



LYNCHBURG REGIONAL AIRPORT 

SHORT ENVIRONMENTAL ASSESSMENT FORM FOR
A REPLACEMENT AIR TRAFFIC CONTROL TOWER
AT LYNCHBURG REGIONAL AIRPORT

RS&H No. 222-2561-001

Prepared for:
City of Lynchburg

Prepared by:

RS&H

DRAFT

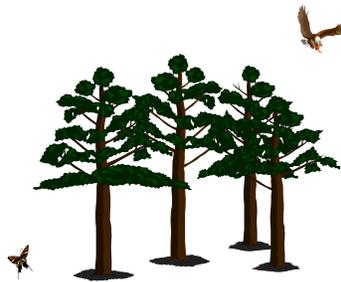
June 2014



FEDERAL AVIATION ADMINISTRATION

EASTERN REGION
AIRPORTS DIVISION

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



Airport Name: Lynchburg Regional Airport

Identifier: LYH

Proposed Project: Replacement Air Traffic Control Tower at Lynchburg Regional Airport

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

Marcus Brundage
FAA Washington ADO, Environmental Protection Specialist

Date

This form is to be used only for limited types of projects. It is strongly recommended that you contact your local Environmental Protection Specialist (EPS) before completing this form. See instructions page.

APPLICABILITY

This Form can be used if the proposed project meets the following criteria:

- 1) It is not categorically excluded (see paragraphs 303 and 307-312 in FAA Order 1050.1E) or
- 2) It is normally categorically excluded but, in this instance, involves at least one extraordinary circumstance that may significantly impact the human environment (see paragraph 304 and the applicable section in Appendix of 1050.1E) or
- 3) The action is one that normally requires an EA at a minimum (see paragraph 506 in FAA Order 5050.4B) and
- 4) The proposed project must fall under one of the following categories of Federal Airports Program actions:
 - (a) Approval of a project on an Airport Layout Plan (ALP).
 - (b) Approval of federal funding for airport development.
 - (c) Requests for conveyance of government land.
 - (d) Approval of release of airport land.
 - (e) Approval of the use of Passenger Facility Charges (PFC).
 - (f) Approval of development or construction on a federally obligated airport.

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.

Complete the following information:

Project Location

Airport Name: Lynchburg Regional Airport Identifier: LYH
Airport Address: 350 Terminal Drive
City: Lynchburg County: Campbell County State: VA Zip: 24502

Airport Sponsor Information

City of Lynchburg, Virginia
Point of Contact: Mark Courtney, Airport Manager
Address: 350 Terminal Drive
City: Lynchburg State: VA Zip: 24502
Telephone: (434) 455-6089 Fax: (434) 239-9027
Email: mark.courtney@lynchburgva.gov

Evaluation Form Preparer Information

Point of Contact: Natalie Deschappelles, Environmental Specialist
Address: 10748 Deerwood Park Boulevard South
City: Jacksonville State: FL Zip: 32256
Telephone: (904) 256-2500 Fax: (904) 256-2501
Email: natalie.deschappelles@rsandh.com

1. Introduction/Background:

The City of Lynchburg, Virginia (the Airport Sponsor), has prepared this Short Environmental Assessment (EA) Form for on-airport, landside improvements in the western portion of the Lynchburg Regional Airport (the Airport) property. The Airport Sponsor proposes to site, design, and construct an Air Traffic Control Tower (ATCT) to replace the existing ATCT (Proposed Project). [Section 2](#) of this Short EA Form provides details regarding the Proposed Project.

The Airport Sponsor owns and operates the Airport. The Airport is approximately five miles southwest of the City's central business district and within Campbell County (see [Attachment A: Exhibit A-1](#)). The Airport encompasses approximately 872 acres and the Federal Aviation Administration's (FAA's) National Plan of Integrated Airport Systems (NPIAS) categorizes the Airport as a primary commercial service airport. The airfield is comprised of two runways:

- ❖ Runway 4-22 (primary runway) - 7,100 feet long by 150 feet wide and
- ❖ Runway 17-35 - 3,386 feet long by 75 feet wide.

The Airport plays a key role in central Virginia's growth as a global gateway to the area's international corporations, manufacturing plants, research and development firms, and educational institutions.¹ According to the FAA's Terminal Area Forecast (TAF), the Airport had approximately 78,600 total enplanements in 2013.² According to the Airport Sponsor, there were 115,237 total operations in 2013.

¹ City of Lynchburg, Lynchburg Regional Airport, <http://www.lynchburgva.gov/airport>, accessed November 2013.

² FAA, TAF, Lynchburg Regional Airport, January 2013, <http://aspm.faa.gov/main/taf.asp>, accessed January 2014.

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 Airport Sponsor proposes to site, design, and construct a replacement ATCT that will provide Instrument Flight Rule (IFR) services, like the existing ATCT, and be suitable for a Part 139 Class I Airport.³ The existing ATCT operates under the Federal Contract Tower Program and plans call for the replacement ATCT to continue to operate under the existing arrangement. [Section 3](#) of this EA explains why the proposed project is needed.

As shown in [Exhibit A-2](#), the Proposed Project site is approximately 195 feet south of the existing ATCT on naturally elevated terrain, approximately 30 feet above the Airport's airfield elevation of approximately 938 feet.⁴ The Proposed Project site is offset 975 feet west of Runway 4-22's centerline and 1,800 feet from the approach end of Runway 22, as measured from the centerline.

The proposed control cab would have an eye height of 50 feet above ground level (AGL), while the overall height of the ATCT, including antennas and lightning rods, would be 75 feet AGL. The proposed eye height of the replacement IFR ATCT exceeds the height required to pass the line-of-sight critical angle of incidence as determined by the FAA's Air Traffic Control Visibility Analysis Tool, but represents the lowest practical tower height consistent with incorporating required rooms and equipment. For comparison, the existing ATCT has an eye height of 45 feet AGL and overall height of approximately 60 feet AGL.

The proposed tower would provide controllers unobstructed lines-of-sight to all runways, taxiways, aircraft aprons, and segments of the Airport's traffic patterns, with the exception of Taxiway G. Taxiway G is currently an uncontrolled area due to shadowing from General Aviation (GA) hangars.⁵

The proposed ATCT's site selection was based on both of the following criteria:

- ❖ construction of the replacement ATCT would not reduce the ability of a controller in the existing ATCT to monitor airport operating areas; and
- ❖ demolition of the existing ATCT building would not reduce the ability of controllers in the replacement ATCT to monitor airport operating areas.

The Airport Sponsor notes that a partial exception to the second criterion is needed due to an unavoidable obstruction of a portion of the approach end of Runway 17 that would occur during the demolition of the existing ATCT. To mitigate this situation, the Airport Sponsor could either temporarily close Runway 17-35 or temporarily displace the Runway 17 threshold by approximately 700 feet during the demolition of the existing ATCT.

³ Under 14 CFR Part 139, FAA issues airport operating certificates to airports serving scheduled and unscheduled air carrier aircraft with more than 30 seats; airports serving scheduled air carrier operations in aircraft with more than nine seats but less than 31 seats; and airports the FAA Administrator requires to have a certificate. Part 139 Class I airports have three types of operations: scheduled large air carrier aircraft (30+ seats), unscheduled large air carrier aircraft (30+ seats), and scheduled small air carrier aircraft (10-30 seats).

⁴ FAA, Airport Master Record, <http://www.gcr1.com/5010WEB/REPORTS/AFD02062014LYH.pdf>, accessed February 2014.

⁵ The buildings causing the shadow are a flight school and storage hangar, which is depicted for future removal on the Airport's approved Airport Layout Plan. This is not considered a connected action to the Proposed Project and, therefore, is not considered in this EA.

The existing ATCT's access road and parking lot would provide vehicular access to and parking for the proposed replacement ATCT. A new sidewalk would provide pedestrian access from the parking lot to the proposed ATCT.

FAA Operations Engineering Support Group, Technical Service (Tech Ops) reviewed the location of the Proposed ATCT during the *Lynchburg Regional Airport ATCT Siting Study* and concluded some shadowing may occur to the signal from a Remote Transmitter Receiver (RTR) facility, located on the opposite side of the road from the Proposed Project, to segments of the airfield.⁶ The RTR facility houses a Remote Communications Outlet (RCO) for the Leesburg Flight Service Station (FSS), which relays radio transmissions from aircraft on the ground at the Airport to the FSS when the ATCT is closed (10:30 PM to 6:29 AM). Transmissions primarily involve pilots opening and closing flight plans, obtaining weather services, and receiving instrument flight plan clearances. The RTR also houses backup transmitters and receivers for local and ground operations of the existing ATCT. Therefore, the Airport Sponsor proposes to relocate the Leesburg FSS RCO to the replacement ATCT, including necessary rooftop antennae, to mitigate the potential shadowing effect of the replacement ATCT. Installing new equipment in the replacement ATCT involves installing new backup local and ground radio equipment, as the existing equipment is dated.

The control cab would initially accommodate two Air Traffic Control Specialist (ATCS) positions, but would have space for up to two additional working or supervisory positions. It would have a minimum of 230 square feet of walkable floor area (subtracting the console surfaces, stairwell, and small convenience center).

Based on the above information, and as shown in [Exhibit A-2](#), the Proposed Project would involve the following, connected project activities and components:

- ❖ constructing and operating a replacement, 75-foot-tall ATCT (including antennas and lightning rods);
- ❖ potentially relocating the FSS RCO including necessary rooftop antennae due to possible shadowing from the proposed replacement ATCT;
- ❖ installing new equipment, including new backup local and ground radio equipment in the replacement ATCT;
- ❖ constructing a sidewalk to provide access to the replacement ATCT from the existing ATCT's parking area;
- ❖ extending utility services to the replacement ATCT; and
- ❖ demolishing the existing ATCT.

[Section 3](#) of this Short EA Form provides further details on the Purpose and Need for this Proposed Project.

Funding – According to engineering estimates, construction of the Proposed Project would cost approximately \$3 million. Funding for the Proposed Project could potentially come from a combination of the following sources: FAA, Virginia Department of Aviation, passenger facility charge (PFC) funds, and/or other local funds.

Schedule – Construction is expected to occur over approximately a six-month period, beginning May 2015.

⁶ RS&H, *Lynchburg Regional Airport ATCT Siting Study*, January 2014.

3. Project Purpose and Need:

FAA Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*, requires an EA to fully address and describe the Purpose and Need for a proposed project. The Purpose and Need identifies the problem facing the Airport Sponsor (the “Need” for action) and the proposed solution to the problem (the “Purpose” of the action). The following paragraphs describe the Purpose and Need.

Purpose – The Airport Sponsor proposes to construct a replacement ATCT at the Airport to improve the functional and operational capabilities of the service provided by the ATCT. The replacement ATCT would meet the FAA security requirements in FAA Orders 1600.69B⁷ and 6480.7E⁸, improving the safety of the ATCS and Airport users.

Need – The Airport currently has an operational ATCT situated atop a three-story office building, which previously housed FAA offices and equipment. The ATCT, which opened in 1963, has passed its useful life. According to the U.S. Department of Transportation, the average ATCT facility has an expected useful life of approximately 25 to 30 years.⁹ The building experiences high maintenance costs, is functionally obsolescent, does not meet current FAA security requirements, and contains asbestos.

According to the Airport Sponsor, the operational cost (e.g., utilities, maintenance) of the existing ATCT building is approximately \$40,000 per year. However, the Airport receives approximately \$37,000 in rent. This results in a net loss of approximately \$3,000 per year. Additionally, the Airport Sponsor has spent over \$40,000 in nonrecurring maintenance costs on the existing ATCT building since 2009. This includes repairs to leaks, multiple upgrades to the heating, ventilation, and air conditioning (HVAC) system, roof replacement of the control cab, and carpet replacement. These costs do not include utility costs, or the time, cost, and effort from Airport staff.

The Airport Sponsor has also listed the following problems with the existing ATCT building:

- ❖ all window panels installed in the office building’s brick framing leak;
- ❖ the generator room experiences leaks through its walls;
- ❖ a 2.5-ton HVAC unit needs to be replaced;
- ❖ the building is not well suited for electronic equipment used today; and
- ❖ the three bathrooms need to be completely remodeled to meet the American Disabilities Act of 1990 (ADA) standards.

The existing ATCT building is also too large for its current use. Today, the building functions solely as an ATCT. Previously, the building housed National Weather Service (NWS), Flight Service Station (FSS), and FAA offices. However, those offices have been relocated and most of the office space remains unused. Additionally, the Airport Sponsor has noted the building does not meet FAA security requirements.¹⁰ To meet those requirements, the doors of the existing ATCT would need to be changed from glass to steel and additional fencing and gates added.

⁷ FAA Order 1600.69B, FAA Facility Security Management Program, October 1, 2003.

⁸ FAA Order 6480.7E, Airport Traffic Control Tower and Terminal Radar Approach Control Facility Design Policy, August 11, 2004.

⁹ USDOT, *FAA’s Management and Maintenance of Air Traffic Control Facilities*, Report Number AV-2009-012, December 15, 2008, http://www.oig.dot.gov/sites/dot/files/pdfdocs/REVIEW_OF_FAA_FACILITIES.pdf.

¹⁰ Stein, Richard M., A.A.E (personal communication, January 16, 2014).

The presence of asbestos-containing materials in the building significantly increases the costs of any major repair and renovation projects to the existing structure. [Attachment B](#) contains the completed FAA Safety and Environmental Certification Checklist and supporting material regarding the presence of asbestos in the existing building. It is important to note the undisturbed asbestos and asbestos not in a friable state within the building does not pose a risk to controllers using the existing ATCT.

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

This Short EA Form establishes a project study area to characterize the existing conditions and areas of potential environmental impacts resulting from the Proposed Project. The 2-acre project study area consists only of maintained grassy areas and wholly lies within the Airport's property boundaries (see [Exhibit A-3](#)). The project study area includes the limit of disturbance for the construction of the Proposed Project and its project "laydown area". The limit of disturbance within the project study area is approximately one-half acre.

Per FAA Order 5050.4B, paragraph 706.e, this EA does not address the Coastal Zone, Section 4(f) properties, Prime and Unique Farmlands, Floodplains, Wetlands, or Wild and Scenic Rivers because the Proposed Project would not affect those resources.

Affected Environmental Resources

Air Quality: The project study area, located in Campbell County, is an "attainment" area for all criteria pollutants having a National Ambient Air Quality Standard (NAAQS).¹¹

Compatible Land Use: According to the 2009 – 2024 Campbell County Comprehensive Plan, the project study area is located in a medium- to high-density commercial land use category.¹² The surrounding area is a mix of medium- to high-density residential, urban development, commercial, and transitional land use categories. The closest residential area is approximately one-quarter mile northwest of the Proposed Project. In order to ensure compatible land uses within the residential areas north and west of the Airport, the City of Lynchburg has implemented an Airport Safety Overlay District to regulate and restrict the height of structures within the departure and approach paths of the Airport.¹³

The majority of the Airport's property, including the sites of the Proposed Project and its alternatives, is mowed and maintained.

The western portions of the Airport's property and an area less than one-tenth-mile from the Proposed Project site have dense vegetation and trees, which may attract wildlife. No other potential wildlife hazard attractants occur within four miles of the Airport.

¹¹ Environmental Protection Agency, Currently Designated Nonattainment Areas of All Criteria Pollutants, <http://www.epa.gov/oaqps001/greenbk/anc1.html#VIRGINIA>, accessed November 2013.

¹² Campbell County, Campbell County Comprehensive Plan, http://www.co.campbell.va.us/depts/comdev/Documents/2009-2024-comprehensive_plan.pdf, accessed January 2014.

¹³ City of Lynchburg, Section 35.1-43.3 Airport Safety Overlay District (AS), <http://www.lyncburgva.gov/sec-351-434-airport-safety-overlay-district>, accessed January 2014.

Fish, Wildlife, and Plants: According to the Virginia Department of Conservation and Recreation (DCR), natural heritage resources¹⁴ have not been documented in the project study area (see [Attachment C-2](#), letter dated February 25, 2014).

According to the United States Fish and Wildlife Service (USFWS) Virginia On-line Project Review Process, the Smooth coneflower (*Echinacea laevigata*), an endangered plant, has the potential to occur within the project study area.¹⁵ However, the project study area does not contain any critical habitat for that species.¹⁶

The bald eagle is no longer a USFWS-listed species; however, it is protected by the Bald and Golden Eagle Protection Act and the Migratory Bird Act. Bald eagles and/or bald eagle nests have not been observed in the project study area. According to the Virginia Bald Eagle Nest Locator, the project study area is not located near any Bald Eagle nests.¹⁷

Hazardous Materials, Pollution Prevention, and Solid Waste: According to Airport personnel, the existing ATCT building contains asbestos.¹⁸ According to the United States Environmental Protection Agency (USEPA), asbestos is a mineral fiber commonly used in a variety of building construction materials for insulation and as a fire retardant.

Historical, Architectural, Archaeological, and Cultural Resources: According to Virginia Department of Historic Resources (VDHR) archive search, the project study area does not include any architectural resources or historic districts (see [Attachment G](#)). In addition, there are no properties on the National Register of Historic Places (NRHP) within the project study area.

As previously described, the existing ATCT building is over 50 years old. Preliminary review of the four criteria listed in 36 Code of Federal Regulations (CFR), Section 60.4 regarding resources eligible for the National Register of Historic Places shows the existing ATCT building:

- ❖ is not associated with an important event or trend;
- ❖ is not associated with an important person;
- ❖ does not have a significant design or construction; and
- ❖ does not convey significant information.

FAA coordination with the Virginia Department of Historic Resources (VDHR) regarding the ATCT's eligibility and the undertaking's effects on the ATCT will occur during the comment period for this Draft EA in accordance with Section 106 of the National Historic Preservation Act. The final EA will provide the results of that consultation.

Water Quality: The project study area does not contain any surface waterbodies. The closest waterbodies are an un-segmented portion of Watershed H03, approximately one-half mile northwest

¹⁴ Natural heritage resources are defined as habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

¹⁵ USFWS, Virginia Ecological Services, The Virginia On-line Project Review Process, http://www.fws.gov/northeast/virginiafield/endspecies/Project_Reviews.html, accessed January 2014.

¹⁶ USFWS, Critical Habitat Mapper, <http://ecos.fws.gov/crithab/flex/crithabMapper.jsp?>, accessed December 2013.

¹⁷ The Center for Conservation Biology, Eagle Nest Locator, <http://www.ccbirds.org/what-we-do/research/species-of-concern/virginia-eagles/nest-locator/>, accessed January 2014.

¹⁸ Stein, Richard M., A.A.E. (personal communication, January 16, 2014).

of the project study area, and an un-segmented portion of Watershed L29, approximately three-quarter mile south of the project study area.¹⁹

Burton Creek (State List I.D. H03R-05-BEN) and Flat Creek (State List I.D. L29R-01-BEN), approximately one and one-quarter miles north and one and three-quarter miles south of the project study area, respectively, are the closest impaired waterbodies to the project study area.²⁰ The USEPA identifies these waterbodies as impaired based on benthic macroinvertebrate bioassessments.²¹ These creeks are included on the Virginia Department of Environmental Quality's (DEQ) 2012 list of impaired waters needing cleanup plans.²²

The Airport is within the Upper Roanoke River Watershed and the Middle James-Buffalo Watershed. The project study area is within the Upper Roanoke River Watershed.²³ The project study area is not located over a designated Sole Source Aquifer.²⁴

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):

In 2014, the *Lynchburg Regional Airport ATCT Siting Study* (Siting Study) was completed for the Airport in which three alternative sites, including the Proposed Project site, for the replacement ATCT were analyzed (see [Attachment D](#) for excerpts from the Siting Study).²⁵ The sites were determined based on the guidance provided in FAA Order 6480.4B, *Airport Traffic Control Tower Siting Criteria*. These criteria include: visual performance; Terminal Instrument Procedures (TERPS); Part 77 surfaces; sunlight/daylight glare; artificial lighting; atmospheric conditions; industrial municipal discharge; site access; interior physical barriers; and security.

Two alternative sites to the Proposed Project are described in further detail in the following paragraphs. A refurbishment alternative is also considered that was not part of the 2014 Siting Study. Refer to [Section 2](#) for a description of the Proposed Project (referred to as Site 1 in the ATCT Siting Study). See [Exhibit A-4](#) for the location of each alternative site. Alternative Sites 2 and 3 would include the construction of a new parking lot, extension of utilities, and demolition of the existing ATCT.

¹⁹ Virginia DEQ, VEGIS, http://www.deq.virginia.gov/mapper_ext/default.aspx?service=public/2010_ADB_Public_Water_Supply, accessed December 2013.

²⁰ USEPA, NEPAAssist, <http://nepassisttool.epa.gov/nepassist/nepamap.aspx?action=searchloc&wherestr=Lynchburg%20Regional%20Airport>, accessed December 2013.

²¹ USEPA, Watershed Assessment, Tracking and Environmental Results, http://ofmpub.epa.gov/tmdl_waters10/attains_waterbody.control?p_list_id=VA-H03R-05-BEN&p_cycle=&p_report_type=T#causes, accessed December 2013.

²² Virginia DEQ, List of Category 5 Impaired Waters, http://www.deq.virginia.gov/Portals/0/DEQ/Water/WaterQualityAssessments/IntegratedReport/2012/ir12_Appendix1a_Category5_List.pdf, accessed December 2013.

²³ VDEQ, VEGIS, <http://www.deq.virginia.gov/ConnectWithDEQ/VEGIS.aspx>, accessed December 2013.

²⁴ USEPA, Region 3 Water Protection Division Sole Source Aquifer Program, <http://www.epa.gov/reg3wapd/presentations/ssa/index.htm>, accessed December 2013.

²⁵ RS&H, *Lynchburg Regional Airport ATCT Siting Study*, January 2014.

Alternative 1 Refurbishment: Under the refurbishment alternative, improvements would be made to enable the existing ATCT and building to operate more efficiently than it currently does. This would include, but is not limited to:

- ❖ replacing window panels in the brick-framed building supporting the tower cab to eliminate existing leaking and deteriorating windows;
- ❖ sealing the walls of the room housing the cab's emergency generator to prevent leaks that could harm the operation of this vital equipment or cause its rapid deterioration;
- ❖ replacing the HVAC system in accordance with FAA standards for controller working conditions and to sustain the conditions needed to operate the climate-sensitive, electronic equipment controllers use to safely and efficiently manage the Airport's air traffic;
- ❖ replacing the building and tower cab's electrical system to maintain and ensure proper operation of modern air traffic control equipment;
- ❖ remodeling the building's bathrooms to meet Americans with Disabilities Act requirements;
- ❖ installing additional fencing and gates to meet current FAA security requirements for ATCTs per FAA Orders 1600.69B and 6480.7E; and
- ❖ installing new steel doors to replace the existing glass doors to meet current FAA security requirements for ATCTs per FAA Orders 1600.69B and 6480.7E, including altering portions of the building near the doors to accommodate the new security measure.

The renovations to the existing building would provide a secure, efficient work area for the controllers working in the tower cab and the equipment they use to ensure safe, efficient, airport operations. All of the renovations would require disturbing asbestos. As a result, the contractor would need to meet USEPA and Virginia asbestos abatement, removal, handling, and disposal requirements (see [Section 6\(E\)](#) of this Short EA Form).

During the 12 to 24-month refurbishment period, the controllers would need to manage the Airport's air traffic from a different location since the water, power, and HVAC systems of the existing tower would be disrupted due to removal of the old systems and installations of new ones. Removal of asbestos from controller-occupied areas would also require the controllers to leave the affected areas. As a result, the Airport Sponsor would need to lease a portable ATCT.

Based on a rough order of magnitude (ROM) estimate of rehabilitation and associated costs, the refurbishment of the existing building and tower cab would be approximately \$2.8 million.²⁶ Additionally, the cost to lease a portable, temporary ATCT for the rehabilitation period would be approximately \$200,000.²⁷ This cost estimate does not include any utilities that would be needed to support the portable ATCT's equipment or to maintain controller working conditions. Overall, the estimated cost to complete the refurbishment alternative would be approximately \$3 million.

Alternative Site 2: Site 2 is approximately 415 feet south/southwest of the existing ATCT on a natural area of high terrain, rising approximately 30 feet above the Airport's airfield elevation. This site is 1,005 feet west of Runway 4-22's centerline and 2,010 feet from Runway 22's approach end, as measured along the centerline. The control cab of the replacement ATCT at this site would have an eye height of 50 feet AGL, with an overall height of 75 feet AGL. As with the Proposed Project, Taxiway G would be shadowed by GA hangars. Additionally, some shadowing of the signal from

²⁶ Costs are based on industry-recognized sources, such as RS Means, and refined based on RS&H's experience and records of bid tabulations of like projects in scope and scale. The estimates are given as the cost to replace or repair all primary building components within a single rehabilitation construction project.

²⁷ The cost to lease a portable, temporary ATCT is based on an estimate from a portable ATCT supplier.

the RTR facility across the street to segments of the airfield may occur. Therefore, the Leesburg FSS RCO would be relocated to the replacement tower, including necessary rooftop antennae. New equipment, including new backup local and ground radio equipment, would also be installed in the replacement ATCT at Site 2. The replacement ATCT at Site 2 would not impact any existing or planned future instrument procedures for the Airport.

Alternative Site 3: Site 3 is located between the GA facilities and Taxiway B on the west side of the Airport. This site is approximately 710 feet west of Runway 4-22's centerline and approximately 3,830 feet from the end of Runway 4. The area is at approximately the same elevation as the Airport's airfield. The control cab of the replacement ATCT at Site 3 would have an eye height of 59 feet AGL, with an overall height of 85 feet AGL. As with the Proposed Project and Site 2, Taxiway G would be shadowed by GA hangars. New equipment, including new backup local and ground radio equipment, would also be installed in the replacement ATCT at Site 3. The replacement ATCT at Site 3 would not impact any existing or planned future instrument procedures for the Airport.

No-Action Alternative: Under the No-Action Alternative, the Airport Sponsor would not build the proposed replacement ATCT and the existing ATCT would remain in operation. The Airport Sponsor would continue to maintain the building and provide continuous repairs and improvements, as needed.

Explanation

Alternative 1 Refurbishment: The 51-year-old ATCT (and building) has passed its useful life as defined by the USDOT Inspector General's 2008 audit of ATCTs (i.e., 25-30 years). As a result, the extensive renovations previously summarized are necessary to address the existing facility's continually deteriorating condition. The short-term construction costs of Alternative 1 would be similar to those of the Proposed Project. However, the long-term operating costs of Alternative 1 would place long-term demands on the Airport Sponsor's operating budget. The Airport Sponsor would continue to pay for costs to maintain the unused office space, as there are no prospective tenants who would occur the space to offset those costs. While the Airport Sponsor recognizes the refurbished building would have lower maintenance costs than the existing building, those costs would exceed those that the Airport Sponsor would incur to maintain the Proposed Project's new tower. Financing the maintenance of an unoccupied building larger than needed to support the refurbished tower during its 25 to 30-year useful life would strain the Airport Sponsor's operating budget. As a result, the cost of Alternative 1 would exceed that of the Proposed Project of the long term.

Compared to the Proposed Project, Alternative 1 would result in similar asbestos-related environmental impacts. Therefore, Alternative 1 and the Proposed Project would require the same handling and abatement measures for hazardous materials. Although Alternative 1 would not disturb the maintained grassy area the Proposed Action would affect, this is not a critical factor because the area the Proposed Action would disturb does not affect any sensitive or specially-protected resources.

Overall, based on the provided cost estimates, Alternative 1 is not a financially prudent or reasonable alternative. Although the Proposed Project and Alternative 1 have similar construction

costs, Alternative 1 would place a long-term budgetary strain on the Airport Sponsor compared to the Proposed Project.

In addition, Alternative 1 is not an environmentally sustainable alternative. Sustainable alternatives are based on sound environmental, economic, and social factors. Environmentally, Alternative 1 is unacceptable due to the energy and other natural resources used to maintain a building far larger than needed to support the refurbished tower cab over the long-term. Economically, Alternative 1 would continue to place an unacceptable economic burden on the Airport Sponsor. Therefore, Alternative 1 is not carried forward for environmental analysis.

Alternatives 2 and 3: A Comparative Safety Assessment (CSA) was conducted as part of the 2014 Siting Study. The CSA compares the risks associated with each alternative site as the site to replace the existing ATCT as they relate to airport operations and human safety. The CSA identified the existing ATCT as a sight barrier to the Proposed Project site, Alternative Site 2, and Alternative Site 3. Demolishing the existing ATCT would mitigate the effect. Additionally the CSA identified the Proposed Project's and Alternative Site 2's potential interference with communication equipment (i.e., the Leesburg FSS RCO). Therefore to eliminate this issue, this equipment would be relocated to the replacement ATCT.

The CSA also identified additional hazards associated with Alternative Sites 2 and 3, as summarized below.

Alternative Site 2 would have obstructed views of the hold short line for Taxiway H in addition to the shadowing existing GA hangars cause on Taxiway G. Although, the Taxiway H hazard was determined to be a minor, remote low-risk hazard with acceptable existing controls in place, it has an additional risk when compared to the Proposed Project. Therefore, Alternative Site 2 is not carried forward for environmental analysis because it is not a prudent and reasonable alternative.

Controllers using an ATCT at Alternative Site 3 would experience the same shadowing of Taxiway G as described in the narrative about the Proposed Project and Alternative 2. In addition, Alternative Site 3 would penetrate the 14 CFR Part 77 surfaces, specifically the 7:1 surface.²⁸ This Alternative would also cause controllers to experience an obstructed view of Runway 17-35 and the taxiway system north of Taxiway B. This hazard was determined to be a probable, high-risk hazard, which could be mitigated by closing Runway 17-35. While closing Runway 17-35 would remove the hazard, this is not a viable option for the efficiency of the Airport's operations. Therefore, Alternative Site 3 is not carried forward for environmental analysis because it is not a prudent and reasonable alternative.

No-Action Alternative: The No-Action Alternative does not meet the stated Purpose and Need for the Proposed Project. As discussed in the [Section 3](#) of this Short EA Form, the existing ATCT has surpassed its useful life, as defined by the USDOT. Its continued maintenance and operation would be an unwise use of the Airport's budget. However, the No-Action Alternative would avoid any potential environmental impacts associated with implementation of the Proposed Project.

Although the No-Action Alternative does not meet the Purpose and Need of this project, this Short EA Form addresses the Alternative's environmental consequences in [Section 6](#). The EA does so to

²⁸ RS&H, *Lynchburg Regional Airport ATCT Siting Study*, January 2014.

fulfill FAA’s obligations under NEPA and to provide an environmental baseline to allow FAA to compare the environmental effects of the Proposed Project with those of the No-Action Alternative.

6. Environmental Consequences – Special Impact Categories (refer to the Instructions page and corresponding sections in Appendix A of 1050.1E and the Airports Desk Reference for more information and direction. The analysis under each section must comply with the requirements and significance thresholds as described in the Desk Reference).

(A) AIR QUALITY (Please note this analysis must meet requirements for both NEPA review and Clean Air Act (CAA) requirements).

Clean Air Act

(a) Is the proposed project located in a nonattainment or maintenance area for the National Ambient Air Quality Standards (NAAQS) established under the Clean Air Act and does it result in direct emissions (including construction emissions)?(If **Yes**, go to (b), **No**, go to the NEPA section below.

No. As described in [Section 4](#) of this Short EA Form, the Proposed Project is located in an attainment area for all NAAQS established under the Clean Air Act. As a result, a General Conformity Determination is not needed.

Construction of the Proposed Project would cause temporary increases in carbon monoxide (CO), volatile organic compounds (VOC), nitrous oxides (NO_x), sulfur dioxide (SO₂), and particulate matter (PM₁₀ and PM_{2.5}) emissions as noted in [Table 1](#). However, the increases would not exceed any NAAQS. As a result, the Project would not significantly affect air quality or the area’s attainment status (see [Section 6\(A\)\(Clean Air Act\)\(c\)](#)).

Table 1
Construction Emission Inventory^{/a/b/}

CO	VOC	NO _x	SO _x	PM ₁₀	PM _{2.5}
<i>Construction Equipment</i>					
2.074	0.352	1.746	0.1552	0.1015	0.1015
<i>Construction Worker Emissions from VMT</i>					
0.277	0.006	0.002	0.001	0.003	0.001
<i>Supply and Equipment Delivery</i>					
0.016	0.023	0.049	0.001	0.005	0.002
<i>Total Criteria Pollutant Emissions</i>					
2.367	0.381	1.797	0.157	0.109	0.104

^{/a/}: Results presented in tons.

^{/b/}: Assumed construction schedule is 6 months; therefore, it is assumed that criteria pollutant emissions would occur in one calendar year.

Source: RS&H, 2014

(b) Is the proposed project an “exempted action,” under the General Conformity Rule or Presumed to Conform (See FRN, vol.72 no. 145, pg. 41565)? (If **Yes**, cite exemption and go to NEPA section below; **No**, go to (c)).

No. The Proposed Project is not an “exempted action.”

(c) Would the proposed project result in a net total of direct and indirect emissions that exceed the threshold levels of the regulated air pollutants for which the project area is in non-attainment or maintenance? (Attach emissions inventory). (If **Yes**, consult with ADO).

No. A construction emission inventory for the Proposed Project was prepared, using available information, in order to estimate temporary construction-related emissions. As previously noted, [Table 1](#) presents a summary of the results from the construction emission inventory ([Attachment E](#) of this Short EA Form provides information on the calculations, assumptions, and emission factors used in the inventory).

The construction emission inventory involves calculating estimated hourly usage of construction equipment, applying these hourly usages to 100% load factors and corresponding emission factors unique to each piece of construction equipment, and calculating emissions resulting from equipment delivery and worker commutes.

The vehicle mix, trip distances, and assumed travel speeds for material delivery, dump truck usage, and worker commute vehicles were input to the Emission Dispersion Modeling System (EDMS), the FAA preferred model for air quality analyses. To estimate emissions associated with on-road motor vehicles including haul trucks, deliveries, and vehicles used by construction workers, this analysis assumes the following:

- ❖ construction worker vehicle miles traveled (VMT) are calculated assuming 40 miles per work day (round trip);
- ❖ 1.25 employees per vehicle over the duration of the construction schedule;
- ❖ haul truck and workers assume an average vehicle speed of 40 miles per hour; and
- ❖ a work schedule of six months with an average of 10 workers working concurrently over the duration of the construction schedule.

Since construction would occur over six months, it is assumed that temporary criteria pollutant emissions resulting from construction of the Proposed Project would not be significant because they would not exceed the *de minimis*²⁹ levels established for each of the criteria pollutants noted in [Table 1](#). As a result, the Proposed Project would not significantly affect air quality in the project area.

NEPA

(a) Is the airport's activity levels below the FAA thresholds for requiring a NAAQS analysis? (If **Yes**, document activity levels and go to Item B, **No**, go to (b)).

Yes. In accordance with FAA and the Environmental Protection Agency (EPA) guidance from the *Air Quality Procedures for Civilian Airports and Air Force Bases*, a National Ambient Air Quality Standards (NAAQS) analysis is only required when general aviation operations and air taxi activity levels exceed 180,000 operations, or there are more than 1.3 million enplanements per year. According to the FAA's Terminal Area Forecast (TAF), the Airport had approximately 78,600 total enplanements in 2013.³⁰ According to the Airport Sponsor, there were 115,237 total operations in 2013. The Proposed Project would not alter the total number of operations or enplanements. Therefore, the Airport's activity level is below the FAA threshold requiring a NAAQS analysis.

²⁹ Note: Most conservative de minimis levels for the above criteria pollutants are: CO 100 tons; VOC 10 tons; NOx 10 tons; SO₂ 100 tons; PM₁₀ 70 tons; PM_{2.5}: 100 tons. Source: USEPA, <http://www.epa.gov/air/genconform/deminimis.html>, accessed February 2014.

³⁰ FAA, TAF, Lynchburg Regional Airport, January 2013, <http://aspm.faa.gov/main/taf.asp>, accessed January 2014.

(b) Do pollutant concentrations exceed NAAQS thresholds? (Attach emissions inventory).

No. See [Section 6\(A\)\(Clean Air Act\)\(c\)](#) and [Section 6\(A\)\(NEPA\)\(a\)](#) of this Short EA Form, and [Table 1](#) for the construction emissions.

(c) Is an air quality analysis needed with regard to state indirect source review?

Not applicable. See [Section 6\(A\)\(NEPA\)\(a\)](#) of this Short EA Form.

(B) BIOTIC RESOURCES

Describe the potential of the proposed project to directly or indirectly impact plant communities and/or the displacement of wildlife. (This answer should also reference Section S, Water Quality, if jurisdictional water bodies are present).

The Proposed Project would occur entirely on Airport property and on land currently mowed and maintained by the Airport Sponsor. As described in [Section 6\(S\)](#) of this Short EA Form, there are no water bodies within the project study area. Therefore, the Proposed Project would not directly or indirectly affect or displace wildlife or aquatic species. See [Section 6\(G\)](#) of this Short EA Form for the discussion regarding threatened and endangered species.

(C) COASTAL RESOURCES

(a) 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.

No. The Proposed Project does not occur in a coastal zone.³¹ Therefore, implementation of the Proposed Project or No-Action Alternative would not affect the use of coastal resources.

(b) 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).

Not applicable. See [Section 6\(C\)\(a\)](#) of this Short EA Form.

(c) 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. The closest CBRS unit is approximately 150 miles east of the project study area.³²

(D) COMPATIBLE LAND USE

(a) 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.

³¹ Virginia DEQ, What is the Virginia Coastal Zone Management Program, <http://www.deq.state.va.us/Programs/CoastalZoneManagement/DescriptionBoundary.aspx>, accessed December 2013.

³² USFWS, CBRS Mapper, <http://www.fws.gov/CBRA/CBRS-Mapper.html>, accessed December 2013.

No. The Proposed Project would occur entirely on Airport property. [Section 6\(E\)](#) of this Short EA Form describes potential impacts to the surrounding areas from construction of the Proposed Project. However, these impacts would be temporary and minor.

Implementation of the Proposed Project would not require the relocation of residences or businesses.

Compared to the No-Action Alternative, the Proposed Project would not alter Airport operations or enplanements, and therefore, would not indirectly affect the surrounding community. Additionally, the Proposed Project would not affect natural resource areas (see [Section 6\(H\)](#) of this Short EA Form for further details) when compared to the No-Action Alternative.

(b) 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.

Yes. As described in [Section 4](#) of this Short EA Form, there is an area of dense vegetation approximately three-quarters of a mile west of the project study area which may attract wildlife. However, compared to the No-Action Alternative, implementation of the Proposed Project would not create any additional wildlife hazards as defined in FAA Advisory Circular 150/5200-33B.

(E) CONSTRUCTION IMPACTS

Would construction of the proposed project increase ambient noise levels due to equipment operation; degrade local air quality due to dust, equipment exhausts and burning debris; deteriorate water quality when erosion and pollutant runoff occur; and/or disrupt off-site and local traffic patterns? Explain.

Yes, temporarily.

Noise: Noise generated by construction equipment would vary depending on the equipment type, model, operational mode, duration of the operation, and specific type of work in progress. However, impacts resulting from temporary construction noise would be localized on the Airport. Noise sensitive land uses (i.e., residential land uses) are located approximately one-quarter mile northwest of the project study area. However, no significant impacts to those land uses is expected since construction would occur during the daytime and would be localized to the project study area.

Air Emissions: Construction of the Proposed Project has the potential to cause short-term effects on ambient air quality. Emissions would occur due to disturbing land (particulate dust emissions), motor vehicles accessing the construction site and traversing disturbed grounds, and direct emissions from construction equipment. Short-term emissions associated with the combustion of hydrocarbons, such as diesel fuel would be minor. [Table 1](#) shows there would be no significant air quality impacts to surrounding areas. Fugitive dust emissions would also be temporary and limited to a relatively small area on Airport property. Through the use of Best Management Practices (BMPs) and sustainable measures (see [Section H](#) of this Short EA Form), the Proposed Project is not anticipated to exceed *de minimus* levels and would not significantly affect the air quality of the region. See [Section 6\(A\)\(Clean Air Act\)\(c\)](#) and [Attachment E](#) of this Short EA Form for the construction emissions inventory.

Hazardous Material: Construction of the Proposed Project would include the demolition of the existing ATCT building. The building potentially contains asbestos, a hazardous material. As

described in [Section 3](#) of this Short EA Form, asbestos can cause significant health problems if microscopic fibers are disturbed and become airborne and inhaled into the lungs of humans.

Asbestos does not pose significant harm when in good condition. However, the USEPA states asbestos can cause significant health problems if microscopic fibers become airborne and are inhaled into the lungs. This typically occurs when asbestos-containing materials are damaged or disturbed by repair, remodeling, or demolition activities.

