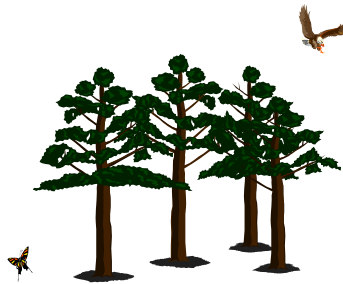




FEDERAL AVIATION ADMINISTRATION

EASTERN REGION
AIRPORTS DIVISION

**Short Environmental
Assessment Form
for
AIRPORT DEVELOPMENT
PROJECTS**



Airport Name: Richmond International Airport

Identifier: RIC

Project Title: Former Park and Ride Facility Development

This Environmental Assessment becomes a Federal document when evaluated, signed, and dated by the Responsible FAA official.

Responsible FAA Official

Date

INSTRUCTIONS

THIS FORM IS FOR LIMITED USE ON SPECIFIC TYPES OF PROJECTS. AIRPORT SPONSORS MUST CONTACT YOUR LOCAL AIRPORTS DISTRICT OFFICE (ADO) ENVIRONMENTAL PROTECTION SPECIALIST (EPS) BEFORE COMPLETING THIS FORM.

This form was prepared by FAA Eastern Region Airports Division and can only be used for proposed projects in this region.

Introduction: This Short Environmental Assessment (EA), is based upon the guidance in Federal Aviation Administration (FAA) Orders 1050.1F – *Environmental Impacts: Policies and Procedures*, and the *Environmental Desk Reference for Airport Actions* and 5050.4B – *NEPA Implementing Instructions for Airport Actions*. These orders incorporate the Council on Environmental Quality's (CEQ) regulations for implementing the National Environmental Policy Act (NEPA), as well as US Department of Transportation environmental regulations, and other applicable federal statutes and regulations designed to protect the Nation's natural, historic, cultural, and archeological resources. The information provided by sponsors, with potential assistance from consultants, through the use of this form enables the FAA ADO offices to evaluate compliance with NEPA and the applicable special purpose laws.

Use: For situations in which this form may be considered, refer to the APPLICABILITY Section below. The local ADO has the final determination in the applicability of this form to a proposed Federal Action. Proper completion of the Form will allow the FAA to determine whether the proposed airport development project can be processed with a short EA, or whether a more detailed EA or EIS must be prepared. **If you have any questions on whether use of this form is appropriate for your project, or what information to provide, we recommend that you contact the environmental specialist in your local ADO.**

This Form is to be used in conjunction with applicable Orders, laws, and guidance documents, and in consultation with the appropriate resource agencies. Sponsors and their consultants should review the requirements of special purpose laws (See 5050.4B, Table 1-1 for a summary of applicable laws). Sufficient documentation is necessary to enable the FAA to assure compliance with all applicable environmental requirements. Accordingly, any required consultations, findings or determinations by federal and state agencies, or tribal governments, are to be coordinated, and completed if necessary, prior to submitting this form to FAA for review. Coordination with Tribal governments must be conducted through the FAA. We encourage sponsors to begin coordination with these entities as early as possible to provide for sufficient review time. Complete information will help FAA expedite its review. This Form meets the intent of a short EA while satisfying the regulatory requirements of NEPA for an EA. Use of this form acknowledges that all procedural requirements of NEPA or relevant special purpose laws still apply and that this form does not provide a means for circumvention of these requirements.

Submittal: When using this form for an airport project requesting *discretionary funding*, the documentation must be submitted to the local ADO by April 30th of the fiscal year preceding the fiscal year in which funding will be requested. When using this form for an airport project requesting *entitlement funding*, the documentation must be submitted to the local ADO by November 30th of the fiscal year in which the funding will be requested.

Availability: *An electronic version of this Short Form EA is available on-line at <http://www.faa.gov/airports/eastern/environmental/media/short-form-ea-final.docx>. Other sources of environmental information including guidance and regulatory documents are available on-line at http://www.faa.gov/airports_airtraffic/airports/environmental.*

APPLICABILITY

Local ADO EPSs make the final determinations for the applicability of this form. If you have questions as to whether the use of this form is appropriate for your project, contact your local EPS BEFORE using this form. Airport sponsors can consider the use of this form if the proposed project meets either Criteria 1 or Criteria 2, 3, and 4 collectively as follows:

- 1) It is normally categorically excluded (see paragraphs 5-6.1 through 5-6.6 in FAA Order 1050.1F) but, in this instance, involves at least one, but no more than two, extraordinary circumstance(s) that may significantly impact the human environment (see paragraph 5-2 in 1050.1F and the applicable resource chapter in the 1050.1F Desk reference).
- 2) The action is one that is not specifically listed as categorically excluded or normally requires an EA at a minimum (see paragraph 506 in FAA Order 5050.4B).
- 3) The proposed project and all connected actions must be comprised of Federal Airports Program actions, including:
 - (a) Approval of a project on an Airport Layout Plan (ALP),
 - (b) Approval of Airport Improvement Program (AIP) funding for airport development,
 - (c) Requests for conveyance of government land,
 - (d) Approval of release of airport land, or
 - (e) Approval of the use of Passenger Facility Charges (PFC).
- 4) The proposed project is not expected to have impacts to more than two of the resource categories defined in the 1050.1F Desk Reference.

This form cannot be used when any of the following circumstances apply:

- 1) The proposed action, including all connected actions, requires coordination with or approval by an FAA Line of Business or Staff Office other than the Airports Division. Examples include, but are not limited to, changes to runway thresholds, changes to flight procedures, changes to NAVAIDs, review by Regional Counsel, etc.
- 2) The proposed action, including all connected actions, requires coordination with another Federal Agency outside of the FAA.
- 3) The proposed action will likely result in the need to issue a Record of Decision.
- 4) The proposed action requires a construction period exceeding 3 years.

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- 5) The proposed action involves substantial public controversy on environmental grounds.
 - 6) The proposed project would have impacts to, or require mitigation to offset the impacts to more than two resources¹ as defined in the 1050.1F Desk Reference.
 - 7) The proposed project would involve any of the following analyses or documentation:
 - a. The development of a Section 4(f) Report for coordination with the Department of the Interior,
 - b. The use of any Native American lands or areas of religious or cultural significance,
 - c. The project emissions exceed any applicable *de minimis* thresholds for criteria pollutants under the National Ambient Air Quality Standards, or
 - d. The project would require noise modeling with AEDT 2b (or current version).

If a project is initiated using this form and any of the preceding circumstances are found to apply, the development of this form must be terminated and a standard Environmental Assessment or Environmental Impact Statement (if applicable) must be prepared.

¹ A resource is any one of the following: Air Quality; Biological Resources (including Threatened and Endangered Species); Climate; Coastal Resources; Section 4(f); Farmlands; Hazardous Materials, Solid Waste, and Pollution Prevention; Historical, Architectural, Archaeological, and Cultural Resources; Land Use; Natural Resources and Energy Supply; Noise and Noise-Compatible Land Use; Socioeconomics; Environmental Justice; Children's Environmental Health and Safety Risks; Visual Effects; Wetlands; Floodplains; Surface Waters; Groundwater; Wild and Scenic Rivers; and Cumulative Impacts.

Complete the following information:

Project Location

Airport Name: *Richmond International Airport* Identifier: *RIC*
Airport Address: *1 Richard E. Byrd Terminal Drive*
City: *Richmond* County: *Henrico* State: *VA* Zip: *23250*

Airport Sponsor Information

Point of Contact: *John B. Rutledge, P.E*
Address: *1 Richard E. Byrd Terminal Drive*
City: *Richmond* State: *VA* Zip: *23250*
Telephone: *(804) 226-3017* Fax:
Email: *jrutledge@flyrichmond.com*

Evaluation Form Preparer Information

Point of Contact: *Andrew R. Harrison, CPG*
Company (if not the sponsor): *Schnabel Engineering*
Address: *9800 JEB Stuart Parkway, Suite 200*
City: *Glen Allen* State: *VA* Zip: *23059*
Telephone: *(804) 521-2429* Fax:
Email: *aharrison@schnabel-eng.com*

1. Introduction/Background:

The Richmond International Airport (RIC) is located at 1 Richard E. Byrd Terminal Drive in Henrico County Virginia approximately seven miles east of downtown Richmond. The airport is approximately four miles east of the James River and encompasses approximately 2,000 acres. RIC is bordered by Williamsburg Road to the north, CSX Transportation railroad tracks and Portugee Road to the south, South Airport Drive to the west, and Beulah Road to the east (Figure 2-1). The adjacent properties are a mix of commercial and industrial facilities and established residential areas, which include schools, hospitals and other community facilities.

The Capital Region Airport Commission (CRAC) owns and operates RIC and numerous adjacent properties. CRAC directs the growth, operation and business activities of RIC and the surrounding properties they own. The project location is currently vacant land owned by CRAC and planned for development.

2. Project Description (List and clearly describe ALL components of project proposal including all connected actions). **Attach a map or drawing of the area with the location(s) of the proposed action(s) identified:**

The 6.5 acre project site is located at the southeast corner of the intersection of Audubon Drive and S. Airport Drive in Sandston, Virginia. The project site is a former park and ride facility that served the Richmond International Airport (RIC). The project site currently consists of an asphalt paved parking area, a 2,500 sf concrete slab (former building), concrete sidewalks and curbing, and landscaping.

CRAC is working with Sheetz Inc. to redevelop the project site as a convenience store and automotive fueling facility. The proposed Sheetz facility will include a single story 6,077 sf store, underground storage tanks (USTs) and associated dispenser islands, a drive through service lane, and up to 61 paved parking spaces. The existing paved areas and concrete slab will be demolished. There will be no fill in wetlands, resource protection areas (RPAs), or streams as a result of the project and no wetland mitigation is proposed.

3. Project Purpose and Need:

The purpose of the project is to redevelop a vacant parcel of land that was previously occupied by a parking lot. The redevelopment of the property will provide a source of revenue for CRAC and provide additional retail grocery, prepared food, and automotive fuel sales for the surrounding community.

Since the project location is currently vacant redevelopment is needed to maintain the property infrastructure, improve utilities, control stormwater, defer maintenance costs, and provide revenue for CRAC to maintain the facilities at RIC.

4. Describe the affected environment (existing conditions) and land use in the vicinity of project:

The project limit of disturbance (LOD) is entirely within the previously improved area of the property and consists of asphalt paved parking areas surrounded with concrete curb and gutters, grass covered islands that separate parking areas, and a tile covered floor slab where a waiting room and office were once located. An overgrown drainage feature is located on the northern edge of the property.

Land use in the area is predominantly commercial retail with some residential development to the west of the site. The project location is adjacent to the main entrance road to RIC.

5. Alternatives to the Project: Describe any other reasonable actions that may feasibly substitute for the proposed project, and include a description of the “No Action” alternative. If there are no feasible or reasonable alternatives to the proposed project, explain why (attach alternatives drawings as applicable):

Alternatives

Currently there are no alternatives to redevelopment of the property as currently planned.

No Action Alternative

The no action alternative would result in the property remaining vacant and degradation of existing infrastructure, no improvements to stormwater BMPs, and ongoing maintenance costs for CRAC.

Explanation

The project location is adjacent to the main entrance road to RIC and redevelopment options are limited due to the size of the lot and restrictions of height of development.

6. Environmental Consequences – Special Impact Categories (refer to the Instructions page and corresponding sections in 1050.1F, the 1050.1F Desk Reference, and the Desk Reference for Airports Actions for more information and direction. Note that when the 1050.1F Desk Reference and Desk Reference for Airports Actions provide conflicting guidance, the 1050.1F Desk Reference takes precedence. The analysis under each section must comply with the requirements and significance thresholds as described in the Desk Reference).

(A) AIR QUALITY

(1) Will the proposed project(s) cause or create a reasonably foreseeable emission increase? Prepare an air quality assessment and disclose the results. Discuss the applicable regulatory criterion and/or thresholds that will be applied to the results, the specific methodologies, data sources and assumptions used; including the supporting documentation and consultation with federal, state, tribal, or local air quality agencies.

No permanent sources of air emissions will result from this project. Potential air emissions from the USTs and fuel dispensers will be controlled by Stage I and II vapor recovery systems. All required permitting will be obtained prior to operation.

(2) Are there any project components containing unusual circumstances, such as emissions sources in close proximity to areas where the public has access or other considerations that may warrant further analysis? If no, proceed to (c); if yes, an analysis of ambient pollutant concentrations may be necessary. Contact your local ADO regarding how to proceed with the analysis.

No

(3) Is the proposed project(s) located in a nonattainment or maintenance area for the National Ambient Air Quality Standards (NAAQS) established under the Clean Air Act?

The proposed project is in a maintenance area for ozone since 1997.

4) Are all components of the proposed project, including all connected actions, listed as exempt or presumed to conform (See FRN, vol.72 no. 145, pg. 41565)? If yes, cite exemption and go to (B) Biological Resources. If no, go to (e).

Yes. The proposed project could be considered Presumed to Conform as a project category that is proven to be “reliably and consistently de minimis.”⁸ In accordance with FRN, vol.72 no. 145, pg. 41565, Section III, the project could be classified as construction that “does not modify or increase airport capacity or change the operational environment of the airport in such a way as to increase air emissions above de minimis thresholds.”

(5) Would the net emissions from the project result in exceedances of the applicable *de minimis* threshold (reference 1050.1F Desk Reference and the *Aviation Emissions and Air Quality Handbook* for guidance) of the criteria pollutant for which the county is in non-attainment or maintenance? If no, go to (B) Biological Resources. If yes, stop development of this form and prepare a standard Environmental Assessment.

No. The project location is not in an area of non-attainment. Henrico County has been in maintenance for 1-hr ozone since 1997 and the project is not expected to significantly increase ozone levels over existing levels.

(B) BIOLOGICAL RESOURCES

Describe the potential of the proposed project to directly or indirectly impact fish, wildlife, and plant communities and/or the displacement of wildlife. Be sure to identify any state or federal species of concern (Candidate, Threatened or Endangered).

1) Are there any candidate, threatened, or endangered species listed in or near the project area?

No. The project site was evaluated for the presence of federally protected species or their suitable habitats as per Section 7 of the Endangered Species Act of 1973, as amended. The United States Fish and Wildlife Service (USFWS) Information for Planning and Conservation (IPaC) website was reviewed. IPaC identified the Northern long-eared bat (NLEB) as a species that may be affected by the Proposed Action. However, a map published by the Virginia Department of Game and Inland Fisheries (DGIF) does not identify a NLEB roost or hibernaculum within 60 miles of the project site. Documentation of species listings from USFWS and Virginia DGIF are included in Attachment A.

(2) Will the action have any long-term or permanent loss of unlisted plants or wildlife species?

No, the project area is currently developed as a park and ride facility with asphalt parking areas. An approximately 0.80 acre utility easement on the western edge of the property is covered with trees and shrubs and is not planned to be disturbed.

(3) Will the action adversely impact any species of concern or their habitat?

No species of concern have been identified at the project site. IPaC only identified the NLEB as a species that may be affected by the Proposed Action and there are no known roost areas or hibernaculum within 60 miles of the project site. The nearest Bald Eagle nest is located over 2.5 miles away from the project site. A map of Bald Eagle nests and roosts is included in Attachment A.

(4) Will the action result in substantial loss, reduction, degradation, disturbance, or fragmentation of native species habitats or populations?

No, the planned development will not result in a substantial loss of native species habitats or populations. No native species or habitat have been identified at the project site. The project site consists of asphalt paved parking areas and grass covered islands between the parking lots. An approximately 0.80 acre utility easement on the western edge of the property is covered with trees and shrubs and is not planned to be disturbed.

(5) Will the action have adverse impacts on a species' reproduction rates or mortality rate or ability to sustain population levels?

No. The project site is located between the airport and a busy road, and therefore the small amounts of vegetation present on site would likely not support significant species populations. Additionally, the vegetated area on the western edge of the site will not be disturbed.

(6) Are there any habitats, classified as critical by the federal or state agency with jurisdiction, impacted by the proposed project?

No. No critical habitat has been identified in the project area. No natural habitat exists in the project area. Additionally, the vegetated area on the western edge of the site will not be disturbed.

(7) Would the proposed project affect species protected under the Migratory Bird Act? (If Yes, contact the local ADO).

No. There are no structures or trees that could provide habitat for roosting or active nests. Additionally, the vegetated area on the western edge of the site will not be disturbed and all existing trees will remain.

If the answer to any of the above is “Yes”, consult with the USWFS and appropriate state agencies and provide all correspondence and documentation.

(C) CLIMATE

(1) Would the proposed project or alternative(s) result in the increase or decrease of emissions of Greenhouse gases (GHG)? If neither, this should be briefly explained and no further analysis is required and proceed to (D) Coastal Resources.

The project will result in a negligible increase in GHG emissions. The fuel storage and dispenser system will be equipped with vapor recovery equipment minimizing any emissions during automotive fueling. The facility will use electricity which is increasingly obtained, in part, from renewable resources. The project is also not expected to result in an increase in vehicle usage as it represents an alternate option rather than a lone source for existing fueling and food service needs.

(2) Will the proposed project or alternative(s) result in a net decrease in GHG emissions (as indicated by quantitative data or proxy measures such as reduction in fuel burn, delay, or flight operations)? A brief statement describing the factual basis for this conclusion is sufficient.

N/A

(3) Will the proposed project or alternative(s) result in an increase in GHG emissions? Emissions should be assessed either qualitatively or quantitatively as described in 1050.1F Desk Reference or Aviation Emissions and Air Quality Handbook.

The project will result in a negligible increase in GHG emissions. The fuel storage and dispenser system will be equipped with vapor recovery equipment minimizing any emissions during automotive fueling. The facility will use electricity which is increasingly obtained, in part, from renewable resources. The project is also not expected to result in an increase in vehicle usage as it represents an alternate option rather than a lone source for existing fueling and food service needs.

(D) COASTAL RESOURCES

(1) Would the proposed project occur in a coastal zone, or affect the use of a coastal resource, as defined by your state's Coastal Zone Management Plan (CZMP)? Explain.

Yes, the project is within the coastal zone management area as defined by the State of Virginia. The project site is not within a resource protection area (RPA) as defined by Henrico County. The site is located within a resource management area (RMA) based on highly permeable soil types, however, the site is covered with 12-inches to 36-inches of fill material capped with asphalt in most areas. Native soils have been heavily disturbed and no additional action is expected to be necessary. An confirmatory email from Henrico County Department of Public Works Construction Division is included in Attachment B.

(2) If **Yes**, is the project consistent with the State's CZMP? (If applicable, attach the sponsor's consistency certification and the state's concurrence of that certification).

Yes. A consistency certification is attached in Attachment B.

(3) Is the location of the proposed project within the Coastal Barrier Resources System? (If **Yes**, and the project would receive federal funding, coordinate with the FWS and attach record of consultation).

No

(E) SECTION 4(f) RESOURCES

(1) Does the proposed project have an impact on any publicly owned land from a public park, recreation area, or wildlife or waterfowl refuge of national, state, or local significance, or an historic site of national, state, or local significance? Specify if the use will be physical (an actual taking of the property) or constructive (i.e. activities, features, or attributes of the Section 4 (f) property are substantially impaired.) If the answer is “No,” proceed to (F) Farmlands.

No. The project site does not include nor is adjacent to any public parks, recreations area, refuges, or cultural resource. There are no public resources at the project site.

(2) Is a *De Minimis* impact determination recommended? If “yes”, please provide; supporting documentation that this impact will not substantially impair or adversely affect the activities, features, or attributes of the Section 4 (f) property; a Section 106 finding of “no adverse effect” if historic properties are involved; any mitigation measures; a letter from the official with jurisdiction concurring with the recommended *de minimis* finding; and proof of public involvement. (See Section 5.3.3 of 1050.1F Desk Reference). If “No,” stop development of this form and prepare a standard Environmental Assessment.

N/A

(F) FARMLANDS

Does the project involve acquisition of farmland, or use of farmland, that would be converted to non-agricultural use and is protected by the Federal Farmland Protection Policy Act (FPPA)? (If **Yes**, attach record of coordination with the Natural Resources Conservation Service (NRCS), including form AD-1006.)

No. The project site has previously been disturbed and the majority of the site is covered with fill material or impervious surfaces.

(G) HAZARDOUS MATERIALS, SOLID WASTE, AND POLLUTION PREVENTION

(1) Would the proposed project involve the use of land that may contain hazardous materials or cause potential contamination from hazardous materials? (If Yes, attach record of consultation with appropriate agencies). Explain.

No. Hazardous materials are not present at the project site. The project will involve the installation of underground storage tanks used to store automotive fuels. The tanks will be installed with leak detection systems, and routine compliance inspections will be performed on the tank system components and dispensers as required by law. The DEQ-DLPR conducted a search of solid and hazardous waste databases (including petroleum releases) to identify waste sites in close proximity (200-foot radius) to the project area. The search did not identify any waste sites within the project area which might impact the project. This information is included in the VDEQ response letter contained within Attachment B.

(2) Would the operation and/or construction of the project generate significant amounts of solid waste? If Yes, are local disposal facilities capable of handling the additional volumes of waste resulting from the project? Explain.

No. The project is not expected to generate a significant amount of waste. Construction wastes will be managed onsite and potentially recyclable materials will be segregated from other wastes and sent to a recycling facility. There are no structures on site and asphalt and concrete debris from the existing lot may be recycled or accepted at a local landfill.

(3) Will the project produce an appreciable different quantity or type of hazardous waste? Will there be any potential impacts that could adversely affect human health or the environment?

Hazardous waste will not be generated at the site.

(H) HISTORIC, ARCHITECTURAL, ARCHEOLOGICAL, AND CULTURAL RESOURCES

(1) Describe any impact the proposed project might have on any properties listed in, or eligible for inclusion in the National Register of Historic Places. (Include a record of your consultation and response with the State or Tribal Historic Preservation Officer (S/THPO)).

The site does not have any structures and is not either listed or eligible to be listed in the National Register of Historic Places. The following tribal organizations have expressed interest in Henrico County and were contacted about this project; Pamunkey Indian Tribe, Catawba Indian Nation, and the Delaware Nation, Oklahoma. Responses were received from the Catawba and Pamunkey tribal organizations. The Catawba did not express any objections to the project, however, the Pamunkey want to remain a consulting party to the project and receive a copy of any archaeological work conducted at the site and a copy of the draft EA report (Archaeological Survey sent to Terry Clothier, 7/17). As of the date of this report comments have not been received from the Delaware Nation. Copies of the tribal correspondence are included as Attachment C.

(2) Describe any impacts to archeological resources as a result of the proposed project. (Include a record of consultation with persons or organizations with relevant expertise, including the S/THPO, if applicable).

No impacts to archaeological resources are expected to result from the project. A Phase I Archaeological survey was conducted at the site in June 2020 and no archaeological resources were identified. The shallow subsurface of the site is heavily disturbed. A copy of the Phase I report is included as an attachment and additional copies have been submitted to the Virginia DHR and Pamunkey Indian Tribe. Documentation of the submission of the report is included in Attachment C.

(I) LAND USE

(1) Would the proposed project result in other (besides noise) impacts that have land use ramifications, such as disruption of communities, relocation of residences or businesses, or impact natural resource areas? Explain.

No impacts to residences or businesses are expected to result from the project. The project will redevelop and currently vacant paved lot with a convenience store and an automotive refueling station.

(2) Would the proposed project be located near or create a wildlife hazard as defined in FAA Advisory Circular 150/5200-33, "Wildlife Hazards On and Near Airports"? Explain.

No hazards from wildlife are near the project or will be created by the proposed redevelopment of the property.

(2) Include documentation to support sponsor's assurance under 49 U.S.C. § 47107 (a) (10), of the 1982 Airport Act, that appropriate actions will be taken, to the extent reasonable, to restrict land use to purposes compatible with normal airport operations.

The project will be compatible with normal airport operations. Documentation from John B. Rutledge, P.E. with Capital Region Airport Commission stating that the project will be compatible with airport operations. A copy of this document is included as Attachment D.

(J) NATURAL RESOURCES AND ENERGY SUPPLY

What effect would the project have on natural resource and energy consumption? (Attach record of consultations with local public utilities or suppliers if appropriate)

The project is not expected to have a significant effect on natural resources. The proposed convenience store is expected to use electricity at the level consistent with similar local businesses and is not projected to exceed the capacity of the local utility. The site is currently connected to and served by the local electrical utility.

(K) NOISE AND NOISE-COMPATIBLE LAND USE

Will the project increase noise by DNL 1.5 dB or more for a noise sensitive area that is exposed to noise at or above the DNL 65 dB noise exposure level, or that will be exposed at or above the DNL 65 dB level due to a DNL 1.5 dB or greater increase, when compared to the no action alternative for the same timeframe? (Use AEM as a screening tool and AEDT 2b as appropriate. See FAA Order

1050.1F Desk Reference, Chapter 11, or FAA Order 1050.1F, Appendix B, for further guidance). Please provide all information used to reach your conclusion. If yes, contact your local ADO.

N/A. A review of the screening tool Area Equivalent Method Version 2c SP2 is applicable to an increase in airport operations/aircraft at the airport. The project location is offsite and will not result in any change in airport operations including flight numbers, flight times, or aircraft usage. Noise from the project is not anticipated to exceed the existing noise levels or previous noise levels from the former park and ride facility.

(L) SOCIOECONOMICS, ENVIRONMENTAL JUSTICE, and CHILDREN’S HEALTH and SAFETY RISKS

(1) Would the project cause an alteration in surface traffic patterns, or cause a noticeable increase in surface traffic congestion or decrease in Level of Service?

The project is not expected to cause a significant alteration in surface traffic patterns. The traffic flow will remain consistent with the current configuration of two entranceways on Audubon Drive and one entrance onto S. Airport Drive. The project is not expected to cause a significant increase in traffic or decrease in level of service. The convenience store will provide additional options for automotive refueling and food service to local populations and airport patrons.

(2) Would the project cause induced, or secondary, socioeconomic impacts to surrounding communities, such as changes to business and economic activity in a community; impact public service demands; induce shifts in population movement and growth, etc.?

The project is expected to have a positive socioeconomic impact on the surrounding community by providing additional employment opportunities. Economic activity will be increased by providing additional options for food service and groceries. An increase and/or shift in populations is not expected to result from the project.

(3) Would the project have a disproportionate impact on minority and/or low-income communities? Consider human health, social, economic, and environmental issues in your evaluation. Refer to DOT Order 5610.2(a) which provides the definition for the types of adverse impacts that should be considered when assessing impacts to environmental justice populations.

No. A disproportionate impact on minority or low income communities is not anticipated to result from the project. Additional employment opportunities and additional retail sales of food and other convenience items are anticipated to result from the project.

(4) Would the project have the potential to lead to a disproportionate health or safety risk to children?

Access to the convenience store is predominantly by vehicular traffic and health and safety risks to children should be minimal and not disproportionate.

If the answer is “YES” to any of the above, please explain the nature and degree of the impact. Also provide a description of mitigation measures which would be considered to reduce any adverse impacts.

N/A

(M) VISUAL EFFECTS INCLUDING LIGHT EMISSIONS

(1) Would the project have the potential to create annoyance or interfere with normal activities from light emissions for nearby residents?

The potential for negative impact from light emissions from the convenience store is expected to be minimal. The project will be located along a developed commercial corridor with existing light emissions. The closest residences are 1,000 feet to the southwest across a parking lot with existing lighting. A vegetative buffer is located between the residences and adjacent parking lot.

(2) Would the project have the potential to affect the visual character of nearby areas due to light emissions?

No. The area is a developed commercial and retail corridor along the northern entrance to the airport. The project will be consistent with the existing development.

(3) Would the project have the potential to block or obstruct views of visual resources?

No. The project will not block visual resources. The development of the project site is consistent with the surrounding properties. Two convenience stores with retail fuel sales are located adjacent to the north and northeast of the project. Each of these sites consist of single story structures similar in size to the proposed project. Each facility has a canopy covering the fueling islands of a similar height to the proposed project.

If the answer is “YES” to any of the above, please explain the nature and degree of the impact using graphic materials. Also provide a description of mitigation measures which would be considered to reduce any adverse impacts.

N/A. A development plan is included in Attachment E. An FAA Final Determination documenting compliance with the requirements set forth in FAA Advisory Circular 150/5370-2, "Operational safety on Airports During Construction is also included in Attachment E.

(N) WATER RESOURCES (INCLUDING WETLANDS, FLOODPLAINS, SURFACE WATERS, GROUNDWATER, AND WILD AND SCENIC RIVERS)

(1) WETLANDS

(a) Does the proposed project involve federal or state regulated wetlands or non-jurisdictional wetlands? (Contact USFWS or appropriate state natural resource agencies if protected resources are affected) (Wetlands must be delineated using methods in the US Army Corps of Engineers 1987 Wetland Delineation Manual. Delineations must be performed by a person certified in wetlands delineation Document coordination with the resource agencies).

Wetlands do not exist on or adjacent to the project area. The National Wetlands Inventory (NWI) Map was reviewed to make this determination. Additionally, the project site is heavily disturbed and the project area is currently predominantly covered with impervious pavement that drains water away from the site. A copy of the NWI Map is included within Attachment F.

(b) If yes, does the project qualify for an Army Corps of Engineers General permit? (Document coordination with the Corps).

N/A

(c) If there are wetlands impacts, are there feasible mitigation alternatives? Explain.

N/A

(d) If there are wetlands impacts, describe the measures to be taken to comply with Executive Order 11990, Protection of Wetlands.

N/A

(2) FLOODPLAINS

(a) Would the proposed project be located in, or would it encroach upon, any 100-year floodplains, as designated by the Federal Emergency Management Agency (FEMA)?

The project is not within or encroach upon a 100-year floodplain. A review of FEMA's National Flood Hazard Layer FIRMette Map indicates the project is within Zone X an area identified as an area of minimal flood hazard. A copy of the FIRMette Map is included in Attachment F.

(b) If Yes, would the project cause notable adverse impacts on natural and beneficial floodplain values as defined in Paragraph 4.k of DOT Order 5620.2, *Floodplain Management and Protection*?

N/A

(c) If Yes, attach the corresponding FEMA Flood Insurance Rate Map (FIRM) and describe the measures to be taken to comply with Executive Order 11988, including the public notice requirements.

A copy of the map is attached.

(3) SURFACE WATERS

(a) Would the project impact surface waters such that water quality standards set by Federal, state, local, or tribal regulatory agencies would be exceeded or would the project have the potential to contaminate a public drinking water supply such that public health may be adversely affected?

The project is not expected to impact surface water. Surface water does not exist at the site. The project site is currently mostly paved with existing drainage infrastructure. No significant change to the amount of paved area or drainage is planned by the proposed project. Once developed, spill equipment and a spill prevention plan will be present at the site to mitigate any release of petroleum products. Drinking water in the local area is municipally supplied by Henrico County, and surface water is not relied on as a source of drinking water by local residents.

(b) Would the water quality impacts associated with the project cause concerns for applicable permitting agencies or require mitigation in order to obtain a permit?

No, water quality impacts are not expected to be a cause of concern or require mitigation. There are two similar facilities within 1,000 feet of the project site.

If the answer to any of the above questions is “Yes”, consult with the USEPA or other appropriate Federal and/or state regulatory and permitting agencies and provide all agency correspondence.

N/A

(4) GROUNDWATER

(a) Would the project impact groundwater such that water quality standards set by Federal, state, local, or tribal regulatory agencies would be exceeded or would the project have the potential to contaminate an aquifer used for public water supply such that public health may be adversely affected?

The project is not expected to impact groundwater in excess of ground quality standards. The fuel system (double walled USTs, double walled piping, and dispensers with leak protection) will be installed with Virginia Department of Environmental Quality (VDEQ) required leak detection equipment. The UST system and dispensers will be operated and maintained as required by VDEQ. The site personnel are expected to complete the VDEQ required UST operator training. Drinking water in the local area is municipally supplied by Henrico County, and groundwater wells are not relied on as a source of drinking water by local residents.

(b) Would the groundwater impacts associated with the project cause concerns for applicable permitting agencies or require mitigation in order to obtain a permit?

No, impacts are not expected, and as such to cause any concerns or require any special mitigation with respect to permitting. The fuel system planned for installation is similar to those of nearby facilities.

(c) Is the project to be located over an EPA-designated Sole Source Aquifer?

No. The project is not located over an EPA designated Sole source Aquifer. The EPA does not list sole source aquifers within 100 miles of the project site.

If the answer to any of the above questions is “Yes”, consult with the USEPA or other appropriate Federal and/or state regulatory and permitting agencies and provide all agency correspondence as an attachment to this form.

N/A

(5) WILD AND SCENIC RIVERS

Would the proposed project affect a river segment that is listed in the Wild and Scenic River System or Nationwide River Inventory (NRI)? (If Yes, coordinate with the jurisdictional agency and attach record of consultation).

No rivers with a designation of Wild and Scenic are located within 100 miles of the project site.

(O) CUMULATIVE IMPACTS

Discuss impacts from past, present, and reasonably foreseeable future projects both on and off the airport. Would the proposed project produce a cumulative effect on any of the environmental impact categories above? Consider projects that are connected and may have common timing and/or location. For purposes of this Form, generally use 3 years for past projects and 5 years for future foreseeable projects.

