

Appendix A – IICEP Correspondence

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Appendix A Contents

Section 7 Consultation Documentation

Section 106 Consultation Documentation

Federal Consistency Determination

Public Review of the Draft EA

 Notice of Availability (NOA) and Affidavits of Publication

 Public Meeting Materials (July 19, 2017)

Table A-1: Summary of Comments on the Draft EA Received during the 30-day Public Review Period

 Correspondence Received during the 30-day Draft EA Public Review Period

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Section 7 Consultation Documentation

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Subject: Online Project Review Request, Tower Project at Wallops Island

Date: Tuesday, April 11, 2017 at 2:14:41 PM Eastern Daylight Time

From: Nystrom, Sarah

To: Miller, Shari A. (WFF-2500), Bundick, Joshua A. (WFF-2000), Mitchell, Joel T. (WFF-2500), Meyer, T J (WFF-2500), melanie.anderson@navy.mil, kristina.deer@us.af.mil, Bonsteel, Michael Carroll (WFF-200.C)[LJT AND ASSOCIATES, INC.]

We have reviewed the project package received on March 3, 2017 for the referenced project. The following comments are provided under provisions of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884), as amended, and Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c, 54 Stat. 250), as amended.

We concur with the determinations provided in the Species Conclusion Table dated March 2, 2017 and have no further comments. Please provide the draft monitoring plan for review prior to implementation. Should project plans change or if additional information on the distribution of listed species or critical habitat becomes available, this determination may be reconsidered. If you have any questions, please contact me at (804) 824-2413, or via email at Sarah.Nystrom@fws.gov.

Thanks!

Sarah

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Sarah Nystrom
Fish and Wildlife Biologist
Virginia Field Office - Ecological Services
6669 Short Lane
Gloucester, Virginia 23061
(804) 824-2413

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National Aeronautics and
Space Administration
Goddard Space Flight Center
Wallops Flight Facility
Wallops Island, VA 23337



Reply to Attn of: 250.W

March 3, 2017

U.S. Fish and Wildlife Service
Virginia Field Office
6669 Short Lane
Gloucester, Virginia 23061

Re: Online Project Review Request, Tower Project at Wallops Island, Accomack County, Virginia, Consultation Tracking Number: 05E2VA00-2017-SLI-1157

We have reviewed the referenced project using the Virginia Field Office's online project review process and have followed all guidance and instructions in completing the review. We completed our review on February 1, 2017, and are submitting our project review package in accordance with the instructions for further review.

Our proposed action consists of authorizing the U.S. Air Force to install a guyed, multi-use instrumentation tower of approximately 750 feet in height on mid-Wallops Island, between Buildings X-030 and X-015. The tower and associated infrastructure would be sited in a previously developed area, the project site having been configured to avoid permanent impacts to jurisdictional wetlands.

The tower would be a typical 3-sided lattice structure, approximately 44 inches per side, and constructed of galvanized steel. Steel guy wires would be installed along three radii from the tower at angles of 120 degrees from each other. Guys would be required approximately every 80 feet of tower height and would tie into two or three anchor points positioned in line with each of the three radii. Therefore, each of the three guy radii would contain approximately 10 individual guys.

The tower would be lit in accordance with Federal Aviation Administration (FAA) guidelines. However, to minimize the collision risk to nocturnally-active avian species, the tower's lighting scheme would be consistent with the September 14, 2000, *Service Guidance on the Siting, Construction, Operation and Decommissioning of Communications Towers*, as well as a FAA-commissioned study (**Patterson, 2012**) which verified the visibility of more bird-friendly tower lighting configurations (i.e., flashing lights versus steady-burning fixtures) to pilots. Likewise, the guy wires would include visual aerial markers (**Avian Power Line Interaction Committee, 2012**) to reduce the potential for diurnal avian collisions. Associated support structures would use down-shielded, motion-sensitive lighting, comprised of either amber light-emitting diode (LED) or low-pressure sodium lamps.

All structural components of the tower would be pile-supported. Piles could be driven or cast in place. Based upon previous projects on Wallops Island, it is expected that piles would need to be installed to approximately 100 feet depth.

In addition to the tower itself, two small (approximately 10 foot by 20 foot) enclosures would be installed at the base of the tower to house electronics and tower-related appurtenances. Required

utility services include electricity and communication, both of which would be tied-in from adjacent existing locations. To provide back-up electricity, a propane-fueled generator (and associated fuel tank) would be installed adjacent to the electronics enclosure. In order to mitigate the potential for flooding during storm events, the enclosure and all supporting equipment would be elevated on piles to at least 11 feet above mean sea level.

The construction phase of the proposed project would likely occur between August 2017 and March 2018. While erecting the tower would require approximately 30 days, other activities, including pile driving and electronics outfitting, would take the majority of the overall installation time. Once installed, the tower is expected to have a lifespan of at least twenty years. Regular maintenance of the tower would be required, and would include tensioning the guy wires, replacing electronics, and trimming vegetation. The location of the project and the action area are identified on the enclosed maps Enclosures 1 and 2).

As the project sponsor, the Air Force is serving as the lead agency for this Endangered Species Act (ESA) consultation with the U.S. Fish and Wildlife Service. NASA and the U.S. Naval Air Warfare Center Aircraft Division would undertake actions connected to the Tower Project and are also participating in this ESA consultation. The effects of their actions are considered in all project-related environmental documentation. As such, please include all three action agencies in future correspondence regarding the Tower Project.

This project review demonstrates all three agencies compliance with the Endangered Species Act (Enclosure 3). The enclosed project review package provides information about the species, critical habitat, and bald eagles considered in our review, the species conclusions table identifies our initial determinations for the resources that may be affected by the project, and the Measures to Mitigate Adverse Effects will be part of the proposed action. The Air Force, NASA, and the Navy, are seeking your agency's concurrence on our determination that the proposed Tower Project "may affect but is not likely to adversely affect" red knot (*Calidris canutus rufa*), piping plover (*Charadrius melodus*), and northern long eared bat (*Myotis septentrionalis*).

Thank you for the consideration of our request. If you have questions or require additional information, please contact me at (757) 824-2327 or Shari.A.Miller@nasa.gov.

Sincerely,



Shari A. Miller
Lead, Environmental Planning

3 Enclosures:

1. Aerial view map depicting proposed action site
2. Conceptual rendering of proposed action
3. Project Review Package

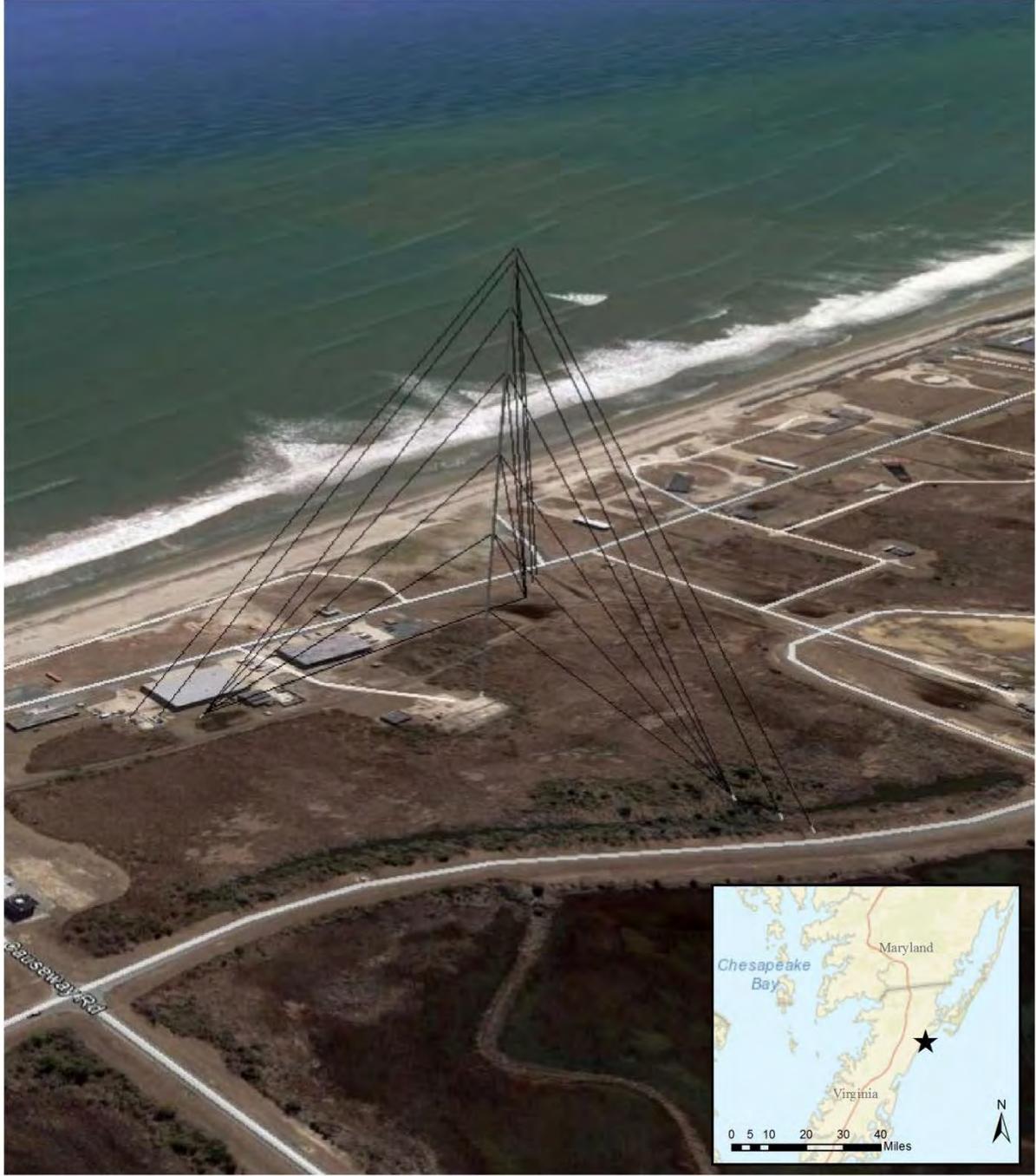
cc:

200/Mr. J. Bundick
250/Mr. T. Meyer
250/Mr. J. Mitchell
NAWCAD/Ms. M. Anderson
USAF/Ms. K. Deer

Literature Cited

APLIC (Avian Power Line Interaction Committee). (2012). *Reducing avian collisions with power lines: the state of the art in 2012*. Edison Electric Institute and APLIC, Washington, DC. 184pp.

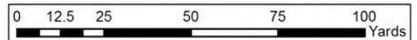
Patterson Jr, J. W. (2012). *Evaluation of New Obstruction Lighting Techniques to Reduce Avian Fatalities*. No. DOT/FAA/TC-TN12/9. 64 pp.

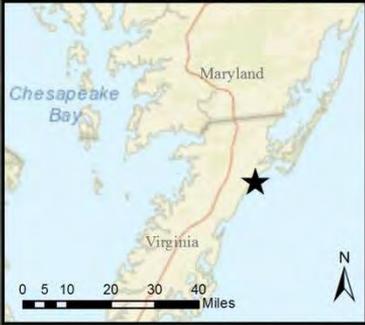


Conceptual Rendering of the X-015 Tower Location (Proposed Action)

Enclosure 1

A-10





- X-015 Site (Proposed Action) X-015 Study Area
- X-079 Site (Action Alternative) X-079 Study Area



U.S. AIR FORCE



Enclosure 2

Sources: Spatial Data courtesy of NASA (2016); Esri (2016) Disclaimer: No warranty is made by AECOM as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. This map is a "living document", in that it is intended to change as new data become available and is incorporated into the GIS database.