To address the potential presence of asbestos in the building housing the existing ATCT, the selected contractor would demolish the existing building in accordance with the 16 VAC 25-30-10 et seq., *Regulations for Asbestos Emissions Standards for Demolition and Renovation Construction Activities and the Disposal of Asbestos-Containing construction Wastes*,³³ and 16 VAC 25-20, *Regulation Concerning Licenses Asbestos Contractor Notification, Asbestos Project Permits, and Permit Fees*.³⁴ The contractor would also be required to comply with 40 Code of Federal Regulations (CFR) Part 61, Subpart M, *National Emission Standard for Asbestos*. The selected contractor would also follow the Virginia Occupational Safety and Health (VOSH) Asbestos Construction Standard, Part 1926.1101, which regulates asbestos exposure during demolition activities when materials containing asbestos are present and could be disturbed. The selected contractor handling and removing asbestos containing materials would be accredited by the Virginia Board for Asbestos, Lead, and Home Inspectors to engage in asbestos abatement, as required by the Virginia Department of Labor and Industry (DOLI). All asbestos-containing material waste would be properly disposed of (e.g., in sealed, impermeable bags and/or containers) in accordance with the previously listed asbestos regulations.

The Airport Sponsor and/or selected contractor would provide written notification to the Virginia DOLI as required by 16 VAC25-20 and 40 CFR Part 61 Subpart M. The Airport Sponsor and/or selected contractor would also receive a permit from the Virginia DOLI for asbestos removal and demolition. The permit would include information regarding the work schedules, asbestos-containing materials to be removed, work procedures, and waste transporter and disposal site information. Therefore, the demolition of the existing ATCT, as part of the Proposed Project, would not substantially affect air quality.

Water Quality: Construction of the Proposed Project has the potential to cause temporary water quality impacts. Rain events could result in stormwater runoff containing pollutants associated with construction activities. These pollutants could include sediments due to clearing activities, fuels, lubricants, and solvents associated with the maintenance and operation of construction equipment. The use of BMPs, permitting requirements, and sustainable measures (see [Section 6\(H\)](#)) during construction activities would minimize temporary, construction-related water quality effects.

There could be minor, localized traffic disruptions to Airport Road and Hangar Road from construction vehicles entering and exiting the Airport Property. However, traffic disruptions would be temporary, relatively minor, and would not permanently degrade the Level of Service (LOS) of Airport Road or Hangar Road, or other roadways in the vicinity of the project study area.

³³ Virginia Department of Labor and Industry, Safety and Health Codes Board, 16 VAC 25-30-10 et seq., effective November 5, 1992, <http://www.doli.virginia.gov/leadasbestos/pdfs/NESHAP.pdf>, accessed January 2014.

³⁴ Virginia Department of Labor and Industry, Safety and Health Codes Board, 16 VAC 25-20, effective November 20, 2008, <http://www.doli.virginia.gov/leadasbestos/pdfs/Asbestos%20Contractor%20Notification%20-%202016%20VAC%2025-20.pdf>, accessed January 2014.

(F) SECTION 4(f) RESOURCES

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? (If **Yes**, contact FAA, contact appropriate agency and attach record of consultation).

No. The Proposed Project is located entirely within the Airport's property. The Proposed Project would not increase enplanements or operations at the Airport. Therefore, the sizes and shapes of the Airport's noise contours would not change. Additionally, the Proposed Project would not affect air quality or the viewshed of the Airport. Implementation of the Proposed Project would not indirectly affect any Section 4(f) resources.

(G) ENDANGERED AND THREATENED SPECIES

(a) Would the proposed project impact any federally or state-listed or proposed, endangered, or threatened species (ESA) of flora and fauna, or impact critical habitat? (Attach record of consultation with federal and state agencies as appropriate).

No. The DCR found the Proposed Project would not affect documented state-listed plants or insects (see [Attachment C-2](#), letter dated February 25, 2014). Additionally, as recommended by the USFWS Virginia Ecological Services Office (see letter dated January 27, 2014 in [Attachment C-2](#) of this Short EA Form), the Virginia On-line Project Review Process was completed. The conclusion was reached that although there is the potential for the Smooth coneflower to occur within the project study area, there is no suitable habitat present (see [Attachment F](#) of this Short EA Form for the on-line project review process results). Therefore, implementation of the Proposed Project would not affect any federal or state-listed species compared to the No-Action Alternative.

Similarly, the project study area does not contain critical habitats as defined by the USFWS; the Proposed Project would not affect any critical habitat.

See [Attachment F](#) of this Short EA Form for the On-line Project Review Certification Letter from the USFWS which concurs with the "no effect" determination.

(b) Would the proposed project affect species protected under the Migratory Bird Act? (If **Yes**, contact FAA).

No. As described in [Section 4](#) of this Short EA Form, there are no bald eagles or other protected bird nests near the project study area. Additionally, the Proposed Project would occur on land regularly mowed and maintained. Tree removal is not included as part of the Proposed Project. Therefore, the Proposed Project would not affect species protected under the Migratory Bird Act.

(H) ENERGY SUPPLIES, NATURAL RESOURCES AND SUSTAINABLE DESIGN

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

Compared to the No-Action Alternative, aircraft operations would remain the same under the Proposed Project. The Proposed Project would not create major changes having measurable effects on local supplies of fuel, energy, or natural resources. Trucks and other construction equipment would consume common fuels as needed for construction purposes. Construction of the replacement

ATCT would not result in significant adverse impacts to the project study area's natural resources or building supplies.

The selected contractor may use sustainable measures when constructing the Proposed Project, including:

- ❖ minimizing land disturbances to the maximum extent practicable;
- ❖ controlling stormwater runoff to ensure sedimentation of the area's streams does not occur; or
- ❖ reducing criteria pollutant emissions resulting from construction activities.

Soil stabilization techniques could include:

- ❖ preserving existing vegetation;
- ❖ mulching cleared vegetation and distributing mulch to disturbed areas to control erosion and runoff;
- ❖ hydroseeding exposed soils;
- ❖ distributing cellulose-fiber mulch;
- ❖ using geotextile mats; or
- ❖ Sodding

Stormwater runoff controls could include installing:

- ❖ straw bale barriers;
- ❖ silt fences;
- ❖ sediment traps;
- ❖ sandbag barriers; or
- ❖ check dams.

Construction equipment emissions could be reduced by:

- ❖ regular maintenance of construction equipment;
- ❖ prohibiting idling of construction vehicles for longer than five minutes;
- ❖ stabilizing construction road entrances; or
- ❖ stabilizing vehicle staging areas or requiring vehicle parking only on paved areas.

The design phase of the replacement ATCT could include measures to have the building operate more energy efficiently. There may be opportunities to reduce waste, recycle, and reuse materials during the construction phase of the replacement ATCT. The Airport Cooperative Research Program (ACRP) Synthesis 10, *Airport Sustainability Practices*, and the Sustainable Aviation Guidance Alliance (SAGA) Database suggest sustainable design elements which could be used by the selected contractor for the design, construction, and operation of the Proposed Project.

(I) ENVIRONMENTAL JUSTICE

Would the proposed project have a disproportionate impact on minority and/or low-income communities? Consider human health, social, economic, and environmental issues in your evaluation. Explain.

No. The Proposed Project would occur entirely on Airport property and would not require the relocation of residences and/or businesses (see [Section 6\(D\)](#) of this Short EA Form). Direct impacts associated with the Proposed Project would occur on Airport property and would not directly affect

low-income or minority populations. Indirect impacts associated with the Proposed Project would not result in disproportionate adverse effects to low-income or minority populations.

(J) 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. There are no soils classified as farmland within the project study area (see [Attachment C-2](#), NRCS letter dated January 10, 2014). The Proposed Project would occur entirely on Airport property and therefore, would not require the acquisition or use of farmland.

(K) 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)?

No. There are no floodplains within the project study area.³⁵ Therefore, the Proposed Project would not be located in or encroach upon any 100-year floodplains.

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

Not Applicable. See [Section 6\(K\)\(a\)](#) of this Short EA Form.

(L) HAZARDOUS MATERIALS

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.

Yes. A portion of the Proposed Project would include the demolition of the existing ATCT building. The building potentially contains asbestos, a hazardous material. As described in [Sections 3, 4, and 6\(E\)](#) of this Short EA Form, asbestos can cause significant health problems if microscopic fibers become airborne and are inhaled into the lungs. This typically occurs when asbestos-containing materials are damaged or disturbed by repair, remodeling, or demolition activities. See [Section 6\(E\)](#) for the discussion regarding asbestos management during demolition activities and mitigation measures. As noted in [Section 6\(E\)](#) of this Short EA Form, demolition of the ATCT building would not cause significant, hazardous materials effects.

The construction of the Proposed Project would not affect the Airport's fuel farm.

(M) HISTORIC, ARCHITECTURAL, ARCHEOLOGICAL OR CULTURAL PROPERTY

(a) Describe any impact the proposed project might have on any properties 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).)

³⁵ FEMA, Current FEMA Issued Floodplains (displayed in ESRI ArcGIS), accessed November 25, 2013.

As described in [Section 4](#) of this Short EA Form, there are no NRHP-listed resources within the project study area. The existing ATCT building is over 50 years old; however, the building does not meet any of the four criterion listed in 36 CFR, Section 60.4 (see [Section 4](#) of this Short EA Form) that could make the building eligible for listing in the NRHP. Therefore, the proposed undertaking would not affect any resources protected by Section 106 of the National Historic Preservation Act.

Compared to the No-Action Alternative, the Proposed Project would not change the number of operations at the Airport or the associated noise contours. Therefore, the Proposed Project would not indirectly affect any NRHP-listed or eligible resources.

(b) 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).

As described in [Section 4](#) of this Short EA Form, there are no known archeological resources within the project study area. Therefore, the Proposed Project would not directly affect any archeological resources.

If archeological resources are encountered during construction, all ground-disturbing activities within 25 feet of the discovered resource would stop immediately. The contractor would immediately contact the City of Lynchburg, the VDHR, the FAA and the THPO. The City of Lynchburg would ensure a qualified paleontologist is called as soon as possible to assess the situation. Consultation would be conducted to seek recommendations for the treatment of the discovery.

Compared to the No-Action Alternative, the Proposed Project would not change the number of operations at the Airport or the associated noise contours. Therefore, the Proposed Project would not indirectly affect archeological resources.

(N) INDUCED SOCIOECONOMIC IMPACTS

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

No. The Proposed Project would be located entirely on Airport property and would not disrupt, divide, or relocate residences or businesses. The small number of construction workers would not adversely affect the project area's traffic levels or community services.

The number of people working in the replacement ATCT would not be significantly different compared to the No-Action Alternative. As described in [Section 4](#) of this Short EA Form, the control cab of the replacement ATCT would initially accommodate two ATCS positions, with space for up to two more working or supervisory positions.

Therefore, implementation of the Proposed Project would not change the area's business and economic activity, impact public service demands, or cause shifts in population movement and growth.

(O) LIGHT EMISSIONS AND VISUAL EFFECTS

Would the proposed project have the potential for airport-related lighting impacts on nearby residents? Explain.

No. The replacement ATCT would be constructed on Airport property. The light emitted from the ATCT would be visible during dark hours (i.e., after sunset). The proposed replacement ATCT would have an overall height of 75 feet AGL and would be lighted with red FAA L-810 obstruction lighting in accordance with FAA Advisory Circular (AC) 70/7460-1K, *Obstruction Marking and Lighting*. This light is low emitting and, therefore, would not impact local residential areas. Parking lot lighting and light emitted from the interior of the proposed replacement ATCT would not impact residential areas surrounding the Airport.

Residential areas approximately one-quarter mile northwest of the project study area would be able to see the proposed replacement ATCT. However, this would not differ significantly from the No-Action Alternative, as residents can currently see the existing ATCT. The overall height of the replacement ATCT would be approximately 15 feet higher than the existing ATCT. The proposed replacement ATCT would be consistent with Airport operations and the overall appearance of the facility. Therefore, implementation of the Proposed Project is not anticipated to visually affect the surrounding area.

(P) NOISE

Will the project, when compared to the No Action alternative for the same timeframe, cause noise sensitive areas located at or above DNL 65 dB to experience a noise increase of at least DNL 1.5 dB? (Use AEM as a screening tool and INM as appropriate. See Airports Desk Reference, Chapter 17, for further guidance).

No. Implementation of the Proposed Project would not increase Airport operations. Compared to the No-Action Alternative, the Proposed Project would not cause noise sensitive areas to experience a noise increase of DNL 1.5 dBA or more. Therefore, the shape and extent of the Airport's aviation noise contours would not change.

Construction noise would be minimal and mostly occur on airport property during daylight hours. See [Section 6\(E\) Construction Impacts](#).

(Q) SOCIAL IMPACTS

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

No. The Virginia Department of Transportation (VDOT) reviewed the early coordination letter for the replacement ATCT and does not see significant impacts to the existing transportation facilities resulting from implementation of the Proposed Project (see [Attachment C-2](#), letter dated January 31, 2014).

Compared to the No-Action Alternative, the Proposed Project would not cause an alteration in surface traffic patterns, cause a noticeable increase in the surface traffic congestion, or decrease the LOS of surrounding roadways. The replacement ATCT would be accessed using the road currently used to access the existing ATCT (Hangar Road). Additionally, the number of people accessing the

replacement ATCT would not be significantly different than the number of people accessing the existing ATCT (see [Section 6\(N\)](#) of this Short EA Form).

(R) SOLID WASTE

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. Construction of the Proposed Project would cause temporary increases in construction debris and solid waste. Removing and disposing organic and inorganic materials and vegetation during land disturbance and excavation would occur during construction of the new ATCT. Construction debris due to demolition of the existing ATCT building would also occur.

The Campbell County Landfill (now known as Livestock Road Regional Landfill) is anticipated to have sufficient capacity to handle the project-related waste noted above.³⁶ The selected contractor could use separate dumpsters for recyclable building material (e.g., scrap metal) to minimize construction and demolition waste sent to the landfill, as recommended in Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*. This would be determined prior to construction and demolition activities.

The operation of the Proposed Project would not cause an increase in personnel, operations, or enplanements at the Airport. As a result, the Proposed Project would not increase the Airport's existing municipal or solid waste loads.

(S) WATER QUALITY

(a) Does the proposed project have the potential to impact water quality, including ground water, surface water bodies, and public water supply system or federal, state or tribal water quality standards? (If **Yes**, contact appropriate agency and include record of consultation).

Yes, temporarily. Construction and operation of the Proposed Project may temporarily affect surface water quality. Construction would disturb land and runoff from the area could flow into nearby streams (see [Section 4](#) of this Short EA Form). However, given the distance of the streams from the project study area, runoff would not directly enter the streams. Nevertheless, BMPs, as described in [Section 6\(H\)](#) of this Short EA Form, would be used to prevent water quality impacts.

As recommended in FAA Advisory Circular (AC) 150/5200-33B³⁷, the Proposed Project would remove all standing water it causes on or near the airfield within 48 hours of a design rainfall event. Therefore, stormwater facilities associated with the Proposed Project would not cause a wildlife hazard.

(b) Is the project to be located over a designated Sole Source Aquifer? (If **Yes**, attach record of consultation with EPA).

No. The Proposed Project is not located over a designated Sole Source Aquifer (see [Section 4](#) of this Short EA Form). Therefore, the Proposed Project would not affect any aquifers.

³⁶ Region 2000 Services Authority, Solid Waste Management Plan (9 VAC 20-130-10 et seq.), April 2010, http://www.region2000.org/assets/files/lgc/Region%202000%20RSWMP_no%20appendices_04-23-10.pdf, accessed January 2014.

³⁷ FAA, AC 150/522-33B, *Hazardous Wildlife Attractants on or Near Airports*, August 2007.

(T) WETLANDS

(a) Does the proposed project involve federal or state regulated or non-jurisdictional wetlands? (Contact USFWS or state agency 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.)

No. There are no wetlands within the project study area.³⁸ Therefore, the Proposed Project would not involve Federal or state regulated or non-jurisdictional wetlands.

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

Not applicable. See [Section 6\(T\)\(a\)](#) of this Short EA Form.

(U) WILD AND SCENIC RIVERS

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

No. The closest wild and scenic river is approximately 130 miles west of the project study area.³⁹ Additionally, the Proposed Project would not directly or indirectly affect any Nationwide Rivers Inventory (NRI) segments in Campbell County. Therefore, the Proposed Project would not affect a river segment listed in the Wild and Scenic River System or NRI.

(V) 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.

Past Projects (2011-2013):

On-Airport Projects:

- ❖ Rehabilitation of various parking lots, including the Virginia Aviation parking lot and Freedom Aviation parking lot (2012)
- ❖ Rehabilitation of the air carrier apron and adjoining taxiways (2012)
- ❖ Construction of a new GA ramp (2013)

Off-Airport Projects⁴⁰:

- ❖ Wards Road Bridge improvements, approximately one mile east of the project study area (2013)
- ❖ Fifth Street Phase II, approximately seven miles northwest of the project study area (2013)

Current Projects (2014):

On-Airport Projects:

³⁸ USFWS, National Wetlands Inventory, <http://www.fws.gov/wetlands/Wetlands-Mapper.html>, accessed December 2013

³⁹ National Wild and Scenic River System, Explore Designated Rivers, available at: <http://www.rivers.gov/map.php>, accessed November 2013.

⁴⁰ City of Lynchburg, Public Works, Construction, Current Posted Projects, <http://www.lynchburgva.gov/construction>, accessed January 2014.

-
- ❖ Construction of the new south ramp and the airfield pavement rehabilitation
 - ❖ Taxiway “C” and “D” Relocation (Phase 2)

Off-Airport Projects⁴¹:

- ❖ Allen-Morrison Park improvements⁴², approximately five miles northeast of the project study area
- ❖ Jefferson Street South Lower Bluffwalk Phase 1 and Phase 2, pedestrian street, approximately seven miles northeast of the project study area
- ❖ Kemper Street Bridge replacement and interchange modifications, approximately six miles northeast of the project study area
- ❖ Main Street Bridge rehabilitation, approximately seven miles northeast of the project study area
- ❖ College Lake Dam improvements, approximately five miles northeast of the project study area
- ❖ Lakeside Drive/College Street intersection improvements, approximately five miles northeast of the project study area

Reasonably Foreseeable Projects (2015 -2019):

On-Airport Projects:

- ❖ Phase II of the T-Hangar Construction (2015)
- ❖ Design and construction of Runway 4-22 parallel taxiway (2016)
- ❖ Phase II of the mid-field general aviation development area (2018)
- ❖ South GA development area (2019)

Off-Airport Projects⁴³:

- ❖ Odd Fellows Road improvements, approximately five miles northeast of the project study area (2015)
- ❖ Wards Road / Harvard Street improvements, approximately two miles northeast of the project study area (2015)
- ❖ New parking facility in the central business district, approximately six miles northeast of the project study area (2016)
- ❖ Wards Ferry Road/Harvard Street intersection improvements, approximately two miles northeast of the project study area (2017)
- ❖ College Park upgrade, approximately two miles northeast of the project study area (2017)

Cumulative Impacts: As described in [Section 6\(A\) – \(U\)](#) of this Short EA Form, implementation of the Proposed Project would not significantly affect environmental resources. Construction of these other projects, both on- and off-airport, may temporarily affect air quality, noise, and water quality. BMPs would be employed to minimize their temporary adverse effects, see [Section 6\(H\)](#). Given the use of BMPs and the small are of the Proposed Project would affect, the potential cumulative construction impacts would not be significant. When evaluated with regard to past, present, and reasonably foreseeable projects, the Proposed Project would not result in a significant cumulative impact.

⁴¹ City of Lynchburg, Public Works, Construction, Current Posted Projects, <http://www.lyncburgva.gov/construction>, accessed January 2014.

⁴² City of Lynchburg, Parks and Recreation, Improvement Projects, <http://www.lyncburgva.gov/allen-morrison-parks-improvement>, accessed January 2014.

⁴³ City of Lynchburg, Proposed Fiscal Year 2014-2018 Capital Improvement Program, March 27, 2013, <http://www.lyncburgva.gov/sites/default/files/COFILES/Community-Development/Planning-Commission/2014-2018%20CIP%20Projects.pdf>, accessed January 2014.

7. PERMITS

List all required permits for the proposed project. Has coordination with the appropriate agency commenced and what is the expected time frame of receiving a permit?

The City of Lynchburg would apply for a construction permit from the Campbell County Community Development Department.

The Airport Sponsor and/or selected contractor would obtain a permit for asbestos removal and demolition from the Virginia DOLI (see Section 6(E) of this Short EA Form).

Under current estimates, the limit of disturbance for construction of the Proposed Project, including the laydown area, would occur on approximately one-half acre. Therefore, an NPDES permit would not be required.⁴⁴

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.

[Section 6](#) of this Short EA Form describes the environmental effects of the No Action and Proposed Project. Comparison of those effects to the significance thresholds noted in FAA Order 1050.1E, Change 1, Appendix A for the affected environmental resources indicates the construction and operation of the Proposed Project would not cause significant impacts on those resources.

The construction of the Proposed Project has the potential to cause temporary construction impacts. These would be mitigated through the use of BMPs and permitting requirements (see [Sections 6\(E\)](#) and [7](#) of this Short EA Form). As described in [Section 6\(H\)](#) of this Short EA Form, the contractor may also use sustainable measures when constructing the Proposed Project.

The demolition of the existing ATCT building would involve handling materials containing asbestos. The selected contractor would follow 16 VAC 25-30-10, 16 *et. seq.*; 16 VAC 25-20; and 40 CFR Part 61, Subpart M; to prevent potential impacts from asbestos (see [Sections 6\(E\)](#) and [6\(L\)](#) of this Short EA Form).

9. PUBLIC INVOLVEMENT

Describe the public review process and any comments received.

Early coordination – On December 23, 2013, RS&H, on behalf of the Airport Sponsor, distributed an early coordination package to various federal, state, and local agencies. The packet discussed the preparation of a Short EA Form for the proposed replacement ATCT, discussed a request for any relevant information agencies may have regarding the project site and/or environs, and provided the opportunity for agencies to comment on the Proposed Project potential environmental, social, and economic issues.

⁴⁴ USEPA, NPDES FAQs, http://cfpub.epa.gov/npdes/faqs.cfm?program_id=6, accessed February 2014.

The information obtained during the early coordination effort was used, as appropriate, during the preparation of this Short EA Form. See [Attachment C-1](#) for the coordination package and distribution list. [Attachment C-2](#) includes correspondence received regarding the Proposed Project.

Draft Short EA Form public outreach – The draft EA is required to be made available via a Notice of Availability to the public for a 30-day review period. In addition, it is to be distributed to the appropriate local, state, and federal regulatory agencies for review. Any comments received will be addressed accordingly and incorporated into the final version of the document. Copies of the draft EA are available on the Airport’s website (<http://www.lynchburgva.gov/airport>) and at the following locations:

Lynchburg Regional Airport
350 Terminal Drive, Suite 100
Lynchburg, VA 24502

Campbell County Public Library
Timberbrook Library
21039 Timberlake Road
Lynchburg, VA 24502

FAA Washington Airports District Office
23723 Air Freight Lane, Suite 210
Dulles, VA 20166

10. LIST OF ATTACHMENTS

Attachment A – Exhibits

Attachment B – FAA Safety and Environmental Certification Checklist

Attachment C – Agency Correspondence

Attachment D – Excerpts from the *Lynchburg Regional Airport ATCT Siting Study*

Attachment E – Construction Emissions Inventory

Attachment F – USFWS On-line Project Review

Attachment G – VDHR Archives Search

Project Title: Replacement Air Traffic Control Tower at Lynchburg Regional Airport

Identifier: LYH

11. PREPARER CERTIFICATION

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

Natalie Deschappelles
Signature

June 19, 2014
Date

Natalie Deschappelles
Name

Environmental Specialist
Title

RS&H, Inc.
Affiliation

(904) 256-2500
Phone #

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) has occurred.

Mark Courtney
Signature

June 20, 2014
Date

Mark Courtney
Name

Airport Director
Title

City of Lynchburg, VA
Affiliation

(434) 455-6089
Phone #

INSTRUCTIONS

NOTE: This form was prepared by FAA Eastern Region Airports Division and is intended for use with proposed projects in this region only.

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

Use: This Form is intended to be used when a project cannot be categorically excluded (CATEX) from a formal environmental assessment, but when the environmental impacts of the proposed project are expected to be insignificant and a detailed EA would not be appropriate. Accordingly, this Form is intended to meet the intent of a short EA while satisfying the regulatory requirements of an EA. Proper completion of the Form would 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. **Please note: When requesting discretionary funding for an airport project, the appropriate environmental documentation should be submitted to the local Airports District Office by April 30th of the year preceding the year funding is requested.**

Availability: *An electronic version of this Short Form EA is available on-line at <http://www.faa.gov/airports/eastern/environmental/media/C10.DOC>. Other sources of environmental information including guidance and regulatory documents are available on-line at http://www.faa.gov/airports_airtraffic/airports/environmental.*



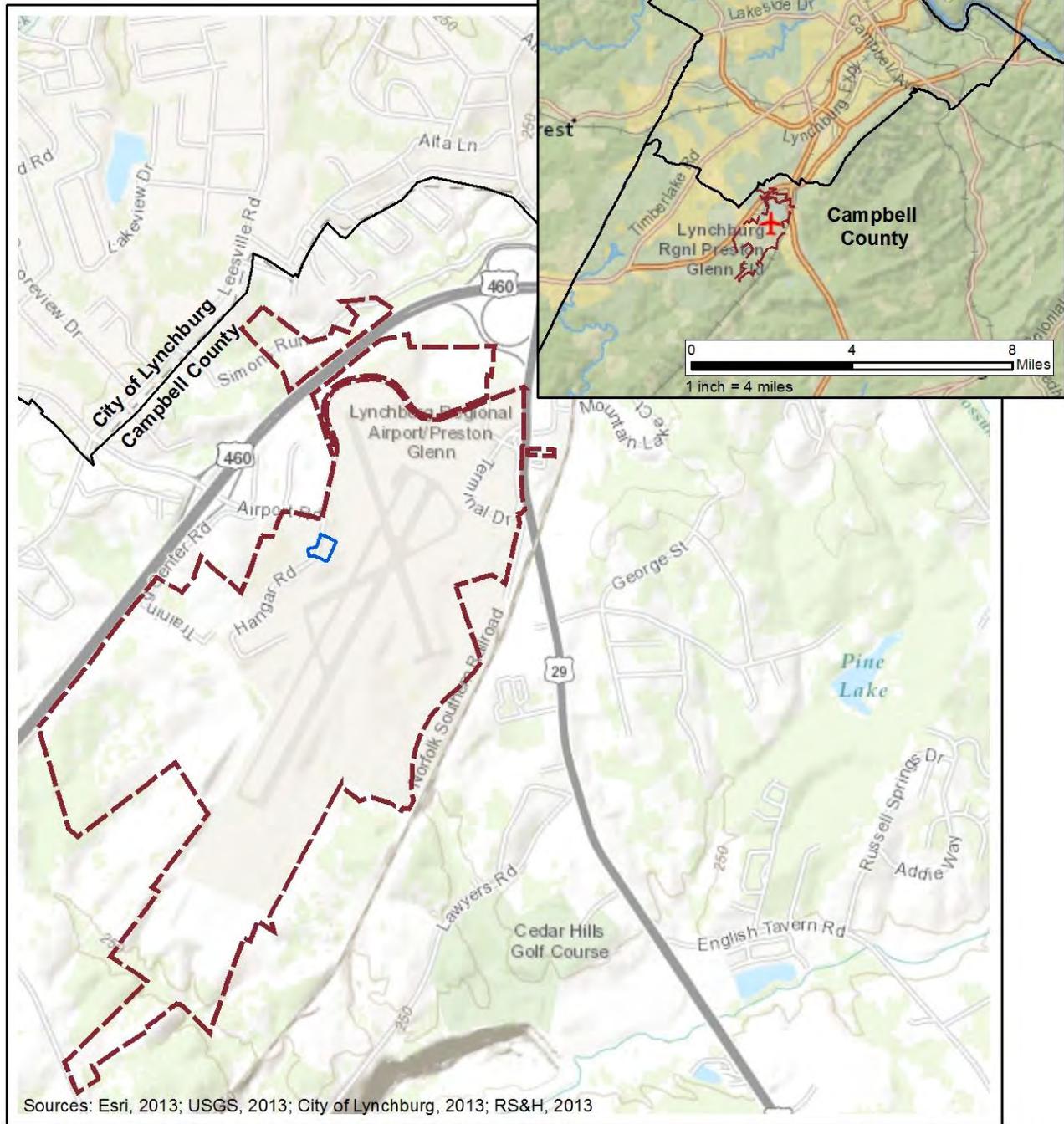
Attachment A – Exhibits

Exhibit A-1 – Location Map

Exhibit A-2 – Proposed Project

Exhibit A-3 – Project Study Area

Exhibit A-4 – Alternative ATCT Sites



-  City of Lynchburg Central Business District
-  Project Study Area
-  Airport Property Boundary
-  City and County Boundary

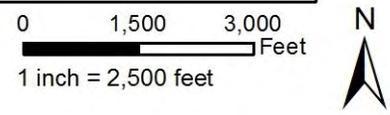
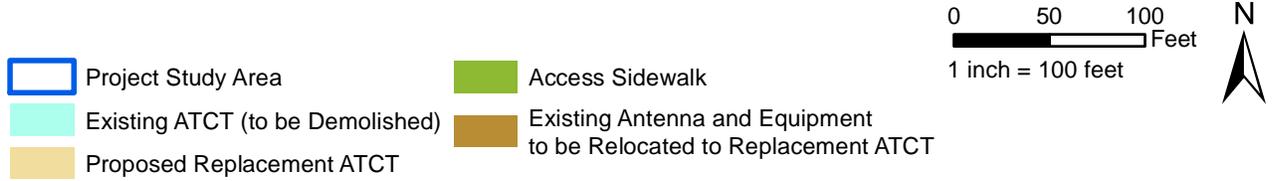


Exhibit A-1
Location Map



Sources: Esri, 2013; RS&H, 2013





 Project Study Area

0 50 100 Feet
1 inch = 100 feet



Exhibit A-3
Project Study Area

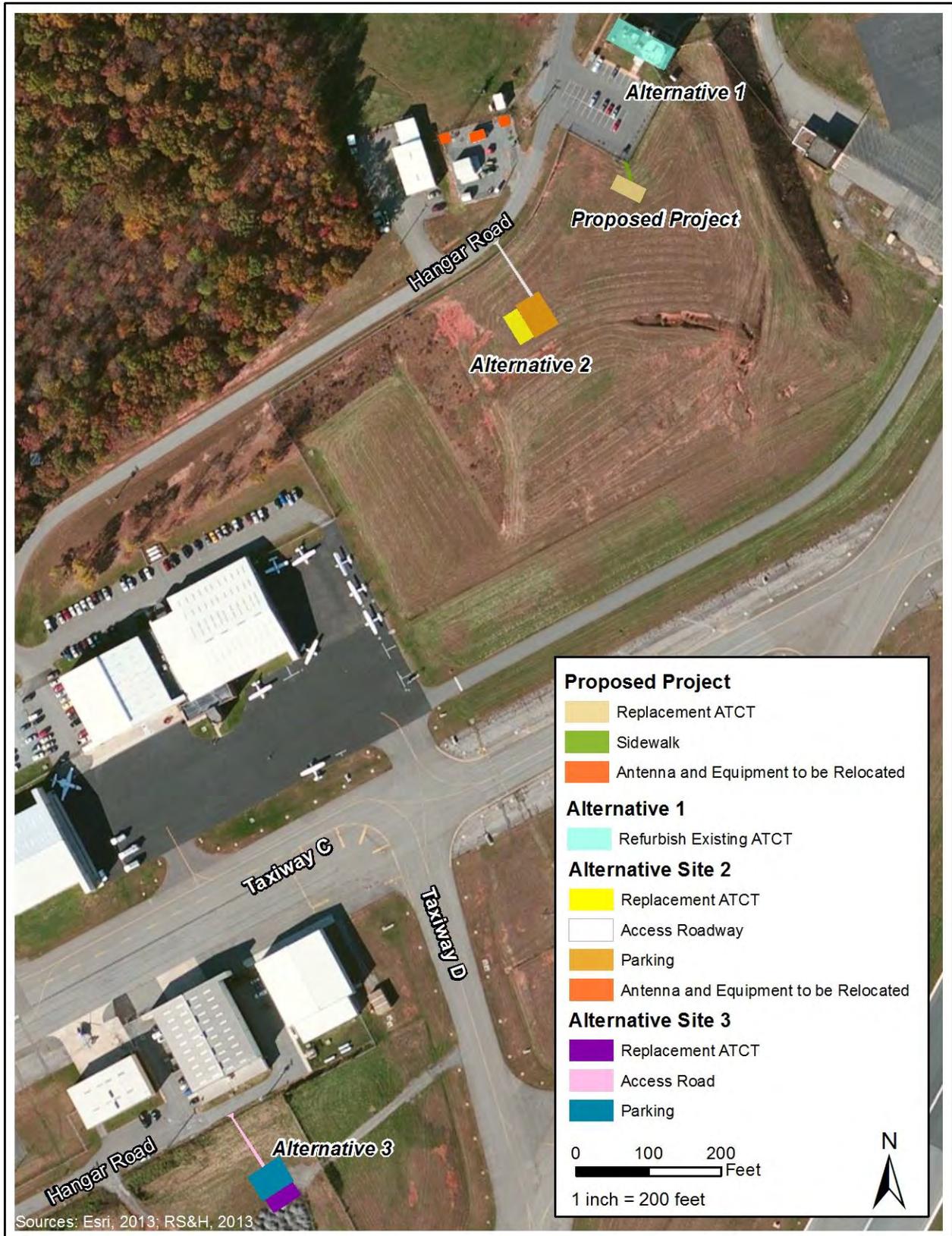


Exhibit A-4

Alternative ATCT Sites



Attachment B – FAA Safety and Environmental Certification Checklist

FAA SAFETY AND ENVIRONMENTAL CERTIFICATION CHECKLIST
Lease No. DTFAEN-12-L-00135 Location: Lynchburg, VA Facility: ATCT

Building Name: _____

Street Address: _____

City: _____, State: _____ Zip Code _____

Approximate outside dimensions of building: _____

Square footage of building _____, Square footage of proposed space _____

Total number of floors in building _____, Floors proposed space is on _____

Year Building constructed _____, Year of last major renovation _____

INSTRUCTIONS: Complete the following information that applies to the building being offered for lease to the Government.

CHECK ALL OF THE FOLLOWING INFORMATION THAT APPLIES:

Security

No Provisions Secure Building Alarm System Guard

Controlled Entry Other, _____

Emergency Illumination:

In Space offered In corridors In Stairwells

Building structural support

Combustible (Timber, wood, etc.)

Noncombustible (Concrete, steel, masonry, etc.)

Other types of uses present in the building (check all that apply):

Restaurants Storage Manufacturing Other, describe Control Tower

Laboratories Retail Industrial _____

FAA SAFETY AND ENVIRONMENTAL CERTIFICATION CHECKLIST
Lease No. *DTFAEN-12-L-00135* Location: *Lynchburg, VA* Facility: *ATCT*

Vertical openings between two or more floor:

Stairs (check one): Open Enclosed with doors **to Control Cab**

Shafts (check one) Open Enclosed with doors; **Conduit shaft**

Other (check one) Open Enclosed with doors; **Equipment Lift**

Sprinklers

None Corridors only All but corridors & lobbies Total Building

Other, describe locations _____

Fire fighting capability:

None Fire Extinguishers Standpipes
Other, _____

Fire Alarm:

None Building Alarm (check all that apply): Audible Visual

Automatic Fire Dept. Notification

Smoke Detectors:

None All Corridors Total Building Other, _____

Wall Interior Finishing in space being offered for lease:

Painted walls of plaster, sheetrock, or masonry Wallpaper or vinyl wall covering

Cloth or corkboard Wood paneling

Other, _____

Emergency Egress (Note - attach a sketch of the floor plan that shows the means of egress)

See attached photos of actual emergency egress plans posted in building

FAA SAFETY AND ENVIRONMENTAL CERTIFICATION CHECKLIST
Lease No. DTFAEN-12-L-00135 Location: Lynchburg, VA Facility: ATCT

2 means of egress from generator room on ground level. The remaining levels have 1 means of egress and meets building code due to occupancy load and use of building (control tower)

Two means of egress from the space offered for lease.

Exit signs for each route.

Some or all space offered is above or below grade level

If, so complete the following for applicable stairwells that are a part of the emergency egress routes from above or below grade space offered:

Fire rated construction Stairwell doors that open in direction of egress

Discharge Outside or into a protected fire corridor that discharges outside

Emergency Lighting in Stairwell Stairwell doors have automatic door closers & latch

All stairwells have adequate handrails

Asbestos:

None Nonfriable:
 Locations Throughout each floor, 9"x9" floor tile with mastic, door and window caulks. See attached report.

Friable:
 Locations Throughout each floor elbows and fittings associated with thermal system insulation and water lines. See attached report.

If asbestos is present, an active asbestos management program is in place.

PCB's :

None present:
 locations not assessed, all units that may contain PCB's are in use and in good condition.