No cumulative impacts are expected to occur from this project. The project site is outside of the RIC airport property along the entrance road to the main entrance. The project entails the redevelopment of a park and ride facility. The project does not impact any environmental resources as detailed in the previous sections. The project is not connected to any past projects (5 years prior) or future projects planned within the next three years.

7. PERMITS

List all required permits for the proposed project. Has coordination with the appropriate agency commenced? What feedback has the appropriate agency offered in reference to the proposed project? What is the expected time frame for permit review and decision?

N/A. No permits other than general construction permits including construction stormwater permits issued by Henrico County and the Virginia Department of Environmental Quality are required for this project. Once approval of the Environmental Assessment is received the construction contractor will obtain the required permits from the County.

8. MITIGATION

Describe those mitigation measures to be taken to avoid creation of significant impacts to a particular resource as a result of the proposed project, and include a discussion of any impacts that cannot be mitigated.

Mitigation measures are not anticipated to be employed for this project due to the absence of significant impacts to resources.

9. PUBLIC INVOLVEMENT

Describe the public review process and any comments received. Include copies of Public Notices and proof of publication.

A public notice was placed in the Richmond times dispatch and was published on July 26 and August 8, 2020. The Virginia Department of Aviation (DOA) determined that a public hearing was not necessary for this project. A copy of the public notice and DOA determination are included in Attachment G.

10. LIST OF ATTACHMENTS

Attachment A – Biological Resources, US Fish and Wildlife

Attachment B – CZMA Consistency Certification

Attachment C – Tribal Response Letters, Phase I Archaeological Survey

Attachment D – Land Use Documentation

Attachment E – Development Plan

Attachment F – NWI Map and Flood Plain Map

Attachment G – Public Involvement

Project Title: Former Park and Ride Facility Development
Identifier: RIC

11. PREPARER CERTIFICATION

I certify that the information I have provided above is, to the best of my knowledge, correct.

Signature Date July 15, 2020

Andrew R. Harrison
Name

Associate
Title

Schnabel Engineering, LLC
Affiliation Phone # 804-649-7035

12. AIRPORT SPONSOR CERTIFICATION

I certify that the information I have provided above is, to the best of my knowledge, correct. I also recognize and agree that no construction activity, including but not limited to site preparation, demolition, or land disturbance, shall proceed for the above proposed project(s) until FAA issues a final environmental decision for the proposed project(s), and until compliance with all other applicable FAA approval actions (e.g., ALP approval, airspace approval, grant approval) and special purpose laws has occurred.

Signature Date

John B. Rutledge, P.E., C.M.
Name

Interim Chief Operating Officer
Title

Capital Region Airport Commission
Affiliation Phone # (804) 226-3017



Source for Base Map: Google Earth Pro Aerial 05/2018

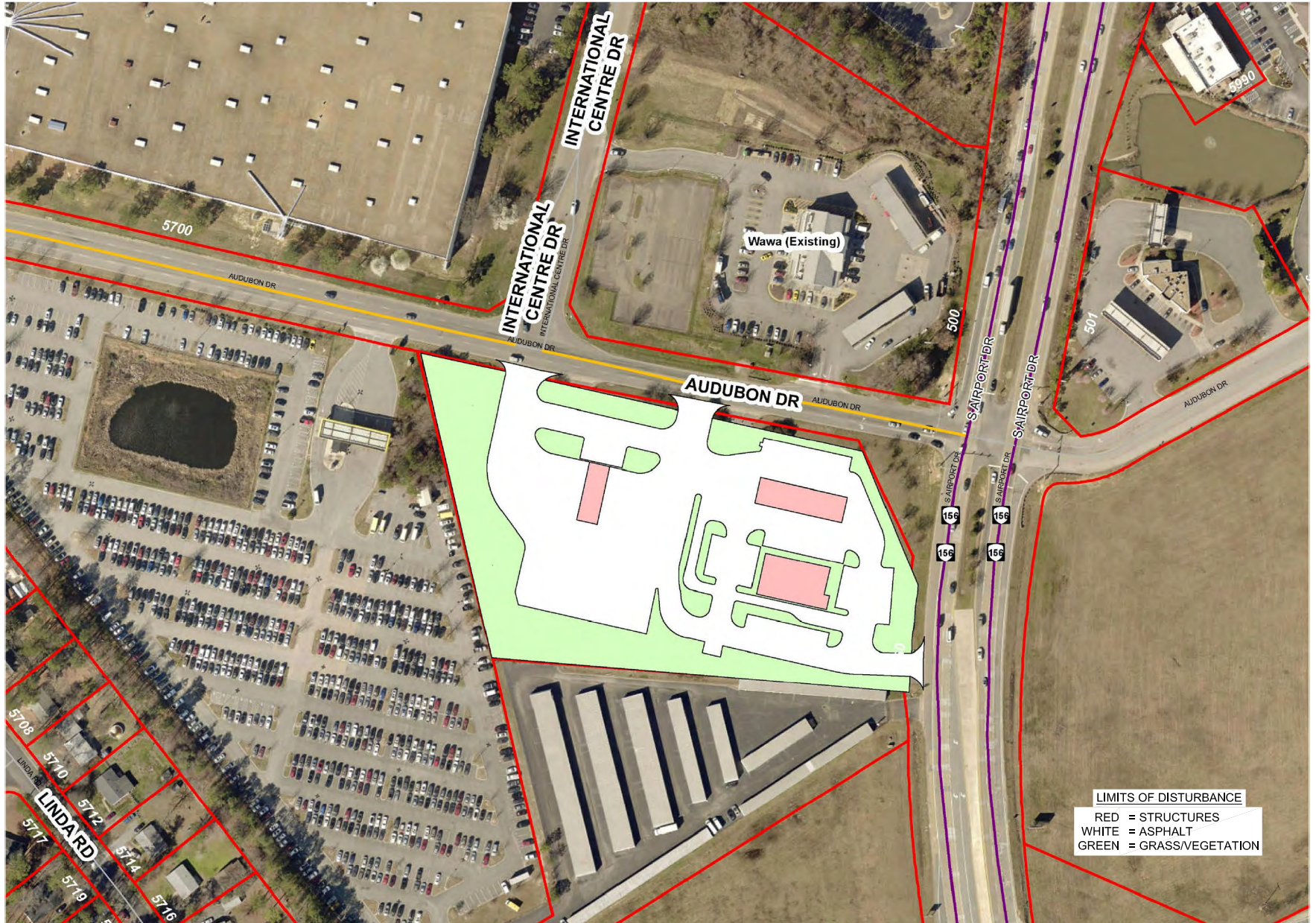


FORMER PARK AND RIDE FACILITY
 AUDUBON AND S. AIRPORT DRIVE
 SANDSTON,
 VIRGINIA

DRAWN BY:
 CAB
 CHECKED BY:
 ARH

DATE:
 DEC 2019
 SCALE:
 1" = 60'

PROJECT VICINITY
 MAP
 PROJECT NO. 19C13219.00
 FIGURE 1



FORMER PARK AND RIDE FACILITY
 AUDUBON AND S. AIRPORT DRIVE
 SANDSTON,
 VIRGINIA

DRAWN BY:
 CAB
 CHECKED BY:
 ARH

DATE:
 DEC 2019
 SCALE:
 N.T.S.

LIMIT OF DISTURBANCE
 (LOD) MAP
 PROJECT NO. 19C13219.00
 FIGURE 2

ATTACHMENT A

Biological Resources, USFWS (8 pages)



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
Phone: (804) 693-6694 Fax: (804) 693-9032
<http://www.fws.gov/northeast/virginiafield/>

In Reply Refer To:

July 17, 2020

Consultation Code: 05E2VA00-2020-SLI-4993

Event Code: 05E2VA00-2020-E-13864

Project Name: Former Park and Ride

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered

species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
 - USFWS National Wildlife Refuges and Fish Hatcheries
-

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Virginia Ecological Services Field Office

6669 Short Lane

Gloucester, VA 23061-4410

(804) 693-6694

Project Summary

Consultation Code: 05E2VA00-2020-SLI-4993

Event Code: 05E2VA00-2020-E-13864

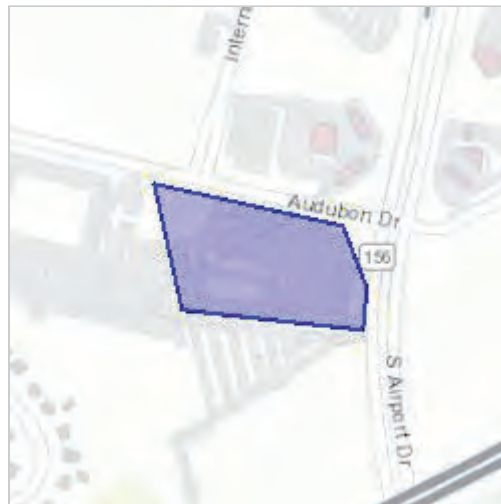
Project Name: Former Park and Ride

Project Type: DEVELOPMENT

Project Description: Redevelopment of a former Park and Ride facility

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/37.52350543629854N77.3299600602065W>



Counties: Henrico, VA

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

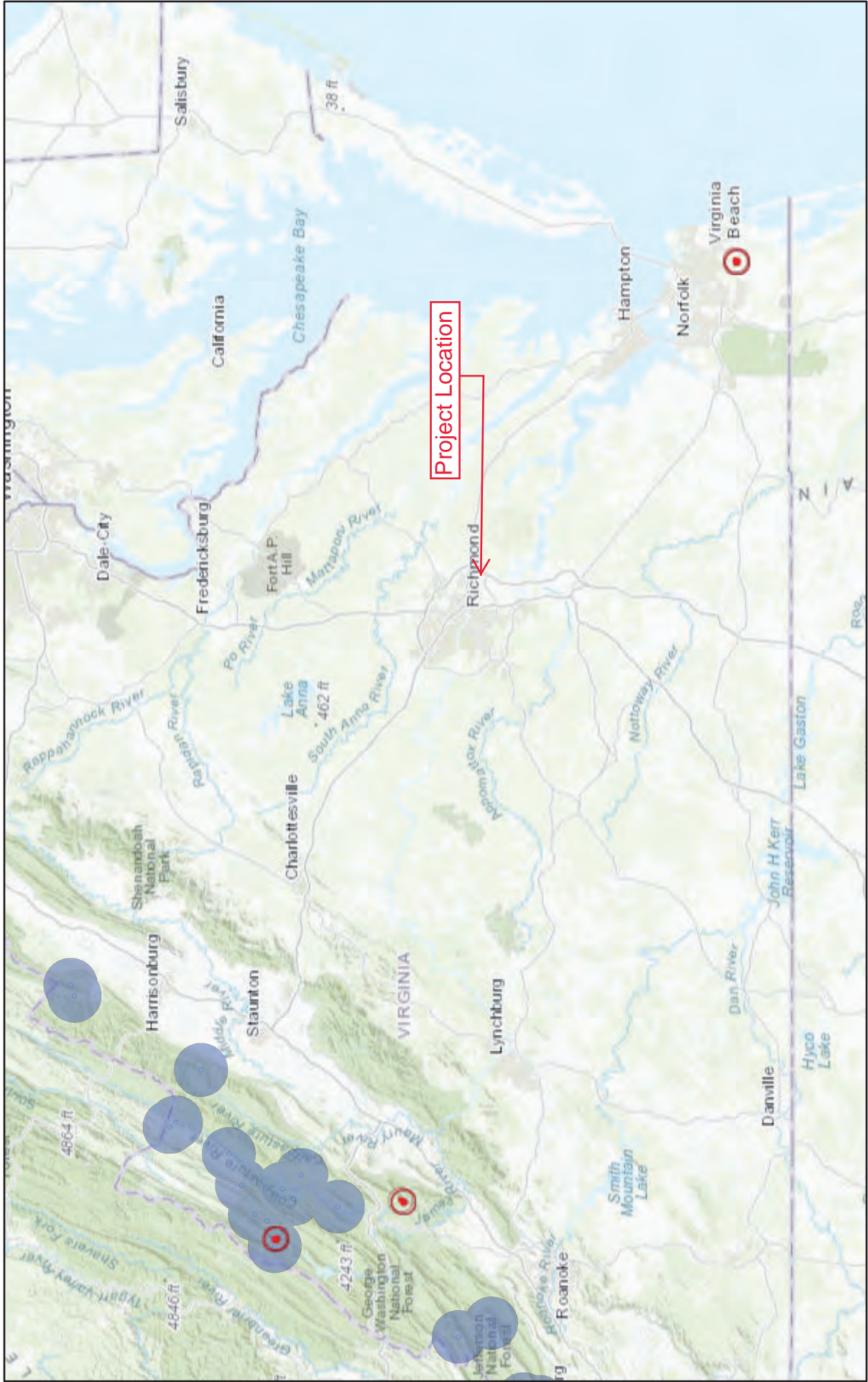
THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

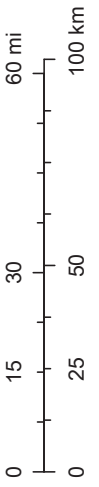
THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

NLEB Locations and Roost Trees



7/20/2020 1:58:59 PM

1:2,311,162

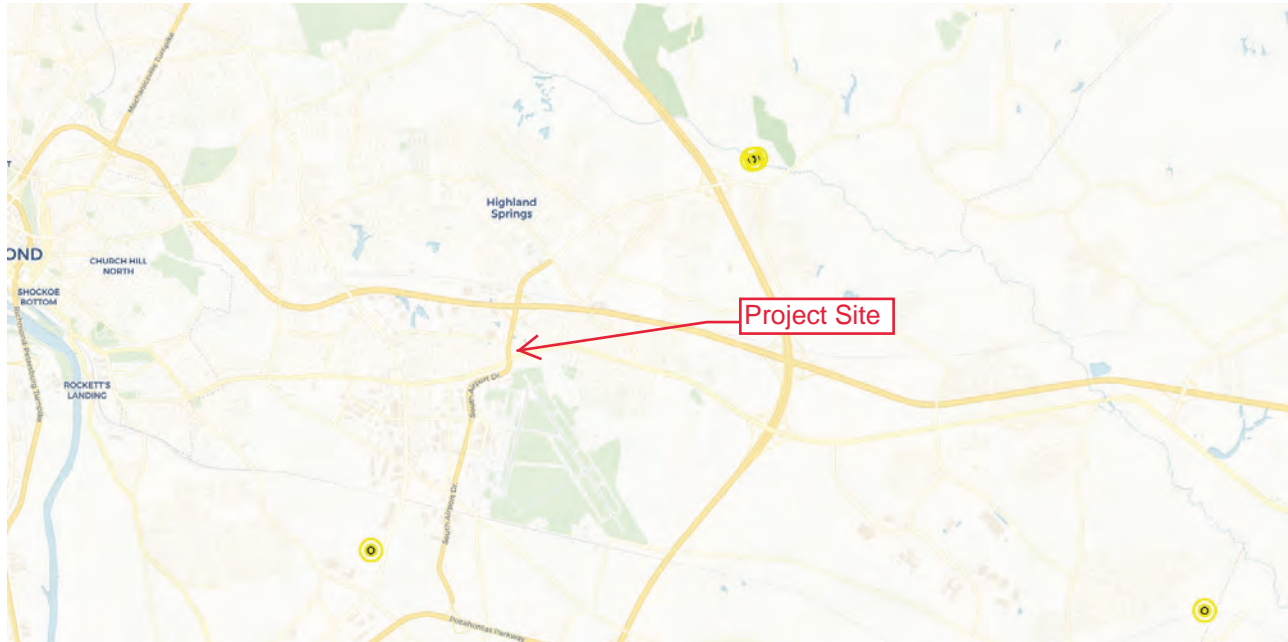


- NLEB Known Occupied Maternity Roost (Summer Habitat)
- NLEB Hibernaculum 5.5 Mile Buffer
- NLEB Hibernaculum Half Mile Buffer

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, Esri, HERE, Garmin, FAO, USGS, EPA, NPS |
 VA Dept. Game & Inland Fisheries



CCB Mapping Portal



Layers: VA Eagle Nest Locator, VA Eagle Nest Buffers, Eagle Roosts, Eagle Roost Polygons, Eagle Roost Buffers

Map Center [longitude, latitude]: [-77.30684280395508, 37.53239476867458]

Map Link:

https://ccbbirds.org/maps/#layer=VA+Eagle+Nest+Locator&layer=VA+Eagle+Nest+Buffers&layer=Eagle+Roosts&layer=Eagle+Roost+Polygons&layer=Eagle+Roost+Buffers&zoom=13&lat=37.53239476867458&lng=-77.30684280395508&legend=legend_tab_48a395c4-c080-11e5-8274-0ecfd53eb7d3&base=Street+Map+%28OSM%2FCarto%29

Report Generated On: 07/24/2020

The Center for Conservation Biology (CCB) provides certain data online as a free service to the public and the regulatory sector. CCB encourages the use of its data sets in wildlife conservation and management applications. These data are protected by intellectual property laws. All users are reminded to view the [Data Use Agreement](#) to ensure compliance with our data use policies. For additional data access questions, view our [Data Distribution Policy](#), or contact our Data Manager, Marie Pitts, at mlpitts@wm.edu or 757-221-7503.

Report generated by [The Center for Conservation Biology Mapping Portal](#).

To learn more about CCB visit ccbbirds.org or contact us at info@ccbbirds.org

ATTACHMENT B

CZMA Consistency Certification (35 pages)



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 1111 East Main Street, Richmond, Virginia 23219

Mailing address: P.O. Box 1105, Richmond, Virginia 23218

www.deq.virginia.gov

Matthew J. Strickler
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

March 9, 2020

Mr. John Rutledge
Capital Region Airport Commission
1 Richard E. Byrd Terminal Drive
Richmond International Airport, Virginia 23250-2606
Via email: jrutledge@flyrichmond.com

RE: Federal Consistency Certification for the Former Park and Ride Facility
Redevelopment, Richmond International Airport, Henrico County, DEQ 20-008F

Dear Mr. Rutledge:

The Commonwealth of Virginia has completed its review of the above-referenced Federal Consistency Certification (FCC) submitted for the proposed project at Richmond International Airport (RIC) in Henrico County. The Department of Environmental Quality (DEQ) is responsible for coordinating Virginia's review of FCCs and responding to appropriate officials on behalf of the Commonwealth. This letter is in response to the FCC dated January 7, 2020 (received January 9, 2020), prepared by Schnabel Engineering for the Capital Region Airport Commission. The following agencies and planning district commission participated in this review:

Department of Environmental Quality
Department of Conservation and Recreation
Department of Aviation
Department of Historic Resources
Department of Health
Department of Transportation
PlanRVA

In addition, the Department of Game and Inland Fisheries and Henrico County were invited to comment on the proposal.

PROJECT DESCRIPTION

The Capital Region Airport Commission (CRAC) proposes to make improvements to the former Park and Ride facility at the Richmond International Airport (RIC/Airport) in

Sandston, Henrico County, Virginia. The 9.38-acre site is located at the southeast corner of the intersection of Audubon and S. Airport Drives. The project site is a former park and ride facility that served the Airport and currently consists of an asphalt paved parking area, a 2,500 square-foot (sf) concrete slab (former building), concrete sidewalks and curbing, and landscaping. CRAC is working with Sheetz Inc. to redevelop the property as a convenience store and automotive fueling facility. The proposed Sheetz facility will include a single story, 6,077 sf store, underground storage tanks and associated dispenser islands, a drive through service lane, and up to 61 paved parking spaces. The existing paved areas and concrete slab will be demolished.

FEDERAL CONSISTENCY PUBLIC PARTICIPATION

In accordance with Title 15, Code of Federal Regulations (CFR), §930.2, the public was invited to participate in the review of the FCC. Public notice of this proposed action was published in OEIR's Program Newsletter and on the DEQ website from January 24, 2020 through February 14, 2020. No public comments were received in response to the notice.

FEDERAL CONSISTENCY UNDER THE COASTAL ZONE MANAGEMENT ACT

Pursuant to the Coastal Zone Management Act of 1972 (CZMA), as amended, and the federal consistency regulations implementing the CZMA (15 CFR, Part 930, Subpart D, Section 930.50 *et seq.*), projects receiving federal permits, licenses or approvals, which can affect Virginia's coastal uses or resources, must be constructed and operated in a manner which is consistent with the Virginia Coastal Zone Management (CZM) Program. The Virginia CZM Program is comprised of a network of programs administered by several agencies. In order to be consistent with the Virginia CZM Program, all the applicable permits and approvals listed under the [enforceable policies](#) must be obtained prior to commencing the project.

FEDERAL CONSISTENCY CONCURRENCE

Based on our review of the consistency certification and the comments submitted by agencies administering the enforceable policies of the Virginia CZM Program, DEQ concurs that the proposal is consistent with the CZM Program provided all applicable permits and approvals are obtained as described below. If, prior to construction, the project should change significantly and any of the enforceable policies of the Virginia CZM Program would be affected, pursuant to 15 CFR 930.66, the applicant must submit supplemental information to DEQ for review and approval. Other state approvals which may apply to this project are not included in this FCC. Therefore, the applicant must ensure that this project is constructed and operated in accordance with all applicable federal, state, and local laws and regulations.

FEDERAL CONSISTENCY ANALYSIS

According to information in the FCC, the proposed activity would have no effect on the following enforceable policies: fisheries management, subaqueous lands management, wetlands management, dunes management, point source pollution control, and shoreline sanitation. The resource agencies that are responsible for the administration of the enforceable policies of the Virginia CZM Program generally agree with findings of the FCC. The applicant must ensure that the proposed action is consistent with the aforementioned policies. In addition, in accordance with 15 CFR, Subpart D, §930.58(a)(3), DEQ encourages the applicant to consider project impacts on the [advisory policies](#) of the Virginia CZM Program. The analysis which follows responds to the discussion of the enforceable policies of the Virginia CZM Program that apply to this project.

1. Nonpoint Source Pollution Control. According to the FCC (page 2), an erosion and sediment control plan will be prepared that complies with the Virginia Erosion and Sediment Control Law and *Regulations* and will govern all land-disturbing activities. Post construction non-point source pollution control will meet Henrico County's Virginia Stormwater Management Program (VSMP) requirements. The requirements of the VSMP are listed in the *Henrico County Environmental Compliance Manual* and will be followed.

1(a) Agency Jurisdiction. The DEQ Office of Stormwater Management (OSWM) administers the nonpoint source pollution control enforceable policy through the *Virginia Erosion and Sediment Control Law and Regulations (VESCL&R)* and *Virginia Stormwater Management Law and Regulations (VSWML&R)*. In addition, DEQ is responsible for the issuance, denial, revocation, termination and enforcement of the Virginia Stormwater Management Program (VSMP) General Permit for Stormwater Discharges from Construction Activities related to municipal separate storm sewer systems (MS4s) and construction activities for the control of stormwater discharges from MS4s and land-disturbing activities under the Virginia Stormwater Management Program.

1(b) Requirements.

(i) Erosion and Sediment Control

The applicant is responsible for submitting a project-specific Erosion and Sediment Control Plan to Henrico County for review and approval pursuant to the local ESC requirements, if the project involves a land-disturbing activity of 10,000 square feet or more (2,500 square feet or more in a Chesapeake Bay Preservation Area). Depending on local requirements, the area of land disturbance requiring an ESC plan may be less. The ESC plan must be approved by the locality prior to any land-disturbing activity at the project site. All regulated land-disturbing activities associated with the project, including on and off site access roads, staging areas, borrow areas, stockpiles, and soil intentionally transported from the project, must be covered by the project specific ESC

plan. Local ESC program requirements must be requested through Henrico County. [Reference: Virginia Erosion and Sediment Control Law §62.1-44.15 *et seq.*; *Virginia Erosion and Sediment Control Regulations* 9 VAC 25-870-10 *et seq.*].

(ii) Stormwater Management

Depending on local requirements, a Stormwater Management (SWM) Plan may be required. Local SWM program requirements must be requested through Henrico County. [Reference: Virginia Stormwater Management Act §62.1-44.15 *et seq.*; *Virginia Stormwater Management (VSMP) Permit Regulations* 9 VAC 25-870-10 *et seq.*].

(iii) General VPDES Permit for Discharges of Stormwater from Construction Activities (VAR10)

The operator or owner of a construction project involving land-disturbing activities equal to or greater than one acre is required to register for coverage under the VAR10 permit and develop a project-specific stormwater pollution prevention plan (SWPPP). The SWPPP must be prepared prior to submission of the registration statement for coverage under the general permit, and it must address water quality and quantity in accordance with the *VSMP Permit Regulations*. General information and registration forms for the General Permit are available on DEQ's website at <http://www.deq.virginia.gov/Programs/Water/StormwaterManagement/VSMPPermits/ConstructionGeneralPermit.aspx>. [Reference: Virginia Stormwater Management Act 62.1-§44.15 *et seq.*] *VSMP Permit Regulations* 9 VAC 25-870-10 *et seq.*].

1(c) Recommendations. DEQ-PRO recommends that consideration should also be given to using permeable paving for parking areas and walkways where appropriate and denuded areas should be promptly revegetated following construction work.

1(d) Conclusion. The project, as proposed, is consistent with the nonpoint source pollution control enforceable policy of the CZM Program, provided the activities comply with ESC and SWM requirements as locally administered.

2. Point Source Pollution Control. The FCC (page 2) does not indicate that the proposed action will generate any new point source discharges.

2(a) Agency Jurisdiction. The point source program is administered by the State Water Control Board (DEQ) pursuant to Virginia Code §62.1-44.15. Point source pollution control is accomplished through the implementation of: (1) the National Pollutant Discharge Elimination System (NPDES) permit program established pursuant to Section 402 of the federal Clean Water Act and administered in Virginia as the Virginia Pollutant Discharge Elimination System permit program; and (2) the Virginia Water Protection Permit program administered by DEQ (Virginia Code §62.1-44.15:20 *et seq.*) and Water Quality Certification pursuant to Section 401 of the Clean Water Act.

2(b) Agency Findings. DEQ-PRO notes that the Airport has an existing VPDES permit (VA0090301) issued by DEQ.

2(c) Requirement. If the project scope changes and a discharge to state waters is anticipated, including changes to the stormwater system or infrastructure, then a VPDES permit modification may be required.

2(d) Conclusion. The proposed action is consistent with the point source pollution control enforceable policy of the Virginia CZM Program, provided the applicant complies with any modifications required of its VPDES permit.

3. Air Pollution Control. According to the FCC (page 2), during construction dust emissions will be controlled on as needed basis utilizing a water truck or similar equipment. New permanent sources of air emissions will result from the project from underground storage tanks (USTs) and fuel dispensers. USTs and dispensers will be equipped with the required vapor recovery systems. All required permitting will be obtained prior to operation.

3(a) Agency Jurisdiction. DEQ's Air Quality Division implements the federal Clean Air Act to provide a legally enforceable State Implementation Plan for the attainment and maintenance of the National Ambient Air Quality Standards. This program is administered by the State Air Pollution Control Board (DEQ) (Virginia Code §10-1.1300 through §10.1-1320).

3(b) Agency Finding. The DEQ Air Division confirms that the project is located in an ozone (O₃) attainment area and emission control area for oxides of nitrogen (NO_x) and volatile organic compounds (VOC).

3(c) Recommendation. All necessary precautions should be taken to restrict the emissions of VOCs and NO_x, principally by controlling or limiting the burning of fossil fuels.

3(d) Requirements.

(i) Fugitive Dust

During construction, fugitive dust must be kept to a minimum by using control methods outlined in 9 VAC 5-50-60 *et seq.* of the *Regulations for the Control and Abatement of Air Pollution*. These precautions include, but are not limited to, the following:

- Use, where possible, of water or chemicals for dust control;
- Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials;
- Covering of open equipment for conveying materials; and
- Prompt removal of spilled or tracked dirt or other materials from paved streets and removal of dried sediments resulting from soil erosion.

(ii) Open Burning

Should the project change to include the open burning of construction material, or the use of special incineration devices, this activity must meet the requirements under 9 VAC 5-130 *et seq.* of the *Regulations* for open burning, and may require a permit. The *Regulations* provide for, but do not require, the local adoption of a model ordinance concerning open burning. The applicant should contact Henrico County fire officials to determine what local requirements, if any, exist.

(iii) Asphalt Paving

In accordance with 9 VAC 5-45-780 there are limitations on the use of “cut-back” (liquefied asphalt cement, blended with petroleum solvents) that may apply to paving activities associated with the project. Moreover, there are time-of-year restrictions on its use during the months of April through October in VOC emission control areas.

3(e) Conclusion. The project, as proposed, is consistent with the air pollution control enforceable policy, provided the applicant obtains all applicable approvals prior to implementation of the project.

4. Coastal Lands Management. The FCC (page 1) states that the Engineering and Environmental Services Division of Henrico County’s Department of Public Works confirmed that Resource Protection Areas do not exist within the project site. The majority of the area surrounding the airport is considered a Resource Management Area. The project will include minimal land clearing which will not impact riparian buffers. All impacts will be temporary and restricted to areas already developed as part of the former park and ride facility.

4(a) Agency Jurisdiction. The DEQ Office of Watersheds and Local Government Assistance Programs (OWLGAP) administers the coastal lands management enforceable policy through the Chesapeake Bay Preservation Act (Bay Act) (Virginia Code §62.1-44.15 *et seq.*) and *Chesapeake Bay Preservation Area Designation and Management Regulations (Regulations)* (9 VAC 25-830-10 *et seq.*).

4(b) Agency Comments. DEQ- OWLGAP notes that the areas in Henrico County that are protected by the Chesapeake Bay Preservation Act (Bay Act), as locally implemented, require conformance with performance criteria. These areas include RPAs and Resource Management Areas (RMAs), as designated by the local government. RPAs include:

- tidal wetlands;
- certain non-tidal wetlands;
- tidal shores; and
- a 100-foot vegetated buffer area located adjacent to and landward of these features and along both sides of any water body with perennial flow.

RMAs, which require less stringent performance criteria, include:

- 100-year floodplains,
- highly erodible soils including steep slopes,
- highly permeable soils, and
- nontidal wetlands not included in RPAs.

Where the land contiguous to the RPA is not an RMA as previously defined, the RMA includes a 100-foot area contiguous to the RPA.

4(c) Agency Findings. DEQ-OWLGAP finds that it appears that the proposed project will not impact the RPA. However, the project may be located within a locally designated RMA.

4(d) Requirements. Projects impacting RMA must be consistent with the general performance criteria provisions of 9 VAC 25-830-130 of the *Regulations*. This would include:

- disturbing no more land than necessary to provide for the proposed use,
- minimizing impervious cover, and
- preserving indigenous vegetation to the maximum extent practicable consistent with the proposed use.

All land-disturbing activity exceeding 2,500 square feet must comply with the requirements of the *Virginia Erosion and Sediment Control Handbook*, Third Edition, 1992, and satisfy stormwater management criteria consistent with the water quality protection provisions of the *Virginia Stormwater Management Regulations*, 9 VAC 25-870-51 and 9 VAC 25-870-103.

4(e) Conclusion. Provided the applicant obtains local approval and adheres to the above requirements, the proposed action is consistent with the coastal lands management enforceable policy of the Virginia CZM Program.

ADDITIONAL ENVIRONMENTAL CONSIDERATIONS

In addition to the enforceable policies of the Virginia CZM Program, comments were also provided with respect to other applicable requirements and recommendations. The applicant must ensure that this project is constructed and operated in accordance with all applicable federal, state, and local laws and regulations.

1. Solid and Hazardous Waste Management.

1(a) Agency Jurisdiction. On behalf of the Virginia Waste Management Board, the [DEQ Division of Land Protection and Revitalization \(DEQ-DLPR\)](#) is responsible for carrying out the mandates of the Virginia Waste Management Act (Virginia Code §10.1-

1400 *et seq.*), as well as meeting Virginia's federal obligations under the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response Compensation Liability Act (CERCLA), commonly known as Superfund. DEQ-DLPR also administers laws and regulations on behalf of the State Water Control Board governing Petroleum Storage Tanks (Virginia Code §62.1-44.34:8 *et seq.*), including Aboveground Storage Tanks (9 VAC 25-91 *et seq.*) and Underground Storage Tanks (9 VAC 25-580 *et seq.* and 9 VAC 25-580-370 *et seq.*), also known as 'Virginia Tank Regulations', and § 62.1-44.34:14 *et seq.* which covers oil spills.

Virginia:

- Virginia Waste Management Act, Virginia Code § 10.1-1400 *et seq.*
- *Virginia Solid Waste Management Regulations*, 9 VAC 20-81
- (9 VAC 20-81-620 applies to asbestos-containing materials)
- *Virginia Hazardous Waste Management Regulations*, 9 VAC 20-60
- (9 VAC 20-60-261 applies to lead-based paints)
- *Virginia Regulations for the Transportation of Hazardous Materials*, 9 VAC 20-110.

Federal:

- Resource Conservation and Recovery Act, 42 U.S. Code sections 6901 *et seq.*
- U.S. Department of Transportation *Rules for Transportation of Hazardous Materials*, 49 Code of Federal Regulations, Part 107
- Applicable rules contained in Title 40, *Code of Federal Regulations*.

1(b) Agency Findings. DEQ-DLPR conducted a search of solid and hazardous waste databases (including petroleum releases) to identify waste sites in close proximity (200-foot radius) to the project area. The search did not identify any waste sites within the project area which might impact the project.

1(c) Recommendation. DEQ encourages all construction projects and facilities to implement pollution prevention principles, including the reduction, reuse, and recycling of all solid wastes generated. All generation of hazardous wastes should be minimized and handled appropriately.