Enclosure 3: Species Conclusions Table

Project Name: Tower Project at Wallops Island

Date: March 2, 2017

| Species / Resource Name | Conclusion | ESA Section 7 / Eagle Act Determination | Notes / Documentation |
|--|--|---|---|
| Flowering Plants | | | |
| Seabeach amaranth <i>Amaranthus pumilus</i> | Species not present No suitable habitat present | No effect | No documented occurrences on Wallops Island (NASA 2016); closest documented occurrence has been at Assateague Island (USFWS 2012), north of the action area. |
| Avifauna | | | |
| Bald eagle <i>Haliaeetus leucocephalus</i> | Unlikely to disturb nesting bald eagles Does not intersect with bald eagle concentration area | No Eagle Act permit required | Two active nest exists on Wallops Island, north of the action area (B. Watts, personal communication, 2016). |
| Piping plover <i>Charadrius melodus</i> | Species present Suitable habitat present | Not likely to adversely affect | Piping plovers regularly nest and forage on Wallops, Assateague, Assawoman Island beaches (NASA 2016; USFWS 2012). Under the proposed action, no construction is planned for areas within known piping plover nesting or foraging habitat. However, collision-induced avian mortality (primarily night-migrating passerines) at tall, guyed communication towers has been observed at multiple sites across the U.S. (Longcore et al. 2013). Although comparatively fewer shorebird species mortalities have been reported at communication towers (which could be interpreted as these species being at lower collision risk), little is known about piping plover migration behavior, flight altitude or habitat use (all of which are factors in weighing collision |

| | | | |
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| | | | <p>risk) within the Atlantic Coast breeding range (USFWS 1996). The majority of Atlantic Coast piping plover migratory movements are thought to take place along a narrow flight corridor including the outer beaches of the coastline, with rare offshore and inland observations (USFWS 1996).</p> <p>Citing a personal communication with A. Hecht, Burger et al. (2011) state that plover visual acuity and maneuverability are known to be good, including night vision (Staine and Burger 1994), suggesting that plovers may be able to identify and avoid structures in their flight paths. USFWS (2008) also indicate that piping plover collisions with fixed structures in the coastal zone, including lighthouses, are rare, if not non-existent in the literature. However, the ability to avoid structures (such as the proposed tower), even if normally good, could be reduced in poor visibility conditions (Burger et al. 2011).</p> <p>In consideration of these facts, it is possible, but extremely unlikely, that migrating plovers would interact with the tower or its guy wires, once erected.</p> |
| <p>Red knot <i>Calidris canutus rufa</i></p> | <p>Species present Suitable habitat present</p> | <p>Not likely to adversely affect</p> | <p>Red knots regularly forage on Wallops, Assateague, and Assawoman Island beaches during northerly spring migration (NASA 2016). Similar to the discussion regarding piping plovers, the proposed tower would be located outside known foraging habitat (i.e., outside the intertidal zone; Cohen et al. 2010).</p> <p>However, the collision risk during migration cannot be discounted. Citing a personal communication with C. Minton, Burger et al.</p> |

| | | | |
|--|---------------------|-----------|--|
| | | | <p>(2011) indicate a red knot cruising altitude of between 1,000 and 3,000 meters above ground level, well above the height of the proposed tower; however, the authors also suggest that the most serious risk comes when northbound long-distance migrants make landfall, movement patterns about which little information exists. Additionally, although visual acuity and maneuverability of red knots are known to be good (L. Niles, personal communication, as cited in Burger et al. 2011; Cohen et al. 2011), inclement weather conditions could increase collision risk.</p> <p>Therefore, because Wallops Island is a known stopover site for northerly migrating red knots, the proposed tower site could present a collision risk for those individuals, whereas those that stop over elsewhere (e.g., Delaware Bay; Karpanty et al. 2011), could be at relatively less risk. Based upon a personal communication with C. Minton, Burger et al (2011) also suggest that southbound (fall) migrants are at comparatively less risk due to their farther offshore flight paths.</p> <p>In consideration of these facts, it is possible, but extremely unlikely, that migrating red knots would interact with the tower or its guy wires, once erected.</p> |
| Roseate tern <i>Sterna d. dougallii</i> | Species not present | No effect | Individuals are rarely observed along the U.S. coast south of New Jersey; may transit through oceanic areas east of the action area during seasonal migration (Nisbet 1984). |

| Mammals | | | |
|--|--|--------------------------------|---|
| Northern Long-Eared Bat <i>Myotis septentrionalis</i> | Suitable habitat present | Not likely to adversely affect | Relying upon the findings of the 1/5/2016 Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-Eared Bat and Activities Excepted from Take Prohibitions (USFWS 2016a) and 6/22/2016 Revised Biological Opinion on Wallops Flight Facility Proposed and Ongoing Operations and Shoreline Restoration/Infrastructure Protection Program (USFWS 2016b) to fulfill our project-specific Section 7 responsibilities. |
| Herpetofauna | | | |
| Atlantic green sea turtle <i>Chelonia mydas</i> | Species not present Suitable habitat present | No effect | Action Area is outside sea turtle nesting habitat. |
| Hawksbill sea turtle <i>Eretmochelys imbricate</i> | Species not present No suitable habitat present | No effect | Action Area is outside sea turtle nesting habitat. |
| Kemp's ridley sea turtle <i>Lepidechelys kempii</i> | Species not present Suitable habitat present | No effect | Action Area is outside sea turtle nesting habitat. |
| Leatherback sea turtle <i>Dermochelys coriaces</i> | Species not present Suitable habitat present | No effect | Action Area is outside sea turtle nesting habitat. |
| Loggerhead sea turtle <i>Caretta caretta</i> | Species present Suitable habitat present | No effect | Action Area is outside sea turtle nesting habitat. |

Literature Cited

- Burger, J., Gordon, C., Lawrence, J., Newman, J., Forcey, G., & Vlietstra, L. (2011). Risk evaluation for federally listed (roseate tern, piping plover) or candidate (red knot) bird species in offshore waters: A first step for managing the potential impacts of wind facility development on the Atlantic Outer Continental Shelf. *Renewable Energy*, 36(1), 338-351.
- Cohen, J. B., Karpanty, S. M., Fraser, J. D., & Truitt, B. R. (2010). The effect of benthic prey abundance and size on red knot (*Calidris canutus*) distribution at an alternative migratory stopover site on the US Atlantic Coast. *Journal of Ornithology*, 151(2), 355-364.
- Cohen, J. B., Gerber, B. D., Karpanty, S. M., Fraser, J. D., & Truitt, B. R. (2011). Day and Night Foraging of Red Knots (*Calidris canutus*) during Spring Stopover in Virginia, USA. *Waterbirds*, 34(3), 352-356.
- Karpanty, S. M., Cohen, J., Fraser, J. D., & Berkson, J. (2011). Sufficiency of horseshoe crab eggs for red knots during spring migration stopover in Delaware Bay USA. *The Journal of Wildlife Management*, 75(5), 984-994.
- Longcore, T., Rich, C., Mineau, P., MacDonald, B., Bert, D. G., Sullivan, L. M., ... & Drake, D. (2013). Avian mortality at communication towers in the United States and Canada: which species, how many, and where? *Biological Conservation*, 158, 410-419.
- NASA. (2016). Wallops Island Protected Species Monitoring Report. December.
- Nisbet, I. C. (1984). Migration and winter quarters of North American Roseate Terns as shown by banding recoveries. *Journal of Field Ornithology*, 1-17.
- Staine, K. J., & Burger, J. (1994). Nocturnal foraging behavior of breeding Piping Plovers (*Charadrius melodus*) in New Jersey. *The Auk*, 579-587.
- USFWS (U.S. Fish and Wildlife Service). (1996). Piping plover (*Charadrius melodus*), Atlantic Coast Population, Revised Recovery Plan. 258 pp. Hadley, Massachusetts.
- USFWS. (2008). Final Biological Opinion, Cape Wind Associates, LLC, Wind Energy Project, Nantucket Sound, Massachusetts Formal Consultation # 08-F-0323. November 21. 78 pp. New England Field Office.
- USFWS. (2012). *Chincoteague National Wildlife Refuge 2012 Beach Habitat Management Report*.
- USFWS. (2016a). Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-Eared Bat and Activities Excepted from Take Prohibitions. January 5. 103 pp. U.S. Fish and Wildlife Service Regions 2, 3, 4, 5, and 6.
- USFWS. (2016b). Revised Biological Opinion on Wallops Flight Facility Proposed and Ongoing Operations and Shoreline Restoration/Infrastructure Protection Program, Accomack County, VA, Project #2015-F-3317. June 22. 103 pp. U.S. Fish and Wildlife Service Regions 2, 3, 4, 5, and 6.



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 Code: 05E2VA00-2017-SLI-1157

January 12, 2017

Event Code: 05E2VA00-2017-E-01702

Project Name: Tower Project

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

To Whom It May Concern:

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

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

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

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

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

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

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

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

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

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

Attachment



United States Department of Interior
Fish and Wildlife Service

Project name: Tower Project

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 Code: 05E2VA00-2017-SLI-1157

Event Code: 05E2VA00-2017-E-01702

Project Type: COMMUNICATIONS TOWER

Project Name: Tower Project

Project Description: Construction of a 750-foot guyed instrumentation tower and auxiliary structures on Wallops Island beginning summer 2017.

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.



United States Department of Interior
Fish and Wildlife Service

Project name: Tower Project

Project Location Map:



Project Coordinates: MULTIPOLYGON (((-75.47976703394484 37.844597150754, -75.47851602443792 37.84366504948299, -75.47837959597796 37.84349390458593, -75.47826995470214 37.8432797259433, -75.47824141264888 37.84305090960962, -75.4782738691579 37.842788771221194, -75.47834338726275 37.842655491917284, -75.4785203449509 37.84249070488882, -75.48205573220659 37.840009159442346, -75.4824055880928 37.83970725317847, -75.48383858599902 37.84088180681751, -75.48523484195636 37.841949182072135, -75.48448993025622 37.8425388878283, -75.48360861393158 37.842964604055155, -75.48319443218637 37.84308792442036, -75.4815187649441 37.84344534027337, -75.48106881714848 37.843618878324605, -75.4803771481801 37.84407956616671, -75.47976703394484 37.844597150754)))

Project Counties: Accomack, VA



United States Department of Interior
Fish and Wildlife Service

Project name: Tower Project

Endangered Species Act Species List

There are a total of 9 threatened or endangered 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 under the **Has Critical Habitat** column 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.

| Birds | Status | Has Critical Habitat | Condition(s) |
|---|------------|----------------------|--------------|
| Piping Plover (<i>Charadrius melodus</i>) Population: except Great Lakes watershed | Threatened | Final designated | |
| Red Knot (<i>Calidris canutus rufa</i>) Population: Wherever found | Threatened | | |
| Roseate tern (<i>Sterna dougallii dougallii</i>) Population: northeast U.S. nesting pop. | Endangered | | |
| Flowering Plants | | | |
| Seabeach amaranth (<i>Amaranthus pumilus</i>) Population: Wherever found | Threatened | | |
| Mammals | | | |
| Northern long-eared Bat (<i>Myotis septentrionalis</i>) Population: Wherever found | Threatened | | |
| Reptiles | | | |
| Hawksbill sea turtle (<i>Eretmochelys imbricata</i>) | Endangered | Final designated | |



United States Department of Interior
Fish and Wildlife Service

Project name: Tower Project

| | | | |
|--|------------|------------------|--|
| Population: Wherever found | | | |
| Kemp's Ridley sea turtle <i>(Lepidochelys kempii)</i> Population: Wherever found | Endangered | | |
| Leatherback sea turtle <i>(Dermochelys coriacea)</i> Population: Wherever found | Endangered | Final designated | |
| Loggerhead sea turtle <i>(Caretta caretta)</i> Population: Northwest Atlantic Ocean DPS | Threatened | Final designated | |



United States Department of Interior
Fish and Wildlife Service

Project name: Tower Project

Critical habitats that lie within your project area

There are no critical habitats within your project area.



United States Department of Interior
Fish and Wildlife Service

Project name: Tower Project

Appendix A: FWS National Wildlife Refuges and Fish Hatcheries

There are no refuges or fish hatcheries within your project area.

Background and Basis for Determination

The presence of the proposed instrumentation tower and its associated guy wires would present a collision risk to birds and bats flying in the vicinity of Wallops Island. Substantial numbers of migratory and resident birds are present on Wallops Island throughout the year due to its coastal location and its proximity to the Atlantic Flyway, a major migratory bird corridor along the East Coast of the United States. In addition, two Federal-listed threatened bird species, the piping plover (*Charadrius melodus*) and the rufa subspecies of the red knot (*Calidris canutus rufa*), have been documented at WFF. Although not documented at WFF, the range of the Federal-listed threatened northern long-eared bat (*Myotis septentrionalis*) includes Accomack County; thus, it is reasonable to assume this listed bat species could occur at or in the vicinity of Wallops Island during non-hibernating summer months (i.e., approximately April to August).

Mitigation Measures Included in the Proposed Action

The USAF and NASA have determined the potential for impacts on bird and bat species from the Proposed Action (see Species Conclusion Table). These data have been used by the USAF and NASA in early project planning to identify specific mitigation measures to reduce the potential impacts of the Proposed Action to these species.

These measures, which have been proactively incorporated into the Proposed Action under either build Alternative, are based on these data, other available research, best management practices (BMPs), and current WFF policies. The USAF and NASA consulted several sources to develop the details of these mitigation measures, including the USFWS Tower Guidelines (USFWS 2016); consultation with the Federal Communications Commission (FCC); and Michigan State University's Fewer Lights Safer Flights program (Michigan State University 2016).

The USFWS Tower Guidelines identify 12 BMPs to be considered and used, where possible, in tower design and construction. Based on the analysis conducted by the USAF and NASA, the following eight BMPs from the USFWS Tower Guidelines would be included as part of the Proposed Action:

- **Guideline #1:** If constructing multiple towers, providers should consider the cumulative impacts of all of those towers to migratory birds and threatened and endangered species, as well as the impact of each individual tower. **Compliance:** This proposed instrumentation tower is the only tower being considered for construction on Wallops Island at this time.
- **Guideline #2:** If taller (i.e., greater than 199 feet above ground level [AGL]) towers requiring lights for aviation safety must be constructed, the minimum amount of pilot warning and obstruction avoidance lighting required by the Federal Aviation Administration (FAA) should be used. **Compliance:** The proposed tower would use the minimum amount of pilot warning and obstruction avoidance lighting required by the FAA; the number and configuration of such lighting would be determined as project planning and design continues.
- **Guideline #3:** Tower designs using guy wires for support that are proposed to be located in known raptor or water bird concentration areas or daily movement routes, or in major diurnal migratory bird movement routes or stopover sites, should have daytime visual markers on the wires to prevent collisions by these diurnally moving species. **Compliance:** The proposed tower would include daytime visual markers. Current plans include either orange-ball or yellow-spiral type diverters on the outer-most guy wires.
- **Guideline #4:** Towers and appendant facilities should be sited, designed, and constructed so as to avoid or minimize habitat loss within and adjacent to the tower footprint. **Compliance:** The proposed tower would be located near existing infrastructure. The tower base and support building, under the Preferred Action Alternative, would be located in an area currently maintained as mowed lawn. Guy anchor points have been sited so as to avoid impacts on wetlands.