Radon:

None Last test under 4.0 picocuries per milliliter (Date tested & results) See attached report

Air Quality:

FAA SAFETY AND ENVIRONMENTAL CERTIFICATION CHECKLIST
Lease No. *DTFAEN-12-L-00135* Location: *Lynchburg, VA* Facility: *ATCT*

Air quality in space offered meets all EPA guidelines for clean air. See attached report

Air quality in space does not meet EPA guidelines for clean air in the following areas: _____

Drinking Water:

Drinking water meets all EPA guidelines for drinking water

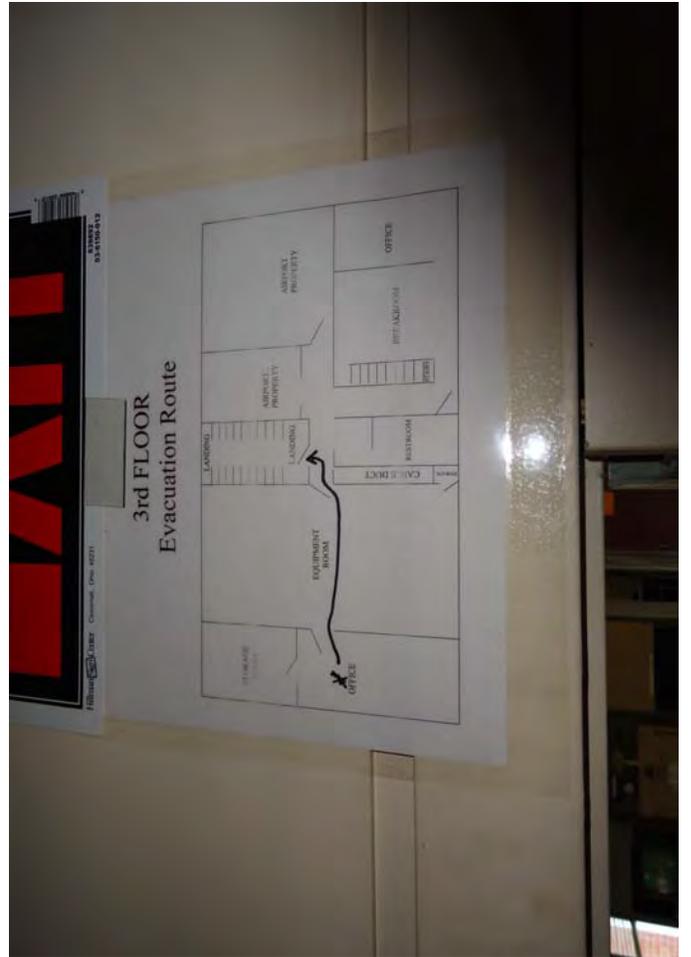
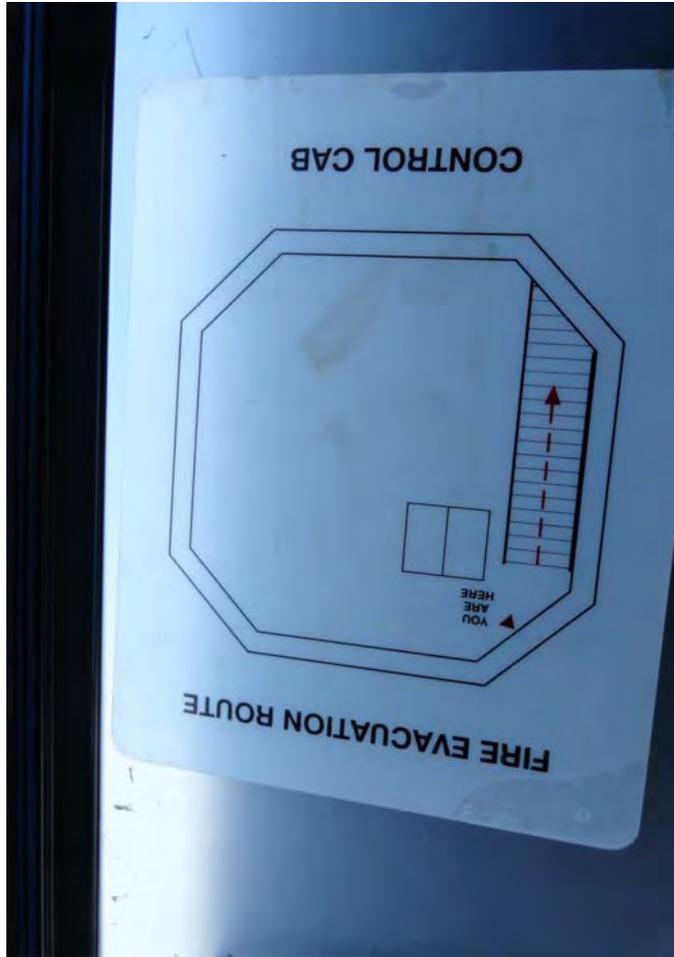
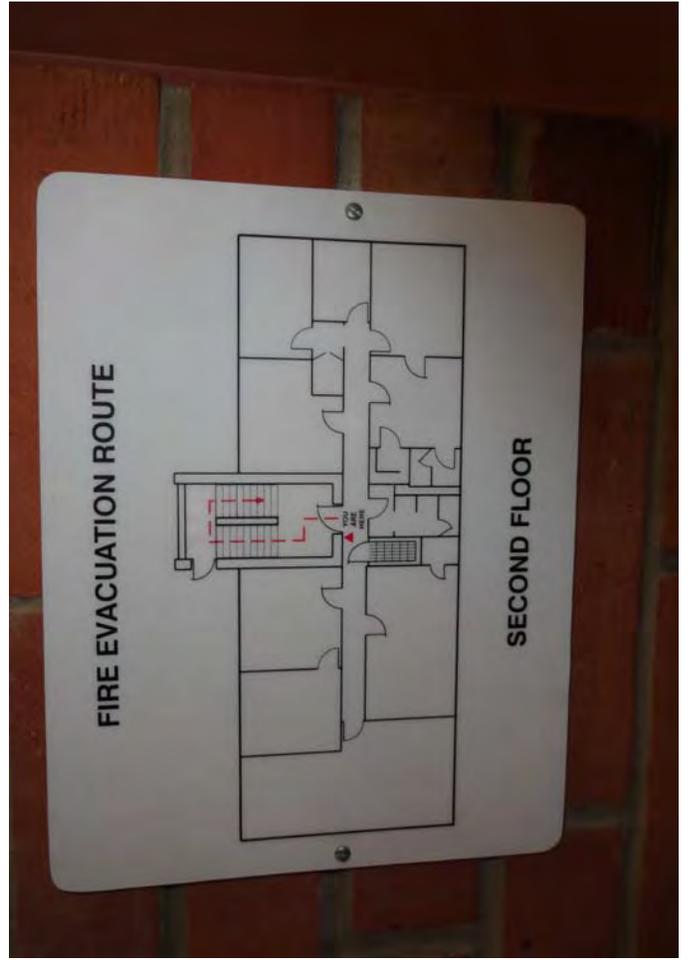
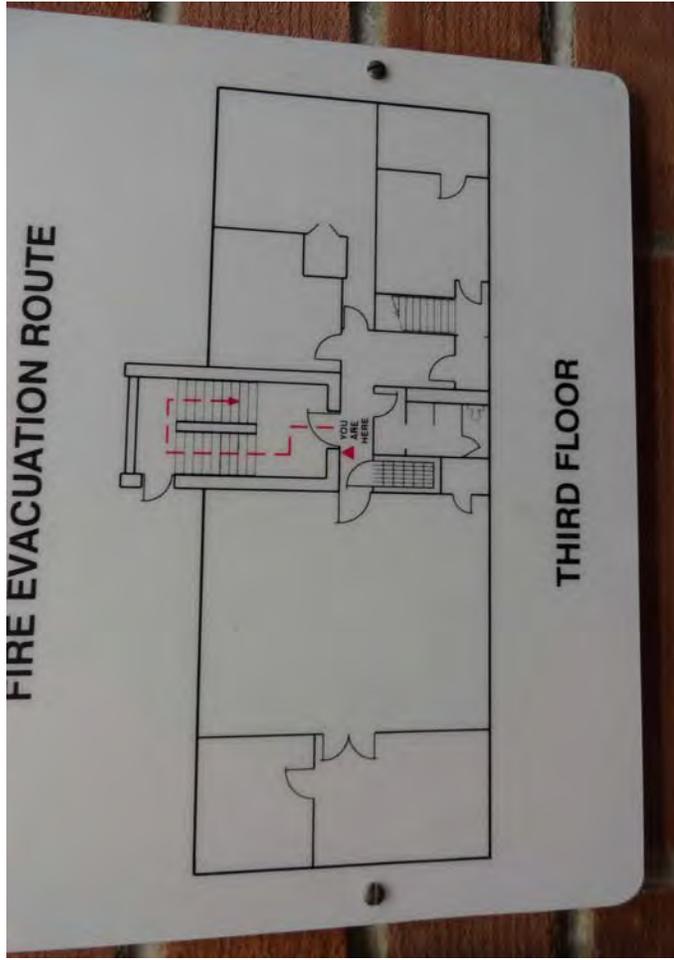
Drinking water does not meet EPA guidelines in the following areas: _____

Lynchburg Regional Airport is serviced by Lynchburg City Domestic Water, which meets and/or exceeds EPA drinking water standards.

This information provided by the offeror on this form are materiel facts and representations upon which the Government relies upon for making an award. The Government has the right to require remedy if the information is in anyway misrepresented, or inaccurate. The Owner or Authorized representative certifies that all the features described above are in operating order and properly maintained.

OWNER OR AUTHORIZED REPRESENTATIVE NAME AND ADDRESS:

SIGNATURE: _____ DATE: _____



Prepared for:
Craddock Cunningham Architects

Lynchburg Regional Airport
City of Lynchburg, Virginia



Industrial Hygiene Survey
Lynchburg Regional Airport-
Air Traffic Control Tower
Lease No. DTFAEN-12-L-00135
Facility: ATCT
Lynchburg, Virginia 24502

Hurt & Proffitt, Inc
December 2012
Project No.: 20120639

HURT & PROFFITT
INCORPORATED



Prepared for:
Craddock Cunningham Architects

Lynchburg Regional Airport
City of Lynchburg, Virginia

Industrial Hygiene Survey
Lynchburg Regional Airport
Air Traffic Control Tower
Lease No. DTFAEN-12-L-00135
Facility: ATCT
Lynchburg, Virginia 24502



Prepared By – W. Chris Nixon
Director of Environmental Services

Hurt & Proffitt, Inc
2524 Langhorne Road
Lynchburg, Virginia 24501
(434) 847-7796 / (434) 847-0047

December 18, 2012
Project No.: 20120639

HURT & PROFFITT
INCORPORATED





Contents

1.0 Facility Description and Operation.....	1-2
2.0 Physical Condition of Facility	2-2
2.1.1 Lead Based Paint	2-2
2.1.2 Asbestos-Containing Materials.....	2-2
2.1.3 Water Damage/Mold.....	2-3
2.1.4 Housekeeping.....	2-4
2.1.5 Indoor Air Quality	2-4
3.0 Radon	4-5
4.0 Conclusions and Limitations	4-5



List of Appendices

Appendix A Lead-Based Paint Analytical Results

Appendix B Asbestos Analytical Results

Appendix C Mold/Fungi Analytical Results

Appendix D Radon Analytical Results

Appendix E References



List of Tables

Table 2-1: Lead Paint Chip Sample Results.....	2-2
Table 3-1 Asbestos Sample Results.....	2-3
Table 4-1: Mold/Fungi Air Sample Results.....	2-3
Table 5-1: Indoor Air Quality Monitoring Results.....	2-4
Table 6-1: Radon in Air Sample Results	4-5



Executive Summary

On December 3rd, 2012, Hurt & Proffitt, Inc (H&P) conducted an Industrial Hygiene (IH) survey of the Lynchburg Regional Airport Tower facility located Lynchburg, Virginia. Mr. Rick Stein was the point of contact for the facility and accompanied H&P during the survey to provide access and information concerning the Tower operations.

The industrial hygiene survey was conducted in accordance with the scope of work as described in the "FAA Safety and Environmental Certification Checklist" for Lease No.DTFAEN-12-L-00135 dated July 2010 OMB Control No. 2120-0595.

The Lynchburg Regional Airport Air Traffic Control Tower (Tower) facility is currently staffed by approximately 5 personnel at any given time. The facility is configured as an administrative area and an air traffic control unit.

Personnel at the facility were undertaking normal daily activities, which are administrative in nature, at the time of the survey. There were only 3 FAA persons working on the day of the field survey.

The activities undertaken during the industrial hygiene survey included facility descriptions, lead paint chip sampling, asbestos bulk sampling, indoor air quality sampling (mold/fungi, radon and typical indoor air quality constituents, ie: Relative Humidity (RH), Temperature (oF), Carbon Dioxide (CO₂) and Carbon Monoxide (CO).

The Lynchburg Regional Tower Facility is housed on the south east side of the Lynchburg Regional Airport Facility over looking the east side of the main runway.

Paint chip samples collected in association with most administrative areas indicated lead levels below the Occupational Safety and Health Administration's (OSHA's) Clarification of "as free as practicable" and lead contamination under 29 CFR 1926.62, The Compliance Directive for the Interim Standard for Lead in Construction, CPL 2-2.58. OSHA recommends the use of HUD's acceptable level of below 0.5 % content by weight for storage facilities, and lunchrooms/eating areas. However, paint chip samples collected from interior-outside walls and areas that may have maintenance personnel exposed, indicate lead levels that the paints are lead containing.

Approximately 300 hundred square feet of peeling lead-based paint was observed in the throughout the facility within mechanical rooms, telecommunication room and office areas.

There was damaged asbestos containing materials observed during the evaluation. Samples of suspect materials were collected and analyzed. The laboratory results illustrated that the following materials are asbestos-containing throughout the building: 9"x9" floor tiles and associated mastics (non-friable), pipe insulation fittings and elbows (friable), interior door and window caulks (non-friable).

The United States Environmental Protection Agency (US EPA) defines an asbestos-containing building material as any building component that contains more than 1% asbestos, as Chrysotile, Amosite, Actinolite, Anthophyllite, Crocidolite, Tremolite. A friable asbestos-containing building material is defined as: any material that can be crushed or pulverized by hand pressure, when dry.

Several roof leaks were reported by building maintenance personnel, although neither water damage nor visible mold growth was observed during the survey. Water intrusion is a mold growth risk factor.



1.0 Facility Description and Operations

The Lynchburg Regional Airport Air Traffic Control Tower is located on the east side of the main runway in Lynchburg, Virginia. The section occupied by FAA personnel consists of the first floor, third floor and main tower and is finished with drywall; acoustical drop ceilings, steel reinforced exterior modular walls, carpet, and floor tile.

The primary activity at the Tower site is routine administrative duties and air traffic control.

2.0 Physical Condition of Facility

2.1.1 Lead Based Paint

Interior surfaces of walls are coated with paint. The paint on the walls is old. H&P did observe damaged or peeling paint during this evaluation.

Paint chip sampling for lead was conducted throughout the building following Occupational Safety & Health Administration (OSHA) sampling methods. Peeling paint was observed on each floor of the facility, both non-lead containing and lead containing by definition.

The following Table 2-1 presents the results of the lead sampling conducted at the facility.

Table 2-1: Lead Paint Chip Sample Results

Sample Number	Color and Sample Location	Lead Concentration % By Weight
LRA-001	PINK DOOR JAMB / THIRD FLOOR	<0.001
LRA-002	PINK STAIR STRINGER / THIRD FLOOR CAB	0.0077
LRA-003	PINK INTERIOR WALL / THIRD FLOOR KITCHEN	<0.0011
LRA-004	TAN EXTERIOR WALL / THIRD FLOOR OFFICE	0.7229
LRA-005	BLACK INTERIOR WALL / SECOND FLOOR HALL	0.0023
LRA-006	PINK DOOR JAMB / SECOND FLOOR HALL	0.0384
LRA-007	GREEN EXTERIOR WALL / FIRST FLOOR	1.423
LRA-008	GREEN I BEAM / FIRST FLOOR	0.5716
LRA-009	WHITE CONCRETE WALL / FIRST FLOOR	0.0033

Laboratory analytical results are presented in Appendix C.

2.1.2 Asbestos-Containing Materials

H&P did observe damaged, friable suspect asbestos-containing materials (ACM) in readily accessible mechanical areas of the Tower during this survey. The asbestos fittings and elbows associated with the pipe insulations within the basement mechanical room is slightly damaged. There was also non-friable floor tile damaged throughout various locations on several floors.

Table 3-1 on the following page presents the results of the asbestos sampling conducted at the facility.



Table 3-1: Asbestos Bulk Sample Results

Sample Number	Sample Description	RESULTS (% TYPE)
FLVCT-001A	9'X9" FLOOR TILE AND ASSOCIATED MASTIC	3% CHRYSOTILE (CH) 3% CH
LICP-002A,B,C	2'X4' FISSURE LAYIN CEILING PANELS	NONE DETECTED
WLSH-003A,B,C	TYPICAL SHEETROCK	NONE DETECTED
JCMPD-004A,B,C	TYPICAL JOINT COMPOUND ASSOCIATED WITH WLSH-003	NONE DETECTED
COVE-005A	3" COVE BASE AND ASSOCIATED MASTIC	NONE DETECTED
ELBOW-006A,B,C	PIPE INSULATION ELBOW AND FITTINGS	10% CH
CLK-007A	INTERIOR DOOR CAULKS	5% CH
SFPRF-008A,B,	SPRAY APPLIED FIRE PROOFING	NONE DETECTED

Laboratory analytical results are presented in Appendix B.

2.1.3 Water Damage/Mold

H&P did observe evidence of water intrusion during this survey. Various locations associated with exterior walls, roof and/or window leaks demonstrated past water intrusion episodes.

Indoor mold/fungi samples were collected utilizing a high volume air pump set at 15 liters per minute (lpm) and allowed to run for 10 minutes to collect a maximum of 150 liters per spore trap sampler. The three (3) interior samples did not illustrate mold amplified mold/fungi, as compared to the exterior sample collected as a control. There was visible mold/fungi growth within first floor mechanical room. The following Table 4-1 presents the results of the mold/fungi air sampling conducted at the facility.

Table 4-1: Mold/Fungi Air Sample Results

Sample Number	Sample Location	Total Spores Count/M3
LRA-01	Interior Room 209	320
LRA-02	Interior 1 st Floor North End of Building	393
LRA-03	Interior 1 st Floor Mechanical Room (Visible Mold Present)	260
LRA-04	Exterior Front of Tower (Control)	7680

Microbial fungi, both environmental and human shed, occur naturally and all persons are exposed to a wide variety of such materials. Indoor biological contamination is defined by the American Conference of Governmental Industrial Hygienists (ACGIH) as one of the following:

- a.) The presence of microorganisms of a kind and concentration likely to cause disease or predispose people to disease.
- b.) Inappropriate concentrations of outdoor microorganisms found inside buildings, especially buildings designed to prevent their entry.
- c.) Indoor microbiological growth and remnants of biological growth that may become airborne and expose personnel.

NOTE:

No regulatory standards have been established regarding concentrations of airborne mold/fungi in indoor environments. The ACGIH recommends levels indoors to be one third that of outdoor concentrations. The OSHA Technical Manual recommends that 1,000 cfu/m³ be used as a "trigger" for evaluating airborne molds and yeasts. Levels in excess of the recommendations do not necessarily imply that conditions are unsafe or hazardous, but that potential health effects exist dependent on the type of microorganism.



2.1.4 Housekeeping

The Lynchburg Regional Airport Tower was observed to be generally clean and orderly during this assessment. However, H&P did observe dust accumulation on readily accessible horizontal surfaces within areas commonly used in the facility.

2.1.5 Indoor Air Quality

The administration section contains general office spaces. The administration section is generally utilized by all of the Federal Aviation Agency (FAA) staff and members. No Indoor Air Quality concerns were noted by the Lynchburg Regional Airport Tower or Federal Aviation Agency personnel.

Instantaneous real-time reading for carbon monoxide and carbon dioxide (parts per million or ppm), temperature (° Fahrenheit), and relative humidity (as percentage) are presented in the following table. All readings were within acceptable guidelines. The following Table 5-1 presents the results of the indoor air quality monitoring results throughout the facility.

Table 5-1: Indoor Air Quality Monitoring Results

Location	Carbon Monoxide (ppm)	Carbon Dioxide (ppm)	Temp (°F)	Relative Humidity (%)
Tower Cab	0.9	538	70.9	37.7
"Bill's Office"	0.6	497	70.6	40.1
Kitchen	0.5	497	70.8	40.3
Hallway at Cab Stairs	0.5	441	70.5	40.5
3 rd Floor Main Hall Way	0.5	444	69.6	42.5
3 rd Floor Mechanical Room	0.5	434	69.2	41.7
3 rd Floor Bathroom	0.5	366	68.7	45.8
3 rd Floor Equipment Room	0.5	349	64.6	43.4
Room 207	0.5	483	70.9	43.0
2 nd Floor Main Hall Way	0.5	515	70.9	43.0
Room 209	0.5	599	71.1	44.1
2 nd Floor Break Room	0.5	428	71.2	43.8
2 nd Floor Mechanical Room	0.6	515	69.9	43.3
1 st Floor Foyer (Main Entrance)	0.6	533	68.3	51.6
1 st Floor North Office Hall	0.5	435	68.5	52.6
1 st Floor Mechanical Engine Room	0.5	414	68.6	51.0
1st Floor Mechanical Room	0.5	393	68.4	50.5
1 st Floor Telecom Room	0.5	427	68.4	50.6

Table 5-1 Guidelines:

Carbon Monoxide: Office/Warehouse Space – 9 ppm based on United States Environmental Protection Agency's National Ambient Air Quality Standard.

OSHA Permissible Exposure Limit (PEL) = 50 ppm. American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit value (TLV) = 25, ppm.

Carbon Dioxide: Office Space -Approximately 700 ppm above background (Derived from American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) Standard 62.1-2010). Not Applicable to warehouse and vehicle maintenance bays.

Relative Humidity: Mechanically air-conditioned space – Maximum 65% (Derived from ASHRAE Standard 62.1-2010 – 5.10.1).

Temperature: Winter (clothing insulation = 1.0 clo) Relative humidity 30-60% - Temp - 68 – 75°F
Summer Temp - 73 – 79°F. (Derived from ASHRAE Standard 55-2010)



3.0 Radon in Air Sampling

Indoor Radon Air Samples were collected utilizing two (2) charcoal air sample devices. The sample units were placed within the lowest portion of the building (mechanical room) so as to determine if radon gas, which is naturally occurring.

The following Table 6-1 presents the results of the radon air sampling conducted at the facility.

Table 6-1: Radon Air Sample Results

Sample Number	Sample Location	Kit Number	Results pCi/L
1190667	Mechanical Room LRA Tower	KK24154	<0.7
1190668	Mechanical Room LRA Tower	KK24122	<0.8

EPA established guidelines are as follows: 0.4 pCi/L is the average outdoor radon concentration nationally, while 1.3 pCi/L is the average indoor radon levels nationally. The EPA recommends mitigation efforts to be taken if the radon levels is 4.0 pCi/L or greater.

The levels as demonstrated are below the EPA recommended action level of 4.0 pCi/L. The enclosed analytical report(s) as provided by Alpha Energy Laboratories of Carrollton, Texas provide additional recommendations as established by the United States EPA.

4.0 Conclusions and Limitations

H&P has conducted this industrial hygiene survey in accordance with the scope of work as described in the "FAA Safety and Environmental Certification Checklist" for Lease No.DTFAEN-12-L-00135 dated July 2010 OMB Control No. 2120-0595. The following conclusions were based on the observations and assessments of activities that occurred during the on-site evaluation:

Housekeeping is performed regularly at the Lynchburg Regional Airport Tower, however it is evident that cleaning is primarily performed in areas that are used daily.

Paint chip samples collected in association with most administrative areas indicated lead levels below the Occupational Safety and Health Administration's (OSHA's) Clarification of "as free as practicable" and lead contamination under 29 CFR 1926.62, The Compliance Directive for the Interim Standard for Lead in Construction, CPL 2-2.58. OSHA recommends the use of HUD's acceptable decontamination level of 200 ug/ft² for floors in evaluating the cleanliness of change areas, storage facilities, and lunchrooms/eating areas.

However, paint chip samples collected from exterior walls and in mechanical areas should be treated with care to minimize dust generation and limit potential exposure, work to be performed in and/or on such areas must be done so in accordance under the United States Occupational Safety and Health Administration's (OSHA) Lead Exposure in Construction; Interim Final Rule (29 CFR 1926.62). OSHA considers paint and coatings to be lead-containing if any detectable level of lead is present. Contractors disturbing lead-containing paint shall comply with OSHA's Lead in Construction Standard 29 CFR 1926.62.

Damaged suspect asbestos-containing materials were observed during the field survey. The majority of damaged materials were non-friable floor tile located throughout the facility. There was damaged friable asbestos pipe fittings/elbows found within the first floor mechanical room.

H&P provided these services consistent with the level and skill ordinarily exercised by members of the profession currently providing similar services under similar circumstances at the time the services were



provided. This statement is in lieu of other statements either expressed or implied. This report is intended for the sole use of The City of Lynchburg as Owner/Manager of the Lynchburg Regional Airport Control Tower Site.

The scope of services performed in execution of this evaluation may not be appropriate to satisfy the needs of other users, and use or re-use of this document, the findings, conclusions, or recommendations is at the risk of said user.

As with all such surveys, the results of the sampling represent conditions found on the date of the survey and may not represent conditions found at other times. Additionally, this survey was limited with respect to the specific parameters indicated above and should not be construed to be a comprehensive evaluation or a definitive representation of conditions within the facility. The information presented in this report is intended to be used as a guide to evaluate the need for further investigation or the need for modifications to the processes or procedures surveyed.

The Client recognizes and agrees that all testing and remediation methods have reliability limitations, no method nor number of sampling locations can guarantee that a condition will be discovered within the performance of the services as authorized by the Client. Additionally, the passage of time may result in a change in the environmental characteristics at this site. This report does not warrant against future operations or conditions that could affect the recommendations made. The results, findings, conclusions, and recommendations expressed in this report are based only on conditions that were observed during H&P's inspection of the site.

Appendix B
ASBESTOS ANALYTICAL RESULTS

SanAir Technologies Laboratory

Analysis Report prepared for Hurt & Proffitt, Inc.

Report Date: 12/11/2012
Project Name: Lynchburg Regional
Airport
Project #: 20120639
SanAir ID#: 12024195



NVLAP LAB CODE 200870-0



Certification # 652931



License # LAB0166



804.897.1177

www.sanair.com



SanAir Technologies Laboratory, Inc.

1551 Oakbridge Drive, Suite B, Powhatan, VA 23139
804.897.1177 Toll Free: 888.895.1177 Fax: 804.897.0070
Web: <http://www.sanair.com> E-mail: iaq@sanair.com

Hurt & Proffitt, Inc.
2524 Langhorne Road
Lynchburg, VA 24501

December 11, 2012

SanAir ID # 12024195
Project Name: Lynchburg Regional Airport
Project Number: 20120639

Dear W. Chris Nixon,

We at SanAir would like to thank you for the work you recently submitted. The 17 sample(s) were received on Tuesday, December 04, 2012 via FedEx. The final report(s) is enclosed for the following sample(s): FLVCT-001A, LICP-002A, LICP-002B, LICP-002C, WLSH-003A, WLSH-003B, WLSH-003C, JCMPD-004A, JCMPD-004B, JCMPD-004C, COVE-005A, ELBOW-006A, ELBOW-006B, ELBOW-006C, CLK-007A, SFPRF-008A, SFPRF-008B.

These results only pertain to this job and should not be used in the interpretation of any other job. This report is only complete in its entirety. Refer to the listing below of the pages included in a complete final report.

Sincerely,

Sandra Sobrino
Asbestos & Materials Laboratory Manager
SanAir Technologies Laboratory

Final Report Includes:

- Cover Letter
- Analysis Pages
- Disclaimers and Additional Information

sample conditions:

17 sample(s) in Good condition



SanAir Technologies Laboratory, Inc.

1551 Oakbridge Drive, Suite B, Powhatan, VA 23139
804.897.1177 Toll Free: 888.895.1177 Fax: 804.897.0070
Web: <http://www.sanair.com> E-mail: iaq@sanair.com

SanAir ID Number

12024195

FINAL REPORT

Name: Hurt & Proffitt, Inc.
Address: 2524 Langhorne Road
Lynchburg, VA 24501

Project Number: 20120639
P.O. Number: Environmental Assessment
Project Name: Lynchburg Regional Airport

Collected Date: 12/3/2012
Received Date: 12/4/2012 10:00:00 AM
Report Date: 12/11/2012 10:13:11 AM
Analyst: Pisula, Nicholas

Asbestos Bulk PLM EPA 600/R-93/116

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
FLVCT-001A / 12024195-001 9"x9" Floor Tile & Mastic, Floor Tile	Green Non-Fibrous Homogeneous	97%	Other	3% Chrysotile
FLVCT-001A / 12024195-001 9"x9" Floor Tile & Mastic, Mastic	Black Non-Fibrous Homogeneous	97%	Other	3% Chrysotile

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
LICP-002A / 12024195-002 2'x4' Layin C. Panel	White Fibrous Homogeneous	60% 15% 15%	Cellulose Glass Min. Wool	10% Other None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
LICP-002B / 12024195-003 2'x4' Layin C. Panel	White Fibrous Homogeneous	60% 15% 15%	Cellulose Glass Min. Wool	10% Other None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
LICP-002C / 12024195-004 2'x4' Layin C. Panel	White Fibrous Homogeneous	60% 15% 15%	Cellulose Glass Min. Wool	10% Other None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
WLSH-003A / 12024195-005 Typical Sheetrock	Grey Non-Fibrous Homogeneous	5%	Cellulose	95% Other None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
WLSH-003B / 12024195-006 Typical Sheetrock	Grey Non-Fibrous Homogeneous	5%	Cellulose	95% Other None Detected

Certification

Signature: 
Date: 12/11/2012

Reviewed: 
Date: 12/11/2012



SanAir Technologies Laboratory, Inc.

1551 Oakbridge Drive, Suite B, Powhatan, VA 23139
804.897.1177 Toll Free: 888.895.1177 Fax: 804.897.0070
Web: <http://www.sanair.com> E-mail: iaq@sanair.com

SanAir ID Number

12024195

FINAL REPORT

Name: Hurt & Proffitt, Inc.
Address: 2524 Langhorne Road
Lynchburg, VA 24501

Project Number: 20120639
P.O. Number: Environmental Assessment
Project Name: Lynchburg Regional Airport

Collected Date: 12/3/2012
Received Date: 12/4/2012 10:00:00 AM
Report Date: 12/11/2012 10:13:11 AM
Analyst: Pisula, Nicholas

Asbestos Bulk PLM EPA 600/R-93/116

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
WLSH-003C / 12024195-007 Typical Sheetrock	Grey Non-Fibrous Homogeneous	5% Cellulose	95% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
JCMPD-004A / 12024195-008 Joint Compound	White Non-Fibrous Homogeneous		100% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
JCMPD-004B / 12024195-009 Joint Compound	White Non-Fibrous Homogeneous		100% Other	None Detected

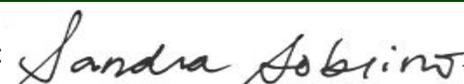
SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
JCMPD-004C / 12024195-010 Joint Compound	White Non-Fibrous Homogeneous		100% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
COVE-005A / 12024195-011 3" Cove Base & Mastic, Cove Base	Black Non-Fibrous Homogeneous		100% Other	None Detected
COVE-005A / 12024195-011 3" Cove Base & Mastic, Mastic	White Non-Fibrous Homogeneous		100% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
ELBOW-006A / 12024195-012 Pipe Insulation Elbow	Grey Non-Fibrous Homogeneous	5% Glass 15% Min. Wool	70% Other	10% Chrysotile

Certification

Signature: 
Date: 12/11/2012

Reviewed: 
Date: 12/11/2012



SanAir Technologies Laboratory, Inc.

1551 Oakbridge Drive, Suite B, Powhatan, VA 23139
804.897.1177 Toll Free: 888.895.1177 Fax: 804.897.0070
Web: <http://www.sanair.com> E-mail: iaq@sanair.com

SanAir ID Number

12024195

FINAL REPORT

Name: Hurt & Proffitt, Inc.
Address: 2524 Langhorne Road
Lynchburg, VA 24501

Project Number: 20120639
P.O. Number: Environmental Assessment
Project Name: Lynchburg Regional Airport

Collected Date: 12/3/2012
Received Date: 12/4/2012 10:00:00 AM
Report Date: 12/11/2012 10:13:11 AM
Analyst: Pisula, Nicholas

Asbestos Bulk PLM EPA 600/R-93/116

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
ELBOW-006B / 12024195-013 Pipe Insulation Elbow				Not Analyzed

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
ELBOW-006C / 12024195-014 Pipe Insulation Elbow				Not Analyzed

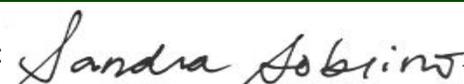
SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
CLK-007A / 12024195-015 Door Caulk	Red Non-Fibrous Homogeneous		95% Other	5% Chrysotile

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
SFPRF-008A / 12024195-016 Spray Applied Fire Proofing	Grey Fibrous Homogeneous	40% Glass 50% Min. Wool	10% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
SFPRF-008B / 12024195-017 Spray Applied Fire Proofing	Grey Fibrous Homogeneous	40% Glass 50% Min. Wool	10% Other	None Detected

Certification

Signature: 
Date: 12/11/2012

Reviewed: 
Date: 12/11/2012

Disclaimer

The final report cannot be reproduced, except in full, without written authorization from SanAir. Fibers smaller than 5 microns cannot be seen with this method due to scope limitations. The accuracy of the results is dependent upon the client's sampling procedure and information provided to the laboratory by the client. SanAir assumes no responsibility for the sampling procedure and will provide evaluation reports based solely on the sample and information provided by the client. This report may not be used by the client to claim product endorsement by NVLAP, AIHA or any other agency of the U.S. government; *and may not be certified by every local, state and federal regulatory agencies.*

SanAir Technologies Laboratory, Inc.

1551 Oakbridge Drive, Suite B - Powhatan, VA 23139
 804.897.1177 / 888.895.1177 / Fax 804.897.0070
 www.sanair.com

**Asbestos
Chain of Custody**

SanAir ID Number
 12024195

Company: Hurt & Proffitt, Inc	Project #: 20120639	Phone #: 4348477796
Address: 2524 Langhorne Road	Project Name: Lynchburg Regional Airport Environmental Assessment	Phone #: 4348413893
City, St., Zip: Lynchburg, Virginia 24501	Date Collected: 12/03/12	Fax #: 4348470047
Samples Collected By: W. Chris Nixon	P.O. Number:	Email: wcn@handp.com

Asbestos Analysis Types

Bulk		Air		Soil/Vermiculite	
ABB	PLM EPA 600/R-93/116	<input checked="" type="checkbox"/>	ABA	PCM NIOSH 7400	<input type="checkbox"/>
	Positive Stop	<input checked="" type="checkbox"/>	ABA-2	OSHA w/ TWA*	<input type="checkbox"/>
ABEPA	PLM EPA 400 Point Count	<input type="checkbox"/>	ABTEM	TEM AHERA	<input type="checkbox"/>
ABB1K	PLM EPA 1000 Point Count	<input type="checkbox"/>	ABATN	TEM NIOSH 7402	<input type="checkbox"/>
ABEN	PLM EPA NOB	<input type="checkbox"/>	ABT2	TEM Level II	<input type="checkbox"/>
ABBCH	TEM Chatfield	<input type="checkbox"/>			
ABBTM	TEM EPA NOB	<input type="checkbox"/>			
ABBNY	TEM NY ELAP 198.4	<input type="checkbox"/>			
OTHER/ Matrix :		<input type="checkbox"/>			

Water		Dust			
ABHE	EPA 100.2	<input type="checkbox"/>	ABWA	TEM Wipe ASTM D-6480	<input type="checkbox"/>
		<input type="checkbox"/>	ABDMV	TEM Microvac ASTM D-5755	<input type="checkbox"/>

Turn Around Times	<input type="checkbox"/> 3 HR (4 HR TEM)	<input type="checkbox"/> 6 HR (8HR TEM)	<input type="checkbox"/> 12 HR	<input type="checkbox"/> 24 HR
	2 Days <input type="checkbox"/>	3 Days <input type="checkbox"/>	4 Days <input type="checkbox"/>	5 Days <input checked="" type="checkbox"/>

Sample #	Sample Identification/Location	Volume or Area	Sample Type	Flow Rate*	Time* Start - Stop
FLVCT-001 A	9"x9" Green Floor Tile + Mastic		ABB		
LICA-002A, B, C	2'x4' White Fissured Lay-in C. Panel				
WLSH-003A, B, C	TYPICAL Sheetrock.				
JCMPD-004A, B, C	Joint Compound.				
COVE-005A	3" Cove Base + Mastic.				
ELBOW-006A, B, C	Pipe Insulation ELBOW				
CLK-007A.	DOOR CAULK.				
SFPRF-008A	B SPRAY APPLIED Fire Proofing.				

Special Instructions	PLEASE EMAIL RESULTS
-----------------------------	----------------------

Relinquished by	Date	Time	Received by	Date	Time
W. Chris Nixon	12/3/12	TO FEDEX	<i>[Signature]</i>	DEC 04 2012	<i>[Signature]</i>

Unless scheduled, the turn around time for all samples received after 5 pm Friday will begin at 8 am Monday morning. Weekend or Holiday work must be scheduled ahead of time and is charged for rush turn around time. Work with standard turn around time sent Priority Overnight and Billed To Recipient will be charged a \$10 shipping fee.



Attachment C – Agency Correspondence



Attachment C-1 – Early Coordination Package



909 N Washington Street
Suite 330
Alexandria, VA 22314
Voice 703 549 2472
Fax 703 549 2582

Date

Name

Agency

Address

City, State Zip

**RE: ENVIRONMENTAL ASSESSMENT FOR THE CONSTRUCTION AND OPERATION OF
AN AIR TRAFFIC CONTROL TOWER
LYNCHBURG REGIONAL AIRPORT
LYNCHBURG, VIRGINIA**

Dear Madam or Sir:

The City of Lynchburg (the City) is proposing to build a replacement Air Traffic Control Tower (ATCT) at the Lynchburg Regional Airport (the Airport). The proposed ATCT (Proposed Project) would be located on the west side of the Airport's property. This area is regularly mowed and maintained. The City wishes to replace the existing, functionally obsolescent, high maintenance ATCT because it has exceeded its useful life.

RS&H is preparing a short-form Environmental Assessment (EA) on behalf of the City per the National Environmental Policy Act of 1969 (NEPA), Federal Aviation Administration (FAA) implementing regulations, and other applicable environmental requirements.¹ The short-form EA will consider and document potential environmental impacts associated with the Proposed Project. The City will submit the short-form EA to the FAA Washington, D.C. Airports District Office for acceptance and a decision to issue a Finding of No Significant Impact (FONSI) or to prepare an Environmental Impact Statement (EIS).

The Proposed Project consists of:

- constructing and operating a new, 75-foot tall ATCT;
- relocating the Leesburg Flight Service Station (FSS) Remote Communications Outlet (RCO) to the new ATCT, including necessary rooftop antennae.
- installing new equipment, including new backup Local and Ground radio equipment;
- constructing a sidewalk to provide access to the ATCT;
- extending utility services to the ATCT; and
- demolition of the existing ATCT

¹ The FAA's Eastern Region Airports Division uses a Short-Form EA when a project cannot be categorically excluded (CatEx) from a formal EA, but when the environmental impacts of a proposed project are expected to be insignificant and a detailed EA would not be appropriate. The Short-Form EA meets the intent of, and satisfies the FAA's regulatory requirements under NEPA.

A project study area will be developed as part of the short-form EA, and will include the limits of disturbance (e.g., building footprint, laydown areas, and utility service extensions).

Exhibits depicting the Airport location (**Attachment 1**) and alternative sites for the proposed ATCT (**Attachment 2**) are enclosed.

On behalf of the City of Lynchburg, I am sending you this early notification to:

1. advise your agency about the preparation of the EA;
2. request any relevant information your agency may have regarding the Airport site or environs; and
3. solicit early comments regarding potential environmental, social, and economic issues for consideration during the preparation of the EA.

You may send any information and comments to me at the address provided below by **[30 days after the date this letter is distributed]**. I appreciate your prompt response to this letter.

David Alberts
Reynolds, Smith and Hills, Inc.
10748 Deerwood Park Boulevard South
Jacksonville, FL 32256

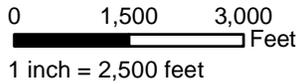
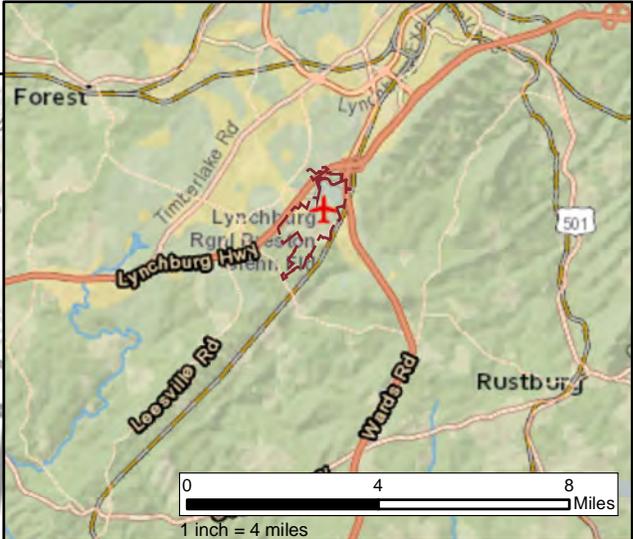
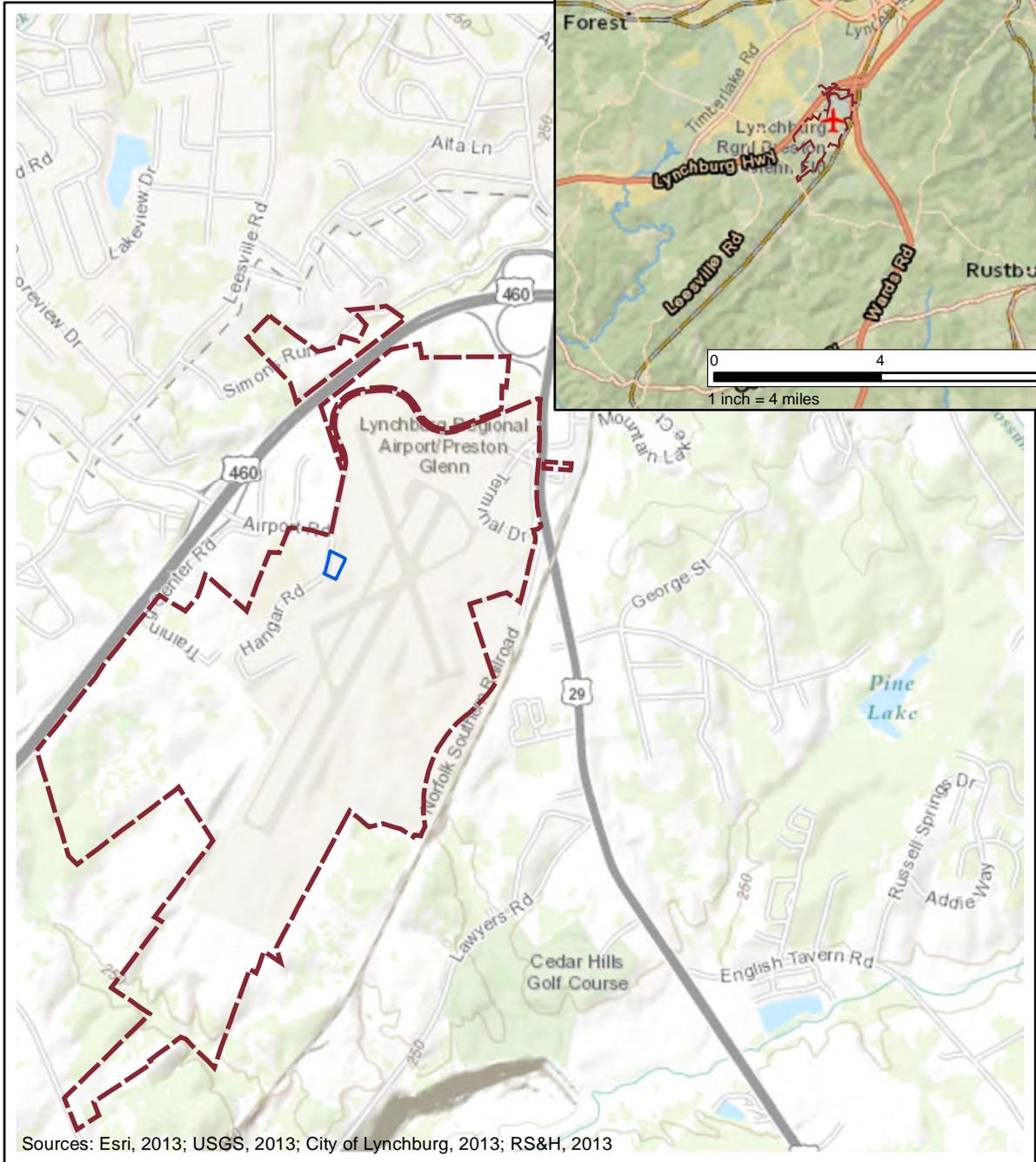
On behalf of the City of Lynchburg, I would like to thank you for your interest in this project and look forward to working with you as RS&H prepares this EA on behalf of the City. If you have any questions or need additional information regarding the Proposed Project, please do not hesitate to contact me at (904) 256-2500 or via email david.alberts@rsandh.com.