1(d) Requirements.

(i) Waste Management

Any soil that is suspected of contamination or wastes that are generated during construction must be tested and disposed of in accordance with applicable federal, state, and local laws and regulations. All construction waste must be characterized in accordance with the *Virginia Hazardous Waste Management Regulations* prior to management at an appropriate facility. It is the applicant's responsibility to determine if a solid waste meets the criteria of a hazardous waste and be managed appropriately.

(ii) Petroleum Contaminated Soil

Due to the historical uses of the site and parcels in the vicinity, all necessary precautions should be taken to avoid or minimize potential environmental/health risks. Report the installation, relocation or removal of any above or below ground petroleum storage tank to DEQ-PRO. For any petroleum contaminated soil/groundwater that are encountered during the sub-surface phases of this project, contact the local Fire Marshall with any personal safety concerns and report the contamination to DEQ-PRO. The disposal of contaminated soils and groundwater should be done in accordance with DEQ regulatory guidelines (Virginia Code §§ 62.1-44.34.8 through 9 and 9 VAC 25-580-10 *et seq.*).

For questions or additional information regarding waste comments, contact DEQ-DLPR, Carlos Martinez at (804) 698-4575 or carlos.martinez@deq.virginia.gov.

2. Natural Heritage Resources.

2(a) Agency Jurisdiction.

(i) [The Virginia Department of Conservation and Recreation's \(DCR\) Division of Natural Heritage \(DNH\).](#)

DNH's mission is conserving Virginia's biodiversity through inventory, protection and stewardship. The Virginia Natural Area Preserves Act (Virginia Code §10.1-209 through 217), authorizes DCR to maintain a statewide database for conservation planning and project review, protect land for the conservation of biodiversity, and protect and ecologically manage the natural heritage resources of Virginia (the habitats of rare, threatened and endangered species, significant natural communities, geologic sites, and other natural features).

(ii) [The Virginia Department of Agriculture and Consumer Services \(VDACS\).](#)

The Endangered Plant and Insect Species Act of 1979 (Virginia Code Chapter 39 §3.1-1020 through 1030) authorizes VDACS to conserve, protect and manage endangered and threatened species of plants and insects. Under a Memorandum of Agreement established between VDACS and the DCR, DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species.

2(b) Agency Findings.

(i) Natural Heritage Resources

DCR-DNH searched its Biotics Data System (Biotics) for occurrences of natural heritage resources from the project area. According to the information currently in Biotics, natural

heritage resources have not been documented within the project boundary including a 100 foot buffer. The absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources. In addition, the project boundary does not intersect any of the predictive models identifying potential habitat for natural heritage resources.

(ii) State-listed Plant and Insect Species

DCR-DNH finds that the proposed activity will not affect any documented state-listed threatened and endangered plant or insect species.

(iii) State Natural Area Preserves

DCR finds that there are no State Natural Area Preserves under the agency's jurisdiction in the project vicinity.

2(c) Recommendations.

(i) Natural Heritage Resources

Contact DCR-DNH to secure updated information on natural heritage resources if the scope of the project changes and/or six months passes before the project is implemented, since new and updated information is continually added to the Biotics Data System.

(ii) Wildlife Resources and Protected Species

The Virginia Department of Game and Inland Fisheries (DGIF) maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in DCR's response. The database may be accessed at <http://vafwis.org/fwis/> or contact DGIF, Ernie Aschenbach at 804-367-2733 or ernie.aschenbach@dgif.virginia.gov.

3. Floodplain Management.

3(a) Agency Jurisdiction. The [DCR Division of Dam Safety and Floodplain Management \(DSFM\)](#) is the lead coordinating agency for the Commonwealth's floodplain management program and the National Flood Insurance Program (Executive Order 45 (2019)).

3(b) National Flood Insurance Program. According to the DCR Floodplain Management Program staff, the National Flood Insurance Program (NFIP) is administered by the Federal Emergency Management Agency (FEMA), and communities who elect to participate in this voluntary program manage and enforce the program on the local level through that community's local floodplain ordinance. Each local floodplain ordinance must comply with the minimum standards of the NFIP,

outlined in 44 CFR 60.3; however, local communities may adopt more restrictive requirements in their local floodplain ordinance, such as regulating the 0.2% annual chance flood zone (Shaded X Zone).

3(c) Requirements. All development within a Special Flood Hazard Area (SFHA), as shown on the locality's Flood Insurance Rate Map (FIRM), must be permitted and comply with the requirements of the local floodplain ordinance. The DCR Floodplain Management Program does not have regulatory authority for projects in the SFHA. The applicant must coordinate with the local floodplain administrator for an official floodplain determination. If the project is located in the SFHA, the project must comply with the locality's floodplain ordinance and obtain a local permit. Failure to comply with the local floodplain ordinance could result in enforcement action from the locality.

To find flood zone information, use the Virginia Flood Risk Information System (VFRIS): www.dcr.virginia.gov/vfris.

4. Public Water Supply.

4(a) Agency Jurisdiction. [Virginia Department of Health \(VDH\) Office of Drinking Water \(ODW\)](#) reviews projects for the potential to impact public drinking water sources (groundwater wells, springs and surface water intakes). VDH administers both federal and state laws governing waterworks operation.

4(b) Agency Findings. VDH-ODW finds that there are no public groundwater wells within a 1-mile radius of the project site and no surface water intakes located within a 5-mile radius of the project site. The project is within the watershed of the Virginia-American Water Company Appomattox River (PWS ID 3670800) surface water source.

4(c) Requirements. Potential impacts to public water distribution systems must be verified by the local utility, as applicable.

4(d) Recommendations. Best Management Practices should be employed on the project site to protect water supply sources, including erosion and sediment controls and spill prevention controls and countermeasures.

For additional information, contact VDH-ODW, Arlene Fields Warren at (804) 864-7781 or arlene.warren@vdh.virginia.gov.

5. Transportation Impacts.

5(a) Agency Jurisdiction. The [Virginia Department of Transportation \(VDOT\)](#) provides comments pertaining to potential impacts to existing and future transportation systems.

5(b) Agency Findings. The VDOT Richmond District notes that the VDOT Ashland Residency has been reviewing the site plans for the facility and is currently working with

the Henrico County on approvals. The VDOT Richmond District has no concerns with the project.

For additional information, contact the VDOT Richmond District, Desmond Smallwood at (804) 774-1624 or desmond.smallwood@vdot.virginia.gov.

6. Historic and Archaeological Resources.

6(a) Agency Jurisdiction. The Department of Historic Resources (DHR) conducts reviews of projects to determine their effect on historic structures or cultural resources under its jurisdiction. DHR, as the designated State's Historic Preservation Office, ensures that federal actions comply with Section 106 of the *National Historic Preservation Act of 1966 (NHPA)*, as amended, and its implementing regulation at 36 CFR Part 800. The *NHPA* requires federal agencies to consider the effects of federal projects on properties that are listed or eligible for listing on the National Register of Historic Places. Section 106 also applies if there are any federal involvements, such as licenses, permits, approvals or funding.

6(b) Agency Findings. DHR notes that the FAA is in direct consultation with agency staff in accordance with Section 106 NHPA.

6(c) Requirement. If the project is a federal undertaking and is subject to Section 106 NHPA, the FAA will coordinate with DHR independently as required.

7. Aviation Impacts.

7(a) Agency Jurisdiction. The Virginia Department of Aviation's (DoAv) Airport Services Division provides airport sponsors and managers with technical assistance on a wide range of projects and issues, including the planning, design, construction and maintenance of airport facilities. The division manages funding programs for capital improvements, facilities and equipment, airport maintenance projects, and airport security; the General Aviation Voluntary Security Certification Program; the licensing program for public-use airports; and the registration program for private-use airports. The division conducts statewide aviation system planning and maintains the Virginia Air Transportation System Plan.

7(b) Agency Findings. DoAv staff finds that the proximity of the project to the Airport will require the CRAC to submit a 7460 form to the FAA.

7(c) Requirement. The 7460 form submission will initiate an airspace study to determine if the proposed structure will constitute a hazard to air navigation for aircraft landing and departing the Airport.

7(d) Conclusion. Provided the airspace study results in a Determination of No Hazard, DoAv has no objection to the project as presented.

For additional information regarding these comments, contact DoAv, Scott Denny at (804) 236-3638 or scott.denny@doav.virginia.gov.

8. Regional Review.

8(a) Agency Jurisdiction. In accordance with 15 CFR 930, Subpart A, § 930.6(b) of the *Federal Consistency Regulations*, DEQ, on behalf of the state, is responsible for securing necessary review and comment from other state agencies, the public, regional government agencies, and local government agencies, in determining the Commonwealth's concurrence or objection to a federal consistency certification.

8(b) Agency Findings. PlanRVA staff reviewed the consistency certification and solicited comments from member localities. PlanRVA reports that it received no comments from locality staff.

8(c) Conclusion. PlanRVA staff has no comments or concerns with the project.

For more information contact PlanRVA, Sarah Stewart at (804) 323-2033 or sstewart@planrva.org.

9. Pollution Prevention. DEQ advocates that principles of pollution prevention and sustainability be used in all construction projects as well as in facility operations. Effective siting, planning, and on-site Best Management Practices will help to ensure that environmental impacts are minimized. However, pollution prevention and sustainability techniques also include decisions related to construction materials, design, and operational procedures that will facilitate the reduction of wastes at the source.

9(a) Recommendations. We have several pollution prevention recommendations that may be helpful in the construction and maintenance of the facility:

- Consider development of an effective Environmental Management System (EMS). An effective EMS will ensure that the proposed project is committed to complying with environmental regulations, reducing risk, minimizing environmental impacts, setting environmental goals, and achieving improvements in its environmental performance. DEQ offers EMS development assistance and recognizes proponents with effective Environmental Management Systems through its Virginia Environmental Excellence Program (VEEP). VEEP provides recognition, annual permit fee discounts, and the possibility for alternative compliance methods.
- Consider environmental attributes when purchasing materials. For example, the extent of recycled material content, toxicity level, and amount of packaging should be considered and can be specified in purchasing contracts.
- Consider contractors' commitment to the environment when choosing contractors. Specifications regarding raw materials and construction practices can be included in contract documents and requests for proposals.

- Choose sustainable materials and practices for construction and design.
- Integrate pollution prevention techniques into maintenance and operations, to include inventory control for centralized storage of hazardous materials. Maintenance facilities should have sufficient and suitable space to allow for effective inventory control and preventive maintenance.

DEQ's Office of Pollution Prevention provides information and technical assistance relating to pollution prevention techniques and EMS. If interested, contact Meghann Quinn at (804) 698-4021 or meghann.quinn@deq.virginia.gov.

10. Pesticides and Herbicides. Should construction or maintenance require the use of pesticides or herbicides for landscape maintenance, these chemicals should be in accordance with the principles of integrated pest management. The least toxic pesticides that are effective in controlling the target species should be used.

Contact the Department of Agriculture and Consumer Services at (804) 786-3501 for more information.

11. Energy Conservation. Proposed structures should be planned and designed to comply with state and federal guidelines and industry standards for energy conservation and efficiency. The applicant is encouraged to incorporate the energy, environmental, and sustainability concepts listed in the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) rating system into the development and procurement of their projects.

11(a) Agency Recommendations. The energy efficiency of the new buildings can be enhanced by maximizing the use of the following:

- thermally efficient building shell components (roof, wall, floor, windows and insulation);
- facility siting and orientation with consideration towards natural lighting and solar loads;
- high-efficiency heating, ventilation, air conditioning systems;
- high-efficiency lighting systems and day-lighting techniques; and
- energy-efficient office and data processing equipment.

Contact the Department of Mines, Minerals and Energy, David Spears at (434) 951-6350 or david.spears@dmme.virginia.gov for additional information on energy conservation measures. For more information on the LEED rating system, visit www.leadbuilding.org.

12. Water Conservation. The following recommendations will result in reduced water use associated with the operation of the facility.

- Grounds should be landscaped with hardy native plant species to conserve water as well as lessen the need to use fertilizers and pesticides.

- Convert turf to low water-use landscaping such as drought resistant grass, plants, shrubs and trees.
- Low-flow toilets should be installed in new facilities. Otherwise, offset older toilets with a plastic jug of pebbles and water to minimize flushing.
- Consider installing low flow restrictors and aerators to faucets.
- Improve irrigation practices by:
 - upgrading sprinkler clock; water at night, if possible, to reduce evapotranspiration (lawns need only 1 inch of water per week, and do not need to be watered daily; overwatering causes 85% of turf problems);
 - installing a rain shutoff device; and
 - collecting rainwater with a rain bucket or cistern system with drip lines.
- Consider replacement of old equipment with new high-efficiency machines to reduce water useage.
- Check for and repair leaks (toilets and faucets) during regular routine maintenance activities.

REGULATORY AND COORDINATION NEEDS

1. Nonpoint Source Pollution Control.

1(a) Erosion and Sediment Control and Stormwater Management. The proposed project must comply with *Virginia's Erosion and Sediment Control Law* (Virginia Code § 62.1-44.15:55) and *Regulations* (9 VAC 25-840-10 *et seq.*) and *Stormwater Management Law* (Virginia Code § 62.1-44.15 *et seq.*) and *Regulations* (9 VAC 25-870-108 *et seq.*) as locally administered. Land-disturbing activities of 2,500 square feet or more in a CBPA would be regulated by *VESCL&R* and *VSWML&R*. Local erosion and sediment control, and stormwater management requirements should be coordinated with Henrico County, Department of Public Works at (804) 501-4393.

1(b) General Permit for Stormwater Discharges from Construction Activities (VAR10). For land-disturbing activities of equal to or greater than one acre, the applicant is required to apply for registration coverage under the Virginia Stormwater Management Program General Permit for Discharges of Stormwater from Construction Activities (9 VAC 25-880-1 *et seq.*). Specific questions regarding the Stormwater Management Program requirements should be directed to Henrico County, Department of Public Works at (804) 501-4393.

2. Point Source Pollution Control. The applicant must coordinate with the VPDES program at DEQ-PRO regarding any modifications that may be necessary to its existing VPDES permit (VA0090301). For additional information and coordination, contact DEQ-PRO, Joseph Bryan at (804) 527-5037 or joseph.bryan@deq.virginia.gov.

3. Air Pollution Control. This project may be subject to air quality regulations administered by the Department of Environmental Quality. The following sections of Virginia Administrative Code are applicable:

- asphalt paving operations (9 VAC 5-45-760 *et seq.*)
- fugitive dust and emissions control (9 VAC 5-50-60 *et seq.*); and
- open burning restrictions (9 VAC 5-130).

Contact Henrico County officials for information on any local requirements pertaining to open burning. For more information, contact DEQ-PRO, James Kyle at (804) 527-5047 or james.kyle@deq.virginia.gov.

4. Coastal Lands Management. The project must comply with the requirements of the Bay Act (Virginia Code §§ 62.1-44.15:67 through 62.1-44.15:78) and *Regulations* (9 VAC 25-830-10 *et seq.*) as administered by Henrico County. For coordination and approval, contact the Henrico County Department of Public Works at (804) 501-4393.

5. Solid and Hazardous Wastes. All solid waste, hazardous waste, and hazardous materials must be managed in accordance with all applicable federal, state, and local environmental regulations. Contact DEQ-PRO, Shawn Weimer at (804) 527-5028 or shawn.weimer@deq.virginia.gov, for information on the location and availability of suitable waste management facilities in the project area or if free product, discolored soils, or other evidence of contaminated soils are encountered.

5(a) Petroleum Contamination. Any petroleum contaminated soil or groundwater that is encountered during construction must be reported to DEQ-PRO, Robyne Bridgman at (804) 527-5057 or robayne.bridgman@deq.virginia.gov. In addition, contact the Henrico County Fire Marshall at (804) 501-4900 with any personal safety concerns.

6. Natural Heritage Resources. Contact DCR-DNH, Rene Hypes at (804) 371-2708 or rene.hypes@dcr.virginia.gov, to secure updated information on natural heritage resources if the scope of the project changes and/or six months passes before the project is implemented, since new and updated information is continually added to the Biotics Data System.

7. Floodplain Management. The redevelopment must comply with local floodplain management ordinances. Access DCR's Local Floodplain Management Directory at www.dcr.virginia.gov/dam-safety-and-floodplains/floodplain-directory, for contact information on the Henrico County floodplain administrator.

8. Water and Sewer Systems. Impacts to public water distribution and sanitary sewer systems should be coordinated with the local utility, as applicable. For additional information, contact VDH-ODW, Arlene Fields Warren at (804) 864-7781 or arlene.warren@vdh.virginia.gov.


9. Transportation Impacts. CRAC must continue to coordinate with the VDOT Ashland Residency on any necessary permits or permissions relating to impacts to the VDOT right-of-way.

10. Historic and Archaeological Resources. The FAA must continue to coordinate with DHR, Adrienne Birge-Wilson at (804) 482-6092 or adrienne.birge-wilson@dhr.virginia.gov, to ensure project compliance with Section 106 NHPA.

11. Aviation Impacts. Contact the FAA Washington Airports District Office at (703) 661-1355, regarding the submission of a 7460 form for a Determination of Hazard.

Thank you for the opportunity to review and respond to the Federal Consistency Certification for the Park and Ride Facility Redevelopment at the Richmond International Airport. Detailed comments of reviewing agencies are attached for your review. Please contact me at (804) 698-4204 or John Fisher at (804) 698-4339 for clarification of these comments.

Sincerely,



Bettina Rayfield, Program Manager
Environmental Impact Review and Long-Range
Priorities

Enclosures

Ec: Amy Ewing, DGIF
Robbie Rhur, DCR
Roger Kirchen, DHR
Arlene Fields Warren, VDH
Heather Wood, VDOT
Scott Denny, DoAv
Sarah Stewart, PlanRVA
John Vithoukas, Henrico County
Susan Stafford, FAA
Andrew Harrison, Schnabel Engineering



MEMORANDUM

TO: John Fisher, DEQ/EIR Environmental Program Planner

FROM: Carlos A. Martinez, Division of Land Protection & Revitalization Review Coordinator

DATE: February 5, 2020

COPIES: Sanjay Thirunagari, Division of Land Protection & Revitalization Review Manager; file

SUBJECT: Environmental Impact Review: 20-008F Former Park & Ride Redevelopment – Richmond International Airport in Sandston,, Virginia.

The Division of Land Protection & Revitalization (DLPR) has completed its review of the Federal Aviation Administration’s January 16, 2020 EIR for Former Park & Ride Redevelopment – Richmond International Airport in Sandston, Virginia.

Solid and hazardous waste issues were not addressed in the submittal. The submittal did not indicate that a search of Federal or State environmental databases was conducted. DLPR staff conducted a search (200 ft. radius) of the project area of solid and hazardous waste databases (including petroleum releases) to identify waste sites in close proximity to the project area. DLPR search did not identify any waste sites within the project area which might impact the project.

DLPR staff has reviewed the submittal and offers the following comments:

Hazardous Waste/RCRA Facilities – none in close proximity to the project areas.

CERCLA Sites – none in close proximity to the project areas.

Formerly Used Defense Sites (FUDS) – none in close proximity to the project areas.

Solid Waste – none in close proximity to the project areas.

Virginia Remediation Program (VRP) – none in close proximity to the project areas.

Petroleum Releases – none in close proximity to the project areas.

PROJECT SPECIFIC COMMENTS

None

GENERAL COMMENTS

Soil, Sediment, Groundwater, and Waste Management

Any soil, sediment or groundwater that is suspected of contamination or wastes that are generated must be tested and disposed of in accordance with applicable Federal, State, and local laws and regulations. Some of the applicable state laws and regulations are: Virginia Waste Management Act, Code of Virginia Section 10.1-1400 *et seq.*; Virginia Hazardous Waste Management Regulations (VHWMR) (9VAC 20-60); Virginia Solid Waste Management Regulations (VSWMR) (9VAC 20-81); Virginia Regulations for the Transportation of Hazardous Materials (9VAC 20-110). Some of the applicable Federal laws and regulations are: the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Section 6901 *et seq.*, and the applicable regulations contained in Title 40 of the Code of Federal Regulations; and the U.S. Department of Transportation Rules for Transportation of Hazardous Materials, 49 CFR Part 107.

Pollution Prevention – Reuse - Recycling

Please note that DEQ encourages all construction projects and facilities to implement pollution prevention principles, including the reduction, reuse, and recycling of all solid wastes generated. All generation of hazardous wastes should be minimized and handled appropriately.

If you have any questions or need further information, please contact Carlos A. Martinez by phone at (804) 698-4575 or email carlos.martinez@deq.virginia.gov.

Re: NEW PROJECT FAA Former Park & Ride Facility, DEQ #20-008F

1 message

Gavan, Lawrence <larry.gavan@deq.virginia.gov>
To: "Fisher, John" <john.fisher@deq.virginia.gov>

Thu, Jan 16, 2020 at 3:13 PM

(a) Agency Jurisdiction. The DEQ administers the nonpoint source pollution control enforceable policy of the VCP through the *Virginia Erosion and Sediment Control Law and Regulations (VESCL&R)* and *Virginia Stormwater Management Law and Regulations (VSWML&R)*.

(b) Erosion and Sediment Control Plan. The Applicant is responsible for submitting a project-specific erosion and sediment control (ESC) plan to the locality in which the project is located for review and approval pursuant to the local ESC requirements, if the project involves a land-disturbing activity of 10,000 square feet or more (2,500 square feet or more in a Chesapeake Bay Preservation Area). Depending on local requirements the area of land disturbance requiring an ESC plan may be less. The ESC plan must be approved by the locality prior to any land-disturbing activity at the project site. All regulated land-disturbing activities associated with the project, including on and off site access roads, staging areas, borrow areas, stockpiles, and soil intentionally transported from the project must be covered by the project specific ESC plan. Local ESC program requirements must be requested through the locality. [Reference: *Virginia Erosion and Sediment Control Law* §62.1-44.15 et seq.; *Virginia Erosion and Sediment Control Regulations* 9VAC25-840-10 et seq.]

(c) Stormwater Management Plan. Depending on local requirements, a Stormwater Management (SWM) plan may be required. Local SWM program requirements must be requested through the locality. [Reference: *Virginia Stormwater Management Act* §62.1-44.15 et seq.; *Virginia Stormwater Management (VSMP) Permit Regulations* 9VAC25-870-10 et seq.]

(d) General Permit for Stormwater Discharges from Construction Activities (VAR10). DEQ is responsible for the issuance, denial, revocation, termination and enforcement of the Virginia Stormwater Management Program (VSMP) General Permit for Stormwater Discharges from Construction Activities related to municipal separate storm sewer systems (MS4s) and construction activities for the control of stormwater discharges from MS4s and land disturbing activities under the Virginia Stormwater Management Program.

The operator or owner of a construction project involving land-disturbing activities equal to or greater than 1 acre is required to register for coverage under the General Permit for Discharges of Stormwater from Construction Activities and develop a project-specific stormwater pollution prevention plan (SWPPP). The SWPPP must be prepared prior to submission of the registration statement for coverage under the General Permit and the SWPPP must address water quality and quantity in accordance with the *VSMP Permit Regulations*. General information and registration forms for the General Permit are available at <http://www.deq.virginia.gov/Programs/Water/StormwaterManagement/VSMPPermits/ConstructionGeneralPermit.aspx> (Reference: VSWML 62.1-44.15 et seq.; VSMP Permit Regulations 9VAC 25-880 et seq.)

On Thu, Jan 16, 2020 at 11:42 AM Fulcher, Valerie <valerie.fulcher@deq.virginia.gov> wrote:

Good morning - this is a new OEIR review request/project:

Document Type: Federal Consistency Certific aon
Project Sponsor: Federal Aviaon Adminis traon



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 1111 East Main Street, Suite 1400, Richmond, VA 23219

Mailing address: P.O. Box 1105, Richmond, Virginia 23218

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Matthew J. Strickler
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

MEMORANDUM

TO: John Fisher, DEQ Office of Environmental Impact Review

FROM: Heather Mackey, DEQ Principal Environmental Planner

DATE: March 4, 2020

SUBJECT: DEQ #20-008F: FAA Richmond International Airport, Former Park & Ride Facility Redevelopment - Henrico County

We have reviewed the Federal Consistency Certification submittal for the proposed project and offer the following comments regarding consistency with the provisions of the *Chesapeake Bay Preservation Area Designation and Management Regulations* (Regulations).

In Henrico County, the areas protected by the *Chesapeake Bay Preservation Act* (CBPA), as locally implemented, require conformance with performance criteria. These areas include Resource Protection Areas (RPAs) and Resource Management Areas (RMAs) as designated by the local government. RPAs include tidal wetlands, certain non-tidal wetlands and tidal shores. RPAs also include a 100-foot vegetated buffer area located adjacent to and landward of these features and along both sides of any water body with perennial flow. RMAs, which require less stringent performance criteria, include 100-year floodplains, highly erodible soils, including steep slopes, highly permeable soils, and nontidal wetlands not included in RPAs. Where the land contiguous to the RPA is not an RMA as previously defined, the RMA includes a 100-foot area contiguous to the RPA.

The applicant proposes the redevelopment of a 9.38 acre site located at the southeast corner of the intersection of Audubon and South Airport Drive in Sandston, Virginia. The site is a former park and ride facility that served the Richmond International Airport, and currently consists of paved parking, sidewalks and driveways, a 2,500 square foot concrete slab (former building), and landscaping. The existing paved areas and concrete slab will be demolished. The site is proposed for redevelopment as a convenience store and automotive fueling facility, which will include a single story 6, 077 square foot store, underground storage tanks and associated dispenser islands, a drive through service land, and up to 61 paved parking spaces.

According to information provided by the applicant and confirmed by County staff, it appears that the proposed project will not impact the RPA. However, the project may be located within the County's designated Resource Management Area and as such, must be consistent with the general performance criteria provisions of §9VAC25-830-130 of the Regulations. This would include disturbing no more land than necessary to provide for the proposed use, minimizing impervious cover, and preserving indigenous vegetation to the maximum extent practicable consistent with the proposed use. All land disturbing activity exceeding 2,500 square feet must comply with the requirements of the *Virginia Erosion and Sediment Control Handbook*, Third Edition, 1992. Finally, stormwater management criteria consistent with the water quality protection provisions of the *Virginia Stormwater Management Regulations*, §9VAC25-870-51 and 9 VAC25-870-103, shall be satisfied.

Provided the above conditions are met, the proposed activity would be consistent with the Regulations and the *Chesapeake Bay Preservation Act*.

**MEMORANDUM
DEPARTMENT OF ENVIRONMENTAL QUALITY
Piedmont Regional Office**

4949-A Cox Road

Glen Allen, VA 23060

804/527-5020

TO: John Fisher
Environmental Program Planner

FROM: Kelley West
Environmental Planner

DATE: February 7, 2020

SUBJECT: Former Park & Ride Facility Redevelopment, Richmond International Airport
(20-008F).

I have reviewed the Federal Consistency Certification for the Richmond International Airport, former park and ride facility redevelopment in Henrico, VA. The project involves demolishing the existing concrete paved parking area and constructing a 6,077 sf convenience store and automotive fueling facility. This includes underground storage tanks, dispenser islands, and a drive through service lane and up to 61 paved parking spaces. My comments are as follows:

Water: Erosion and Sediment Control and Storm Water Management: DEQ has regulatory authority for the Virginia Pollutant Discharge Elimination System (VPDES) programs related to municipal separate storm sewer systems (MS4s) and construction activities. Erosion and sediment control measures are addressed in local ordinances and State regulations. Additional information is available at <http://www.deq.virginia.gov/Programs/Water/StormwaterManagement.aspx>. Non-point source pollution resulting from this project should be minimized by using effective erosion and sediment control practices and structures. Consideration should also be given to using permeable paving for parking areas and walkways where appropriate and denuded areas should be promptly revegetated following construction work. If the total land disturbance exceeds 10,000 square feet, an erosion and sediment control plan will be required; some localities also require an E&S plan for disturbances less than 10,000 square feet. A stormwater management plan may also be required. For any land disturbing activities equal to one acre or more, you are required to apply for coverage under the VPDES General Permit for Discharges of Storm Water from Construction Activities. The Virginia Stormwater Management Permit Authority is Henrico County. Specific questions regarding the Stormwater Management Program requirements should be directed to Henrico County or to Jamie Robb at DEQ-PRO (804) 527-5086.

VPDES: The Richmond International Airport is currently authorized to discharge via a VPDES permit (VA0090301). If the project scope changes and a discharge to state waters will be anticipated, including changes to the storm water system or infrastructure, a VPDES permit modification may be required. For additional information, please contact Joseph Bryan at (804) 527-5037.

Air: DEQ-PRO recommends the proposed actions shall operate in a manner consistent with air pollution control practices for minimizing emissions, especially during periods of high ozone.

Fugitive dust should be kept to a minimum, (9 VAC5-50-60). For further questions concerning air quality issues, please contact James Kyle at (804) 527-5047.

Waste: The generation or recovery of any hazardous waste materials should be tested and removed in accordance with the Virginia Hazardous Waste Management Regulations (9 VAC 20-60) and/or the Virginia Solid Waste Management Regulations (9 VAC 20-81). Please understand that it is the generator's responsibility to determine if a solid waste meets the criteria of a hazardous waste and as a result be managed as such. In addition, asbestos waste, lead waste, or contaminated residues generated must be handled and disposed of in accordance with the VSWMR or VHWMR as applicable. DEQ recommends that pollution prevention principles be implemented to reduce the amount of wastes at the source, such as the re-use and recycling of construction waste materials. If you have any questions concerning hazardous/solid waste management, please contact Shawn Weimer at (804)527-5028

Above/Underground Storage Tanks (AST/UST): Due to the historical uses of the site and parcels in the vicinity, all necessary precautions should be taken to avoid or minimize potential environmental/health risks. Please report the installation, relocation or removal of any above or below ground petroleum storage tank to DEQ Piedmont Regional Office. For any petroleum contaminated soil/groundwater that are encountered during the sub-surface phases of this project, please contact your Local Fire Marshall with any personal safety concerns and report any such contamination to DEQ-PRO. The disposal of contaminated soils and groundwater should be done in accordance with DEQ regulatory guidelines. If you have any further questions or concerns, please contact the DEQ-PRO at (804) 527-5020.

Re: NEW PROJECT FAA Former Park & Ride Facility, DEQ #20-008F

1 message

Birge-wilson, Adrienne <adrienne.birge-wilson@dhr.virginia.gov>
To: "Fisher, John (DEQ)" <John.Fisher@deq.virginia.gov>
Cc: "Walker, Genevieve J (FAA)" <Genevieve.J.Walker@faa.gov>

Fri, Feb 7, 2020 at 2:13 PM

DHR and the FAA have communicated regarding this project. If this project is a federal Undertaking and is subject to Section 106, the FAA will coordinate with DHR independently as required.

V/R,

Adrienne Birge-Wilson

Review and Compliance Division
Virginia Department of Historic Resources
[2801 Kensington Avenue](#)
Richmond, VA 23221
(804) 482-6092
adrienne.birge-wilson@dhr.virginia.gov

[Subscribe to DHR's Quarterly Newsletter](#)

On Thu, Jan 16, 2020 at 12:02 PM Kirchen, Roger <roger.kirchen@dhr.virginia.gov> wrote:

*Roger W. Kirchen, Director
Review and Compliance Division
Department of Historic Resources
[2801 Kensington Avenue](#)
Richmond, VA 23221
phone: 804-482-6091
www.dhr.virginia.gov*

----- Forwarded message -----

From: **Fulcher, Valerie** <valerie.fulcher@deq.virginia.gov>
Date: Thu, Jan 16, 2020 at 11:42 AM
Subject: NEW PROJECT FAA Former Park & Ride Facility, DEQ #20-008F
To: rr dgif-ESS Projects <essprojects@dgif.virginia.gov>, Roberta Rhur <robbie.rhur@dcr.virginia.gov>, odwreview (VDH) <odwreview@vdh.virginia.gov>, Carlos Martinez <carlos.martinez@deq.virginia.gov>, Kotur Narasimhan <kotur.narasimhan@deq.virginia.gov>, Lawrence Gavan <larry.gavan@deq.virginia.gov>, Daniel Moore <daniel.moore@deq.virginia.gov>, Holly Sepety <holly.sepety@deq.virginia.gov>, West, Kelley <kelley.west@deq.virginia.gov>, Roger Kirchen <roger.kirchen@dhr.virginia.gov>, rr EIR Coordination <eir.coordination@vdot.virginia.gov>, Sarah Stewart <sstewart@richmondregional.org>, <vit@henrico.us>, Stephen Denny <scott.denny@doav.virginia.gov>
Cc: John Fisher <john.fisher@deq.virginia.gov>

Good morning - this is a new OEIR review request/project:

Document Type: Federal Consistency Cerfic aon

Project Sponsor: Federal Aviaon Adminis traon

Project Title: Former Park & Ride Facility Redevelopment, Richmond Internaonal Airport

DEQ Project # 20-008F

1 message

Scott Denny <scott.denny@doav.virginia.gov>
To: John Fisher <John.Fisher@deq.virginia.gov>
Cc: John Rutledge <jrutledge@flyrichmond.com>

Thu, Jan 23, 2020 at 9:49 AM

Dear Mr. Fisher:

The Virginia Department of Aviation has reviewed the information package included in the January 16, 2020 e-mail depicting the proposed development on property formerly used as a Park and Ride Facility near the Richmond International Airport. It is our understanding it is the project sponsor's intent to develop the site as a Sheetz convenience store and refueling facility.