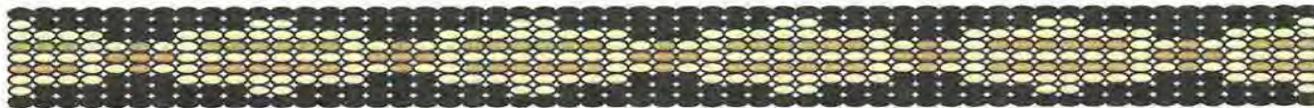
- **Guideline #5:** In order to reduce the number of towers needed in the future, providers should be encouraged to design new towers structurally and electrically to accommodate the applicant/licensee's antennas and comparable antennas for at least two additional users (minimum of three users for each tower structure), unless this design would require the addition of lights or guy wires to an otherwise un-lighted and/or un-guyed tower. **Compliance:** The proposed tower would provide sufficient space for the USAF, NASA, and NASC equipment, as this is a joint project, consolidating equipment onto a single tower; there would be additional space potentially available to support other tower users.
- **Guideline #6:** Security lighting for on-ground facilities and equipment should be down-shielded to keep light within the boundaries of the tower site. **Compliance:** All exterior lighting would be down-shielded and activated by motion sensors to reduce lighting to the maximum extent possible.
- **Guideline #7:** If a tower is constructed or proposed for construction, service personnel or researchers from the Communication Tower Working Group should be allowed access to the site to conduct studies. **Compliance:** Should the Communication Tower Working Group require access to the tower, the Group must coordinate with NASA (the landowner) to obtain access, following all required safety and security protocols. In addition, in consultation with interested stakeholders, the USAF and NASA would prepare, implement, and monitor a project-specific mitigation plan. The USAF and NASA have engaged a recognized expert in avian migration and communication tower impact concerns to assist in preparing and implementing this post-construction monitoring plan. At a minimum, this monitoring plan would include systematic, frequent mortality searches during the both shorebird and songbird migration periods. This plan is being developed as part of the NEPA process and will be provided once completed. The information obtained through this monitoring effort would be provided to wildlife management agencies, academic institutions, and conservation organizations.
- **Guideline #8:** Towers no longer in use or determined to be obsolete should be removed within 12 months of cessation of use. **Compliance:** End-of-life instructions for this proposed tower would include removal of the entire tower structure within 12 months of cessation of use. All DoD projects are required to plan for and document required system disposal activities that would be implemented at the end of a project's life.

Section 106 Consultation Documentation

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Catawba Indian Nation
Tribal Historic Preservation Office
1536 Tom Steven Road
Rock Hill, South Carolina 29730

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



March 8, 2016

Attention: Shari Miller
NASA Goddard Space Flight Center
Wallops Flight Facility
Wallops Island, VA 23337

| Re. THPO # | TCNS # | Project Description |
|------------|--------|--|
| 2016-517-1 | | Proposed construction and operation of an instrumented tower on Wallops Island, VA |

Ms. Miller,

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

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

Sincerely,

Wenonah G. Haire
Tribal Historic Preservation Officer

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DEPARTMENT OF THE AIR FORCE
AIR FORCE CIVIL ENGINEER CENTER
JOINT BASE SAN ANTONIO LACKLAND TEXAS



July 6, 2017

MEMORANDUM FOR: Ms. Laura Lavernia
Virginia Department of Historic Resources
2801 Kensington Avenue
Richmond, VA 23221

SUBJECT: Air Force Tower Construction Project on Wallops Island, VA
DHR File No. 2014 – 0946

In response to the Virginia Department of Historic Resources (DHR) letter dated April 4, 2017 (Attachment 1), a Phase II- Cultural Resources Analysis (Attachment 2) was completed based on the information that you requested.

The Phase II work included: 1) a reconnaissance-level survey following the DHR's *Guidelines for Conducting Historic Resources survey in Virginia*, October 2011; 2) amending Figure 1 (from the prior Phase I report) to further identify the locations, names, and total heights of existing vertical structures that share the coastline with the proposed tower; and 3) representative photographs with visual simulations of the proposed tower geo-located and to scale on the alternative sites to determine if the historic properties' higher surrounding elevations and vegetation would "screen" the proposed tower.

As requested, the attached report includes a reconnaissance level survey to support the potential historic district determination. The report also provides visual simulations and representative photographs that clarify the rationale in support of the determination that there would be no adverse effect to cultural resources. The Air Force requests your review of the attached report and confirmation that we have provided your office with the necessary information to comply with Section 106 of the National Historic Preservation Act.

We request your review and comment within 30 days from receiving this letter. Please provide any comments to me at michael.ackerman.2@us.af.mil (210) 925-2741.

Sincerely,

MICHAEL ACKERMAN
Air Force Civil Engineering Center
NEPA Division (AFCEC/CZN)

2 Attachments:

1. April 4, 2017 Letter
2. Phase II Cultural Resources Analysis



April 4, 2017

Michael Ackerman
Air Force Civil Engineering Center
NEPA Division (AFCEC/CZN)

RE: Air Force Instrumented Tower Project on NASA Wallops Island Flight Facility
Wallops Island, Accomack County, VA
DHR File No. 2014 – 0946

Dear Mr. Ackerman:

The Virginia Department of Historic Resources (DHR) has received additional information regarding the above referenced project for our review and comment pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended and the *Programmatic Agreement Among the National Aeronautics and Space Administration, the Virginia State Historic Preservation Office, and the Advisory Council on Historic Preservation Regarding the Management of Facilities, Infrastructure, and Sites at the National Aeronautics and Space Administration's Wallops Island Flight, Facility, Wallops Island, Accomack County, VA*. DHR understands that the project scope consists of the construction of a 750-ft. guyed communications tower.

This correspondence is in response to materials submitted on March 9, 2017, and also serves as a general recapitulation of this application submitted for review:

- 1) **Area of Potential Effect (APE) determination:** In a letter dated January 14, 2016 written by Roger Kirchen, Director of Review and Compliance, DHR concurred with NASA's Area of Direct Effect to be the "circle of the proposed guy wires." Insofar as indirect effects, DHR concurs with the Indirect APE identified in URS Figure 1, which extends the original 3 mile buffer an additional 3.5 miles to include the NRHP-listed Assateague Beach Coast Guard Station (DHR ID #001-0172).
- 2) **Wisharts Point Road, potential historic district:** URS consultants identified a potential historic district. In order for these determinations to be reviewed, a reconnaissance level survey needs to be completed. Survey documentation needs to be recorded in the Virginia Cultural Resource Information System (VCRIS). Link to VCRIS/Survey Guidance: http://www.dhr.virginia.gov/survey/Survey_guidance.htm. DHR's survey guidelines are found here: http://www.dhr.virginia.gov/pdf_files/Survey%20Manual-RevOct.2011Final.pdf. Please note, since 2011 we no longer require printing on archival paper, and the most recent photo survey guidelines are found here: http://dhr.virginia.gov/pdf_files/DHR_Architectural_Survey_Photo_Policy_2016.pdf

- 3) **Visual effects of the proposed guyed tower structure:** In order to make an informed recommendation on the indirect visual impact, our office kindly requests the following:
- a. URS Figure 1 points out the location of existing vertical structures that share the coast-line with the proposed tower. Please amend Figure 1 to further identify these keyed items providing their names and total heights.
 - b. **Further clarification of the rationale for no adverse effect.** In the report provided, URS states that the tower will be visible, but its effects will not be adverse. Three (3) historic structures fall within the agreed-upon Indirect APE identified in Figure 1, in addition to the proposed Wisharts Road Historic District and the Assateague Beach Coast Guard Station. Please provide representative photos from these historic sites with a geo-located tower to scale depicting effect, if possible. For example, regarding Wharton Place (DHR ID #001-0050), this simulation would assist in determining if the historic property's higher elevation and surrounding vegetation would, in fact, make the proposed tower not visible.

We look forward to receiving this information, thank you for your efforts and work thus far. If you have any questions regarding these comments, please do not hesitate to contact me at (804) 325-8473 or email Laura.Lavernia@dhr.virginia.gov

Sincerely,



Laura Lavernia, Architectural Historian
Review and Compliance Division

Wallops Island Tower Cultural Resources Analysis – Phase II
Task Order 08-12-2017 / GSA Environmental Services (ES) Schedule GS-00F-188CA
Technical Memorandum
June 2017

URS Group, Inc. (URS) completed follow-up work under Task Order 08-12-2017 related to our prior cultural resources analysis performed in support of the United States Air Force's (USAF) proposed action to build and operate an approximately 750-foot tall, guyed instrumentation tower on Wallops Island at WFF (i.e., the undertaking). The undertaking has not changed since the review response provided by the Virginia Department of Historic Resources (DHR, or State Historic Preservation Office [SHPO]), dated April 4, 2017. Per a request by the Virginia SHPO, URS conducted a reconnaissance-level architectural survey of Wisharts Point Road potential historic district, consisting of eight architectural properties, within the project Area of Potential Effects (APE) for visual effects, defined as the project area plus any area with a potential for visual effects. Additionally, URS amended Figure 1 (attachment 1; prepared for the previous Phase I report) at the request of the SHPO to further identify the locations, names, and total heights of existing vertical structures that share the coastline with the proposed tower, and is providing representative photographs with the proposed tower geo-located and to scale to depict the potential visual effects from the locations of three (3) historic structures. The results of this survey are detailed in this technical memorandum.

Project Background

Consideration of effects on cultural resources is mandated both by NEPA and by Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S.C. 470-470w-6). Section 106 requires federal agencies to take into account the effects of their undertakings on historic properties and to afford the Advisory Council on Historic Preservation (ACHP) an opportunity to comment on such undertakings. The procedures for implementing Section 106 are contained in 36 CFR Part 800, Protection of Historic Properties.

The purpose of this Phase II work was to assist USAF in obtaining SHPO concurrence on the determination of no affect to historic properties from the undertaking at NASA WFF in Accomack County, Virginia. The proposed galvanized steel tower would be approximately 750 feet tall and would be anchored by three sets of guy wires aligned at 120 degree increments around the tower center point. The tower would be illuminated in accordance with Federal Aviation Administration guidelines.

URS previously was contracted by LJT on behalf of NASA to review the potential for the undertaking to effect historic properties within the direct and indirect APE. Upon recommendations from the SHPO, URS developed a 3-mile radius indirect (visual) APE. The direct APE consisted of the proposed tower footprint and associated cable runs and equipment shelters.

On January 14, 2016, the SHPO concurred with the direct and indirect APE, with the recommendation that the indirect APE be extended 3.5 miles to the northeast to include the National Register of Historic Places (NRHP)-listed Assateague Beach Coast Guard Station

(DHR ID #001-0172) due to the relatively unimpeded view from the Station to the proposed tower location.

The Phase I cultural resources analysis was provided to the SHPO for review and concurrence on March 9, 2017. The URS finding determined that while the proposed communications tower may have a visual effect on the six above-ground historic properties and the potential historic district at Wisharts Point Road, any effects would not be adverse. In a letter dated April 4, 2017, the SHPO responded to the Phase I cultural resources analysis concerning the undertaking. In that letter, the SHPO requested additional information concerning the undertaking and its potential effects on historic properties.

Therefore, this Phase II work addresses the items requested by the SHPO in the April 4, 2017 letter, including: 1) conducting a reconnaissance-level survey of the Wisharts Point Road potential historic district following the DHR's *Guidelines for Conducting Historic Resources survey in Virginia*, October 2011; 2) amending Figure 1 (from the prior Phase I report; see Attachment 1) to further identify the locations, names, and total heights of existing vertical structures that share the coast-line with the proposed tower; and 3) providing representative photographs with visual simulations of the proposed tower geo-located and to scale to depict the potential visual effects from three (3) historic structures, the proposed Wisharts Point Road Historic District, and the Assateague Beach Life-Saving Station, to assist in determining if the historic properties' higher surrounding elevations and vegetation would "screen" the proposed tower.

Project Methodology

Prior to fieldwork, URS completed a background review, which consisted of searching DHR's Virginia Cultural Resource Information System (VCHRIS) website and survey file records, as well as examining historic maps and photographs, aerial imagery, and historical publications. In addition, URS utilized online research from various regional and national libraries, including the Library of Congress, Library of Virginia, Virginia Historical Society, and the Chesapeake Bay Maritime Museum. This research included a review of records on the proposed Wisharts Point Road Historic District.

Communications were conducted with the Collections Manager at the Eastern Shore of Virginia Historical Society in Onancock, and the Executive Director at the Eastern Shore Watermen's Museum and Research Center for relevant materials on the proposed Wisharts Point Road Historic District. Since the Wisharts Point Road Historic District is located in the Chesapeake/Atlantic Preservation Area (CAPA), contact was also made with the Accomack County Department of Planning and Community Development to determine if any previous surveys took place in or near the project APE.