Sincerely,

David Alberts
Southeast Region Environmental Service Group Leader
Reynolds, Smith and Hills, Inc.

Copy: Mark Courtney – City of Lynchburg
Marcus Brundage – FAA
File

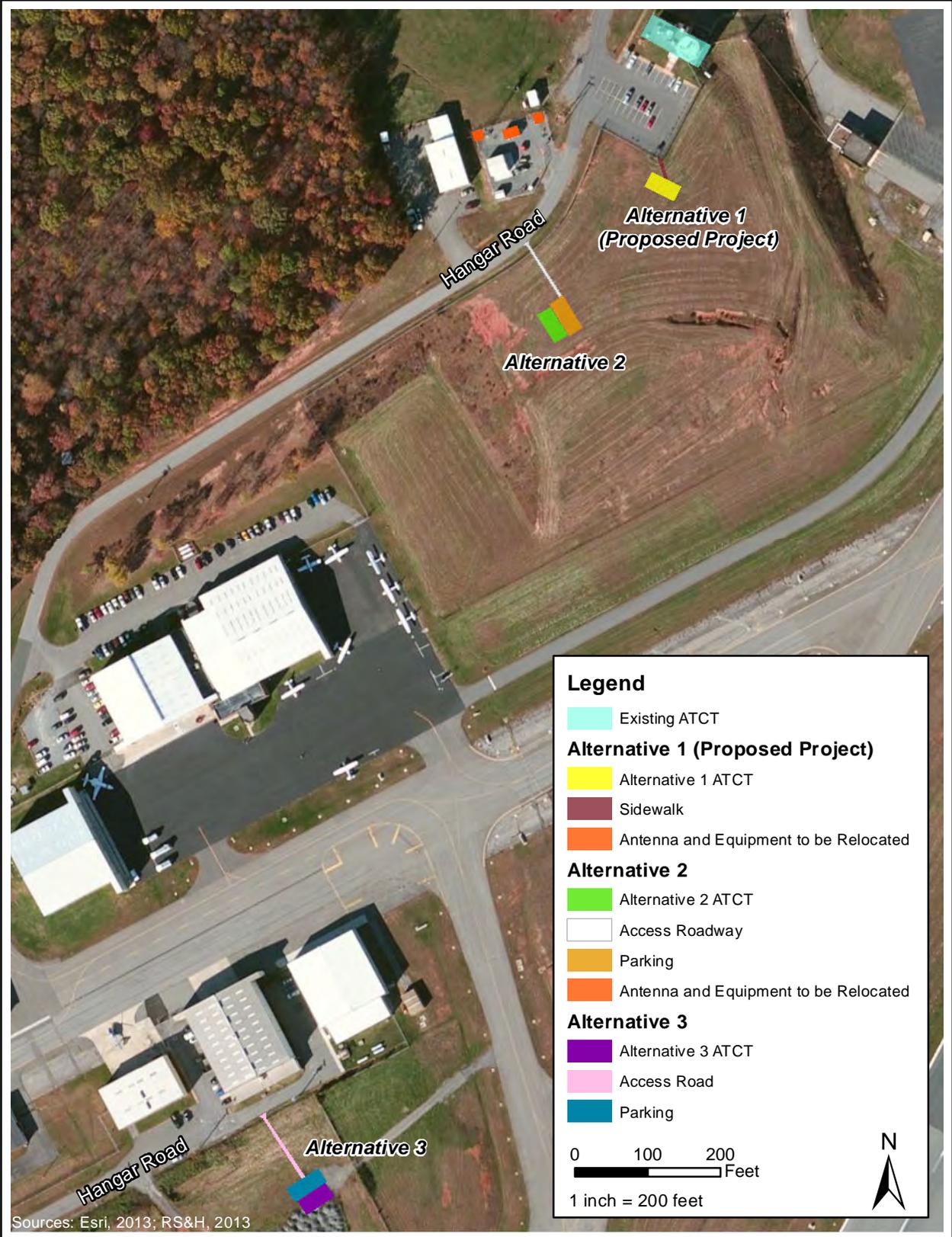
Enclosures: Attachment 1 – Location Map
Attachment 2 – Alternative ATCT Sites



Legend

-  Airport Property Boundary
-  Project Study Area





**Early Coordination Mailing List
Lynchburg Regional Airport Environmental Assessment**

Federal Agencies

United States Environmental Protection Agency

U.S. Environmental Protection Agency
Region 3
Attn. NEPA Coordination
1650 Arch Street
Philadelphia, PA 19103-2029

United States Fish and Wildlife Service

Ms. Lisa Moss
U.S. Fish and Wildlife Service
Virginia Fisheries Coordinator Office
11110 Kimages Road
Charles City, VA 23030-2844

Federal Emergency Management Agency

Ms. Amanda Ciampolillo
Federal Emergency Management Agency
Region III
615 Chestnut Street
One Independence Mall, Sixth Floor
Philadelphia, PA 19106-4404

United States Army Corps of Engineers

Ms. Jeanne Richardson
U.S. Army Corps of Engineers
Norfolk District
Regulatory Branch
P.O. Box 3160
Lynchburg, VA 24503

National Oceanic and Atmospheric Administration – National Marine Fisheries Service

Ms. Jennifer Anderson, NERO NEPA Coordinator
NOAA-National Marine Fisheries Service
Northeast Regional Office
55 Great Republic Drive
Gloucester, MA 01930

United States Department of Agriculture (Natural Resources Conservation Service)

Mr. Jack Bricker, State Conservationist
Natural Resources Conservation Service
Virginia State Office
1606 Santa Rosa Rd., Suite 209
Richmond, VA 23229

Department of the Interior (Office of Environmental Policy and Compliance)

Ms. Lindy Nelson, Regional Environmental Officer
Department of the Interior
Office of Environmental Policy and Compliance
Philadelphia Region
Custom House, Room 244
200 Chestnut Street
Philadelphia, PA 19106

State Agencies

Virginia Department of Aviation

Mr. Randall P. Burdette, Director of Aviation
Virginia Department of Aviation
5702 Gulfstream Road
Richmond, VA 23250

Virginia Department of Conservation and Recreation

Mr. David Johnson, Director
Department of Conservation and Recreation
600 E. Main Street, 24th Floor
Richmond, VA 23219

Virginia Department of Environmental Quality

Ms. Ellie Irons
Virginia Department of Environmental Quality
Office of Environmental Impact Review
629 East Main Street, 6th Floor
Richmond, VA 23219

Virginia Department of Health

Ms. Cynthia C. Romero, MD, FAAFP
Virginia Department of Health
Office of the Commissioner
109 Governor Street
Richmond, VA 23219

Virginia Department of Historic Resources

Ms. Julie Langan, Director and State Historic Preservation Officer
Virginia Department of Historic Resources
2801 Kensington Avenue
Richmond, VA 23221

Virginia Department of Mines, Minerals and Energy

Virginia Department of Mines, Minerals and Energy
Attn. NEPA Coordination
1100 Bank Street, 8th Floor
Washington Building
Richmond, VA 23219

Virginia Department of Transportation

Mr. Christopher L. Winstead, P.E., Lynchburg District Administrator
Virginia Department of Transportation
4219 Campbell Avenue (Route 501)
Lynchburg, VA 24501

Local Agencies

Region 2000 Local Government Council

Region 2000 Local Government Council
Attn. NEPA Coordination
828 Main Street, 12th Floor
Lynchburg, VA 24504

Robert E. Lee Soil and Water Conservation District

Mr. Barry Lobb, Director
Robert E. Lee Soil and Water Conservation District
7631 A Richmond Highway
Appomattox, VA 24522

Campbell County

Campbell County
Community Development
Attn. NEPA Coordination
85 Carden Lane
P.O. Box 100
Rustburg, VA 24588



Attachment C-2 – Agency Coordination

<u>Date</u>	<u>Agency</u>
January 6, 2014	Virginia Department of Conservation and Recreation, Planning and Recreational Resources
January 6, 2014	Virginia Department of Mines, Minerals, and Energy
January 10, 2014	Campbell County, Community Development
January 10, 2014	United States Army Corps of Engineers
January 10, 2014	Natural Resource Conservation Service
January 14, 2014	Virginia Department of Health
January 23, 2014	Virginia Department of Environmental Quality
January 24, 2014	Virginia Department of Historic Resources
January 27, 2014	United States Fish and Wildlife Service
January 31, 2014	Virginia Department of Transportation
February 25, 2014	Virginia Department of Conservation and Recreation

Alberts, David

From: Rhur, Robbie (DCR) <Robbie.Rhur@dcr.virginia.gov>
Sent: Monday, January 06, 2014 9:50 AM
To: Alberts, David
Subject: Short EA for Lynchburg airport

Dear Mr. Alberts:

My office was copied on a letter addressed to our Director David Johnson dated December 23, 2013 regarding a ATC tower at the Lynchburg Airport. While we have no concerns in the Planning and Recreational Division. I recommend that you send your information request directly to the Division on Natural Heritage. The information request form can be found at http://www.dcr.virginia.gov/natural_heritage/infoservices.shtml

On the right side of the screen an online information request form is available.

Thank you for the opportunity to comment.

*Robbie D. Rhur
Environmental Review Coordinator
DCR Planning and Recreational Resources
600 E. Main St., 17th Floor
Richmond, VA 23219
804-371-2594*



DIVISIONS
ENERGY
GAS AND OIL
GEOLOGY AND MINERAL RESOURCES
MINED LAND RECLAMATION
MINERAL MINING
MINES
ADMINISTRATION

COMMONWEALTH OF VIRGINIA

Department of Mines, Minerals and Energy

Washington Building, 8th Floor
1100 Bank Street
Richmond, Virginia 23219-3638
(804) 692-3200 FAX (804) 692-3237
www.dmme.virginia.gov

January 6, 2014

David Alberts
Reynolds, Smith and Hills, Inc.
909 N. Washington Street, Suite 330
Alexandria, Virginia 22314

Dear Mr. Alberts:

The Department of Mines, Minerals and Energy (DMME) is making difficult decisions in response to state budget reductions. One of the most difficult decisions to date was to reduce staff in our Division of Geology and Mineral Resources (DGMR) in January 2009. Since that time, DMME has carefully reviewed services that we have provided in the past in order to determine which services can be provided in the future with existing staff. One service that we considered was the review of environmental impact reports for state and local projects.

We have determined that existing staff levels within DMME do not allow for the review of environmental impact reports on a routine basis. As a result, we ask that you remove DMME from your environmental review distribution lists. We understand that there are times when specific information related to geologic conditions, mineral extraction, and energy policy is an important consideration for a particular project. In these instances, please contact State Geologist David Spears with our Division of Geology and Mineral Resources: 900 Natural Resources Drive, Suite 500, Charlottesville, VA 22903, (434) 951-6350; or by e-mail at david.spears@dmme.virginia.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "C. T. Spangler, III".

Conrad T. Spangler, III
Director

Alberts, David

From: Harvey, Paul E. <PEHarvey@co.campbell.va.us>
Sent: Friday, January 10, 2014 3:35 PM
To: Alberts, David
Subject: Env. Assessment Air Traffic Control Tower Lynchburg Regional Airport

Mr. Alberts,

Thank you for the opportunity to comment on the pending environmental assessment for Lynchburg Regional Airport. Our department does not have any comments on the air traffic control tower project as it relates to the environmental assessment. We will process their routine construction permit applications when they are submitted.

Paul E. Harvey
Director of Community Development
Campbell County
P. O. Box 100
Rustburg, VA 24588
434-332-9592
peharvey@co.campbell.va.us

Alberts, David

From: Richardson, Jeanne C NAO <Jeanne.C.Richardson@usace.army.mil>
Sent: Friday, January 10, 2014 8:02 AM
To: Alberts, David
Cc: Richardson, Jeanne C NAO
Subject: Lynchburg Regional Airport (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Mr. Alberts,

A preliminary review of the information you submitted to my office indicates wetlands/streams are present within the Airport property. The presence or absence of wetlands/streams within the proposed project boundaries is unknown. Therefore, I would recommend that upon completion of a determination which site is to be selected and prior to construction, the Airport should have an environmental consultant familiar with wetland delineations in Virginia, complete a walkover of the property to determine if a delineation confirmation and/or permit is needed from the Corps of Engineers.

Feel free to contact me if you have any questions or require additional information.

Jeanne C. Richardson
US Army Corps of Engineers-Norfolk District
West Central Field Office
PO Box 3160
Lynchburg, Virginia 24503
434.384.0182

The Norfolk District is committed to providing the highest level of support to the public. In order for us to better serve you, we would appreciate you completing our Customer Satisfaction Survey located at http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey. We value your comments and appreciate your taking the time to complete the survey.

Classification: UNCLASSIFIED
Caveats: NONE



United States Department of Agriculture

Natural Resources Conservation Service
163 Kabler Lane, P.O. Box 1036
Rustburg, VA 24588

January 10, 2014

David Alberts
Reynolds, Smith and Hills, Inc.
10748 Deerwood Park Boulevard South
Jacksonville, FL 32256

Re: Environmental Assessment for the Construction and Operation of an Air Traffic Control Tower, Lynchburg Regional Airport, Lynchburg, Virginia

Dear Mr. Alberts:

Examination of the three alternative sites for the proposed new Air Traffic Control Tower for the Lynchburg Regional Airport indicates they are all within existing airport property. The three sites are on similar geology and soils that the existing airport infrastructure is sited. The natural topography has been altered by the original and subsequent grading for the airport. There are no indications of unusual problems for the structure that would be caused by the soils on the site. Hard bedrock will probably exceed 2 meters in depth. It is not sited on a floodplain and wetland will not be impacted at any of the site alternatives.

No farmland will be impacted or converted by this project. Sediment and erosion impacts will be mitigated during construction by following existing sediment and erosion ordinances.

If you have any further questions, please contact me at (434) 332-9534, x112 or john.nicholson@va.usda.gov.

John C. Nicholson
Resource Soil Scientist
USDA-NRCS

Cc: David Harper, Soil Scientist, USDA-NRCS, Richmond, VA
Don Yancey, District Conservationist, USDA-NRCS, Rustburg, VA

Enclosure: Location Map

Helping People Help the Land

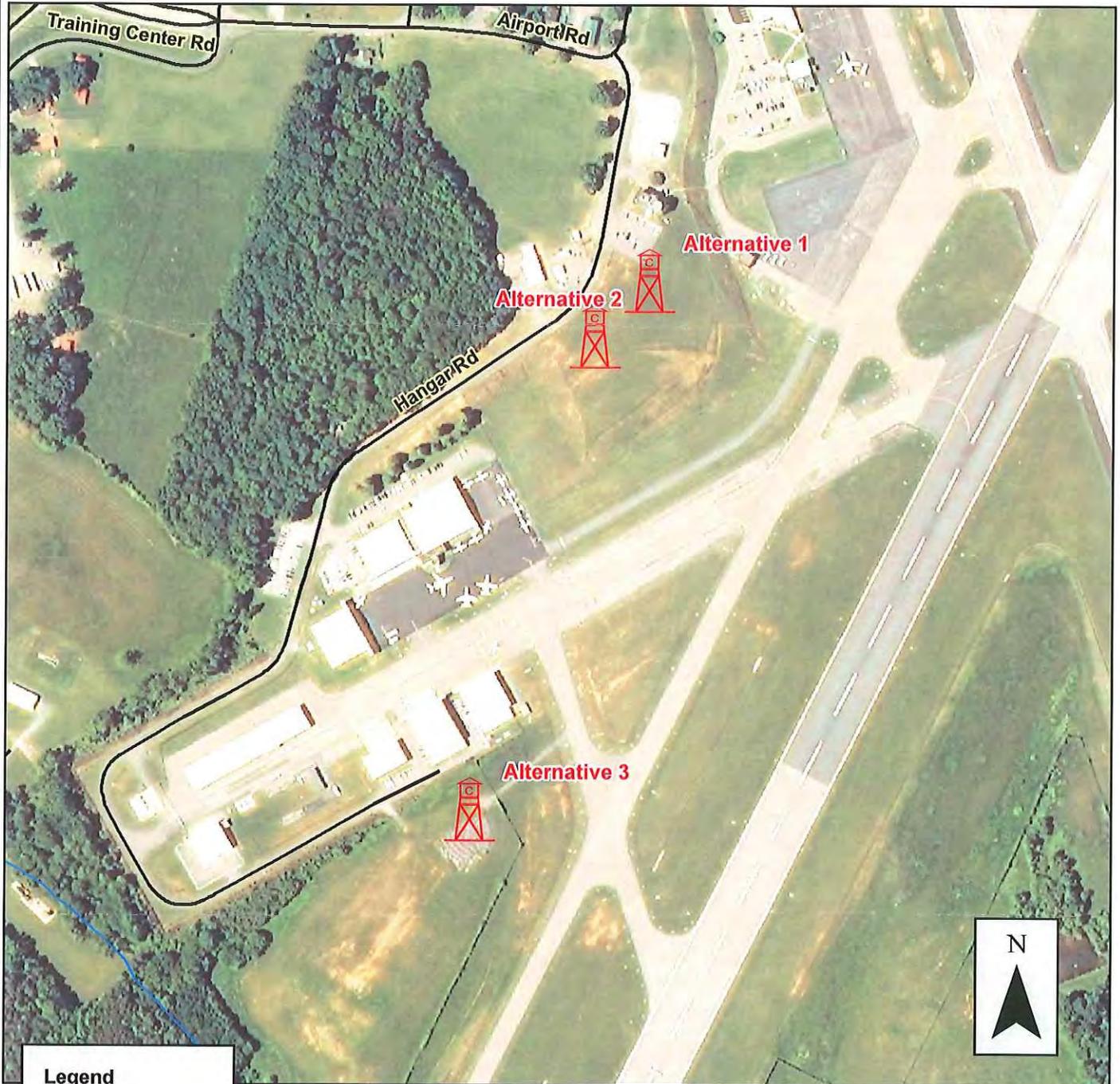
An Equal Opportunity Provider and Employer

Information Request New Air Traffic Control Tower Lynchburg Regional Airport

County: Campbell

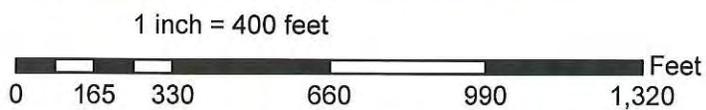
Office: Rustburg USDA Service Center
 District: Robert E. Lee SWCD

Assisted by: John Nicholson,
 Soil Scientist



Legend

-  ATCT_alternatives
-  Roads
-  Railroad
-  Ponds
-  Stream



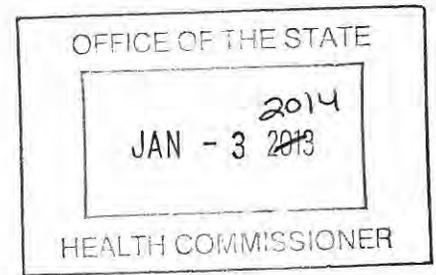
Map accuracy is for a scale of 1:12,000 (1 inch = 1000 feet). Some distortions may exist when zoomed in at larger scale.

WARNING: This map has been prepared for a limited purpose. See attachments for an explanation of its use and interpretation. Tract and field boundaries are approximate. Prepared by Farmville Area Office Farmville, VA.

Env Health



909 N Washington Street
Suite 330
Alexandria, VA 22314
Voice 703 549 2472
Fax 703 549 2582



December 23, 2013

Ms. Cynthia C. Romero, MD, FAAFP
Virginia Department of Health
Office of the Commissioner
109 Governor Street
Richmond, VA 23219

**RE: ENVIRONMENTAL ASSESSMENT FOR THE CONSTRUCTION AND OPERATION OF
AN AIR TRAFFIC CONTROL TOWER
LYNCHBURG REGIONAL AIRPORT
LYNCHBURG, VIRGINIA**

Dear Dr. Romero:

The City of Lynchburg (the City) is proposing to build a replacement Air Traffic Control Tower (ATCT) at the Lynchburg Regional Airport (the Airport). The proposed ATCT (Proposed Project) would be located on the west side of the Airport's property. This area is regularly mowed and maintained. The City wishes to replace the existing, functionally obsolescent, high maintenance ATCT because it has exceeded its useful life.

RS&H is preparing a short-form Environmental Assessment (EA) on behalf of the City per the National Environmental Policy Act of 1969 (NEPA), Federal Aviation Administration (FAA) implementing regulations, and other applicable environmental requirements.¹ The short-form EA will consider and document potential environmental impacts associated with the Proposed Project. The City will submit the short-form EA to the FAA Washington, D.C. Airports District Office for acceptance and a decision to issue a Finding of No Significant Impact (FONSI) or to prepare an Environmental Impact Statement (EIS).

The Proposed Project consists of:

- constructing and operating a new, 75-foot tall ATCT;
- relocating the Leesburg Flight Service Station (FSS) Remote Communications Outlet (RCO) to the new ATCT, including necessary rooftop antennae.
- installing new equipment, including new backup Local and Ground radio equipment;
- constructing a sidewalk to provide access to the ATCT;
- extending utility services to the ATCT; and
- demolition of the existing ATCT

¹ The FAA's Eastern Region Airports Division uses a Short-Form EA when a project cannot be categorically excluded (CatEx) from a formal EA, but when the environmental impacts of a proposed project are expected to be insignificant and a detailed EA would not be appropriate. The Short-Form EA meets the intent of, and satisfies the FAA's regulatory requirements under NEPA.

A project study area will be developed as part of the short-form EA, and will include the limits of disturbance (e.g., building footprint, laydown areas, and utility service extensions).

Exhibits depicting the Airport location (**Attachment 1**) and alternative sites for the proposed ATCT (**Attachment 2**) are enclosed.

On behalf of the City of Lynchburg, I am sending you this early notification to:

1. advise your agency about the preparation of the EA;
2. request any relevant information your agency may have regarding the Airport site or environs; and
3. solicit early comments regarding potential environmental, social, and economic issues for consideration during the preparation of the EA.

You may send any information and comments to me at the address provided below by January 31, 2014. I appreciate your prompt response to this letter.

David Alberts
Reynolds, Smith and Hills, Inc.
10748 Deerwood Park Boulevard South
Jacksonville, FL 32256

On behalf of the City of Lynchburg, I would like to thank you for your interest in this project and look forward to working with you as RS&H prepares this EA on behalf of the City. If you have any questions or need additional information regarding the Proposed Project, please do not hesitate to contact me at (904) 256-2500 or via email david.alberts@rsandh.com.

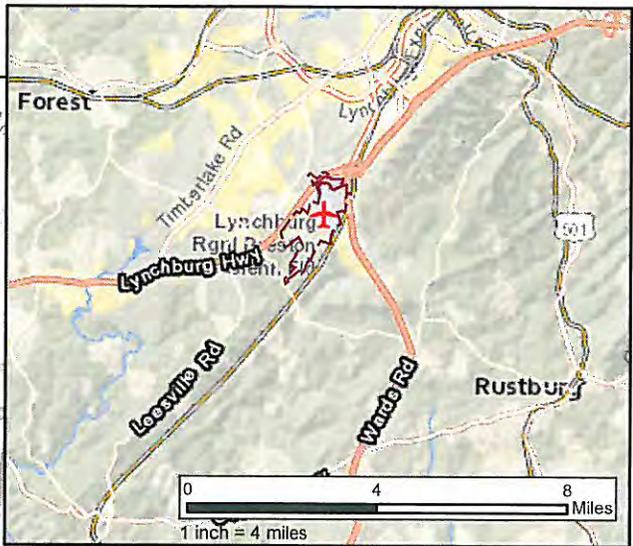
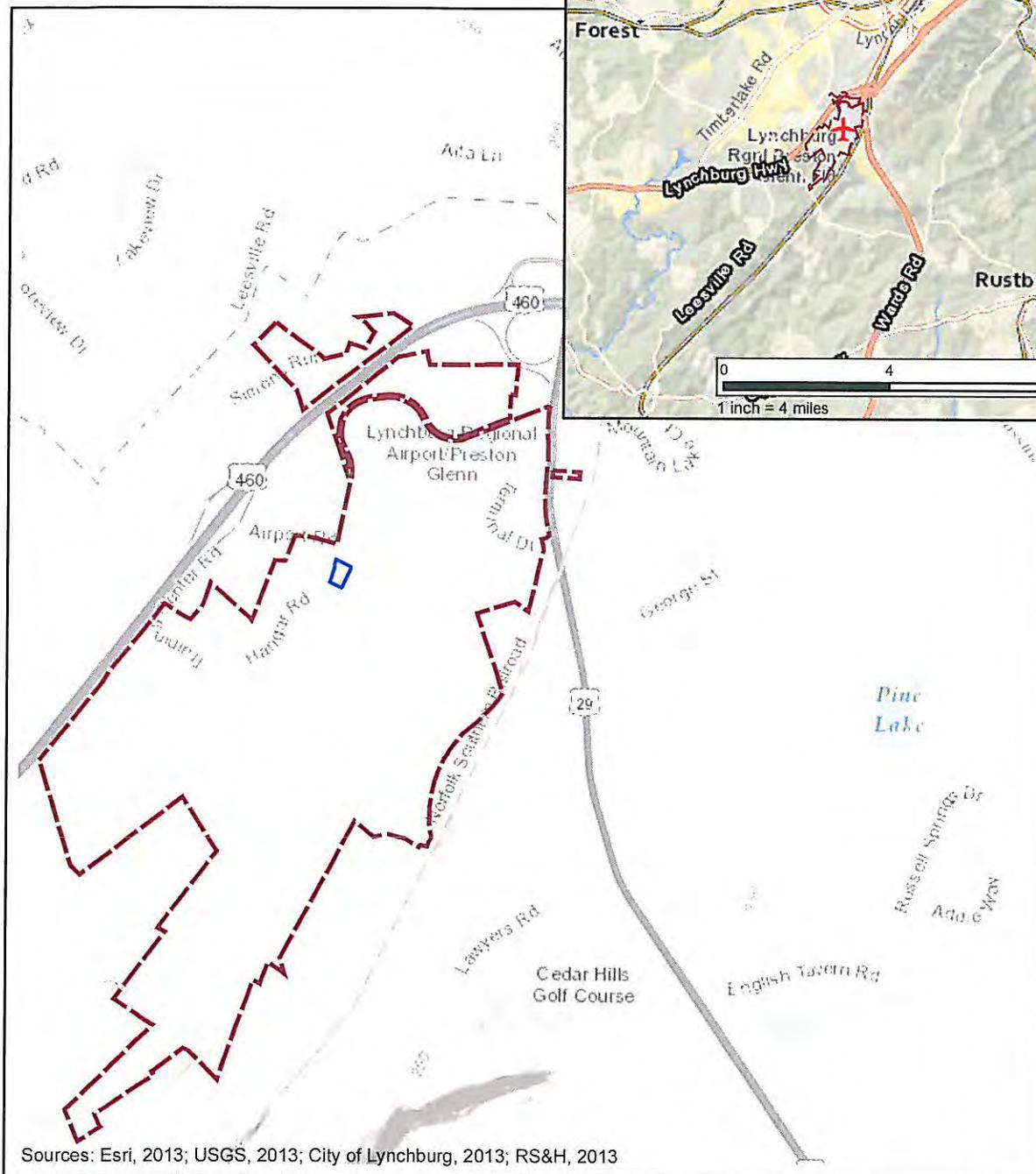
Sincerely,



David Alberts
Southeast Region Environmental Service Group Leader
Reynolds, Smith and Hills, Inc.

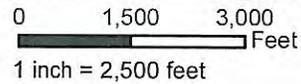
Copy: Mark Courtney – City of Lynchburg
Marcus Brundage – FAA
File

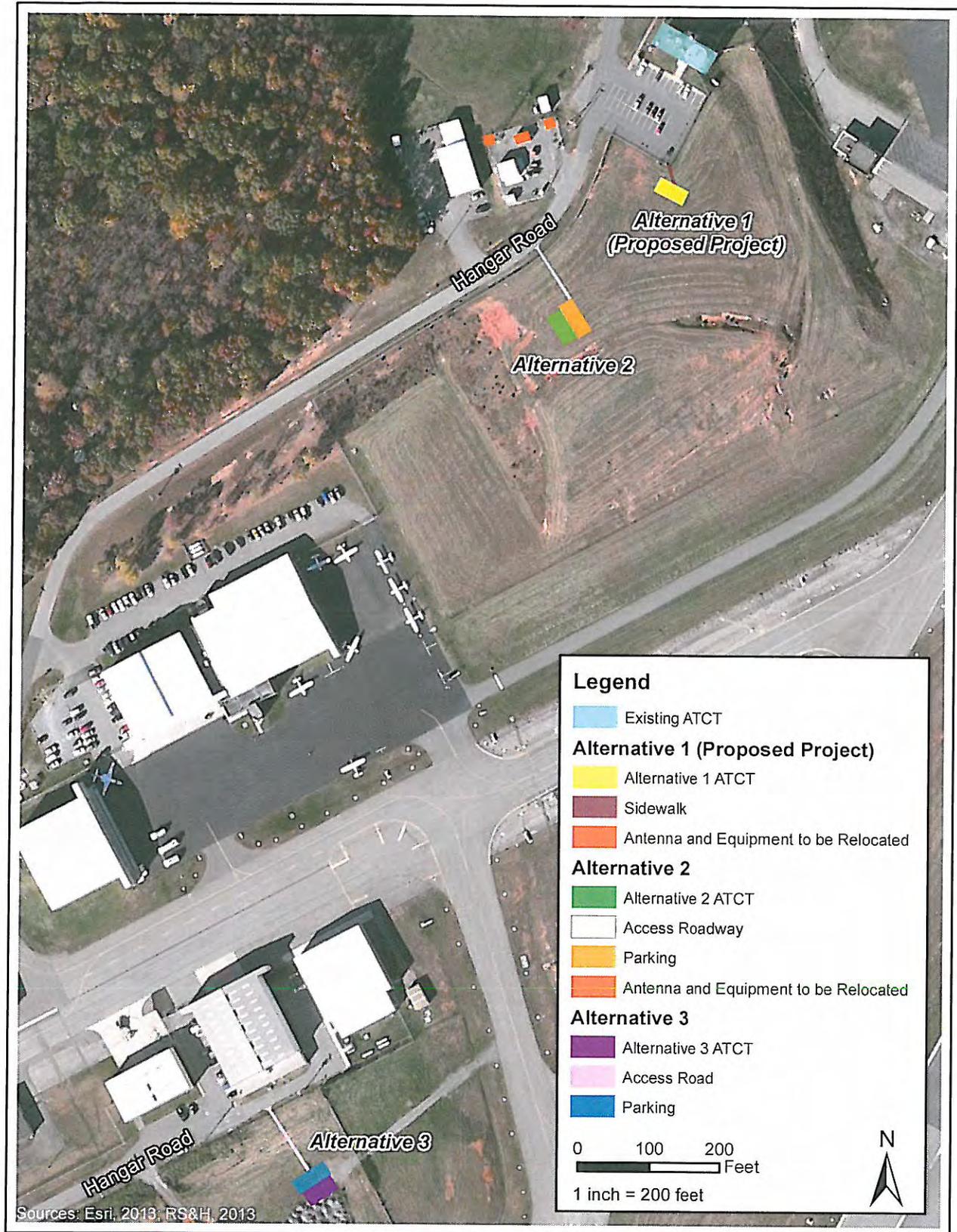
Enclosures: Attachment 1 – Location Map
Attachment 2 – Alternative ATCT Sites



Sources: Esri, 2013; USGS, 2013; City of Lynchburg, 2013; RS&H, 2013

- Legend**
- Airport Property Boundary
 - Project Study Area







Campbell County Health Department
PO Box 160
Rustburg, VA 24588
(434) 592-9550 Voice
(434) 332-5512 Fax

January 10, 2014

David Alberts
Reynolds, Smith and Hills, Inc.
10748 Deerwood Park Boulevard South
Jacksonville, FL 32256

RE: FOIA Request in Campbell County, VA; Environmental Assessment for Lynchburg Regional Airport

Dear Mr. Alberts:

Please find attached records and copying invoice, per your request, for Lynchburg Regional Airport.

Please contact me at Thomas.saxton@vdh.virginia.gov or 434-592-9550 x 113 if you have any questions.

Sincerely,

A handwritten signature in red ink, appearing to read 'Tom Saxton', is written over the word 'Sincerely,'.

Tom Saxton, Environmental Health Specialist

PERMIT TO INSTALL REPAIR, REASONS FOR REJECTION
WATER SUPPLY SEWAGE DISPOSAL SYSTEM

(1) Void after (12) twelve months. (2) Automatically cancelled when site conditions are changed from those shown on permit.
 (3) Automatically cancelled should facts later become known that a potential hazard would be created by continuing installation.

FHA/VA Yes No Date 10/28/81 Case No. _____

Owner City of Lynchburg Address Lynchburg, Virginia Phone _____
(Mailing Address)

Occupant Lyby Municipal Airport Address _____ Phone _____
(Mailing Address)

Exact Location of premises Lyby Municipal Airport
(Subdivision, Street or Road Name, Section or Lot No.)

FOR: Dwelling Other Terminal Automatic Washing Machine Yes No Consumption 2000 gal. per day
 Actual Potential Bedrooms _____ Garbage Disposal Unit Yes No Actual Estimated Water

Additional wastes _____

(1) WATER SUPPLY (Existing) Class _____ Approved Yes No Other _____
 (To be installed) Class _____ Cased _____ ft. to be grouted _____ ft.

(Unless supported by positive evidence Class III is to be considered as to be installed.)

(2) SOIL STUDY Naturally drained, suitable by sight Yes No Technical Classification _____
(If Known)
 Estimated Percolation Rate 1-10 11-25 26-50 > 51 Percolation Test Required Yes No Rate _____
(Minutes per inch) (Minutes per inch to nearest 10 minutes)
 Depth to Grey Mottles _____ inches (estimate over 4 ft.) OTHER _____
 Surface drainage required Yes NO OTHER DRAINAGE _____

(3) HOUSE SEWER LINE Size EXISTING inches. Type of material required _____ Distance from Water Supply _____ feet.

(4) DETAILS OF CONSTRUCTION Watertight Septic Tank of EXISTING Material _____ Liquid Capacity _____ gallons.
 Inside Dimensions Length _____ feet. Width _____ feet. Liquid Depth _____ feet. Depth of Air Space _____ feet.

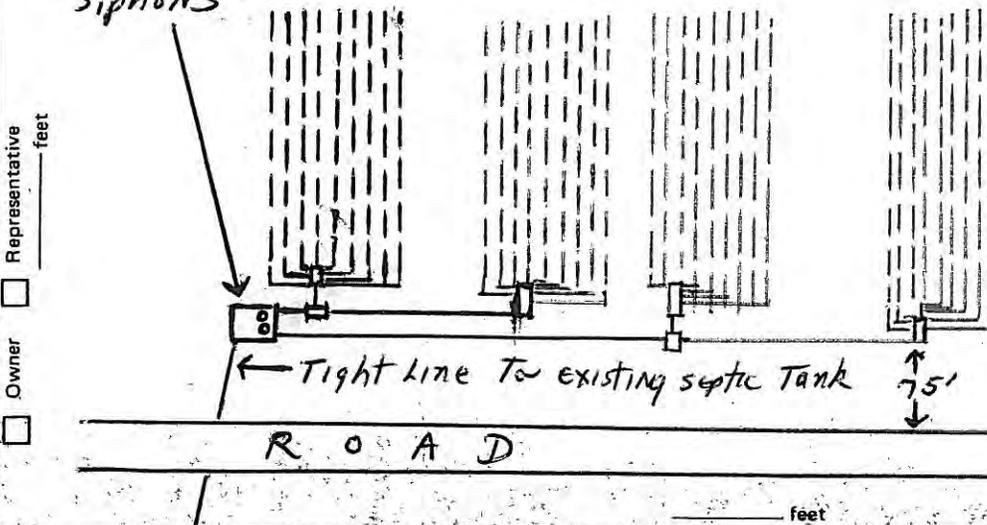
SUBSURFACE ABSORPTION FIELD Number of square feet required 10,800 Type aggregate required STONE
 (5) Depth of aggregate from base of tile to bottom of ditches 6 inches. Allowable fall 2 to 4 inches.
 Total aggregate minimum depth 13 inches or more. Depth of drainfield to be 48 inches from surface of original ground.
 Distance from well to septic tank 50+ feet; distance from well to drainfield 100 feet. MINIMUM

Rough Sketch of Premises (including adjacent properties if pertinent, Showing Location of Lot Line, Buildings, Water Supplies, Sewage Disposal Systems, Trees, and Other Possible Sources of Contamination of Water Supplies, by Indicating Distances and Slope with regard to one another.

Dosing Tank with TWIN alternating siphons

Each drainfield to contain 9-100' x 3' drainfield lines on 9 ft. centers at 48" depth

Notify Health Dept. prior to installation



Note: Owner or his agent must notify Lynchburg Health Department, Phone 528 2781 when installation is ready for inspection. If any Sewage Disposal System, or part thereof, is covered before being inspected by the Health Department, it shall be uncovered at the direction of the Health Director or his agent. CONDITIONS DISCOVERED DURING INSTALLATION MAY REQUIRE ADJUSTMENTS OF SYSTEM DESIGN. Changes from above specifications require Health Department approval before being made.

Based on the above information, the undersigned recommends that this permit be issued.

Date _____ Approved _____ Date 10/28/81 Signed R.E. Rose Jr.
(Sanitarian or Health Director)

Sewage Disposal System Operation Permit

Commonwealth of Virginia
Department of Health



Health Department
Identification No. 83-214-0066
Lynchburg Health Department

Tax Map No. N/A

City of Lynchburg is Hereby Granted Permission
to Operate a (Type) II Sewage Disposal System Having a Design Capacity of _____ gpd, at
Lynchburg Municipal Airport - Air Virginia - Hangar Addition

SUBDIVISION	SECTION/BLOCK	LOT

This permit is Issued in Accordance with the Provisions of 32.1, Chapter 6 of the Code of Virginia as Amended and Section(s)
3.22 of the Sewage Handling and Disposal Regulations of the Virginia Department of Health and

with Previously Issued permits _____ Sewage Disposal System Permit Dated January 6, 1984

with the understanding that the Owner and/or any Subsequent Owner will operate the Sewage Disposal System in Accordance
with the Sewage Handling and Disposal Regulations of the Virginia Department of Health and any Variances or Conditions Granted.
Issuance of an Operating Permit does not imply or Guarantee that the Sewage Disposal System will Function for any Specified
Period of Time.

VARIANCES GRANTED
 NONE SEE ATTACHED

SPECIAL CONDITIONS
 NONE SEE ATTACHED

January 30, 1984

Effective Date

R.E. Rozek
Recommended (Sanitarian)

[Signature]
Approved (State Health Commissioner)

RECORD OF INSPECTION-SEWAGE DISPOSAL SYSTEM

Date 3/24/82 Case No. _____

Owner City of Lynchburg Address Lynchburg, Va. Phone _____
(Mailing Address)

Occupant Airplane Hangar Address _____ Phone _____
(Mailing Address)

Exact Location of Premises Lyby Municipal Airport
(Subdivision, Street or Road Name, Section or Lot No.)

WATER SUPPLY INSPECTION

Installed according to Permit Design Yes No. Distance to nearest House Sewer _____ feet. Distance to nearest Sewage Disposal System _____ feet. (Use Form LHS-143 for Detailed inspection of Water Supply Reference Materials.)

SEWAGE DISPOSAL SYSTEM INSPECTION

(1) LOCATION

Allotted Area adequate Yes No. Distance from nearest lot lines N/A feet. Trees N/A feet. Water Supplies 100T feet. Buildings N/A feet.

(2) INSTALLATION AND DESIGN

Installed according to Permit Design Yes No.
 Have additional Household Appliances been added NOT on Permit:
 Automatic Washer Garbage Disposal
 Other _____
(Describe)

(3) SOIL CONDITION

Are there soil conditions now evident which indicate system may be unsatisfactory as designed: Yes No. If Yes, show adjustments required under "Remarks" below.

(4) HOUSE SEWER LINE

Installed Yes No. Type of material Sch 40
 Size 6 Inches.