The proximity to the Richmond International Airport will require the project sponsor submit a 7460 form to the Federal Aviation Administration (FAA). This 7460 submission will initiate an airspace study to determine if the proposed structure will constitute a hazard to air navigation for aircraft landing and departing the Richmond International Airport. Provided the airspace study results in a "Determination of No Hazard" the Department has no objection to the project as presented.

Please feel free to contact me if you have any questions regarding this matter.

Sincerely,

S. Scott Denny
Senior Aviation Planner
Virginia Department of Aviation

--

S. Scott Denny
Senior Aviation Planner
Virginia Department of Aviation
804-236-3638
scott.denny@doav.virginia.gov

RE: NEW PROJECT FAA Former Park & Ride Facility, DEQ #20-008F

1 message

Sarah Stewart <SStewart@planrva.org>
To: John Fisher <john.fisher@deq.virginia.gov>

Fri, Feb 7, 2020 at 4:36 PM

John,

PlanRVA staff shared information about this review with staff of member localities. We received no comments in response. PlanRVA staff have review the materials provided about this review. We have no comments or concerns at this time.

Thank you,

Sarah

From: Fulcher, Valerie <valerie.fulcher@deq.virginia.gov>**Sent:** Thursday, January 16, 2020 11:42 AM**To:** rr dgif-ESS Projects <essprojects@dgif.virginia.gov>; Roberta Rhur <robbie.rhur@dcr.virginia.gov>; odwreview (VDH) <odwreview@vdh.virginia.gov>; Carlos Martinez <carlos.martinez@deq.virginia.gov>; Kotur Narasimhan <kotur.narasimhan@deq.virginia.gov>; Lawrence Gavan <larry.gavan@deq.virginia.gov>; Daniel Moore <daniel.moore@deq.virginia.gov>; Holly Sepety <holly.sepety@deq.virginia.gov>; West, Kelley <kelley.west@deq.virginia.gov>; Roger Kirchen <roger.kirchen@dhr.virginia.gov>; rr EIR Coordination <eir.coordination@vdot.virginia.gov>; Sarah Stewart <SStewart@planrva.org>; vit@henrico.us; Stephen Denny <scott.denny@doav.virginia.gov>**Cc:** John Fisher <john.fisher@deq.virginia.gov>**Subject:** NEW PROJECT FAA Former Park & Ride Facility, DEQ #20-008F**Good morning - this is a new OEIR review request/project:****Document Type: Federal Consistency Certification****Project Sponsor: Federal Aviation Administration****Project Title: Former Park & Ride Facility Redevelopment, Richmond International Airport****Location: Henrico County****Project Number: DEQ #20-008F****The document is attached.**

The due date for comments is **FEBRUARY 7, 2020**. You can send your comments either directly to JOHN FISHER by email (John.Fisher@deq.virginia.gov), or you can send your comments by regular interagency/U.S. mail to the Department of Environmental Quality, Office of Environmental Impact Review, 1111 East Main St., Richmond, VA 23219.

Re: NEW PROJECT FAA Former Park & Ride Facility, DEQ #20-008F

1 message

Warren, Arlene <arlene.warren@vdh.virginia.gov>
To: John Fisher <john.fisher@deq.virginia.gov>

Wed, Jan 22, 2020 at 5:49 PM

Project Name: Former Park & Ride Facility Redevelopment, Richmond International Airport
Project #: 20-008 F
UPC #: N/A
Location: Henrico Co.

VDH – Office of Drinking Water has reviewed the above project. Below are our comments as they relate to proximity to **public drinking water sources** (groundwater wells, springs and surface water intakes). Potential impacts to public water distribution systems or sanitary sewerage collection systems **must be verified by the local utility.**

There are no public groundwater wells within a 1-mile radius of the project site.

There are no surface water intakes located within a 5-mile radius of the project site.

The project is within the watershed of the following public surface water sources:

PWS ID Number	System Name	Facility Name
3670800	VIRGINIA-AMERICAN WATER CO	APPOMATTOX RIVER

Best Management Practices should be employed, including Erosion & Sedimentation Controls and Spill Prevention Controls & Countermeasures on the project site.

Virginia Department of Health – Office of Drinking Water appreciates the opportunity to provide comments. If you have any questions, please let me know.

Best Regards,

Arlene Fields Warren

GIS Program Support Technician

Office of Drinking Water

Virginia Department of Health

109 Governor Street

Richmond, VA 23219

(804) 864-7781

On Thu, Jan 16, 2020 at 11:42 AM Fulcher, Valerie <valerie.fulcher@deq.virginia.gov> wrote:

Re: NEW PROJECT FAA Former Park & Ride Facility, DEQ #20-008F

1 message

Smallwood, Desmond <desmond.smallwood@vdot.virginia.gov>

Tue, Jan 21, 2020 at 9:18 AM

To: John Fisher <John.Fisher@deq.virginia.gov>Cc: "McAdory, Liz" <liz.mcadory@vdot.virginia.gov>

Good Morning John,

In regards to the FAA Former Park & Ride Facility near the Richmond International Airport, the Richmond District Planning Department has no concerns. The Ashland residency has been reviewing the site plans for this facility and is currently working with the Henrico County on approvals. Please let me know if you have any questions or concerns.

Best,

Desmond A. Smallwood

Planning Specialist**Virginia Department of Transportation | Richmond District****2430 Pine Forest Drive | Colonial Heights, VA 23834****Work: 804-774-1624 | desmond.smallwood@vdot.virginia.gov**

On Tue, Jan 21, 2020 at 9:13 AM Smallwood, Desmond <desmond.smallwood@vdot.virginia.gov> wrote:

Great, thanks for the update.

Best,

Desmond A. Smallwood

Planning Specialist**Virginia Department of Transportation | Richmond District****2430 Pine Forest Drive | Colonial Heights, VA 23834****Work: 804-774-1624 | desmond.smallwood@vdot.virginia.gov**

On Tue, Jan 21, 2020 at 6:46 AM Butler, Robert <robert.butler@vdot.virginia.gov> wrote:

VDOT has been reviewing the site plan and is working with the County on approvals.

On Sun, Jan 19, 2020 at 2:35 PM Smallwood, Desmond <desmond.smallwood@vdot.virginia.gov> wrote:

Good Morning Robert,

Please see the forwarded email containing the EIR comment request for the former Park & Ride Facility Redevelopment near the Richmond International Airport in Henrico county. Please provide any comments or concerns you may have. Let me know if you have any questions.

Best,

Matthew J. Strickler
Secretary of Natural Resources

Clyde E. Cristman
Director



Rochelle Altholz
Deputy Director of
Administration and Finance

Russell W. Baxter
Deputy Director of
Dam Safety & Floodplain
Management and Soil & Water
Conservation

Thomas L. Smith
Deputy Director of Operations

COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

MEMORANDUM

DATE: February 7, 2020

TO: John Fisher, DEQ

FROM: Roberta Rhur, Environmental Impact Review Coordinator

SUBJECT: DEQ 20-008F, Former Park and Ride Facility Redevelopment, Richmond International Airport

Division of Natural Heritage

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

According to the information currently in Biotics, natural heritage resources have not been documented within the submitted project boundary including a 100 foot buffer. The absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources. In addition, the project boundary does not intersect any of the predictive models identifying potential habitat for natural heritage resources.

There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the DCR, DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects.

New and updated information is continually added to Biotics. Please re-submit project information and map for an update on this natural heritage information if the scope of the project changes and/or six months has passed before it is utilized.

The Virginia Department of Game and Inland Fisheries (VDGIF) maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in this letter. Their database may be accessed from <http://vafwis.org/fwis/> or contact Ernie Aschenbach at 804-367-2733 or Ernie.Aschenbach@dgif.virginia.gov.

Division of Dam Safety and Floodplain Management

Floodplain Management Program:

The National Flood Insurance Program (NFIP) is administered by the Federal Emergency Management Agency (FEMA), and communities who elect to participate in this voluntary program manage and enforce the program on the local level through that community's local floodplain ordinance. Each local floodplain ordinance must comply with the minimum standards of the NFIP, outlined in 44 CFR 60.3; however, local communities may adopt more restrictive requirements in their local floodplain ordinance, such as regulating the 0.2% annual chance flood zone (Shaded X Zone).

All development within a Special Flood Hazard Area (SFHA), as shown on the locality's Flood Insurance Rate Map (FIRM), must be permitted and comply with the requirements of the local floodplain ordinance.

State Agency Projects Only

[Executive Order 45](#), signed by Governor Northam and effective on November 15, 2019, establishes mandatory standards for development of state-owned properties in Flood-Prone Areas, which include Special Flood Hazard Areas, Shaded X Zones, and the Sea Level Rise Inundation Area. These standards shall apply to all state agencies.

1. Development in Special Flood Hazard Areas and Shaded X Zones
 - A. All development, including buildings, on state-owned property shall comply with the locally-adopted floodplain management ordinance of the community in which the state-owned property is located and any flood-related standards identified in the Virginia Uniform Statewide Building Code.
 - B. If any state-owned property is located in a community that does not participate in the NFIP, all development, including buildings, on such state-owned property shall comply with the NFIP requirements as defined in 44 CFR §§ 60.3, 60.4, and 60.5 and any flood-related standards identified in the Virginia Uniform Statewide Building Code.
 - (1) These projects shall be submitted to the Department of General Services (DGS), for review and approval.
 - (2) DGS shall not approve any project until the State NFIP Coordinator has reviewed and approved the application for NFIP compliance.
 - (3) DGS shall provide a written determination on project requests to the applicant and the State NFIP Coordinator. The State NFIP Coordinator shall maintain all documentation associated with the project in perpetuity.
 - C. No new state-owned buildings, or buildings constructed on state-owned property, shall be constructed, reconstructed, purchased, or acquired by the Commonwealth within a Special Flood Hazard Area or Shaded X Zone in any community unless a variance is granted by the Director of DGS, as outlined in this Order.

The following definitions are from Executive Order 45:

Development for NFIP purposes is defined in 44 CFR § 59.1 as "Any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials."

The Special Flood Hazard Area may also be referred to as the 1% annual chance floodplain or the 100-year floodplain, as identified on the effective Flood Insurance Rate Map and Flood Insurance Study. This includes the following flood zones: A, AO, AH, AE, A99, AR, AR/AE, AR/AO, AR/AH, AR/A, VO, VE, or V.

The Shaded X Zone may also be referred to as the 0.2% annual chance floodplain or the 500- year floodplain, as identified on the effective Flood Insurance Rate Map and Flood Insurance Study.

The Sea Level Rise Inundation Area referenced in this Order shall be mapped based on the National Oceanic and Atmospheric Administration Intermediate-High scenario curve for 2100, last updated in 2017, and is intended to denote the maximum inland boundary of anticipated sea level rise.

“State agency” shall mean all entities in the executive branch, including agencies, offices, authorities, commissions, departments, and all institutions of higher education.

“Reconstructed” means a building that has been substantially damaged or substantially improved, as defined by the NFIP and the Virginia Uniform Statewide Building Code.

Federal Agency Projects Only

Projects conducted by federal agencies within the SFHA must comply with federal Executive Order 11988: Floodplain Management.

DCR’s Floodplain Management Program does not have regulatory authority for projects in the SFHA. The applicant/developer must contact the local floodplain administrator for an official floodplain determination and comply with the community’s local floodplain ordinance, including receiving a local permit. Failure to comply with the local floodplain ordinance could result in enforcement action from the locality. For state projects, DCR recommends that compliance documentation be provided prior to the project being funded. For federal projects, the applicant/developer is encouraged reach out to the local floodplain administrator and comply with the community’s local floodplain ordinance.

To find flood zone information, use the Virginia Flood Risk Information System (VFRIS): www.dcr.virginia.gov/vfris

To find community NFIP participation and local floodplain administrator contact information, use DCR’s Local Floodplain Management Directory: www.dcr.virginia.gov/dam-safety-and-floodplains/floodplain-directory

The remaining DCR divisions have no comments regarding the scope of this project. Thank you for the opportunity to comment.

DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF AIR PROGRAM COORDINATION

ENVIRONMENTAL REVIEW COMMENTS APPLICABLE TO AIR QUALITY

TO: John Fisher

We thank OEIR for providing DEQ-AIR an opportunity to review the following project:

Document Type: **Federal Consistency Certification**
Project Sponsor: **Federal Aviation Administration**
Project Title: **Former Park & Ride Facility Redevelopment, Richmond International Airport**
Location: **Henrico County**
Project Number: **DEQ #20-008F**

Accordingly, I am providing following comments for consideration.

PROJECT LOCATION: X OZONE ATTAINMENT
AND EMISSION CONTROL AREA FOR NOX & VOC

REGULATORY REQUIREMENTS MAY BE APPLICABLE TO: X CONSTRUCTION
 OPERATION

STATE AIR POLLUTION CONTROL BOARD REGULATIONS THAT MAY APPLY:

1. 9 VAC 5-40-5200 C & 9 VAC 5-40-5220 E – STAGE I
2. 9 VAC 5-45-760 et seq. – Asphalt Paving operations
3. X 9 VAC 5-130 et seq. – Open Burning
4. X 9 VAC 5-50-60 et seq. Fugitive Dust Emissions
5. 9 VAC 5-50-130 et seq. - Odorous Emissions; Applicable to _____
6. 9 VAC 5-60-300 et seq. – Standards of Performance for Toxic Pollutants
7. 9 VAC 5-50-400 Subpart _____, Standards of Performance for New Stationary Sources, designates standards of performance for the _____
8. 9 VAC 5-80-1100 et seq. of the regulations – Permits for Stationary Sources
9. 9 VAC 5-80-1605 et seq. Of the regulations – Major or Modified Sources located in PSD areas. This rule may be applicable to the _____
10. 9 VAC 5-80-2000 et seq. of the regulations – New and modified sources located in non-attainment areas
11. 9 VAC 5-80-800 et seq. Of the regulations – State Operating Permits. This rule may be applicable to _____

COMMENTS SPECIFIC TO THE PROJECT:

All precautions are necessary to restrict the emissions of volatile organic compounds (VOC) and oxides of nitrogen (NO_x).



(Kotur S. Narasimhan)
Office of Air Data Analysis

DATE: January 16, 2020

Andrew Harrison

From: Wilder, Robin <wil47@henrico.us>
Sent: Tuesday, December 17, 2019 5:26 PM
To: Andrew Harrison
Cc: Cobb, Jen
Subject: RE: RPA/RMA 550 S Airport Dr.

Andrew:

There are no RPA features on this property. The only RMA component on the site are highly permeable soils which cover the entire parcel.

Robin.

Robin V. Wilder
Capital Projects Manager



Department of Public Works | Construction Division
10431 Woodman Rd, Glen Allen, VA 23060-4423
O: 804-727-8252 C: 804-349-5561 E: wil47@henrico.us

"If there is magic on this planet, it is contained in water." Loren Eiseley

From: Andrew Harrison <aharrison@schnabel-eng.com>
Sent: Tuesday, December 17, 2019 11:38 AM
To: Wilder, Robin <wil47@henrico.us>
Subject: RPA/RMA

Robin:

We are working with the Capital Region Airport Commission on a CZMA Certification for a development project on property owned by the airport. I wanted to check if the project site was within a RPA or RMA. An aerial of the development with the limit of design (LOD) identified. Is there an online map I can check?

Thanks,
Drew

Andrew R. Harrison, CPG
Senior Scientist

Schnabel Engineering
O 804.649.7035
9800 Jeb Stuart Parkway, Suite 100
Glen Allen, VA 23059
schnabel-eng.com



Build Better. Together.

Schnabel complies with the regulations of Title VI of the Civil Rights Act of 1964. Schnabel will also ensure that minorities will be afforded full opportunity to submit proposals and will not be discriminated against on the basis of race, color or national origin in consideration for an award.

NOTICE: The email domain @co.henrico.va.us is being retired in January 2020 and will no longer be valid. Please update your email contact or address book to use @henrico.us domain when contacting Henrico County Government staff.

ATTACHMENT C

Tribal Response Letters, Phase I Archaeological
Survey (61 pages)



PAMUNKEY INDIAN TRIBE

Terry Clouthier
Cultural Resource
Director

TRIBAL GOVERNMENT
Tribal Office

1054 Pocahontas Trail
King William, VA 23086

(804) 843-2109
FAX (866) 422-3387

THPO File Number: 2020-240

Date: 06/15/2020

Genevieve J. Walker
Environmental Protection Specialist
Washington Airports District Office
Federal Aviation Administration
13873 Park Center Road, Suite 490S
Herndon, VA 20171

RE: Airport Improvement Project, Richmond International Airport, Henrico County, Virginia

Dear Ms. Walker,

Thank you for contacting the Pamunkey Indian Tribe regarding the proposed undertaking to construct a Sheetz convenience store in the location of a former park and ride at the Richmond International Airport in Henrico County, Virginia. My office offers the following comments regarding the proposed undertaking.

My office would like to remain a consulting party for the remainder of this undertaking.

While the majority of the area is previously disturbed by the former park and ride, there are still areas along the eastern and western edges of the proposed area of potential effects (APE) that might contain undisturbed soils which could potentially contain sites of significance to the Tribe. Will these areas be subject to an archaeology survey? My office would like to review the results surveys of these areas once they are completed. If they will not be surveyed, please provide justification for such a decision to my office. This can include evidence that the area was previously surveyed and my office would like to review those surveys as well.

Additionally, my office would like to review the draft Environmental Assessment (EA) for this proposed undertaking once it is completed.

Thank you for considering our cultural heritage in your decision-making process.

If you have any questions feel free to email me at terry.clouthier@pamunkey.org

Andrew Harrison

From: Walker, Genevieve J (FAA) <Genevieve.J.Walker@faa.gov>
Sent: Friday, July 17, 2020 10:42 AM
To: Terry Clouthier
Cc: Andrew Harrison
Subject: RE: Airport Improvement Project, Richmond International Airport, Henrico County, Virginia
Attachments: JRIA RIC ParkRide Ph I report.pdf

Good morning Terry- I hope all is well with you. Attached is the Phase 1 Archaeological Report you requested on the proposed development of the Sheetz Gas Station and Convenience Store at Richmond International Airport. The results of the survey indicated the proposed project “will have no impact on potentially significant archaeological resources, and that no further testing is warranted.” Please let me know if you have further concerns about this site. Per your request, I will be forwarding the draft Environmental Assessment for your review, once it is finalized.

Please let me know if you would like me to set up a (virtual) briefing on the project. Please also be aware that we are coordinating with the Virginia Department of Historic Resources on this project as well. We are awaiting their concurrence of the results from this Phase 1 Survey.

I hope you and your tribe are healthy and appreciate the continued communications regarding airport projects!

Take care,
Genevieve

Genevieve Walker
Environmental Protection Specialist
Washington ADO
13783 Park Center Road, Suite 490S
Herndon, VA 20171
(703) 487-3979

---O--()--O---

From: Terry Clouthier <terry.clouthier@pamunkey.org>
Sent: Monday, June 15, 2020 2:40 PM
To: Walker, Genevieve J (FAA) <Genevieve.J.Walker@faa.gov>
Cc: aharrison@schnabel-eng.com
Subject: Airport Improvement Project, Richmond International Airport, Henrico County, Virginia

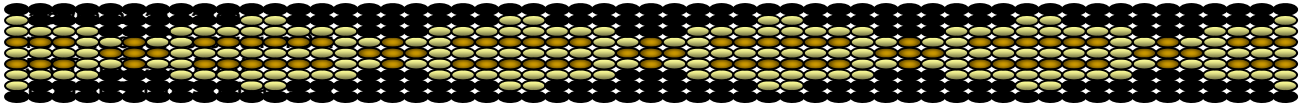
Good Afternoon,

Attached are our comments for the proposed undertaking.

Feel free to email if you have any questions.

Sincerely,

Terry Clouthier
Cultural Resource Director
Pamunkey Indian Tribe
1054 Pocahontas Trail
King William, VA 23086



Office 803-328-2427
Fax 803-328-5791

June 15, 2020

Attention: Genevieve J. Walker
Federal Aviation Administration
13873 Park Center Road, Suite 490-S
Herndon, VA 20171

Re. THPO #	TCNS #	Project Description
2020-40-5		Richmond International Airport, Henrico, VA

Dear Ms. Walker,

The Catawba have no immediate concerns with regard to traditional cultural properties, sacred sites or Native American archaeological sites within the boundaries of the proposed project areas. **However, the Catawba are to be notified if Native American artifacts and / or human remains are located during the ground disturbance phase of this project.**

If you have questions please contact Caitlin Rogers at 803-328-2427 ext. 226, or e-mail Caitlin.Rogers@catawba.com.

Sincerely,

Wenonah G. Haire
Tribal Historic Preservation Officer

**PHASE I ARCHAEOLOGICAL SURVEY
OF AN APPROXIMATELY 6.5-ACRE
FORMER PARK & RIDE FACILITY
AT 550 S. AIRPORT DRIVE
HENRICO COUNTY, VIRGINIA**

DHR File No. 2020-3701

June 2020

Prepared For:

Schnabel Engineering
9800 Jeb Stuart Parkway, Suite 100
Glen Allen, Virginia 23059

Prepared By:

Matthew R. Laird, Ph.D., RPA
James River Institute for Archaeology, Inc.
223 McLaws Circle, Suite 1
Williamsburg, Virginia 23185
(757) 229-9485

ABSTRACT

In June 2020, the James River Institute for Archaeology, Inc. (JRIA) completed a Phase I archaeological survey of an approximately 6.5-acre former Park & Ride facility located at 550 S. Airport Drive (Parcel ID# 822-716-2325) adjacent to the Richmond International Airport in Henrico County, Virginia. The parcel, which is owned by the Capital Region Airport Commission, will be developed with a convenience store with drive-through facilities and two fuel pump canopies.

The JRIA Phase I survey failed to identify any remaining portion of the historic boundary ditch previously recorded as Site 44HE0371. The extensive disturbances associated with the construction of the stormwater management pond and retaining berms within this mapped site vicinity would have destroyed any portion of this landscape feature within the project area. Similarly, the results of visual inspection and judgmental shovel testing within the accessible portions of the project area confirmed the results of the 2019 geotechnical boring report which indicated that the entire parcel is characterized by multiple feet of fill deposits over natural clay, with no evidence of intact buried topsoil layers. As a result, JRIA recommended that the proposed project will have no impact on potentially significant archaeological resources, and that no further testing is warranted.

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I. INTRODUCTION

Project Overview

In June 2020, the James River Institute for Archaeology, Inc. (JRIA) completed a Phase I archaeological survey of an approximately 6.5-acre former Park & Ride facility located at 550 S. Airport Drive (Parcel ID# 822-716-2325) adjacent to the Richmond International Airport in Henrico County, Virginia. The parcel, which is owned by the Capital Region Airport Commission, will be developed with a convenience store with drive-through facilities and two fuel pump canopies.

In electronic correspondence with Genevieve Walker of the Federal Aviation Administration (FAA) dated 4 June 2020, Architectural Historian Adrienne Birge-Wilson of the Virginia Department of Historic Resources (DHR) noted that the project area is located with the Savage Station Battlefield (DHR ID #043-0308), and coincides with a previously recorded historic boundary ditch feature, designated Site 44HE0371. “Although the currently impervious portions of the project area are not likely to contain intact archaeological sites,” she proposed, “the area labeled as ‘Potential Site Clearing’ on the project area vicinity map provided for our review may retain some integrity. To identify historic properties that may be impacted by this project, we recommend Phase I archaeological survey of the undeveloped portion of the project area” (DHR File No. 2020-3701).

Schnabel Engineering contracted with JRIA to complete a Phase I archaeological survey, which was designed to investigate previously recorded Site 44HE0371 and identify any additional archaeological resources within the undeveloped portions of the project area, and to obtain sufficient information to assess their potential eligibility for listing in the National Register of Historic Places (National Register). To accomplish this, all documentary research and archaeological field testing was conducted at a level in compliance with the Secretary of the Interior’s Standards and Guidelines for Archeological Documentation (48 FR 44734-37) and the DHR’s *Guidelines for Conducting Historic Resources Survey in Virginia* (2017).

Matthew R. Laird, Ph.D., RPA, served as Principal Investigator for the project. The archaeological fieldwork was conducted under the direction of JRIA Project Archaeologist Tony Smith, M.A., with the assistance of Tommy Kester, Rachel Gregor, and Kiana Wilkerson. The final report was authored by Dr. Laird with contributions from Mr. Smith.

Physical Description and Environmental Setting

The project area consists of a former Park & Ride facility which is located southwest of the intersection of S. Airport Drive (State Route [SR] 156) and Audubon Drive, in an area directly north of the Richmond International Airport in Henrico County, Virginia, which is predominantly characterized by commercial development (Figures 1-3). According to site signage, the facility has not been in active use since 2008. It is accessed by two entrances on Audobon Drive and one on S. Airport Drive, all of which

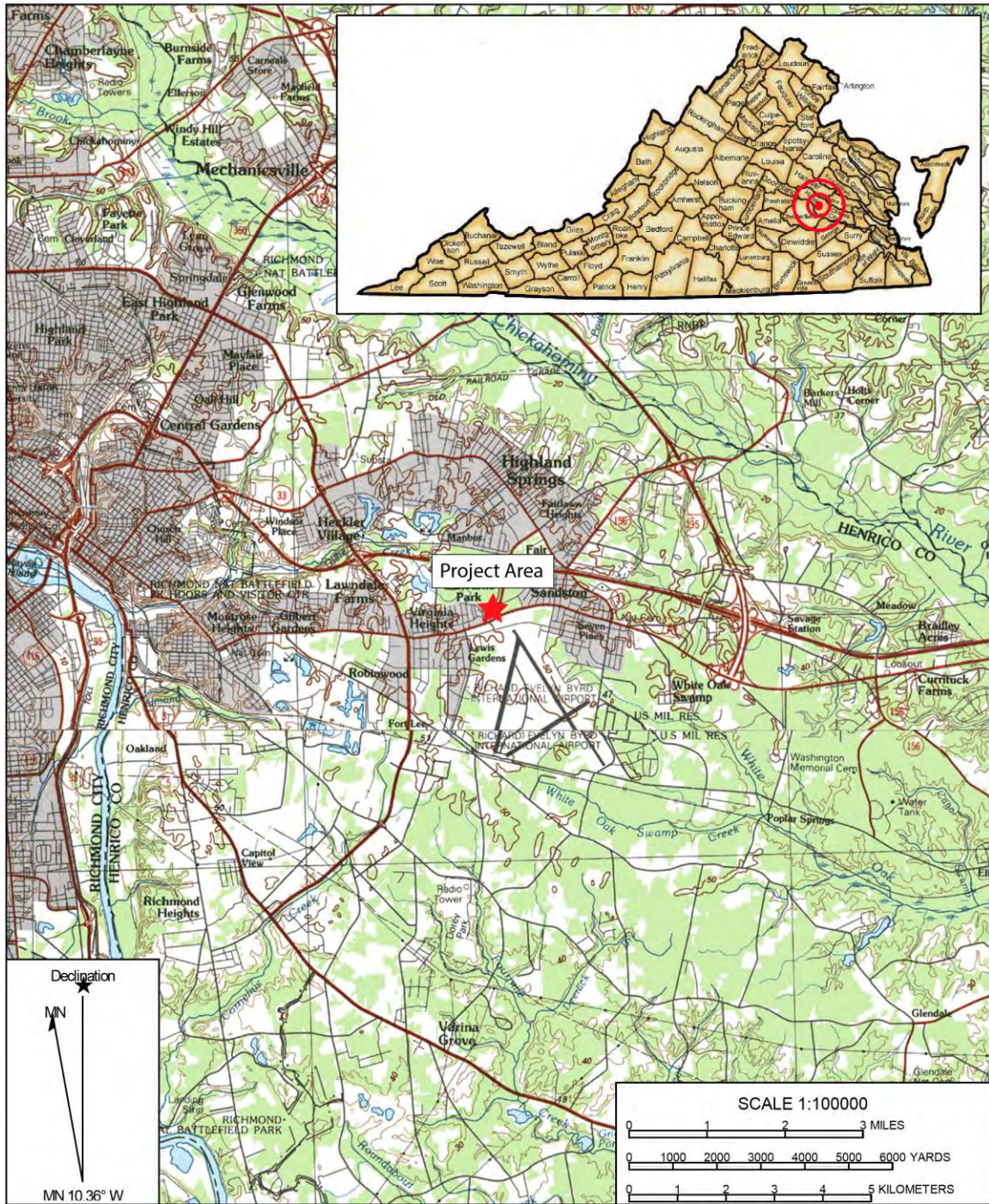


Figure 1. Location of the project area on detail of U.S.G.S. 1:100,000 Richmond topographic quadrangle map, 1984.

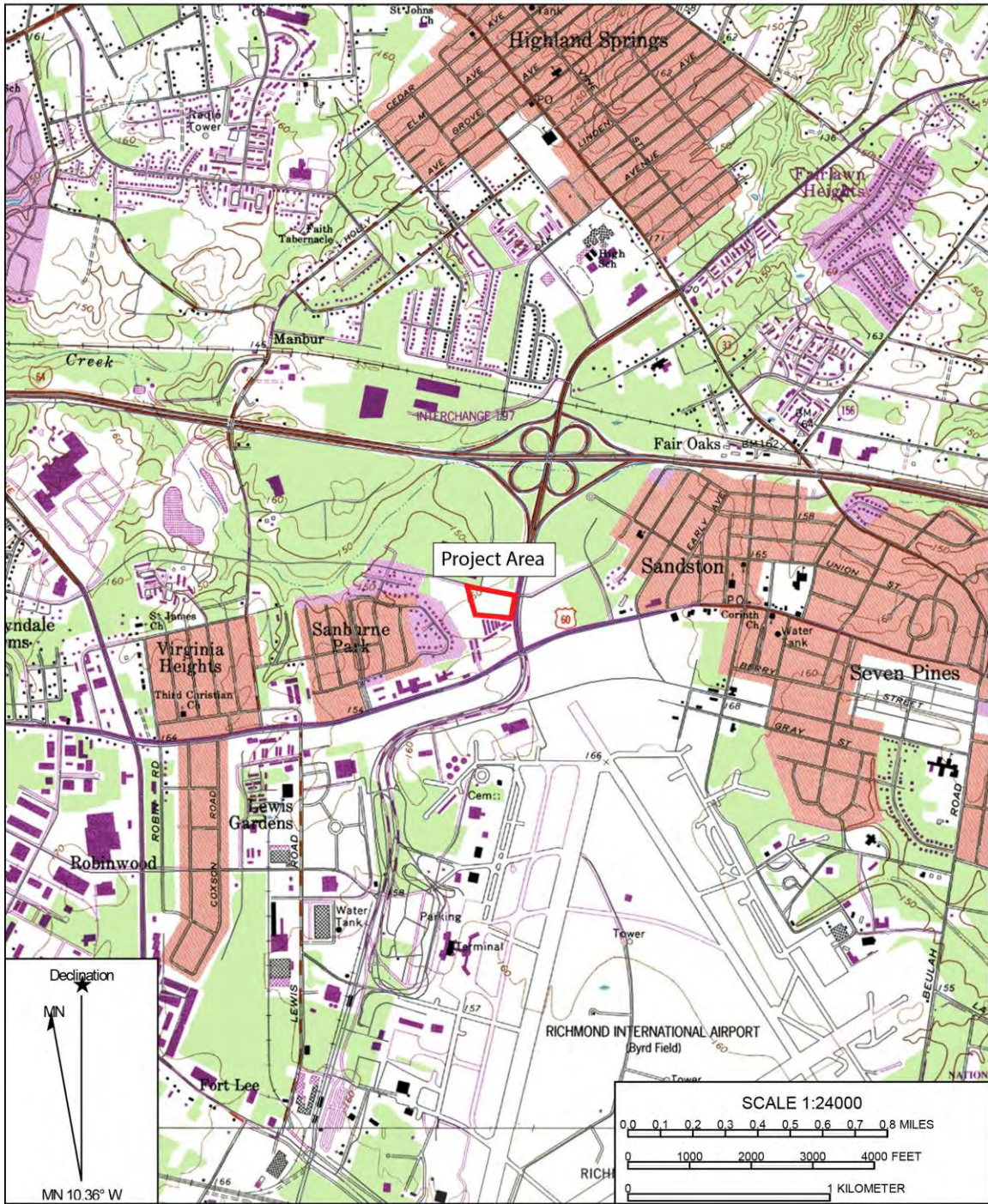


Figure 2. Location of the project area on detail of U.S.G.S. 7.5' Seven Pines topographic quadrangle map, 1994.



Figure 3. Location of the project area on a 2018 aerial photograph.

are currently barricaded. The majority of the parcel consists of impervious asphalt paving, with grassy islands of various sizes interspersed throughout, some of which include mature trees (Figure 4). The smaller islands tend to be at the same elevation as the surrounding pavement; however, some of the larger islands contain landscaped berms. There are larger, maintained grassy areas with landscaped berms along Audubon Drive, and at the intersection of Audubon Drive and S. Airport Drive (Figures 5-7). Marked subsurface utilities are present in these areas. No utilities were marked within the paved portion of the property; however, the presence of storm drains, fire hydrants, and parking lot lights suggests that there are numerous buried utilities throughout. The largest undeveloped portion of the property consists of an approximately 0.75-acre area in the northwest corner. Heavily wooded with mature trees and thick understory, this area consists entirely of a stormwater management pond and associated retaining berms evidently constructed at the same time as the Park & Ride facility in the 1980s (Figure 8).