A reconnaissance-level architectural survey was completed on resources that met the NRHP age criteria of 50 years or older by the year of 2020 (construction date of 1970). During the survey, each of the eight historic houses located in the proposed historic district were documented through photographs capturing the primary elevation, oblique angles, and the general setting. The historic district was evaluated for NRHP potential under three criteria: Criterion A, for its

association with events that have made a contribution to the broad patterns of our history; Criterion B, for its association with people significant in our nation's history; and Criterion C, for its embodiment of distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or possess high artistic values. Criterion D, the potential to yield information important in history, was not evaluated as part of this investigation. NRHP criteria considerations were taken into account only where necessary.

Visits to local Accomack County archival repositories that had the highest potential for containing relevant historical materials on the proposed Wisharts Point Road Historic District occurred simultaneously with the reconnaissance-level survey. Once the reconnaissance-level architectural survey was completed, research was conducted in the Eastern Shore Room of the Eastern Shore Public Library in the Town of Accomac. Using information obtained during the survey, URS generated a new DHR VCRIS form and made recommendations on NRHP potential for the proposed Wisharts Point Road Historic District. Fieldwork was conducted by Lorin Farris and Brian Cleven on May 19, 2017. Ms. Farris and Mr. Cleven exceed the *Secretary of the Interior's Professional Qualification Standards* (36 CFR Part 61) in the disciplines of architectural history and/or history (see Attachment 2 for resumes).

Representative Photographs with Geo-Located Tower to Scale

Per a request by the SHPO, URS was contracted to provide representative photographs with geo-located visual simulations of the proposed tower to scale to depict effects from five historic properties: the proposed Wisharts Point Road Historic District, Assateague Beach Coast Guard Station (VDHR ID #001-0172), Wharton Place (DHR ID #001-0050), Mount Wharton (DHR ID #001-0052), and 31545 Point Breeze Lane, a dwelling built in circa 1890 that is located within the indirect APE and is eligible for the NRHP and Virginia Landmarks Registry [VLR]. Photographs used to create computer-simulated images of the proposed instrumentation tower to convey the visual impacts on the historic resources required using a camera with a 50mm lens. Photographs were taken on May 19, 2017. The day was notable for its clear skies and low humidity.

If vegetation was blocking the view of the proposed tower, the geo-located visual simulations of the proposed tower were illustrated on a white screen to depict their relationship to the landscape. These simulations are shown on Figures 1 through 6. Each illustration is to scale and depicts the USAF's proposed tower. From each of the locations identified by the SHPO, photographs were taken of representational views from main entrances toward the project site to evaluate potential visual impacts. Assessing the visual effects from main entrances of historic properties is a standard practice, as the façade is typically the location of the historic property's significant historic features (36 CFR Part 800.5). The proposed Wisharts Point Road Historic District was the exception to this methodology. In the district, the houses face away from the proposed tower location. Consequently, photographs were taken from a point on the public right-of-way (ROW) directly across from the front entrance. Within the District, the visual simulation of the proposed tower's appearance is from 33362 Wisharts Point Road, since it has the highest possibility of visibility from the ROW as it is located closest to the tower. At 31545 Point Breeze Lane, the rear addition side entrance appears to be the primary entrance used by the house's residents. Consequently, a representative photograph was also taken from this location, as shown on Figure 6.



Figure 1. View from Wisharts Point Historic District (33362 Wisharts Point Road; with and without white screen simulation).



Figure 2. View from Assateague Beach Life Saving Station



Figure 3. View from Wharton Place (13485 Wharton Drive)



Figure 4. View from Mt. Wharton (32339 Mt. Wharton Road)



Figure 5. View from 31545 Point Breeze Road (from Front Door)



Figure 6. View from 31545 Point Breeze Road (from Rear Addition, Side Door; with and without white screen simulation)

Visual Simulation Results

Visual simulations of the proposed tower are to scale within the landscape of the five historic resources are depicted in Figures 1-6. Based on the findings, the five historic resources will not be adversely affected by the undertaking, as vegetation and/or topography has completely blocked views from the historic resources to the project area.

Background Review

As a component of this study, URS conducted a background literature and records review of the proposed Wisharts Point Road Historic District. Following VCRIS/DHR Survey Guidance and *DHR Guidelines* for survey projects, URS generated an architectural description, historic context, and statement of significance of the proposed Wisharts Point Road Historic District. Additionally, URS provided recommendations on whether the potential historic district should be given further inspection at the intensive level, and recommendations concerning potential NRHP eligibility. These findings are discussed in further detail below.

Architectural Description: Wisharts Point Historic District

Near the southeast end of Wisharts Point Road is a former agricultural and fishing community that accesses Bogue Bay and Powells Bay. The community consists of eight historic houses constructed from 1900 to 1920, of which all are located within the indirect APE (Figure 7). The houses are vernacular interpretations of the Greek Revival, Gothic Revival, Colonial Revival, and Bungalow styles. The boundary of the proposed historic district is defined as the northwest property line for 33260 Wisharts Point Road, the northeast side of Wisharts Point Road, the southeast-south peninsula of Wisharts Point Road, and the southwest property line of the eight historic houses (Figure 8).

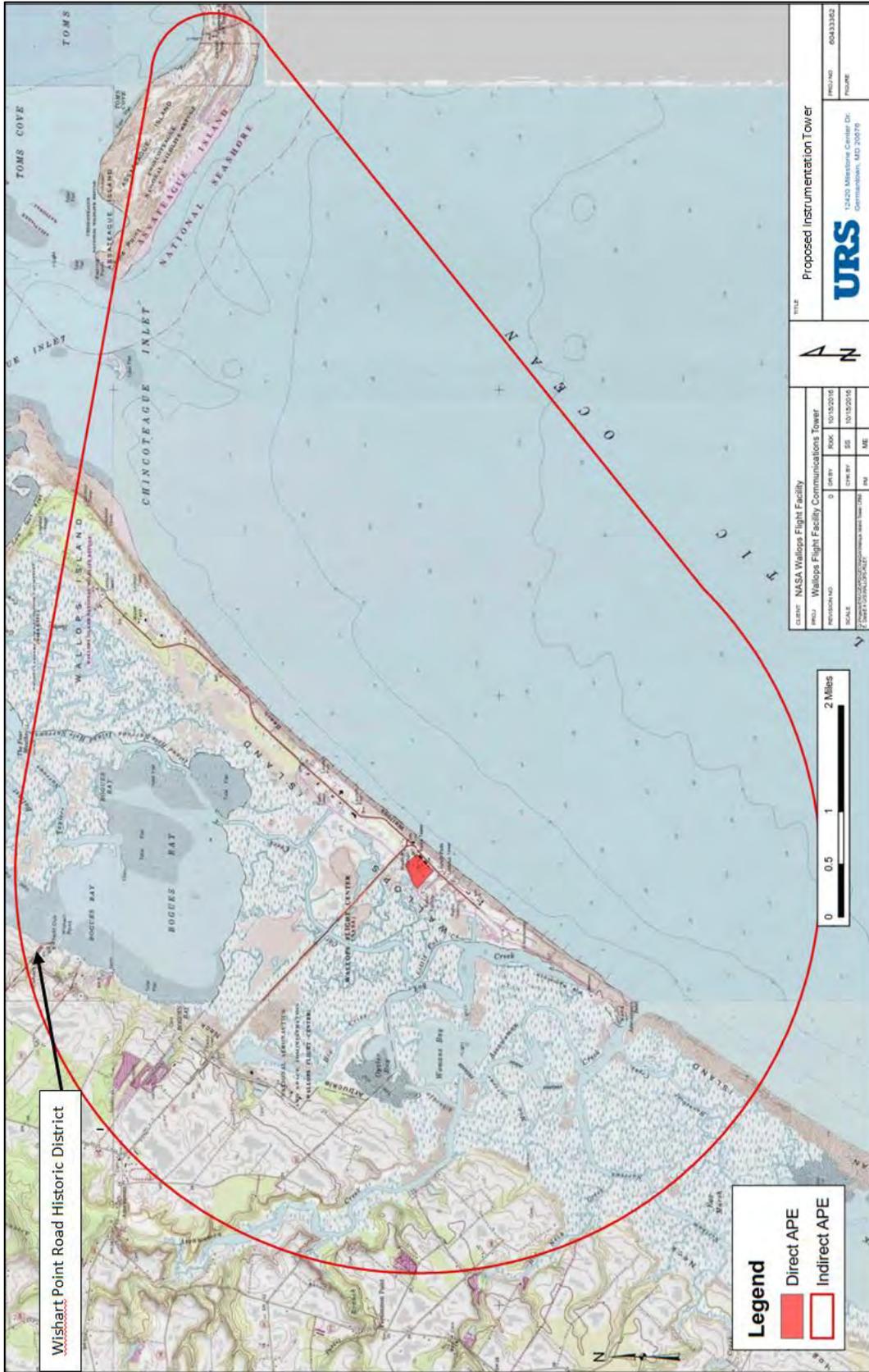


Figure 7. Project Area of Potential Effects (APE)



Figure 8. Wisharts Point Road Historic District, Aerial View (Bing)

The vernacular architecture expressed by the buildings at Wisharts Point reflects the frugality of the rural population that worked as farmers or watermen. Best described as the architecture that most people built or used during a specific time period, vernacular architecture is often evaluated in a broader context when located within a historic district, rather than at the individual building level. Although vernacular buildings lack stylistic ornamentation, they often have stylistic influences. It is also easier to describe vernacular architecture by a building's function, floor plan,

or overall building shape. Vernacular buildings are based on building traditions passed down over time and reflect the local skills, technology, and materials of the community in which they are built. Generally, builders and craftspeople, not professional architects, have led the design process (KCI 1999:D-15-16; Lanier and Herman 1997:124, 127, 138, 145, 159, 161). In vernacular architecture of the late nineteenth century and early twentieth century, builders commonly began with basic house forms and plans and then applied simplified ornamentation inspired by the fashionable styles of the time.

Ornamentation, when present, was simple and a building may have only exhibited one or two features, usually the most obvious characteristics of a style, such as porches supported by columns, pilasters, or a rectangular transom over the door flanked by sidelights inspired by the Greek Revival style; decorative, mass-produced verge boards like those found in the Gothic Revival style; decorative cornice with dentils, ornate entry with pilasters or transom, asymmetrical façade, and windows topped with cornices to the Colonial Revival style; and open floor plans, low-pitched roofs, and a large front porch by the Bungalow style (KCI 1999: D-15-16; Lanier and Herman 1997:124, 127, 138, 145, 159, 161; McAlester 2006:321).

The following brief architectural descriptions of the eight houses are presented from northwest to southeast along Wisharts Point Road, and include the identification of each building's vernacular style.

House at 33260 Wisharts Point Road

33260 Wisharts Point Road is a two-story, side-gable roofed house constructed in 1900 in the vernacular interpretation of the Colonial Revival style (Figures 9-13). The house is two bays in length and one bay in depth, and has a rectangular plan. Its roof is clad with asphalt shingles. Notable features include an interior brick chimney, and pedimented gable ends. The southeast (side) elevation has a one-and-one-half-story, gable roof extension. Alterations include vinyl siding and windows, and a one-story side and rear addition.



Figure 9. House at 33260 Wisharts Point Road, Looking Southeast



Figure 10. House at 33260 Wisharts Point Road, Looking Northwest



Figure 11. House at 33260 Wisharts Point Road, Looking North



Figure 12. Shed at 33260 Wisharts Point Road, Looking Southwest



Figure 13. Side Yard of House at 33260 Wisharts Point Road, Looking Southeast Towards the Proposed Tower Location

33288 Wisharts Point Road

The two-story, cross-gable roofed house at this location was constructed in 1920 in the vernacular interpretation of the Greek Revival style (Figures 14-17). The house has a concrete block foundation, is three bays in length and two bays in depth, and has a center-hall plan. The roof is clad with asphalt shingles, the gable ends have returned eaves, and the rear extension has an interior brick chimney. The southeast (side) elevation has a one-and-one-half-story, gable roof extension with an exterior brick chimney. The rear elevation has a two-story, gable roof extension. Alterations include vinyl siding and windows and a shed roof front porch enclosure.



Figure 14. House at 33288 Wisharts Point Road, Looking South



Figure 15. House at 33288 Wisharts Point Road, Looking North



Figure 16. House at 33288 Wisharts Point Road, Looking Northeast



Figure 17. Rear Yard of House at 33288 Wisharts Point Road, Looking Southeast Towards the Proposed Tower Location

House at 33298 Wisharts Point Road

The one-and-one-half-story, cross-gable roofed house at this location was constructed in 1920 in the Bungalow style (Figures 18-20). The house has a concrete block foundation, is three bays in length and four bays in depth, and has an asymmetrical façade. The roof is clad with asphalt shingles, has an interior brick chimney, and a cross-gable at the southeast (side) slope. The house has wood-frame, four-over-one, double-hung windows that are fronted by aluminum storm windows. The four lights in the upper sashes are vertically oriented. The half story has a fixed wood-frame window with four vertically oriented lights. The main entry has a wood door with four vertically oriented lights, is sheltered by a gable hood supported by brackets, and accessed by four brick steps. Alterations include vinyl siding and shutters.