(5) SEPTIC TANK

Constructed of 1000 gal - 6" Tees
(Kind of Material)
 Inside Dimensions Length _____ feet. Width _____ feet.
 Liquid Depth _____ feet. Depth of Air Space _____ inches.
 Inside Fittings comply with requirements Yes No.

(6) DISTRIBUTION BOX

Watertight and equal surcharge to each line by Water Test Yes No. Distribution Box provided with 4-5
(Number)
 extra outlets for future use.

(7) SUBSURFACE ABSORPTION FIELD

Total Area in bottom of ditches 800 square feet.
 Number of ditches 4 Length of ditches 67 X 3 feet.
 Grade of ditches Minimum 3 Inches per 100 feet.
 Maximum 4 inches per 100 feet. Has system been checked by instruments (Level) Yes No.
 Type aggregate used Stone
 Depth of aggregate under Tile 6 inches
 Total depth of aggregate 13 inches
 Depth of backfill over aggregate 40-48 inches

(8) SURFACE DRAINAGE

Storm Drains from House and Basement flowing away from Subsurface Drainage Field: Yes No. Was Surface Drainage required Yes No. If Yes, has this been provided Yes No. Has area been drained by lowering Ground Water Table: Yes No. Not required.

(9) Are follow-up inspections necessary Yes No.

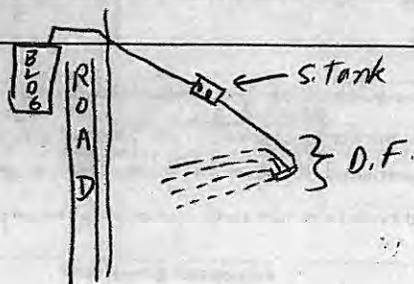
Septic Tank Contractor: S.L. Yuille Address RT 1, Rustburg, Va. Phone _____

This Sewage Disposal System (Is) ~~(Is Not)~~ Approved by Lynchburg Health Department

Date 3/24/82 Signed R.E. Rose
(Sanitarian)

Date _____ Approved _____
(Reviewing Authority)

With proper maintenance, approved Sewage Disposal systems may be expected to function satisfactorily, provided no overloading or physical damage occurs to the system. Remarks: * Sewer line (6") with clean-outs installed per City Engineers specifications, septic tank + drain field as shown below



Handwritten initials/signature

**PERMIT TO INSTALL REPAIR, REASONS FOR REJECTION
 WATER SUPPLY SEWAGE DISPOSAL SYSTEM**

(1) Void after (12) twelve months. (2) Automatically cancelled when site conditions are changed from those shown on permit.
 (3) Automatically cancelled should facts later become known that a potential hazard would be created by continuing installation.

FHA/VA Yes No Date 9/15/81 Case No. _____

Owner City of Lynchburg Address Lynchburg Va. Phone _____
 (Mailing Address)

Occupant Airplane Hangar Address _____ Phone _____
 (Mailing Address)

Exact Location of premises Lyby Municipal Airport
 (Subdivision, Street or Road Name, Section or Lot No.)

FOR: Dwelling Other Airplane Automatic Washing Machine Yes No Consumption _____ gal. per day
 Actual Potential Bedrooms Hanger Garbage Disposal Unit Yes No (Actual estimated Water)

Additional wastes _____

(1) WATER SUPPLY (Existing) Class _____ Approved Yes No Other _____
 (To be installed) Class II-B Cased _____ ft. to be grouted _____ ft.
 (Unless supported by positive evidence Class III is to be considered as to be installed.)

(2) SOIL STUDY Naturally drained, suitable by sight Yes No Technical Classification _____
 Estimated Percolation Rate 1-10 11-25 26-50 > 51 Percolation Test Required Yes No Rate _____
 (Minutes per inch) (Minutes per inch to nearest 10 minutes)
 Depth to Grey Mottles _____ inches (estimate over 4 ft.) OTHER _____
 Surface drainage required Yes No OTHER DRAINAGE _____

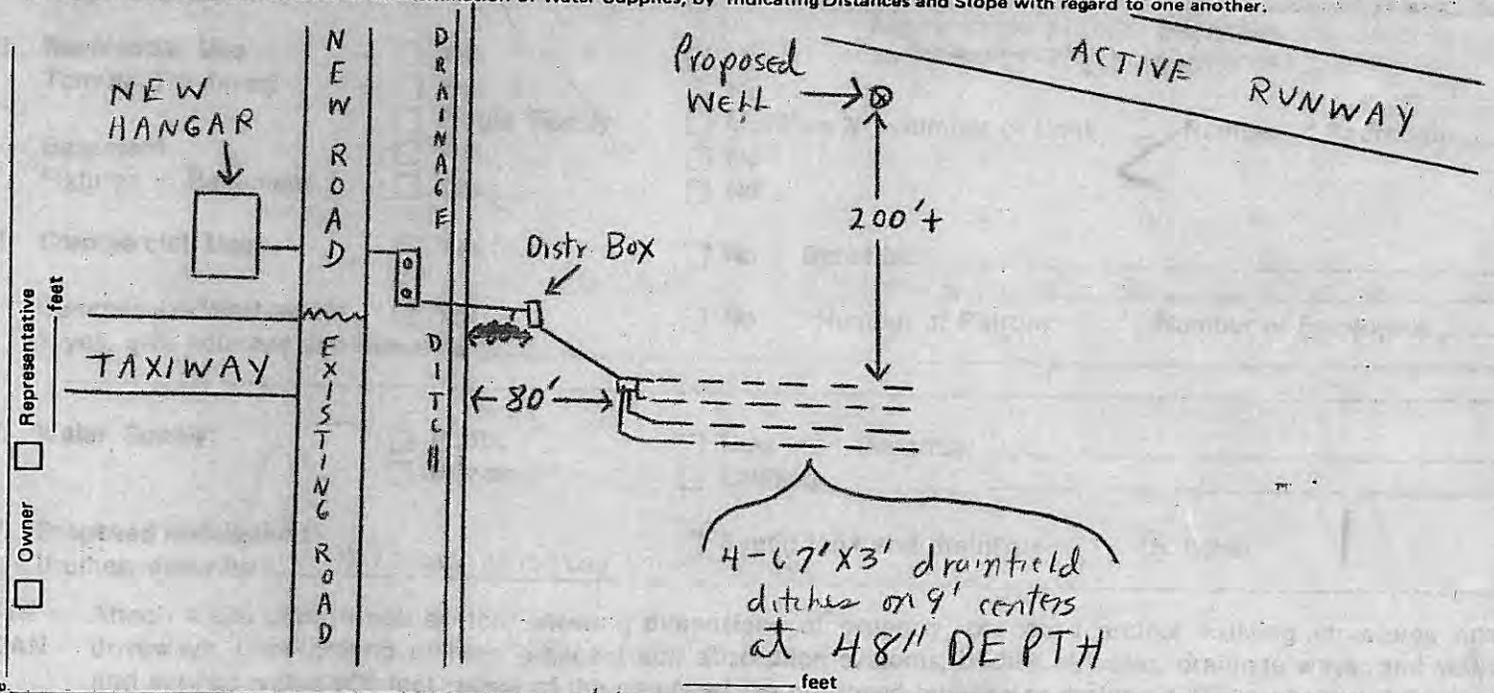
(3) HOUSE SEWER LINE Size 4 inches. Type of material required SL40 Distance from Water Supply 50+ feet.

(4) DETAILS OF CONSTRUCTION Watertight Septic Tank of concrete Material Liquid Capacity 1000 gallons.
 Inside Dimensions Length 8 feet. Width 4 feet. Liquid Depth 4 feet. Depth of Air Space 1 feet.

SUBSURFACE ABSORPTION FIELD Number of square feet required 800 Type aggregate required stone

(5) Depth of aggregate from base of tile to bottom of ditches 6 inches. Allowable fall 2 to 4 inches.
 Total aggregate minimum depth 13 inches or more. Depth of drainfield to be 48 inches from surface of original ground.
 Distance from well to septic tank 50+ feet; distance from well to drainfield 100+ feet.

Rough Sketch of Premises (including adjacent properties if pertinent, Showing Location of Lot Line, Buildings, Water Supplies, Sewage Disposal Systems, Trees, and Other Possible Sources of Contamination of Water Supplies, by Indicating Distances and Slope with regard to one another.



Note: Owner or his agent must notify Lynchburg Health Department, Phone 5286781 when installation is ready for inspection. If any Sewage Disposal System, or part thereof, is covered before being inspected by the Health Department, it shall be uncovered at the direction of the Health Director or his agent. CONDITIONS DISCOVERED DURING INSTALLATION MAY REQUIRE ADJUSTMENTS OF SYSTEM DESIGN. Changes from above specifications require Health Department approval before being made.

Based on the above information, the undersigned recommends that this permit be issued.
 Date _____ Approved _____ Date 9/15/81 Signed R.E. Rose
 LHS - 121 REV. 12/71 (Reviewing Authority) (Sanitarian or Health Director)

DUPLICATE

[Handwritten initials]

Application for a Sewage Disposal System Construction Permit

Commonwealth of Virginia
Department of Health

For Department Use Only

Health Department 23
Identification Number 217 0066
Map Reference _____

Lynchburg Health Department

Date Received 12/14/83

To Be Completed By The Applicant

Type sewage system: New Repair Expanded Conditional
FHA/VA yes no

Owner City of Lynchburg (Municipal Airport) Address Public Works Department City Hall Lynchburg, VA 24505 Phone _____

Agent Charles Evans Address as above Phone 847-1362

Directions to Property Lynchburg South, Route 628

Subdivision _____ Section _____ Block _____ Lot _____

Other Property Identification _____

Dimensions/size of Lot/Property _____

Other Application Information

I. Building/facility New Existing Yes No
Intermittent Use Yes No If yes, describe: _____

Operates seven day week. In a twenty-four hour period, employees vary from 8/10 up to 50.

II. Residential Use Yes No Yes No
Termite Treatment Yes No
Basement Single Family Multifamily Number of Units _____ Number of Bedrooms _____
Fixtures in Basement Yes No

Waste from planes averages one per day for forty-eight passenger plane.

III. Commercial Use Yes No Describe: _____

Commercial/Wastewater Yes No Number of Patrons _____ Number of Employees _____
If yes, give volumes and describe _____

IV. Water Supply: Public New Describe: _____
 Private Existing _____

V. Proposed Installation: Septic tank and drainfield Other
If other, describe Relocate existing septic tanks

SITE PLAN Attach a site plan (rough sketch) showing dimensions of property, proposed and/or existing structures and driveways, underground utilities, adjacent soil absorption systems, bodies of water, drainage ways, and wells and springs within 200 feet radius of the center of the proposed building or drainfield. Distances may be paced or estimated.

The property lines and building location are clearly marked and the property is sufficiently visible to see the topography. I give permission to the Department to enter onto the property described for the purpose of processing this application.

Signature of owner/agent

10-28-83

Date

Sewage Disposal System Construction Permit

Commonwealth of Virginia
Department of Health

LY86

Health Department



Health Department

Identification Number 83-214-0066

Map Reference _____

General Information

New Repair Expanded Conditional FHA VA Case No. _____
 Based on the application for a sewage disposal system construction permit filed in accordance with Section 3.13.01, a construction permit is hereby issued to:
 Owner City of Lynchburg (Municipal Airport) Telephone _____
 Address Public Works Department - City Hall, Lyby, VA
 For a Type II Sewage disposal system which is to be constructed on/at Lyby Municipal Airport - Air Virginia - Hangar Addition
 Subdivision _____ Section/Block _____ Lot _____
 Actual or estimated water use _____

DESIGN

NOTE: INSPECTION RESULTS

Water supply, existing: (describe) Drilled well
To be installed: class _____
 cased _____ grouted _____

Water supply location: yes no comments
 Satisfactory N/A

Building sewer:
30" 4" I.D. PVC 40, or equivalent.
 Slope 1.25" per 10' (minimum).
 Other _____

Building sewer: yes no comments
 Satisfactory Cast Iron installed

Septic tank: Capacity 2-1000 gals. (minimum).
 Other _____

Pretreatment unit: yes no comments
 Satisfactory

Inlet-outlet structure:
 PVC 40, 4" tees or equivalent.
 Other _____

Inlet-outlet structure: yes no comments
 Satisfactory

Pump and pump station:
 No Yes describe and shown design.
 if yes: _____

Pump & pump station: yes no comments
 Satisfactory N/A

Gravity mains: 3" or larger I.D., minimum 6" fall per 100', 1500 lb. crush strength or equivalent.
 Other _____

Conveyance method: yes no comments
 Satisfactory Cast Iron installed

Distribution box: Existing
 Precast concrete with _____ ports.
 Other _____

Distribution box: yes no comments
 Satisfactory N/A

Header lines: Existing
 Material: 4" I.D. 1500 lb. crush strength plastic or equivalent from distribution box to 2' into absorption trench.
 Slope 2" minimum.
 Other _____

Header lines: yes no comments
 Satisfactory N/A

Percolation lines: Existing
 Gravity 4" plastic 1000 lb. per foot bearing load or equivalent, slope 2" 4" (min. max.) per 100'.
 Other _____

Percolation lines: yes no comments
 Satisfactory N/A

Absorption trenches: Existing
 Square ft. required _____; depth from ground surface to bottom of trench _____; aggregate size _____;
 Trench bottom slope _____;
 center to center spacing _____; trench width _____

Absorption trenches: N/A yes no comments
 Satisfactory

Date 1/30/84 Inspected and approved by: _____
 Sanitarian

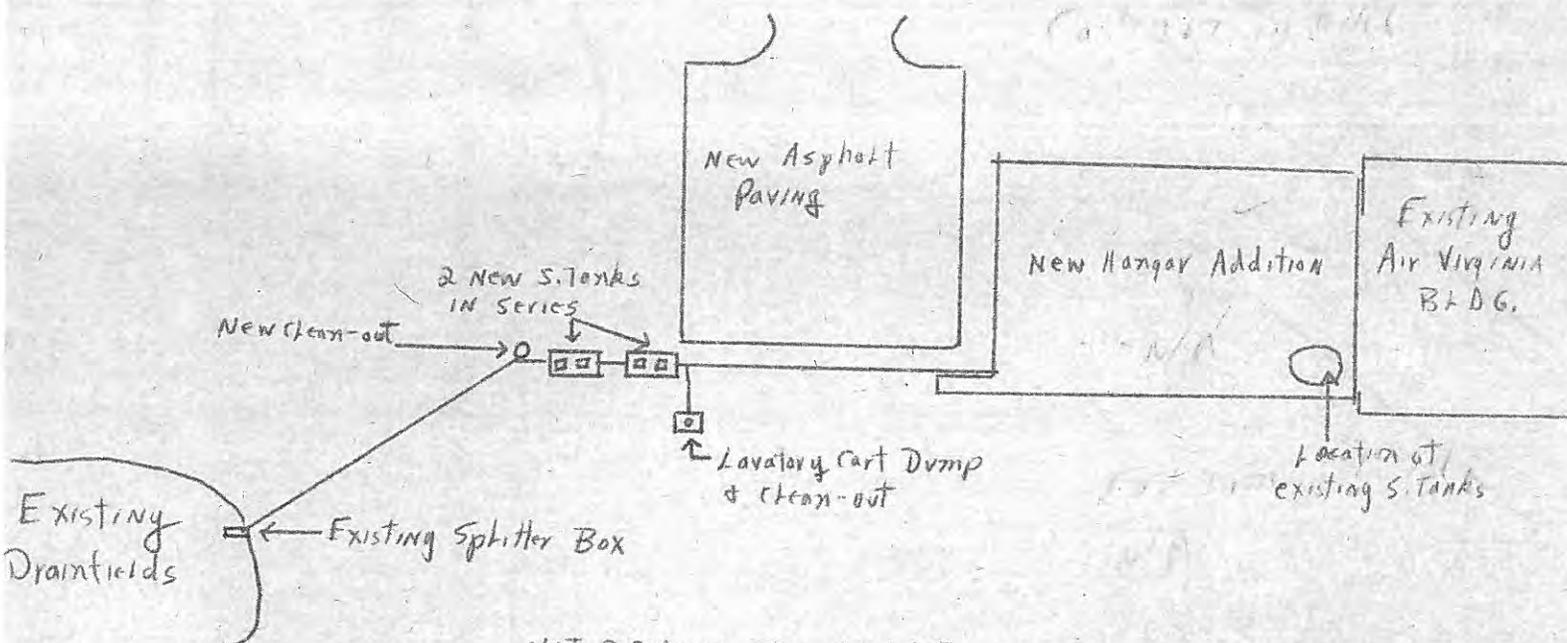
Schematic drawing of sewage disposal system and topographic features.

Show the lot lines of the building lot and building site, sketch of property showing any topographic features which may impact on the design of the system, all existing and/or proposed structures including sewage disposal systems and wells within 100 feet of sewage disposal system and reserve area. The schematic drawing of the sewage disposal system shall show sewer lines, pretreatment unit, pump station, conveyance system, and subsurface soil absorption system, reserve area, etc. When a nonpublic drinking water supply is to be located on the same lot show all sources of pollution within 100 feet.

The information required above has been drawn on the attached copy of the sketch submitted with the application. Attach additional sheets as necessary to illustrate the design.

NOTE: 2 existing Septic Tanks serving Air Virginia will be removed, 2 new S. Tanks will be installed as shown with new sewer line & new gravity main as shown - so as to comply with page 1 of construction permit requirements.

It is critical that sewer line be held as high as possible so that sewer line, Septic Tanks & gravity main can be installed so as to obtain minimum required fall from new building addition to existing splitter box.



The sewage disposal system is to be constructed as specified by the permit or attached plans and specifications .

This sewage disposal system construction permit is null and void if (a) conditions are changed from those shown on the application (b) conditions are changed from those shown on the construction permit. If construction has not commenced within 12 months of date of issuance, the construction permit must be revalidated.

No part of any installation shall be covered or used until inspected, corrections made if necessary, and approved, by the local health department or unless expressly authorized by the local health dept. Any part of any installation which has been covered prior to approval shall be uncovered, if necessary, upon the direction of the Department.

Date: 1/5/84 Issued by: R. E. Road Jr.
 Sanitarian

Date: 2-13-84 Reviewed by: [Signature]
 Supervisory Sanitarian

If FHA or VA financing

Reviewed by Date _____ Date _____
 Supervisory Sanitarian Regional Sanitarian

with Kent Skelton

8-20-81

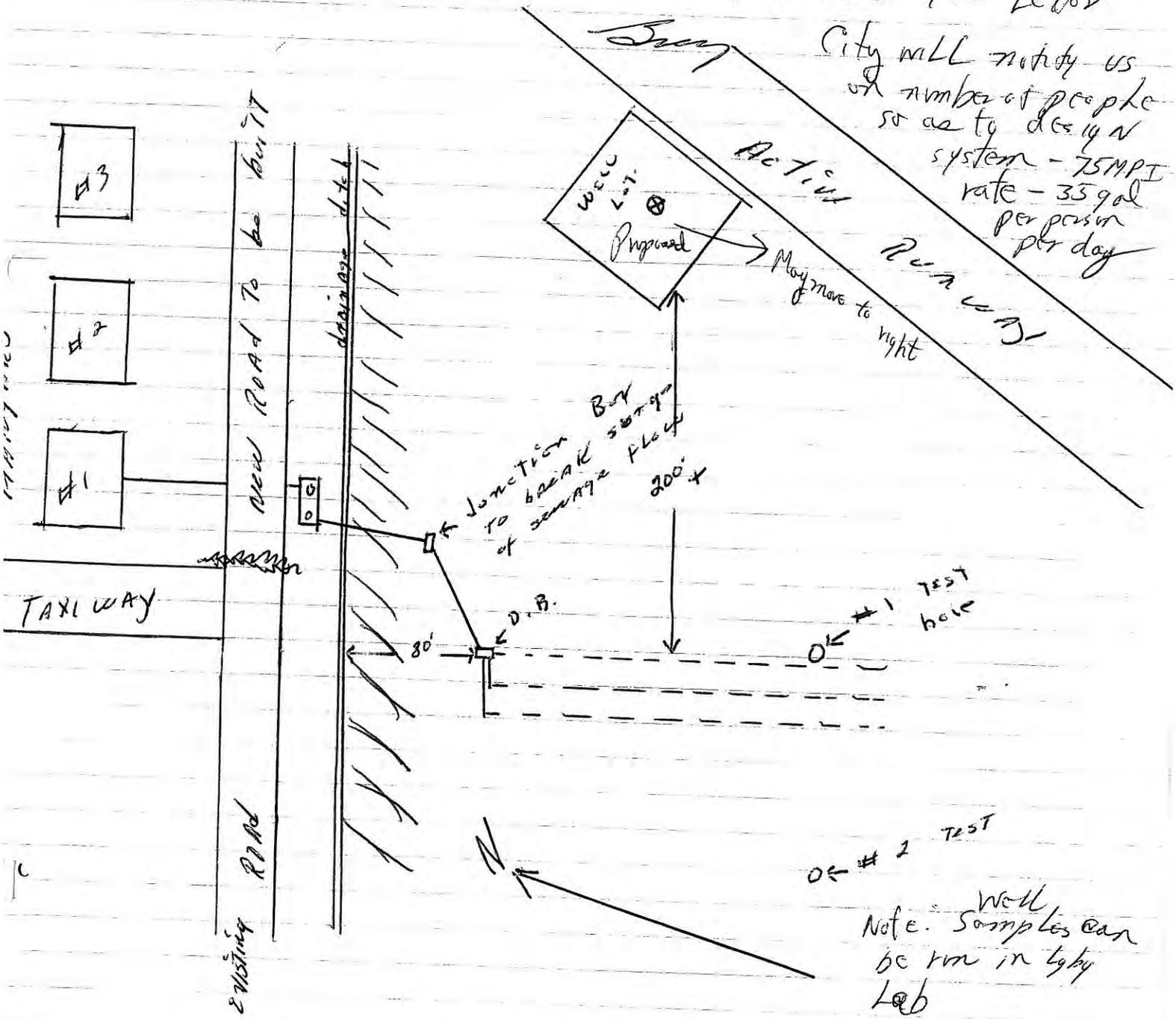
Bob -

Need well letter

Will you get out a letter to the city regarding a 2 B use at the airport for the new facilities. I met with Kent Skelton and selected the site. Also at this meeting was Harold Davis. I can fill you in on detail as required.

Similar to 1st letter

City will notify us of number of people so as to design system - 75 MPI rate - 35 gal per person per day



PERMIT TO INSTALL REPAIR, REASONS FOR REJECTION
WATER SUPPLY SEWAGE DISPOSAL SYSTEM

- (1) Void after (12) twelve months. (2) Automatically cancelled when site conditions are changed from those shown on permit.
 (3) Automatically cancelled should facts later become known that a potential hazard would be created by continuing installation.

FHA/VA Yes No Date 1/16/81 Case No. _____

Owner Lyby Municipal Airport Address Lyby, Va Phone _____
 (Mailing Address)

Occupant Same Address _____ Phone _____
 (Mailing Address)

Exact Location of premises RT # 678

(Subdivision, Street or Road Name, Section or Lot No.)

FOR: Dwelling Other Airport Hangar office Automatic Washing Machine Yes No Consumption _____ gal. per day
 Actual Potential Bedrooms _____ Garbage Disposal Unit Yes No (Actual estimated Water)
 Additional wastes _____

(1) WATER SUPPLY (Existing) Class _____ Approved Yes No Other _____
 (To be installed) Class II Cased 50 ft. to be grouted 50 ft.

(Unless supported by positive evidence Class III is to be considered as to be installed.)

(2) SOIL STUDY Naturally drained, suitable by sight Yes No Technical Classification _____
 Estimated Percolation Rate (Minutes per inch) 1-10 11-25 26-50 > 51 Percolation Test Required Yes No Rate _____
(Minutes per inch to nearest 10 minutes)
 Depth to Grey Mottles _____ inches (estimate over 4 ft.) OTHER _____
 Surface drainage required Yes No OTHER DRAINAGE _____

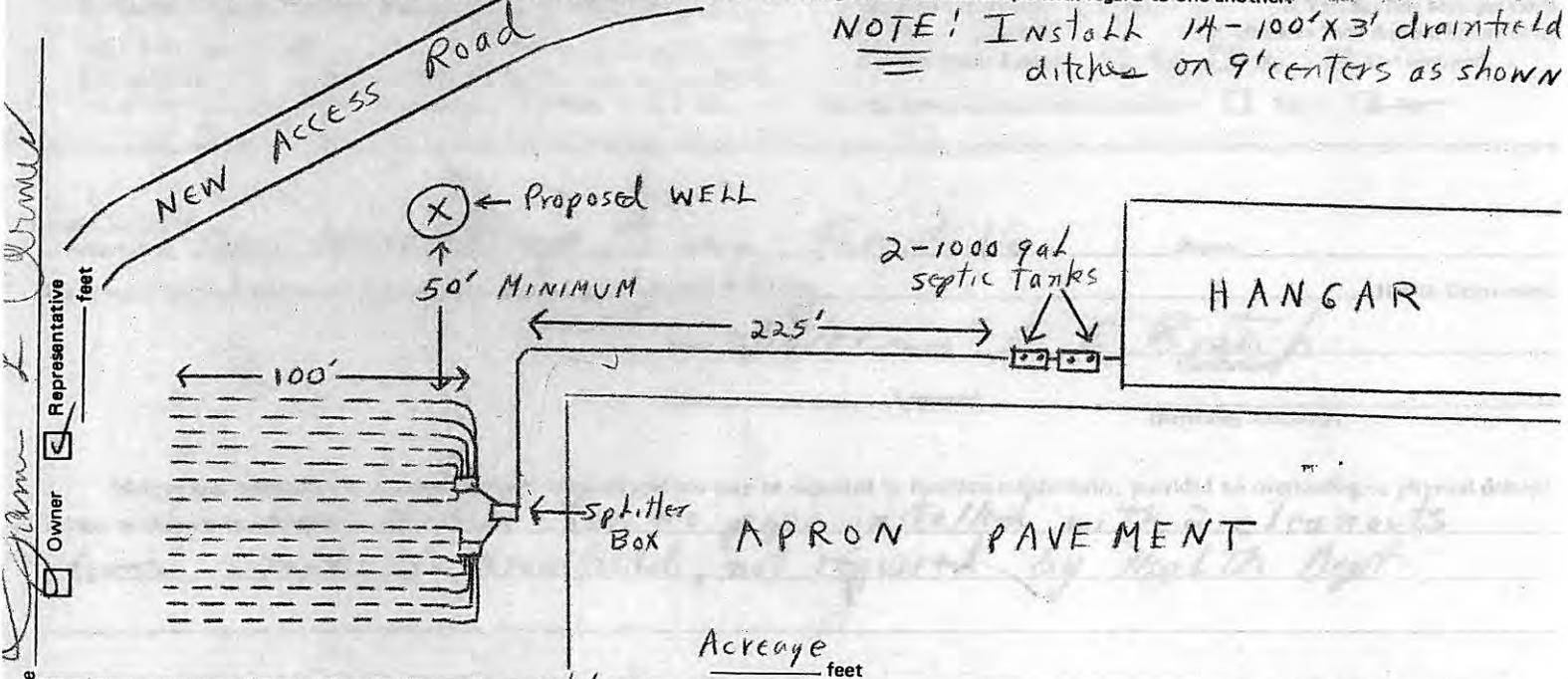
(3) HOUSE SEWER LINE Size 4 inches. Type of material required Sch40 Distance from Water Supply 50 feet.

(4) DETAILS OF CONSTRUCTION Watertight Septic Tank of Concrete Material _____ Liquid Capacity 2-1000 gallons. tanks
 Inside Dimensions Length 8 feet. Width 7 feet. Liquid Depth 4 feet. Depth of Air Space 1 feet.

(5) SUBSURFACE ABSORPTION FIELD Number of square feet required 4200 Type aggregate required stone
 Depth of aggregate from base of tile to bottom of ditches 6 inches. Allowable fall 2 to 4 inches.
 Total aggregate minimum depth 13 inches or more. Depth of drainfield to be 30 inches from surface of original ground.
 Distance from well to septic tank 50 feet; distance from well to drainfield 50 feet.

Rough Sketch of Premises (including adjacent properties if pertinent, Showing Location of Lot Line, Buildings, Water Supplies, Sewage Disposal Systems, Trees, and Other Possible Sources of Contamination of Water Supplies, by Indicating Distances and Slope with regard to one another.

NOTE: Install 14-100'x3' drainfield ditches on 9' centers as shown



Signature _____
 Owner Representative _____
 Owner _____
 Note: Owner or his agent must notify Lynchburg Health Department, Phone 5280781 when installation is ready for inspection. If any Sewage Disposal System, or part thereof, is covered before being inspected by the Health Department, it shall be uncovered at the direction of the Health Director or his agent. CONDITIONS DISCOVERED DURING INSTALLATION MAY REQUIRE ADJUSTMENTS OF SYSTEM DESIGN. Changes from above specifications require Health Department approval before being made.

Based on the above information, the undersigned recommends that this permit be issued.
 Date _____ Approved _____ Date 1/16/81 Signed R.E. Rizzo
 LHS - 121 REV. 12/71 (Reviewing Authority) (Sanitarian or Health Director)
 Virginia State Department of Health

DUPLICATE

1111

RECORD OF INSPECTION-SEWAGE DISPOSAL SYSTEM

Date 3/12/81 Case No. _____

Owner Lybg Municipal Airport Address Lynchburg, Va. Phone _____
(Mailing Address)

Occupant Same Address _____ Phone _____
(Mailing Address)

Exact Location of Premises RT # 678
(Subdivision, Street or Road Name, Section or Lot No.)

WATER SUPPLY INSPECTION

Installed according to Permit Design Yes No. Distance to nearest House Sewer _____ feet. Distance to nearest Sewage Disposal System _____ feet. (Use Form LHS-143 for Detailed inspection of Water Supply Reference Materials.)

SEWAGE DISPOSAL SYSTEM INSPECTION

- (1) LOCATION
 Allotted Area adequate Yes No. Distance from nearest lot lines N/A feet. Trees N/A feet. Water Supplies 100+ feet. Buildings 5+ feet.
- (2) INSTALLATION AND DESIGN
 Installed according to Permit Design Yes No.
 Have additional Household Appliances been added NOT on Permit:
 Automatic Washer Garbage Disposal
 Other _____
(Describe)
- (3) SOIL CONDITION
 Are there soil conditions now evident which indicate system may be unsatisfactory as designed: Yes No. If Yes, show adjustments required under "Remarks" below.
- (4) HOUSE SEWER LINE
 Installed Yes No. Type of material Sch 40
 Size 4 Inches.
- (5) SEPTIC TANK
 Constructed of 2-1000 gal S. Tanks
(Kind of Material)
 Inside Dimensions Length _____ feet. Width _____ feet.
 Liquid Depth _____ feet. Depth of Air Space _____ inches.
 Inside Fittings comply with requirements Yes No.
- (6) DISTRIBUTION BOX
 Watertight and equal surcharge to each line by Water Test Yes No. Distribution Box provided with _____
(Number) extra outlets for future use.
- (7) SUBSURFACE ABSORPTION FIELD
 Total Area in bottom of ditches 4200 square feet.
 Number of ditches 14 Length of ditches 100 X 3 feet.
 Grade of ditches Minimum 2 Inches per 100 feet.
 Maximum 4 inches per 100 feet. Has system been checked by instruments (Level) Yes No.
 Type aggregate used Stone
 Depth of aggregate under Tile 6 inches
 Total depth of aggregate 13 inches
 Depth of backfill over aggregate 15-36 inches
- (8) SURFACE DRAINAGE
 Storm Drains from House and Basement flowing away from Subsurface Drainage Field: Yes No. Was Surface Drainage required Yes No. If Yes, has this been provided Yes No.
 Has area been drained by lowering Ground Water Table: Yes No. Not required.
- (9) Are follow-up inspections necessary Yes No.

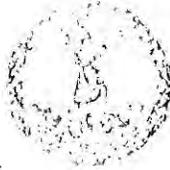
Septic Tank Contractor: Creger Well + Pump Co. Address Forest, Va. Phone _____

This Sewage Disposal System (Is) ~~(Is Not)~~ Approved by Lynchburg Health Department

Date 3/12/81 Signed R.E. Ross
(Sanitarian)

Date _____ Approved _____
(Reviewing Authority)

With proper maintenance, approved Sewage Disposal systems may be expected to function satisfactorily, provided no overloading or physical damage occurs to the system. Remarks: 4 inch Sch 40 pipe installed with 2 cleanouts from S. Tanks to drainfield, not required by Health Dept.



COMMONWEALTH of VIRGINIA

LYNCHBURG HEALTH DEPARTMENT

LYNCHBURG, VIRGINIA 24501

IN COOPERATION WITH THE
STATE DEPARTMENT OF HEALTH

MEMORANDUM

TO: Richard Jacques, Director
Department of Community Planning and Development

FROM: Robert E. Rose, Jr., Sanitarian

THROUGH: Joanna H. Morris, M. D., Director
Central Virginia Health District

DATE: October 30, 1980

SUBJECT: PROPOSED WELL FOR NEW HANGAR AND OFFICES, LYNCHBURG MUNICIPAL AIRPORT

On September 3, 1980, I met with Mr. Earl Simpson, consulting engineer, and Mr. Sandy Pearce of Architectural Partners for the purpose of inspecting a proposed well site which will serve as the water supply for the new hangar and offices at the Lynchburg Municipal Airport.

In accordance with Section 3.23.03 of The Commonwealth of Virginia Waterworks Regulations, this letter is to advise that the proposed well site shown on the plans submitted by Mr. Pearce, located approximately 250 feet west of the proposed offices and 50 feet north of the existing drainage ditch is approved for construction of a Class II-B well.

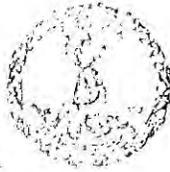
This approval is valid for a period of twelve (12) months. If construction of the well has not commenced by November 1, 1981, a reinspection of the site will be required. The well must be located as described above.

All construction requirements for the well are covered in Section 8.03 of The Commonwealth of Virginia Waterworks Regulations. Enclosed is a sketch showing all appurtenances that should be included on the well.

The Lynchburg Health Department, Environmental Health Section, must be notified in order that the grouting of the well can be observed.

Upon completion of the well, a yield and draw down test for a duration of eight hours is required. Nine bacteriological and one chemical sample must also be collected.

The owner is required to furnish a copy of the well completion report, the yield and draw down test report, a dedication document, and recorded plat plan of the well lot. A sample dedication document is enclosed.



COMMONWEALTH of VIRGINIA

LYNCHBURG HEALTH DEPARTMENT

LYNCHBURG, VIRGINIA 24501

IN COOPERATION WITH THE
STATE DEPARTMENT OF HEALTH

Richard Jacques, Director
Department of Community Planning and Development

-2-

October 30, 1980

Before the water system is allowed to be put into operation and after all of the above required information has been received, a final inspection will be made to insure that construction has been completed in accordance with the work sheets.

After the final inspection, you will be notified in writing that the system can be put into service.

Please let me know if you have any questions.

RER:cb

Enclosures (5)

cc: Mr. Sandy Pearce

LYNCH. ENV. HEALTH
41 43 44
46 88 09/ PER



The City of Lynchburg, Virginia

MEMORANDUM

TO: Grey Perrow LOCATION: Lynchburg Public Health Department

FROM: Richard D. Jacques *RDJ* LOCATION: Community Planning and Development

DATE: September 26, 1980

SUBJECT: Sewer Problems at Lynchburg Municipal Airport

REFERENCE: Attachment

FILE: Airport/Sewer Problems - 1980-81

As indicated to you during our meeting a few weeks ago, the City would attempt to resolve the poor septic system at the airport. I wish to draw your attention to the attached letter from Ray Booth. As you can see, we are working on the problem and we will soon establish a means by which to temporarily resolve the current conditions over the next several weeks.

Should you have any questions please do not hesitate to contact me.

RDJ:mca

Attachment

cc: Raymond Booth
Jesse Moorhead
Reggie Whitley



Jordan P

September 17, 1980

Mr. James L. Noffsinger
Director of Public Works and Assistant
County Administrator
County of Campbell
Post Office Box 100
Rustburg, Virginia 24588

Dear Jim:

Subject: Sewer Service for Lynchburg Municipal Airport

Attached please find a copy of a map showing the proposed location of a sewer line to serve the Lynchburg Municipal Airport. You will note from the attached map the location of the line in the County and where it enters Airport property. Please review this map and unofficially try to determine what course of action the City should follow if it should decide to possibly extend this line. The City hopes to complete its sewer line up to the City/County line on Wards Ferry Road by around April 1, 1981. The City will need to make a decision in the very near future if it is feasible to extend the sewer to the Airport at this time or to wait until some future date. We would appreciate any assistance you could provide in this matter.

Sincerely,

*Raymond A. Booth*_{rrw}

Raymond A. Booth, P.E.
Director of Public Works

RAB/rrw

Attachment

cc: ✓ Richard D. Jacques
Director of Community Planning
and Development
Jesse J. Moorhead
Airport Manager

RECORD OF INSPECTION-SEWAGE DISPOSAL SYSTEM

Date 11/4/74 Case No. _____

Owner City of Lynchburg Address Lynchburg, Va. Phone _____
(Mailing Address)

Occupant Lynchburg Municipal Airport Address _____ Phone _____
(Mailing Address)

Exact Location of Premises Airport Road
(Subdivision, Street or Road Name, Section or Lot No.)

WATER SUPPLY INSPECTION

Installed according to Permit Design Yes No. Distance to nearest House Sewer _____ feet. Distance to nearest Sewage Disposal System _____ feet. (Use Form LHS-143 for Detailed inspection of Water Supply Reference Materials.)

SEWAGE DISPOSAL SYSTEM INSPECTION

- | | |
|--|---|
| <p>(1) LOCATION
 Allotted Area adequate <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No. Distance from nearest lot lines <u>N/A</u> feet. Trees <u>N/A</u> feet. Water Supplies <u>100'</u> feet. Buildings <u>10-20</u> feet.</p> <p>(2) INSTALLATION AND DESIGN
 Installed according to Permit Design <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No. Have additional Household Appliances been added NOT on Permit: <input type="checkbox"/> Automatic Washer <input type="checkbox"/> Garbage Disposal <input type="checkbox"/> Other _____
 <small>(Describe)</small></p> <p>(3) SOIL CONDITION
 Are there soil conditions now evident which indicate system may be unsatisfactory as designed: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No. If Yes, show adjustments required under "Remarks" below.</p> <p>(4) HOUSE SEWER LINE
 Installed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No. Type of material <u>Sch 40</u> Size <u>4</u> Inches.</p> <p>(5) SEPTIC TANK
 Constructed of <u>1000 gal concrete</u>
 <small>(Kind of Material)</small>
 Inside Dimensions Length <u>8</u> feet. Width <u>4</u> feet. Liquid Depth <u>7</u> feet. Depth of Air Space <u>12</u> inches. Inside Fittings comply with requirements <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No.</p> | <p>(6) DISTRIBUTION BOX
 Watertight and equal surcharge to each line by Water Test <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No. Distribution Box provided with <u>1-2</u>
 <small>(Number)</small> extra outlets for future use.</p> <p>(7) SUBSURFACE ABSORPTION FIELD
 Total Area in bottom of ditches <u>1400</u> square feet. Number of ditches <u>5</u> Length of ditches <u>93x3</u> feet. Grade of ditches Minimum <u>3</u> Inches per 100 feet. Maximum <u>5</u> inches per 100 feet. Has system been checked by instruments (Level) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No. Type aggregate used <u>stone</u>. Depth of aggregate under Tile <u>6</u> inches. Total depth of aggregate <u>13</u> inches. Depth of backfill over aggregate <u>3-6 ft</u> inches.</p> <p>(8) SURFACE DRAINAGE
 Storm Drains from House and Basement flowing away from Subsurface Drainage Field: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No. Was Surface Drainage required <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No. If Yes, has this been provided <input type="checkbox"/> Yes <input type="checkbox"/> No. Has area been drained by lowering Ground Water Table: <input type="checkbox"/> Yes <input type="checkbox"/> No. <input checked="" type="checkbox"/> Not required.</p> <p>(9) Are follow-up inspections necessary <input type="checkbox"/> Yes <input type="checkbox"/> No.</p> |
|--|---|

Septic Tank Contractor: REC Construction Co. Address Forest, Va. Phone _____

This Sewage Disposal System (Is) ~~(Is Not)~~ Approved by Campbell County Health Department.

Date 11/4/74 Signed R.E. Rozo Date _____ Approved _____
(Sanitarian) (Health Director)

Date _____ Approved _____ Date _____ Approved _____
(Advisory Sanitarian) (Reviewing Authority - Other Agency)

With proper maintenance, approved Sewage Disposal systems may be expected to function satisfactorily, provided no overloading or physical damage occurs to the system. Remarks: _____

WATER SUPPLY **SEWAGE DISPOSAL SYSTEM**

(1) Void after (12) twelve months. (2) Automatically cancelled when site conditions are changed from those shown on permit.
 (3) Automatically cancelled should facts later become known that a potential hazard would be created by continuing installation.

