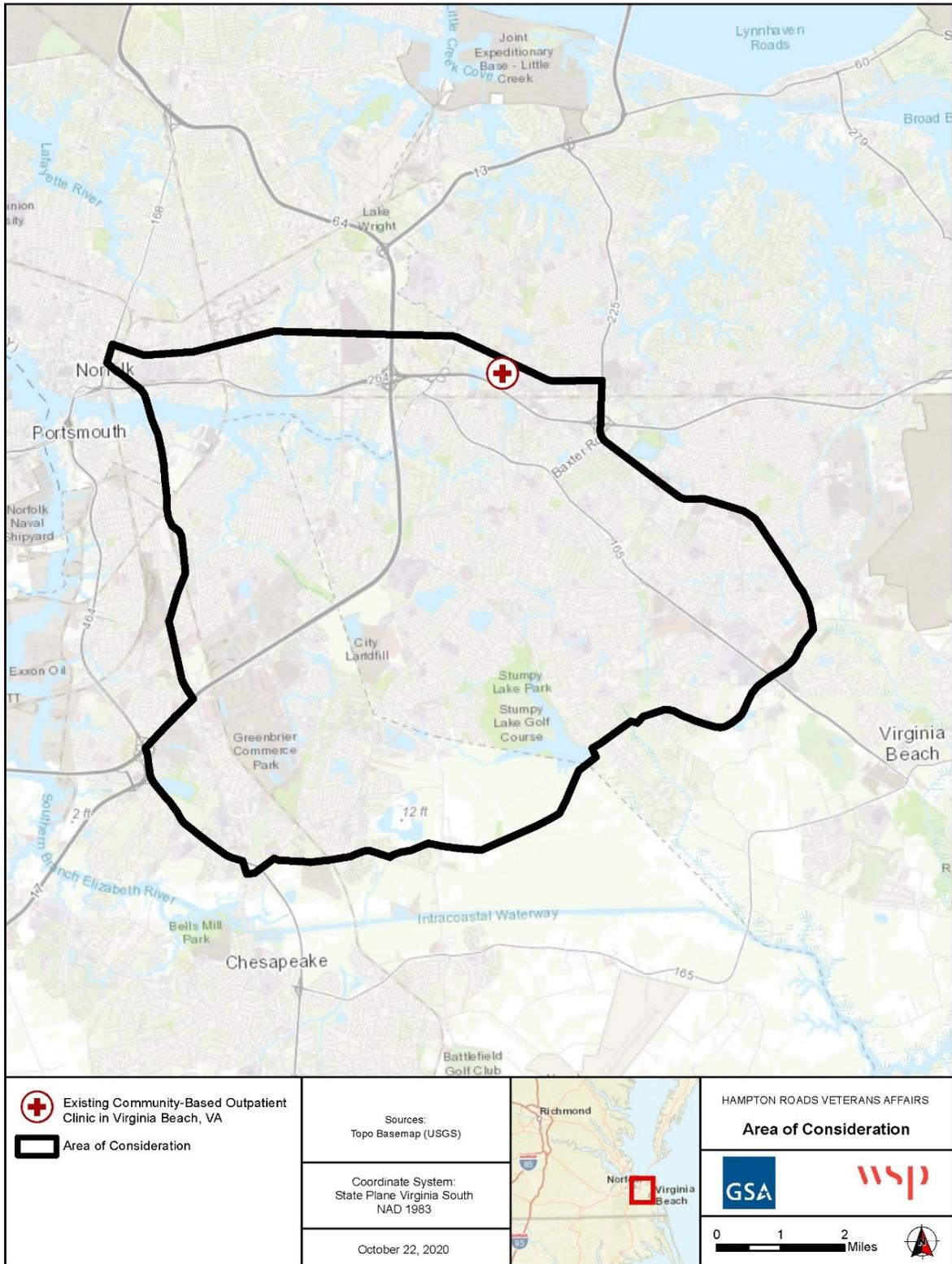


Figure 1: Area of Consideration

1.4 Purpose and Need for Proposed Action

The purpose of the Proposed Action is to develop a new CBOC in the Hampton Roads region to allow the VA to expand primary care, mental health, and eye clinic services and to provide specialty care and advanced imaging services to veterans in a right-sized, state-of-the-art, energy efficient health care facility. The Proposed Action would promote further accessibility to VA-provided health services for veterans who currently commute to the existing CBOC site in Virginia Beach.

The Proposed Action is needed because the existing Virginia Beach CBOC cannot meet the growing needs and services of the veteran population within the existing 13,000-square-foot facility. While the Virginia Beach site would continue to operate under the Proposed Action, expansion of the site is not feasible due to physical constraints.

1.5 Scoping and Public Participation

The Notice of Intent to prepare an EA for the project was published in the *Federal Register* on October 19, 2020. Public notification was also advertised in the *Virginian Pilot*, a daily newspaper serving the Hampton Roads region and parts of northeastern North Carolina, on October 20, 2020.

GSA mailed a scoping letter in October 2020 announcing the beginning of the EA process and soliciting comments to 66 federal, state, and local government agencies; and individuals with a known or potential interest in the proposed action and its environmental impacts, including 34 adjacent property owners.

Eight correspondences were received during the public and agency scoping period.

- One commenter was supportive of the project but requested information regarding traffic management and site drainage.
- The City of Chesapeake noted the Proposed Action is consistent with the City's long-term plan and supports the proposed development.
- The U.S. Environmental Protection Agency recommended specific resource area analyses and other considerations be addressed in the EA.
- Virginia Department of Environmental Quality (VDEQ), Office of Environmental Impact Review, provided a scoping letter detailing Virginia's review process for NEPA and Coastal Zone Management (CZM) documents.
- One commenter suggested considering an existing underutilized medical facility.
- The Virginia Marine Resources Commission noted the proposed sites are outside its jurisdiction and indicated that a permit from the agency would not be required.

- The Virginia Department of Health, Office of Drinking Water, noted there are two public groundwater wells within 1 mile of the Clearfield Avenue site. No public groundwater wells are recorded within 1 mile of the Knells Ridge Boulevard site. Neither site is within a 5-mile radius of surface water intakes or within the watershed of any public surface water intakes.
- A final commenter inquired if a solicitation had been issued for the project yet.

1.6 Section 106 Consultation

Pursuant to Section 106 of the National Historic Preservation Act of 1966 (NHPA), 16 USC §§ 470 et seq., consulting party letters were mailed to the Virginia Department of Historic Resources (VDHR) and 12 federally recognized Native American tribes on January 20, 2021, upon completion of cultural resources technical documents.

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 Description of the Proposed Action

The Proposed Action evaluated in this EA is the development a new CBOC in the Hampton Roads region to be leased by the GSA for the VA and acquired, constructed, owned, and maintained by a selected developer. The new facility would increase health care service provision and provide modern facilities and new medical technologies.

The CBOC would be developed to support identified program requirements generalized as up to 215,000 rentable square feet within two contiguous floors. The facility would include a minimum of 1,050 parking spaces to be located on a contiguous site with the CBOC. Additional site requirements include (1) a site location within an established neighborhood, (2) a variety of neighborhood services within immediate proximity of the site, and (3) one or more transit stops within one-quarter mile of the front-entrance of the CBOC.

2.2 Alternatives

The EA analyzes three Action Alternatives—one design option on one site (Clearfield Avenue) and two design options on a second site (Knells Ridge Boulevard). The proposed site designs that are under consideration are not publicly available because of procurement sensitivity, but they were used to analyze potential impacts in this EA.

2.2.1 Clearfield Avenue Alternative

The Clearfield Avenue site (Figure 2) covers approximately 40 acres and crosses the boundaries of two existing parcels. The site is approximately 750-feet east of the intersection of VA 190 (Kempsville Road) and Clearfield Avenue. A retirement community is located to the west of the site; residential development is located to the north across Clearfield Avenue; a medical center is located to the west of the parcels that make up the site; and the site is bordered by undeveloped land to the south that is adjacent to the Intracoastal Waterway. The elevation of the site is approximately 20 feet above sea level. The site is currently undeveloped and cleared for existing agricultural uses.

Implementation of the Proposed Action at this site would meet the VA's facility needs and improve access to health care services for veterans. The site has the developable land requirements to support the facility.

On the Clearfield Avenue site, one design is proposed with a site plan covering 33.5 acres.

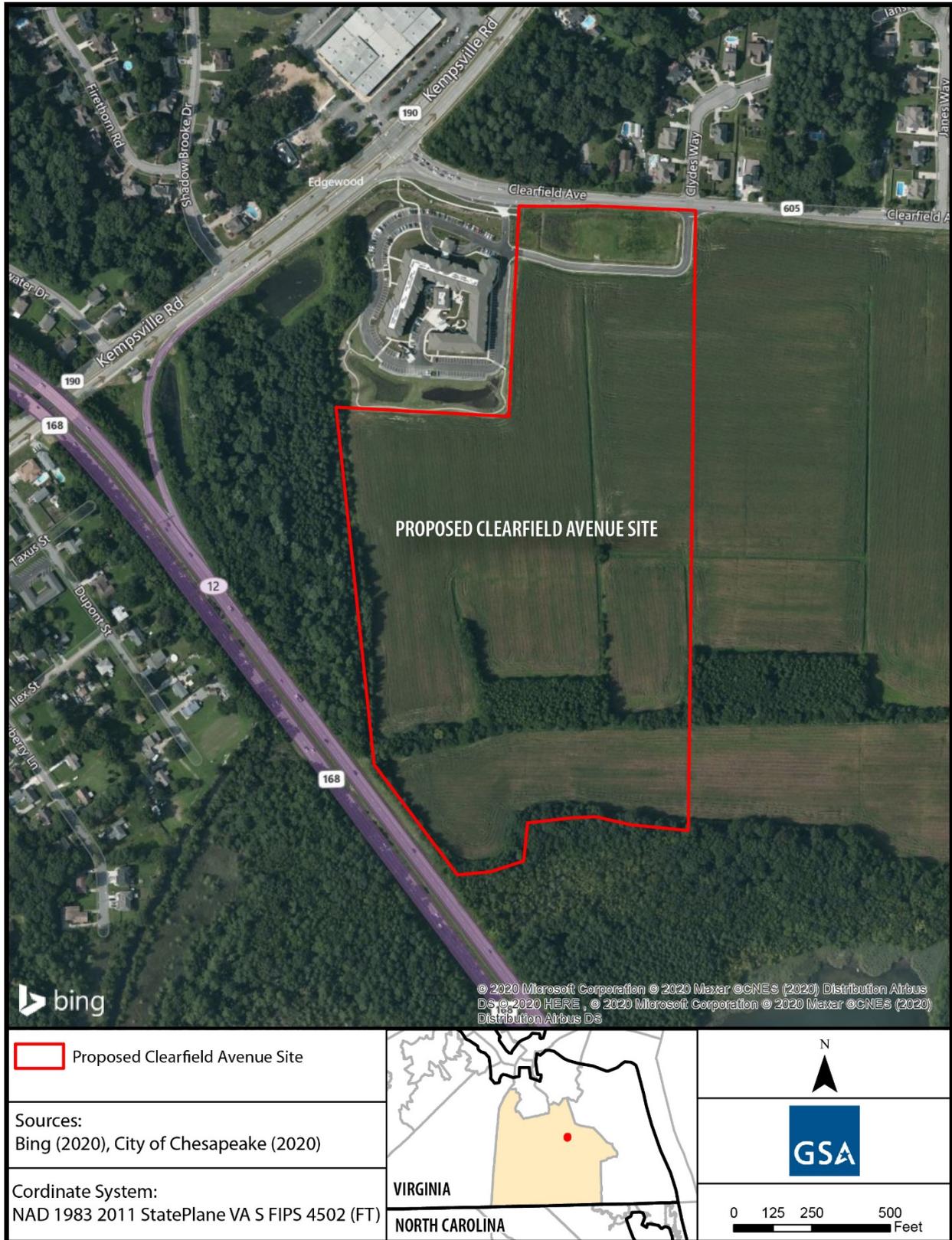


Figure 2: Clearfield Avenue Alternative

2.2.2 Knells Ridge Boulevard Alternatives

The Knells Ridge Boulevard site (Figure 3) covers approximately 25 acres and is encompassed within the boundary of an existing parcel. The site is approximately 600-feet west of the intersection of VA 168 (North Battlefield Boulevard) and Knells Ridge Boulevard and is surrounded by a single-family neighborhood to the west, commercial development to the north and east, and by a recently constructed apartment complex for low-income and homeless veterans to the south. The elevation of the site is 20 feet above sea level. The site is currently undeveloped and heavily forested.

Implementation of the Proposed Action at this site would meet the VA's facility needs and improve access to health care services for veterans. The site has the developable land requirements to support the facility.

On the Knells Ridge Boulevard site, two alternatives are proposed with site plans covering between 21.5 and 22 acres. These alternatives are referenced in this EA as Knells Ridge Boulevard—Design A and Knells Ridge Boulevard—Design B.



Figure 3: Knells Ridge Boulevard Alternatives

2.2.3 No Action Alternative

CEQ defines the No Action Alternative as the alternative that represents no change from current management; the analysis of this no action alternative provides a baseline of continuing with the present course of actions (CEQ 1981). Under the No Action Alternative, the proposed CBOC would not be constructed. Services provided by the VA would continue in various existing facilities to support veterans within the Hampton Roads region. The No Action Alternative would not support increased levels of VA health services for primary care, mental health, and eye clinic services, nor would it expand VA health care accessibility. For these reasons, the No Action Alternative would not meet the purpose and need for the Proposed Action as described in Section 1.4. However, the No Action Alternative provides a baseline against which to measure the potential impacts of the Proposed Action. Therefore, the No Action Alternative is evaluated in subsequent sections of this EA.

2.3 Alternatives Considered but Not Carried Forward

The alternatives analyzed in this EA are sites identified by the short-listed developers during Phase II of procurement. No other alternatives were considered.

2.4 Summary and Comparison of Potential Impacts

A summary and comparison of potential impacts is discussed in Table 1.