Figure 18. House at 33298 Wisharts Point Road, Looking Southwest



Figure 19. House at 33298 Wisharts Point Road, Looking Northeast

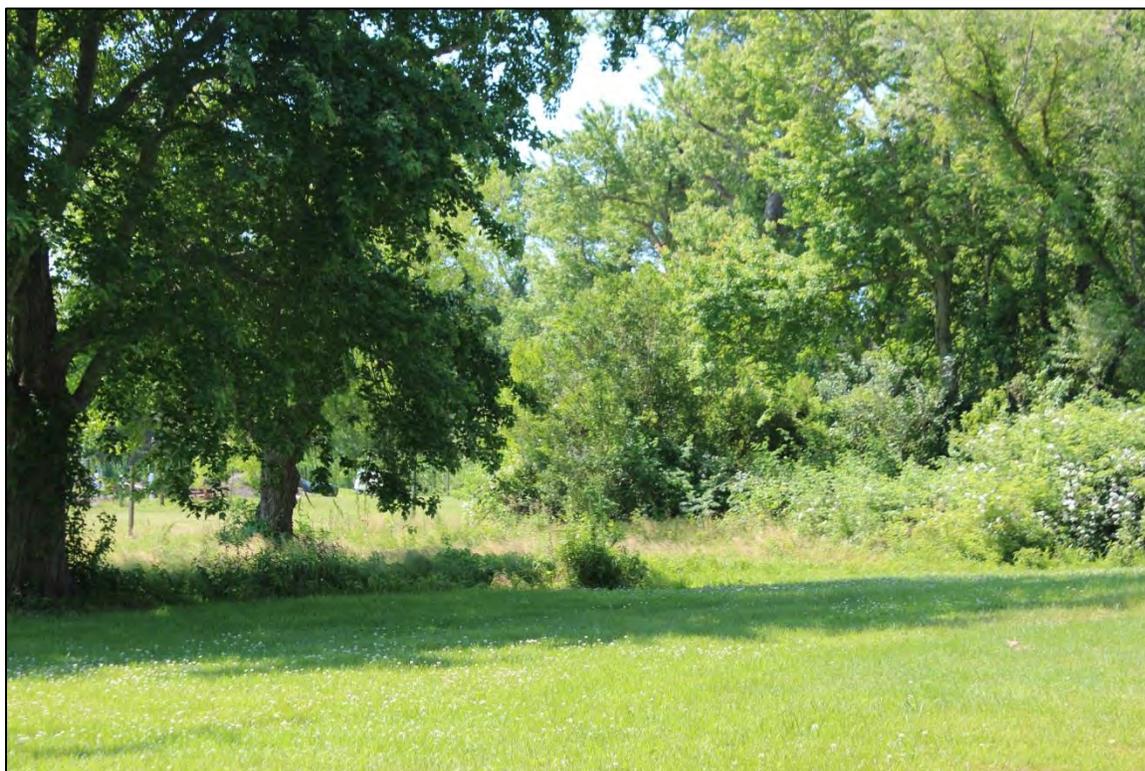


Figure 20. Rear Yard of House at 33298 Wisharts Point Road, Looking Southeast Towards the Proposed Tower Location

House at 33322 Wisharts Point Road

The two-story house at this location was constructed in 1920 in the vernacular interpretation of the Gothic Revival style (Figures 21-23). The house is three bays in width and two bays in depth, has a center-hall plan, and sits on a brick foundation. It has a side-gable roof with center gable clad with asphalt shingles. The inside of the center gable is clad with shingles. The gables have returned eaves. Alterations include vinyl siding and windows, a wrap-around-porch addition, bay window addition, and a two-story, side addition at the southeast elevation.



Figure 21. House at 33322 Wisharts Point Road, Looking Southeast



Figure 22. House at 33322 Wisharts Point Road, Looking Southwest



Figure 23. View from House at 33322 Wisharts Point Road, Looking Southeast Towards the Proposed Tower Location

House at 33332 Wisharts Point Road

The two-story house with a side-gable roof at this location was constructed in 1920 in the vernacular interpretation of the Greek Revival style (Figures 24-26). The house is three bays in width and one bay in depth, has a center-hall plan, and rests on a concrete block foundation. The roof is clad with asphalt shingles, the gables have returned eaves, and an exterior concrete block chimney pierces through the southeast gable. The centered main entry is sheltered by a gabled-roof front porch supported by wood posts. Alterations include vinyl siding and windows and a one-story, rear addition.



Figure 24. House at 33332 Wisharts Point Road, Looking Southeast



Figure 25. House at 33332 Wisharts Point Road, Looking North

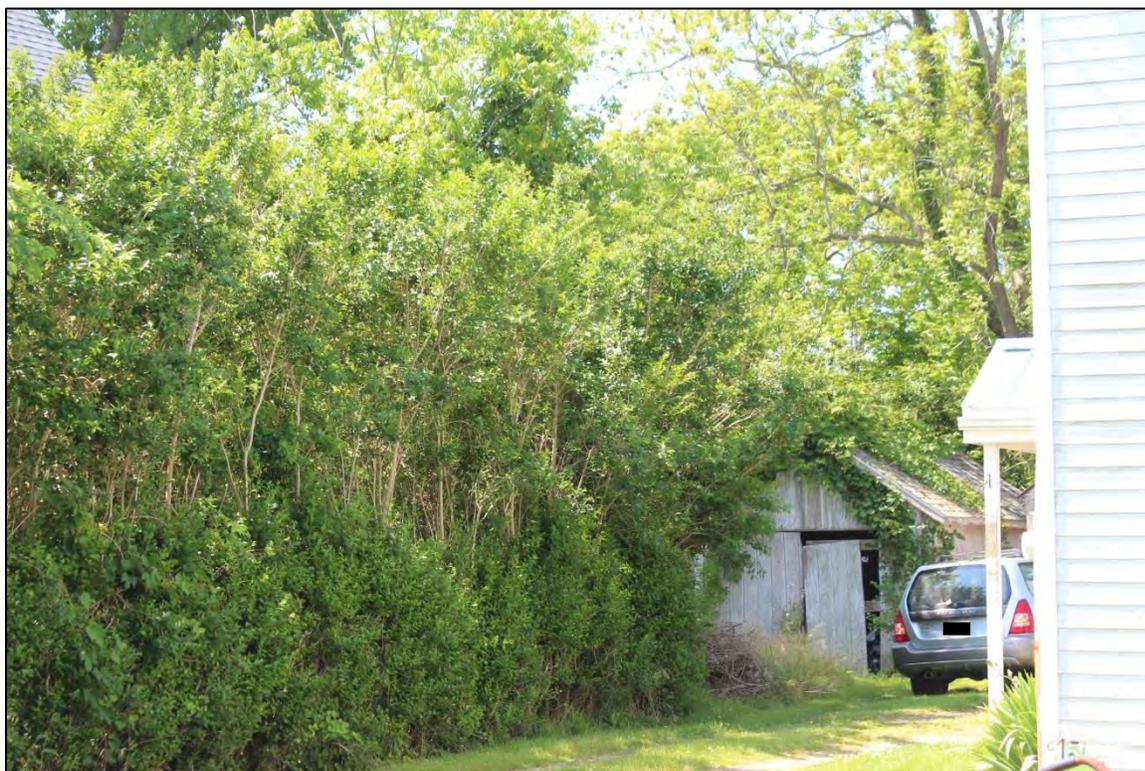


Figure 26. Rear Yard of House at 33332 Wisharts Point Road, Looking Southeast Towards the Proposed Tower Location

House at 33340 Wisharts Point Road

The two-and-one-half-story house with a front-gable roof at this location was constructed in 1900 in the vernacular interpretation of the Greek Revival style (Figures 27-29). The house is two bays in width and three bays in depth, has a rectangular plan, and sits on a rusticated concrete block foundation. The roof is clad with asphalt shingles. The gabled ends are clad with wood shingles and have returned eaves. The façade has an exterior, centered brick chimney that pierces through the gable's eave. The house has a combination of wood-frame, two-over-two, double-hung windows and vinyl-frame double-hung windows. Other alterations include vinyl siding, front porch enclosure, and a one-story, rear addition.



Figure 27. House at 33340 Wisharts Point Road, Looking Southeast



Figure 28. House at 33340 Wisharts Point Road, Looking Southwest



Figure 29. Side Yard of House at 33340 Wisharts Point Road, Looking Southeast Towards the Proposed Tower Location

House at 33348 Wisharts Point Road

The one-and-one-half-story house with a front-gable roof at this location was constructed in 1920 in the Bungalow style (Figures 30-32). The house is two bays in length and four bays in depth, has a rectangular plan, and rests on a rusticated concrete block foundation. The roof is clad with asphalt shingles. Alterations include vinyl siding and window and a replacement door at the main entry.



Figure 30. House at 33348 Wisharts Point Road, Looking Southeast



Figure 31. House at 33348 Wisharts Point Road, Looking Southwest

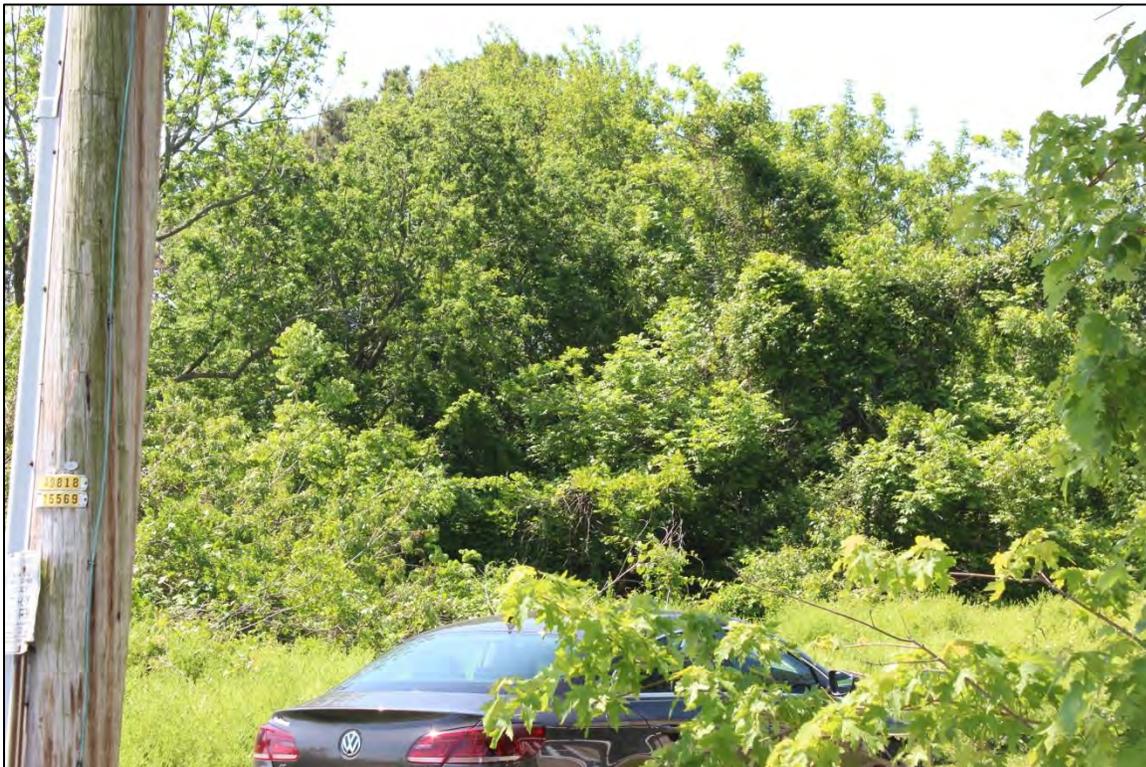


Figure 32. Rear Yard of House at 33348 Wisharts Point Road, Looking Southeast Towards the Proposed Tower Location

House at 33362 Wisharts Point Road

The two-and-one-half-story house with a side-gable roof at this location was constructed in 1900 in the vernacular interpretation of the Greek Revival style (Figures 33-36). The house is two bays in length and one bay in depth. The roof is clad with asphalt shingles and has an interior brick chimney. The gable ends have eave returns. The house has wood-frame, three-over-one, double-hung windows that are covered with aluminum storm windows. The three lights in the upper sashes are vertically oriented. The off-centered main entry has a wood door with four lights in the upper half that are vertically oriented. The main entry is also sheltered by a gable canopy with pediment that is supported by decorative metal posts that rest on a concrete stoop accessed by two concrete steps. The rear elevation has a gabled-roof, two-story extension that is two bays in depth and one bay in length, and has an interior brick chimney. The extension's side elevation has a one-story porch enclosure. Alterations include asbestos siding, a shed addition near the extension's west corner, and the extension's porch enclosure.