FHA/VA Yes No Date 10/21/74 Case No. _____

Owner City of Lynchburg Address Lynchburg, Va. Phone _____
 (Mailing Address)

Occupant Cardinal Airlines Address Airport Road Phone _____
 (Mailing Address)

Exact Location of premises Airport Road - City Airport
 (Subdivision, Street or Road Name, Section or Lot No.)

FOR: Dwelling Other _____ Automatic Washing Machine Yes No Consumption 700 gal. per day
 Actual Potential Bedrooms _____ Garbage Disposal Unit Yes No (Actual estimated Water)

Additional wastes _____

(1) WATER SUPPLY (Existing) Class _____ Approved Yes No Other _____
 (To be installed) Class _____ Cased _____ ft. to be grouted _____ ft.

(Unless supported by positive evidence Class III is to be considered as to be installed.)

(2) SOIL STUDY Naturally drained, suitable by sight Yes No Technical Classification _____ (if Known)

Estimated Percolation Rate 1-10 11-25 26-50 > 51 Percolation Test Required Yes No Rate _____
 (Minutes per inch) (Minutes per inch to nearest 10 minutes)

Depth to Grey Mottles _____ inches (estimate over 4 ft.) OTHER _____
 Surface drainage required Yes No OTHER DRAINAGE _____

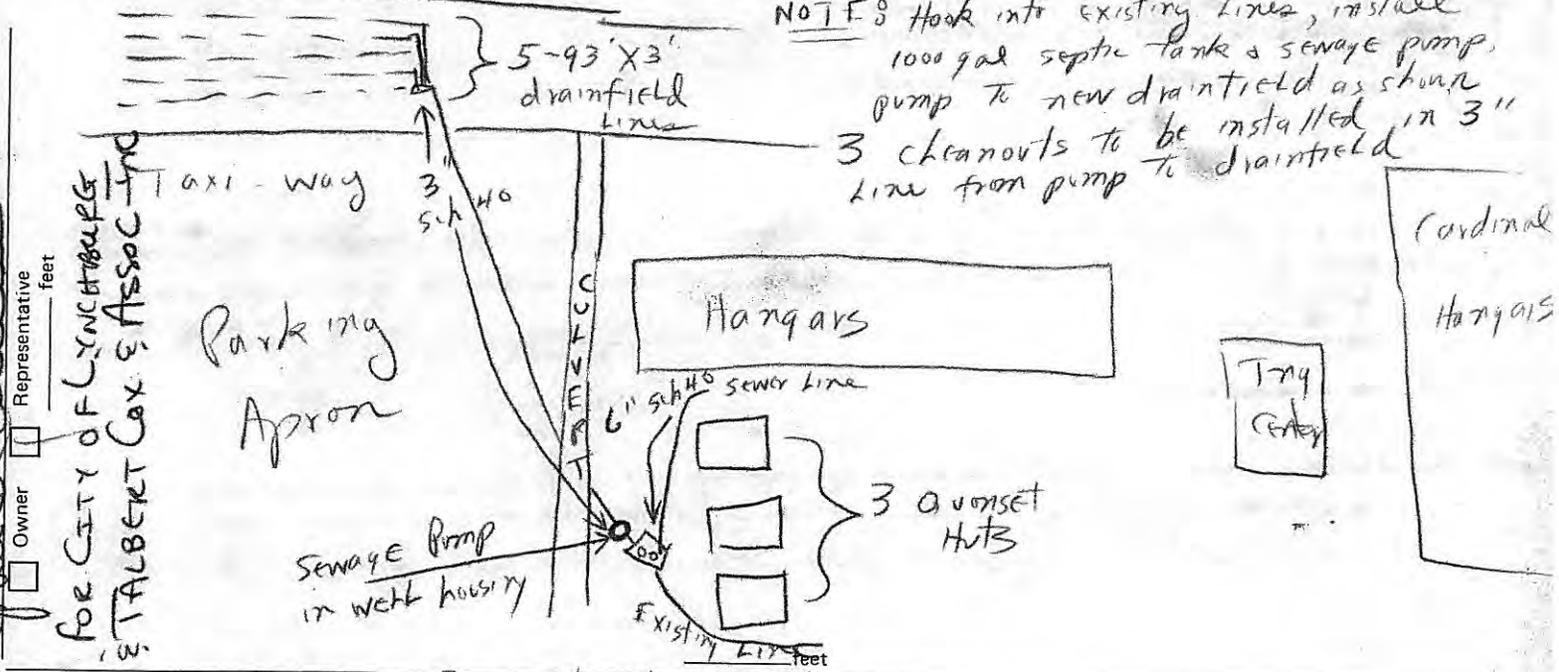
(3) HOUSE SEWER LINE Size As shown inches. Type of material required _____ . Distance from Water Supply _____ feet.

(4) DETAILS OF CONSTRUCTION Watertight Septic Tank of concrete Material Liquid Capacity 1000 gallons.
 Inside Dimensions Length 8 feet. Width 2 1/2 feet. Liquid Depth 4 feet. Depth of Air Space 1 feet.

SUBSURFACE ABSORPTION FIELD Number of square feet required 1400 Type aggregate required stone

(5) Depth of aggregate from base of tile to bottom of ditches 6 inches. Allowable fall 1/4 to 1/2 inches.
 Total aggregate minimum depth 13 inches or more. Depth of drainfield to be 30+ inches from surface of original ground.
 Distance from well to septic tank 50 feet; distance from well to drainfield 100 feet.

Rough Sketch of Premises including adjacent properties if pertinent, Showing Location of Lot Line, Buildings, Water Supplies, Sewage Disposal Systems, Trees, and Other Possible Sources of Contamination of Water Supplies, by Indicating Distances and Slope with regard to one another.



Note: Owner or his agent must notify Campbell County Health Department, Phone _____ when installation is ready for inspection. If any Sewage Disposal System, or part thereof, is covered before being inspected by the Health Department, it shall be uncovered at the direction of the Health Director or his agent. CONDITIONS DISCOVERED DURING INSTALLATION MAY REQUIRE ADJUSTMENTS OF SYSTEM DESIGN. Changes from above specifications require Health Department approval before being made.

Based on the above information, the undersigned recommends that this permit be issued. Date 10/21/74 Approved R.E. Rose (Sanitarian or Health Director)
 Date _____ Approved _____ (Reviewing Authority) Date _____ Signed _____

DUPLICATE

use on toilet if pink identify then then
chestnut yellow.

Date 5-16-69 Case No. _____

Owner City of Lynchburg, Va. Address Lynchburg, Va. Phone _____

Occupant New Hanger & Shop Address _____ (Mailing Address) Phone _____

Exact Location of Premises Lynchburg Municipal Airport - off R. 29 South Phone _____

(Subdivision, Street or Road Name, Section or Lot No.)

WATER SUPPLY INSPECTION

Installed according to Permit Design Yes No. Distance to nearest House Sewer _____ feet. Distance to nearest Sewage Disposal System _____ feet. (Use Form LHS-143 for Detailed inspection of Water Supply Reference Materials.)

SEWAGE DISPOSAL SYSTEM INSPECTION

(1) LOCATION

Allotted Area adequate Yes No. Distance from nearest lot lines comply feet. Trees _____ feet. Water Supplies 50 ft. feet. Buildings 48 feet. to corner of bldg.

(6) DISTRIBUTION BOX

Watertight and equal surcharge to each line by Water Test Yes No. Distribution Box provided with 10 extra outlets for future use. (Number)

(2) INSTALLATION AND DESIGN

Installed according to Permit Design Yes No. Have additional Household Appliances been added NOT on Permit: Automatic Washer Garbage Disposal Other _____ (Describe)

(7) SUBSURFACE ABSORPTION FIELD

Total Area in bottom of ditches 1250 square feet. Number of ditches 7 Length of ditches 90 feet. Grade of ditches Minimum 1 Inches per 100 feet. Maximum 4 inches per 100 feet. Has system been checked by instruments (Level) Yes No. Type aggregate used slag. Depth of aggregate under Tile 10 inches. Total depth of aggregate 13 inches. Depth of backfill over aggregate 3 1/2' to 5' inches.

(3) SOIL CONDITION

Are there soil conditions now evident which indicate system may be unsatisfactory as designed: Yes No. If Yes, show adjustments required under "Remarks" below.

(8) SURFACE DRAINAGE

Storm Drains from House and Basement flowing away from Subsurface Drainage Field: Yes No. Was Surface Drainage required Yes No. If Yes, has this been provided Yes No. Has area been drained by lowering Ground Water Table: Yes No. Not required.

(9) Are follow-up inspections necessary Yes No.

Septic Tank Contractor: Southern Air, Inc. Address Wards St. Lynchburg, Va. Phone _____

This Sewage Disposal System (Is) ~~(Is Not)~~ Approved by Campbell Co. Health Department.

Date 5-16-69 Signed W. H. Dugan Date _____ Approved _____ (Sanitarian) (Health Director)

Date _____ Approved _____ Date _____ Approved _____ (Advisory Sanitarian) (Reviewing Authority - Other Agency)

With proper maintenance, approved Sewage Disposal systems may be expected to function satisfactorily, provided no overloading or physical damage occurs to the system. Remarks: (3) Plastic clay 2' to 4' deep over part of drainfield. Sandy clay soil + sand rock at level of drainfield.

GARLAND M. GAY AIA
HAL C CRADDOCK AIA



ARCHITECTURAL PARTNERS
900 LAKESIDE DRIVE LYNCHBURG, VIRGINIA 24501 804/846-8456

LYNCH. ENV. HEALTH

41/	43	44
46	88	09/ AER

September 22, 1980

Mr. Bob Rose
Virginia State Health Department
1900 Thomson Drive
Lynchburg, Virginia 24501

RE: HANGAR AND OFFICES, LYNCHBURG MUNICIPAL AIRPORT, LYNCHBURG,
VIRGINIA

Dear Mr. Rose:

Attached to this letter are copies of drawing sheets S-1 (Site Plan) and P-2 (Plumbing Plan) on the above referenced project. These drawings show the location of the new well and the sewage drain field as well as the tanks and piping involved in the water system. Also attached is one copy of the specifications for the well.

If you have any questions, please call me or Mr. Earl Simpson.

Yours very truly,

ARCHITECTURAL PARTNERS


W. S. (Sandy) Pearce

WSP/j
enc.

cc: Mr. Earl Simpson



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 629 East Main Street, Richmond, Virginia 23219

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

Fax: 804-698-4019 - TDD (804) 698-4021

www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4020
1-800-592-5482

January 23, 2014

Mr. David Alberts
Reynolds, Smith and Hills
10748 Deerwood Park Boulevard South
Jacksonville, FL 32256

RE: Scoping: Federal Aviation Administration Environmental Assessment for the Construction and Operation of an Air Traffic Control Tower, Lynchburg Regional Airport, City of Lynchburg

Dear Mr. Alberts:

This correspondence is in response to the December 23, 2013, letter (received January 6, 2014) submitted by RS&H Consultants on behalf of the City of Lynchburg requesting scoping comments pursuant to the National Environmental Policy Act (NEPA). RS&H is preparing a short-form environmental assessment (EA) for the proposed construction of an air traffic control tower at the Lynchburg Regional Airport.

Description of Project

According to the scoping letter (attached), the proposed construction of the air traffic control tower would be located on the west side of the airport property. The proposed project site is regularly mowed and maintained. The existing tower needs to be replaced because it has exceeded its useful life. The proposed project consists of the following:

- Constructing and operating a new, 75-foot tall air traffic control tower;
- Relocating the Leesburg Flight Service Station Remote Communications Outlet to the new tower;
- Installing new equipment;
- Constructing a sidewalk to provide access to the tower;
- Extending utility services to the tower; and
- Demolishing the existing tower.

Coordination of Environmental Reviews

The role of DEQ in relation to the project under consideration is that DEQ Office of Environmental Impact Review (OEIR) will coordinate Virginia's review of federal documents prepared pursuant to NEPA and comment to the appropriate agency on behalf of the Commonwealth.

Scoping and Environmental Review

While this Office does not participate in scoping efforts beyond the advice given herein, other agencies are free to provide scoping comments concerning the preparation of a NEPA document, if one is developed, for the proposed project. These entities may be asked to participate in the coordinated review of the NEPA document submitted to this office. Therefore, we are sharing your letter with selected state and local Virginia agencies:

- Department of Environmental Quality
 - Blue Ridge Regional Office – Lynchburg
 - Air Division
 - Division of Land Protection and Revitalization
 - Division of Water, Office of Stormwater Management
- Department of Game and Inland Fisheries
- Department of Conservation and Recreation
 - Division of Natural Heritage
 - Division of Planning and Recreation Resources
- Marine Resources Commission
- Department of Historic Resources
- Department of Health
- Department of Transportation
- Department of Aviation
- City of Lynchburg
- Virginia's Region 2000 Local Government Council

DATABASE ASSISTANCE

Below is a list of databases that may assist you in the preparation of a NEPA document:

- DEQ Online Database: Virginia Environmental Geographic Information Systems

Information on Permitted Solid Waste Management Facilities, Impaired Waters, Petroleum Releases, Registered Petroleum Facilities, Permitted Discharge (Virginia Pollution Discharge Elimination System Permits) Facilities, Resource Conservation and Recovery Act (RCRA) Sites, Water Monitoring Stations, National Wetlands Inventory:

- www.deq.virginia.gov/ConnectWithDEQ/VEGIS.aspx

- **DEQ Permit Expert**

Helps determine if a DEQ permit is necessary:

- www.deq.virginia.gov/permitexpert/

- **DHR Data Sharing System**

Survey records in the DHR inventory:

- www.dhr.virginia.gov/archives/data_sharing_sys.htm

- **DCR Natural Heritage Search**

Produces lists of resources that occur in specific counties, watersheds or physiographic regions:

- www.dcr.virginia.gov/natural_heritage/dbsearchtool.shtml

- **DGIF Fish and Wildlife Information Service**

Information about Virginia's Wildlife resources:

- <http://vafwis.org/fwis/>

- **Environmental Protection Agency (EPA) Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Database: Superfund Information Systems**

Information on hazardous waste sites, potentially hazardous waste sites and remedial activities across the nation, including sites that are on the National Priorities List (NPL) or being considered for the NPL:

- www.epa.gov/superfund/sites/cursites/index.htm

- **EPA RCRAInfo Search**

Information on hazardous waste facilities:

- www.epa.gov/enviro/facts/rcrainfo/search.html

- **EPA Envirofacts Database**

EPA Environmental Information, including EPA-Regulated Facilities and Toxics Release Inventory Reports:

- www.epa.gov/enviro/index.html

- EPA NEPAssist Database

Facilitates the environmental review process and project planning:

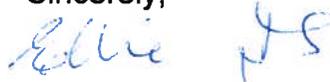
- <http://nepassisttool.epa.gov/nepassist/entry.aspx>

In order to ensure an effective coordinated review of documents, we typically require 18 copies. The submission may include 3 hard copies and 15 compact discs (CDs) or 3 hard copies and an electronic copy available for download at a website, file transfer protocol (ftp) site or the Virginia Information Technology Agency (VITA) Share file transfer system (<https://vitashare.virginia.gov/>). We recommend that project details unfamiliar to people outside the Federal Aviation Administration be adequately described.

If you have questions about the environmental review process, please feel free to call me at (804) 698-4325 or Julia Wellman of this Office at (804) 698-4326.

I hope this information is helpful to you.

Sincerely,



Ellie L. Irons, Program Manager
Environmental Impact Review

Enclosures

cc: Gary Christie, Virginia's Region 2000
L. Kimball Payne, City of Lynchburg

ec: David Alberts, RS&H
Amy Ewing, DGIF
Robbie Rhur, DCR
Barry Matthews, VDH
Steve Coe, DEQ DLPR
Kotur Narasimhan, DEQ DAPC
Mike Cholko, DEQ BRRO
Larry Gavan, DEQ Water
Holly Sepety/Shantelle Nicholson, DEQ Water
Roger Kirchen, DHR
Tony Watkinson, VMRC
Jim Cromwell/Chip Ray, VDOT
Rusty Harrington, DOAV



909 N Washington Street
Suite 330
Alexandria, VA 22314
Voice 703 549 2472
Fax 703 549 2582

December 23, 2013

Ms. Ellie Irons
Virginia Department of Environmental Quality
Office of Environmental Impact Review
629 East Main Street, 6th Floor
Richmond, VA 23219

**RE: ENVIRONMENTAL ASSESSMENT FOR THE CONSTRUCTION AND OPERATION OF
AN AIR TRAFFIC CONTROL TOWER
LYNCHBURG REGIONAL AIRPORT
LYNCHBURG, VIRGINIA**

Dear Ms. Irons:

The City of Lynchburg (the City) is proposing to build a replacement Air Traffic Control Tower (ATCT) at the Lynchburg Regional Airport (the Airport). The proposed ATCT (Proposed Project) would be located on the west side of the Airport's property. This area is regularly mowed and maintained. The City wishes to replace the existing, functionally obsolescent, high maintenance ATCT because it has exceeded its useful life.

RS&H is preparing a short-form Environmental Assessment (EA) on behalf of the City per the National Environmental Policy Act of 1969 (NEPA), Federal Aviation Administration (FAA) implementing regulations, and other applicable environmental requirements.¹ The short-form EA will consider and document potential environmental impacts associated with the Proposed Project. The City will submit the short-form EA to the FAA Washington, D.C. Airports District Office for acceptance and a decision to issue a Finding of No Significant Impact (FONSI) or to prepare an Environmental Impact Statement (EIS).

The Proposed Project consists of:

- constructing and operating a new, 75-foot tall ATCT;
- relocating the Leesburg Flight Service Station (FSS) Remote Communications Outlet (RCO) to the new ATCT, including necessary rooftop antennae.
- installing new equipment, including new backup Local and Ground radio equipment;
- constructing a sidewalk to provide access to the ATCT;
- extending utility services to the ATCT; and
- demolition of the existing ATCT

¹ The FAA's Eastern Region Airports Division uses a Short-Form EA when a project cannot be categorically excluded (CatEx) from a formal EA, but when the environmental impacts of a proposed project are expected to be insignificant and a detailed EA would not be appropriate. The Short-Form EA meets the intent of, and satisfies the FAA's regulatory requirements under NEPA.

A project study area will be developed as part of the short-form EA, and will include the limits of disturbance (e.g., building footprint, laydown areas, and utility service extensions).

Exhibits depicting the Airport location (**Attachment 1**) and alternative sites for the proposed ATCT (**Attachment 2**) are enclosed.

On behalf of the City of Lynchburg, I am sending you this early notification to:

1. advise your agency about the preparation of the EA;
2. request any relevant information your agency may have regarding the Airport site or environs; and
3. solicit early comments regarding potential environmental, social, and economic issues for consideration during the preparation of the EA.

You may send any information and comments to me at the address provided below by January 31, 2014. I appreciate your prompt response to this letter.

David Alberts
Reynolds, Smith and Hills, Inc.
10748 Deerwood Park Boulevard South
Jacksonville, FL 32256

On behalf of the City of Lynchburg, I would like to thank you for your interest in this project and look forward to working with you as RS&H prepares this EA on behalf of the City. If you have any questions or need additional information regarding the Proposed Project, please do not hesitate to contact me at (904) 256-2500 or via email david.alberts@rsandh.com.

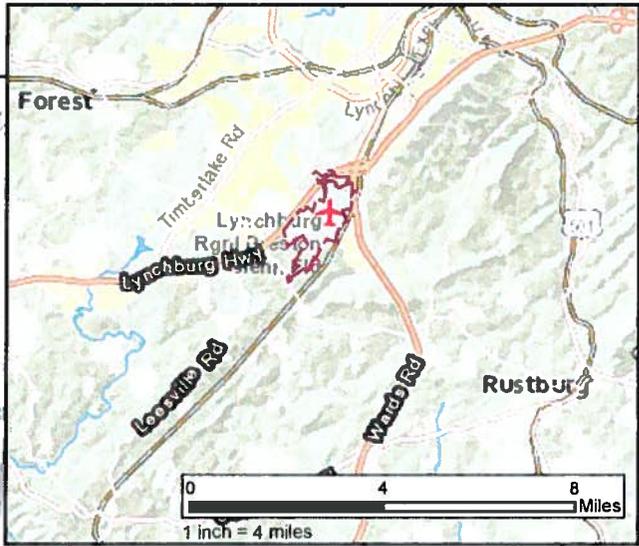
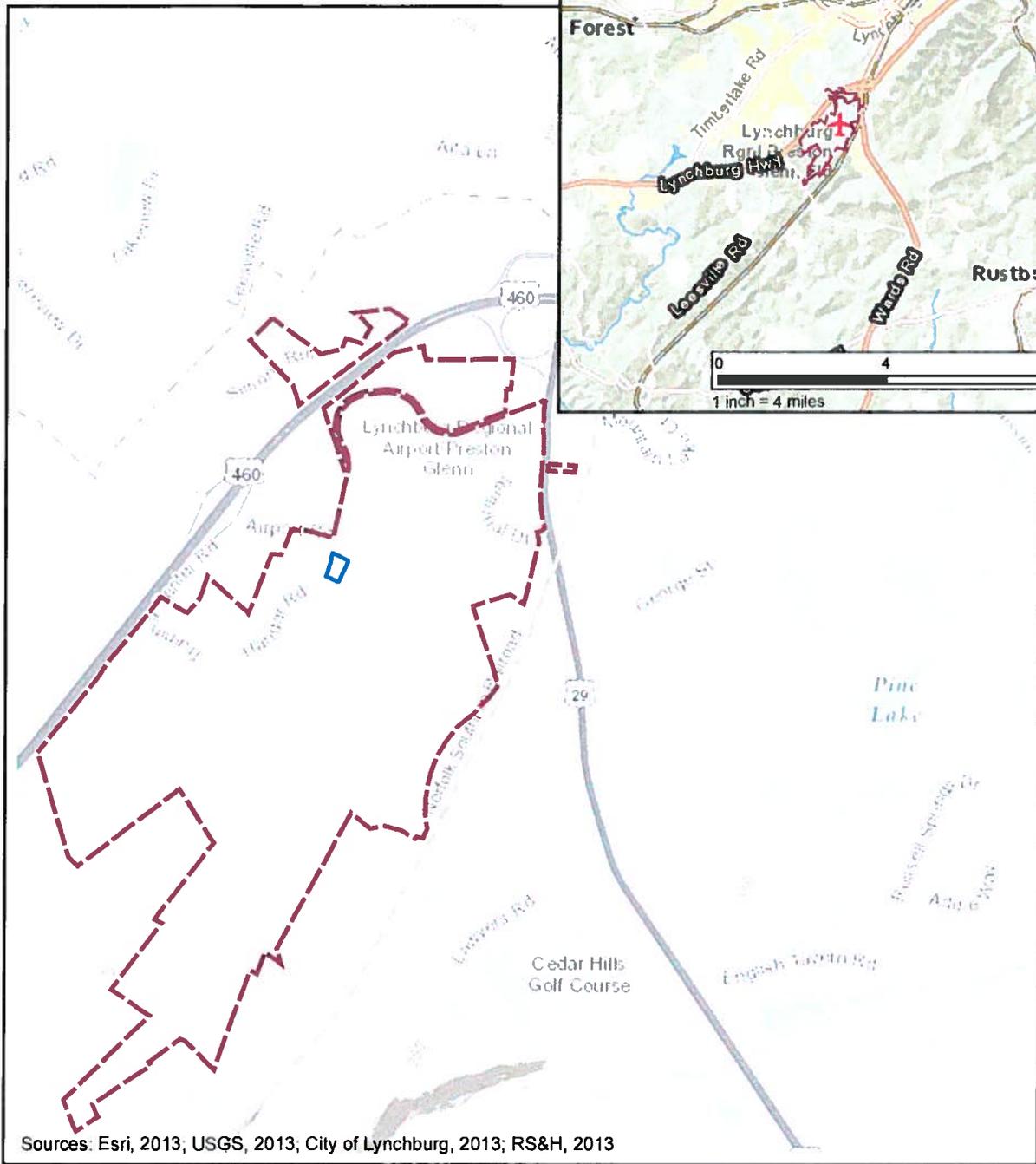
Sincerely,



David Alberts
Southeast Region Environmental Service Group Leader
Reynolds, Smith and Hills, Inc.

Copy: Mark Courtney – City of Lynchburg
Marcus Brundage – FAA
File

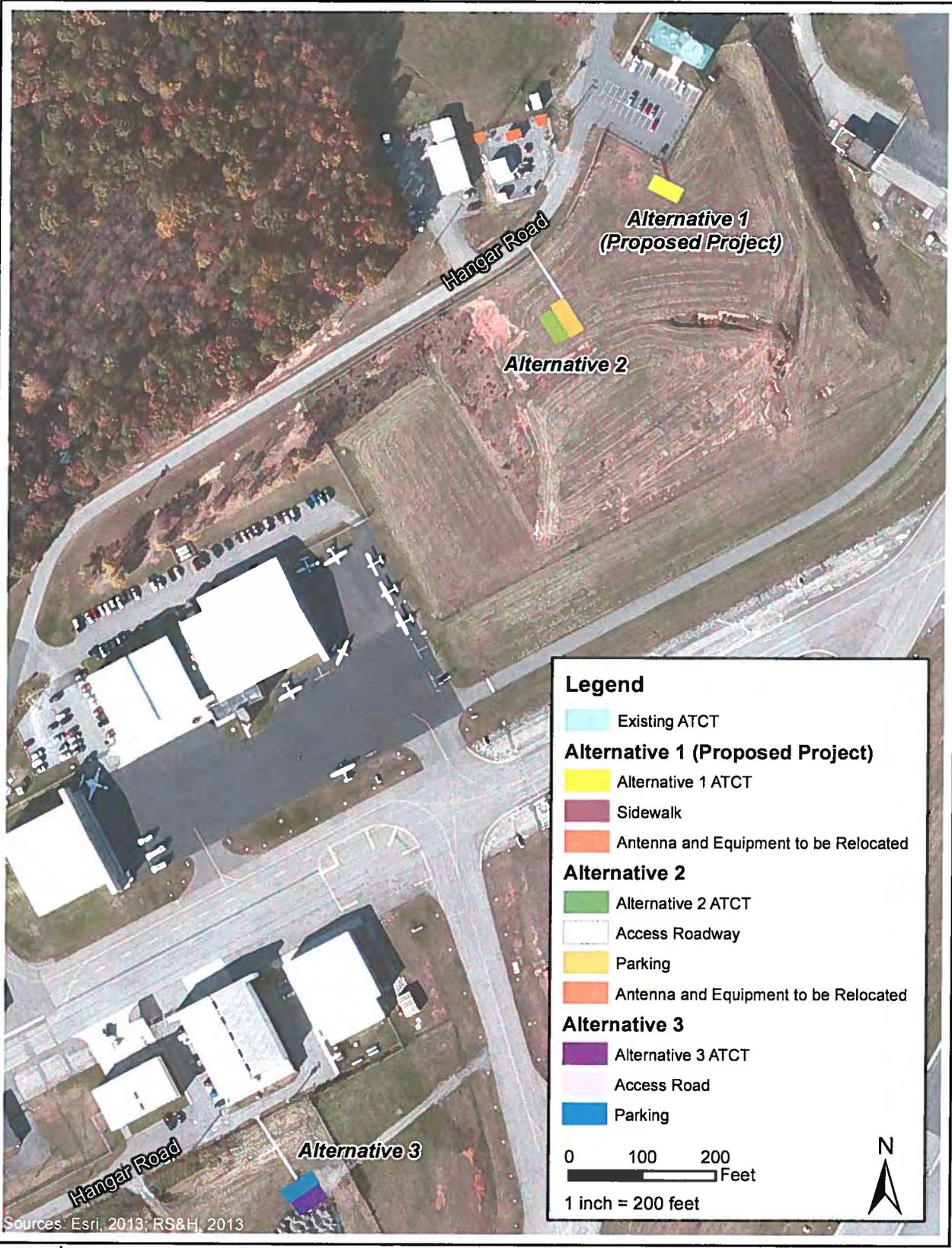
Enclosures: Attachment 1 – Location Map
Attachment 2 – Alternative ATCT Sites



Legend

-  Airport Property Boundary
-  Project Study Area





Sources: Esri, 2013; RS&H, 2013





COMMONWEALTH of VIRGINIA

Department of Historic Resources

2801 Kensington Avenue, Richmond, Virginia 23221

Molly Joseph Ward
Secretary of Natural Resources

Julie V. Langan
Acting Director

Tel: (804) 367-2323
Fax: (804) 367-2391
www.dhr.virginia.gov

January 24, 2014

Mr. David Alberts
Reynolds, Smith, and Hills, Inc.
10748 Deerwood Park Boulevard S.
Jacksonville, FL 32256

Re: Lynchburg Regional Airport – New Air Traffic Control Tower
City of Lynchburg, Virginia
DHR File No. 2013-1524

Dear Mr. Alberts,

On December 27, 2013, the Virginia Department of Historic Resources (DHR) received information regarding the above referenced project for our review and comment. We understand that the City of Lynchburg may be receiving federal funding and/or permit from the Federal Aviation Administration (FAA) for the construction of a new air traffic control tower at the Lynchburg Regional Airport. Unfortunately, we do not have enough information to complete a review at this time.

DHR understands that the City of Lynchburg proposes to replace the existing Air Traffic Control Tower at the Lynchburg Regional Airport. A Short Form Environmental Assessment is being prepared. The project consists of a new 75-foot tower, relocating rooftop antennae, new sidewalks and utilities, and demolition of the existing tower.

Due to the involvement of the FAA, this project is subject to Section 106 of the National Historic Preservation Act of 1966, as amended. Please contact the FAA so formal initiation of 106 may commence. In order for DHR to make an informed decision regarding the project's possible direct and indirect effects to historic properties, DHR respectfully requests the following information through a completed project review application:

- A completed project review application form with an initiation letter from the FAA.
- Please delineate an Area of Potential Effects (APE) for direct and indirect effects. The APE for indirect effects should be expanded to account for the visibility that will result from 75-foot tower.
- Detailed photographs of the project area within the APE.
- Completed DHR archives search within the APE for indirect effects.

Administrative Services
10 Courthouse Ave.
Petersburg, VA 23803
Tel: (804) 862-6408
Fax: (804) 862-6196

Capital Region Office
2801 Kensington Avenue
Richmond, VA 23221
Tel: (804) 367-2323
Fax: (804) 367-2391

Tidewater Region Office
14415 Old Courthouse Way
2nd Floor
Newport News, VA 23608
Tel: (757) 886-2818
Fax: (757) 886-2808

Western Region Office
962 Kime Lane
Salem, VA 24153
Tel: (540) 387-5443
Fax: (540) 387-5446

Northern Region Office
5357 Main Street
PO Box 519
Stephens City, VA 22655
Tel: (540) 868-7029
Fax: (540) 868-7033

Page 2
Mr. David Alberts
DHR File No. 2013-1524

- Photographs and background information on the tower that will be demolished (i.e. date of construction, materials, type of construction, etc.)
- Detailed site plan showing the proposed ground disturbance and construction plans for the new tower.

Should you have additional questions, please contact me at (804) 482-6084, or via email at andrea.kampinen@dhr.virginia.gov.

Sincerely,



Andrea Kampinen
Architectural Historian, Office of Review and Compliance

Cc: Marcus Brundage, FAA

Administrative Services
10 Courthouse Ave.
Petersburg, VA 23803
Tel: (804) 862-6408
Fax: (804) 862-6196

Capital Region Office
2801 Kensington Avenue
Richmond, VA 23221
Tel: (804) 367-2323
Fax: (804) 367-2391

Tidewater Region Office
14415 Old Courthouse Way 2nd
Floor
Newport News, VA 23608
Tel: (757) 886-2818
Fax: (757) 886-2808

Western Region Office
962 Kime Lane
Salem, VA 24153
Tel: (540) 387-5443
Fax: (540) 387-5446

Northern Region Office
5357 Main Street
PO Box 519
Stephens City, VA 22655
Tel: (540) 868-7029
Fax: (540) 868-7033

Alberts, David

From: Sinisi, Mary <mary_sinisi@fws.gov>
Sent: Monday, January 27, 2014 2:53 PM
To: Alberts, David
Subject: USFWS Letter referring to your letter dated December 23, 2013 in reference to City of Lynchburg building a replacement airport tower.
Attachments: 20130204_Form Letter_Service to Interested Parties_directing to VAFO website.pdf

See attached letter referring you to our website.

--

Mary L. Sinisi
U.S. Fish and Wildlife Service
Virginia Field Office
6669 Short Lane
Gloucester, Virginia 23061
804 693 6694 X 114
804 693 9032 Fax
<http://virginiafieldoffice.fws.gov>



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
6669 Short Lane
Gloucester, Virginia 23061



FEB 04 2013

Greetings:

Due to increases in workload and refinement of our priorities in Virginia, this office will no longer provide individual responses to requests for environmental reviews. However, we want to ensure that U.S. Fish and Wildlife Service trust resources continue to be conserved. When that is not possible, we want to ensure that impacts to these important natural resources are minimized and appropriate permits are applied for and received. We have developed a website, http://www.fws.gov/northeast/virginiafield/endspecies/Project_Reviews_Introduction.html, that provides the steps and information necessary to allow landowners, applicants, consultants, agency personnel, and any other individual or entity requiring review/approval of their project to complete a review and come to the appropriate conclusion.

The website will be frequently updated to provide new species/trust resource information and methods to review projects, so refer to the website for each project review to ensure that current information is utilized.

If you have any questions about project reviews or need assistance, please contact Troy Andersen of this office at (804) 693-6694, extension 166, or troy_andersen@fws.gov. For problems with the website, please contact Mike Drummond of this office at mike_drummond@fws.gov.

Sincerely,

Cindy Schulz
Supervisor
Virginia Field Office

Alberts, David

From: Youngblood, Rick D. (VDOT) <Rick.Youngblood@VDOT.Virginia.gov>
Sent: Friday, January 31, 2014 10:02 AM
To: Alberts, David
Cc: Jordan, Elizabeth (VDOT); Cromwell, James R. (VDOT); Ray, Alfred C. (VDOT); mark.courtney@lynchburgva.gov
Subject: Air Traffic Control Tower, Lynchburg Regional Airport Environmental Review

Mr. Alberts:

The Lynchburg District Transportation Planning Section has reviewed the documentation for the newly planned Air Traffic Control Tower at the Lynchburg Regional Airport and see no significant impacts to the existing transportation facilities. Considering the demolition of the existing tower, no significant new trips should be generated with the new tower and as the location is within the confines of the Regional Airport property, no new ingress / egress points should be needed unto the road system. Should you require additional information or clarification of the above information, please do not hesitate to contact me at your convenience. Thank you for the opportunity to review and respond.

Rick Youngblood, GISP
District Transportation Planning Manager
VDOT - Lynchburg District
Work 434-856-8331
Work Cell 434-841-0356



Attachment D – Excerpts from the *Lynchburg ATCT Siting Study*

Table of Contents

CHAPTER 1 Executive Summary.....	1-1
1.1 The Existing Site	1-1
1.2 Proposed Sites.....	1-2
1.3 Preferred Site.....	1-2
CHAPTER 2 Project Background	2-1
2.1 Overview	2-1
2.2 Site Determinations.....	2-2
CHAPTER 3 Proposed Sites	3-1
3.1 SITE 1.....	3-1
3.1.1 Description.....	3-1
3.1.2 Site Reference Data.....	3-1
3.1.3 Siting Criteria	3-1
3.1.4 Conclusions	3-7
3.1.5 Estimated Construction Cost.....	3-7
3.1.6 NASWATCH Summary	3-7
3.2 SITE 2.....	3-7
3.2.1 Description.....	3-7
3.2.2 Site Reference Data.....	3-8
3.2.3 Siting Criteria	3-8
3.2.4 Conclusions	3-13
3.2.5 Estimated Construction Cost.....	3-13
3.2.6 NASWATCH Summary	3-13
3.3 SITE 3.....	3-13
3.3.1 Description.....	3-13
3.3.2 Site Reference Data.....	3-14
3.3.3 Siting Criteria	3-14
3.3.4 Conclusions	3-19
3.3.5 Estimated Construction Cost.....	3-19
3.3.6 NASWATCH Summary	3-19
CHAPTER 4 Site Comparison Chart	4-1

Appendices

- Appendix A ATCVAT Analysis
- Appendix B OE/AAA Analysis
- Appendix C Panoramic Photographs
- Appendix D NASWatch Report
- Appendix E Environmental Information
- Appendix F Construction Cost Estimates

List of Figures

Figure 1-1 Existing ATCT and FAA Facilities Space	1-1
Figure 2-1 Location of Lynchburg Regional Airport.....	2-1
Figure 2-2 Modified Airport Layout Plan	2-3
Figure 3-1 Adjacent Industrial Site.....	3-5
Figure 3-2 Sample Site 1 Cab Orientation	3-6
Figure 3-3 Sample Site 2 Cab Orientation	3-12
Figure 3-4 Sample Site 3 Cab Orientation	3-18

List of Tables

Table 3-1 Low Weather ASOS Observations.....	3-4
Table 3-2 Site 1 Preliminary Cost Estimates.....	3-7
Table 3-3 Site 2 Preliminary Cost Estimates.....	3-13
Table 3-4 Site 3 Preliminary Cost Estimates.....	3-19
Table 4-1 LYH Preferred Site Comparison Chart.....	4-1

CHAPTER 1 EXECUTIVE SUMMARY

The proposed facility will be a new Air Traffic Control Tower (ATCT) facility at the Lynchburg Regional Airport (LYH) located in the city of Lynchburg, Virginia. The City of Lynchburg is the airport owner and wishes to replace its existing Air Traffic Control Tower, which operates as part of the Federal Aviation Administration (FAA) Contract Tower Program. The existing ATCT has passed its useful life and is functionally obsolescent. It contains asbestos and experiences extremely high maintenance costs.

The City of Lynchburg proposes to site, design and construct an IFR ATCT suitable for a Part 139 Class I Airport that sees approximately 100,000 operations annually. Intended design is a control cab on top of a functional shaft. An adjacent office building may contain some equipment, but the presence of the building will not affect cab height. The limiting factor on cab height is shadowing of some pavement by general aviation hangars along Taxiway G. The cab will initially accommodate two (2) Air Traffic Control Specialist (ATCS) positions, but will have space for up to two (2) more working or supervisory positions. The cab will have a minimum of 230 square feet of walkable floor area (subtracting out the console surfaces, stairwell, and small convenience center). The new ATCT will be located at the recommended site.

1.1 THE EXISTING SITE

The existing ATCT sits atop a three-story office building built in 1963 that houses FAA offices. It is located in the northwest quadrant of the Airport, facing southeast. It lies approximately 1030 feet from the centerline of Runway 4-22 and approximately 1,600 feet from the approach end of Runway 22 (as measured along the centerline). The coordinates of the existing ATCT are 37° 19' 45.39" N and 79° 12' 08.42" W. The existing tower is shown in Figure 1-1.

Figure 1-1 Existing ATCT and FAA Facilities Space



Controller eye height in the existing tower is approximately 45 feet above ground level (AGL) and overall tower height, including antennae, is 1019 feet mean sea level (MSL).

1.2 PROPOSED SITES

Three proposed sites have been identified. Two of the sites are in relatively close proximity to the existing site, taking advantage of natural high ground to allow excellent visibility of the airfield.

Site 1 and Site 2 are near the existing ATCT. The existing ATCT, Site 1, and Site 2 all lie on top of an area of natural high ground that rises sharply to an elevation about 30 feet above the runway and is located at approximately midfield. Site 1 is approximately 195 feet south of the existing tower. Site 2 is approximately 530 feet southwest of the existing facility. Even with an ATCT of minimal height, the high terrain affords acceptable visibility over the general aviation hangars that lie on either side. Access to Sites 1 and 2 exists from Hangar Road. The parking lot for the existing ATCT and FAA office building lies between the existing ATCT and Site 1. Site 2 would be accessed from the same roadway, but would require a new parking area. Utilities are adjacent to each site.

Site 3 is located on the west side of the Airport, between the west side General Aviation facilities and Taxiway B, just south of Taxiway D. Site 3 is located approximately 710 feet west of the centerline of Runway 4-22, approximately 3,830 feet from the Runway 4 end. Access and utilities would be routed from Hangar Road.

1.3 PREFERRED SITE

Site 1 is the preferred site, due to its excellent vantage point of the airfield and its proximity to existing utilities and infrastructure. In addition, it is also estimated to have the lowest overall construction cost.