Table 1: Summary of Potential Impacts

Resource	Clearfield Avenue Alternative	Knells Ridge Boulevard Alternative – Design A	Knells Ridge Boulevard Alternative – Design B	No Action Alternative
Water Resources	Direct and indirect adverse impacts on >0.1 acres of wetlands and 220 linear feet of stream. Likely impacts on Chesapeake Bay Preservation Area (CBPA) riparian buffers. Stormwater impacts reduced through new facilities. Federal consistency determination necessary because site is within Virginia's coastal zone.	Direct, adverse impacts on 0.5 to 1.0 acres of wetlands. Stormwater impacts reduced through new facilities. Federal consistency determination necessary because the site is within Virginia's coastal zone.	No direct wetland impacts. Stormwater impacts reduced through new facilities. Federal consistency determination necessary because the site is within Virginia's coastal zone.	No Impacts

Resource	Clearfield Avenue Alternative	Knells Ridge Boulevard Alternative – Design A	Knells Ridge Boulevard Alternative – Design B	No Action Alternative
Wildlife and Habitat	<p>Non-significant impacts on wildlife are likely on commonly occurring species.</p> <p>Habitat is not present for the northern-long eared bat.</p>	<p>Non-significant impacts on wildlife are likely on commonly occurring species.</p> <p>May affect, not likely to adversely affect the northern-long eared bat.</p>	<p>Non-significant impacts on wildlife are likely on commonly occurring species.</p> <p>May affect, not likely to adversely affect the northern-long eared bat.</p>	No Impacts
Socioeconomics/ Environmental Justice	<p>Short- and long-term benefits to local employment and income, and long-term impacts on health. No/negligible impacts on children and environmental justice populations.</p>	<p>Short- and long-term benefits to local employment and income, and long-term impacts on health. No/negligible impacts on children and environmental justice populations.</p>	<p>Short- and long-term benefits to local employment and income, and long-term impacts on health. No/negligible impacts on children and environmental justice populations.</p>	No Impacts
Land Use	<p>Compatible with existing and proposed land uses. Proposed Action would likely require rezoning or variance. No adverse impacts.</p>	<p>Compatible with existing and proposed land uses. Proposed Action would not require rezoning. No adverse impacts.</p>	<p>Compatible with existing and proposed land uses. Proposed Action would not require rezoning. No adverse impacts.</p>	No Impacts
Traffic, Transportation, and Parking	<p>Long-term, adverse impacts on traffic from the addition of CBOC vehicle trips at study intersections. Long-term benefits on transportation as pedestrian, bicycle, and transit networks are expanded. No/negligible impacts on parking.</p>	<p>Long-term, adverse impacts on traffic from the addition of CBOC vehicle trips at study intersections. Long-term benefits on transportation as pedestrian, bicycle, and transit networks are expanded. No/negligible impacts on parking.</p>	<p>Long-term, adverse impacts on traffic from the addition of CBOC vehicle trips at study intersections. Long-term benefits on transportation as pedestrian, bicycle, and transit networks are expanded. No/negligible impacts on parking.</p>	<p>No impact from the Proposed Action; increased traffic volumes would occur without the development of the CBOC and would adversely impact some intersections.</p>

Resource	Clearfield Avenue Alternative	Knells Ridge Boulevard Alternative – Design A	Knells Ridge Boulevard Alternative – Design B	No Action Alternative
Utilities	New connections to utility lines would be required but utilities are readily available in the project vicinity. No significant impacts anticipated.	New connections to utility lines would be required but utilities are readily available in the project vicinity. No significant impacts anticipated.	New connections to utility lines would be required but utilities are readily available in the project vicinity. No significant impacts anticipated.	No Impacts

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section describes the existing environment that may be affected by implementing the Proposed Action and serves as a baseline from which to identify and evaluate potential impacts. The description of the affected environment focuses on those resource areas that are potentially subject to impacts resulting from the Proposed Action.

This section describes the baseline (existing) environmental and socioeconomic conditions at the two Action Alternative sites with emphasis on those resources that the Proposed Action could potentially affect. Section 3.1 describes the impact topics dismissed from full EA analysis. Resources fully analyzed in the EA are described beginning in Section 3.2. Under each resource area (Sections 3.2 through 3.7), the potential direct and indirect effects of implementing the Proposed Action at the two sites (three Action Alternatives) and the No Action Alternative are identified. Potential cumulative impacts are discussed in Section 3.9.

Where appropriate and clearly discernible, each impact is identified as either adverse or beneficial. CEQ regulations specify that in determining the significance of effects, consideration must be given to both “context” and “intensity” (40 CFR 1508.27). Context refers to the significance of an effect on society as a whole (human and national), to an affected region, to affected interests, or to just the locality. Significance varies with the setting of the Proposed Action. Intensity refers to the magnitude or severity of the effect and whether it is beneficial or adverse. In this EA, the significance of potential direct, indirect, and cumulative effects has been determined through a systematic evaluation of each resource topic.

3.1 Resources Dismissed from Full Analysis in this Environmental Assessment

CEQ regulations emphasize that NEPA documents should focus on issues of critical importance and only discuss insignificant issues briefly (CFR1502.2(b) (CEQ 1978). Consistent with this guidance, the following resources have been dismissed from full analysis in this EA.

3.1.1 Aesthetics

The proposed CBOC would be no more than two stories in height and would comply with all zoning requirements, including massing and setbacks. The Proposed Action would alter the existing visual landscape on an undeveloped site at either Action Alternative site; however, the visual impact would be consistent with the existing commercial development in the vicinity that typically ranges from three to four stories in height. Setbacks and vegetative buffers would further reduce the effect of potential visual impacts. Therefore, this topic was dismissed from further analysis.

3.1.2 Cultural Resources

Historic Architecture

Pursuant to section 106 of the NHPA, a historic survey was completed to identify potential historic properties eligible for inclusion in the National Register of Historic Places (NRHP) that could be affected by the Proposed Action.

Background research was conducted to identify potential properties meeting the NRHP age criterion of at least 50 years through online databases maintained by VDHR and the City of Chesapeake. Windshield surveys were conducted in August 2020, and additional research was conducted at the Chesapeake Central Library. None of the 14 properties surveyed were recommended as eligible for inclusion in the NRHP, and there would be no potential for impacts on historic structures (WSP 2020a). Therefore, impacts on historic architecture was dismissed from further analysis. Consultation with VDHR on these recommendations is ongoing.

Archaeology

Clearfield Avenue. The Clearfield Avenue site has been the subject of two previous Phase I archaeological surveys. The site was partially surveyed in 1989 and 1994 except for a 41.5-acre portion in the northern section of the site that was not surveyed. The previous surveys recorded one site, but the low density and broad artifact distribution led the surveyors to recommend the site not eligible for the NRHP. WSP conducted additional fieldwork from October 12 to 14 and from November 9 to 11, 2020. As a result of the archaeological testing, and in consultation with VDHR, two new sites were recorded in the area of potential effect (APE). The sites were identified as historic field scatters with small precontact components. The two newly identified sites may be extensions of the previously recorded sites (44CS0112 and 44CS0171), but the distance between them made it necessary to assign unique site numbers.

WSP recommends that neither of the newly identified sites is eligible for listing in the NRHP. Research did not reveal any associations with events or persons of historical significance with the surveyed property, making it ineligible for listing in the NRHP under Criteria A and B. There are no standing structures in the APE; therefore, the sites do not qualify for significance under Criterion C.

Knells Ridge. This site was previously surveyed in 1989 (Traver and Ralph 1989). VDHR confirmed there are no potentially eligible archaeological sites at this location.

Therefore, archeological resources were dismissed from further analysis in this EA. Consultation with VDHR is ongoing.

3.1.3 Air Quality

The City of Chesapeake, as part of the Hampton Roads region, has been designated as in attainment (maintenance) for ozone national ambient air quality standards since June 2007.

The construction and operation of the proposed CBOC would generate emissions. Construction activities would result in temporary emissions of criteria pollutants through fugitive dust and vehicle exhaust. Fugitive dust would result from construction equipment on disturbed soils, including during grading and filling activities. Air quality impacts during construction would be minimized by including standard construction dust control best management practices (BMPs) in a VDEQ-approved stormwater management plan administered by the City of Chesapeake. Long-term impacts on air quality from operation of the CBOC would be negligible. The proposed CBOC is not anticipated to be a major stationary source of air emissions and would not require a Title V permit; however, the facility would include an on-site backup generator that would generate emissions during monthly testing and during a power outage. Mobile source emissions from vehicles would occur as employees and visitors travel to and from the site. These trips are not anticipated to be new trips; they would generally replace trips to other VA medical facilities in the region. However, a detailed air quality analysis related to stationary or mobile sources is not required because the City of Chesapeake is in attainment for all criteria air pollutants.

The Proposed Action would not produce long-term measurable impacts on air quality and is not anticipated to affect the attainment status of the City of Chesapeake or Hampton Roads region. Emissions during the construction period would be temporary and are not anticipated to have a noticeable effect on air quality. The application of BMPs to reduce fugitive emissions would further limit the potential impacts on air quality. Therefore, air quality was dismissed as a topic for further analysis in this EA.

3.1.4 Geology and Soils

The sites associated with the Action Alternatives are situated within the Embayed section of the Coastal Plain physiographic province. The terrain of both sites is predominately flat. Elevations at the Clearfield Avenue Alternative range from approximately 2 to 20 feet above sea level, with the highest elevation points at the northern end of the parcels adjacent to Clearfield Avenue; elevations decrease as the site nears the Intracoastal Waterway. Elevations at the Knells Ridge Boulevard Alternative range from 18 to 20 feet above sea level.

Soil surveys provided through the Natural Resources Conservation Service Web Soil Survey tool were reviewed to assess existing soil conditions for both alternative sites. The Clearfield Avenue site contains nine unique soil types, including prime farmland soils that make up 30 percent of the site. However, three predominant soils types exist in the area of proposed disturbance: Tomotley series, Munden fine sandy loam, and Chesapeake sandy loam. The Knells Ridge Boulevard site contains predominantly Tomotley-Nimmo Complex, 0–1 percent slopes and no

prime farmland soils. Because both sites are within the Virginia Beach Census Bureau-designated Urbanized Area, the Proposed Action would not be subject to the Farmland Protection Policy Act.

The proposed CBOC would require between 25 and 33.5 acres of ground-disturbing activities such as excavation, grading, and clearing during construction, which would affect soils. Erosion and sediment control measures would be developed and implemented prior to and during construction through a VDEQ-approved stormwater management plan administered by the City of Chesapeake. After construction is completed, disturbed areas would be revegetated to reduce the potential for erosion. However, between 15 and 20 acres of soils would be permanently lost from the location of the building and surrounding pavement across all Action Alternatives.

Overall, the Proposed Action would not contribute significant impacts on geology and soils, so this topic was dismissed from further analysis in this EA.

3.1.5 Noise

Noise sensitive receptors, including residences, schools, day-care centers, and places of worship, are located near the Action Alternative sites. Temporary noise impacts are anticipated through increases in noises levels associated with construction (e.g., clearing, demolition, and construction vehicle traffic). Consistent with City of Chesapeake zoning requirements, all construction would occur outside the hours of 10:00 pm and 6:30 am (City of Chesapeake 2020). The proposed CBOC would operate between 8:00 am and 5:00 pm and would produce noise levels similar to an office building. A mix of land uses, including residential, office, and commercial, are present in the vicinity of both sites, and high traffic volumes are also present from the street network adjacent to both sites. This suggests noise sensitive receptors already likely experience notable levels of noise, and the Proposed Action would not noticeably alter the existing acoustic environment. Therefore, the topic of noise was dismissed from further analysis in this EA.

3.1.6 Community Services

Various community services, including schools, places of worship, medical centers, day-care centers, and fire stations, are near the Action Alternatives. These resources are listed in Table 2, below. Excluding temporary increases in noise levels and air pollution during construction, other temporary or long-term impacts are not anticipated.

Table 2: Community Resources

Community Service	Near-By Alternative	Name	Address
Place of Worship	Clearfield Avenue	Grace Community Church	872 Clearfield Ave, Chesapeake VA
Place of Worship	Clearfield Avenue	Hope Church	1108 Kempsville Rd, Chesapeake VA
Place of Worship	Clearfield Avenue	Harvest Assembly of God	525 Kempsville Road, Chesapeake VA
School	Clearfield Avenue	Greenbrier Christian Academy	311 Kempsville Road, Chesapeake VA
School	Clearfield Avenue	Tidewater Community College, Regional Automotive Center	600 Innovation Drive, Chesapeake VA
School	Knells Ridge Boulevard	B.M. Williams Primary School	1100 North Battlefield Road, Chesapeake VA
School	Knells Ridge Boulevard	Montessori Laboratory School	1101 Madison Plaza, Chesapeake VA
Hospital	Knells Ridge Boulevard	Chesapeake Regional Medical Center	736 N Battlefield Blvd, Chesapeake VA
Fire Station	Knells Ridge Boulevard	Chesapeake Fire Station 4	104 Lenore Trail, Chesapeake VA
Daycare	Clearfield Avenue	Greenbrier KinderCare	725 Greenbrier Pkwy, Chesapeake VA

The Proposed Action would not contribute long-term measurable impacts on community services because it would not increase the current population and would not result in additional school aged children coming into the area. The Proposed Action would likely result in a beneficial impact on community services because it would provide expanded medical services to veterans in the region. Therefore, this topic was dismissed from further analysis in this EA.

3.1.7 Solid Waste and Hazardous Materials

A Phase 1 Environmental Site Assessment (ESA) was completed for the Clearfield Avenue Alternative site in March 2020. The document found no records indicating the presence of potential Recognized Environmental Considerations on the two parcels that make up the alternative. Four properties with underground storage tanks are present within a quarter-mile search radius of the site, and eight leaking underground storage tanks or leaking petroleum tanks are present within a half-mile search radius of the site. However, the Phase I ESA Report concludes these sites were in compliance with current regulations, had no further action letters from the appropriate regulatory agency, or no longer had underground tanks in use and would not pose potential concerns with regard to the construction of the Proposed Action. Historical

aerial imagery suggests the site has been undeveloped since at least 1950. The Phase I ESA indicates no additional environmental investigations are warranted.

A Phase I ESA was completed for the Knells Boulevard site in March 2020. The document found no records indicating the presence of potential Recognized Environmental Considerations on the site. While six leaking underground storage tanks cases are located within a half-mile of the site, VDEQ has either closed these cases or concluded they do not warrant further assessment. Historical aerial imagery suggests the site has remained wooded and undeveloped since at least 1949. The Phase I ESA indicates no additional environmental investigations are warranted.

Any hazardous waste generated or stored on-site by the Proposed Action would follow necessary disposal protocols and procedures. The Proposed Action would not have significant impacts on solid waste or hazardous materials. As a result, this impact topic was dismissed from full EA analysis.