Figure 33. House at 33362 Wisharts Point Road, Looking Southeast



Figure 34. House at 33362 Wisharts Point Road, Looking Southwest



Figure 35. House at 33362 Wisharts Point Road, Looking Northwest



Figure 36. Side and Rear Yard of House at 33362 Wisharts Point Road, Looking Southeast Towards the Proposed Tower Location

Summary: Historic Significance

The potential historic district located at Wisharts Point Road consists of eight vernacular historic properties constructed at the beginning of the twentieth century. During this time period, Accomack County, Virginia was profiting from a plentiful seafood industry and agricultural economy. The region depended on water transportation, such as steamboats, to move seafood products and produce to larger markets. With the arrival of the New York, Pennsylvania and Norfolk Railroad in 1884, Accomack County would continue to prosper economically and with the opening of new markets and the beginning of the tourist industry. During the early 1880s, a wharf was constructed at the end of Wisharts Point Road that was used by steamboats to transport goods, mail, and passengers. Wisharts Point was a stop on the mail and passenger route to Franklin City and Chincoteague Island. By 1910, majority of the population that lived on Wisharts Point Road were white, rented their houses, and worked as general farmers or watermen. There was a small African-American or mixed-race population living on Wisharts Point Road as well who also worked as laborers or watermen. In 1910, a small hotel was built at Wisharts Point wharf, which was later moved in the 1920s to Chincoteague Island to service the sports fishermen during the autumn months. With the completion of the Chincoteague Causeway in 1922, and the U.S. government's replacement of mail-boat routes from Wisharts Point to Chincoteague, the wharf at Wisharts Point Road became obsolete. The period of significance for the potential historic district located at Wisharts Point Road is 1881, with the first mention of steamboats stopping at Wisharts Point, to 1923, when the wharf was no longer used for mail or passenger service. The potential historic district located at Wisharts Point Road is eligible for listing in the NRHP under Criterion A because of its association with events that have made a

contribution to the broad patterns of Accomack County, Virginia's maritime and transportation history.

Wisharts Point Historic Context

The potential historic district is located at Wisharts Point Road, route 695, in the northeast portion of Accomack County, Virginia. The wharf located at the end of Wisharts Point Road provides access to Bogue Bay to the southeast, Watts Bay to the northeast, and eventually to the Atlantic Ocean. The nearest populated area to Wisharts Point Road is the town of Atlantic to the northwest, and from the water is Chincoteague Island to the northeast. Accomack County's principal industries have been agriculture and the seafood industry. The fertile lands provided a wealth of vegetables, grains, and potatoes, while the shallow waters and tidal flats supplied oysters, clams, crabs, and fish (Badger 2009:7). Wisharts Point was a convenient location for farmers and watermen because of the fast and nearby access to the bay and the ocean. These water highways delivered such products to eager markets in Baltimore, Philadelphia, Norfolk, and other cities. In 1884, the New York, Pennsylvania and Norfolk Railroad (NYP&N) came through Accomack County and became the dominant way of getting food to markets well into the 1920s and 1930s (Badger 2009:7). These larger markets, speedy rail travel, and refrigerated railroad cars gave the seafood industry in Accomack County national attention (Badger 2009:10). The railroad would also trigger the modern era of tourism in Accomack County. Although the railroad brought hard competition for steamboats, they continued to play a role in the transportation of people, goods, and mail until the arrival of the U.S. Route 13 in 1926 and State Route 175 in 1930 (Whitelaw 1989: 46).

The eight historic properties located at the southeast end of Wisharts Point Road are possibly associated with the small town of Atlantic, Virginia. Located northwest of Wishart's Point Road, the town of Atlantic for many years was a one road town (Mariner 2008:104). The main thoroughfare of Atlantic was originally identified as Seaside Road; by the early 1900s it was called Main Street, and most recently Atlantic Road. The town during the early 1900s consisted of two churches, the Atlantic United Methodist Church and St. Johns Methodist Church, about a dozen wood-frame residential buildings, two segregated school buildings (African-American children attended the Oaks Colored School located south of the village in the section known as "the Oaks" and white children attended a school building [name unknown] located in the center of town), and the Warner general store (burned in 1954) (Mariner 2008:104 & 106). Although the town of Atlantic was the closest to Wisharts Point, the small cluster of buildings also had a close association with Chincoteague Island because of mail-boat routes back and forth between Wisharts Point and Franklin City to Chincoteague.

During the third quarter of the 19th century, the property around Wisharts Point Road was originally owned by the Taylor family. Instead of having the property stay in the family, the land was auctioned off because the family was split on who should receive ownership (Mascari 1996). As early as August 1881, steamboats would leave Franklin City for Wisharts Point on Wednesdays and Fridays at 6:30 A.M. and return for Franklin City by 12 M (sic) with stopovers at Chincoteague Island and Bloodgood's Wharf (*Peninsula Enterprise* August 18, 1881). The route was run by the Old Dominion Steamship Company. Later in 1883, the Old Dominion

Steamship Company replaced the existing wharf at Wisharts Point with a larger one to handle the increased trade (*Peninsula Enterprise* April 5, 1883).

The wharf at Wisharts Point was also a lifeline for local farmers to tap into other markets. One major crop in Virginia's Eastern Shore was Irish potatoes. In 1895, farmers could load their potatoes at Wisharts Point for 20 cents per barrel onto a schooner bound for the Philadelphia market, and for 5 cents more farmers could tap into the New York market (*Peninsula Enterprise* July 13, 1895). Businesses would establish themselves at Wisharts Point to profit from the seafood industry. In 1895, the oyster shucking house of Emory & Dutton would build a large oyster packing house at Wisharts Point (*Peninsula Enterprise* November 30, 1895). In September 1902, the oyster shucking house of Taylor & Lockwood opened for business at Wisharts Point (*Peninsula Enterprise* September 20, 1902). The firm would eventually become Lockwood & Company, and would leave Wisharts Point in 1912 to expand their business at a larger scale (*Peninsula Enterprise* August 17, 1912). Wisharts Point was also a public location where business disputes were resolved. In 1907, Wisharts Point was the location where the State Oyster Inspector of District No. 1 heard arguments from two men and their attorneys that had the same claim over an oyster bed (*Peninsula Enterprise* May 4, 1907).

Wisharts Point provided a way for the surrounding population to travel to other areas of the Eastern Shore. In August 1882, the steamer *Widgeon* was advertised with a special excursion from Wisharts Point to Chincoteague and Franklin City for a fare of 30 cents. Passengers could expect meals, ice cream, and confectioneries at moderate prices and would leave at 8:30 a.m. (*Peninsula Enterprise* August 3, 1882). The following year, towards the end of the summer, there were excursions from Wisharts Point to Ocean City via Chincoteague and Franklin City. The roundtrip would cost 75 cents with passengers leaving at 8:00 a.m. and returning by 7:00 p.m. (*Peninsula Enterprise* August 9, 1883). The steamer *Lillie*, under the control of Captain S.E. Matthews, towed a barge to accommodate 150 people from Wisharts Point to Chincoteague for special events (*Peninsula Enterprise* July 18, 1896). Wisharts Point was also a popular location for entertainment. In August of 1893, the public enjoyed boat races that were followed by a large picnic with delicacies of the season (*Peninsula Enterprise* August 12, 1893).

In October 1896, the Wisharts Point wharf would have to be rebuilt after a strong storm destroyed the wharf. The storm carried away wood and lumber owned by the company of Matthews & Taylor, and it caused damage to boats and other property at or near the wharf (*Peninsula Enterprise* October 17, 1896). Another storm in 1897 caused damage to nearby boats and the wharf at Wisharts Point. The company of Matthews & Taylor was affected again with over 100 cords of wood and other materials were carried away by the high tide. The Wishart Point Transportation Company, who had a house and dock at Wisharts Point, were both swept away with nothing remaining except for the dock's pilings (*Peninsula Enterprise* October 30, 1897). The Wishart Point Transportation Company recovered from the 1897 storm and by 1899 the company was being praised for providing continued service of mail delivery during a deep freeze with frigid temperatures of 4 degrees below freezing (*Peninsula Enterprise* February 25, 1899). In 1902, under a partnership formed by Jonathan H. Matthews and Peter J. Gillespie, the Wishart Point Transportation Company would carry mail and passengers from the NYP&N to Chincoteague and return via Wisharts Point. Passengers would pay 75 cents for the journey (*Peninsula Enterprise* October 4, 1902).

As early as 1896, public support was being gathered to ask the post office to establish a mail route from Chincoteague via Wisharts Point to connect with the railroad at Oak Hall station (*Peninsula Enterprise* August 15, 1896). In October 1896, more petitions for support of a mail route from Bloomtown via Wisharts Point circulated locally (*Peninsula Enterprise* October 31, 1896). The establishment of these mail routes would support faster delivery of the mail from southern areas that had to go through Philadelphia or New York and took three or four days for delivery. By 1899, Wisharts Point became part of a new mail route that traveled to Chincoteague and continued up to Franklin City (*Peninsula Enterprise* January 14, 1899; Mariner 1996:80). Delivering the mail was a profitable business because mail-boats could carry both the mail and passengers. In 1913, the mail/passenger route was so popular that Captain Willard Taylor agreed to ferry the mail for less than one dollar, and later mentioned he would have paid as much as \$50 a year to run the profitable route (Mariner 1996:80).

The majority of the people living along Wisharts Point Road at the turn of the twentieth century worked as general farmers or watermen, and rented their properties. The 1910 U.S. Federal Census shows a total of eighteen households along Wisharts Point Road (1910 U.S. Federal Census). Most of the population living on Wisharts Point Road were white and were Virginia born. These white families worked as net fishermen, hucksters that sell fish, coopers that made truck barrels, boarding house managers, and general store workers and owners. Out of the fifteen white households, five owned their homes. There were three African-American or mixed-race families living on Wisharts Point Road in 1910 (1910 U.S. Federal Census). These African-American and mixed-race families were Virginia born, had little to no education, rented their houses, and worked as laborers or as watermen.

By 1910, Wisharts Point wharf had a hotel that was sometimes referenced as Wisharts Point Hotel, or Hotel Massey (Mascari 1996). Described as having a long front porch and facing the water, the hotel was possibly owned by Lee W. Massey, who is noted in 1911 as owning a store at Wisharts Point near the town of Atlantic (*Peninsula Enterprise* November 25, 1911). The Wisharts Point Hotel changed ownership over the years. In 1918, there is a reference of the hotel being owned by S. Wilkins Matthews, and in the 1920s the hotel was purchased by William C. Bunting, Jr. (Mascari 1996).

The glory days of the steamboat route between Chincoteague and Wisharts Point Wharf would come to a close with the completion of the Chincoteague Causeway in 1922. In 1919, John B. Whealton established the Chincoteague Toll Road and Bridge Company with the goal of connecting the mainland of the Eastern Shore to Chincoteague. Whealton was a native of Chincoteague Island who owned his own construction company in Florida that specialized in building roads with a mixture of oyster shells and dirt (Turman 1964:225). In 1918, he returned to Chincoteague and organized a stock company to build a road and bridge system to connect the island to the mainland. By the winter of 1918, Whealton submitted an application to the State Corporation Commission for a charter for the Chincoteague Toll Road and Bridge Company. In January 1919, the charter was granted and in September 1919 a permit to cross the marshes and salt water creeks was approved by the Virginia General Assembly. Whealton was awarded a \$144,000 contract for the construction of the road and bridge system and began work on March 1, 1920 (Turman 1964: 226 ; Mariner 1996:106).

On November 15, 1922, the Chincoteague Toll Road and Bridge opened to the public with over 3,000 visitors attending the ceremony, many of which were eager to drive their automobiles over the causeway (Mariner 1996:111). The day of the opening ceremony unfortunately was plagued by rain, making the causeway muddy and impassable (Mariner 1996:112). The poor road conditions caused ninety-six cars to be stranded in the middle of the marshlands (Turman 1964:226). The next two days following the opening ceremony were spent using barges to ferry the stranded cars to Wisharts Point or Franklin City (Turman 1964:227). This would be the last time cars from Chincoteague would cross to the mainland to Wisharts Point and Franklin City (Mariner 1996:113). The causeway's initial construction consisted of soil pumped from creeks and marshes that was then trapped between pilings sunk into the marsh, and overlaid with oyster shells and stones (Mariner 1996:106). By December 1922, Whealton's company rebuilt and reinforced the causeway by adding oyster shells covered with soil (Turman 1964:227). During the spring of 1923, the success of the Chincoteague Causeway was affirmed when the U.S. government replaced mail-boat routes from Franklin City and Wisharts Point to Chincoteague through use of the Chincoteague Causeway (Mariner 1996:113).

During the 1920s, the Chincoteague Causeway made the island more accessible to tourists and it eventually became a popular destination for sports fishermen during the autumn months. This created a need for "tourist homes" that would take in temporary boarders or "roomers" (Mariner 1996:124). William Bunting, the owner of the hotel at Wisharts Point, moved the hotel building on a monitor from Wisharts Point to Chincoteague Island. The hotel was newly situated opposite the Carnival Grounds at 3639/3641 Main Street (Mariner 1996:124). Eventually, the hotel was sold in 1930 by William Bunting to two couples for \$1,800: Samuel and Atlanta Jones Taylor, and Irving W. and Amy Bowden (Land Records of Accomack County, Virginia A138:187). Atlanta Jones Taylor and Irving W. Bowden were half brother and sister (Mascari 1996). The Taylors continued to rent rooms to fishing parties during the 1950s (Mascari 1996).

National Register of Historic Places Evaluation

The potential historic district located at Wisharts Point Road is eligible for listing in the NRHP under Criterion A because of its association with events that have made a contribution to the broad patterns of Accomack County, Virginia's maritime and transportation history. Although the community at Wisharts Point Road is a relatively small fishing and farming community from the late nineteenth and early twentieth centuries, the eight historic houses help convey the community's association with Accomack County's maritime and transportation history, especially because the wharf and historic hotel no longer exist at Wisharts Point. The historic houses are the only tangible elements remaining that reflect why farmers and watermen chose to live near Wisharts Point wharf to ship their produce to market and have access to water. Additionally, Wisharts Point Road extends to a man-made landmass where the wharf and historic hotel was located and is a tangible remnant of the maritime transportation route from Wisharts Point Road to Chincoteague Island. For over forty years, the wharf at Wisharts Point Road connected the general population with larger populated areas at Franklin City and Chincoteague Island, and opened up new markets for local farmers and watermen.