Soil types mapped by the U.S. Department of Agriculture (U.S.D.A.) within the project area consist of Coxville silt loam (Cp) within the central portion of the project area (approximately 4.5 acres) and Lynchburg fine sandy loam (Ly) in the northeast corner and southwest portion (approximately 2.0 acres) (Figure 9). Coxville silt loam is a poorly drained soil type characteristic of depressions and marine terraces, and its agricultural productivity is severely restricted by wetness. Lynchburg fine sandy loam is found on marine terraces and, although also prone to wetness, can be converted to prime farmland if drained (U.S.D.A. Web Soil Survey 2020).

The entire former Park & Ride facility is elevated at least 2.0 feet above the adjacent roadways and developed parcels, suggesting that a substantial quantity of fill was introduced to elevate and level the site during construction. This observation was confirmed by a report on subsurface investigations conducted by GeoTechnologies, Inc. in August 2019 (Appendix). Subsurface investigations to evaluate site grading and foundation support considerations for the proposed development consisted of 40 soil test borings at various locations across the property. According to the report: “subsurface conditions on the site were characterized by near surface asphalt (about 5 to 16 inches) in most places with a thin veneer of topsoil (4 to 6 inches) in landscaped areas. The topsoil and pavement was typically underlain by near surface fill that extended to 2.5 to 5.5 feet below existing grade. The fill generally consisted of loose to dense silty and clayey sands. . . . Underlying the fill, the borings generally encountered low to high plasticity fill...[which] extended to the 20 foot boring termination depth.” The report further noted that: “the site is conducive to the development of a temporarily higher perched groundwater condition which occurs following periods of inclement weather due to ponding of surface water on the underlying clay strata.” Seasonal high groundwater was encountered at 1.0 feet below existing grade in the stormwater management pond, while it was typically encountered at a depth of 4-5 feet below grade at the interface between the near surface sandy fill and underlying clay. In summary, the results of the GeoTechnologies investigation suggested that the potential for encountering intact buried cultural deposits anywhere within the parcel was low (GeoTechnologies 2019).



Figure 4. Overview of the project area, view to the northwest.



Figure 5. Open area in the northwest corner of the project area, view to the northwest.



Figure 6. Open area along the south side of Audubon Drive, view to the east.



Figure 7. Open area at the intersection of S. Airport Drive and Audubon Drive, view to the northeast.



Figure 8. Stormwater management pond in the northwest portion of the project area.

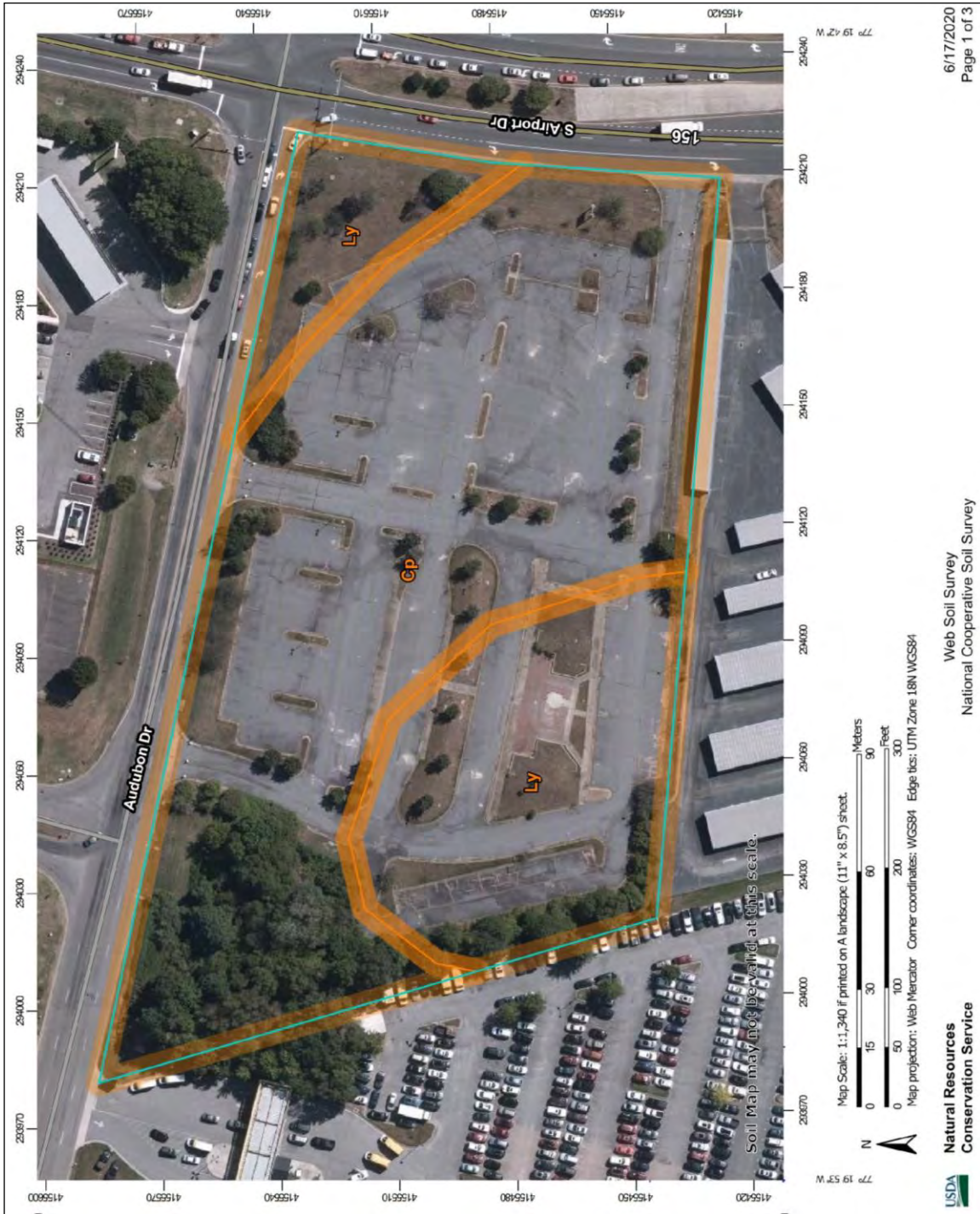


Figure 9. Mapped soil types within the project area (U.S.D.A. Web Soil Survey 2020).

II. CULTURAL CONTEXT

A. PREHISTORIC CONTEXT

Virginia's prehistoric cultural chronology is subdivided into three major time periods based on changes in subsistence as exhibited by material remains and settlement patterns. These divisions are known as the Paleoindian, Archaic, and Woodland periods. A brief summary of the regional cultural chronology follows, with comments on manifestations of each period within the project area vicinity.

Paleoindian (Prior to 10,000 B.C.)

Paleoindian occupation in Virginia, the first human occupation of the region, began some time before 10,000 B.C. The earliest recognized diagnostic artifacts are Clovis projectile points, typically fashioned of high quality cryptocrystalline materials such as chert, chalcedony, and jasper. Later Paleoindian points include smaller Clovis-like and Cumberland variants, small "Mid-Paleo" points, and, at the end of the period, Dalton, Hardaway-Dalton and Hardaway Side-notched points. Also diagnostic, though to a lesser extent, are certain types of well-made endscrapers, sidescrapers, and other formalized tools. Most current views now hold that eastern Paleoindians were generalized foragers with an emphasis on hunting. Social organization apparently consisted of relatively small bands that exploited a wide, but defined, territory (Gardner 1989: 5-52; Turner 1989: 71-94).

The majority of Paleoindian remains in Virginia are represented by isolated projectile point finds and what appear to be small temporary camps. Although some larger and very notable base camps are present in the state, they are relatively rare and usually associated with sources of preferred, high quality, lithic materials. The most important Paleoindian sites in Virginia, and in the eastern United States, are the Thunderbird Site in the Shenandoah Valley (Gardner 1974, 1977), the Williamson Site in south-central Virginia (McCary 1951, 1975, 1983), and the Cactus Hill Site in Sussex County (McAvoy and McAvoy 1997). Both the Thunderbird and Williamson sites are large base camps associated with local sources of high-grade cryptocrystalline lithic materials. At the Thunderbird site (44WR0011) and its environs, a site typology has been formulated which includes lithic quarries, quarry-related base camps, quarry reduction stations, base camp maintenance stations, outlying hunting sites, and isolated point sites (Gardner 1981, 1989). Cactus Hill (44SX202), located on the Nottoway River near Stony Creek, is characterized by stratified deposits associated with the Paleoindian through Woodland periods. The site has yielded numerous Clovis projectile points, and generated a radiocarbon date of 15,070 B.P. from a pre-Clovis occupation layer, which is characterized by artifacts in a pre-Clovis core blade tradition (McAvoy and McAvoy 1997).

Archaic (10,000-1200 B.C.)

The beginning of the Archaic Period generally coincided with the end of the Pleistocene epoch, marked in the region by a climatic shift from a moist, cool period to a warmer, drier climate. Vegetation also changed at this time from a largely boreal forest setting to a mixed conifer-deciduous forest. In eastern Virginia, a temperate climate was

established, and the formation of the Chesapeake estuary began. Increasing differences in seasonal availability of resources brought on by post-Pleistocene changes are thought to have coincided with increasing emphasis on strategies of seasonally geared mobility (Dent 1995:147).

Archaic populations likely were characterized by a band-level social organization involving seasonal movements corresponding to the seasonal availability of resources and, in some instances, shorter-interval movements. Settlement during this era probably involved the occupation of relatively large regions by single band-sized groups living in base camps during part of the year, and then dispersing as necessary during certain seasons, creating smaller microband camps that may have consisted of groups as small as single families. The Archaic period saw the development of more specialized resource procurement activities and associated technologies. These differences in material culture are believed to reflect larger, more localized populations, as well as changes in food procurement and processing methods. The Archaic Period also marked the beginning of ground stone technology, with the occurrence of ground atlatl weights and celts. New tool categories that developed during the Archaic include chipped and ground stone celts, ground stone net sinkers, pestles, pecked stones, mullers, axes, and, during the more recent end of the Late Archaic, vessels carved from soapstone quarried in the Piedmont (Custer 1990: 35-40; Geier 1990: 84-86, 93-94).

Early Archaic

Corner and side-notching became a common characteristic of projectile points at the beginning of the Archaic Period (Early Archaic), indicating changes in hafting technology and possibly the invention of the spear-thrower (atlatl). Notched point forms include Palmer and Kirk Corner-notched and, in localized areas, various side-notched types. The later end of the Early Archaic Period and the beginning of the Middle Archaic Period are marked by a series of bifurcate base projectile point forms that, in this area, are mainly represented by Lecroy points. As with the preceding Paleoindian period, the most common Early Archaic site locations were near the confluence of major streams and tributaries.

Middle Archaic

The Middle Archaic, ca. 6500 - ca. 3000 B.C., in Virginia was characterized by a notable increase in the number of occupation sites over the immediately preceding Early Archaic period, suggesting an increase in population most likely resulting from environmental stabilization. The Middle Archaic witnessed the rise of various stemmed projectile point forms; in this area of eastern Tidewater Virginia, the most common Middle Archaic artifact forms are, from oldest to youngest: Lecroy, Stanly, Morrow Mountain, and Guilford projectile point types, followed by the side-notched Halifax type at the end of the period as it transitions into the Late Archaic between ca. 3500 and 3000 B.C.

Late Archaic

The Late Archaic period, ca. 3000-1200 B.C., was dominated by stemmed and notched knife and spear point forms, including various large, broad-bladed stemmed knives and projectile points that generally diminish in size by the succeeding Early Woodland period (e.g., Savannah River points and variants). Also found, though less common, are stemmed and notched-stem forms identical to those associated more prominently with areas of Pennsylvania and adjoining parts of the northeast (Susquehanna and Perkiomen points).

Marked increases in population density and, in some areas, decreased mobility characterized the Late Archaic Period in the Middle Atlantic states and eastern North America as a whole. Locally, there is an increase in the numbers of late Middle Archaic (Halifax) and Late Archaic (Savannah River) sites over those of earlier periods, suggesting a population increase and/or intensity of use of this region between about 3500 B.C. and ca. 1200 B.C.

Agriculture in the Middle Atlantic region probably has its origins during this period. Yarnell (1976: 268), for example, writes that sunflower, sumpweed, and possibly goosefoot may have been cultivated as early as 2000 BC. In the lower Little Tennessee River Valley, remains of squash have been found in Late Archaic Savannah River contexts (ca. 2400 BC), with both squash and gourd in slightly later Iddins period contexts (Chapman and Shea 1981: 70). However, no cultigens have been found in Late Archaic contexts locally.

Woodland (1200 B.C. – ca. A.D. 1600)

The Woodland period was characterized by the introduction of ceramic technology, a gradually developing dependence on horticulture, and increased sedentism. Three sub-periods (Early, Middle, and Late Woodland) have been designated, based primarily on stylistic and technological changes in ceramic and projectile point types, as well as settlement patterns.

Early Woodland

The Early Woodland period, ca. 1200-500 B.C., is generally defined by the appearance of ceramics in the archaeological record. The earliest Woodland ceramic wares, Marcey Creek Plain and variants, are rectangular or oval and resemble the preceding Late Archaic soapstone vessels. These ceramics are followed by cord-marked, soapstone-tempered Selden Island ceramics, then by sand-and-grit-tempered Elk Island (Accokeek) ceramics with both plain and cord-marked surfaces. The latter traditionally were referred to as the Stony Creek series, although this type is now known to subsume several Early, Middle, and Late Woodland ceramic wares (Egloff 1991: 243-48).

Early Woodland sites in region typically consist of small camps in both riverine and lesser-order stream locations, particularly those also occupied slightly later in the earlier part of the Middle Woodland period.

Middle Woodland

The Middle Woodland period in this area, ca. 500 B.C. to A.D. 900, was marked by the appearance of net-marked, sand-tempered, and pebble-tempered pottery that generally spans the period ca. 500 B.C. to about A.D. 300 (Pope's Creek and Prince George wares). These ware types were supplanted by shell-tempered net- and cord-marked Mockley pottery until about A.D. 900 in areas lying east of the Fall Line. Local wares, such as Varina net-marked, were quite common in the Inner Coastal Plain, and have been dated to ca. A.D. 200/250 (Egloff 1991: 243-48).

Previous archaeological studies in the region have demonstrated the intensive use of small tributary streams as well as major river floodplains throughout the Middle Woodland period (ca. 500 B.C. and A.D. 900). Archaeologists have suggested that the Middle Woodland was characterized by "restricted wandering," in which groups used various campsites for several weeks at a time, obtaining needed materials in the site vicinity (Stewart 1992: 12-16).

Late Woodland

By the Late Woodland Period (A.D. 900-1600), agriculture had assumed a role of major importance in the prehistoric subsistence system. The adoption of agriculture represented a major change in the subsistence economy and patterns of settlement. The availability of large areas of arable land became a dominant factor in settlement location, and sites increasingly were located on fertile floodplain soils or on higher terraces or ridges adjacent to them.

Diagnostic artifacts of this period include several triangular projectile point styles that originated during the later part of the Middle Woodland period and decreased in size through time. Late Woodland ceramics from about A.D. 900 to the time of European contact in Tidewater Virginia include shell-tempered, Townsend, and Roanoke ceramics; untyped, sand-tempered, fabric-impressed ceramics that are otherwise similar to Townsend; and lithic- and sand-tempered simple-stamped ceramics similar to Gaston and Cashie types of North Carolina.

By the Late Woodland period, a significant number of villages and small hamlets appear to have been occupied on a more permanent basis. Some villages were highly nucleated while others were internally dispersed over a wide area. A number of villages were completely fortified by circular or oval palisades, indicating a rise in inter-group conflict, while others contained both a fortified core area and outlying houses. The more dispersed settlements were scattered over a wide area and characterized by fluid settlements within large, sprawling, and loosely defined town or village territories (Turner 1992: 108-114).

Drawings and journals of early European explorers describing Indian villages indicate that houses were constructed of oval, rectanguloid, or circular frameworks of flexible, green sapling poles set in the ground, lashed together, and covered with thatch or bark mats. Burial sites of the period were situated in individual pits or in ossuaries. Such historical accounts are consistent with data obtained from archaeological excavations of Coastal Plain Late Woodland village sites (Hodges and Hodges 1994).

With the development of a more sedentary settlement-subsistence system culminating in the Late Woodland period, permanent habitation sites gradually replaced base camp habitation sites more characteristic of those of previous foragers and hunter-gatherers. Various supporting camps and activity areas were established in the day-to-day procurement of food and other resources (i.e., short-term hunting and foraging camps, quarries, butchering locations, and re-tooling locations). Locations used partially or largely for ceremonial purposes were also present, usually in association with habitation sites. Late Woodland hamlets and villages typically are found on bluffs, terraces, or floodplains adjacent to rivers or major tributaries. Small seasonal camps and non-seasonally based satellite camps supporting nearby sedentary villages and hamlets are located along smaller streams in the interior. These campsites typically are characterized by limited concentrations and sparse scatters of lithics and ceramics (Turner 1992: 108-114).

During the time of the first English contact with the local Native Americans, the project area appears to have been located within the territory of the Arrohatocks. The Indians of the Arrohatock district were one of six groups that Powhatan controlled through inheritance rather than intimidation or conquest (Turner and Opperman 1995). The Arrohatock district was located on both sides of the James River, and the Jones Neck and Deep Bottom areas on each side of the river appear to have located at the eastern end of the territory. The Deep Bottom Site (44HE7/44HE38) appears to be a hamlet or a small village of the Late Woodland period, but the style/type of ceramic artifacts recovered there suggests a pre-contact settlement.

B. HISTORIC CONTEXT

Settlement to Society (1607-1750)

The project area has been included within the bounds of Henrico County since it was established officially in 1634. In Henrico, and throughout the Chesapeake, it was tobacco, above all, that determined the pattern of development in nearly every aspect of life in the colonial period, encompassing the economy, the cultural landscape, and social relations. By the end of the seventeenth century, tobacco cultivation remained the principal economic activity of every rank, from the largest landowner to the most humble tenant farmer. And once the system of tobacco monoculture had been established, it was nearly impossible to break free. Though prices for the crop in Europe fluctuated, often drastically, most planters preferred to stick with the staple, rather than risk an expensive investment of time and money in a less reliable export, such as grain (Kulikoff 1986: 4-5; Rutman and Rutman 1984: 41-43).

Above all, labor was the perennial problem of the planter. Without breaking entirely away from tobacco, the only way to combat a decline in prices was to increase production. Greater yields required more plants, and more plants needed the attention of more laborers. Planters had relied for decades on a steady stream of white indentured servants willing to trade seven years of their lives for passage to the colonies, and the chance ultimately to become planters themselves. Beginning in the 1680s, however, the

number of white servants arriving in Virginia was declining acutely. Desperate for workers, planters turned reluctantly to a new source: enslaved Africans. The implications of Tidewater's darkening complexion would be profound (Kulikoff 1986: 4-6; Rutman and Rutman 1984: 41-43, 165-66).

The transition from white to black labor throughout Tidewater laborer coincided with a lengthy period of economic instability. From the 1680s through the 1720s, Virginia suffered through a prolonged depression of the tobacco market. During this period, tobacco prices exceeded the costs of production in only one year out of five. To compound the problem, European wars regularly interrupted transatlantic trade. Chesapeake planters of all ranks responded by becoming more self-sufficient. Many shifted their focus from tobacco to other subsistence crops, such as wheat and corn; they also began to make their own cloth and consume a variety of local products. Released from the tyranny of tobacco, Virginians now had more time on their hands. More time allowed for increasing craft specialization, which in turn fed the growing demand for local products. As a result, Virginians were significantly more self-sufficient in 1750 than they had been at the turn of the eighteenth century. Increasingly, however, wealth in Tidewater was expressed in, and contingent upon, slaveholding. To consistently make a profit in tobacco by the mid-eighteenth century, a planter simply had to own slaves (Rutman and Rutman 1984: 184; Kulikoff 1986: 5).

Colony to Nation (1750-1789)

By 1750, the north bank of the James in Henrico County was dominated by the holdings of wealthy, politically influential plantation owners, while the interior was characterized by smaller farmsteads. Through mid-century tobacco remained a viable export crop, and local planters shipped their product via two new public warehouses on Four Mile Creek (Manarin and Dowdey 1984: 105, 115).

However, Tidewater Virginia's "Golden Age" of tobacco-based prosperity would be short-lived. By the second half of the eighteenth century even the great plantation-owning gentry was beginning to feel the pinch of a sputtering, century-old tobacco economy. After a few decades of prosperity, tobacco was once again on the decline by the 1760s and 1770s. Severe economic problems in England precipitated by the costly Seven Years' War reverberated throughout the colonies. Faced with economic ruin, English merchants began calling in their debts, which threatened the very foundation of the Tidewater economic system. For some time, Virginians of all ranks had relied on British credit to maintain, and gradually increase, their consumption of imported goods, thereby raising their standard of living. This constriction of credit threatened to topple even the most prominent planters (Kaplan 1993: 55, 67).

Aside from the movement of troops, Henrico County witnessed no significant military action until the theater of war turned to Virginia in the early part of 1781. In January of that year, Benedict Arnold and a force of 1,200 troops sailed up the James, disembarked at Westover and marched on Richmond, where they did considerable damage. In fact, the most destructive event in Henrico's experience of the war was the destruction of the bulk of the county's court records at the hands of the British (Manarin and Dowdey 1984: 141-48).

Ultimately, the Revolution established American independence, but it also effectively brought an end to Virginia's tobacco economy. During the war, the markets for Virginia tobacco were almost completely cut off, and planters were forced to diversify, turning primarily to corn, wheat, and livestock for export to the West Indies. As a result, by the 1790s, tobacco had virtually disappeared north of the James River (Kaplan 1993: 55, 67).

Early National Period (1789-1840)

By the end of the eighteenth century, nothing could revive Tidewater's flagging tobacco economy. With a restricted market for their staple crop, and the productivity of their land exhausted, Henrico County residents began to leave the county in significant numbers in the late eighteenth and early nineteenth centuries. Not even the county's most privileged families were entirely resistant to the attractive force of new western lands on Virginia's frontier and beyond. Many scions of the county's elite also pulled up stakes and struck out west. And, with the wholesale transition to a newly diversified agricultural economy that was less labor-intensive than tobacco cultivation, many of Henrico's slaves found themselves literally being sold "down the river" to the booming cotton and rice plantations of the Deep South (Manarin and Dowdey 1984).

A traveler passing between Williamsburg and Richmond in 1795 described what he saw along the River Road: "a few fields of Indian corn occasionally met my sight," he recorded, "and some new cleared grounds of considerable extent, but not a single field that was tolerably well cultivated, whereas I am assured that, within four miles on each side of the road, the lands are good and the plantations numerous." The houses along the road, he recalled, were "small, bad, and not numerous," and "inhabited by white people, who do not seem to be in easy circumstances" (Manarin and Dowdey 1984: 164).

Whatever their social standing, Henrico County farmers found themselves confronted in the early years of the nineteenth century by land that was simply worn out by decades of tobacco farming. Meanwhile, the prevailing agricultural practice of crop rotation every three years insured that even wheat and corn depleted the soils at an alarming rate. But it was not long before a small group of Virginians dedicated to "scientific agriculture" helped to usher in a new era of productive farming. In his series of essays entitled *Arator*, Caroline County's John Taylor demonstrated the benefits of four-field crop rotation, in which soils could be improved significantly by rotating corn, wheat, fertilizer, and clover. Similarly, in the early 1820s, Edmund Ruffin publicized the effectiveness of marl in reducing soil acidity, a technique that could triple the productivity of Tidewater soils. Other agricultural improvements included contour plowing to reduce erosion, cast iron plows, threshing machines, and corn shellers (Kaplan 1993: 87-88).

Antebellum Period (1840-1861)

Henrico County remained predominantly rural and agricultural in the first half of the nineteenth century. By 1830, the county's population was 12,737, with 5,716 (44.9 percent) white inhabitants, 5,932 (46.6 percent) enslaved African Americans, and 1,089

(8.5 percent) free blacks. Unlike many other declining Tidewater counties, the population of Henrico grew by more than 50 percent between 1790 and 1830, primarily because of its proximity to the new booming capital of Richmond (Manarin and Dowdey 1984: 165).

This period witnessed a profoundly transforming effect on county society, which had long been dominated by a small planter elite. Though Tidewater society remained influenced by aristocratic ideals, class distinctions were far less rigid than they had been during the eighteenth century. Social mobility was increasing, property was more evenly distributed between those who remained, and a new group of men, including doctors, preachers, prosperous farmers, merchants, and even skilled workmen, had claimed a new social and political influence. This emerging “middle class” was “literate, intelligent, enterprising, hospitable, and deeply religious.” Independent and self-assured, they were also politically aware and strong advocates of democracy (Kaplan 1993: 88-89).

Civil War (1861-1865)

Anticipating the Federal assault on the Confederate capital of Richmond in the spring of 1862, southern forces built an extensive network of fortifications around Richmond to protect it from capture. Five strong lines encircled the city, including an Interior Line consisting of 24 detached forts and batteries, and an Intermediate Line beyond. The outermost line of defense guarding against a land attack from the Peninsula was known as the Exterior (or Outer) Line, running northeast from the James River to the Seven Pines area, then west across the Chickahominy River and beyond the Mechanicsville Pike (Sommers 1981: 14-15).

The project area was located a short distance to the east of the Outer Line of Defenses, and between two important transportation routes leading directly to Richmond, the Williamsburg Road to the south and the Richmond and York River Railroad line to the north (Figure 10). According to detailed maps of eastern Henrico County drafted during the war years, the project area consisted of a mixture of cleared agricultural fields and woodland at that time, with no evidence of occupation in the immediate vicinity.

As a result of its situation along significant transportation routes to Richmond, the project area would see both direct fighting and peripheral action and troop movements during four significant Civil War engagements. These included the Battle of Seven Pines/Fair Oaks of 31 May-1 June 1862, the Battle of Oak Grove/French’s Field, King’s School House on 25 June 1862, and the Battle of Savage’s Station of 29 June 1862, all of which were part of the Seven Days Battles of the Peninsula Campaign of March-September 1862. Later in the war, during the Richmond- Petersburg Campaign, the project area vicinity would also see activity during the Battle of Fair Oaks & Darbytown Road of 27-28 October 1864. Of all these engagements, however, the project area would have been most directly affected by the Battle of Oak Grove, as it was situated within the core combat area.

The Battle of Oak Grove, also known as the Battle of French’s Field or King’s School House, was fought on 25 June 1862, and was the first of the Seven Days Battles of the Peninsula Campaign. After the indecisive Battle of Seven Pines on 31 May and 1 June, Union Major General George B. McClellan’s Army of the Potomac took up



Figure 10. Location of the project area on detail of *Richmond [1862-1865]* (Michler and Michie 1867).

static positions on the eastern fringes of Richmond, allowing the Army of Northern Virginia's commander, General Robert E. Lee, time to reorganize his forces and expand the defensive lines protecting the Confederate capital. After learning that Lee was about to receive reinforcements from Major General Thomas J. "Stonewall" Jackson's forces in the Shenandoah Valley, McClellan decided to take the initiative and advance his siege artillery closer to Richmond by taking the high ground on Nine Mile Road near Old Tavern. In preparation, he planned an attack on Oak Grove, to the south of Old Tavern and the York River Railroad, an area which had witnessed numerous clashes between pickets of both armies. Two divisions of the III Corps, commanded by Brigadier Generals Joseph Hooker and Philip Kearny, would advance to the west along the Williamsburg Road corridor against Confederate Major General Benjamin Huger's division (Wikipedia 2020).

On the morning of 25 June 1862, three Union brigades advanced and generally made good progress on their left and center, but the troops on the right ran into tough Confederate resistance which threw the entire attack out of alignment. At this point, Huger launched a counterattack which broke up the Federal advance and caused panicked confusion in one of their regiments. Learning of the reverse by telegraph, McClellan ordered a pause in the attack so that he could visit the front to assess the situation. Realizing that conditions were not as bad as he had feared, he ordered his men to retake the ground they had lost, and the fighting continued until nightfall. Although considered only a minor engagement, the Battle of Oak Grove would be McClellan's only tactical assault on Richmond, and cost of over 1,000 casualties on both sides for a gain of only 600 yards (Wikipedia 2020).

As detailed in the American Battlefield Protection Program (ABPP) map of the Battle of Oak Grove, the project area was traversed by North Carolina troops of Brigadier General Robert Ransom, Jr.'s brigade of Huger's division as they counterattacked the Excelsior Brigade of Brigadier General Daniel E. Sickles (Figures 11-12). In fact, it was the devastating volley of the 26th North Carolina Regiment of Ransom's Brigade which helped to break up the Union attack when they caused the opposing 71st New York Regiment to retreat in panic.

Reconstruction and Growth (1865-1917)

By the end of the Civil War, much of Henrico County's critical infrastructure had been destroyed. The combined loss of manpower and draft animals, the neglect of agricultural land, and the emancipation of the slave population had a detrimental effect on the county's economic and social landscape in the postwar era. Over the following years, property values plummeted: land that had sold for \$10 per acre before the war now fetched only \$1-3. In fact, the real estate market was so depressed that during their 1869-1870 session the General Assembly enacted a law prohibiting the sale of land for less than 75 percent of its assessed value (Kaplan 1993: 153-56).

In a pattern reminiscent of the early nineteenth century, postwar agricultural difficulties prompted Henrico farmers to seek alternative sources of income. The solution for many was to sell off the timber on their land for cash. Others simply left the county for jobs in Richmond or elsewhere. By the latter years of the nineteenth century,

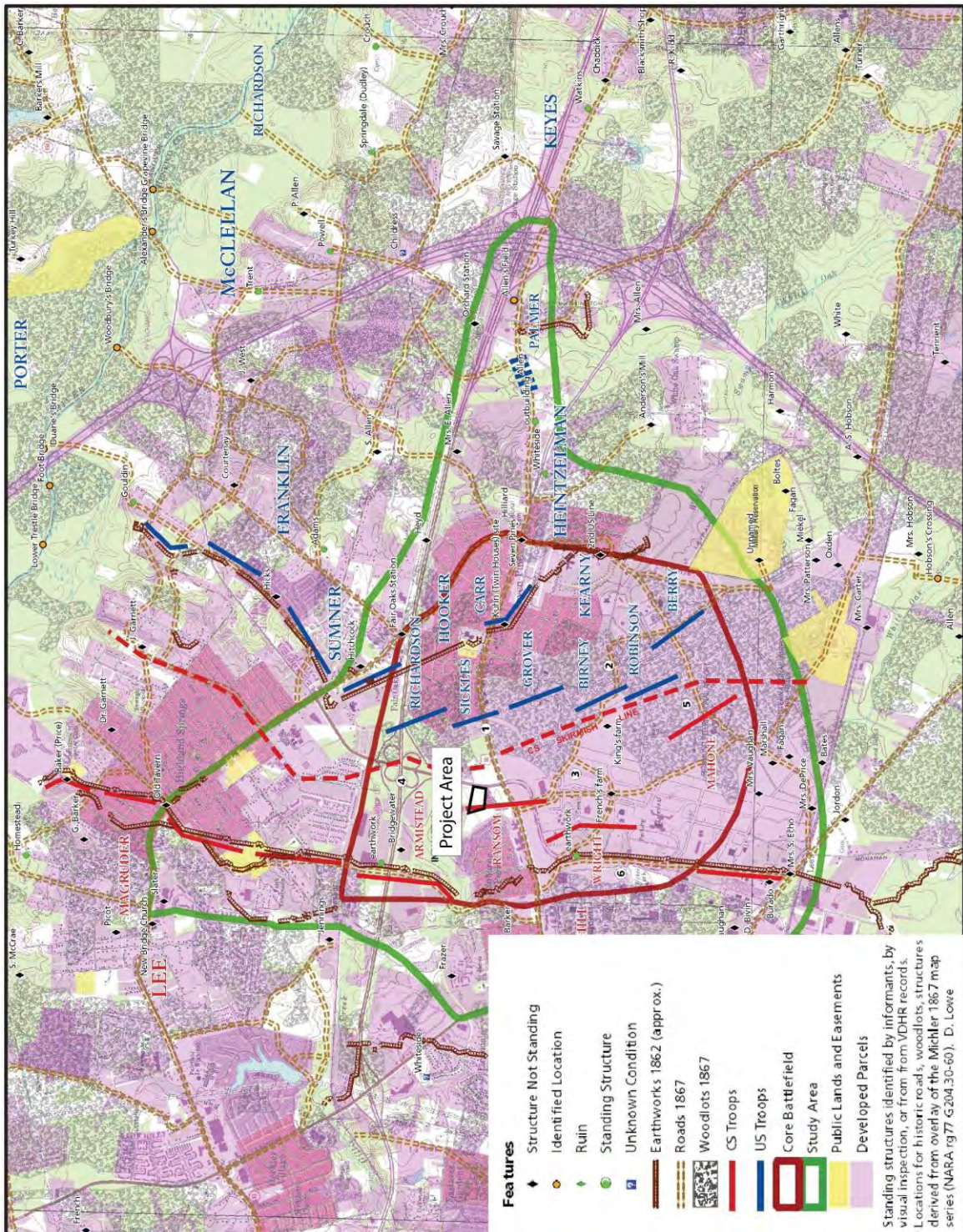


Figure 11. Location of the project area on *Battle of Oak Grove, King’s Schoolhouse, or French’s Field, June 25, 1862* (ABPP 2007).