3.2 Water Resources (Surface Waters, Floodplains, Wetlands, and Coastal Zone Management)

3.2.1 Affected Environment

Both Action Alternatives fall within the New Mill Creek – Southern Branch Elizabeth River watershed (HUC 020802080201) (Virginia Department of Conservation and Recreation 2020). Flow from both sites leads to the Intracoastal Waterway (Elizabeth River), which flows to the James River, ultimately emptying into the Chesapeake Bay. A wetland delineation was performed in July 2020 to determine the federal-jurisdictional wetland boundaries of all wetlands and open waters identified within the Clearfield Avenue site. This delineation remains subject to U.S. Army Corps of Engineers (USACE) verification through a jurisdictional determination. A wetland delineation was completed for the Knells Ridge Boulevard site in October 2019 and verified by USACE in a Preliminary Jurisdictional Delineation issued in May 2020.

Both alternative sites are located within Virginia's coastal zone as identified in its CZM Program. The CZM Program refers to coastal lands where federal policy promotes the protection of coastal resources through coordinated policy and program efforts from federal, state, and local stakeholders. Should any of the designs at either alternative site be selected for implementation, a federal consistency determination would be required. Similarly, the Chesapeake Bay Preservation Area (CBPA) is a riparian buffer program established to preserve the water quality of the Chesapeake Bay. VDEQ delegates implementation authority to select municipalities, including the City of Chesapeake. The Clearfield Avenue Site is located within the CBPA, while the Knells Ridge Boulevard site is not.

Clearfield Avenue Alternative

Two riverine intermittent streambed streams and three riverine ephemeral ditches totaling approximately 3,400 linear feet in combined stream length were identified on the Clearfield Avenue site during the July 2020 delineation. One additional riverine ephemeral ditch was identified just outside the site boundary. The ditches delineated on the site did not have indicators suggesting they would fall under USACE jurisdiction (WSP 2020b). Two palustrine persistent emergent wetlands and two palustrine forested wetlands totaling just over an acre (1.07 acres) in combined area were identified during the delineation. Approximately 0.75 acres of 100-year floodplains are located within the site along the southern and southwestern border. Figure 4 displays the water resources within the Clearfield Avenue site.

Knells Ridge Boulevard

One riverine ephemeral ditch was identified adjacent to the Knells Ridge Boulevard site. While not within the boundary of the alternative, the ditch follows the western border of the site for approximately 1,055 feet. The 2019 USACE-approved delineation indicates the presence of a 3.21-acre palustrine wetland near the western border of the site. There are no floodplains within the site, and the site is not within the CBPA. Figure 5 displays the water resources within the Knells Ridge Boulevard site.

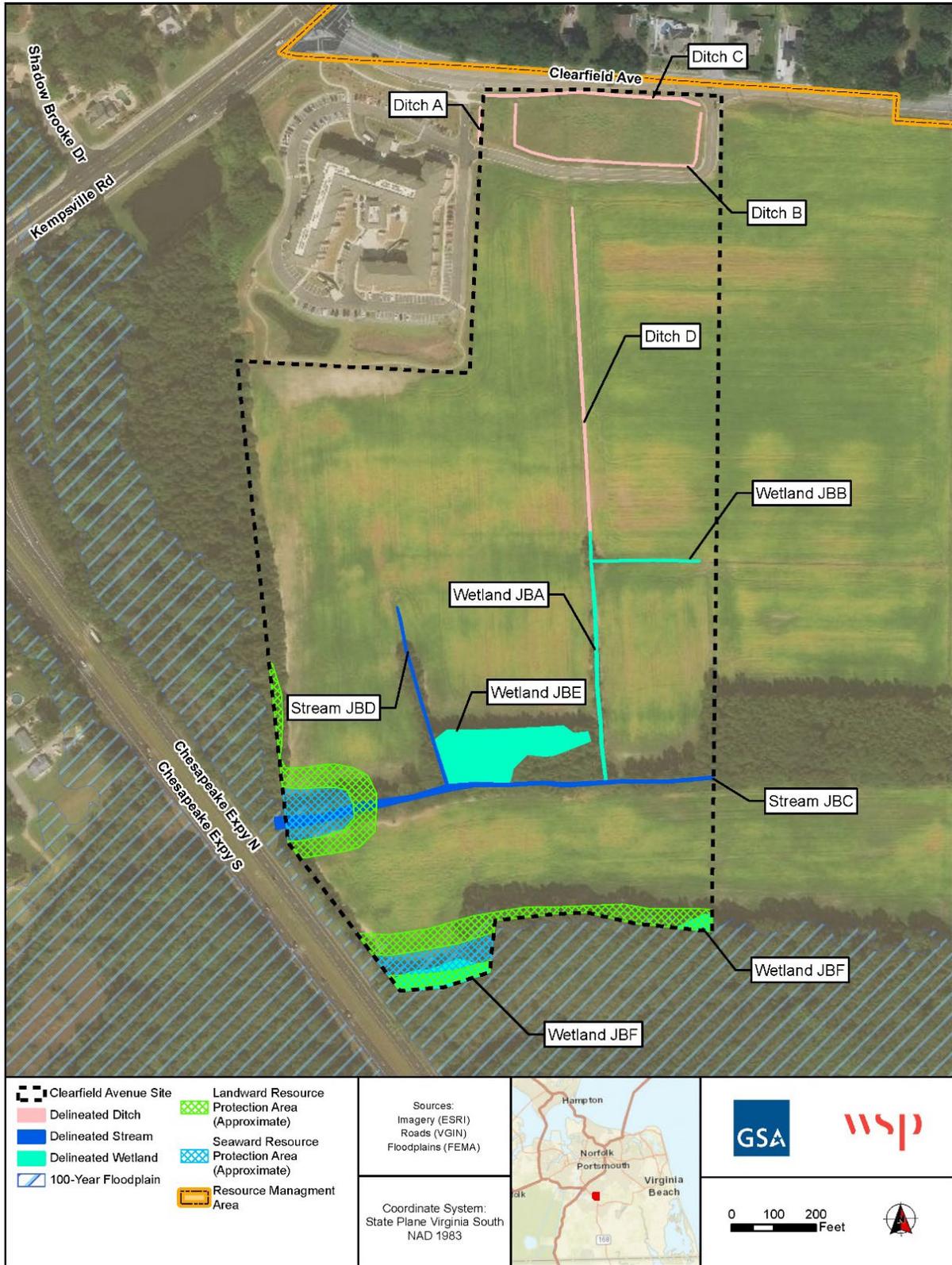


Figure 4: Clearfield Avenue Site – Water Resources



Figure 5: Knells Ridge Site – Water Resources

3.2.2 Environmental Consequences

The proposed CBOC at either alternative site would be a slab-on-grade building serviced by the municipal water system. Therefore, the Proposed Action is not anticipated to affect groundwater. If shallow groundwater were encountered during construction, appropriate groundwater engineering controls would be used to ensure no adverse effects on groundwater. As such, no significant impacts on groundwater are anticipated.

The Action Alternatives would not have significant impacts on surface waters, provided that the BMPs described in Section 4 are implemented. These BMPs would control construction-related impacts from soil erosion and sedimentation and would provide proper stormwater management following the completion of the Proposed Action. Each site would include on-site stormwater collection and management systems that would convey stormwater to stormwater management ponds. The stormwater management systems would be designed and constructed in accordance with Virginia Stormwater Management Program requirements. Anticipated stormwater management for each site is described below. Both sites would also require a federal consistency determination in compliance with the Coastal Zone Management Act. Should an action alternative be selected for implementation, GSA would work with the developer to complete that determination.

Clearfield Avenue Alternative

Construction activities would include land disturbance, clearing, grading, and adding impervious surface for the CBOC and associated parking, which would result in direct and indirect impacts on surface water resources. Based on the proposed site plan submitted by the developer, impacts on delineated wetlands and streams are anticipated. All the delineated ditches would be impacted, as well as direct fill of 220 linear feet of streams and 0.06 acres of wetlands. Earth-moving activities would disturb soil and increase the potential for erosion and the transport of sediment into surrounding surface waters via overland stormwater runoff, which could result in temporary, adverse impacts on surface waters during construction. Additional temporary, indirect, adverse impacts could result from the operation of construction equipment, which would increase the potential for accidental leaks or spills of fuel, lubricants, or other materials that could contaminate nearby surface water. Implementation of erosion and sediment control practices in accordance with the Virginia erosion and sediment control requirements would minimize or avoid these impacts. After construction is completed, there would be an increase in impervious surfaces of approximately 20 acres. Impervious surfaces would include the parking areas and building footprint. This increase could result in long-term, adverse impacts from increased stormwater runoff, although implementation of stormwater BMPs would avoid or minimize these impacts on surface water resources. The proposed design would provide stormwater facilities that comply with Section 438 of the Energy Independence and Security Act and Virginia's Stormwater Management Regulations, using the Virginia Runoff Reduction Method.

Coordination with USACE and VDEQ would be necessary to determine appropriate mitigation and if compensatory mitigation would be required. Impacts on wetlands and streams would require coordination with USACE to receive a jurisdictional determination before receiving a Section 404/401 permit for construction. No development is proposed in the floodplain, so no impacts on floodplains are anticipated.

Because the site is within the CBPA, it is subject to the related ordinance administered by the City of Chesapeake. The ordinance requires a 100-foot vegetative riparian buffer—known as a resource protection area (RPA)—for non-tidal wetlands connected by surface flow to tidal wetlands. The delineation of the RPA also includes any necessary determinations of “perennial water bodies” using the most recent U.S. Geological Survey quadrangle map. Implementing the CBPA’s RPA would require identifying perennial streams and tidal or non-tidal wetlands. Stream JBC is both perennial and intermittent within the site, and the portion that is perennial would be subject to an RPA buffer. Wetlands JBA, JBB, and JBE would be subject to RPA buffers because they are non-tidal wetlands connected to the South Branch Elizabeth River through Stream JBC. Coordination with the City of Chesapeake would occur to determine the appropriate implementation of the RPA. The proposed site plan would affect portions of these four RPA buffers, which would not be compatible with the CBPA.

Knells Ridge Boulevard Alternatives

Impacts on surface waters and wetlands at the Knells Ridge site would be similar to those described under the Clearfield Avenue site, including impacts from sedimentation and increased stormwater from approximately 15 acres of new impervious surface. No 100-year floodplains are present on the site; therefore, impacts are not anticipated.

Design A is anticipated to have additional direct, adverse, and permanent impacts on wetlands by filling between 0.5 and 1.0 acres of the identified wetland and would require a VDEQ State Programmatic General Permit that allows VDEQ to issue a USACE general permit. Impacts on surface waters and wetlands at the Knells Ridge site would be similar to those described for the Clearfield Avenue site, including impacts from sedimentation and increased stormwater from approximately 15 acres of new impervious surface. With likely impacts on streams and wetlands, compensatory mitigation is anticipated. Permanent impacts on forested wetlands associated with fill are typically compensated at a ratio of 2:1, while impacts associated with conversion resulting in a permanent alternation of function is typically compensated at a ratio of 1:1.

Design A would increase the amount of impervious area by approximately 15 acres; it would provide stormwater facilities to achieve 75 percent pollutant removal on-site. The developer would purchase off-site nutrient credits to achieve the remaining 25 percent of water quality requirements. These facilities would comply with Section 438 of the Energy Independence and Security Act and Virginia’s Stormwater Management Regulations, using the Virginia Runoff

Reduction Method. The purchase of off-site nutrient credits would be needed to address the remaining water quality requirements.

Design B would avoid impacts on the forested wetland on the Knells Ridge site. It would also result in approximately 15 acres of impervious surface and would provide stormwater facilities that comply with Virginia's Stormwater Management Regulations and the Virginia Runoff Reduction Method. The proposed design would comply with the Energy Independence and Security Act Section 438 and Virginia's Stormwater Management Regulations using Virginia Runoff Reduction Methods.

No Action Alternative

Under the No Action Alternative, construction of the CBOC would not occur. There would be no change to the existing conditions at either of the Action Alternative sites, and no impacts on water resources would occur.

3.3 Wildlife and Habitat

This section describes wildlife, including protected species, that may occur in the project area and could be affected by the Proposed Action. Information presented in this section was obtained from the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) system, the Virginia Department of Wildlife Resources, and a field survey conducted in July 2020.

The alternative sites are located in an urban/suburban environment and are subject to frequent disturbances from surrounding development. Habitats in this area are highly fragmented, and the quality of any existing wildlife habitats is limited. Wildlife species at the sites would be limited primarily to common species that are adapted to urban environments and tolerant of a high level of disturbance. Common mammal species may include white-tailed deer, foxes, skunks, opossums, and squirrels. Birds that may be frequently present include hawks, crows, blue jays, mourning doves, woodpeckers, and various species of sparrows, finches, and wrens. Migratory birds could be seasonally or occasionally present.

According to USFWS, one federally listed endangered species could occur at the sites: northern long-eared bat (*Myotis septentrionalis*). Suitable summer habitat for northern long-eared bat includes a wide variety of forested and wooded habitats that allow for roosting, foraging, and travel. Roost trees may be living, dying, or snagged. Tree clusters or individual trees with loose or exfoliating bark are especially suitable for roosting. Suitable winter habitats include caves and mines where bats hibernate during the winter. A field survey was conducted in July 2020 to identify potentially suitable habitat at both alternative sites.

Additionally, five species that are protected or proposed for protection by the Commonwealth of Virginia are present in the City of Chesapeake and could occur at the alternative sites (Table 3).

Table 3: City of Chesapeake State-Listed Species

Common Name	Scientific Name	State Legal Status
Red-cockaded woodpecker	<i>Picoides borealis</i>	Listed Endangered*
Eastern big-eared bat	<i>Corynorhinus rafinesquii macrotis</i>	Listed Endangered
Tricolored bat (eastern pipistrelle)	<i>Perimyotis subflavus</i>	Listed Endangered
Canebrake rattlesnake	<i>Crotalus horridus [Coastal Plain population]</i>	Listed Endangered
Raven's seedbox	<i>Ludwigia ravenii</i>	Proposed Endangered

* Red-cockaded woodpecker is also listed as a federally endangered species. However, USFWS does not list this species as potentially occurring in the project area.

Red-cockaded woodpecker habitat consists of mature southern pine forests, especially those dominated by longleaf pine (*Pinus palustris*). Both bat species inhabit forested landscapes and occur along waterways where they feed and roost. The canebrake rattlesnake inhabits a variety of terrestrial habitats, including lowland cane thickets, high areas around swamps and river floodplains, hardwood and pine forests, mountainous areas, and rural habitats in farming areas. Raven's seedbox is found in open, wet, peaty places, such as ditches and the margins of swamps, ponds, and bogs. A desktop review supported with observations made during the July 2020 field visit was used to assess the likelihood that suitable habitats for state-listed species exist on both sites. This analysis is presented below.