The Wisharts Point community retains integrity of location, setting, feeling and association. The community has not been moved from its original location. Although the setting has become more developed since the community was constructed, it has not changed substantially from the small rural farming and waterfront setting that the community original represented. The community continues to be associated with an agricultural lifestyle and retains the road and causeway representative of its maritime transportation history. Wisharts Point retains its historical community development patterns and feeling of a small waterfront agricultural community.

Archival research completed as part of this project does not indicate that the potential historic district located at Wisharts Point Road is associated with person(s) of historic significance, and thus is not eligible under NRHP criterion B.

The potential historic district located at Wisharts Point Road does not retain its integrity of design, materials, and workmanship due to the use of modern materials through alterations such as small additions, modern window replacement, and siding. Additionally, the historic significance of Wisharts Point Road revolved around the wharf and small hotel, both of which are no longer physically standing or intact. As a result, the lack of these significant structures has left a gap in the architectural integrity of Wisharts Point Road, and has lost its integrity of feeling, setting, association, and location to convey the community's former purpose as a maritime and transportation hub for the region during the late nineteenth and early twentieth centuries. Therefore, the potential historic district located at Wisharts Point Road is not eligible under Criterion C for NRHP listing as having architecturally significant building types, periods, or methods of construction.

NRHP Criterion D was not investigated as part of this study.

Survey Results

The architectural investigation of the undertaking's APE for visual effects involved a reconnaissance survey of the potential historic district at Wisharts Point Road, near Wallops Island, Virginia. The potential historic district contains a total of eight architectural resources within the project APE for visual effects. The main entrances of the eight architectural resources located in the proposed historic district face northeast. The project site is located 3.0 miles southeast from the proposed historic district. The prior cultural resources analysis of the potential historic district at Wisharts Point Road was completed during the winter in February 2016, and this reconnaissance-level architectural survey was completed towards the end of spring in May 2017. Based on the findings from both surveys, the line of sight to the project site is blocked by the overgrowth of vegetation from the eight architectural resources' southwest property lines. Therefore, the undertaking will have No Adverse Effect on the potential NRHP-eligible historic district. Additionally, URS does not recommend further inspection of the potential historic district at the intensive level, as the research conducted during this survey was exhaustive and did not yield any undiscovered significant aspects of Virginia's maritime history for the time period or region.

Summary

In April 2016, URS completed a cultural resources analysis performed in support of the USAF proposed action to build and operate an approximately 750-foot tall, guyed instrumentation tower on Wallops Island at WFF (i.e., the undertaking). URS developed aerial maps and simulations to show the visibility of the tower from different mile markers, and reviewed the potential for the proposed project to affect historic properties within the direct and indirect APE. Based on the reconnaissance survey, five historic resources and one potential historic district were within the Indirect APE. It was determined that trees and vegetation overgrowth acted as visual buffers between the historic properties and the proposed tower's location. Consequently, the proposed tower's location would have no adverse visual effects on the six above-ground historic properties. Concerning the direct APE, the proposed undertaking would have no potential to impact significant archeological sites and would have no effect on archaeological historic properties.

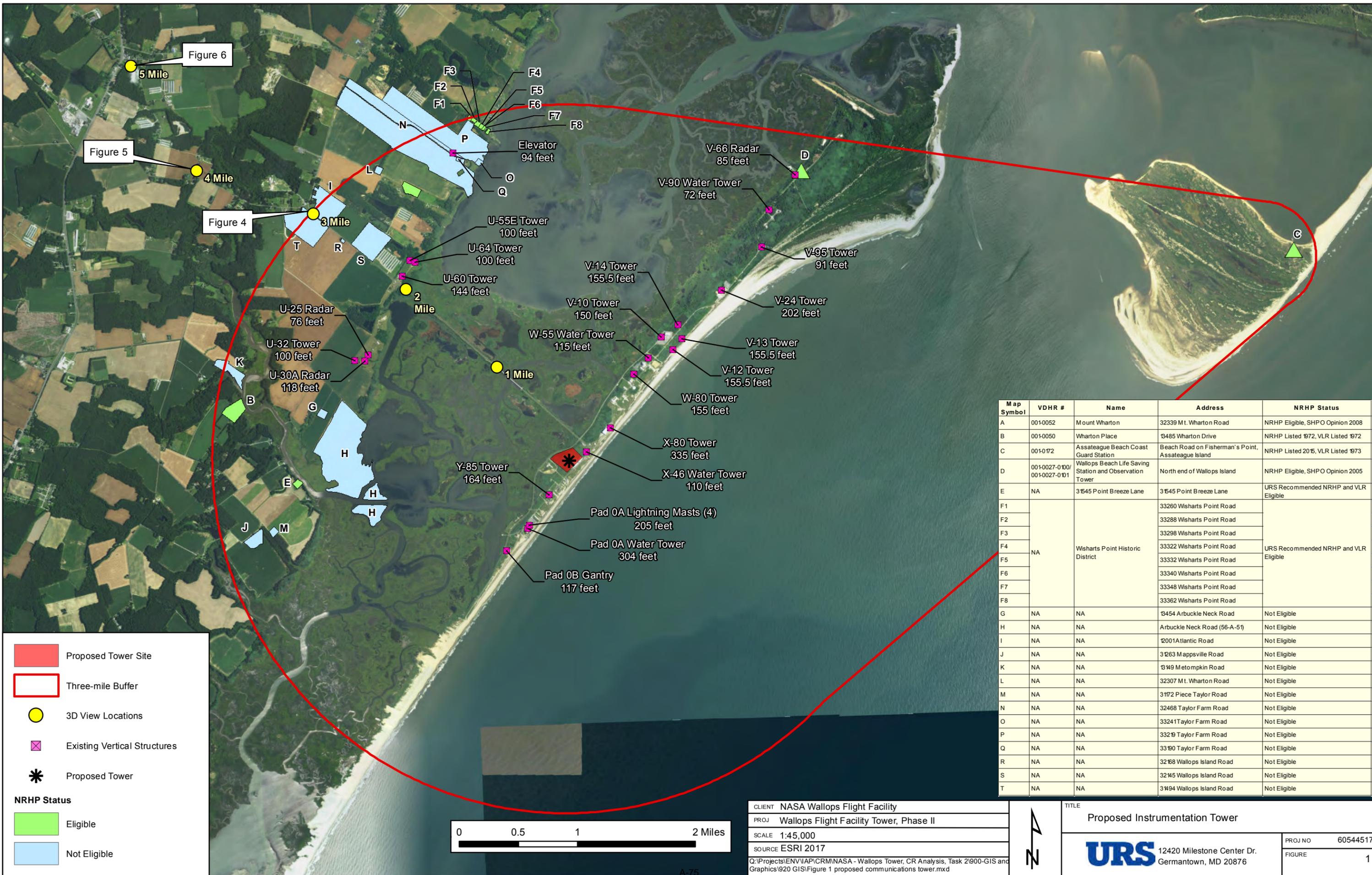
After submittal of these findings, the Virginia SHPO requested that URS conduct a reconnaissance-level architectural survey of Wisharts Point Road potential historic district within the project APE for visual effects. It was also requested that URS amend Figure 1 from the 2016 cultural resource analysis to further identify the locations, names, and total heights of existing vertical structures that share the coastline with the proposed tower, and provide representative photographs with the proposed tower geo-located and to scale to depict the potential visual effects from the locations of three (3) historic structures.

In May 2017, URS documented and evaluated the potential historic district at Wisharts Point Road, and assessed the visual effects of the undertaking on resources within this historic district. The potential historic district is recommended for listing in the NRHP under Criterion A because of its association with events that have made a contribution to the broad patterns of Accomack County, Virginia's maritime and transportation history. After further analysis of the project area APE, the proposed Wisharts Point Road Historic District will not be adversely affected by the undertaking. As was previously determined during the 2016 cultural resources analysis, the eight historic resources' primary northeast views are in the opposite direction of the project site, and the view from the properties' southwest (rear) property lines are blocked from vegetation and do not have a view of the project site. In conclusion, the undertaking will have no effect on the potential NRHP-eligible historic district. Furthermore, the representative photographs with the proposed tower geo-located and to scale have strengthened the findings that the proposed tower would not have an effect on the following historic structures: Assateague Beach Coast Guard Station (VDHR ID #001-0172), Wharton Place (DHR ID #001-0050), Mount Wharton (DHR ID #001-0052), and 31545 Point Breeze Lane, a dwelling eligible for the NRHP and Virginia Landmarks Registry [VLR].

References Cited

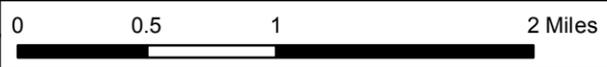
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**ATTACHMENT 1
REVISED FIGURE 1**



| Map Symbol | VDHR # | Name | Address | NRHP Status |
|------------|-----------------------------|---|--|---------------------------------------|
| A | 001-0052 | Mount Wharton | 32339 Mt. Wharton Road | NRHP Eligible, SHPO Opinion 2008 |
| B | 001-0050 | Wharton Place | 13485 Wharton Drive | NRHP Listed 1972, VLR Listed 1972 |
| C | 001-0172 | Assateague Beach Coast Guard Station | Beach Road on Fisherman's Point, Assateague Island | NRHP Listed 2016, VLR Listed 1973 |
| D | 001-0027-0100/001-0027-0101 | Wallops Beach Life Saving Station and Observation Tower | North end of Wallops Island | NRHP Eligible, SHPO Opinion 2005 |
| E | NA | 31545 Point Breeze Lane | 31545 Point Breeze Lane | URS Recommended NRHP and VLR Eligible |
| F1 | NA | Wisharts Point Historic District | 33260 Wisharts Point Road | URS Recommended NRHP and VLR Eligible |
| F2 | | | 33288 Wisharts Point Road | |
| F3 | | | 33298 Wisharts Point Road | |
| F4 | | | 33322 Wisharts Point Road | |
| F5 | | | 33332 Wisharts Point Road | |
| F6 | | | 33340 Wisharts Point Road | |
| F7 | | | 33348 Wisharts Point Road | |
| F8 | | | 33362 Wisharts Point Road | |
| G | NA | NA | 13454 Arbuckle Neck Road | Not Eligible |
| H | NA | NA | Arbuckle Neck Road (56-A-51) | Not Eligible |
| I | NA | NA | 12001 Atlantic Road | Not Eligible |
| J | NA | NA | 31263 Mappsville Road | Not Eligible |
| K | NA | NA | 13149 Metompkin Road | Not Eligible |
| L | NA | NA | 32307 Mt. Wharton Road | Not Eligible |
| M | NA | NA | 31172 Piece Taylor Road | Not Eligible |
| N | NA | NA | 32468 Taylor Farm Road | Not Eligible |
| O | NA | NA | 33241 Taylor Farm Road | Not Eligible |
| P | NA | NA | 33219 Taylor Farm Road | Not Eligible |
| Q | NA | NA | 33190 Taylor Farm Road | Not Eligible |
| R | NA | NA | 32168 Wallops Island Road | Not Eligible |
| S | NA | NA | 32145 Wallops Island Road | Not Eligible |
| T | NA | NA | 31494 Wallops Island Road | Not Eligible |

Proposed Tower Site
 Three-mile Buffer
 3D View Locations
 Existing Vertical Structures
* Proposed Tower
NRHP Status
 Eligible
 Not Eligible



CLIENT NASA Wallops Flight Facility
 PROJ Wallops Flight Facility Tower, Phase II
 SCALE 1:45,000
 SOURCE ESRI 2017
 Q:\Projects\ENV\IAP\CRM\NASA - Wallops Tower, CR Analysis, Task 2\900-GIS and Graphics\920 GIS\Figure 1 proposed communications tower.mxd



TITLE
Proposed Instrumentation Tower
 12420 Milestone Center Dr.
 Germantown, MD 20876
 PROJ NO 60544517
 FIGURE 1



DEPARTMENT OF THE AIR FORCE
AIR FORCE CIVIL ENGINEER CENTER
JOINT BASE SAN ANTONIO LACKLAND TEXAS



March 01, 2017

MEMORANDUM FOR: Ms. Amanda Lee
Virginia Department of Historic Resources
280 I Kensington A venue
Richmond, VA 23221

SUBJECT: Air Force Tower Construction Project on Wallops Island, VA

In November, 2015, Virginia Department of Historic Resources (DHR) responded to the National Aeronautics and Space Administration (NASA) regarding the proposed tower construction project, DHR File No. 2014-0946. The Air Force has taken over as the lead federal agency for this project and is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA). In response to the 2015 DHR letter attached, NASA contracted with URS Group, Inc to review the proposed 750-foot tall tower and identify the affect to historic properties within the Area of Potential Effects (APE).

The Wallops Island Tower Cultural Resources Analysis is attached for your review. The analysis concludes that there is no potential to affect historic archaeological sites and that there would be no effect on historic properties. The Air Force would like to respectfully request that you review this letter and the attached files to determine if any further action is needed to comply with Section 106 of the Historic Preservation Act.