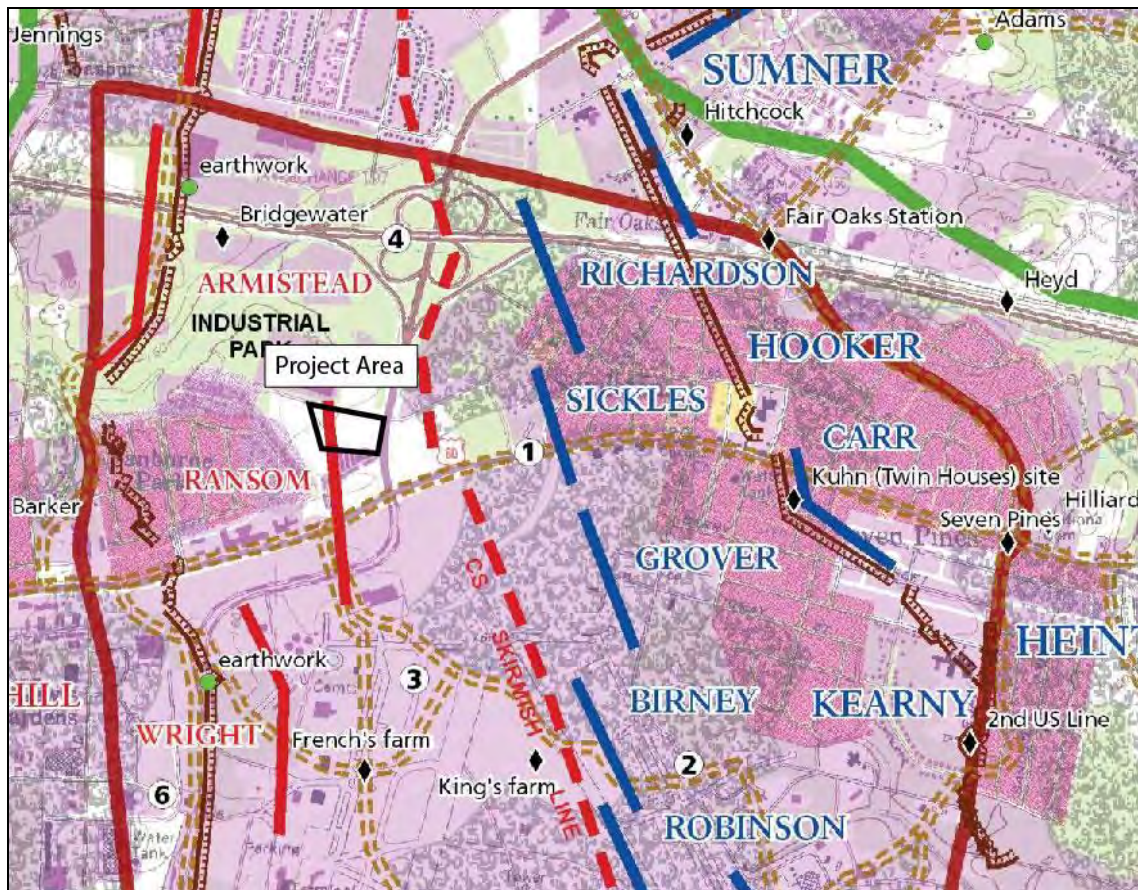


Figure 12. Location of the project area on detail of *Battle of Oak Grove, King's Schoolhouse, or French's Field, June 25, 1862* (ABPP 2007).

the face of Henrico County farming had shifted once again, this time to market gardening. In 1892, Virginia was producing upwards of \$7 million in produce. Canneries sprang up throughout the Tidewater counties, and, by 1900, the Old Dominion ranked third among states engaged in market farming and canning. Dairy farming also provided significant revenue for many area farmers. And farm fields neglected since the Civil War had produced stands of mature trees, providing ample resources for an expanding timber industry (Kaplan 1993: 180-81, 198; Manarin and Dowdey 1984: 340-341).

The most significant development in the project area vicinity in the latter years of the nineteenth century was the emergence of the nearby community of Highland Springs. New England developer Edmund Sewell Read, seeking a more healthful climate for his ailing wife, settled on this area east of Richmond. The name “Highland Springs” was chosen for the site, supposedly the highest ground between Richmond and the Chesapeake, and watered by at least nine springs. In 1890, Read purchased 1,000 acres along Nine Mile Road, moved his family from the Boston area, and began laying out lots for sale. Lots were advertised at prices ranging from \$50 to \$300, and Read’s company offered to lend money for building and as well as a year’s free pass to ride the suburban railroad, which ran from Richmond to Seven Pines. By 1893, the new community boasted 50 houses, a church, library, school, firehouse, and post office. The town received a boost when the Richmond Railway and Electric Company bought the commuter rail line, introducing an electric streetcar running from Seven Pines to the city (Manarin and Dowdey 1984).

According to the map of Henrico County published by T. Crawford Redd & Brother in 1901, the project area was encompassed by the Watson family’s 94-acre farm (Figure 13). It appears that the farmstead was located to the southeast of the project area along the Williamsburg Road.

World War I to World War II (1917-1945)

Beyond the limits of Highland Springs, Henrico County remained predominantly rural and agricultural throughout the first decades of the twentieth century. Principal crops included corn, oats, wheat, and tobacco, supplemented by barley, rye, clover, timothy grasses, and hay. Nurseries, orchards, and vineyards supplemented the traditional agricultural products. Dairy farms, including one of the county’s largest at Curles Neck, accounted for more than half of the county’s agricultural revenue during this period, and Henrico became known as “Virginia’s dairy county” (Manarin and Dowdey 1984: 368-70).

After the U.S. entered World War I in 1917, and many local industries were being converted to munitions production, a powder-bag loading plant was constructed on what is now Richmond International Airport property, with an associated civilian workers’ housing project nearby at Seven Pines. The plant was a joint product of the U.S. Government, DuPont Engineering Company, and the Chesapeake & Ohio Railroad. The plant officially opened in October 1918, only a month before the Armistice, and closed soon after. In the immediate postwar period, Richmond became a popular location for “barnstorming” airplane performances, and famous pilot Roscoe Turner established an

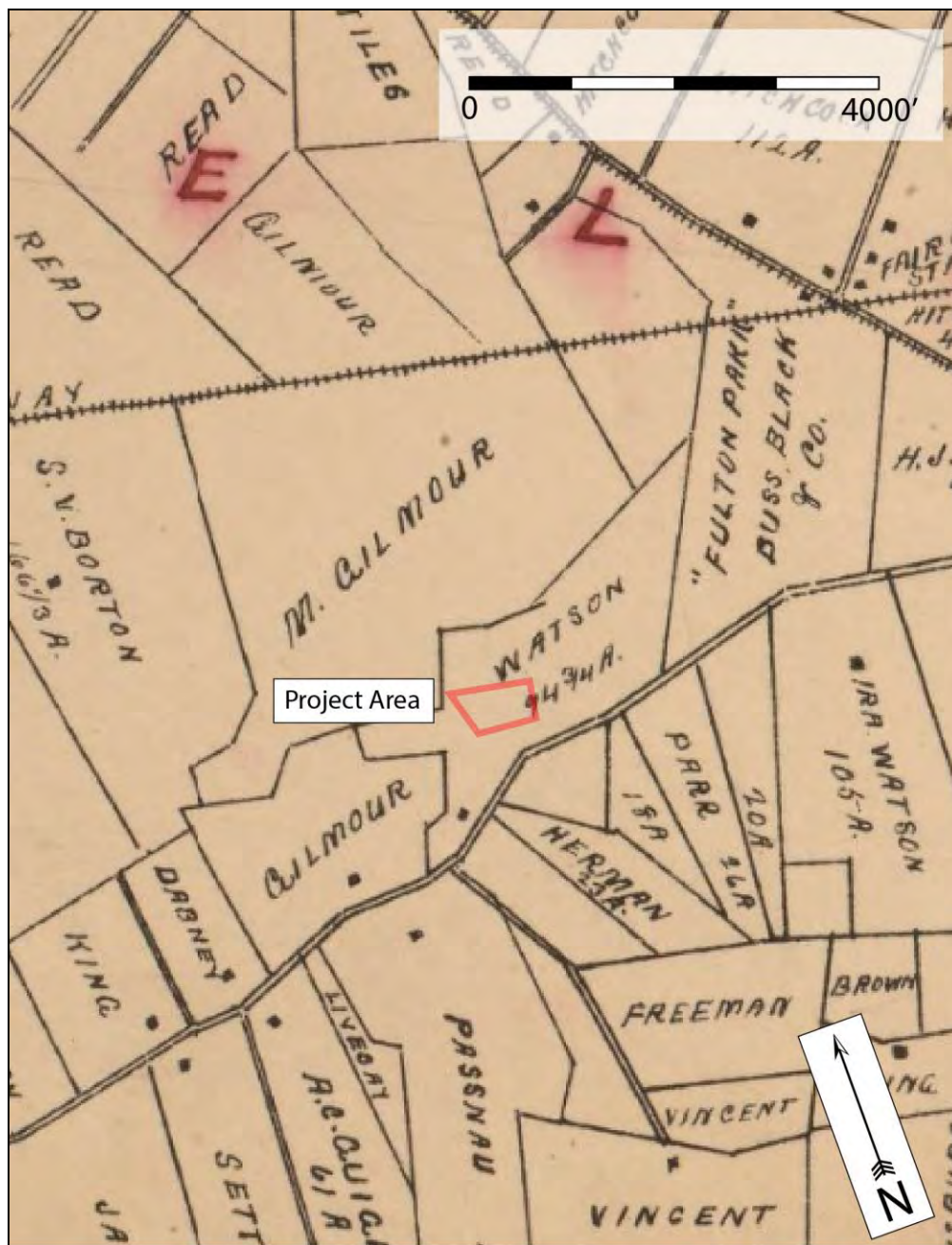


Figure 13. Location of the project area on detail of *Map of Henrico County, Virginia* (Redd et al. 1901).

airfield known as the Richmond Air Junction near the former powder bag-loading plant. Soon after, the City of Richmond developed the Richard Byrd Air Field on a 400-acre property at the intersection of the Charles City Road and the C&O Railroad line. In its first week of operation, the famed aviator Charles Lindbergh landed at the airfield on the return trip from his historic trans-Atlantic flight. Though owned by the city, the airfield was operated by Pitcairn Aviation, and subsequently by Eastern Airlines, providing mail and passenger services (EH&A 1996: 28-29).

The U.S.G.S. 7.5' Seven Pines topographic quadrangle map published in 1938 does not depict any buildings or other significant features in the project area vicinity (Figure 14).

After the Japanese attack on Pearl Harbor in December 1941, the Richmond Air Field was converted to military use for the duration of the war. Over four hundred new buildings were constructed in 1942, and the airfield was expanded to include over 3,000 acres. Originally envisioned as a base for bombing operations, the Richmond Army Air Base ultimately focused on fighter-pilot training, while servicing some additional bomber support and engineering functions (EH&A 1996: 31-32).

The New Dominion (1945-Present)

After World War II, Henrico County witnessed a tremendous economic and demographic boom, changing rapidly from a sparsely populated rural locale to a heavily suburbanized community. In the decade between 1945 and 1955, the population nearly tripled, from 30,000 to 86,750. More people meant more housing, and a significant amount of rural land was encompassed by suburban development on the fringes of the rapidly growing Richmond metropolitan area (Manarin and Dowdey 1984: 439).

Aside from suburban sprawl, the character of Henrico was transformed by large-scale industrial and commercial development in the late 1960s and 1970s, with large corporations such as Union Camp, A. H. Robins, Nabisco, and Western Electric establishing facilities in the county. This expansion precipitated a significant decline in available agricultural land, and by the mid-1970s only 187 working farms remained, encompassing 20.5 percent of county land. Similarly, the proportion of the county population engaged in farming had declined steadily from 22.5 percent in 1930 to a mere 1.3 percent by 1960. Though no longer a driving force in Henrico's economy, farming continues to characterize the rural portions of the county, with a concentration on cattle, dairy products, hogs, poultry, and grain and vegetable production (Manarin and Dowdey 1984: 478-82).

A U.S.D.A. aerial photograph of eastern Henrico County taken in October 1952 indicates that the project area still consisted primarily of cleared agricultural land, while its eastern portion was heavily wooded (Figure 15). No buildings appear to have been located in this vicinity, and the only notable landscape feature is a ditch or fence line in the north-central portion of the parcel. The U.S.G.S. 7.5' Seven Pines topographic quadrangle map published in 1956 similarly depicted the project area as a combination of cleared agricultural land and woodland (Figure 16). This area was beginning to become

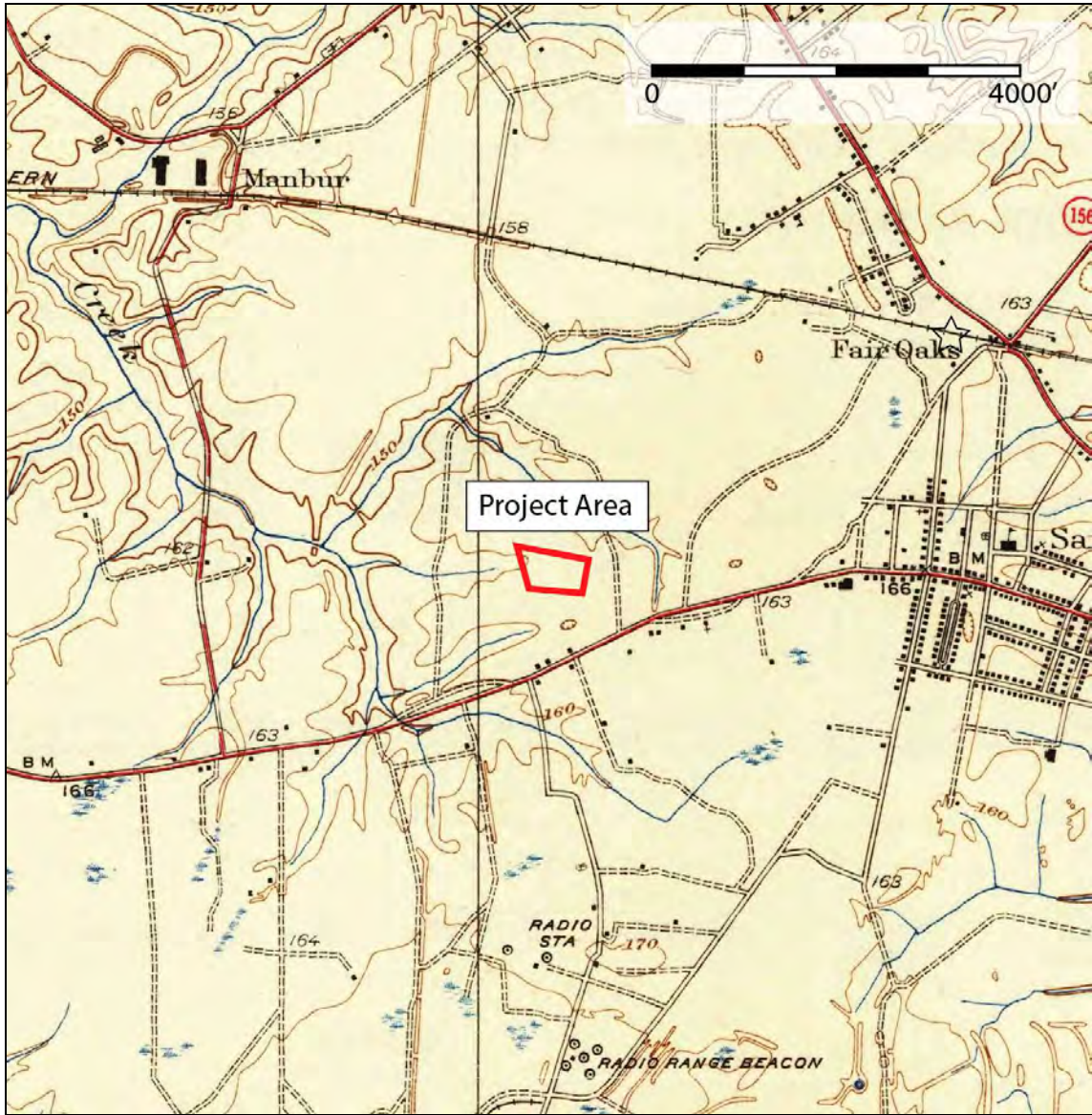


Figure 14. Location of the project area on detail of U.S.G.S. 7.5' Seven Pines topographic quadrangle map, 1938.

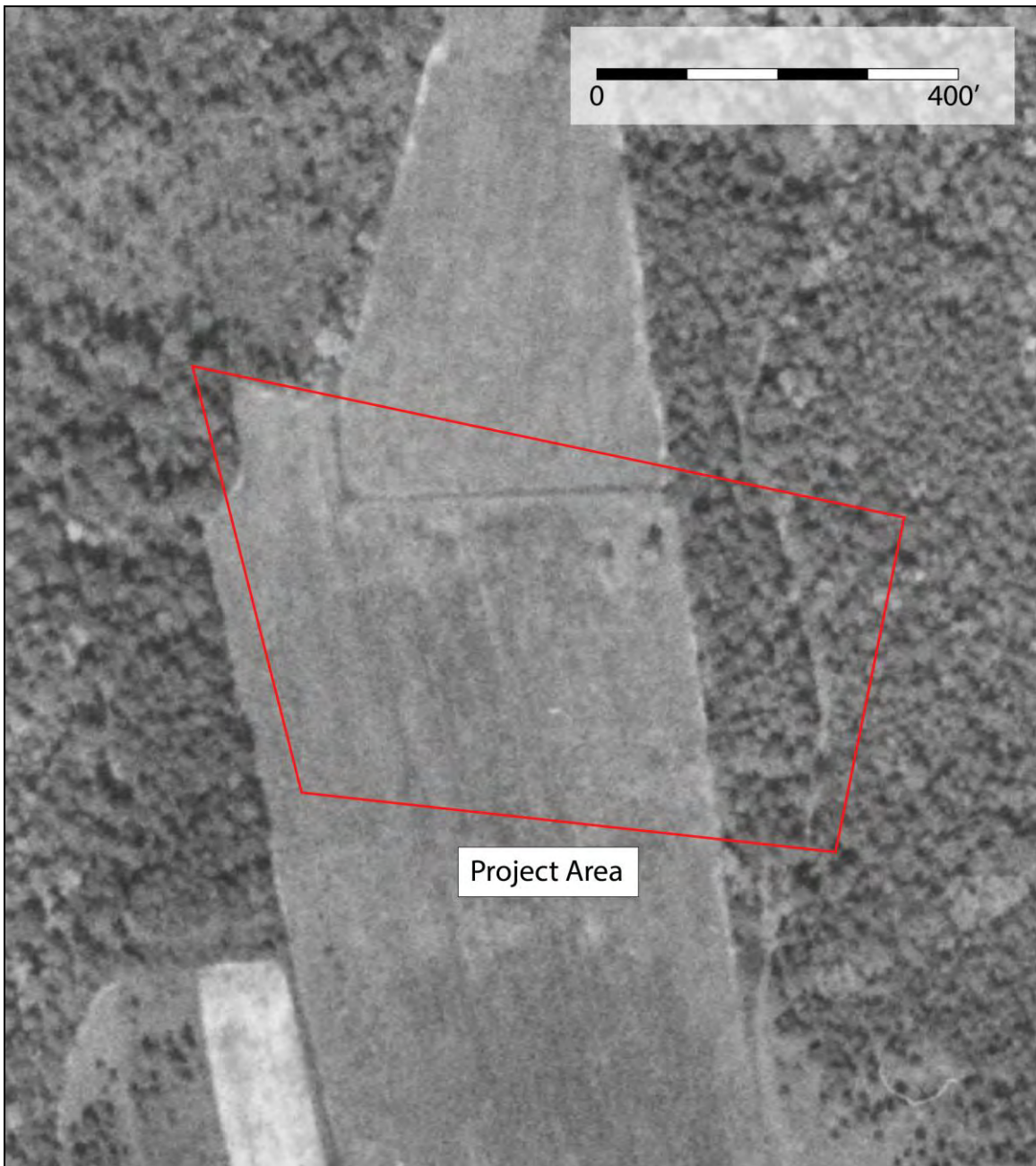


Figure 15. Location of the project area on detail of a U.S.G.S. aerial photograph, 26 October 1952 (NETR Online).

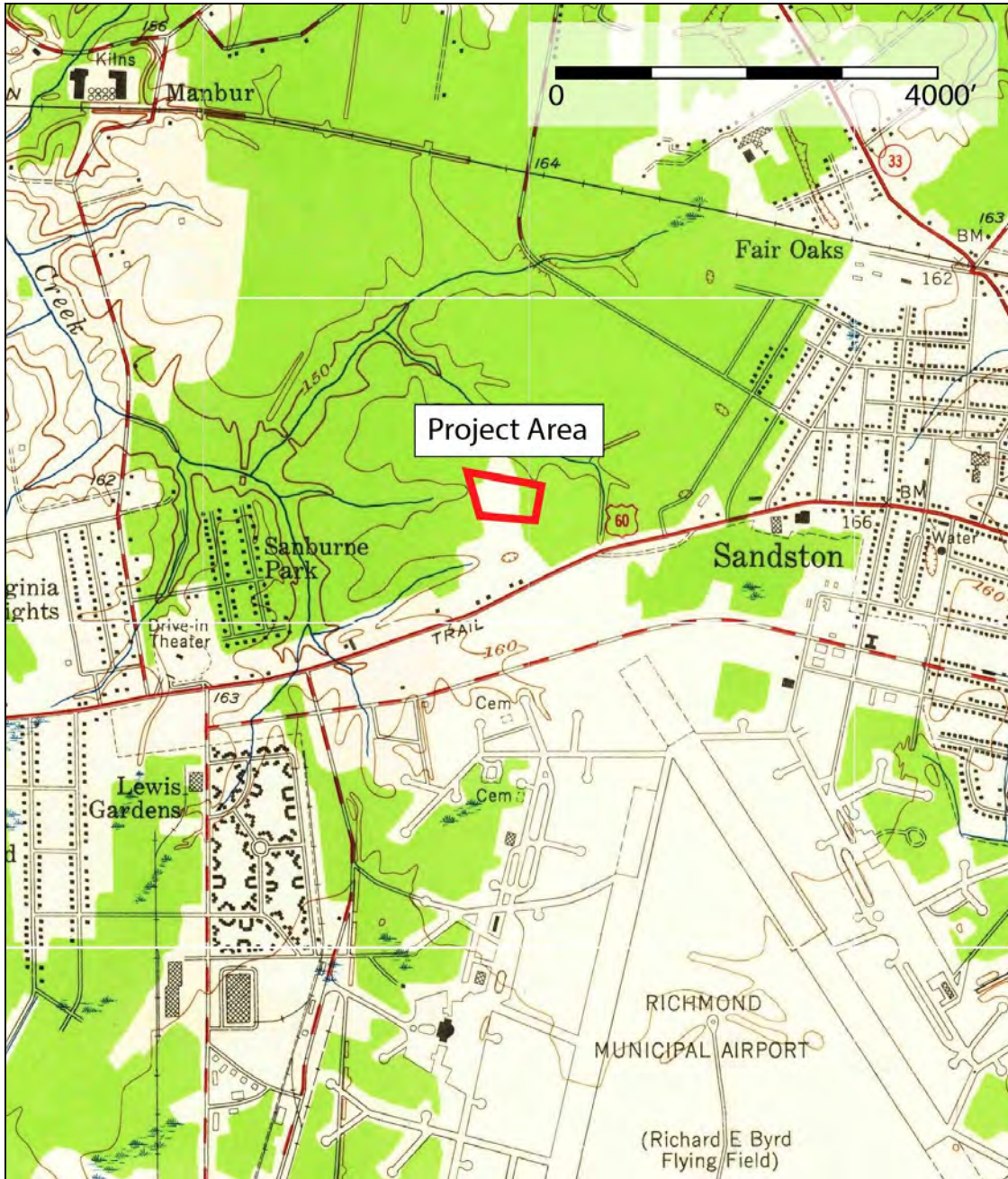


Figure 16. Location of the project area on detail of U.S.G.S. 7.5' Seven Pines topographic quadrangle map, 1956.

increasingly developed, however, with the Richmond Municipal Airport (which had reverted to use primarily as a civilian facility after World War II) to the south, and residential developments to the east and west. By the time the map was updated in 1964, Interstate 64 had been constructed, with an interchange providing airport access via S. Airport Drive (SR 156) (Figure 17). A short segment of what is now Audubon Drive had also been built on the north side of the project area, which remained undeveloped at that time.

The Capital Region Airport Commission acquired the project area in January 1981, after which the current Park & Ride facility was constructed (Henrico County Deed Book 1823: 1660). The property has been regularly maintained since it was closed to use in 2008, although aerial photographs indicate that the stormwater management pond area has been increasingly overgrown with vegetation over the past 10-15 years.

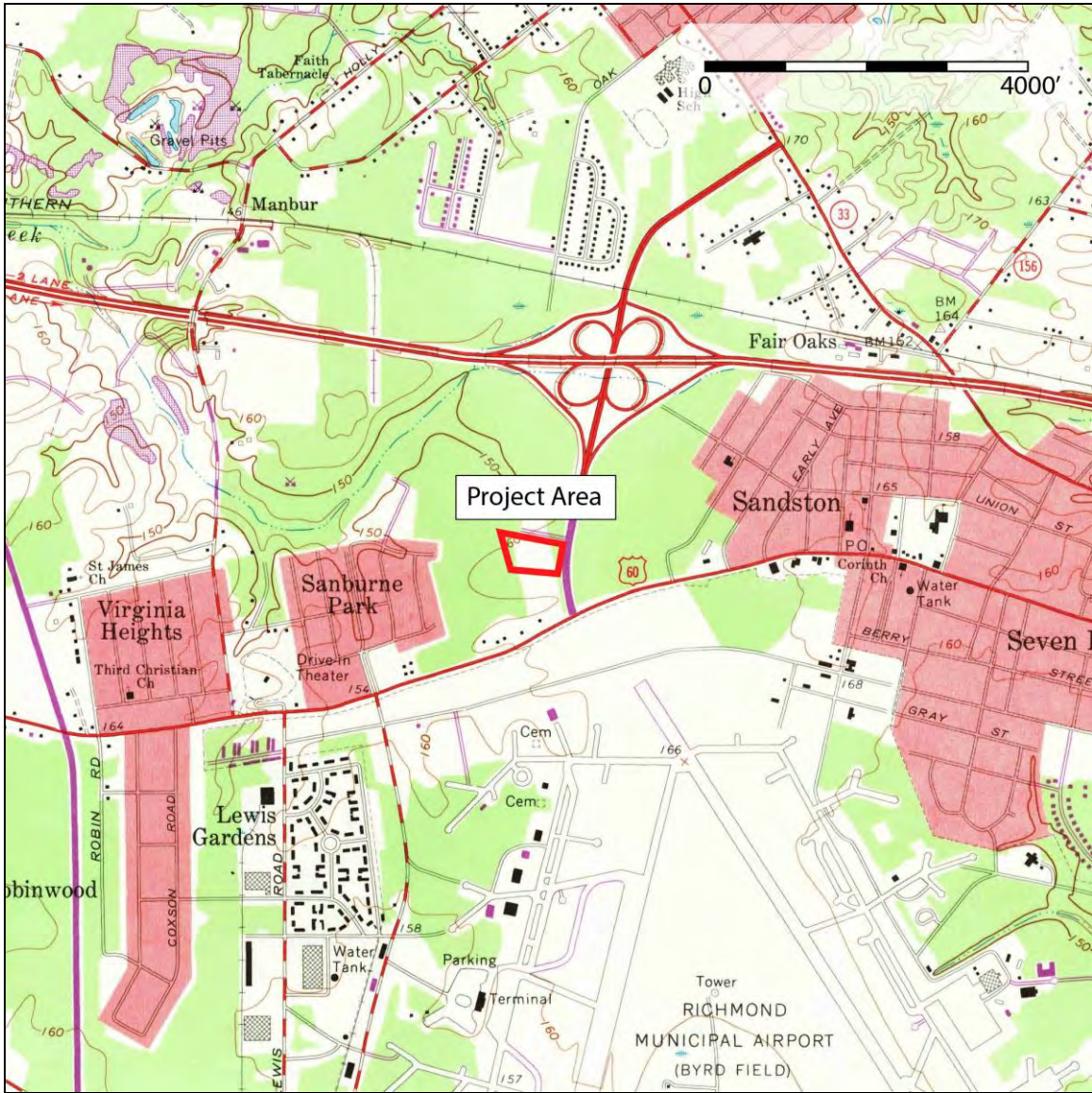


Figure 17. Location of the project area on detail of U.S.G.S. 7.5' Seven Pines topographic quadrangle map, 1964.

III. RESEARCH DESIGN

OBJECTIVES

The Phase I archaeological survey was designed to investigate previously recorded Site 44HE0371 and identify all other archaeological resources within the undeveloped portions of the project area, and to obtain sufficient information to assess their potential eligibility for listing in the National Register. A cultural resource is deemed significant if it is greater than 50 years old and meets at least one of the following criteria:

- A. It is associated with events that have made a significant contribution to the broad patterns of our history.
- B. It is associated with the lives of persons significant in our past.
- C. It embodies the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction.
- D. It has yielded, or may be likely to yield, information important in prehistory or history.

Criterion D—and occasionally Criterion A—typically applies to archaeological sites, whereas Criteria B and C generally pertain to architectural resources. In order to yield important information about the past, an archaeological site generally must possess artifacts, soil strata, structural remains, or other cultural features which make it possible to test historical hypotheses, corroborate and amplify currently available information, or reconstruct the sequence of the local archaeological record.

DEFINITIONS

Two designations for identified archaeological resources were used in this Phase I survey: *archaeological site* and *archaeological location*. As outlined in the DHR's *Guidelines for Conducting Historic Resources Survey in Virginia* (2017), an archaeological site is defined as the physical remains of any area of human activity greater than 50 years old for which a boundary can be established, and often is manifested by the presence of artifacts and/or cultural features. This definition does not apply to cultural material that has been recently redeposited or reflects casual discard. Any occurrence of artifacts which does not qualify for a site designation is termed an archaeological location. In application, defining these types of resources requires a certain degree of judgment in the field and consideration of a number of variables. Contextual factors such as prior disturbance and secondary deposition must be taken into account. The representative nature of the sample as measured by such factors as the degree of surface exposure and shovel test interval also must be considered.

PREVIOUSLY IDENTIFIED HISTORIC RESOURCES

In 1980, a portion of the current project area was investigated in the course of a Phase I archaeological survey conducted by the Virginia Commonwealth University Archaeology Research Center (VCU-ARC) for the Byrd Airport Obstruction Removal Project (DHR Cultural Resource Management [CRM] Report No. HE-042). This project focused on investigating several small areas for the removal of obstructions within runway approach zones, and for the construction of a new entrance road to the airport. In the course of this survey, the VCU-ARC recorded an historic boundary ditch, designated Site 44HE0371, somewhere in or around the northwest corner of the current project area (Figure 18). At the time of the survey, the ditch was situated in scrubby woodlands, and the trees appeared to be older to the north of the ditch than the south, which appeared to have been bulldozed roughly 30 years prior. It was noted that this resource was threatened by the obstruction removal project (EH&A 1996: 33).

The project area is also encompassed by four Civil War battlefield historic districts: Savage Station Battlefield (DHR ID #043-0308), which has been determined eligible for listing in the National Register; Fair Oaks & Darbytown Road Battlefield (DHR ID #043-5073), which has been determined potentially eligible for listing in the National Register; French's Field/King's School House/Oak Grove Battlefield (DHR ID #043-5079), the National Register eligibility of which has not been evaluated; and Fair Oaks/Seven Pines Battlefield (DHR ID #043-5081), which has been determined eligible for listing in the National Register for environmental review purposes only.

METHODS

Archival Research

Documentary research in support of the investigation was conducted using a variety of primary and secondary sources in a number of repositories, including the Virginia Department of Historic Resources; Library of Congress, Geography and Map Division; and the historic map archives of the U.S. Geological Service.

Field Methods

The Phase I archaeological survey began with a complete pedestrian survey and surface inspection of the project area. Based on the results of this inspection, and the prior review of the geotechnical boring dating, JRIA determined that the likelihood of encountering intact cultural deposits through shovel testing within the project area was low. However, to confirm the potential for archaeological resources, JRIA archaeologists excavated screened shovel tests in representative locations within the accessible (i.e. unpaved) portions of the project area. Each shovel test measured approximately 16 inches in diameter or larger and was excavated to the maximum practicable depth. The backfill was sifted through ¼-inch screen mesh. Representative soil profiles were drawn at 1 inch = 1 foot scale and recorded on standardized forms using Munsell color designators and U. S. Department of Agriculture soil texture terminology. The location of each shovel test was recorded on a 1 inch = 100 feet scale map, and all shovel tests were assigned an individual Shovel Test (ST) number.