3.3.1 Affected Environment

Clearfield Avenue

The Clearfield Avenue site consists of agricultural fields planted with soybeans. A limited amount of forested habitat is present, although most of the trees on the site serve as shelterbelts between abutting fields and do not provide high quality habitat for wildlife. The small amount of forested habitat at the site most closely resembles a disturbed southern coastal plain mesic mixed hardwood forest. The site is mostly surrounded by development, including roads, parking lots, and commercial and residential buildings. Habitats within the site are subject to frequent disturbances, particularly noise from the surrounding urban development, as well as disturbances from on-site agricultural activities.

Wildlife species that could occur at the site would be limited mainly to common mammals and birds that are tolerant of frequent disturbance, as noted above. Wetland and stream habitats at the site could support a limited diversity of reptiles, amphibians, and fish that are tolerant of disturbance and habitat fragmentation. USFWS lists 12 species of migratory birds that could be seasonally present nearby; however, it is unlikely that most of these species would be present with regular frequency because of the limited quality of habitat at the site, high degree of fragmentation, and frequency and magnitude of disturbance.

Field surveys conducted in July 2020 confirmed the absence of suitable summer roosting habitat for northern-long eared bat. The site does not contain suitable roost trees or snags, and no human-made structures are present. No caves are located within 1 mile of the site. Therefore, this species is not likely to occur at the site.

Similarly, field surveys confirmed that the site does not contain suitable habitat for red-cockaded woodpecker or raven's seedbox. Therefore, these species would not be present at the site. Potentially suitable habitat for eastern big-eared bat, tricolored bat, and canebrake rattlesnake occurs near the south side of the site that abuts an undeveloped forested area. However, these species were not observed during the field surveys and are not likely to occur given the degree of habitat fragmentation and the frequency and intensity of disturbances at the site.

Knells Ridge Boulevard

The Knells Ridge Boulevard site consists of undeveloped hardwood forest. Habitat in the area is highly fragmented by adjacent urban development, including roads, parking lots, and commercial and residential buildings. Like the Clearfield Avenue site, forested habitat at the site most closely resembles a southern coastal plain mesic mixed hardwood forest. Habitats within the site are subject to frequent disturbances, particularly noise from surrounding urban development.

Wildlife species that could occur at the site would be limited mostly to common mammals and birds that are tolerant of frequent disturbance, as noted above. A limited number of reptile and amphibian species could occur in or near the wetland at the western border of the site. USFWS lists eight species of migratory birds that could be seasonally present nearby; however, it is unlikely that most of these species would be present with regular frequency because of the high degree of habitat fragmentation and frequency of on-site disturbance.

Suitable habitat for northern long-eared bat was observed during the field survey. In summer, northern long-eared bats roost under the loose bark of dead or dying trees or in trees with loose or exfoliating bark (such as shagbark hickory [*Carya ovata*]) greater than 3 inches diameter at breast height. Suitable summer habitat for northern long-eared bats consists of a wide variety of forested and wooded habitats where they roost, forage, and travel. Summer habitat may also include some adjacent and interspersed non-forested habitats, such as emergent wetlands and adjacent edges of agricultural fields, old fields, and pastures. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure or linear features, such as fence rows, riparian forests, and other wooded corridors. The primary requirement for any of these forested or wooded areas is the presence of roost trees greater than 3 inches diameter at breast height with exfoliating bark, cracks, crevices, or hollows. These trees may be living, dead, dying, or snags. Individual trees outside aggregated areas may also be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet of other forested or wooded habitat.

Individual clusters of trees were observed that could provide suitable roosting or foraging habitat. Additionally, several snags and potentially suitable roost trees that had exfoliating bark and cracks and crevices were also observed. However, northern long-eared bat tends to avoid areas with high levels of noise and visual disturbance and habitats that are highly fragmented. Therefore, it is not likely that northern long-eared bats roost at the site. Human-made structures are not present on the site, and caves are not located on or within 1 mile of the site.

Field surveys confirmed that the site does not contain suitable habitat for red-cockaded woodpecker. Therefore, this species would not be present at the site. The site does contain potentially suitable habitat for eastern big-eared bat, tricolored bat, canebrake rattlesnake, and raven's seedbox. However, these species were not observed during the field surveys and are not likely to occur given the degree of habitat fragmentation and the frequency of on-site disturbance.

3.3.2 Environmental Consequences

Clearfield Avenue Alternative

Based on the proposed site plan, it is anticipated that approximately 33.5 acres of the 40-acre site would be developed, resulting in a permanent loss of wildlife habitat. However, this would not represent a loss of high-quality habitat given the current agricultural land use on the site and the high degree of fragmentation from extensive surrounding urban development. Short-term, adverse impacts could range from temporary disturbance or displacement of species to possible mortality of some individuals.

Implementation of the Proposed Action at the Clearfield Avenue site would have *no effect* on northern long-eared bat because the site does not contain suitable habitat for this species.

Similarly, implementation of the Proposed Action at this site would not result in adverse impacts to red-cockaded woodpecker or raven's seedbox because the site does not contain suitable habitat. Adverse impacts on eastern big-eared bat, tricolored bat, and canebrake rattlesnake are not anticipated because these species are not likely to occur at the site given the degree of habitat fragmentation and the frequency and intensity of disturbances. If this alternative were selected for implementation, the developer would coordinate with the Virginia Department of Wildlife Resources prior to project implementation to avoid or minimize, to the extent practicable, any adverse impacts on species protected or proposed for protection by the Commonwealth of Virginia.

Implementation of the Proposed Action at this site would not affect any species at the population level because of the limited quality of wildlife habitat that the site provides. Therefore, significant adverse impacts on wildlife and wildlife habitat are not anticipated.

Knells Ridge Boulevard Alternatives

Under the Knells Ridge Boulevard Alternatives, 21.5 or 22 acres of the 25-acre site would be developed, under Design A or Design B, respectively. This would result in a permanent loss of wildlife habitat consisting almost entirely of forest. This would not represent a loss of high-quality habitat given the high degree of fragmentation from extensive surrounding urban development. Short-term, adverse impacts would range from temporary disturbance or displacement of species to mortality of some individuals. Adverse impacts on wildlife would generally be the same under both design options, but Design A would have slightly greater impacts on wetland species, including reptiles, amphibians, and some birds, because up to 1 acre of wetland habitat would be removed.

Implementation of the Proposed Action at the Knells Ridge Boulevard site would require removal of trees, including potentially suitable roosting trees for northern long-eared bat. It is not likely that this habitat is occupied by northern long-eared bats because this species tends to avoid areas with high levels of noise and visual disturbance and habitats that are highly fragmented. If applicable once section 7 consultation is complete, tree removal may be conducted between November 15 and March 31 when bats are in hibernation. Because the site does not contain suitable winter habitat, bats would not be present at the site during this time. Therefore, the implementation of the Proposed Action at the Knells Ridge Boulevard *may affect but is not likely to adversely affect* northern long-eared bat.

Development of the site would result in potential adverse impacts on eastern big-eared bat, tricolored bat, canebrake rattlesnake, and raven's seedbox because potentially suitable habitat for these species would be lost permanently. However, given the degree of habitat fragmentation and the frequency of disturbance at the site from nearby urban development, it is unlikely that habitat at the site is occupied. If either design option under this alternative were selected for implementation, the developer would coordinate with the Virginia Department of Wildlife Resources prior to project implementation to avoid or minimize, to the extent practicable, any adverse impacts on species protected or proposed for protection by the Commonwealth of Virginia. There would be no adverse impacts on red-cockaded woodpecker because the site does not contain suitable habitat.

Implementation of the Proposed Action at this site would not affect any species at the population level because of the limited quality of wildlife habitat that the site provides. Therefore, significant adverse impacts on wildlife and wildlife habitat are not anticipated.

No Action Alternative

There would be no adverse impacts on wildlife or wildlife habitat under the No Action alternative because the Proposed Action would not be implemented, and the sites would remain in their current conditions.

3.4 Socioeconomics and Environmental Justice

3.4.1 Affected Environment

The following subsections describe the socioeconomic environment and identify minority and low-income communities in the City of Chesapeake and the Commonwealth of Virginia.

Socioeconomic areas of discussion include the local demographics of the area, and the regional and local economy. Environmental justice areas of discussion include minority, low-income, and limited English proficiency communities.

Demographics

The City of Chesapeake and the Commonwealth of Virginia have relatively similar demographic characteristics (see Table 4). Persons under 18 years of age and over 65 years of age, and high school graduation rates are generally similar between the City of Chesapeake and Virginia. The percent of veterans who reside in the City of Chesapeake is larger than the percent of veterans residing in the Commonwealth as a whole. Minority populations are discussed below under Environmental Justice.

Table 4: Demographics for the City of Chesapeake and Virginia

Area	All Individuals	Population Under 18 Years of Age	Population over 65 Years in Age	Minority*	High School Graduates	Veterans
City of Chesapeake	237,820	24.3%	12.5%	42.1%	92.2%	15.7%
Virginia	8,413,774	22.2 %	14.6%	37.8%	89.3%	10.6%

Source: U.S. Census Bureau 2019

* Minority populations include all races that are non-White and Hispanic populations that are White.

Employment and Income

The City of Chesapeake and the Commonwealth of Virginia have similar employment and income characteristics (see Table 5). The City of Chesapeake has a slightly higher median household income and lower poverty rate than the Commonwealth, although the Commonwealth has an overall lower unemployment rate.

Table 5: Employment and Income for the City of Chesapeake and Virginia

Area	Number of Households	Median Household Income	Population Below Poverty Level	Unemployment Rate (September 2020)
City of Chesapeake	84,230	\$75,790	9.0%	7.1%*
Virginia	3,128,415	\$71,564	10.9%	6.2%

Source: U. S. Census Bureau 2019; U.S. Bureau of Labor Statistics 2020

* Statistic represent the Virginia Beach-Norfolk-Newport News, VA-NC Metropolitan Area.

Commuting Patterns

A high percentage of workers in the City of Chesapeake and the Commonwealth use private vehicles for commuting to work by either driving alone or carpooling. The average commuting time in the Virginia Beach-Norfolk-Newport News, VA-NC Metropolitan Area is approximately 25 minutes (U.S. Census Bureau 2019).

Protection of Children

Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks, requires that federal actions be assessed for health impacts to children. Although children do not qualify for the care provided by CBOCs, children and concentrations of children may be present in areas adjacent to the Action Alternatives.

Residential neighborhoods are located north and west of the Clearfield Avenue site and the Knells Ridge Boulevard site, respectively. A private K-12 school, Greenbrier Christian Academy, is located approximately 1,000 feet northwest of the Clearfield Avenue site. Schools, pre-schools, or other notable concentrations of children were not identified in the vicinity of the Knells Ridge Boulevard site.

Environmental Justice

As a result of Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, an evaluation of minority and low-income populations must be conducted to identify whether a Proposed Action would have a disproportionate adverse impact with regard to environmental quality and health on minority and low-income populations.

Data from the 2014–2018 5-year *American Community Survey* were analyzed to determine if notable minority and/or low-income populations are present and if limited English proficiency thresholds are met for either Action Alternative. Census data was analyzed at the block group level for this analysis. The Clearfield Avenue Alternative is within census tract 208.06, block group 3, and the Knells Ridge Boulevard Alternatives are within census tract 209.06, block group 1 (U.S. Census Bureau 2019).

Block groups were found to have a notable environmental justice population if the minority or low-income population in the block group exceeds 50 percent or if the percentage of a minority or low-income population in the affected area is greater than the average percentage in the respective county/city.

Minority populations include all races that are non-White and include Hispanic populations that are White; low-income populations are defined as populations with a ratio of income to poverty level of 0–1.49 (150 percent). Table 6 indicates the block groups for the Action Alternative sites

meet the environmental justice threshold for minority populations because the percentage of minority populations is greater than the City of Chesapeake average.

Table 6: Presence of Minority Populations

Geography	Total Population	Minority Population*	
		Number	Percent
Census Tract 208.04, Block Group 3 (Clearfield Avenue Alternative)	2,440	1,103	45.3%
Census Tract 209.06, Block Group 1 (Knell Ridge Boulevard Alternatives)	3,346	1,803	53.9%
City of Chesapeake	237,820	100,238	42.1%
Virginia	8,413,774	3,180,663	37.8%

Source: U.S. Census Bureau 2019

*B03002 "Hispanic or Latino Origin by Race"

Table 7 indicates the block group for the Clearfield Avenue Alternative meets the environmental justice threshold for low-income populations because the percentage of low-income populations is greater than the City of Chesapeake average. The block group for the Knells Ridge Boulevard Alternatives does not meet the environmental justice threshold for low-income populations because the percentage of low-income populations is neither greater than 50 percent nor is it higher than the City of Chesapeake average.

Table 7: Presence of Low-Income Populations

Geography	Total Population	Below 150% Poverty Level*	
		Number	Percent
Census Tract 208.04, Block Group 3 (Clearfield Avenue Alternative)	2,385	422	17.7%
Census Tract 209.06, Block Group 1 (Knell Ridge Boulevard Alternatives)	3,344	244	7.3%
City of Chesapeake	238,736	32,571	13.6%
Virginia	8,279,357	1,365,571	16.5%

Source: U.S. Census Bureau 2019

* C17002 "Ratio of Income to Poverty Level in the Past 12 Months"

The U.S. Department of Justice Safe Harbor threshold for limited-English proficiency is met when there is a language group that speaks English less than very well and that either has 1,000 adults or makes up 5 percent of the aggregate demographic study area population (with at least 50 adults). For this analysis, the block group associated with each Action Alternative represents each alternative's respective demographic study area.

Table 8 indicates neither the Clearfield Avenue Alternative nor the Knells Ridge Boulevard Alternatives meets the threshold for limited-English proficiency for any language group.

Table 8: Presence of Limited English Proficiency Populations

Geography	Adult Population	Primary Language Group of Adults Who Speak English Less than Very Well*							
		Spanish		Other Indo-European		Asian/Pacific Island		Other	
Census Tract 208.04, Block Group 3 (Clearfield Avenue Alternative)	1,539	0	0%	0	0%	48	3.1%	0	0.7%
Census Tract 209.06, Block Group 1 (Knell Ridge Boulevard Alternatives)	2,698	0	0%	17	0.6%	97	3.6%	0	0%

Source: U.S. Census Bureau 2019

*B16004 "Age by language spoken at home by ability to speak English for the population 5 years and over"

3.4.2 Environmental Consequences

Action Alternatives

The Proposed Action is anticipated to result in short- and long-term, beneficial impacts to local employment and income through increases in temporary employment during construction and the permanent employment of CBOC staff at either alternative site. Long-term benefits to health are anticipated because the Proposed Action would increase the availability of health care services to veterans in a state-of-the-art facility.