CHAPTER 4 SITE COMPARISON CHART

Table 4-1 LYH Preferred Site Comparison Chart

Item Description	Site 1 (Preferred Site)	Site 2	Site 3																		
Preferred Site	--	--	--																		
Eye Level	50 ft AGL, 1017 ft MSL	50 ft AGL, 1015 ft MSL	59 ft AGL, 979 ft MSL																		
Latitude / Longitude	37°-19'-43.5" N 79°-12'-08.9" W	37°-19'-41.7" N 79°-12'-10.7" W	37°-19'-29.8" N 79°-12'-14.6" W																		
ATCT Height (incl. antennas)	75 ft AGL, 1042 ft MSL	75 ft AGL, 1040 ft MSL	84 ft AGL, 1004 ft MSL																		
Maximum Distance (to farthest point, Key Point, on all runways and taxiways)	5,352 ft (approach end of Runway 4)	5,010 ft (approach end of Runway 4)	3,916 ft (approach end of Runway 4)																		
2-Point Lateral Discrimination																					
Object Discrimination, Pass/Fail, Front View, Dodge Caravan (FAA ATCTVAT)	Pass Detection 99.4% Recognition 46.2%	Pass Detection 99.5% Recognition 50.9%	Pass Detection 99.8% Recognition 76.3%																		
Line of Sight Angle of Incidence	1.34°	1.36°	1.26°																		
ATCT Orientation Direction	SE	SE	NNE																		
Access to ATCT Site	Yes	Yes	Yes																		
Environmental Issues	None	None	None																		
Potential Impacts to NAVAIDs	255' to RTR/RCO 364' to Exist. NDB 916' to ASOS 2,812' to Localizer 1.7 nm to ASR	255' to RTR/RCO 381' to Exist. NDB 916' to ASOS 3,042' to Localizer 1.7 nm to ASR	1451' to RTR/RCO 4,145' to Localizer 1.9 nm to ASR																		
TERPS Impacts	None	None	None																		
Part 77 Impacts	None	None	7: 1 Surface Penetrated Obstr. Ltg. Required.																		
Total Construction Cost Estimates (incl. ATC equipment)	\$2,850,000	\$2,985,000	\$3,215,000																		
Safety Assessment Initial Risk Ranking	<table border="1" style="width: 100%; text-align: center;"> <tr><td>H</td><td>M</td><td>L</td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>	H	M	L				<table border="1" style="width: 100%; text-align: center;"> <tr><td>H</td><td>M</td><td>L</td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>	H	M	L				<table border="1" style="width: 100%; text-align: center;"> <tr><td>H</td><td>M</td><td>L</td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>	H	M	L			
H	M	L																			
H	M	L																			
H	M	L																			
Safety Assessment Predicted Residual Risk Ranking	<table border="1" style="width: 100%; text-align: center;"> <tr><td>H</td><td>M</td><td>L</td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>	H	M	L				<table border="1" style="width: 100%; text-align: center;"> <tr><td>H</td><td>M</td><td>L</td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>	H	M	L				<table border="1" style="width: 100%; text-align: center;"> <tr><td>H</td><td>M</td><td>L</td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>	H	M	L			
H	M	L																			
H	M	L																			
H	M	L																			

Air Traffic Control Tower Siting Study

Comparative Safety Assessment



Lynchburg Regional Airport (LYH)

Lynchburg, Virginia

Department of Transportation Federal Aviation Administration

Version 1.0
August 14, 2013



Findings

Site 1 is the recommended location for the ATCT.

The SRM Panel identified necessary safety requirements shown below to mitigate the potential risks identified. A detailed listing of hazards for Sites 1, 2 and 3 can be found later in this document.

The tables below summarize the initial and predicted residual risks for the three candidate sites. Details for all of the sites can be found in the Preliminary Hazard Analysis in Appendix A.

Table 1 - CSA Initial Risk Ranking Results

	HIGH	MED	LOW
Site 1	0	0	0
Site 2	0	0	1
Site 3	1	0	0

Mitigation of the potential risks was identified with necessary safety requirements depicted in Table 2 and Table 3 below.

Table 2 - Initial and Predicted Residual Risk Summary

Site #	Hazard Description	Initial Risk	Safety Requirement	Predicted Residual Risk
2	Obstructed view of hold short line for Taxiway H	5C Low	Existing controls acceptable	5C Low
3	Obstructed view of Runway 17-35 and taxiway system north of Taxiway B	2B	Close Runway 17-35	None. Hazard removed

Table 3 - CSA Predicted Residual Risk Ranking Results

	HIGH	MED	LOW
Site 1	0	0	0
Site 2	0	0	1
Site 3	0	0	0

Section 6 – Phase 2: Identified Hazards

The LYH ATCT siting hazards were identified using an experienced team of air traffic control consultants and SMS safety experts. This team utilized the ATCT Siting Preliminary Hazard List as identified in FAA Order 6480.4B. This potential hazard list is identified below in Table 5. All potential hazards were analyzed and discussed. Many potential hazards on the PHL were found to have no safety risk, and worksheets for these PHL hazards are not included. PHL items highlighted in yellow are included in the worksheets and discussed in this CSA.

Table 6 -ATCT Preliminary Hazard List

Hazard	Site 1	Site 2	Site 3
Potential interference with navigation equipment both planned and existing	None identified	None identified	None identified
Potential interference with communication equipment both planned and existing	Potential RTR	Potential RTR	None identified
Potential interference with existing and or proposed surveillance equipment	None identified	None identified	None identified
TERPS surfaces penetrations	None identified	None identified	None identified
Part 77 surfaces penetrations	None identified	None identified	7:1 Surface
Relevant airport design standards violated	None identified	None identified	None identified
Direction of view			
North	None identified	None identified	None identified
East	None identified	None identified	None identified
West	None identified	None identified	None identified
South	None identified	None identified	None identified
Line of sight/angle of view			
Down	None identified	None identified	None identified
Visual Performance			
Unobstructed view	None identified	Minor Remote Low Risk	Hazardous Probable Hi Risk
Object discrimination	None identified	None identified	None identified
Line of Sight (LOS) Angle of Incidence	None identified	None identified	None identified
Lighting and Atmospheric Limitations – Daylight			
Sun Angle	None identified	None identified	None identified
Sun Glare	None identified	None identified	None identified

Sun Shadows	None identified	None identified	None identified
Thermal Distortion	None identified	None identified	None identified
Light changes/contrast eye adaptation	None identified	None identified	None identified
Lighting and Atmospheric Limitations – Night			
Dawn	None identified	None identified	None identified
Dusk	None identified	None identified	None identified
Night	None identified	None identified	None identified
Artificial Lighting			
Airport lighting equipment outages	None identified	None identified	None identified
Lighting shadows	None identified	None identified	None identified
Airport lighting	None identified	None identified	None identified
Construction lighting	None identified	None identified	None identified
Residential/industrial lighting	None identified	None identified	None identified
Background clutter	None identified	None identified	None identified
Naturally Occurring Atmospheric Conditions			
Dust	None identified	None identified	None identified
Ash	None identified	None identified	None identified
Smoke	None identified	None identified	None identified
Haze	None identified	None identified	None identified
Fog	None identified	None identified	None identified
Rain	None identified	None identified	None identified
Sleet	None identified	None identified	None identified
Snow	None identified	None identified	None identified
Sun glare off snow	None identified	None identified	None identified
Industrial/municipal discharges			
Dust	None identified	None identified	None identified

Ash	None identified	None identified	None identified
Smoke	None identified	None identified	None identified
Access to proposed site does not cross existing ground/air traffic patterns	None identified	None identified	None identified
Interior physical barriers			
Position of ATC in Tower Cab	None identified	None identified	None identified
Position of Tower Cab equipment	None identified	None identified	None identified
Position of Tower Cab mullions	None identified	None identified	None identified
Exterior physical barriers			
Construction equipment	None identified	None identified	None identified
Proposed new structures and Airport expansion (ALP)	None identified	None identified	None identified
Existing ATCT	To be removed	To be removed	To be removed

Section 7 – Phase 3 & 4: Risks Analysis & Risks Assessed

Hazard Identification

The SRMP discussed hazard identification using the ATCT Siting PHL. The SRMP validated the ATCT Siting PHL. Several items were identified for mitigation, and that mitigation was stipulated at the beginning of the SRMP:

- 1) Interference of RTR signals by the new tower was determined to be a possibility with Site 1 and Site 2, and the Sponsor agreed to relocate RTR equipment into the new ATCT facility should interference develop.
- 2) Obstruction lighting was assumed for Site 3.
- 3) The existing ATCT and base building are planned to be removed as soon as possible following the construction of the new ATCT. The Sponsor indicated such removal would be part of the same contract as construction.

Hazard Analysis

Using the Worksheets identified below in Figure 4, the SRMP held a discussion on each of the identified hazards and conducted a Preliminary Hazard Analysis (PHA) on three (3) viable locations for the new ATCT. The purpose of this discussion was to examine the hazard causes and to determine the worst credible effect (severity of consequence) from the hazards on the PHL, and to determine a qualitative likelihood of occurrence based on the expertise of the SRMP and all available data. The PHA is shown on page 20.

Risk Determination

Risk is the composite of predicted severity and likelihood of the potential effect of a hazard in the identified system state. The CSA relied upon the input from the SRMP; the final likelihood determinations are qualitative. The ATCT CSA uses criteria identified in the FAA SMS Manual for severity of consequence and likelihood of occurrence. These tables are shown on the following pages.



Attachment E – Construction Emissions Inventory

The following Attachment presents the calculations used to quantify construction emissions over the duration of construction activities at the Airport and throughout each construction year.



Attachment E-1 – Construction Equipment Hourly Use

The following information outlines the assumptions and calculations used to determine the Proposed Project's hourly use of construction equipment.

ATCT Demolition

3100 SF

Service and Disassembly at Heights
 Dump Trucks for Haul off (1 hr one way)
 Excavator to Load
 Excavator with Hoe Ram

Excavate

Foundations/Base Slab

Utility Disconnects

"New" ATCT Construction

1000 SF

Subgrade

Grading
 Compaction

Foundations

Excavate 200 foot of grade beam footing
 or equivalent pier/spread footings
 3 loads of concrete x 1 hr RT

Base

Haul In
 Grading
 Compaction

Floor slabs

Concrete 10 loads x 1 hr RT

Wall panels

Crane
 Manlift
 Underground Utilities

Roof

Crane

Interior Trim Out

Sidewalk

30 LF

Antenna moved to new ATCT

Restore Old Antenna Site

Excavator	Dozer	Dump Truck	Roller	Paver	Crane	Concrete Truck	Concrete Pump Truck	Manlift	Rubber Tire Backhoe	Plate Tamp	Bobcat
		120			80			80			
					80						
80											
	80										
									40	40	40
		20									
			20								
16							3				
		6									
	8										
			8								
							10	16			
					80						
								40			
									40	40	40
					8						
									80		
							1		8	8	8
					16						
	8	4	8								8
Excavator	Dozer	Dump Truck	Roller	Paver	Crane	Concrete Truck	Concrete Pump Truck	Manlift	Rubber Tire Backhoe	Plate Tamp	Bobcat
176	36	130	36	0	264	14	16	120	168	88	96

Totals

Materials

		Trips	Total Trips
Excavation	50 CY	7	14
Fill Material	50 CY	7	14
Base Material	50 CY	7	14
Concrete	126 CY	18	36
Asphalt	0 Tons		
Class 7 delivery truck capacity:		7 CY of material	

Added Refueling Truck at 1 hour a day for 180 days.

50 hours of air compressor use.

20 hours of welding.

15 hours of generators to run concrete vibrators

150 hours of generators to run hand tools



Attachment E-2 – Calculations and Results

The following information presents the calculations and emissions factors for the Proposed Project's construction equipment. It also presents the Proposed Project's construction related emissions associated with vehicle miles traveled for construction workers, equipment and supply delivery, and the results of the construction emission inventory.

CONSTRUCTION EMISSION INVENTORY													
Equipment Type	Hours of Use	CO Emission Rate lb/hr	CARBON MONOXIDE (CO) lbs	HC Emission Rate lb/hr	HYDROCARBONS lbs	NO2 Emission Rate lb/hr	NITROGEN OXIDES (NOX) lbs	SO2 Emission Rate lbs/hr	SULFUR OXIDES (SO2) lbs	PART Emission Rate lbs/hr	PM 10 lbs	PART Emission Rate lbs/hr	PM 2.5 lbs
Asphalt Paver		0.3981	0	0.07589	0	1.28138	0	0.1157	0	0.055985	0	0.055985	0
Concrete Paver		0.81219	0	0.19905	0	1.78078	0	0.16528	0	0.079975	0	0.079975	0
Roller	36	0.37896	13.64256	0.10024	3.60864	1.13688	40.92768	0.12225	4.401	0.047675	1.7163	0.047675	1.7163
Scraper		2.46872	0	0.35056	0	4.29557	0	0.44437	0	0.31106	0	0.31106	0
Paving Equipment		0.5322	0	0.13074	0	1.27382	0	0.10413	0	0.052065	0	0.052065	0
Trencher	40	0.90692	36.2768	0.15578	6.2312	0.99423	39.7692	0.09228	3.6912	0.07144	2.8576	0.07144	2.8576
Excavator	176	1.19602	210.49952	0.161	28.336	2.47254	435.16704	0.2139	37.6464	0.165605	29.14648	0.165605	29.14648
Cement Mixer		0.06248	0	0.01399	0	0.14955	0	0.01263	0	0.00611	0	0.00611	0
Graders		0.87912	0	0.36322	0	2.22095	0	0.20127	0	0.115675	0	0.115675	0
Rubber Tired Loader	168	1.00019	168.03192	0.1792	30.1056	2.14624	360.56832	0.1792	30.1056	0.1344	22.5792	0.1344	22.5792
Rubber Tired Dozer		1.29679	0	0.3983	0	4.44613	0	0.43072	0	0.152835	0	0.152835	0
Tractor/Loader/Backhoe		0.635	0	0.13354	0	0.94316	0	0.07937	0	0.049025	0	0.049025	0
Crawler Tractor	36	0.96378	34.69608	0.25902	9.32472	2.06811	74.45196	0.17067	6.14412	0.115455	4.15638	0.115455	4.15638
Sweeper	4	0.88138	3.52552	0.23271	0.93084	2.03619	8.14476	0.13526	0.54104	0.116355	0.46542	0.116355	0.46542
Off Highway Truck	144	1.72088	247.80672	0.51626	74.34144	5.90016	849.62304	0.54699	78.76656	0.24584	35.40096	0.24584	35.40096
Generator (gasoline)	165	12.974	2140.71	0.474	78.21	0.018	2.97	0.005	0.825	0.001	0.165	0.001	0.165
Generator (diesel)		0.179	0	0.033	0	0.293	0	0.033	0	0.008	0	0.008	0
Manual Lift/Manlift (Boom and Scissor)	120	0.282	33.84	0.065	7.8	0.673	80.76	0.043	5.16	0.0165	1.98	0.0165	1.98
Forklift		0.52	0	0.17	0	1.54	0	0.143	0	0.0465	0	0.0465	0
Crane		0.751	0	0.25	0	1.919	0	0.167	0	0.0625	0	0.0625	0
Boom Truck		0.052	0	0.017	0	0.184	0	0.017	0	0.0065	0	0.0065	0
Refueling Truck	180	0.052	9.36	0.017	3.06	0.184	33.12	0.017	3.06	0.0065	1.17	0.0065	1.17
Air Compressor		0.195	0	0.036	0	0.32	0	0.036	0	0.009	0	0.009	0
300-Ton Capacity Truck Crane	264	2.24	591.36	0.688	181.632	5.504	1453.056	0.4945	130.548	0.374	98.736	0.374	98.736
Weld Machine	20	0.173	3.46	0.032	0.64	0.284	5.68	0.032	0.64	0.008	0.16	0.008	0.16
Skidsteer (bobcat)	96	0.204	19.584	0.00735	0.7056	0.287	27.552	0.00315	0.3024	0.0125	1.2	0.0125	1.2
Concrete Mixer		0.062	0		0	0.148	0	0.012	0	0.003	0	0.003	0
Hand Held Vibrator Plate	88	7.018	617.584	3.086	271.568	0.002	0.176	0.002	0.176	0.0145	1.276	0.0145	1.276
Vertical Auger Drill		3.135	0	0.47	0	3.762	0	0.314	0	0.1175	0	0.1175	0
Chain Saw		0.15	0	0.029	0	0.208	0	0.037	0	0.0125	0	0.0125	0
Chipper		0.908	0	0.119	0	1.169	0	0.165	0	0.057	0	0.057	0
Tamping Spade		4.488	0	1.973	0	0.001	0	0.001	0	0.0095	0	0.0095	0
Concrete Pump/Truck	16	0.547	8.752	0.237	3.792	2.941	47.056	0.331	5.296	0.0505	0.808	0.0505	0.808
Water Truck (BMPs)	180	0.052	9.36	0.017	3.06	0.184	33.12	0.017	3.06	0.0065	1.17	0.0065	1.17
SUB-TOTAL EMISSIONS (LBS)			4148.48912		703.34604		3492.142		310.36332		202.98734		202.98734
TOTAL EMISSIONS (TONS)			2.07424456		0.35167302		1.746071		0.15518166		0.10149367		0.10149367

Emission factors are based on criteria pollutant emissions per hour (in pounds) for a given piece of equipment operating at 100% load factor.

Results are presented in tons.

Construction Worker Trips						Equipment and Supply Delivery					
180 work days		10 employees (average) 1.25 employees per car 16 worker trips per day 2,880						121 40 mi/trip 4,840 VMT			
40 miles roundtrip		115,200 VMT									
Worker Construction trips g/VM (light duty gasoline trucks) (tons) ¹						g/VM class 7 Heavy Duty diesel trucks ¹					
CO	VOC	Nox	SOx	PM10	PM2.5	CO	VOC	Nox	SOx	PM10	PM2.5
2.18	0.044	0.0176	0.0088	0.0247	0.0112	0.1236	0.1814	0.3896	0.0092	0.0358	0.0188
Emission Results ²						Emission Results ²					
CO	VOC	NO _x	SO ₂	PM ₁₀	PM _{2.5}	CO	VOC	NO _x	SO ₂	PM ₁₀	PM _{2.5}
0.277	0.006	0.002	0.001	0.003	0.001	0.016	0.023	0.049	0.001	0.005	0.002

1: Grams per vehicle mile

2: Results presented in tons

Grand Total					
CO	VOC	NO _x	SO ₂	PM ₁₀	PM _{2.5}
2.36724456	0.380673	1.797071	0.15718166	0.10949367	0.10449367

Annualized Emissions ^{/a/}					
CO	VOC	NO _x	SO ₂	PM ₁₀	PM _{2.5}

/a/: Does not apply, construction schedule < or = 1 year.

Results are presented in tons.

Presented in Grams per Vehicle mile



Attachment F – USFWS On-line Project Review

Deschappelles, Natalie

From: Virginia Field Office, FW5 <virginiafieldoffice@fws.gov>
Sent: Monday, February 03, 2014 2:00 PM
To: Deschappelles, Natalie
Subject: Confirmation of Project Receipt Re: Online Project Review Certification Letter for the Lynchburg Regional Airport Replacement Air Traffic Control Tower

Thanks for submitting your online project package. We will review your package within 30 days of receipt. If you have submitted an online **project review request letter**, expect our response within 30 days. If you have submitted an online **project review certification letter**, you will typically not receive a response from us since the certification letter is our official response. However, if we have additional questions or we do not concur with your determinations, we will contact you during the review period.



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Ecological Services
6669 Short Lane
Gloucester, Virginia 23061

Date:

Online Project Review Certification Letter

Project Name:

Dear Applicant:

Thank you for using the U.S. Fish and Wildlife Service (Service) Virginia Field Office online project review process. By printing this letter in conjunction with your project review package, you are certifying that you have completed the online project review process for the referenced project in accordance with all instructions provided, using the best available information to reach your conclusions. This letter, and the enclosed project review package, completes the review of your project in accordance with the Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884), as amended (ESA), and the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c, 54 Stat. 250), as amended (Eagle Act). This letter also provides information for your project review under the National Environmental Policy Act of 1969 (P.L. 91-190, 42 U.S.C. 4321-4347, 83 Stat. 852), as amended. A copy of this letter and the project review package must be submitted to this office for this certification to be valid. This letter and the project review package will be maintained in our records.

The species conclusions table in the enclosed project review package summarizes your ESA and Eagle Act conclusions. These conclusions resulted in “no effect” and/or “not likely to adversely affect” determinations for listed species and critical habitat and/or “no Eagle Act permit required” determinations for eagles regarding potential effects of your proposed project. We certify that the use of the online project review process in strict accordance with the instructions provided as documented in the enclosed project review package results in reaching the appropriate determinations. Therefore, we concur with the “no effect” and “not likely to adversely affect” determinations for listed species and critical habitat and “no Eagle Act permit required” determinations for eagles. Additional coordination with this office is not needed.

Candidate species are not legally protected pursuant to the ESA. However, the Service encourages consideration of these species by avoiding adverse impacts to them. Please contact this office for additional coordination if your project action area contains candidate species.

Should project plans change or if additional information on the distribution of listed species, critical habitat, or bald eagles becomes available, this determination may be reconsidered. This certification letter is valid for one year.

Applicant

Page 2

Information about the online project review process including instructions and use, species information, and other information regarding project reviews within Virginia is available at our website http://www.fws.gov/northeast/virginiafield/endspecies/project_reviews.html. If you have any questions, please contact Kimberly Smith of this office at (804) 693-6694, extension 124.

Sincerely,

/s/ Cynthia A. Schulz

Cindy Schulz
Supervisor
Virginia Field Office

Enclosures - project review package

Project Review Package

On December 23, 2013, RS&H, Inc. sent an early coordination letter to Ms. Lisa Moss of the U.S. Fish and Wildlife Service (USFWS), Virginia Fisheries Coordinator Office regarding the environmental assessment (EA) for the construction and operation of a replacement instrument flight rules (IFR) air traffic control tower (ATCT) at the Lynchburg Regional Airport. The purpose of the letter was to:

1. advise USFWS about the preparation of the EA;
2. request any relevant information USFWS may have regarding the Airport site or environs; and
3. solicit early comments regarding potential environmental, social, and economic issues for consideration during the preparation of the EA.

Ms. Mary L. Sinisi responded to the early coordination letter on January 27, 2014 directing RS&H to the Virginia Ecological Services On-line Project Review Process. RS&H completed the On-line Project Review and compiled the Project Review Package.

As directed by Step 8 of the On-line Project Review Process, the Project Review Package includes the results of the following applicable steps:

- Step 1 & 2 – Information, Planning and Consultation (IPaC) system results showing the official species list and map showing the action area;
- Step 3 – Virginia Department of Game and Inland Fisheries (VDGIF) and Virginia Department of Conservation and Recreation Division of Natural Heritage (VDCR – HR) database review results;
- Step 4 – habitat assessment;
- Step 6a – VaEagles map; and
- Step 7 – species conclusion table.

Additional documentation to support search criteria and conclusions is included in Steps 3 and 4.

- Step 3 includes the Virginia hydrologic units boundaries used to determine the correct watershed for the Natural Heritage Resource search.
- Step 4 includes the results of the Natural Resource Conservation Service (NRCS) Web Soil Survey and NRCS soil description used to reach the conclusions presented in Step 7.

Steps 1 and 2 IPaC Results



U.S. Fish and Wildlife Service

Natural Resources of Concern

This resource list is to be used for planning purposes only — it is not an official species list.

Endangered Species Act species list information for your project is available online and listed below for the following FWS Field Offices:

Virginia Ecological Services Field Office
6669 SHORT LANE
GLOUCESTER, VA 23061
(804) 693-6694
<http://www.fws.gov/northeast/virginiafield/>

Project Name:

Replacement IFR ATCT at Lynchburg Regional Airport



U.S. Fish and Wildlife Service

Natural Resources of Concern

Project Location Map:



Project Counties:

Campbell, VA

Geographic coordinates (Open Geospatial Consortium Well-Known Text, NAD83):

MULTIPOLYGON (((-79.203279 37.3286608, -79.2033812 37.3289509, -79.2028931 37.3290447, -79.2027482 37.3295056, -79.201854 37.3292155, -79.2023572 37.3284793, -79.2030004 37.328725, -79.203279 37.3286608)))

Project Type:

Development



Natural Resources of Concern

Endangered Species Act Species List ([USFWS Endangered Species Program](#))

There are a total of 1 threatened, endangered, or candidate species on your 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 fishes may appear on the species list because a project could cause downstream effects on the species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section below for critical habitat that lies within your project area. Please contact the designated FWS office if you have questions.

Species that should be considered in an effects analysis for your project:

Flowering Plants	Status		Has Critical Habitat	Contact
Smooth coneflower (<i>Echinacea laevigata</i>)	Endangered	species info		Virginia Ecological Services Field Office

Critical habitats within your project area:

There are no critical habitats within your project area.

FWS National Wildlife Refuges ([USFWS National Wildlife Refuges Program](#))

There are no refuges found within the vicinity of your project.

FWS Migratory Birds ([USFWS Migratory Bird Program](#))

Most species of birds, including eagles and other raptors, are protected under the Migratory Bird Treaty Act (16 U.S.C. 703). Bald eagles and golden eagles receive additional protection under the [Bald and Golden Eagle Protection Act](#) (16 U.S.C. 668). The Service's [Birds of Conservation Concern \(2008\)](#) report identifies species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become listed under the Endangered Species Act as amended (16 U.S.C 1531 et seq.).

Migratory bird information is not available for your project location.



U.S. Fish and Wildlife Service

Natural Resources of Concern

NWI Wetlands ([USFWS National Wetlands Inventory](#)).

The U.S. Fish and Wildlife Service is the principal Federal agency that provides information on the extent and status of wetlands in the U.S., via the National Wetlands Inventory Program (NWI). In addition to impacts to wetlands within your immediate project area, wetlands outside of your project area may need to be considered in any evaluation of project impacts, due to the hydrologic nature of wetlands (for example, project activities may affect local hydrology within, and outside of, your immediate project area). It may be helpful to refer to the USFWS National Wetland Inventory website. The designated FWS office can also assist you. Impacts to wetlands and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes. Project Proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate [U.S. Army Corps of Engineers District](#).

There are no wetlands found within the vicinity of your project.



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Virginia Ecological Services Field Office
6669 SHORT LANE
GLOUCESTER, VA 23061
PHONE: (804)693-6694 FAX: (804)693-9032
URL: www.fws.gov/northeast/virginiafield/

Consultation Tracking Number: 05E2VA00-2014-SLI-1040

February 11, 2014

Project Name: Replacement ATCT at Lynchburg Regional Airport

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.*).

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



United States Department of Interior
Fish and Wildlife Service

Project name: Replacement ATCT at Lynchburg Regional Airport

Official Species List

Provided by:

Virginia Ecological Services Field Office
6669 SHORT LANE
GLOUCESTER, VA 23061
(804) 693-6694
<http://www.fws.gov/northeast/virginiafield/>

Consultation Tracking Number: 05E2VA00-2014-SLI-1040

Project Type: Development

Project Description: The Proposed Project is the construction & operation of a 75 ft. tall, ~1000 sq. ft., replacement Air Traffic Control Tower at Lynchburg Regional Airport. The following actions would also occur at the replacement ATCT: relocate the Remote Communications Outlet; install new equipment; construct a sidewalk for access; & extend utility services. The current 60 ft. tall, ATCT would be demolished. The study area is ~2.3 acres & is entirely on Airport property.



United States Department of Interior
Fish and Wildlife Service

Project name: Replacement ATCT at Lynchburg Regional Airport

Project Location Map:



Project Coordinates: MULTIPOLYGON (((-79.2027502 37.3295035, -79.2019478 37.3292011, -79.2023976 37.3284946, -79.2030258 37.3287185, -79.2032832 37.3286652, -79.2034033 37.3289467, -79.2029152 37.3290449, -79.2027502 37.3295035)))

Project Counties: Campbell, VA



United States Department of Interior
Fish and Wildlife Service

Project name: Replacement ATCT at Lynchburg Regional Airport

Endangered Species Act Species List

There are a total of 1 threatened, endangered, or candidate species on your 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. Critical habitats listed on the **Has Critical Habitat** lines may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Smooth coneflower (*Echinacea laevigata*)

Listing Status: Endangered



United States Department of Interior
Fish and Wildlife Service

Project name: Replacement ATCT at Lynchburg Regional Airport

Critical habitats that lie within your project area

There are no critical habitats within your project area.

Step 3 Results
VDGIF and VDCR – HR Database Review

Natural Heritage Resources

Your Criteria

County: Campbell

Watershed: 03010101 - Upper Roanoke River

Subwatershed: Select All

Search Run: 1/28/2014 9:25:28 AM

Click scientific names below to go to NatureServe report.

Click column headings for an explanation of species and community ranks.

Common Name/Natural Community	Scientific Name	Global Conservation Status Rank	State Conservation Status Rank	Federal Legal Status	State Legal Status	Statewide Occurrences
Campbell						
Upper Roanoke						
Big Otter River-Johnson Creek						
TERRESTRIAL NATURAL COMMUNITY						
Central Appalachian / Piedmont Basic Mesic Forest (Twinleaf - Blue Cohosh Type)	<i>Acer (nigrum, saccharum) - Tilia americana / Asimina triloba / Jeffersonia diphylla - Caulophyllum</i>	G4G5	S4	None	None	15

<i>Common Name/Natural Community</i>	<i>Scientific Name</i>	Global Conservation Status Rank	State Conservation Status Rank	Federal Legal Status	State Legal Status	<i>Statewide Occurrences</i>
	<i>thalictroides</i> Forest					
Big Otter River-Troublesome Creek TERRESTRIAL NATURAL COMMUNITY						
Piedmont / Coastal Plain Hemlock - Hardwood Forest	<i>Tsuga canadensis</i> - <i>Fagus grandifolia</i> - <i>Quercus</i> (<i>montana</i> , <i>alba</i>) Forest	G2G3	S1	None	None	16
Buffalo Creek-Timber Lake TERRESTRIAL NATURAL COMMUNITY						
Central Appalachian Acidic Cove Forest (White Pine - Hemlock - Mixed Hardwoods Type)	<i>Liriodendron tulipifera</i> - <i>Pinus strobus</i> - <i>Tsuga canadensis</i> - <i>Quercus</i> (<i>rubra</i> , <i>alba</i>) / <i>Polystichum acrostichoides</i> Forest	G4?	S4	None	None	2
VASCULAR PLANTS						
Nestronia	Nestronia umbellula	G4	S1	None	LE	7
Buffalo Creek-Timber Lake VASCULAR PLANTS						
Downy Phlox	Phlox pilosa	G5	S1	None	None	11

Note: On-line queries provide basic information from DCR's databases at the time of the request. They are NOT to be substituted for a project review or for on-site surveys required for environmental assessments of specific project areas.

For Additional Information on locations of Natural Heritage Resources please submit an [information request](#).

To Contribute information on locations of natural heritage resources, please fill out and submit a [rare species sighting form](#).

NWBD and 14-Digit Hydrologic Units

Legend

— Jurisdiction Boundary

NWBD Hydrologic Unit Boundary

Order

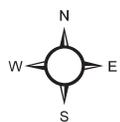
- 1
- 2
- 3
- 4
- 5
- 6

Old 14-Digit HUs

Waterbody

Stream

For the comparison of the older 14-digit hydrologic units to the current NWBD hydrologic units of Virginia.



WEST VIRGINIA

MARYLAND

WASHINGTON

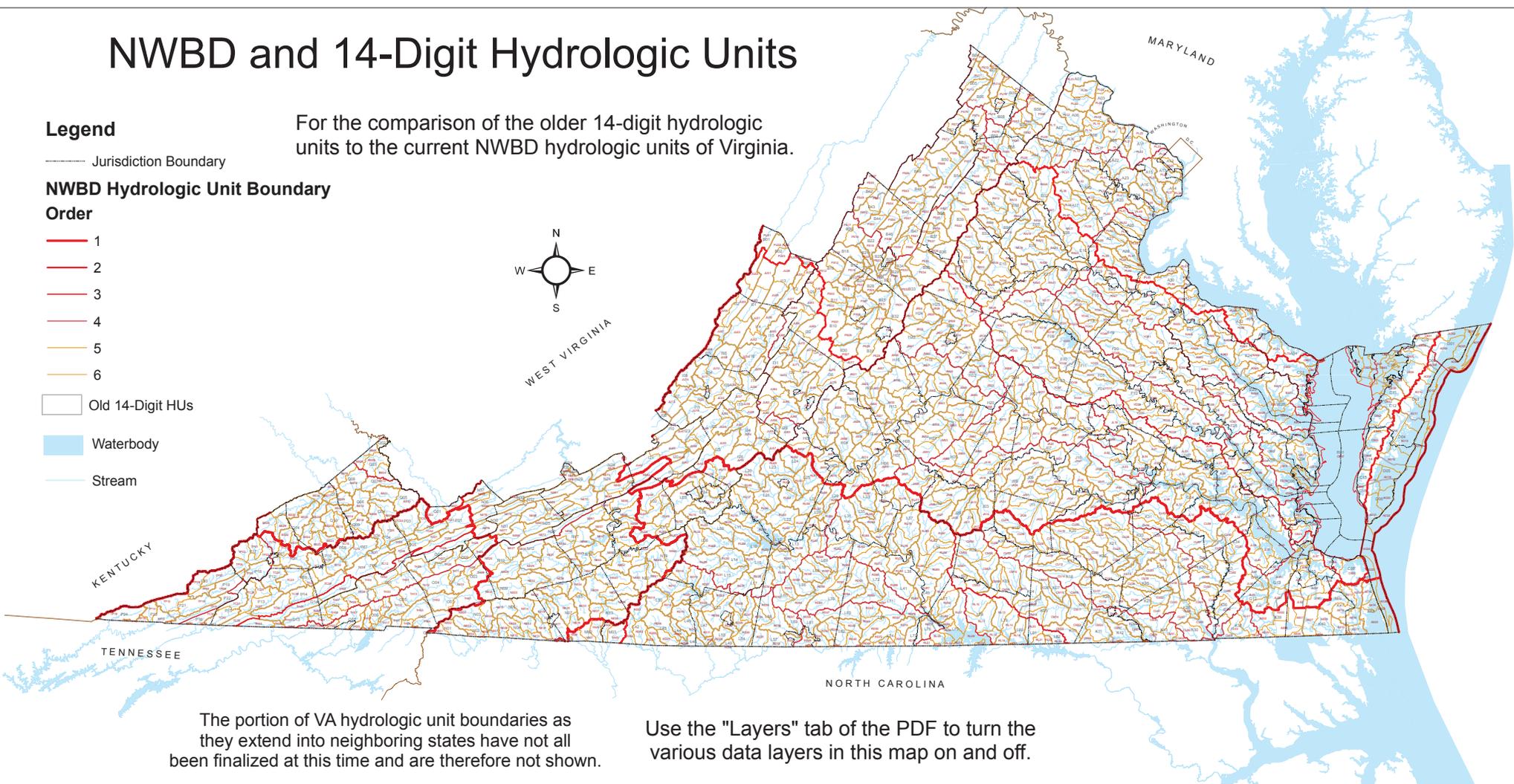
KENTUCKY

TENNESSEE

NORTH CAROLINA

The portion of VA hydrologic unit boundaries as they extend into neighboring states have not all been finalized at this time and are therefore not shown.

Use the "Layers" tab of the PDF to turn the various data layers in this map on and off.





Virginia Department of Game and Inland Fisheries

Special Legal Status Faunal Species in Virginia

<u>Common Name</u>	<u>Scientific Name</u>	<u>Federal</u> ¹	<u>State</u>	<u>WAP Tier</u>
<u>FRESHWATER FISHES</u>				
Atlantic sturgeon	<i>Acipenser oxyrinchus</i>	FE	SE	II
Blackbanded sunfish	<i>Enneacanthus chaetodon</i>		SE	I
Blackside dace	<i>Chrosomus (=Phoxinus) cumberlandensis</i>	FT	ST	III
Carolina darter	<i>Etheostoma collis</i>		ST	II
Duskytail darter	<i>Etheostoma percnurum</i>	FE	SE	I
Emerald shiner	<i>Notropis atherinoides</i>		ST	III
Golden darter	<i>Etheostoma denoncourti</i>	SOC	ST	
Greenfin darter	<i>Etheostoma chlorobranchium</i>		ST	II
Orangefin madtom	<i>Noturus gilberti</i>	SOC	ST	II
Paddlefish	<i>Polyodon spathula</i>		ST	II
Roanoke logperch	<i>Percina rex</i>	FE	SE	I
Sharphead darter	<i>Etheostoma acuticeps</i>		SE	I
Shortnose sturgeon	<i>Acipenser brevirostrum</i>	FE	SE	I
Sickle darter (=longhead darter)	<i>Percina williamsi (=P. macrocephala)</i>		ST	II
Slender chub	<i>Erimystax cahni</i>	FT	ST	I
Spotfin chub	<i>Erimonax monachus</i>	FT	ST	I
Steelcolor shiner	<i>Cyprinella whipplei</i>		ST	III
Tennessee dace	<i>Chrosomus (=Phoxinus) tennesseensis</i>		SE	I
Variagate darter	<i>Etheostoma variatum</i>		SE	II
Western sand darter	<i>Ammocrypta clara</i>		ST	II
Whitemouth shiner	<i>Notropis alborus</i>		ST	IV
Yellowfin madtom	<i>Noturus flavipinnis</i>	FT	ST	I
<u>AMPHIBIANS</u>				
<u>Frogs</u>				
Barking treefrog	<i>Hyla gratiosa</i>		ST	II
<u>Salamanders</u>				
Eastern tiger salamander	<i>Ambystoma tigrinum (=A. t. tigrinum)</i>		SE	II
Mabee's salamander	<i>Ambystoma mabeei</i>		ST	II
Shenandoah salamander	<i>Plethodon shenandoah</i>	FE	SE	I
<u>REPTILES</u>				
<u>Lizards</u>				
Eastern glass lizard	<i>Ophisaurus ventralis</i>		ST	II
<u>Snakes</u>				
Canebrake rattlesnake (Coastal Plain population of timber rattlesnake)	<i>Crotalus horridus</i>		SE	II
<u>Turtles</u>				
Bog (= Muhlenberg) turtle	<i>Glyptemys (=Clemmys) muhlenbergii</i>	FT(S/A)	SE	I
Eastern chicken turtle	<i>Deirochelys reticularia reticularia</i>		SE	I
Green sea turtle	<i>Chelonia mydas</i>	FT	ST	
Hawksbill sea turtle	<i>Eretmochelys imbricata</i>	FE	SE	

¹ FE=Federal Endangered; FT=Federal Threatened; S/A=Similarity of Appearance; FC=Federal Candidate; FP=Federal Proposed; SOC=Federal Species of Concern (not a legal status; list maintained by USFWS Virginia Field Office); SE=State Endangered; ST=State Threatened; WAP Tier = Virginia Wildlife Action Plan Tiered Species, from the Species of Greatest Conservation Need list that is defined in the plan: Tiers I-IV (not a legal status, Tier levels defined in the Virginia Wildlife Action Plan).



Virginia Department of Game and Inland Fisheries

Special Legal Status Faunal Species in Virginia

<u>Common Name</u>	<u>Scientific Name</u>	<u>Federal</u> ¹	<u>State</u>	<u>WAP Tier</u>
Kemp's ridley sea turtle	<i>Lepidochelys kempii</i>	FE	SE	
Leatherback sea turtle	<i>Dermochelys coriacea</i>	FE	SE	
Loggerhead sea turtle	<i>Caretta caretta</i>	FT	ST	I
Wood turtle	<i>Glyptemys insculpta</i>		ST	I
<u>BIRDS</u>				
Bachman's sparrow	<i>Aimophila aestivalis</i>		ST	I
Bachman's warbler (=wood)	<i>Vermivora bachmanii</i>	FE	SE	
Bewick's wren	<i>Thryomanes bewickii</i>		SE	I
Black rail	<i>Laterallus jamaicensis</i>		SE	I
Gull-billed tern	<i>Sterna nilotica</i>		ST	I
Henslow's sparrow	<i>Ammodramus henslowii</i>		ST	I
Kirtland's warbler (=wood)	<i>Dendroica kirtlandii</i>	FE	SE	IV
Loggerhead shrike	<i>Lanius ludovicianus</i>		ST	I
Peregrine falcon	<i>Falco peregrinus</i>		ST	I
Piping plover	<i>Charadrius melodus</i>	FT	ST	I
Red-cockaded woodpecker	<i>Picoides borealis</i>	FE	SE	I
Red knot	<i>Calidris canutus</i>	FC		IV
Roseate tern	<i>Sterna dougallii dougallii</i>	FE	SE	IV
Upland sandpiper	<i>Bartramia longicauda</i>		ST	I
Wilson's plover	<i>Charadrius wilsonia</i>		SE	I
<u>MAMMALS</u>				
American water shrew	<i>Sorex palustris</i>		SE	II
Carolina northern flying squirrel	<i>Glaucomys sabrinus coloratus</i>	FE	SE	I
Delmarva Peninsula fox squirrel	<i>Sciurus niger cinereus</i>	FE	SE	II
Dismal Swamp southeastern shrew	<i>Sorex longirostris fisheri</i>		ST	IV
Eastern puma (=cougar)	<i>Puma (=Felis) concolor cougar</i>	FE	SE	
Gray bat	<i>Myotis grisescens</i>	FE	SE	II
Gray wolf	<i>Canis lupus</i>	FE	SE	
Indiana bat	<i>Myotis sodalis</i>	FE	SE	I
Rafinesque's eastern big-eared bat	<i>Corynorhinus rafinesquii macrotis</i>		SE	I
Rock vole	<i>Microtus chrotorrhinus</i>		SE	II
Snowshoe hare	<i>Lepus americanus</i>		SE	I
Virginia big-eared bat	<i>Corynorhinus (=Plecotus) townsendii virginianus</i>	FE	SE	II
Virginia northern flying squirrel	<i>Glaucomys sabrinus fuscus</i>	FE	SE	I
<u>MOLLUSKS</u>				
<u>Freshwater Mussels</u>				
Appalachian monkeyface (pearlymussel)	<i>Quadrula sparsa</i>	FE	SE	I
Atlantic pigtoe	<i>Fusconaia masoni</i>	SOC	ST	II
Birdwing pearlymussel	<i>Lemiox rimosus</i>	FE	SE	I
Black sandshell	<i>Ligumia recta</i>		ST	III
Brook floater	<i>Alasmidonta varicosa</i>		SE	II
Cracking pearlymussel	<i>Hemistena lata</i>	FE	SE	I
Cumberland bean (pearlymussel)	<i>Villosa trabalis</i>	FE	SE	I
Cumberland monkeyface (pearlymussel)	<i>Quadrula intermedia</i>	FE	SE	I
Cumberlandian combshell	<i>Epioblasma brevidens</i>	FE	SE	I

¹ FE=Federal Endangered; FT=Federal Threatened; S/A=Similarity of Appearance; FC=Federal Candidate; FP=Federal Proposed; SOC=Federal Species of Concern (not a legal status; list maintained by USFWS Virginia Field Office); SE=State Endangered; ST=State Threatened; WAP Tier = Virginia Wildlife Action Plan Tiered Species, from the Species of Greatest Conservation Need list that is defined in the plan: Tiers I-IV (not a legal status, Tier levels defined in the Virginia Wildlife Action Plan).