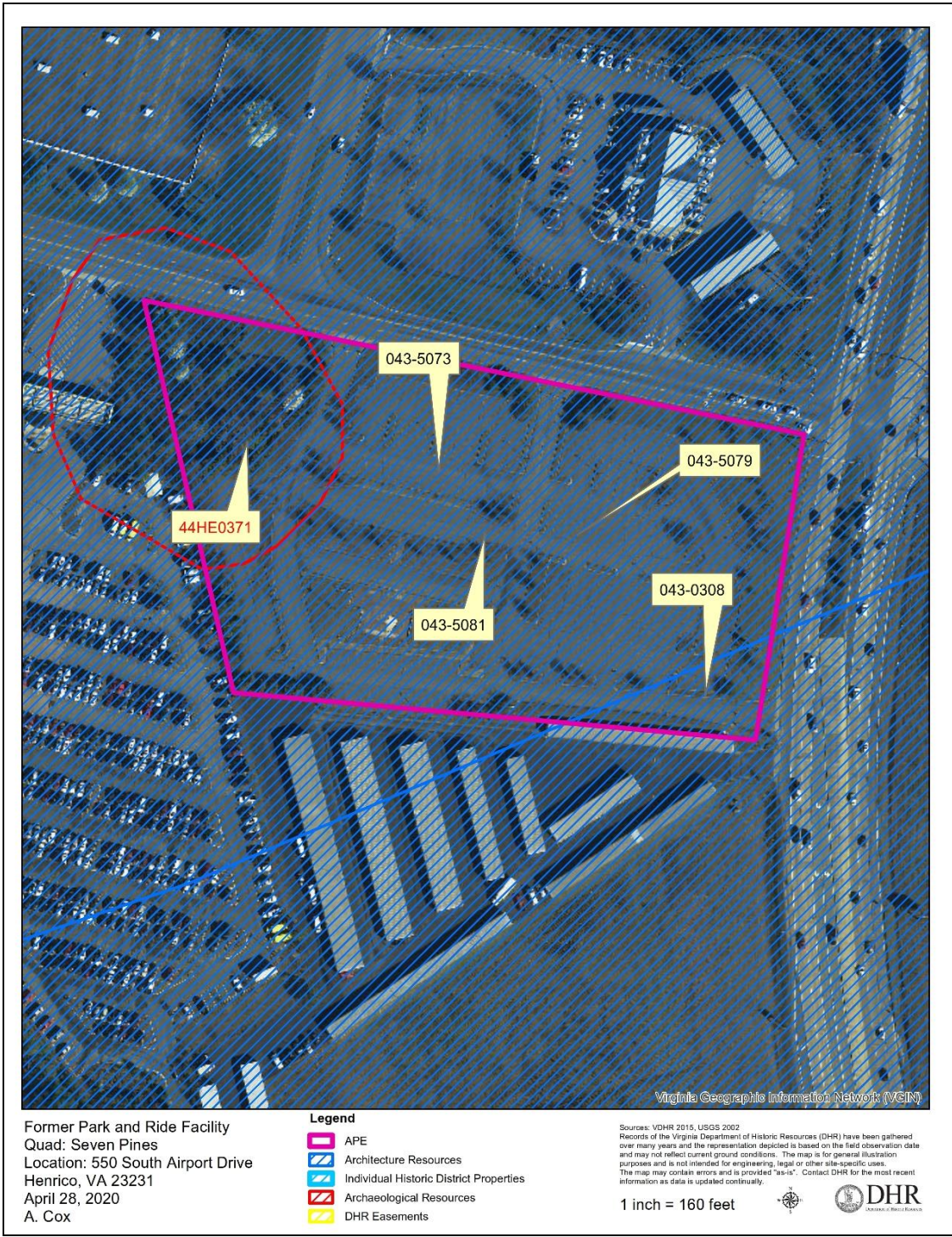


Figure 18. Previously identified historic resources within the project area vicinity (DHR).

Representative shovel test and surface feature locations were recorded with a handheld Trimble GPS unit.

Because the project area is encompassed by four Civil War battlefields, JRIA determined that a controlled metal detector survey would be conducted to identify potential military remains should the results of shovel testing indicate the potential for intact cultural deposits. However, only deep fill deposits were encountered in shovel testing, so no metal detecting was performed.

Laboratory Methods

No artifacts were recovered in the course of the Phase I survey, so no laboratory processing or analysis was required.

IV. RESULTS OF TESTING

JRIA archaeologists excavated eight screened shovel tests in representative locations throughout those landscaped portions of the project area which were at the same elevation as the paved parking lot, avoiding landscaped berms (Figure 19). Each was excavated to a depth of approximately 2.0 to 2.5 feet below the current ground surface. All were characterized by the same fill materials described in the GeoTechnologies report (Figures 20-21). Only Shovel Test 1 in the open area in the northwest corner of the parcel exhibited what appeared to be undisturbed clay subsoil beneath the layers of modern topsoil and fill material. No prehistoric or historic artifacts were recovered, and no intact cultural layers or features were observed.



Figure 19. Location of shovel tests.

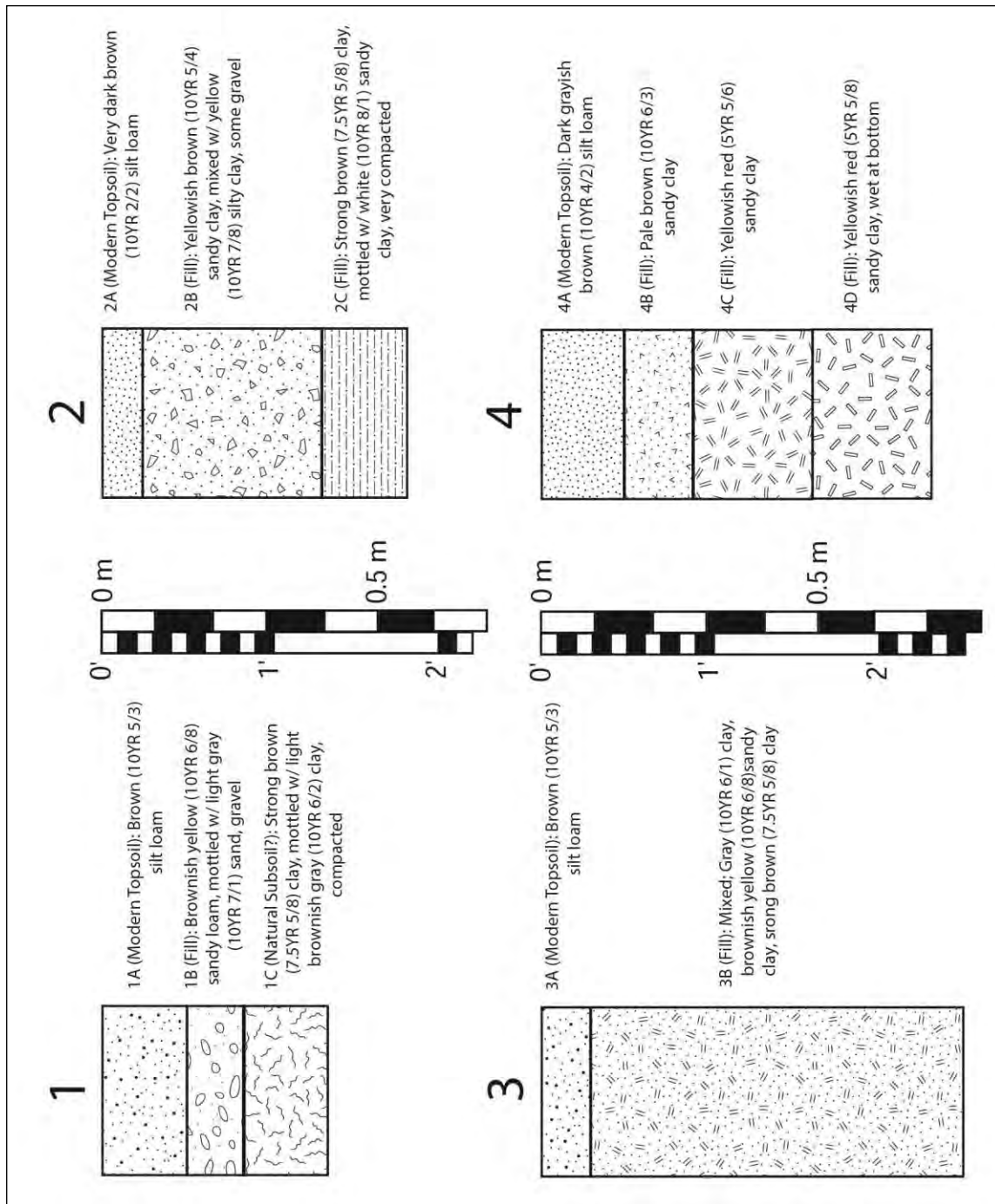


Figure 20. Profiles of Shovel Tests 1-4.

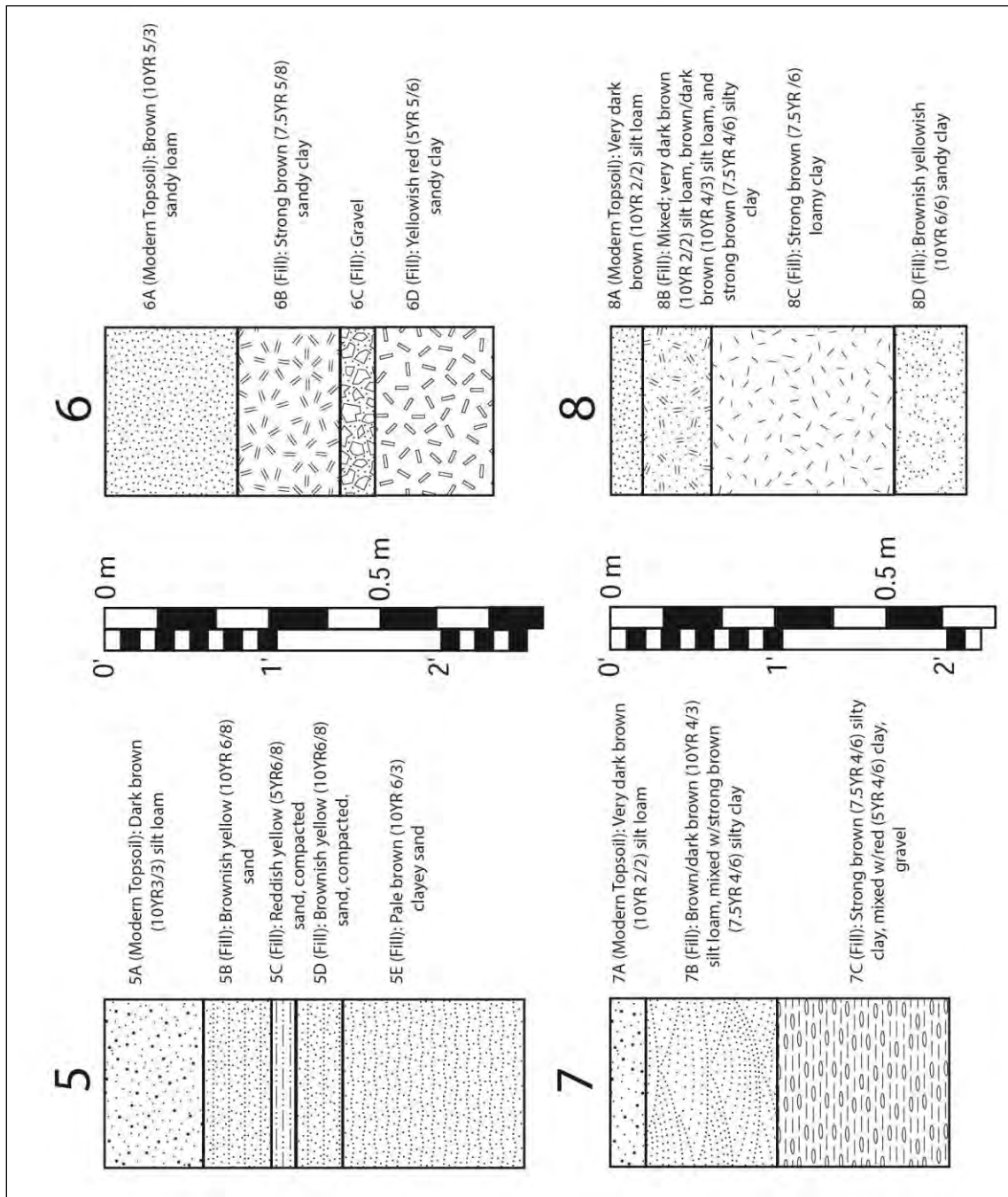


Figure 21. Profiles of Shovel Tests 5-8.

V. CONCLUSIONS AND RECOMMENDATIONS

The JRIA Phase I survey failed to identify any remaining portion of the historic boundary ditch previously recorded as Site 44HE0371. The extensive disturbances associated with the construction of the stormwater management pond and retaining berms within this mapped site vicinity would have destroyed any portion of this landscape feature within the project area. Similarly, the results of visual inspection and judgmental shovel testing within the accessible portions of the project area confirmed the results of the 2019 geotechnical boring report which indicated that the entire parcel is characterized by multiple feet of fill deposits over natural clay, with no evidence of intact buried topsoil layers. As a result, JRIA recommends that the proposed project will have no impact on potentially significant archaeological resources, and that no further testing is warranted.

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**APPENDIX: GEOTECHNOLOGIES, INC. REPORT
OF SUBSURFACE INVESTIGATION (EXCERPTS)**

August 19 2019

Tom Anastasi, P.E.
SHEETZ, INC.
99 Meadowmist Drive
Garner, NC 27529

Re: Report of Subsurface Investigation
Proposed Sheetz at RIC
550 South Airport Drive
Richmond, Virginia, North Carolina
GeoTechnologies Project No. 1-19-0582-EA

Gentlemen:

GeoTechnologies, Inc. has completed the authorized subsurface investigation to evaluate site grading and foundation support considerations for a proposed Sheetz store and gas station which will be located at 550 South Airport Drive in Richmond, Virginia. Subsurface conditions at the site were investigated by completing 40 soil test borings at the approximate locations indicated on the attached site plan, Figure 1. These borings were located in the field using a hand held Trimble GPS unit with NC grid coordinates obtained from the provided CAD file. A summary of the boring coordinates is presented on the attached Table 1. The indicated boring locations should be considered approximate. The borings were extended to depths of 5 to 20 feet below existing grade. The borings were completed using an all-terrain vehicle mounted drill rig turning hollow stem augers. Soils were sampled at selected intervals using standard penetration testing designated in ASTM D-1586. This report presents the findings of the investigation and our recommendations for site grading and foundation support.

SITE AND PROJECT INFORMATION

The project site is located at the southwest corner of the intersection of Audubon Drive and S. Airport Drive (550 South Airport Drive) in Richmond, Virginia. The site is currently a paved parking lot. The site appears to be relatively flat.

The new project will include construction of a Sheetz store which will be single story and comprise 6,077 square feet. Based on our experience with similar type structures, we estimate that maximum column loads will be around 40 kips with wall loads of about 3 kips per linear foot (klf). In addition to the proposed building, pump canopies will be located north and west of the proposed building and the proposed underground storage tank pits will be located on the northwest portion of the site. Parking and driveway areas will be located on the north, south, west and east sides of the building. Access into the site will be from Audubon Drive on the north and S Airport Drive on the east. No site grading plan was provided; however, we are assuming the development will be constructed near current grades.

SUBSURFACE CONDITIONS

Generalized subsurface profiles prepared from the test boring data are attached to this report as Figures 2A through 2D to graphically illustrate subsurface conditions encountered at this site. More detailed descriptions of the conditions encountered at the individual test boring locations are then presented on the attached test boring records.

Subsurface conditions on the site were characterized by near surface asphalt (about 5 to 16 inches) in most places with a thin veneer of topsoil (4 to 6 inches) in landscaped areas. The topsoil and pavement was typically underlain by near surface fill that extended to 2.5 to 5.5 feet below existing grade. The fill generally consisted of loose to dense silty and clayey sands with penetration resistances of 7 to 49 blows per foot. Topsoil and organics were present in the fill at borings B-21 and B-45. Underlying the fill, the borings generally encountered low to high plasticity fill with penetration resistances of 3 to 24 bpf. The clays extended to the 20 foot boring termination depth.

Groundwater was not encountered in the borings at the time of boring completion. However, the site is conducive to the development of a temporarily higher perched groundwater condition which occurs following periods of inclement weather due to ponding of surface water on the underlying clay strata. Additionally, regional groundwater levels will fluctuate with seasonal and climatic changes and may be different at other times. Seasonal high groundwater was measured at the BMP pond areas by a soil scientist from S&EC. Seasonal high groundwater was encountered at 1.0 feet below existing grade in the BMP area. In higher areas of the site the seasonal high groundwater was typically encountered at 4 to 5 feet below grade at the interface between the near surface sandy fill and underlying clay.

RECOMMENDATIONS

The following recommendations are made based upon a review of the attached test boring data, our understanding of the proposed construction, and past experience with similar projects and subsurface conditions. Should site grading or structural plans change significantly from those now under consideration, we would appreciate being provided with that information so that these recommendations may be confirmed, extended, or modified as necessary. Additionally, should subsurface conditions adverse to those indicated by this report be encountered during construction, those differences should be reported to us for review and comment.

Site Grading Considerations. Subsurface conditions on the site are characterized by relatively fine grained soils which are sensitive to moisture content changes. Therefore, we recommend that site grading be completed during the warmer summer months of the year if possible, when higher ambient air temperatures generally result in lower near surface moisture contents. Grading the site during the cooler winter months of the year will likely result in an increase in subgrade repairs.

Grading should begin with the removal of all vegetation, topsoil and existing asphalt pavements from the building and pavement areas. Due to the substantial thickness of the existing pavements, consideration could be given to milling the pavements and using that material as structural fill in parking areas of the site. Once stripping is completed, we recommend the site be proofrolled with a partially loaded dump truck or similar piece of rubber tired equipment in the presence of a geotechnical engineer to identify areas which require repair. Any area which appears unsuitable in the opinion of the engineer should be undercut to firm bearing and backfilled with properly compacted structural fill as directed. It is possible that some relics of the previous development (organically contaminated fill, old light pole foundations or utility trenches) could be encountered which will

require repair. Based on the results of our test borings, the near surface soils were relatively dense and appear to require minimal repair. However, the site has been filled in the past and topsoil and organics were encountered in the fill at borings B-21 and B-45, completed in proposed parking areas on the northern end of the site. At the start of site grading we recommend that test pits be completed in these areas to determine if the material can be left in place. That decision will also be based on proposed grades. If more than 3 feet of compacted structural fill exists above the organically contaminated material it may be possible to leave it in place depending on the outcome of the test pits. Repair areas will need to be identified in the field as grading proceeds. If the site is graded during the warmer summer months of the year it is likely that the soils will be drier and more stable.

Borrow Sources. The soils which exist on this site, with the exception of topsoil, organically contaminated old fill and highly plastic clay will be suitable for reuse as structural fill provided they are moisture conditioned to within 2% of optimum moisture as necessary. Any off site fill should consist of clayey or silty sands or low plasticity silts and clays with Unified Soil Classifications of SC, SM, ML, or CL. All fill material placed on the site should be compacted to not less than 95% of the standard Proctor maximum dry density except in the final foot where compaction should be increased to 98% of the standard Proctor maximum. All fill should be moisture conditioned to within 2% of optimum moisture content to facilitate compaction and to maintain stability of the fill section. We recommend density testing be performed on a full-time basis to verify that the recommended density percentages are achieved.

Foundation Support Considerations. Following proper site grading, foundations may be designed for a maximum allowable bearing pressure of 2,500 psf subject to the restriction that all column and wall footings have minimum dimensions of 24 and 16 inches, respectively. These foundations may bear at nominal depth beneath finished exterior grade except that a minimum embedment of not less than 18 inches is recommended for frost protection. All excavation foundation subgrades should be inspected by a geotechnical engineer to verify that suitable bearing conditions exist. Should any soft areas be identified, these areas can be repaired by undercutting to firm bearing material and backfilling to design bearing elevation with uniformly graded washed #57 or #67 stone.

GeoTechnologies evaluated potential settlements utilizing the FHA procedure which is an empirical method correlating soil compressibility to material types and penetration resistances. The anticipated 40-kip column loads will result in total settlements of about ½ inch when supported on shallow spread footings designed for a contact pressure of 2,500 psf. Differential settlements are expected to be approximately one half the magnitude of the total settlement. The results of our settlement analysis are presented on the attached Figure 3. This assumes that the building will be constructed at or near existing grade. Once a grading plan has been completed the settlements should be re-evaluated.

We recommend that slab-on-grades be designed for an assumed subgrade modulus of 100 pci assuming that all soils within the upper 12 inches are properly compacted to 98% of the standard Proctor maximum dry density. We recommend that any joints in the slab be cut relatively quickly, concurrently with finishing operations, to help control shrinkage cracking. Additionally, water/cement ratios should be kept relatively low to help reduce shrinkage cracking. We recommend that joint spacing be in accordance with guidelines presented in ACI and that the joints extend at least one third the slab depth to promote cracking along these joints.

We recommend that foundations for the pump island canopies be designed for an allowable bearing pressure of 2,500 psf. The majority of the load on the canopies is likely uplift, so we anticipate that they would typically be oversized for uplift resistance. To evaluate resistance to uplift, we recommend assuming a soil unit weight of 110 pcf above the foundation, assuming that all backfill soils are properly compacted to 95% of the

standard Proctor maximum dry density. The weight of the concrete within the foundations can be properly sized to provide any additional uplift resistance needed. Buoyant unit weights should be used below the ground water level. In order to evaluate resistance to sliding, GeoTechnologies recommends assuming a friction factor of 0.30 along the base of the foundations. A uniform ultimate passive resistance of 600 psf may be used for design.

Tank Pit Construction. We understand that the project will include installation of below grade underground fuel tanks. We anticipate that the base of the tanks will likely extend to depths of as much as 15 to 20 feet below existing ground surface. No rock or partially weathered rock was encountered in the tank area and we anticipate that tank pit excavations can be completed with conventional excavators.

Groundwater was not encountered in the borings at the time of completion. However, higher perched groundwater could occur following inclement weather events. As such, the tanks should be designed to resist buoyancy assuming that perched groundwater could develop within the tank pit backfill. All OSHA regulations should be strictly adhered to when performing below grade excavation.

Pavement Design Considerations. The most important factors affecting pavement life in the area of the site are the condition of the subgrade immediately prior to base course stone placement and post-construction settlement. We recommend that the subgrade of all pavement areas be proofrolled and that any yielding areas be identified and repaired prior to placement of the base course stone. All subgrade soils should be compacted to a minimum of 98% of the standard Proctor maximum dry density immediately prior to base course stone placement. We recommend that all pavement areas be properly graded to promote runoff of water and to prevent ponding of water on the pavement surface which can lead to eventual saturation of the subgrade soils and the loss of pavement support. Consideration should also be given to installing French drains or strip drains behind curbs or landscaped areas to help prevent saturation of subgrades and base course stone.

Seismic Design Considerations. In order to evaluate seismic design considerations for the project, GeoTechnologies utilized guidelines presented in the Virginia Building Code which includes the International Building Code information in conjunction with the soil borings completed on this site and deeper borings completed in the surrounding area. Based on this information, we recommend utilizing a site classification of "D" with respect to seismic design considerations.

SUMMARY

In summary, subsurface conditions on the site are considered suitable for support of the proposed Sheetz facility. We recommend using a bearing pressure of 2,500 psf. No rock or partially weathered rock was encountered in the tanks area. Subgrade repair are expected to be minimal if the site is developed at existing grade. If cuts or more than 4 feet are anticipated the underlying moisture sensitive clays will be exposed and subgrade repairs will increase significantly.

Sheetz, Inc.

Re: Proposed Sheetz at RIC

August 19, 2019

Page: 5

GeoTechnologies, Inc. appreciates the opportunity to provide you with our services during this phase of the project. Please contact us if you should have questions regarding this information or if we may be of further assistance.

Sincerely,

GeoTechnologies, Inc.

David L. Israel, P.E.
VA Registration No. 20201



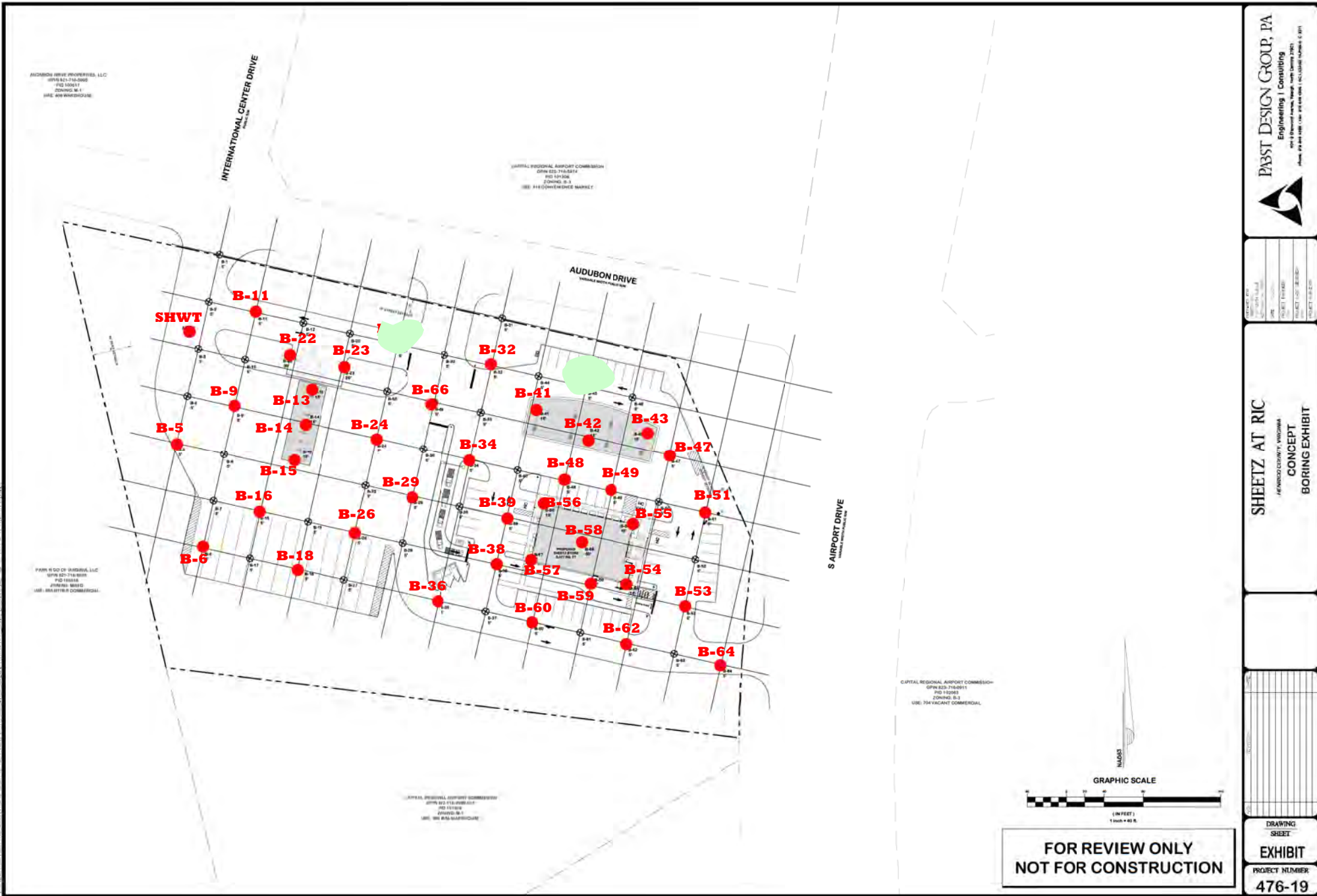
DLI/pr-mrp

Attachments

L:\1190582EA\1190582ea-Sub.docx

TABLE 1
Summary of Boring Locations

Boring #	State Plane Coordinates (ft)	
	Northing	Easting
B-5	6511709	11822034
B-6	6511601	11822061
B-9	6511747	11822094
B-11	6511844	11822116
B-13	6511767	11855175
B-14	6511730	11822166
B-15	6511693	11822158
B-16	6511638	11822121
B-18	6511579	11822159
B-21	6511811	11822263
B-22	6511800	11822152
B-23	6511788	11822209
B-24	6511714	11822241
B-26	6511617	11822219
B-29	6511654	11822278
B-32	6511838	11822371
B-34	6511692	11822339
B-36	6511546	11822305
B-38	6511583	11822365
B-39	6511632	11822376
B-41	6511745	11822407
B-42	6511711	11822460
B-43	6511719	11822522
B-45	6511768	11822458
B-47	6511697	11822544
B-48	6511670	11822436
B-49	6511659	11822485
B-51	6511637	11822582
B-53	6511540	11822560
B-54	6511563	11822502
B-55	6511625	11822508
B-56	6511646	11822414
B-57	6511587	11822406
B-58	6511605	11822454
B-59	6511561	11822462
B-60	6511524	11822403
B-62	6511502	11822500
B-64	6511480	11822598
B-66	6511751	11822300
SHWT	6511822	11822046



DATE	10/15/2014
BY	J. H. HARRIS
CHECKED	J. H. HARRIS
PROJECT	704 VACANT COMMERCIAL
SHEET	001
PROJECT NO.	14-001

SHEETZ AT RIC
 HENRIECO COUNTY, PENNSYLVANIA
 CONCEPT
 BORING EXHIBIT

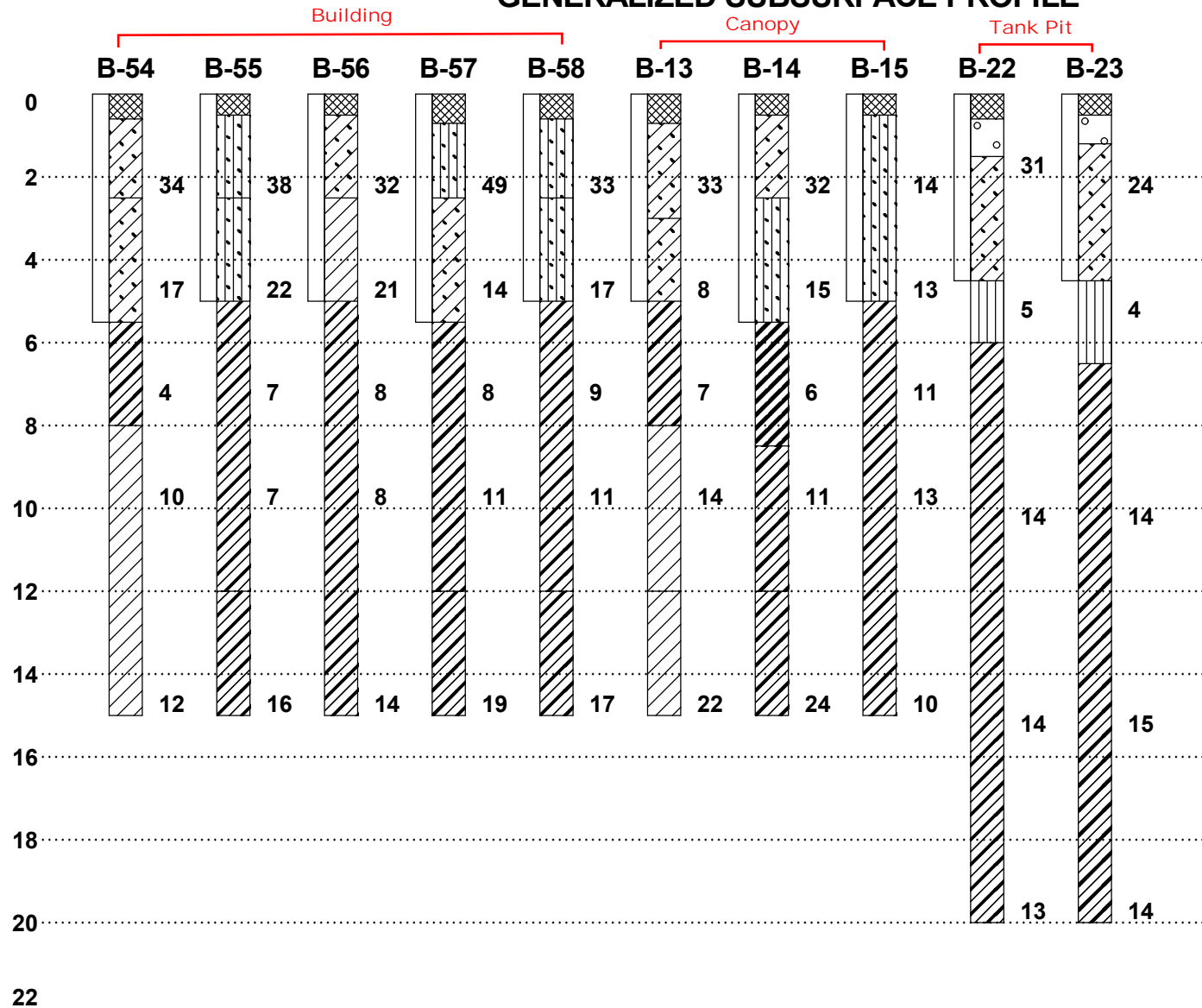
DATE	10/15/2014
BY	J. H. HARRIS
CHECKED	J. H. HARRIS
PROJECT	704 VACANT COMMERCIAL
SHEET	001
PROJECT NO.	14-001

FIGURE 1

Depth (Feet)

GENERALIZED SUBSURFACE PROFILE

LEGEND



- Asphalt
- Clayey Sand
- Moderate Plasticity Clay
- Low Plasticity Clay
- Silty Sand
- High Plasticity Clay
- ABC Stone
- Low Plasticity Silt
- Fill
- Standard Penetration Resistance

PROJECT:

Sheetz
Richmond, VA



GeoTechnologies, Inc.