Permanent adverse health impacts to children are not anticipated because children are not regularly present on either alternative site. During construction, fencing would be used to prevent unauthorized access by children from the nearby residential areas. Mitigation measures discussed in Section 4.0 would help prevent the dust and air pollution produced during construction from affecting the school adjacent to the Clearfield Avenue site.

Although the Action Alternative sites are located in areas with slightly higher than average minority populations, and Clearfield Avenue site is located in an area with a slightly higher than average low-income population, the Proposed Action would have very little impact on the residents in the areas. During construction, effects on nearby residential land uses, such as

through noise and dust, would be limited and controlled through BMPs, which would minimize adverse effects to all adjacent populations. There is limited indication that environmental justice or limited-English proficient populations are adjacent to either alternative site; therefore, the Proposed Action is not likely to affect these populations.

No Action Alternative

A new CBOC would not be constructed under the No Action Alternative; therefore, there would be no change in employment and income because neither temporary nor permanent jobs would be created. There would be no impacts on environmental justice and limited-English proficient populations as a result of the No Action Alternative.

3.5 Land Use

3.5.1 Affected Environment

Clearfield Avenue

As noted in Section 2, the Clearfield Avenue site covers approximately 40 acres and crosses the boundaries of two existing parcels. The site is located less than 0.1 miles southeast of the intersection of VA 190 (Kempsville Road) and Clearfield Avenue. The site is currently undeveloped with a portion of the property currently used for agricultural operations. The proposed site consists of two existing parcels with zoning designations of “R15: Residential” and “MULTI: Multiple Zoning,” respectively (City of Chesapeake n.d.a). Generally, the eastern half of the site is zoned as residential while the western half of the property is zoned as multiple zoning and classified as agricultural. Historic aerial imagery indicates the site has been undeveloped since at least 1950.

Harmony at Oakbrooks, a retirement community, was recently constructed immediately west of the site. An access road connecting the retirement community with Clearfield Avenue crosses the northwest corner of the site. Land use north of the site predominately consists of single-family residential homes. A partially constructed commercial center and business park, including a hospital, is located west of the site. The site is further bordered to the west and south by Kempsville Road, VA 168 (Great Bridge Bypass), and the Intracoastal Waterway.

The City of Chesapeake’s Comprehensive Plan, *Moving Forward – Chesapeake 2035*, was adopted in 2014. The Plan identifies the “Clearfield Triangle” (the intersection of Clearfield Avenue, Kempsville Road, and Greentree Road) as a potential transit-oriented development node in support of possible commuter rail (City of Chesapeake 2014). The Plan states for identified transit-oriented development nodes that “as these areas undergo infill and redevelopment, options should be preserved for re-orienting them toward transit-friendly design. Investments in transit are long-term and may take decades to be realized.”

The City of Chesapeake *2035 Land Use Plan*, last updated in 2018, identifies future land use of the Clearfield Avenue site as “Office/Research” (City of Chesapeake 2018a).

Knells Ridge Boulevard

The Knells Ridge Boulevard site covers approximately 25 acres and is encompassed within the boundary of one parcel. The Knells Ridge Boulevard Alternatives are located 0.11 miles west of the intersection of Battlefield Boulevard North and Knell’s Ridge Boulevard, lying along a curve of Knell’s Ridge Boulevard. The site is currently zoned “O-I” for office and institutional use and is undeveloped and heavily forested. The O-I zone includes offices and clinics of doctors and dentists permitted by-right.

Land use to the west of the site includes an established single-family residential neighborhood. Large-scale commercial buildings, including medical centers, are located to the north and east of the site. Land use to the south of the site has been historically undeveloped, though a 50-unit apartment complex for homeless and disabled low-income veterans, Cypress Landing, was recently constructed. The site is bordered to the north and south by utility easements.

The City of Chesapeake Comprehensive Plan designates the future land use of the site as Institution/Government, and the City of Chesapeake 2035 Land Use Plan identifies future land use of the Knells Ridge Boulevard site as “Office/Research” (City of Chesapeake 2014, 2018a).

3.5.2 Environmental Consequences

Clearfield Avenue Alternative

The Clearfield Avenue Alternative would be compatible with existing and proposed land uses on and surrounding the site. However, a conditional rezoning would be required to revise the zoning to allow a medical facility. While a rezoning would be needed, the City of Chesapeake has indicated a medical facility would be compatible with surrounding land uses. As a result, there would be no significant impacts on land use as a result of this alternative.

Knells Ridge Boulevard Alternatives

Both Knells Ridge Boulevard Alternatives would be compatible with existing and proposed land uses on and surrounding the site. Rezoning of the site would not be required to construct the Proposed Action. There would be no significant impacts on land use as a result of this alternative.

No Action Alternative

There would be no impacts on land use as a result of the No Action Alternative.

3.6 Traffic, Transportation, and Parking

3.6.1 Affected Environment

The following sections discuss impacts on the transportation system that could occur as a result of the Proposed Action. The discussion of transportation for the proposed CBOC includes the pedestrian network, the bicycle network, public transit, and traffic (vehicular). The transportation study, included as Appendix A, evaluates impacts for each of the travel modes with the Proposed Action. The traffic section of the study incorporates Virginia Department of Transportation *Administrative Guidelines for Traffic Impact Analysis Regulation*.

Traffic is commonly measured through average daily traffic and design capacity. These two measures are used to assign a roadway with a corresponding level of service (LOS). The LOS designation is a professional industry standard used to describe the perceived operating conditions of a roadway segment or intersection. LOS is defined on a scale of A to F that describes the range of operating conditions on a particular type of roadway facility. LOS A and LOS B indicate free flow travel. LOS C indicates stable traffic flow. LOS D indicates the beginning of traffic congestion. LOS E indicates the nearing of traffic breakdown conditions, while LOS F indicates stop-and-go traffic conditions and represents unacceptable congestion and delay. The Chesapeake 2035 Comprehensive Plan sets the LOS standard for non-residential developments at LOS E. For the Transportation Study conducted for this project, LOS A through LOS E are considered within the standard and LOS F is considered worse than the standard. The transportation study area is defined and the current conditions in the study area are summarized below.

Study Area Definition

A general study area is proposed for each transportation mode. The pedestrian and bicycle network study area consist of a 1-mile radius from each Action Alternative site to represent a typical distance that a visitor might be willing to walk or use a bicycle to travel to the site. The transit study area consists of a 0.25-mile radius from each Action Alternative site to represent a typical walking distance between the site and the nearest bus stop. The traffic study area includes 10 existing intersections—of which one intersection would serve as the CBOC driveway—and one new driveway (11 total intersections). The intersections considered are: (1) Battlefield Boulevard at Wal-Mart Way; (2) Battlefield Boulevard at Volvo Parkway; (3) Battlefield Boulevard at Lenore Trail; (4) Battlefield Boulevard at Hollywood Drive/Oak Grove Road; (5) Battlefield Boulevard at Knells Ridge Boulevard; (6) Battlefield Boulevard at Medical Parkway; (7) Battlefield Boulevard at Gainsborough Square; (8) Battlefield Boulevard at Kempsville Road/Great Bridge Boulevard; (9) Kempsville Road at Clearfield Avenue; and (10) Clearfield Avenue at Clydes Way. The Clearfield Avenue Alternative would share access from Clydes Way at Clearfield Avenue. The new driveway is the proposed driveway associated with the Knells Ridge Boulevard Alternative, which would be accessed from Knells Ridge Boulevard. These intersections and the driveway represent the locations where the highest

concentration of new vehicle trips would be generated by each Action Alternative. The pedestrian network covers the same network as the traffic study area. Figure 6 illustrates the study intersections within the traffic study area.

Appendix A, Section 3.2, describes roadways in the traffic study area and includes the Virginia Department of Transportation roadway functional classification, the posted speed limit, the number of lanes in each direction, and any other noteworthy characteristics.

Data Collection

Because of restrictions related to the COVID-19 pandemic, intersection turning movement volumes were obtained from data collected in 2015 and 2019 from previously approved studies. The counts used in the study are based on AM and PM peak weekday commuter hours. The peak hours would occur during the 8:00 to 9:00 AM hour and the 4:00 to 5:00 PM hour, based on clinic hours and the anticipated peak arrival and departure times of staff and patients. The study calibrated the turning movement count data to a year 2020 baseline to represent existing conditions, roadway volume growth, and land use developments that opened prior to 2020. Appendix A, Section 3.3, contains the traffic counts obtained for the traffic study area intersections and provides additional detail to explain the process for developing the existing condition turning movement volumes.

Pedestrian Network

The existing pedestrian network in the study area was assessed for connectivity and general compliance with the Americans with Disabilities Act (ADA) and development and land ordinances (City of Chesapeake n.d.b). Knells Ridge Boulevard lacks sidewalks and crosswalks in either direction west of Kingsborough Square in the direction of the study area. However, appropriate sidewalks and crosswalks are located on Battlefield Boulevard with full connectivity. Sidewalks are intermittently adjacent to the study area on Clearfield Avenue. Detailed information covering the pedestrian network is provided in Appendix A, Section 3.4.

Bicycle Network

Existing bicycle facilities in the study area were identified from the City of Chesapeake *2050 Trails Plan* and aerial imagery. The sidewalk on Volvo Parkway from Battlefield Boulevard to Greenbriar Parkway in the eastbound direction and the sidewalks on Kempsville Road from Battlefield Boulevard to the city boundary at Bishopstoke Drive and Plantation Lakes Circle are classified as a Class I Multi-Use Path Facility. Additionally, Medical Parkway has a Class II bicycle route from Battlefield Boulevard to Old Oak Grove Road (City of Chesapeake 2016). Appendix A, Section 3.5, contains a map showing the bicycle network.

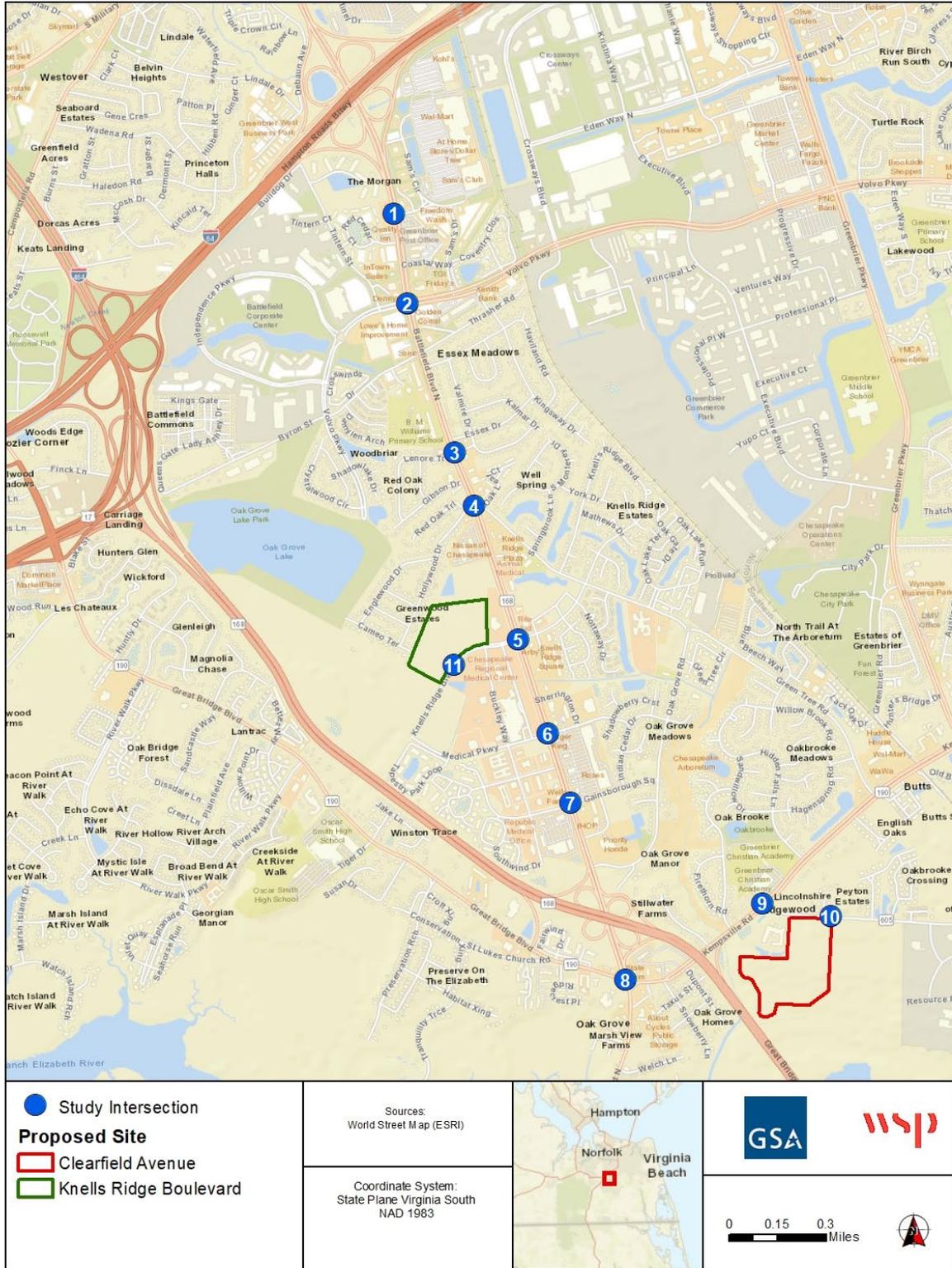


Figure 6: Study Area

Transit Network

Existing transit facilities in the study area were identified from the Hampton Roads Transit agency (HRT). Hampton Roads Transit (HRT) runs two bus routes within the study area: one local bus (14) and one commuter bus (967) (HRT 2020). Appendix A, Section 3.6, contains maps showing the transit network.

Parking

No on-street parking is available on Knells Ridge Boulevard or Clearfield Avenue. Off-street parking is available on Battlefield Boulevard for each individual commercial use along the corridor.

Traffic

The transportation study analyzed the traffic study area intersections using the Synchro™ Traffic Signal Coordination Software tool that performs intersection capacity analysis and queuing analysis. The LOS for the study intersections is based on the Highway Capacity Manual (HCM) 2010 methods, but in some instances were based on HCM 2000 methods, because of HCM 2010 method limitations regarding signal phase numbers that do not follow the National Electrical Manufacturer Association requirements. Appendix A, Section 3.8.3., describes inputs used to determine an accurate LOS and the intersection control delay LOS thresholds.