Virginia Department of Game and Inland Fisheries

Special Legal Status Faunal Species in Virginia

<u>Common Name</u>	<u>Scientific Name</u>	<u>Federal¹</u>	<u>State</u>	<u>WAP Tier</u>
Deertoe	<i>Truncilla truncata</i>		SE	IV
Dromedary pearlymussel	<i>Dromus dromas</i>	FE	SE	I
Dwarf wedgemussel	<i>Alasmidonta heterodon</i>	FE	SE	II
Elephantear	<i>Elliptio crassidens</i>		SE	IV
Fanshell	<i>Cyprogenia stegaria</i>	FE	SE	I
Finerayed pigtoe	<i>Fusconaia cuneolus</i>	FE	SE	I
Fluted kidneyshell	<i>Ptychobranthus subtentum</i>	FP		II
Fragile papershell	<i>Leptodea fragilis</i>		ST	IV
Green blossom (pearlymussel)	<i>Epioblasma torulosa gubernaculum</i>	FE	SE	I
Green floater	<i>Lasmigona subviridis</i>		ST	II
James spiny mussel	<i>Pleurobema collina</i>	FE	SE	I
Littlewing pearlymussel	<i>Pegias fabula</i>	FE	SE	I
Ohio pigtoe	<i>Pleurobema cordatum</i>		SE	III
Oyster mussel	<i>Epioblasma capsaeformis</i>	FE	SE	I
Pimpleback	<i>Quadrula pustulosa pustulosa</i>		ST	IV
Pink mucket (pearlymussel)	<i>Lampsilis abrupta</i>	FE	SE	I
Pistolgrip	<i>Tritogonia verrucosa</i>		ST	IV
Purple bean	<i>Villosa perpurpurea</i>	FE	SE	I
Purple lilliput	<i>Toxolasma lividus</i>	SOC	SE	II
Pyramid pigtoe	<i>Pleurobema rubrum</i>	SOC	SE	II
Rayed bean	<i>Villosa fabalis</i>	FE	SE	II
Rough pigtoe	<i>Pleurobema plenum</i>	FE	SE	I
Rough rabbitsfoot	<i>Quadrula cylindrica strigillata</i>	FE	SE	I
Sheepnose	<i>Plethobasus cyphus</i>	FE	SE	II
Shiny pigtoe	<i>Fusconaia cor</i>	FE	SE	I
Slabside pearlymussel	<i>Lexingtonia dolabelloides</i>	FP	ST	II
Slippershell mussel	<i>Alasmidonta viridis</i>		SE	II
Snuffbox	<i>Epioblasma triquetra</i>	FE	SE	II
Spectaclecase	<i>Cumberlandia monodonta</i>	FE	SE	II
Tan riffleshell	<i>Epioblasma florentina walkeri</i> (=E. walkeri)	FE	SE	I
Tennessee heelsplitter	<i>Lasmigona holstonia</i>		SE	II
<u>Freshwater & Land Snails</u>				
Appalachian springsnail	<i>Fontigens bottimeri</i>	SOC	SE	II
Brown supercoil	<i>Paravitrea septadens</i>	SOC	ST	I
Rubble coil	<i>Helicodiscus lirellus</i>	SOC	SE	I
Shaggy coil	<i>Helicodiscus diadema</i>	SOC	SE	I
Spider elimia	<i>Elimia arachnoidea</i>		SE	II
Spiny riversnail	<i>Io fluvialis</i>	SOC	ST	III
Spirit supercoil	<i>Paravitrea hera</i>	SOC	SE	I
Springsnail (no common name)	<i>Fontigens morrisoni</i>	SOC	SE	I
Thankless ghostsnail	<i>Holsingeria unthinksensis</i>	SOC	SE	I
Virginia fringed mountain snail	<i>Polygyriscus virginianus</i>	FE	SE	I
<u>FRESHWATER CRUSTACEANS</u>				
Big Sandy crayfish	<i>Cambarus veteranus</i>	SOC	SE	II
Lee County Cave isopod	<i>Lirceus usdagalun</i>	FE	SE	I
Madison Cave amphipod	<i>Stygobromus stegerorum</i>	SOC	ST	I
Madison Cave isopod	<i>Antrolana lira</i>	FT	ST	II

¹ FE=Federal Endangered; FT=Federal Threatened; S/A=Similarity of Appearance; FC=Federal Candidate; FP=Federal Proposed; SOC=Federal Species of Concern (not a legal status; list maintained by USFWS Virginia Field Office); SE=State Endangered; ST=State Threatened; WAP Tier = Virginia Wildlife Action Plan Tiered Species, from the Species of Greatest Conservation Need list that is defined in the plan: Tiers I-IV (not a legal status, Tier levels defined in the Virginia Wildlife Action Plan).



Virginia Department of Game and Inland Fisheries

Special Legal Status Faunal Species in Virginia

<u>Common Name</u>	<u>Scientific Name</u>	<u>Federal</u> ¹	<u>State</u>	<u>WAP Tier</u>
<u>MILLIPEDES</u>				
Ellett Valley pseudotremia	<i>Pseudotremia cavernarum</i>	SOC	ST	II
Laurel Creek xystodesmid	<i>Sigmoria whiteheadi</i>	SOC	ST	I
<u>ARACHNIDS</u>				
Spruce-fir moss spider	<i>Microhexura montivaga</i>	FE	SE	
<u>INSECTS</u> ²				
American burying beetle	<i>Nicrophorus americanus</i>	FE		I
Appalachian grizzled skipper	<i>Pyrgus wyandot</i> (= <i>Pyrgus centaureae wyandot</i>)	SOC	ST	I
Buffalo Mountain mealybug	<i>Puto kosztarabi</i>	SOC	SE	I
Holsinger's cave beetle	<i>Pseudanopthalmus holsingeri</i>	SOC	SE	I
Mitchell's satyr butterfly	<i>Neonympha mitchellii</i>	FE	SE	I
Northeastern beach tiger beetle	<i>Cicindela dorsalis dorsalis</i>	FT	ST	II
Virginia Piedmont water boatman	<i>Sigara depressa</i>	SOC	SE	I
<u>MARINE MAMMALS</u>				
Blue whale	<i>Balaenoptera musculus</i>	FE	SE	
Finback whale	<i>Balaenoptera physalus</i>	FE	SE	
Humpback whale	<i>Megaptera novaeangliae</i>	FE	SE	
North Atlantic Right whale	<i>Eubalaena glacialis</i>	FE	SE	
Sei whale	<i>Balaenoptera borealis</i>	FE	SE	
Sperm whale	<i>Physeter catodon</i> (= <i>macrocephalus</i>)	FE	SE	
West Indian manatee	<i>Trichechus manatus</i>	FE	SE	

² all insects listed as federal or state endangered or threatened are protected by regulations that fall under the Virginia Department of Agriculture and Consumer Services' jurisdiction

For further information or details regarding this list or any species listed herein, please contact:

Bureau of Wildlife Resources, Statewide Resources
 Virginia Department of Game and Inland Fisheries
 4010 W. Broad St.
 Richmond, Virginia 23230
 (804) 367-6913

¹ FE=Federal Endangered; FT=Federal Threatened; S/A=Similarity of Appearance; FC=Federal Candidate; FP=Federal Proposed; SOC=Federal Species of Concern (not a legal status; list maintained by USFWS Virginia Field Office); SE=State Endangered; ST=State Threatened; WAP Tier = Virginia Wildlife Action Plan Tiered Species, from the Species of Greatest Conservation Need list that is defined in the plan: Tiers I-IV (not a legal status, Tier levels defined in the Virginia Wildlife Action Plan).

Step 4 Results Habitat Assessment

Smooth Coneflower

Echinacea laevigata



L.W. Zettler

Description - The smooth coneflower occurs in Virginia, North Carolina, South Carolina, and Georgia. It no longer occurs in Pennsylvania. The smooth coneflower is a perennial herb with a single stem that grows up 59 inches in height. Stems are smooth with few leaves. The largest leaves are the elliptical leaves at the base of the plant which can reach a length of 7.8 inches. The petals of the flowers are light pink to purplish, usually drooping, and 1.9 to 3.1 inches in length. Flower heads are usually solitary.

Life History - This rare coneflower was formerly a plant of prairie-like habitats or oak savannahs maintained by fire and large herbivores such as elk and bison. Now, it is found in relatively open areas including dry woods, power line right-of-ways, dry limestone bluffs, roadsides, meadows, and clearcuts. Sites with bare soils rich in magnesium and/or calcium, abundant sunlight, and little

competition from other plants are optimal. Flowering occurs from May through July.

Conservation - The smooth coneflower was federally listed as an endangered species on October 8, 1992. Currently, fire or some other suitable form of disturbance, such as well-timed mowing or the careful clearing of trees, is essential to maintaining the habitat remnants upon which this species depends. Loss of open habitat due to conversion to agriculture, silviculture, urbanization, and industrial development, as well as suppression of natural disturbances, such as fire, are a significant threat to this species. Other threats to this species include unauthorized collection, woody plant invasion, residential and industrial development, highway construction and improvement, herbicides, and roadside and power line right-of-way maintenance.

What You Can Do To Help - If you find a plant that appears to be the smooth coneflower, take note of the location and photograph the plant, if possible. Please do not remove the plant! Contact one of the following agencies for assistance:

Virginia Department of Conservation
and Recreation
Division of Natural Heritage
217 Governor Street, 3rd Floor
Richmond, Virginia 23219
(804) 786-7951

U.S. Fish and Wildlife Service
Virginia Field Office
6669 Short Lane
Gloucester, Virginia 23061
(804) 693-6694

References

Gaddy, L.L. 1991. The status of *Echinacea laevigata* (Boynton and Beadle) Blake. Unpublished report to the U.S. Fish and Wildlife Service, Asheville, North Carolina.

Lugwig, J.C. 1991. Smooth coneflower. Pages 144-145 in K. Terwilliger, ed. Virginia's Endangered Species, Proceedings of a Symposium. McDonald and Woodward Publishing Company, Blacksburg, Virginia.

U.S. Fish and Wildlife Service. 1995. Smooth coneflower recovery plan. Atlanta, Georgia.



U.S. Fish and Wildlife Service
Virginia Field Office
6669 Short Lane
Gloucester, Virginia 23061
(804) 693-6694

<http://www.fws.gov>

August 1999

Virginia Department of Agriculture
and Consumer Services
Office of Plant Protection
P.O. Box 1163
Richmond, Virginia 23209
(804) 786-3515

Smooth Coneflower

Echinacea laevigata

Description

The smooth coneflower, *Echinacea laevigata*, one of nine species of *Echinacea* native to North America, is a herbaceous perennial of the Asteraceae, the aster family. It is closely related to the more common purple coneflower, *Echinacea purpurea*.

A basal rosette of lanceolate leaves emerges from a fleshy rhizome and fibrous roots. The leaves are 4 in. to 6 in. long and 1 in. to 3 in. wide, with three to five prominent veins. The petioles are winged and purple tinged. The leaf surface is smooth to slightly rough above and smooth beneath. A smooth stem to 4.5 ft. tall with a few alternate leaves supports a solitary flower head.

The flower heads contain 13 to 21 pale pink or lavender drooping ray flowers surrounding tubular disk flowers that form a hemisphere or cone. The ray flowers emerge rolled, appearing stringlike, and open gradually. Populations in Virginia show considerable differences in the amount of purple in leaves, petioles, and flowers.

The hemispheric or conical seed heads with their spiny protruding bracts give the genus *Echinacea* its name, from the Greek *echinos*, meaning sea urchin.

Habitat

The plant grows in open sunny areas in which it receives little competition from other plants. It requires neutral to alkaline soils rich in calcium and magnesium with good drainage. Before the arrival of Europeans, it thrived in oak savanna



IRVINE T. WILSON/DCR-DNH

Smooth coneflower

openings where its growth conditions were maintained by fire or grazing.

It is ironic that today the plant's most available habitat often happens to be places, such as power line rights-of-way and roadsides, where it is subject to harm by frequent mowing or the use of herbicides.

Distribution

The smooth coneflower occurs in only 10 counties in Virginia, North Carolina, South Carolina, and Georgia. It may once have occurred in Pennsylvania, but if so, it has been extirpated there. Populations in Virginia are found in the Upper Roanoke, Middle Roanoke, and Upper Dan watersheds.



E. laevigata, basal rosette

Life History

Plants flower from May through July and set seed from July through October. Although the flowers attract bees and butterflies, specific pollinators and seed dispersers have not been identified.

One rhizome can produce multiple rosettes, which can divide and become viable plants. Researchers in South Carolina have taken advantage of this natural tendency and propagated plants using both rosettes and cuttings from rhizomes.

Conservation

The smooth coneflower is listed by Virginia as threatened. Its federal status is endangered. Globally, it is listed as imperiled (G2). Populations are small and risk decreasing genetic diversity.

Its plight has diverse causes. Most populations have been affected by habitat loss due to agriculture or development. Mowing of highway rights-of-way threatens populations unless they are consciously protected. And fire suppression has allowed encroachment of competing plants, which the smooth coneflower cannot tolerate.

Landowners can protect smooth coneflower habitat by removing woody plants with periodic, but not frequent, mowing or by prescribed burning. Because the smooth coneflower requires at least partial sun, trees should not be allowed to shade its habitat. Where the plant occurs along roads, the area can be marked to prevent destruction by mowing.

Finally, because the smooth coneflower hybridizes readily, specimens of other *Echinacea* species, such as *purpurea*, should not be planted near natural populations of *E. laevigata*.

Virginia Natural Heritage

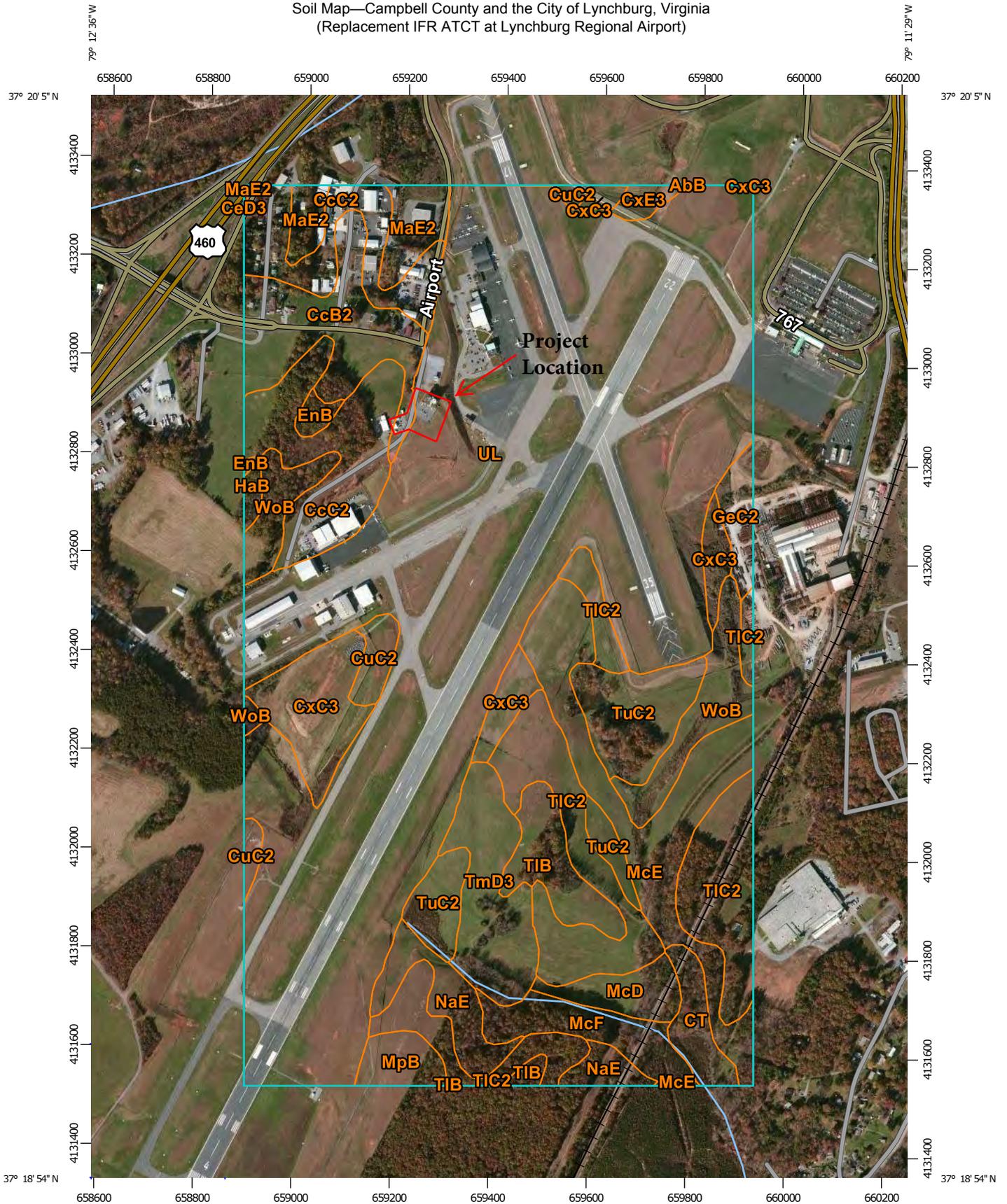
The Virginia Department of Conservation and Recreation's Division of Natural Heritage maintains a database of rare species, populations and natural communities in the commonwealth, and manages the State natural Area Preserve System. Natural Heritage biologists, stewardship, and protection staff can answer landowners' questions about rare species and sensitive habitats. The staff also provides information and expertise on conservation and management practices that help ensure that we preserve our rich natural heritage and pass it on to future Virginians.

To learn more about Virginia's rare plant and animal species and rich biological communities, visit the website of the Division of Natural Heritage, at www.dcr.virginia.gov/natural_heritage

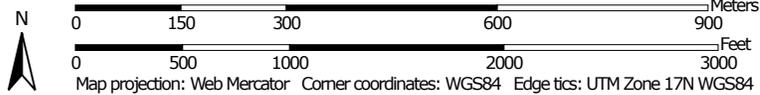
For additional information on the smooth coneflower, see [NatureServe Explorer: Echinacea laevigata](#)

Special thanks to the Riverine Chapter of the Virginia Master Naturalist Program for its assistance in developing this fact sheet.

Soil Map—Campbell County and the City of Lynchburg, Virginia
(Replacement IFR ATCT at Lynchburg Regional Airport)



Map Scale: 1:10,700 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

Soil Map—Campbell County and the City of Lynchburg, Virginia
(New IFR ATCT at Lynchburg Regional Airport)

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Campbell County and the City of Lynchburg, Virginia

Survey Area Data: Version 11, Dec 11, 2013

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 8, 2010—Mar 17, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Campbell County and the City of Lynchburg, Virginia (VA631)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AbB	Abell fine sandy loam, 0 to 4 percent slopes	0.0	0.0%
CcB2	Cecil fine sandy loam, 2 to 6 percent slopes, eroded	18.2	3.9%
CcC2	Cecil fine sandy loam, 6 to 15 percent slopes, eroded	31.7	6.8%
CeD3	Cecil clay loam, 6 to 15 percent slopes, severely eroded	0.0	0.0%
CT	Chewacla-Toccoa complex	5.0	1.1%
CuC2	Cullen loam, 6 to 15 percent slopes, eroded	4.5	1.0%
CxC3	Cullen clay loam, 6 to 15 percent slopes, severely eroded	17.8	3.8%
CxE3	Cullen clay loam, 15 to 25 percent slopes, severely eroded	1.6	0.4%
EnB	Enon fine sandy loam, 2 to 6 percent slopes	1.4	0.3%
GeC2	Georgeville loam, 6 to 15 percent slopes, eroded	3.8	0.8%
HaB	Helena fine sandy loam, 2 to 6 percent slopes	1.0	0.2%
MaE2	Madison loam, 15 to 25 percent slopes, eroded	7.5	1.6%
McD	Manteo channery loam, 6 to 15 percent slopes	5.3	1.1%
McE	Manteo channery loam, 15 to 25 percent slopes	25.2	5.4%
McF	Manteo channery loam, 25 to 60 percent slopes	8.5	1.8%
MpB	Masada fine sandy loam, 2 to 6 percent slopes	4.2	0.9%
NaE	Nason loam, 15 to 25 percent slopes	9.8	2.1%
TIB	Tatum loam, 2 to 6 percent slopes	8.9	1.9%
TIC2	Tatum loam, 6 to 15 percent slopes, eroded	40.9	8.7%
TmD3	Tatum clay loam, 6 to 15 percent slopes, severely eroded	14.5	3.1%
TuC2	Turbeville fine sandy loam, 6 to 15 percent slopes, eroded	17.6	3.8%

Campbell County and the City of Lynchburg, Virginia (VA631)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
UL	Urban land	225.7	48.3%
WoB	Worsham soils, 0 to 4 percent slopes	14.5	3.1%
Totals for Area of Interest		467.6	100.0%

LOCATION CECIL

NC+AL GA SC VA

Established Series
Rev. DTA, RHB
02/2007

CECIL SERIES

The Cecil series consists of very deep, well drained moderately permeable soils on ridges and side slopes of the Piedmont uplands. They are deep to saprolite and very deep to bedrock. They formed in residuum weathered from felsic, igneous and high-grade metamorphic rocks of the Piedmont uplands. Slopes range from 0 to 25 percent. Mean annual precipitation is 48 inches and mean annual temperature is 59 degrees F. near the type location.

TAXONOMIC CLASS: Fine, kaolinitic, thermic Typic Kanhapludults

TYPICAL PEDON: Cecil sandy loam--forested. (Colors are for moist soil unless otherwise stated.)

Ap--0 to 8 inches; dark yellowish brown (10YR 4/4) sandy loam; weak medium granular structure; very friable; slightly acid; abrupt smooth boundary. (2 to 8 inches thick)

Bt1--8 to 26 inches; red (10R 4/8) clay; moderate medium subangular blocky structure; firm; sticky, plastic; common clay films on faces of peds; few fine flakes of mica; strongly acid; gradual wavy boundary.

Bt2--26 to 42 inches; red (10R 4/8) clay; few fine prominent yellowish red (5YR 5/8) mottles; moderate medium subangular blocky structure; firm; sticky, plastic; common clay films on faces of peds; few fine flakes of mica; very strongly acid; gradual wavy boundary. (Combined thickness of the Bt horizon is 24 to 50 inches)

BC--42 to 50 inches; red (2.5YR 4/8) clay loam; few distinct yellowish red (5YR 5/8) mottles; weak medium subangular blocky structure; friable; few fine flakes of mica; very strongly acid; gradual wavy boundary. (0 to 10 inches thick)

C--50 to 80 inches; red (2.5YR 4/8) loam saprolite; common medium distinct pale yellow (2.5Y 7/4) and common distinct brown (7.5YR 5/4) mottles; massive; very friable; few fine flakes of mica; very strongly acid.

TYPE LOCATION: Franklin County, North Carolina; about 9.7 miles west of Louisburg on North Carolina Highway 56 to Franklinton, about 4.4 miles south on U.S. Highway 1, about 0.4 mile east on North Carolina Highway 96, about 500 feet north of the road, in a field; Franklinton USGS topographic quadrangle; lat. 36 degrees 02 minutes 24 seconds N. and long. 78 degrees 29 minutes 27 seconds W.

RANGE IN CHARACTERISTICS: The Bt horizon is at least 24 to 50 inches thick and extends to 40 inches or more. Depth to bedrock ranges from 6 to 10 feet or more. The soil ranges from very strongly acid to moderately acid in the A horizons and is strongly acid or very strongly acid in the B and C horizons. Limed soils are typically moderately acid or slightly acid in the upper part. Content of coarse fragments range from 0 to 35 percent by volume in the A horizon and 0 to 10 percent by volume in the

Bt horizon. Fragments are dominantly gravel or cobble in size. Most pedons have few to common flakes of mica in the Bt horizon and few to many flakes of mica in the BC and C horizons.

The A or Ap horizon has hue of 2.5YR to 10YR, value of 3 to 5, and chroma of 2 to 8. A horizons with value of 3 are less than 6 inches thick. The texture is sandy loam, fine sandy loam, or loam in the fine earth fraction. Eroded phases are sandy clay loam, or clay loam in the fine earth fraction.

The E horizon, where present, has hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 3 to 8. It is sandy loam, fine sandy loam, or loam in the fine-earth fraction.

The BA or BE horizon, where present, has hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 3 to 8. It is sandy clay loam, loam, or clay loam.

The Bt horizon averages 35 to 60 percent clay in the control section but may range to 70 percent in some subhorizons. It has hue of 10R or 2.5YR, value of 4 or 5, and chroma of 6 or 8. Hue also ranges to 5YR if evident patterns of mottling are lacking in the Bt and BC horizons. Mottles that are few and random are included. The Bt horizon is clay loam, clay, or sandy clay and contains less than 30 percent silt.

The BC horizon has hue of 10R to 5YR, value of 4 or 6, and chroma of 4 to 8. Mottles in shades of yellow or brown are few to common in some pedons. The texture is sandy clay loam, clay loam, or loam.

The C horizon is similar in color to the BC horizon or it is variegated. It is loamy saprolite weathered from felsic, igneous and high-grade metamorphic rocks.

COMPETING SERIES: These are the [Appling](#), [Bethlehem](#), [Georgeville](#), [Herndon](#), [Madison](#), [Nanford](#), [Nankin](#), [Pacolet](#), [Saw](#), [Tarrus](#), and [Wedowee](#) series in the same family. Those in closely related families are the [Cataula](#), [Chestatee](#), [Cullen](#), [Hulett](#), [Lloyd](#), [Mayodan](#), and [Mecklenburg](#) series. Appling soils have dominant hue of 7.5YR or yellower or where hue is 5YR it has evident patterns of mottling in a subhorizon of the Bt or BC horizon. Bethlehem soils have soft bedrock at depths of 20 to 40 inches. Cataula soils have a perched water table at 2 to 4 feet, Chestatee soils contain more than 15 percent, by volume, coarse fragments throughout. Cullen soils have more clay in the Bt horizon. Mayodan and Mecklenburg soils have mixed mineralogy and in addition, Mayodan soils formed in Triassic age sediments and Mecklenburg soils formed from basic diabase parent material. Georgeville, Herndon, Nanford, and Tarrus soils formed in Carolina slate and contain more than 30 percent silt. Hulett, Nankin, and Wedowee soils have a Bt horizon with hue of 5YR or yellower. In addition, Nankin soils formed from marine sediments. Lloyd soils have rhodic colors to depths of 40 inches or more. Madison, Pacolet, and Wedowee soils have thinner argillic horizons. Saw soils have hard bedrock at depths of 20 to 40 inches.

GEOGRAPHIC SETTING: Cecil soils are on nearly level to steep Piedmont uplands. Slope gradients are 0 to 25 percent, most commonly between 2 and 15 percent. These soils have developed in weathered felsic igneous and high-grade metamorphic rocks. Average annual precipitation is about 48 inches. Mean annual soil temperature is about 59 degrees F.

GEOGRAPHICALLY ASSOCIATED SOILS: In addition to the competing [Appling](#), [Bethlehem](#), [Cataula](#), [Chestatee](#), [Cullen](#), [Lloyd](#), [Madison](#), [Mecklenburg](#), [Pacolet](#), [Saw](#), and [Wedowee](#) series these are the [Durham](#), [Louisburg](#), [Rion](#), and [Worsham](#) series. Durham, Louisburg, and Rion soils have less clay in the Bt horizon. Worsham soils are poorly drained and are around the heads of drains.

DRAINAGE AND PERMEABILITY: Well drained; medium to rapid runoff; moderate permeability.

USE AND VEGETATION: About half of the total acreage is in cultivation, with the remainder in pasture and forest. Common crops are small grains, corn, cotton, and tobacco.

DISTRIBUTION AND EXTENT: The Piedmont of Alabama, Georgia, North Carolina, South Carolina, and Virginia. The series is of large extent, with an area of more than 10 million acres.

MLRA SOIL SURVEY REGIONAL OFFICE (MO) RESPONSIBLE: Raleigh, North Carolina

SERIES ESTABLISHED: Cecil County, Maryland; 1899.

REMARKS: The June 1988 revision changed the classification to Typic Kanhapludults and recognized the low activity clay properties of this soil as defined in the Low Activity Clay Amendment to Soil Taxonomy, August 1986. The December 2005 revision changed the type location from Catawba County, North Carolina to a more representative location. The May 2006 revision changed language in competing series for Wedowee.

Diagnostic horizons and features recognized in this pedon are:
 Ochric epipedon--the zone from the surface of the soil to a depth of 8 inches (Ap horizon)
 Kandic horizon--the zone between 8 and 42 inches meets the low activity clay requirement in more than 50 percent of the horizon (Bt1 and Bt2 horizons)
 Argillic horizon--the zone between 8 and 42 inches (Bt1 and Bt2 horizons)

ADDITIONAL DATA: McCracken, R. J., editor: Southern Cooperative Series Bulletin 61, issued January, 1959, Virginia Agricultural Experiment Station, Blacksburg, Virginia. Soil Survey of Catawba County, North Carolina, issued 1975. Soil Survey of Forsyth County, North Carolina, issued 1976.

MLRA--136

REVISED--09/1997, RLV; 12/2005, DTA; 05/2006, RHB

TABULAR SERIES DATA:

SOI-5	Soil Name	Slope	Airtemp	FrFr/Seas	Precip	Elevation
NC0018	CECIL	0-25	57-65	175-200	45-55	200-900
NC0268	CECIL	0-25	57-65	160-190	44-55	300-800

SOI-5	FloodL	FloodH	Watertable	Kind	Months	Bedrock	Hardness
NC0018	NONE		>6.0	-	-	>60	
NC0268	NONE		>6.0	-	-	>60	

SOI-5	Depth	Texture	3-Inch	No-10	Clay%	-CEC-
NC0018	0-8	SL FSL L	0-5	80-100	5-20	1-5
NC0018	0-8	GR-SL GR-L GR-FSL	5-15	55-85	5-20	1-5
NC0018	0-8	SCL CL	0-5	75-100	20-35	5-10
NC0018	8-50	C CL	0-5	92-100	35-70	3-12
NC0018	50-80	VAR	-	-	-	-
NC0268	0-8	GR-SCL GR-CL	0-10	60-85	20-35	5-10
NC0268	8-50	C CL	0-5	90-100	35-70	3-12
NC0268	50-80	VAR	-	-	-	-

SOI-5	Depth	-pH-	O.M.	Salin	Permeab	Shnk-Swll
NC0018	0-8	4.5-6.5	0.5-1.0	0-0	2.0-6.0	LOW
NC0018	0-8	4.5-6.5	0.5-1.0	0-0	2.0-6.0	LOW
NC0018	0-8	4.5-6.5	0.5-1.0	0-0	0.6-2.0	LOW
NC0018	8-50	4.5-5.5	0.0-0.5	0-0	0.6-2.0	LOW
NC0018	50-80	-	-	-	-	-
NC0268	0-8	4.5-6.0	0.5-1.0	0-0	0.6-2.0	LOW
NC0268	8-50	4.5-5.5	0.0-0.5	0-0	0.6-2.0	LOW
NC0268	50-80	-	-	-	-	-

National Cooperative Soil Survey
U.S.A.

Step 6(a) Results
VaEagles Map

Step 7 Results
Species Conclusion Table

Species Conclusions Table

Project Name: Replacement IFR ATCT at Lynchburg Regional Airport

Date: January 28, 2014

Species / Resource Name	Conclusion	ESA Section 7 / Eagle Act Determination	Notes / Documentation
Smooth coneflower (<i>Echinacea laevigata</i>)	No suitable habitat present	No effect	According to the NRCS Web Soil Survey, the area of interest consists of urban land and cecil fine sandy loam soils. The cecil soil series has a pH ranging from 4.5 – 6.5 (very strong acidic to slight acidic). The smooth coneflower requires neutral to alkaline soils. Additionally, the area of ground disturbing activities associated with the Proposed Project is regularly maintained by the Airport.
Critical Habitat	No critical habitat present	No effect	
Bald Eagle	Unlikely to disturb nesting bald eagles; does not intersect with an eagle concentration area	No Eagle Act permit required	



Attachment G – VDHR Archives Search



COMMONWEALTH of VIRGINIA

Department of Historic Resources

2801 Kensington Avenue, Richmond, Virginia 23221

Molly Joseph Ward
Secretary of Natural Resources

Julie V. Langan
Acting Director

Tel: (804) 367-2323
Fax: (804) 367-2391
www.dhr.virginia.gov

February 24, 2014

David Alberts
RS&H, Inc
350 Terminal Drive,
Lynchburg, VA 24502

RE: **ORC Project Review Archives Search**
Replacement Instrument Flight Rules Air Traffic Control Tower at
Lynchburg Regional Airport

Dear Mr. Alberts:

Thank you for your recent request for information from our Archives on previously recorded archaeological and architectural resources within the area of potential effect, as delineated on your map, for the above-referenced project. Please note that your request for information from the Department of Historic Resources (DHR) Archives concerning the location of historic resources does not relieve you or your client from possible obligations under state or federal historic preservation regulations. I strongly recommend that you contact **Roger Kirchen**, DHR's Resource Services and Review Division at (804) 482-6091, if you have any questions concerning state and federal regulatory requirements.

Enclosed is the map showing the locations of any archaeological or architectural resources previously recorded at DHR. Since no sites or other historic resources were found to have been previously identified in your project area, no records were copied for inclusion in this packet.

DHR serves as the official state repository on historic resources. This information has been compiled primarily by independent cultural resource consultants. DHR makes no warranty as to the fitness of the data for any purpose. The absence of historic resources in DHR records does not necessarily mean that no historic properties are present. It is advisable to check with local government planning offices for information on any properties that may meet the age and significance tests of the National Register criteria and have not yet been recorded in the DHR Archives. Also, the area in question may not have been systematically surveyed for resources, possibly necessitating a survey and submittal of that data with your Project Review application.

Sincerely,

Lauren Leake
Archives Assistant - DHR

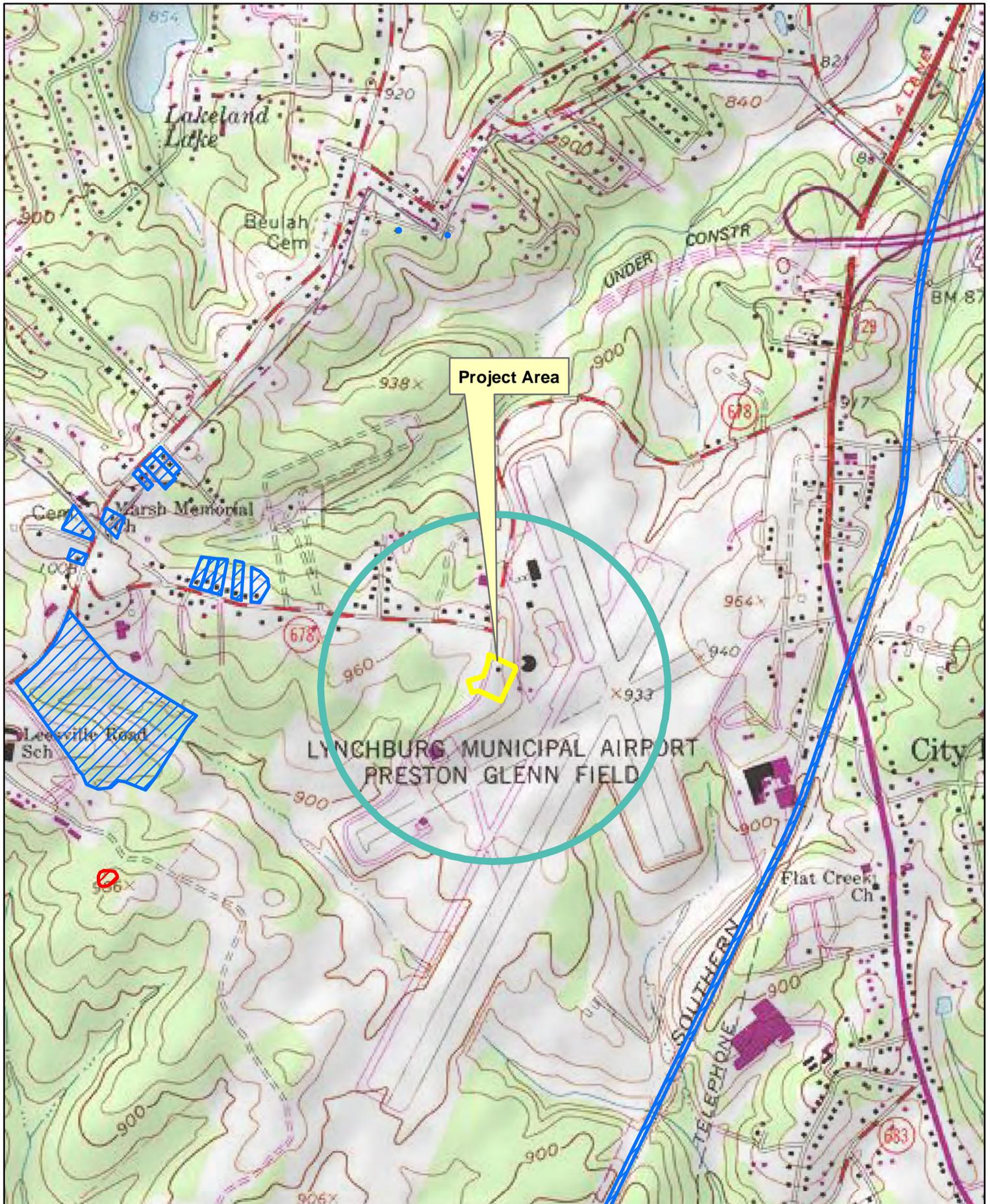
Administrative Services
10 Courthouse Ave.
Petersburg, VA 23803
Tel: (804) 863-1624
Fax: (804) 862-6196

Capital Region Office
2801 Kensington Avenue
Richmond, VA 23221
Tel: (804) 367-2323
Fax: (804) 367-2391

Tidewater Region Office
14415 Old Courthouse Way
2nd Floor
Newport News, VA 23608
Tel: (757) 886-2818
Fax: (757) 886-2808

Western Region Office
962 Kime Lane
Salem, VA 24153
Tel: (540) 387-5443
Fax: (540) 387-5446

Northern Region Office
5357 Main Street
PO Box 519
Stephens City, VA 22655
Tel: (540) 868-7029
Fax: (540) 868-7033



Replacement Instrument Flight Rules Air Traffic Control Tower
 350 Terminal Drive
 Lynchburg, VA 24502
 February 24, 2014
 L. Leake

Legend

- APE_Direct
- APE_Indirect
- Architecture Resources
- Archaeological Resources

Sources: VDHR 2013, USGS 2002
 Records of the Virginia Department of Historic Resources (DHR) have been gathered over many years and the representation depicted is based on the field observation date and may not reflect current ground conditions. The map is for general illustration purposes and is not intended for engineering, legal or other site-specific uses. The map may contain errors and is provided "as-is". Contact DHR for the most recent information as data is updated continually.

1 inch = 1,167 feet