SCALE: As Shown

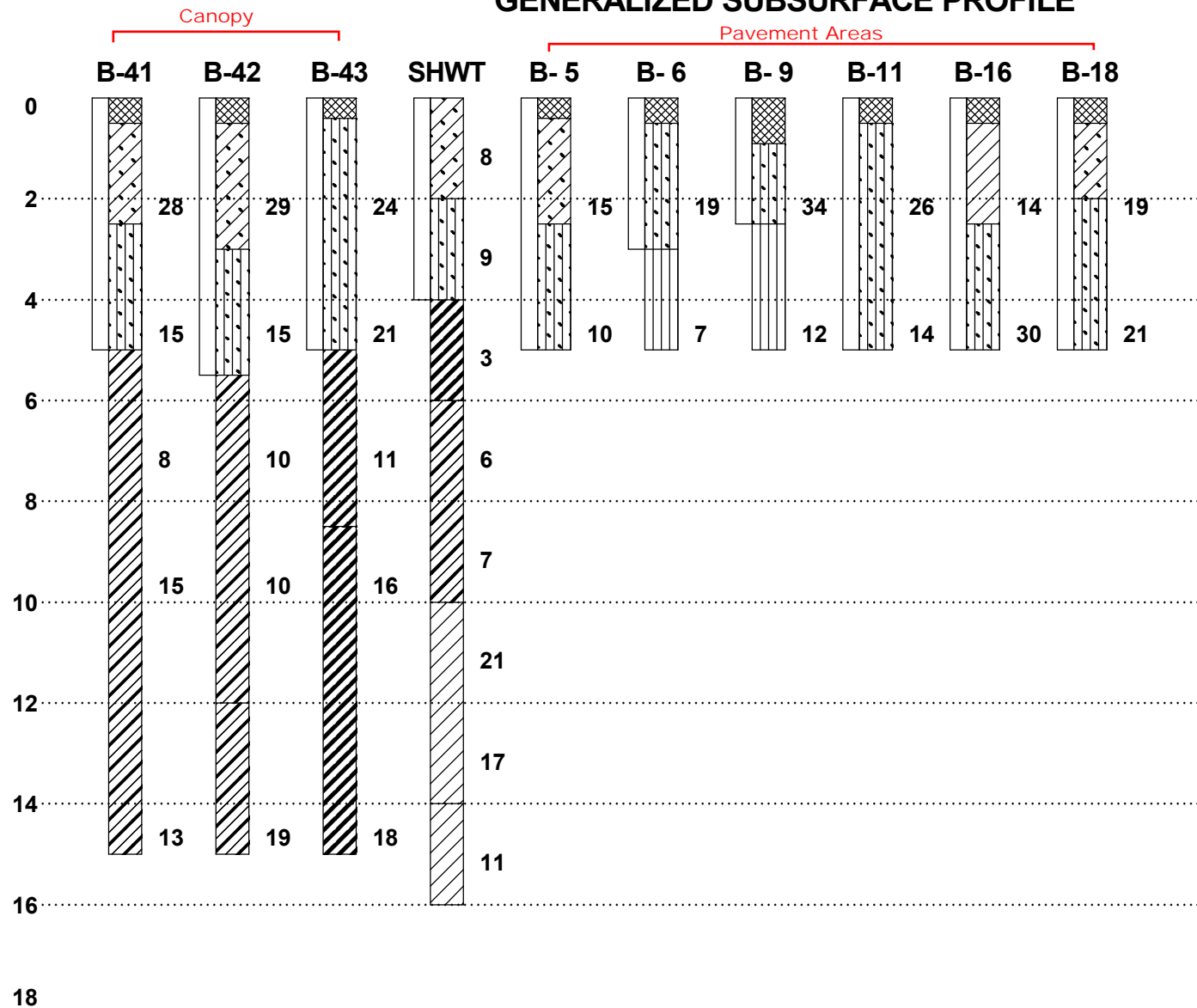
JOB No: 1-19-0582-EA

FIGURE No: 2A

Depth (Feet)

GENERALIZED SUBSURFACE PROFILE

LEGEND



- Asphalt
- Clayey Sand
- Silty Sand
- Low Plasticity Silt
- Low Plasticity Clay
- Moderate Plasticity Clay
- High Plasticity Clay
- Fill
- Standard Penetration Resistance

PROJECT:
Sheetz
Richmond, VA










SCALE: As Shown
JOB No: 1-19-0582-EA
FIGURE No: 2B

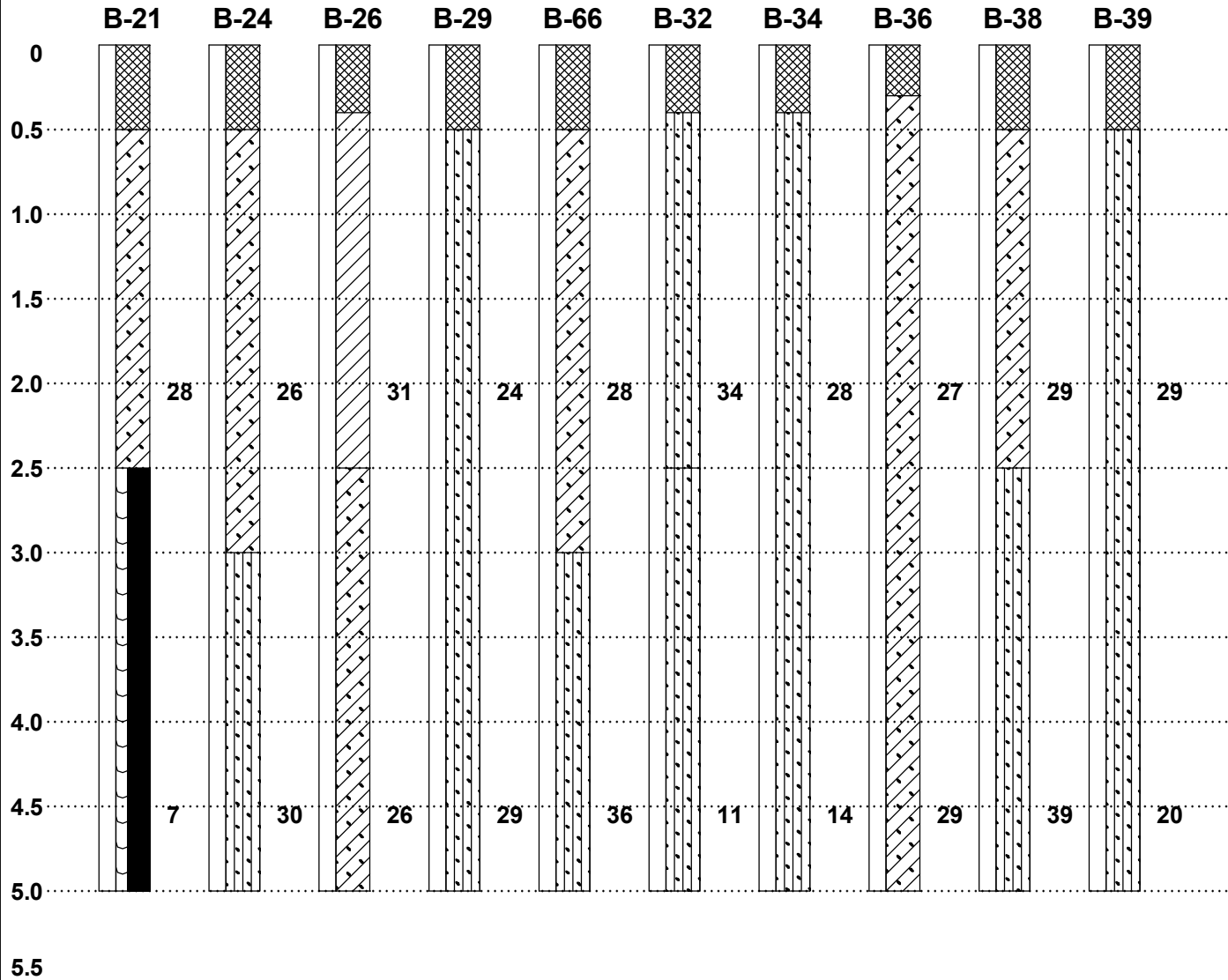
Depth (Feet)

GENERALIZED SUBSURFACE PROFILE

Pavement Areas

LEGEND

-  Asphalt
-  Clayey Sand
-  Topsoil/Clay
-  Silty Sand
-  Low Plasticity Clay
-  Fill
-  Standard Penetration Resistance



PROJECT:

Sheetz
Richmond, VA



GeoTechnologies, Inc.

SCALE: As Shown

JOB No: 1-19-0582-EA











FIGURE No: 2C

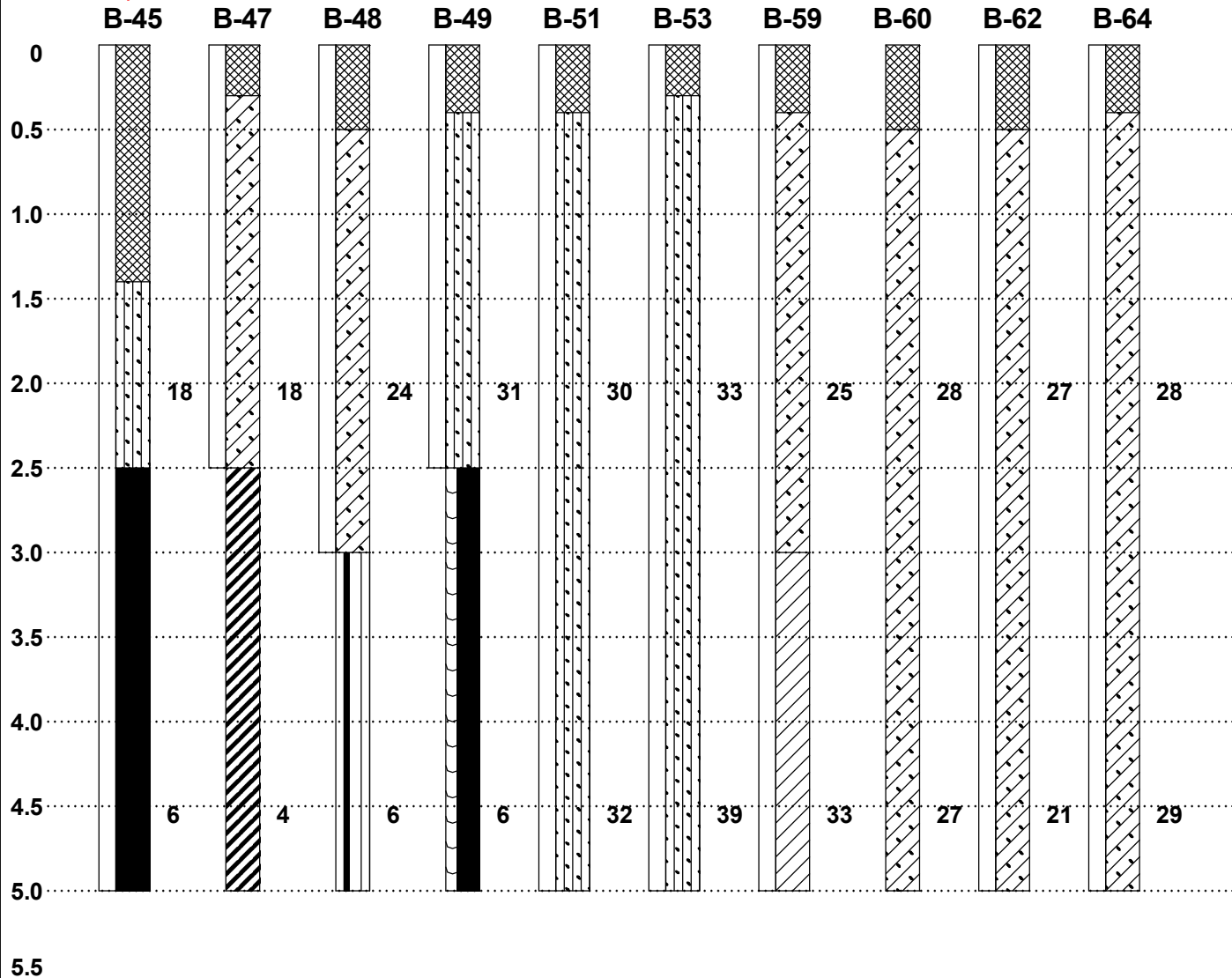
Depth (Feet)

GENERALIZED SUBSURFACE PROFILE

Pavement Areas

LEGEND

-  Asphalt
-  Silty Sand
-  Topsoil
-  Clayey Sand
-  High Plasticity Clay
-  Moderate Plasticity Silt
-  Topsoil/Clay
-  Low Plasticity Clay
-  Fill
-  Standard Penetration Resistance



PROJECT:

Sheetz
Richmond, VA



GeoTechnologies, Inc.

SCALE: As Shown

JOB No: 1-19-0582-EA

FIGURE No: 2D

ATTACHMENT D

Land Use Documentation (1 page)

Andrew Harrison

From: John Rutledge <jrutledge@flyrichmond.com>
Sent: Thursday, July 16, 2020 9:02 AM
To: Genevieve Walker
Cc: Andrew Harrison
Subject: Draft EA Former Park and Ride Facility (Future Sheetz Retail Site)

Genevieve – In response to your conversation with Drew Harrison I offer the following:

The development of the parcel in question (former Park and Ride Facility) will be restricted to the extent possible to uses compatible with normal Airport operations.

Please let Drew or me know if you need further info on this.

Thanks for your help with this.

John

John B. Rutledge, P.E., C.M.
Interim Chief Operating Officer
Capital Region Airport Commission
1 Richard E. Byrd Terminal Drive
Richmond, VA 23250
(804) 226-3017 (office)
(804) 221-0700 (cell)
(804) 652-2607 (fax)



This email and any attachments are confidential. If you receive this message in error or are not the intended recipient, you should not retain, distribute, disclose or use any of this information and you should destroy the email and any attachments or copies.

ATTACHMENT E

Development Plan (2 page)

SIGHT DISTANCE CALCULATIONS

AUDUBON DRIVE: 40 MPH, 3-LANES (AT DRIVEWAYS)
 AIRPORT DRIVE: 55 MPH, 3-LANES (AT DRIVEWAY)
 FULL ACCESS DRIVEWAYS: 14.5 X 45'
 RIGHT-IN/RIGHT-OUT DRIVEWAYS: 10.5 X 45'
 THROUGH TRAVEL LANE

1. DISTANCE MEASURED FROM EDGE OF THE MAJOR ROADWAY
2. NEEDS TO BE MEASURED FROM A HEIGHT OF 5 FEET TO AN OBJECT HEIGHT OF 5 FEET
3. 3.5 FEET
4. ANY OBSTRUCTIONS LOCATED WITHIN A SIGHT DISTANCE EASEMENT MUST NOT BE WITHIN A RANGE BETWEEN ONE AND EIGHT FEET ABOVE THE GROUND SURFACE IN THE SIGHT DISTANCE CORRIDOR.

HENRICO COUNTY PAVEMENT NOTES

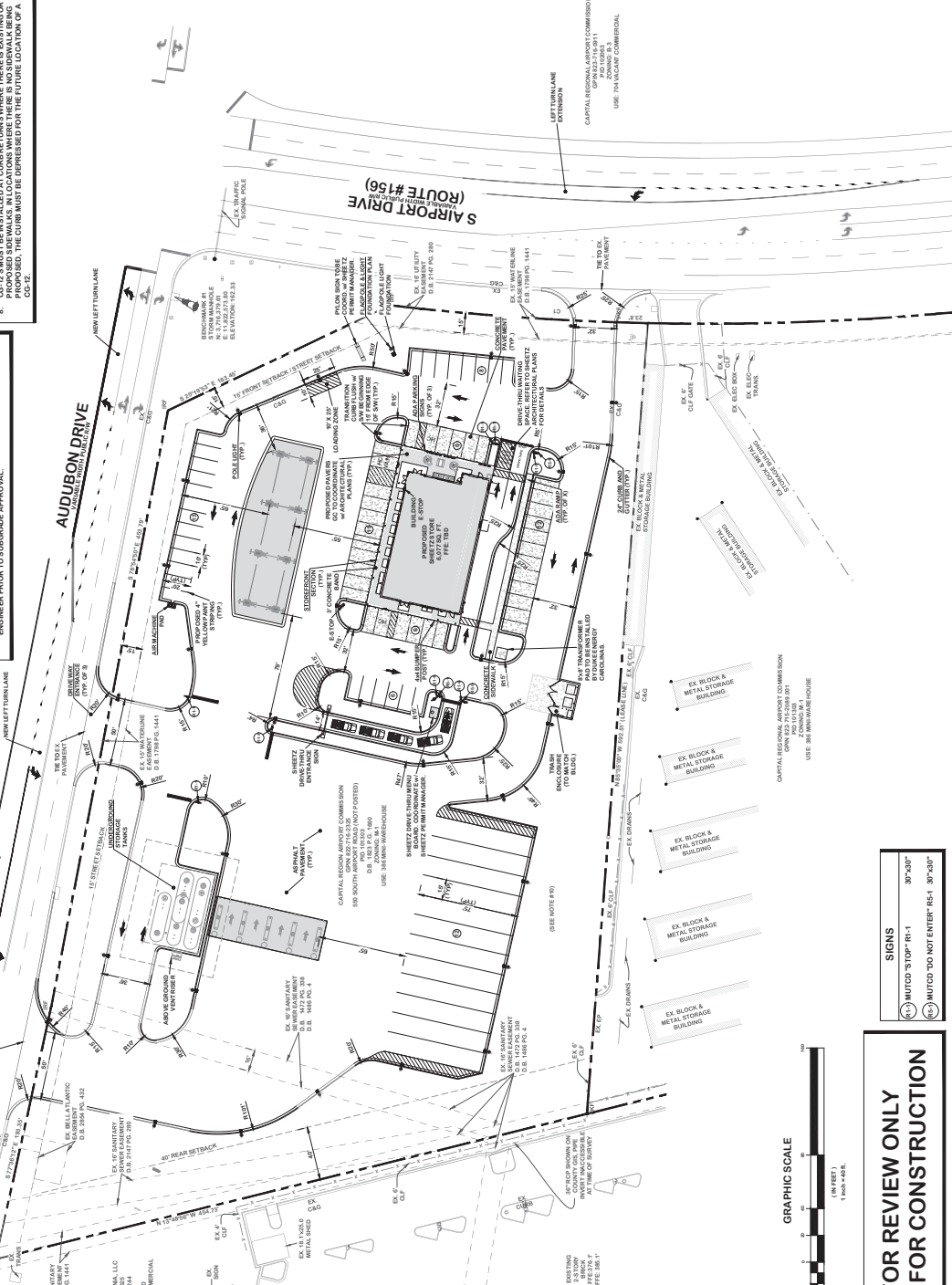
1. ALL PAVEMENT WORK SHALL BE IN ACCORDANCE WITH THE HENRICO COUNTY PAVEMENT SPECIFICATIONS AS DETERMINED BY THE COUNTY ENGINEER FOR HENRICO COUNTY.
2. ANY NECESSARY PAVEMENT IMPROVEMENTS IS THE RESPONSIBILITY OF THE DEVELOPER.
3. ALL MEDIAN AND TURN LANE MUST BE NOTED AS 4.5' FOR TURN LANE BEING CONSTRUCTED ON EXISTING ROADS. THE OLD MEDIAN MUST BE REMOVED BY THE DEVELOPER AND THE ROAD MUST BE RECONSTRUCTED TO STANDARD MEDIAN OR VARIATION OF THE SAME WILL NOT BE PERMITTED. SAME AS THE EXISTING PAVEMENT SECTION. THESE TURN LANE MUST HAVE UNDER DRAINS.
4. NO PAVEMENT OPEN CUTS ARE ALLOWED ON EXISTING COUNTY MAINTAINED ROADWAYS. ANY OPEN CUTS MUST BE APPROVED BY THE COUNTY ENGINEER FOR HENRICO COUNTY.
5. IF UTILITY CONNECTIONS ARE LOCATED OUTSIDE OF THE PAVEMENT AND RIGHT-OF-WAY, NO PAVEMENT DISTURBANCE IS REQUIRED AND ALL UTILITY CROSSINGS MUST BE BORED.
6. SOIL TESTS AND DR INFORMATION, WITH AN APPROPRIATE PAVEMENT DESIGN, SHALL BE OBTAINED AND AVAILABLE TO THE CONSTRUCTION ENGINEER PRIOR TO SUBGRADE APPROVAL.

HENRICO COUNTY CURB AND GUTTER NOTES

1. ALL CURB AND GUTTER SHALL BE HENRICO COUNTY STANDARD CURB AND GUTTER. ALL CURB AND GUTTER SHALL BE BUILT TO THE COUNTY RIGHT-OF-WAY. EXISTING CURB AND GUTTER SHALL BE MAINTAINED BY THE COUNTY ENGINEER OR BY CALLING 311-4675.
2. ALL CURB AND GUTTER SHALL BE BUILT TO THE COUNTY RIGHT-OF-WAY. EXISTING CURB AND GUTTER SHALL BE MAINTAINED BY THE COUNTY ENGINEER OR BY CALLING 311-4675.
3. THREE PLANK REBAR BASE CURB AND GUTTER ELEVATIONS ALONG THE PAVEMENT RIGHT-OF-WAY, THE COUNTY RESERVES THE RIGHT TO ADJUST THE PROPOSED GRADES IF NECESSARY. SEE PLANSHEET C-1.0.
4. ALL CURB AND GUTTER IN THE COUNTY RIGHT-OF-WAY MUST BE WET CURB. ALL CURB AND GUTTER IN THE COUNTY RIGHT-OF-WAY MUST BE WET CURB. ALL CURB AND GUTTER IN THE COUNTY RIGHT-OF-WAY MUST BE WET CURB.
5. THE TRANSITION FROM STANDARD SIX (6) INCH CURB TO BOLL-FACED CURB SHALL BE AT INTERSECTIONS AT THE POINT OF CURVATURE (P.O.C.) OF CURB RETURNS.
6. WHERE SIDEWALKS ARE PRESENT OR PROPOSED, ALL DRIVEWAYS MUST BE SET BACK FROM THE BACK OF CURB TO AT LEAST THE REAR OF THE SIDEWALK.
7. CLASS 5 STONE MUST BE PLACED UNDER ALL CURB AND GUTTER AND MUST EXTEND ON FOOT BEHIND THE BACK OF THE CURB.
8. CO-125 MUST BE INSTALLED AT CURB RETURNS WHERE THERE IS EXISTING OR PROPOSED SIDEWALKS. INSTALLATIONS WHERE THERE IS NO SIDEWALK BEING PROPOSED, THE CURB MUST BE DECREASED FOR THE TURNING ROADWAY TO CO-125.

SITE DATA TABLE

OWNER	5700 WEST HAVEN
ENGINEER	1100 WEST HAVEN
PROJECT ADDRESS	1100 WEST HAVEN
CITY	RICHMOND, VA 23230
PROJECT NUMBER	1100 WEST HAVEN
DATE	11/01/2019
PROJECT DESCRIPTION	REBAR BASE CURB AND GUTTER
PROJECT NUMBER	1100 WEST HAVEN
DATE	11/01/2019



**FOR REVIEW ONLY
 NOT FOR CONSTRUCTION**

GRAPHIC SCALE
 1 inch = 40 feet

SIGNS
 MUTCD "STOP" R-1
 MUTCD "DO NOT ENTER" R-51

FIGURE 2 - Site Development Plan



December 31, 2019

TO:
 Capital Region Airport Commission
 Attn: John Rutledge
 1 Richard E. Byrd Terminal Drive
 Richmond, VA 23250
 jrutledge@flyrichmond.com

RE: (See attached Table 1 for referenced case(s))
 FINAL DETERMINATION

Table 1 - Letter Referenced Case(s)

ASN	Prior ASN	Location	Latitude (NAD83)	Longitude (NAD83)	AGL (Feet)	AMSL (Feet)
2019-AEA-2214-NRA		RICHMOND,VA	37-31-23.60N	77-19-46.30W	25	195
2019-AEA-2215-NRA		RICHMOND,VA	37-31-24.19N	77-19-46.30W	25	195
2019-AEA-2216-NRA		RICHMOND,VA	37-31-23.97N	77-19-45.13W	25	195
2019-AEA-2217-NRA		RICHMOND,VA	37-31-23.36N	77-19-45.22W	25	195
2019-AEA-2218-NRA		RICHMOND,VA	37-31-25.25N	77-19-46.37W	20	188
2019-AEA-2219-NRA		RICHMOND,VA	37-31-24.89N	77-19-46.48W	20	188
2019-AEA-2220-NRA		RICHMOND,VA	37-31-24.95N	77-19-44.82W	20	188
2019-AEA-2221-NRA		RICHMOND,VA	37-31-24.59N	77-19-44.93W	20	188
2019-AEA-2222-NRA		RICHMOND,VA	37-31-25.49N	77-19-49.42W	20	188
2019-AEA-2223-NRA		RICHMOND,VA	37-31-24.68N	77-19-49.66W	20	188
2019-AEA-2224-NRA		RICHMOND,VA	37-31-25.42N	77-19-49.05W	20	188
2019-AEA-2225-NRA		RICHMOND,VA	37-31-24.61N	77-19-49.30W	20	188

Description: Construct Sheetz Convenience Store with Diesel Island Canopy and Gas Island Canopy

We do not object with conditions to the construction described in this proposal provided:

You comply with the requirements set forth in FAA Advisory Circular 150/5370-2, "Operational Safety on Airports During Construction."

You coordinate the Airport Layout Plan (ALP) and Environmental issues with the Washington Airports District Office prior to start of construction. The proposed building and canopies are not an impact to the existing runways but they conflict with the ultimate Runway 16 extension. The runway extension and associated MALSR relocation are included as development beyond the 20-year planning period. The proposed building construction and canopies conflict with future RPZ land use and may conflict with the future relocated MALSR light plane. Further evaluation is required to determine full impact.

A separate notice to the FAA is required for any construction equipment, such as temporary cranes, whose working limits would exceed the height and lateral dimensions of your proposal.

This determination does not constitute FAA approval or disapproval of the physical development involved in the proposal. It is a determination with respect to the safe and efficient use of navigable airspace by aircraft and with respect to the safety of persons and property on the ground.

In making this determination, the FAA has considered matters such as the effects the proposal would have on existing or planned traffic patterns of neighboring airports, the effects it would have on the existing airspace structure and projected programs of the FAA, the effects it would have on the safety of persons and property on the ground, and the effects that existing or proposed manmade objects (on file with the FAA), and known natural objects within the affected area would have on the airport proposal.

If you have any questions concerning this determination contact Kyle Allison (703) 487-3975
kyle.allison@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study
Number 2019-AEA-2214-NRA.

Kyle Allison
ADO
Signature Control No: 419269397-426418321

ATTACHMENT F

NWI Map and Flood Plain Map (2 pages)



December 17, 2019

Wetlands

- | | | |
|--------------------------------|-----------------------------------|----------|
| Estuarine and Marine Deepwater | Freshwater Emergent Wetland | Lake |
| Estuarine and Marine Wetland | Freshwater Forested/Shrub Wetland | Other |
| | Freshwater Pond | Riverine |

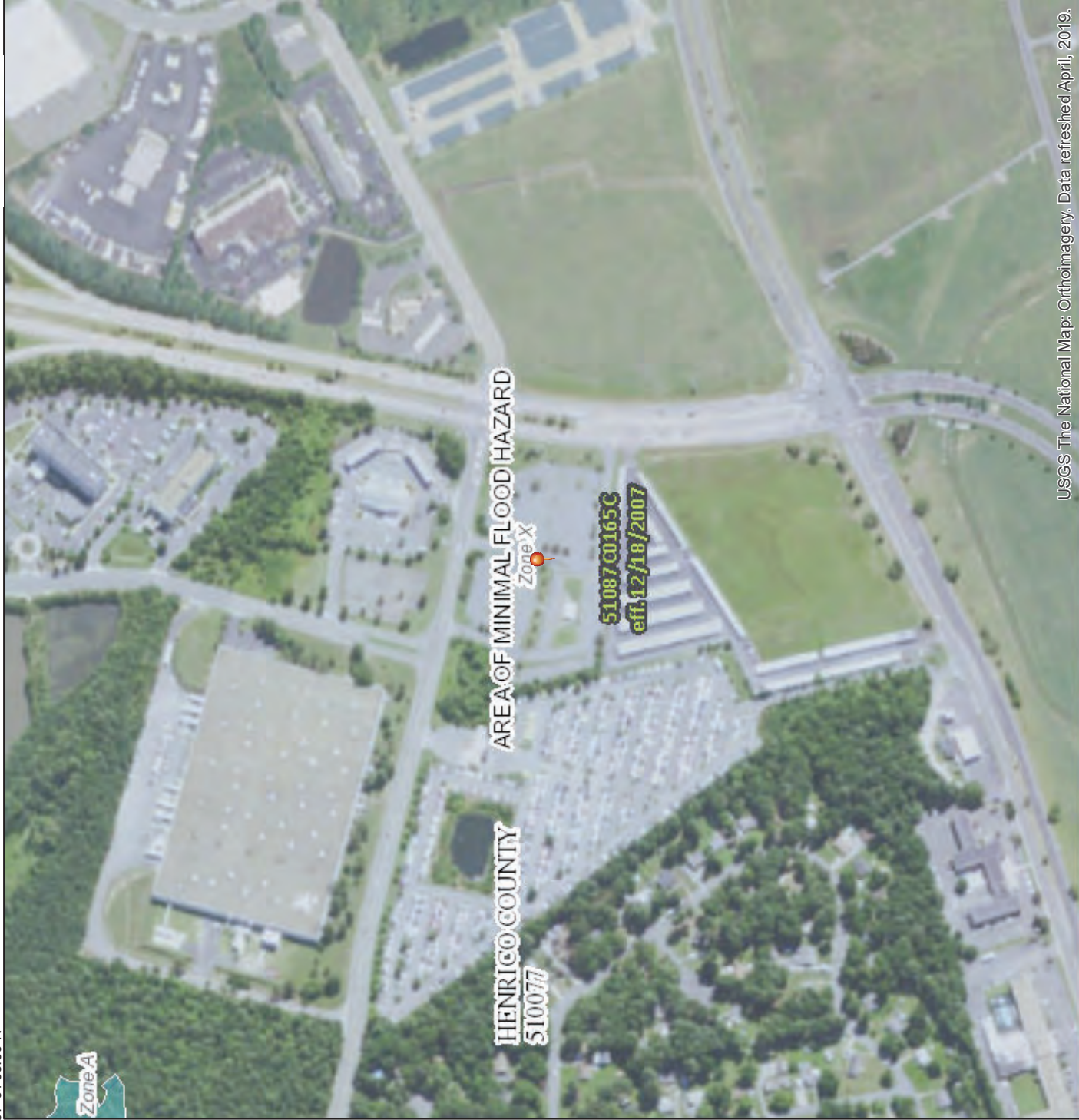
This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Flood Hazard Layer FIRMette



37°31'38.56"N

77°20'5.96"W



USGS The National Map: Orthoimagery. Data refreshed April, 2019.

37°31'10.03"N

Feet 1:6,000

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE)
Zone A, V, A99
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD

- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS

- Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES

- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES

- Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS

- Digital Data Available
- No Digital Data Available
- Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 5/5/2020 at 11:50:02 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

77°19'28.49"W

ATTACHMENT G

Public Involvement (3 pages)

Andrew Harrison

From: Walker, Genevieve J (FAA) <Genevieve.J.Walker@faa.gov>
Sent: Monday, July 20, 2020 12:50 PM
To: Andrew Harrison
Subject: FW: Question regarding the RIC proposed Sheetz development project

Hi Andrew- Just another email for your file!
Genevieve

From: Scott Denny <scott.denny@doav.virginia.gov>
Sent: Monday, July 20, 2020 9:24 AM
To: Walker, Genevieve J (FAA) <Genevieve.J.Walker@faa.gov>
Subject: Re: Question regarding the RIC proposed Sheetz development project

Genevieve:

Thanks for reaching out to me. I hope you are well too. I would like a copy just for our records. I don't believe there is any need for a public hearing. I am not aware of any issues with the site or local objections of the development. Thanks again for checking.

Scott

On Mon, Jul 20, 2020 at 9:08 AM Walker, Genevieve J (FAA) <Genevieve.J.Walker@faa.gov> wrote:

Good Morning Scott- I hope you are well! I am working with the contractor to address my issues with their short form EA and wondered if you wanted to see the document before it goes out for public comment. Also do you think it needs a hearing with DEQ? We are advertising it separately due to the virus (would you like to see the NOA)? Your only comment on the FCC was that they had to submit a FORM 7460 to the FAA (Kyle confirmed they did that and airspace cleared the project).

Just let me know what you need!

Genevieve

Genevieve Walker

Environmental Protection Specialist

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