Based on the Synchro™ analysis, four intersections operate beyond the LOS standard. Battlefield Boulevard/Volvo Parkway (Intersection #2) operates at LOS F in the AM and PM peak hours; Battlefield Boulevard/Hollywood Drive/Oak Grove Road (Intersection #4) operates at LOS F in the AM and PM peak hours; Battlefield Boulevard/Battlefield Boulevard/Gainsborough Square Drive (Intersection #7) operates at LOS F in the PM peak hour; and Battlefield Boulevard/Great Bridge Boulevard/Kempsville Road (Intersection #8) operates at LOS F in the AM and PM peak hours. Table 9 contains a summary of the AM and PM peak hour LOS grades for each intersection, and Figure 7 depicts the overall intersection LOS grades for the AM and PM peak hours.

Table 9: Existing Conditions Intersection Operations (AM and PM Peak Hours)

Intersection Number and Name	AM Peak Hour Delay (sec/veh)	AM Peak Hour LOS	AM Check	PM Peak Hour Delay (sec/veh)	PM Peak Hour LOS	PM Check
1. Battlefield Boulevard/Wal-Mart Way ^a	61.4	E	Pass	76.3	E	Pass
2. Battlefield Boulevard/Volvo Parkway ^a	136.2	F	Fail	237.6	F	Fail
3. Battlefield Boulevard/Lenore Trail	20.2	C	Pass	35.1	D	Pass

Intersection Number and Name	AM Peak Hour Delay (sec/veh)	AM Peak Hour LOS	AM Check	PM Peak Hour Delay (sec/veh)	PM Peak Hour LOS	PM Check
4. Battlefield Boulevard/Hollywood Drive/Oak Grove Road	96.7	F	Fail	81.0	F	Fail
5. Battlefield Boulevard/Knells Ridge Boulevard ^a	21.2	C	Pass	19.5	B	Pass
6. Battlefield Boulevard/Medical Parkway	23.8	C	Pass	23.6	C	Pass
7. Battlefield Boulevard/Gainsborough Square Drive/Gainsborough Square East	32.1	C	Pass	105.4	F	Fail
8. Battlefield Boulevard/Great Bridge Boulevard/Kempsville Road	189.8	F	Fail	160.4	F	Fail
9. Clearfield Avenue/Kempsville Road ^a	34.5	C	Pass	40.9	D	Pass
10. Clearfield Avenue/Clydes Way/Driveway ^b	20.1	C	Pass	20.8	C	Pass

Notes:

LOS = Level of Service

TWSC = Two-way STOP-Controlled unsignalized intersection (TWSC intersections do not have an overall LOS)

Delay is measured in seconds per vehicle.

^a HCM Manual 2000 results are used because of HCM 2010 limitations for evaluating this intersection.^b For TWSC intersections, the reported delay corresponds to the worst performing lane group.

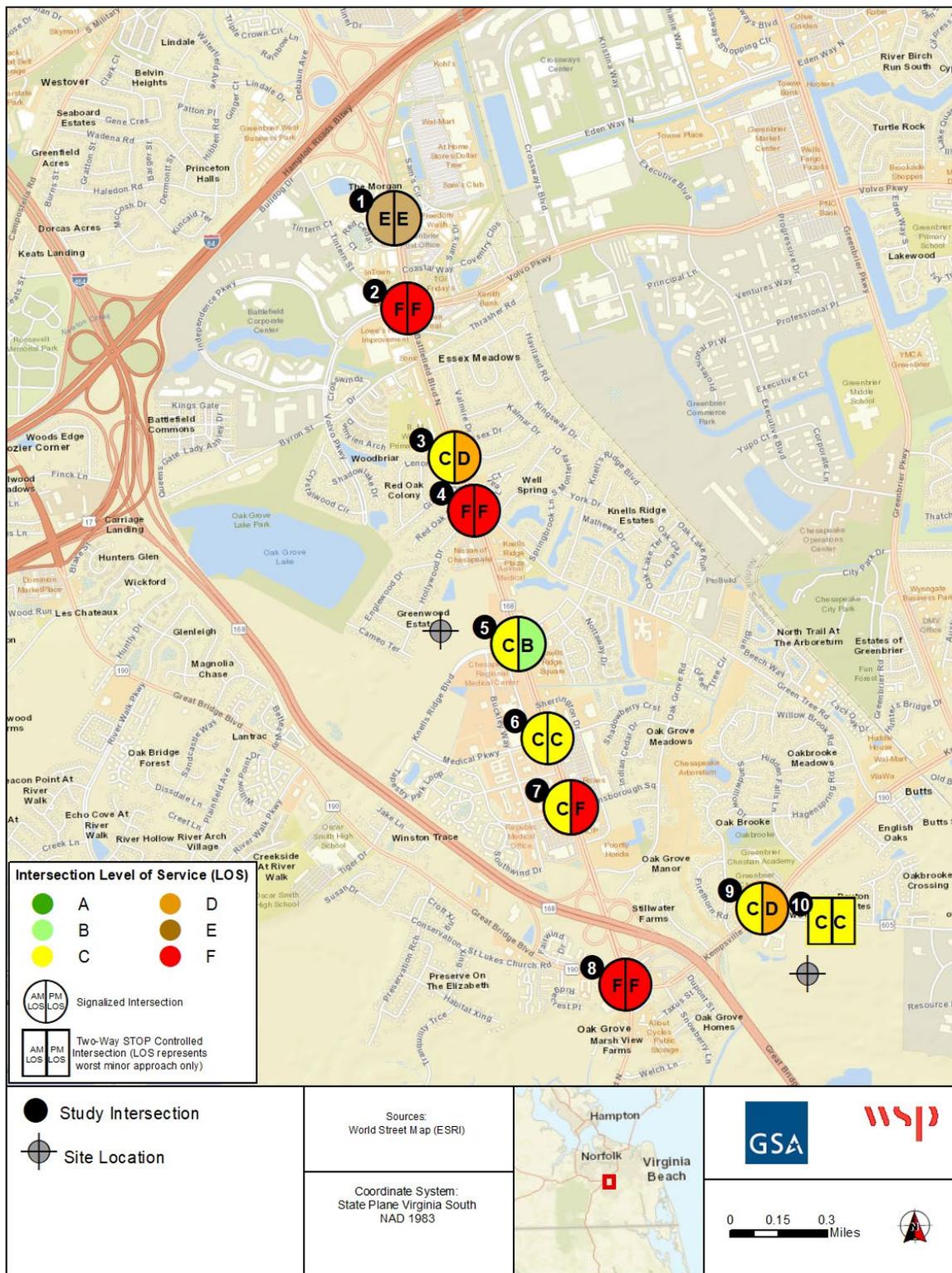


Figure 7: 2020 Existing Condition AM and PM Peak Hour LOS by Intersection

Vehicle queue lengths were calculated for each intersection lane group. A failing queue length is determined by a queue length that exceeds the intersection approach travel lane storage capacity. Appendix A, Section 3.8.5, contains more detail concerning the queue analysis method and the results.

Under current conditions, most failing queues in the study area occur on the eastbound or westbound approaches of streets that cross Battlefield Boulevard. Specifically, failing queues occur during either the AM or PM peak hour in the westbound and eastbound left turn lanes or approaches of Volvo Parkway (Intersection #2); the eastbound and westbound left turn lanes of Lenore Trail (Intersection #3); the eastbound left turn lane of Hollywood Drive (Intersection #4); the eastbound approach of Knells Ridge Boulevard (Intersection #5); the westbound approach of Gainsborough Square East (Intersection #7); and the eastbound and westbound left turn lanes of Great Bridge Boulevard and Kempsville Road (Intersection #8). Less commonly, a failing queue occurs on a turning lane or through movement along northbound and southbound Battlefield Boulevard. The backs of queues occurring along Battlefield Boulevard rarely extend to an adjacent upstream intersection, except for southbound Battlefield Boulevard at Volvo Parkway (Intersection #2) and northbound Battlefield Boulevard at Lenore Trail (Intersection #3).

3.6.2 Environmental Consequences

No Action Alternative

The CBOC would not be constructed under the No Action Alternative, but traffic would increase from existing conditions as a result of roadway volume growth and planned land use developments. Appendix A, Section 4.2, describes the process for developing traffic forecasts under the No Action Alternative and discusses planned roadway improvements that would be implemented under this alternative. The intersection of Battlefield Boulevard at Wal-Mart Way (Intersection #1) would degrade from a LOS E under existing conditions to a LOS F under the No Action Alternative in the PM peak hour. Table 10 contains a summary of the AM and PM peak hour LOS grades for each intersection under the No Action Alternative and Figure 8 depicts the overall intersection LOS grades for the AM and PM peak hours under the No Action Alternative.

Vehicle queue patterns under the No Action Alternative generally would be consistent with those under existing conditions; queue lengths would exceed the available storage on the eastbound or westbound approaches of roadways that cross Battlefield Boulevard and continue to be less common on northbound or southbound Battlefield Boulevard. Appendix A, Section 4.9, provides additional details on the results of the queueing analysis for the No Action Alternative.

The No Action Alternative would have both long-term benefits and long-term, adverse impacts on the traffic study area. Planned roadway improvements in the traffic study area would provide long-term benefits to the traffic study area because of reductions in vehicle delays at failing intersections, despite overall increases in traffic volumes. However, the increase in traffic would

have long-term, adverse impacts at the intersection of Battlefield Boulevard at Wal-Mart Way (Intersection #1).

**Table 10: No Action Alternative Conditions Intersection Operations
(AM and PM Peak Hours)**

Intersection Number and Name	AM Peak Hour Delay (sec/veh)	AM Peak Hour LOS	AM Check	PM Peak Hour Delay (sec/veh)	PM Peak Hour LOS	PM Check
1. Battlefield Boulevard/Wal-Mart Way ^a	45.7	D	Pass	81.5	F	Fail
2. Battlefield Boulevard/Volvo Parkway ^a	119.7	F	Fail	177.2	F	Fail
3. Battlefield Boulevard/Lenore Trail	20.3	C	Pass	35.9	D	Pass
4. Battlefield Boulevard/Hollywood Drive/Oak Grove Road	73.3	E	Pass	73.0	E	Pass
5. Battlefield Boulevard/Knells Ridge Boulevard ^a	16.6	B	Pass	23.3	C	Pass
6. Battlefield Boulevard/Medical Parkway	40.5	D	Pass	28.5	C	Pass
7. Battlefield Boulevard/Gainsborough Square Drive/Gainsborough Square East	36.0	D	Pass	68.1	E	Pass
8. Battlefield Boulevard/Great Bridge Boulevard/Kempsville Road	109.2	F	Fail	141.8	F	Fail
9. Clearfield Avenue/Kempsville Road ^a	43.0	D	Pass	41.2	D	Pass
10. Clearfield Avenue/Clydes Way/Driveway ^b	22.3	C	Pass	23.4	C	Pass

Notes:

LOS = Level of Service

TWSC = Two-way STOP-Controlled unsignalized intersection (TWSC intersections do not have an overall LOS)

Delay is measured in seconds per vehicle.

^a HCM Manual 2000 results are used because of HCM 2010 limitations for evaluating this intersection.

^b For TWSC intersections, the reported delay corresponds to the worst performing lane group.

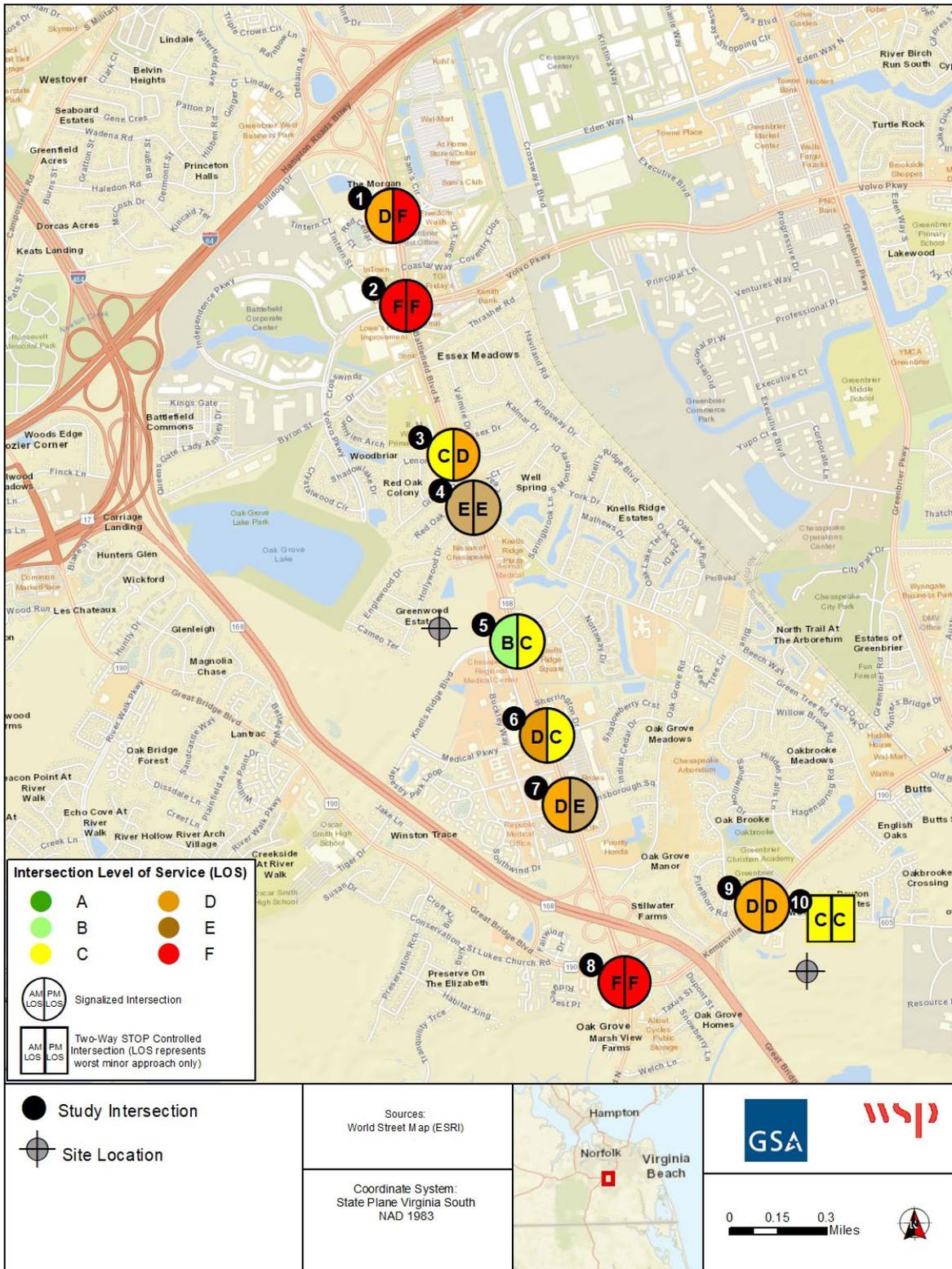


Figure 8: No Action Alternative AM and PM Peak Hour LOS by Intersection

Pedestrian Network

Under the No Action Alternative, three development projects, described in Appendix A, Section 4.2.1, are reasonably foreseeable to be completed by 2024, the full build out year. These projects may include replacing existing sidewalks damaged during construction or improving sidewalks to adhere to the requirements of the Americans with Disabilities Act (ADA) or the City of Chesapeake development and land use ordinances (City of Chesapeake n.d.b).

Bicycle Network

Under the No Action Alternative, the City of Chesapeake *2050 Trails Plan* identifies several proposed bicycle facilities throughout the study area, including two Class I paths, two Class II lanes, and four Class III lanes (City of Chesapeake 2016). Appendix A, Section 4.6, contains a map showing the proposed bicycle network.

Transit Network

Under the No Action Alternative, one transit initiative would affect the network. As part of the *Hampton Roads Regional Transit Vision Plan*, Harbor Park to Great Bridge via Battlefield Boulevard was identified as an express and enhanced bus corridor that could be implemented in the short term (by 2025) (HRT 2011). Once the COVID-19 pandemic is no longer affecting public transit operations and ridership, previous routes and stops are expected to resume.

Parking

The planned developments described under the No Action Alternative would be required to provide new parking spaces to serve users based on their site plans and the City of Chesapeake development and land use ordinances (City of Chesapeake n.d.b).

The No Action Alternative would result in long-term benefits on transportation as pedestrian, bicycle, and transit networks are expanded. There would be no/negligible impacts on parking.

Clearfield Avenue Alternative

Within the traffic study area under the Clearfield Avenue Alternative, the LOS of four intersections would worsen from the No Action Alternative. This conclusion is based on intersection LOS that would either degrade from LOS E under the No Action Alternative to LOS F under the Clearfield Avenue Alternative or an intersection that would operate at LOS F under both the No Action Alternative and the Clearfield Avenue Alternative, but in which delays would be worse under the Clearfield Avenue Alternative. The four intersections are Battlefield Boulevard/Wal-Mart Way (Intersection #1) during the PM peak hour, Battlefield Boulevard/Volvo Parkway (Intersection #2) during the PM peak hour, Battlefield Boulevard/Great Bridge Boulevard/Kempsville Road (Intersection #8) during the AM and PM peak hours, and Clearfield Avenue/Clydes Way/Driveway (Intersection #10) during the PM peak hour. Appendix A, Section 4.3, describes the process for developing traffic forecasts for the Clearfield Avenue Alternative. Table 11 contains a summary of the AM and PM peak hour LOS

grades for each intersection under the Clearfield Avenue Alternative and Figure 9 depicts the overall intersection LOS grades for the AM and PM peak hours under the Clearfield Avenue Alternative.

**Table 11: Clearfield Avenue Alternative Conditions Intersection Operations
(AM and PM Peak Hours)**

Intersection Number and Name	AM Peak Hour Delay (sec/veh)	AM Peak Hour LOS	AM Check	PM Peak Hour Delay (sec/veh)	PM Peak Hour LOS	PM Check
1. Battlefield Boulevard/Wal-Mart Way ^a	65.6	E	Pass	95.4	F	Fail
2. Battlefield Boulevard/Volvo Parkway ^a	116.3	F	Fail	193.9	F	Fail
3. Battlefield Boulevard/Lenore Trail	20.6	C	Pass	41.6	D	Pass
4. Battlefield Boulevard/Hollywood Drive/Oak Grove Road	72.4	E	Pass	78.8	E	Pass
5. Battlefield Boulevard/Knells Ridge Boulevard ^a	19.6	C	Pass	25.6	D	Pass
6. Battlefield Boulevard/Medical Parkway	42.4	D	Pass	36.5	D	Pass
7. Battlefield Boulevard/Gainsborough Square Drive/Gainsborough Square East	37.6	D	Pass	72.5	E	Pass
8. Battlefield Boulevard/Great Bridge Boulevard/Kempsville Road	176.5	F	Fail	189.6	F	Fail
9. Clearfield Avenue/Kempsville Road ^a	39.9	D	Pass	50.0	D	Pass
10. Clearfield Avenue/Clydes Way/Driveway ^b	34.4	C	Pass	561.1	F	Fail

Notes:

LOS = Level of Service

TWSC = Two-way STOP-Controlled unsignalized intersection (TWSC intersections do not have an overall LOS)

Delay is measured in seconds per vehicle.

^a HCM Manual 2000 results are used because of HCM 2010 limitations for evaluating this intersection.

^b For TWSC intersections, the reported delay corresponds to the worst performing lane group.

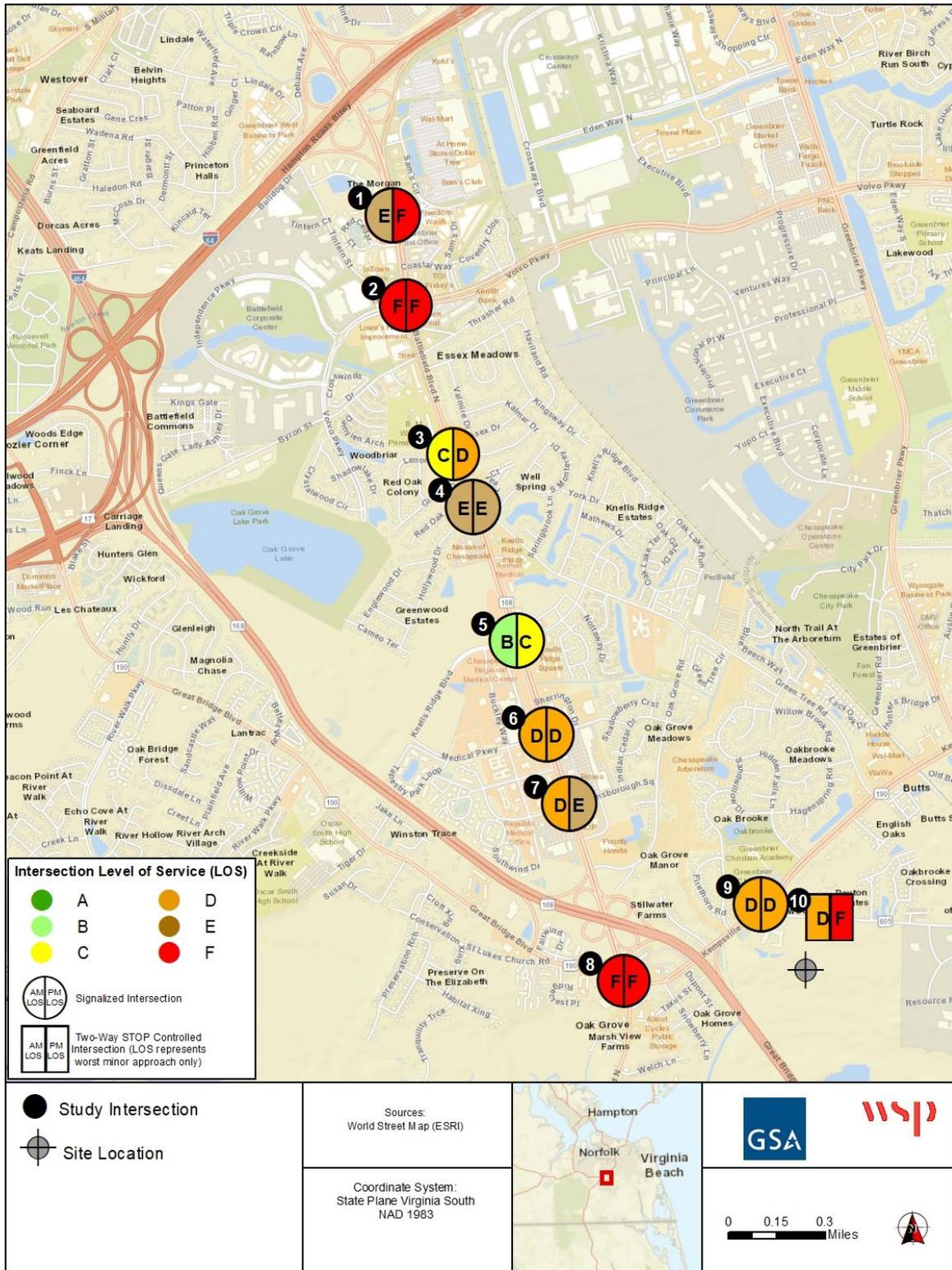


Figure 9: Clearfield Avenue Alternative AM and PM Peak Hour LOS by Intersection

Vehicle queue patterns under the Clearfield Avenue Alternative would be generally consistent with those under the No Action Alternative; queue lengths would increase minimally for most turning movements. Notable increases in queue lengths compared with the No Action Alternative would be the northbound right turn of Battlefield Boulevard at Kempsville Road (Intersection #8), the northbound left turn of Clearfield Avenue at Kempsville Road (Intersection #9), and the northbound approach of the Clearfield Avenue Alternative Driveway (Intersection #10), which are the intersections closest to the Clearfield Avenue Alternative. Appendix A, Section 4.9, provides further details on the results of the queuing analysis for the Clearfield Avenue Alternative.

The Clearfield Avenue Alternative would result in long-term, adverse impacts on traffic. The transportation study includes potential mitigation measures that would minimize the adverse impacts on these intersections. Should this alternative be selected for implementation, the developer, in consultation with the Virginia Department of Transportation and the City of Chesapeake, would determine final, reasonable mitigation measures.

Pedestrian Network

Under the Clearfield Avenue Alternative, the CBOC would have sidewalks and crosswalks from the proposed parking lots to the facility. Additionally, the facility would have a pedestrian path that connects various public spaces.

Bicycle Network

Under the Clearfield Avenue Alternative, no bicycle infrastructure would be incorporated into the site plan.

Transit Network

Under the Clearfield Avenue Alternative, a bus stop would be planned on-site. The developer would need to work with HRT to ascertain which bus route(s) would serve this stop.

Parking

The Clearfield Avenue Alternative would include a minimum requirement of 1,050 parking spaces.

The Clearfield Avenue Alternative would result in long-term benefits on transportation as pedestrian, bicycle, and transit networks are expanded. There would be no/negligible impacts on parking.

Knells Ridge Boulevard Alternatives

Within the traffic study area under the Knells Ridge Boulevard Alternatives, LOS for three intersections would worsen from the No Action Alternative based on criteria that were previously described in the discussion of the Clearfield Avenue Alternative. These include

Battlefield Boulevard/Wal-Mart Way (Intersection #1) during the PM peak hour, Battlefield Boulevard/Volvo Parkway (Intersection #2) during the PM peak hour, and Battlefield Boulevard/Great Bridge Boulevard/Kempsville Road (Intersection #8) during the AM and PM peak hours. Appendix A, Section 4.4, describes the process for developing traffic forecasts for the Knells Ridge Boulevard Alternatives. Table 12 contains a summary of the AM and PM peak hour LOS grades for each intersection under the Knells Ridge Boulevard Alternatives, and Figure 10 depicts the overall intersection LOS grades for the AM and PM peak hours under the Knells Ridge Boulevard Alternatives.

Vehicle queue patterns under the Knells Ridge Boulevard Alternatives would be generally consistent with those under the No Action Alternative; queue lengths would increase minimally. Notable increases in queue lengths compared with the No Action Alternative would occur in the eastbound lane groups of Knells Ridge Boulevard at Battlefield Boulevard (Intersection #5), which is close to the Knells Ridge Boulevard Alternatives. Appendix A, Section 4.9, provides further details on the results of the queueing analysis for the Knells Ridge Boulevard Alternatives.

The Knells Ridge Boulevard Alternatives would have long-term, adverse impacts on traffic. The transportation study includes potential mitigation measures that would minimize the adverse impacts on these intersections. Should either design under this alternative site be selected for implementation, the developer, in consultation with the Virginia Department of Transportation and the City of Chesapeake, would determine final, reasonable mitigation measures.

**Table 12: Knells Ridge Boulevard Alternatives Conditions Intersection Operations
(AM and PM Peak Hours)**

Intersection Number and Name	AM Peak Hour Delay (sec/veh)	AM Peak Hour LOS	AM Check	PM Peak Hour Delay (sec/veh)	PM Peak Hour LOS	PM Check
1. Battlefield Boulevard/Wal-Mart Way ^a	65.4	E	Pass	95.1	F	Fail
2. Battlefield Boulevard/Volvo Parkway ^a	116.2	F	Fail	194.2	F	Fail
3. Battlefield Boulevard/Lenore Trail	20.6	C	Pass	42.0	D	Pass
4. Battlefield Boulevard/Hollywood Drive/Oak Grove Road	72.4	E	Pass	79.3	E	Pass
5. Battlefield Boulevard/Knells Ridge Boulevard ^a	27.9	C	Pass	49.3	D	Pass

Intersection Number and Name	AM Peak Hour Delay (sec/veh)	AM Peak Hour LOS	AM Check	PM Peak Hour Delay (sec/veh)	PM Peak Hour LOS	PM Check
6. Battlefield Boulevard/Medical Parkway	41.2	D	Pass	36.8	D	Pass
7. Battlefield Boulevard/Gainsborough Square Drive/Gainsborough Square East	37.8	D	Pass	73.4	E	Pass
8. Battlefield Boulevard/Great Bridge Boulevard/Kempsville Road	127.4	F	Fail	156.3	F	Fail
9. Clearfield Avenue/Kempsville Road ^a	43.0	D	Pass	41.1	D	Pass
10. Clearfield Avenue/Clydes Way/Driveway ^b	22.3	C	Pass	23.4	C	Pass
11. Knells Ridge Boulevard/Driveway ^b	0.0	A	Pass	29.5	D	Pass

Notes:

LOS = Level of Service

TWSC = Two-way STOP-Controlled unsignalized intersection (TWSC intersections do not have an overall LOS)

Delay is measured in seconds per vehicle.

^a HCM Manual 2000 results are used because of HCM 2010 limitations for evaluating this intersection.^b For TWSC intersections, the reported delay corresponds to the worst performing lane group.

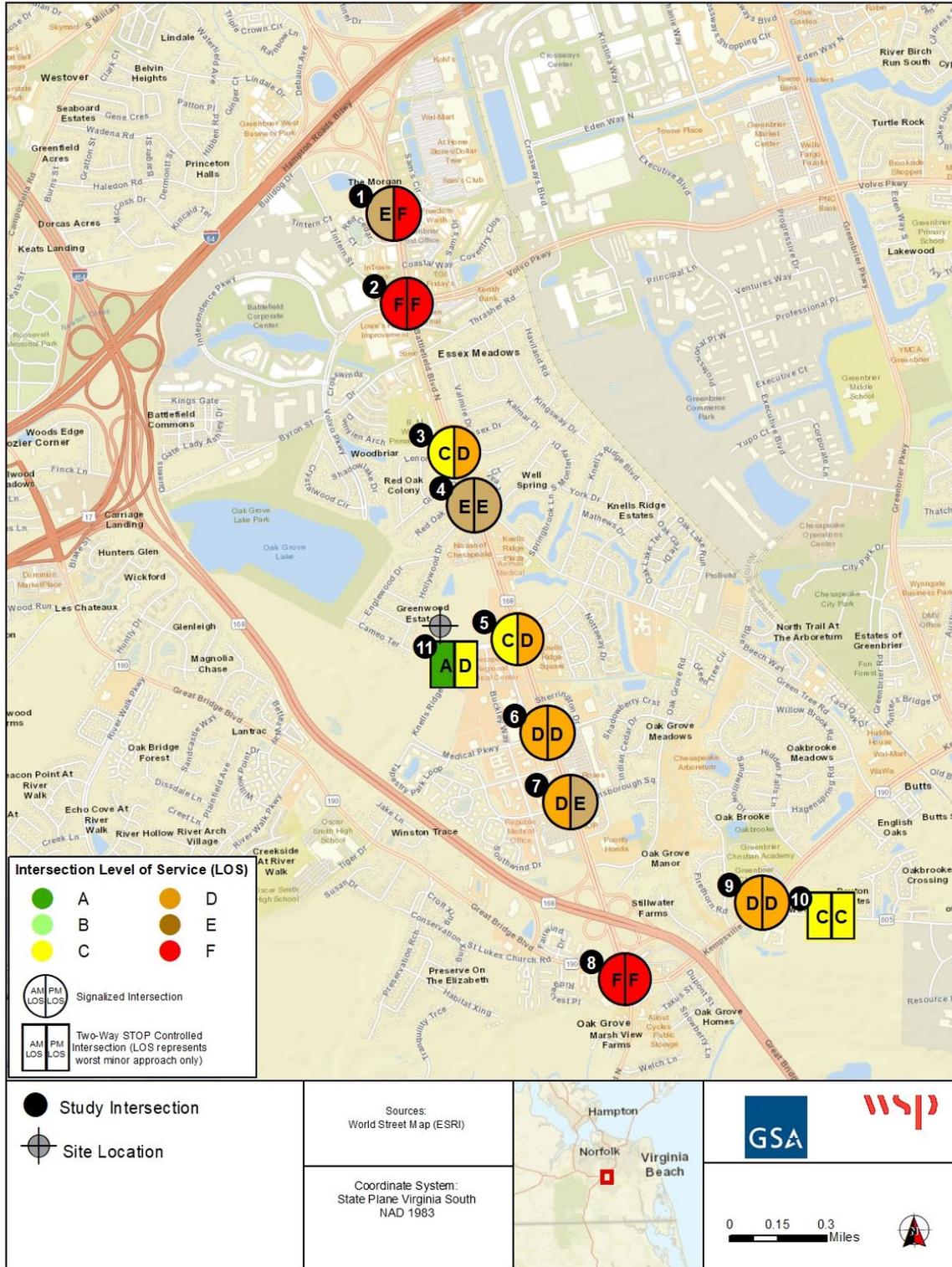


Figure 10: Knells Ridge Boulevard Alternatives AM and PM Peak Hour LOS by Intersection

Pedestrian Network

Under the Knells Ridge Boulevard Alternatives, sidewalks and crosswalks would be available from the proposed parking lots to the facility. Additionally, crosswalks would be located at all entrances.

Bicycle Network

Under the Knells Ridge Boulevard Alternatives, no bicycle infrastructure would be incorporated into the site plan.

Transit Network

Under the Knells Ridge Boulevard Alternatives, no transit routes or stops have been identified at this time, although a new bus stop is part of the proposed CBOC.

Parking

The Knells Ridge Boulevard Alternatives would include a minimum requirement of 1,050 parking spaces.

The Knells Ridge Boulevard Alternatives would result in long-term benefits on transportation as pedestrian, bicycle, and transit networks are expanded. There would be no/negligible impacts on parking.

3.7 Utilities

3.7.1 Affected Environment

Several different utility providers provide basic utilities (e.g., water, sewer, natural gas, and electric) in the vicinity of the alternative sites. Information from the utility providers and provided by the developers was reviewed to determine the availability and capacity of utilities in the vicinity of the alternative sites.

- **Electricity:** Dominion Energy supplies electricity services within the City of Chesapeake. Existing distribution lines are located on Clearfield Avenue and Knells Ridge Boulevard. There is an existing 120-foot easement on the Knells Ridge Boulevard site, adjacent to the eastern property line. Electric utility easements maintained by Dominion Energy are located both north and south of the Knells Ridge Boulevard site.
- **Natural Gas:** Virginia Natural Gas and Columbia Natural Gas provide natural gas services within the City of Chesapeake. An existing natural gas line runs along VA 168 (Battlefield Boulevard), approximately 600 feet from the Knells Ridge Boulevard site. Natural gas is also available near the Clearfield Avenue site.
- **Potable Water:** The City of Chesapeake supplies potable water to the Action Alternative sites. The City operates two water treatment plants that have a combined capacity of 18 million gallons per day (City of Chesapeake 2018b). Currently, the City of Chesapeake

produces approximately 15 million gallons per day (City of Chesapeake 2018b). A 10-inch water main is located on the west side of Knells Ridge Boulevard site. There is an existing 12-inch water main within Clearfield Avenue site.

- **Wastewater:** The City of Chesapeake and the Hampton Roads Sanitation District provide wastewater services within the City of Chesapeake. The City of Chesapeake collects and distributes wastewater to treatment plants operated by the Sanitation District. The Hampton Roads Sanitation District operates 16 treatment plants in the Hampton Roads region with a combined capacity of 249 million gallons per day (Hampton Roads Sanitation District n.d.).

There is an existing 8-inch sanitary sewer line along the centerline of Knells Ridge Boulevard with 6-inch sewer laterals that are stubbed to the site. A 12-inch sanitary sewer main is present within Clearfield Avenue.

3.7.2 Environmental Consequences

Action Alternatives

The Proposed Action would result in increased usage of electricity, natural gas, potable water, and sewer at similar levels for the Action Alternative sites or design options. All major utility services are available immediately next to or in close proximity to the Action Alternative sites. Stormwater management, as discussed in Section 3.2, would also be required for the Proposed Action. The proposed CBOC is not anticipated to require extraordinary utility services beyond those of a similarly sized medical facility. Based on preliminary design information, adequate utilities exist to supply the facility as currently proposed. However, each utility provider would require a review of the detailed final design plans to validate these preliminary findings and to confirm connection/extension requirements. No significant impacts on utilities are anticipated.

The Proposed Action would require new connections to the existing electric distribution line, water main, and sewer line on Clearfield Avenue. Assuming a building size of 215,000 square feet, the Proposed Action would produce an electrical demand of approximately 2,200 kilowatts. Preliminary discussions between the developer and the Department of Public Utilities indicated that the sewer line has adequate capacity and would not require an on-site sewer lift station.

The Proposed Action would also require new connections to the existing electric distribution on Knells Ridge Boulevard. Both design options could encroach on the Dominion Energy easements located north and south of the site. Roads and parking lots are permitted to encroach on easements as long as they meet certain conditions, including remaining at least 50 feet from any structure, foundation pole, transformer, equipment, guy or anchor. Coordination with Dominion Energy by the selected developer would be required to obtain a Consent Agreement for Right-of-Way Encroachment prior to construction for both design alternatives.

A new connection to the natural gas line on VA 168 would also be required (from Battlefield Boulevard). Available connections exist adjacent to the Knells Ridge Boulevard site. Based on the City of Chesapeake's capacity and current demands, sufficient potable water exists to operate the proposed CBOC, and connection to the existing sanitary sewer would be available under both design options. Upgrades to the existing sewer or pump stations is not anticipated.

No Action Alternative

Because no new facility would be constructed under this alternative, the No Action Alternative would have no impact on utilities.

3.8 Potential for Generating Substantial Controversy

As discussed in chapter 1, GSA solicited input from the public and various federal, state, and local government agencies regarding the Proposed Action. Members of the public and several government agencies provided input; none of the input identified substantial controversy related to the Proposed Action or the Action Alternatives. GSA will publish and distribute this Draft EA for a 15-day public comment period. Public comments on the Draft EA will be considered in preparing the Final EA, as appropriate.

3.9 Cumulative Effects Summary

Cumulative impacts are defined as “the impacts on the environment that result from the incremental impact of the action when added to other past, present, or reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertake such other actions” (40 CFR 1508.7).

The scope of the cumulative effects analysis involves both the geographic extent of the effects and the timeframe in which the effects could be expected to occur, as well as a description of what resources could potentially be cumulatively affected.

Because there are no planned developments adjacent to either of the Action Alternative sites, there would be no cumulative impacts.

4.0 MANAGEMENT AND MITIGATION MEASURES

This section summarizes the proposed management and mitigation measures to minimize potential adverse effects of the Proposed Action. The developer and construction contractors would implement BMPs and satisfy all applicable federal, state, and local regulatory requirements in association with the design, construction, and operation of the proposed CBOC at the selected Action Alternative site.

Management measures are defined as routine BMPs and/or regulatory compliance measures that are regularly implemented as part of proposed activities, as appropriate, across Virginia. In general, implementation of such management measures would maintain impacts at acceptable levels for all resource areas analyzed. Mitigation measures are project-specific requirements, not routinely implemented as part of development projects but necessary to reduce identified potentially significant adverse environmental impacts to less-than-significant levels. No significant impacts are anticipated, so no formal mitigation measures are required; however, compensatory mitigation may be required for impacts on wetlands. Virginia Department of Transportation and the project development team would determine final mitigation approaches that the developer would agree to implement. The routine BMPs and management and mitigation measures summarized in Table 13 would be included by the developer in the selected Action Alternative to minimize adverse impacts from the Proposed Action.

Table 13: Management, Minimization, and Mitigation Measures

Resource	Measure
Water Resources	<p>Control soil erosion and sedimentation impacts during construction by complying with the VDEQ Virginia Pollutant Discharge Elimination System (VPDES) permit.</p> <p>Obtain a permit from USACE and VDEQ for any filling or taking of wetlands on the Knells Ridge Boulevard site. Obtain a jurisdictional determination from USACE and obtain a permit from USACE and/or VDEQ for any filling or taking of wetlands on the Clearfield Avenue Site. Complete the permit-required mitigation measures.</p> <p>Coordinate with VDEQ, as required, to ensure that the Proposed Action is consistent with the VDEQ's CZM Program.</p> <p>Design improvements in accordance with the requirements of the Energy Independence and Security Act Section 438 with respect to stormwater runoff quantity and characteristics.</p> <p>Ensure that the design of the CBOC includes sufficient stormwater management so water quantity/quality in receiving waters and/or off-site areas are not adversely affected.</p> <p>If applicable, comply with city, county, and/or state regulations and ordinances implementing the Chesapeake Bay Preservation Area.</p>
Wildlife and Habitat	<p>Complete informal section 7 compliance under the Endangered Species Act. Conduct tree removal between November 15 and March 31 when bats are hibernating, if applicable once section 7 consultation is complete.</p>

Resource	Measure
Socioeconomics and Environmental Justice	Secure the construction area to prevent unauthorized access by children from nearby residential areas.
Land Use	Comply with applicable zoning requirements and development standards. Obtain a variance or conditional zoning, if applicable.
Traffic, Transportation, and Parking	The selected developer, in consultation with the Virginia Department of Transportation and the City of Chesapeake, would determine final, reasonable mitigation measures.
Utilities	None required.
Aesthetics	Comply with City of Chesapeake zoning for required setbacks and height limitations. Use vegetative buffers to enhance viewscales, particularly near adjacent residential properties.
Air Quality	Use appropriate dust suppression methods (such as the use of water, dust, palliative, covers, and suspension of earth moving in high wind conditions) during on-site construction activities Stabilize disturbed area through revegetation or mulching if the area would be inactive for several weeks or longer. Implement measures to reduce diesel particulate matter emissions from construction equipment, such as reducing idling time and using newer equipment with emissions controls. Comply with the applicable VDEQ air quality regulations. Secure any required minor air emissions permits from VDEQ prior to construction
Cultural Resources	Should potentially historic or culturally significant items be discovered during project construction, immediately cease work in the area until GSA, a qualified archaeologist, VDHR, and other consulting parties are contacted to properly identify and appropriately treat discovered items in accordance with applicable state and federal laws.
Geology and Soils	Control soil erosion and sedimentation impacts during construction by implementing erosion prevention measures and complying with the VDEQ-issued VPDES permit, including the development and implementation of a site-specific Stormwater Pollution Prevention Plan. The VPDES permit would require stormwater runoff and erosion management using BMPs, such as earth berms, vegetative buffers and filter strips, and spill prevention and management techniques. The construction contractor would implement the sedimentation and erosion control measures specified in the VPDES permit and the Stormwater Pollution Prevention Plan to protect surface water quality.

Resource	Measure
Noise	<p>Limit construction and associated heavy truck traffic to between 6:30 a.m. and 10:00 p.m. on Monday through Friday, or during normal, weekday, work hours, in compliance with zoning requirements.</p> <p>Shut down noise-generating heavy equipment when it is not needed.</p> <p>Maintain equipment per manufacturer's recommendations to minimize noise generation.</p> <p>Encourage construction personnel to operate equipment in the quietest manner practicable (such as speed restrictions, retarder brake restrictions, engine speed restrictions).</p>
Community Services	None required.
Solid Waste and Hazardous Materials	Comply with applicable federal and state laws governing the use, generation, storage, transportation, and disposal of solid and hazardous materials and medical wastes.

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