We respectfully request your review and comment within 30 days from receiving this letter. Please provide any comments to me at michael.ackerman.2@us.af.mil (210) 925-2741, or Mr. Mark Kinkade at mark.kinkade.1@us.af.mil.

Sincerely,

Michael Ackerman
Air Force Civil Engineering Center
NEPA Division (AFCEC/CZN)

Attachments:

1. DHR Letter (November 10, 2015)
2. Wallops Island Tower Cultural Resources Analysis



COMMONWEALTH of VIRGINIA

Department of Historic Resources

Molly Joseph Ward
Secretary of Natural Resources

2801 Kensington Avenue, Richmond, Virginia 23221

Julie V. Langan
Director

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

November 10, 2015

Mr. Randall Stanley
Facility Historic Preservation Officer
National Aeronautics and Space Administration
Goddard Space Flight Center
Wallops Flight Facility
Wallops Island, VA 23337

Re: Area of Potential Effects Definition, Instrumented Tower, National Aeronautics and Space Administration, Goddard Space Flight Center, Wallops Flight Facility
Accomack County
DHR File No. 2014-0946

Dear Mr. Stanley,

The Virginia Department of Historic Resources (DHR) received information regarding the above referenced project for our review and comment pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended and the *Programmatic Agreement Among the National Aeronautics and Space Administration, the Virginia State Historic Preservation Office, and the Advisory Council on Historic Preservation Regarding the Management of Facilities, Infrastructure, and Sites at the National Aeronautics and Space Administration's Wallops Flight Facility, Wallops Island, Accomack County, Virginia.*

DHR understands that the U.S. Air Force is proposing to construct an instrumented tower at NASA Wallops Flight Facility in Accomack County (Undertaking). The proposed tower will be approximately 750-feet tall and anchored by three sets of guy wires aligned at 120 degree increments around the tower base. The tower will likely be painted dark gray and will be illuminated following Federal Aviation Administration guidelines. NASA is serving as the lead Federal agency as the proposed project would be located on NASA property.

At this stage of the review process, NASA has developed an Area of Potential Effects (APE) for indirect effects. The proposed APE for indirect effects is a 3-mile radius around the proposed tower. The 3-mile radius is based on photo simulations developed using bare-earth

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Northern Region Office
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Stephens City, VA 22655
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Fax: (540) 868-7033

Digital Elevation Model with a 6-foot high observation point and run at 1-mile radii from the proposed tower location; 30-foot tall trees were included in the simulations for scale. A number of other existing towers and water tanks within the proposed APE for indirect effects were also included in the photo simulations.

Additional information is needed to aid DHR in its review of the proposed Undertaking.

- **DHR Project Review Application Form:** Please complete and submit a DHR Project Review Application Form.
- **APE for direct effects:** You note in your submission that “the Undertaking does not occur within an area identified as having a moderate or high probability for archaeological resources nor does it occur within the boundary of a previously recorded archaeological site; as such, no archaeological investigations are warranted within the direct APE.”
 - Please provide an APE for direct effects, so we may better understand the proposed site location and ground disturbance.
 - Please clearly identify the APE for direct effects and the APE for indirect effects on Figure 1.
- **APE for indirect effects:** You note that “the photo simulations show that the tower’s apparent height rapidly reduces by the 3-mile radius and is similar to those of other existing towers and tanks in the vicinity.”
 - Did you run 3.5-, 4-, 4.5-, or 5-mile radius photo simulations to verify that the tower would not be visible at those locations? If not, please do so.
 - The photo simulations (Figures 2-6) provided illustrate the visibility of the proposed tower and existing towers and tanks. Unfortunately, the figures are not keyed to Figure 1, which is the proposed APE for indirect effects. Please key Figures 2-6 to Figure 1. Also update Figures 2-6 with captions so that they are easily understood in terms of distance and direction from or towards the proposed tower location.
 - Not knowing the exact locations of Figures 2-6, were all of the photo simulations run in each of the cardinal directions from the proposed tower location and at set 1-mile, 2-mile, and 3-mile radii? If not, please do so.

Please send the additional information to my attention and reference DHR File No. 2014-0946 in correspondence associated with this project. DHR looks forward to receiving the additional information and consulting with NASA on this project.

Sincerely,



M. Amanda Lee, Historic Preservationist
Division of Review and Compliance

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Tel: (540) 868-7029
Fax: (540) 868-7033

Project Review Application Form

This application must be completed for all projects that will be federally funded, licensed, or permitted, or that are subject to state review. Please allow 30 days from receipt for the review of a project. All information must be completed before review of a project can begin and incomplete forms will be returned for completion.

I. GENERAL PROJECT INFORMATION

1. Has this project been previously reviewed by DHR? YES NO DHR File # 2014-0946

2. Project Name NASA Wallops Flight Facility Communications Tower

3. Project Location Wallops Island Accomack County
City Town County

4. Specify Federal and State agencies involved in project (providing funding, assistance, license or permit). Refer to the list of agencies and abbreviations in the instructions.

Lead Federal Agency NASA

Other Federal Agency DOD

State Agency DHR

5. Lead Agency Contact Information

Contact Person Randall Stanley, Facility Historic Preservation Officer

Mailing Address NASA / WFF FMB, Code 228, Building N-161, Room 132, Wallops Island, VA 23337

Phone Number 757-824-1309 Fax Number 757-824-1831

Email Address Randall.M.Stanley@nasa.gov

6. Applicant Contact Information

Contact Person Same as Lead Agency

Mailing Address _____

Phone Number _____ Fax Number _____

Email Address _____

II. PROJECT LOCATION AND DESCRIPTION

7. USGS Quadrangle Name Wallops Island (See attached USGS Topographic Map)

8. Number of acres included in the project N/A

9. Have any architectural or archaeological surveys of the area been conducted? YES X
NO ___

If yes, list author, title, and date of report here. Indicate if a copy is on file at DHR.

URS, Wallops Island Tower Cultural Resources Analysis, March 31, 2016 - Scott Seibel, RPA, Archaeology Program Manager and Lorin Farris, MA, Architectural Historian (A copy is not on file at DHR but is attached to this application).

The following surveys have been conducted by URS for the Wallops Flight Facility and are on file at DHR:

- Integrated Cultural Resource Management Plan (ICRMP), 2006
- Site-Wide Environmental Assessment, 2005
- Historic Resources Survey and Eligibility Report, 2004
- Phase I Archaeological Survey of the DD(x) Wetlands Mitigation Project Area, 2004
- Cultural Resources Assessment, NASA, 2003

10. Are any structures 50 years old or older within or adjacent to the project area? YES X
NO ___

If yes, give date(s) of construction and provide photographs.

For this project, twenty-one properties were surveyed that were constructed between 1768 and 1965. Photographs of these properties are in the report.

11. Does the project involve the rehabilitation, alteration, removal, or demolition of any structure, building, designed site (e.g. park, cemetery), or district that is 50 years or older? If yes, this must be explained fully in the project description. YES ___
NO X

12. Does the project involve any ground disturbance (e.g. excavating for footings, installing sewer or water lines or utilities, grading roads, etc.)? If yes, this must be explained fully in the project description. YES X
NO ___

13. DESCRIPTION: Attach a complete description of the project. Refer to the instructions for the required information.

The Department of Defense (DOD) is proposing to construct an instrumented tower at NASA Wallops Flight Facility in Accomack County, Virginia (Undertaking). As the proposed tower would be located on NASA property, NASA is serving as the lead Federal agency for this Undertaking on behalf of the U.S. Air Force. The tower is not subject to Federal Communications Commission licensing and, as such, is not covered under the September 2004, Nationwide Programmatic Agreement for Review Effects on Historic Properties for Certain Undertakings Approved by the Federal Communications Commission.

The tower as proposed would be approximately 750-feet tall, may be painted dark gray, and anchored by three sets of guy wires aligned at 120 degree increments around the tower base. At night, the tower would be illuminated following Federal Aviation Administration guidelines; it should be noted that the proposed tower would be located within the Wallops Flight Facility restricted airspace.

In a letter dated January 14, 2016, the Virginia Department of Historic Resources (DHR) recommended a 3-mile radius indirect (visual) APE around the proposed tower with an extension (DHR File No. 2014-

0946) to include the Assateague Beach Coast Guard Station, also known as the Assateague Beach Life-Saving Station. The direct APE consists of the tower footprint and any cable runs and equipment shelters.

To the best of my knowledge, I have accurately described the proposed project and its likely impacts.



March 1, 2017

Signature of Applicant/Agent

Date

The following information must be attached to this form:

- Completed DHR Archives search
- USGS map with APE shown
- Complete project description
- Any required photographs and plans

No historic properties affected No adverse effect

Additional information is needed in order to complete our review.

We have previously reviewed this project. A copy of our correspondence is attached.

Comments: _____

Signature _____ Date _____

Phone number _____ DHR File # _____

This Space For Department Of Historic Resources Use Only

Cultural Resource Assessment for Air Force Tower Construction on Wallops Island

Background

LJT & Associates, Inc. (LJT) is assisting the Department of Defense (DOD) with the siting of a proposed communications tower at National Aeronautics and Space Administration (NASA) Wallops Flight Facility in Accomack County, Virginia (Undertaking). NASA is the lead Federal agency for this Undertaking on behalf of the U.S. Air Force. The proposed communications tower would be up to 750-feet tall, may be painted dark gray, and would be anchored by three sets of guy wires aligned at 120 degree increments around the tower center point. The tower would be illuminated following Federal Aviation Administration guidelines. Figures 1 through 8 provide information about the proposed communications tower APE, the location of all the properties surveyed on the aerial map, and simulations showing the visibility of the tower from different mile markers. LJT contracted with URS Group, Inc. (URS) to review the potential for the proposed project to affect historic properties within the direct and indirect Area of Potential Effects (APE) (Figures 1 and 2). In a letter dated January 14, 2016, the Virginia Department of Historic Resources (DHR) recommended a 3-mile radius indirect (visual) APE around the proposed tower with an extension (DHR File No. 2014-0946) to include the Assateague Beach Coast Guard Station, also known as the Assateague Beach Life-Saving Station. The direct APE consists of the tower footprint and any cable runs and equipment shelters. Figure 8 shows a representative view of the tower.

Visual APE

Twenty-eight (28) properties were identified to be surveyed that were 50 years and older. All but one property, the Assateague Lighthouse, are located within the indirect APE. An analysis was conducted on the Assateague Lighthouse but was not surveyed during the site visit. Three of the twenty-eight properties were previously listed in the National Register of Historic Places (NRHP) within the indirect APE: Wharton Place (DHR ID 001-0052); Assateague Beach Coast Guard Station (DHR ID 001-0172); and the Assateague Lighthouse (DHR ID 001-0078). Due to deteriorated conditions of the access road, the Assateague Beach Coast Guard Station could not be surveyed during the site visit but an analysis was completed by utilizing aerial imagery and information from the Virginia Cultural Resources Information System (VCRIS). Also, two historic properties were previously determined eligible for the NRHP within the indirect APE: Mount Wharton (DHR ID 001-0052); and the Wallops Beach Life Saving Station and Observation Tower (DHR ID 001-0027-0100/001-0027-0101). The remaining 23 resources had not been previously evaluated. Of these 23 resources, URS recommends that one individual historic resource and one historic district, consisting of eight historic resources, are eligible for the NRHP and the Virginia Landmarks Registry (VLR). The recommended, eligible individual historic resource and historic district are both within the indirect APE. The other 14 resources are recommended not eligible for the NRHP or the VLR. Table 1 includes a brief overview of the assessed properties. After Table 1 are architectural descriptions and condition assessments of the historic properties, and photographs of these properties are in Figures 9 through 24. Also, Figures 25 through 27 provide photographs and brief condition assessments of the 14 resources not eligible for the NRHP or the VLR.

Table 1. Indirect APE – Properties Surveyed

| VDHR No. | Name | Address | Property Type | NRHP Status |
|---------------------------------|---|--|---------------------------------------|--------------------------------------|
| 001-0052 | Mount Wharton | 32339 Mt. Wharton Road | Residential, 1772 Dwelling | NRHP Eligible, SHPO Opinion 2008 |
| 001-0050 | Wharton Place | 13485 Wharton Drive | Residential, 1797 Dwelling | NRHP Listed 1972, VLR Listed 1972 |
| 001-0172 | Assateague Beach Coast Guard Station | Beach Road on Fisherman’s Point, Assateague Island | Military/Defense, 1922 Dwelling | NRHP Listed 2015, VLR Listed 1973 |
| 001-0078 | Assateague Lighthouse | 8250 Beach Road, southern end of Assateague Island | Government, 1867 Lighthouse | NRHP Listed 1973, VLR Listed 1973 |
| 001-0027-0100/ 001-0027-0101 | Wallops Beach Life Saving Station and Observation Tower | North end of Wallops Island | Military/Defense, 1936 Dwelling/Tower | NRHP Eligible, SHPO Opinion 2005 |
| NA | 31545 Point Breeze Lane | 31545 Point Breeze Lane | Residential, Circa 1890 Dwelling | URS Recommends NRHP and VLR Eligible |
| NA | Wisharts Point Historic District | 33260 Wisharts Point Road | Residential, 1900 Dwelling | URS Recommends NRHP and VLR Eligible |
| | | 33288 Wisharts Point Road | Residential, 1920 Dwelling | |
| | | 33298 Wisharts Point Road | Residential, 1920 Dwelling | |
| | | 33322 Wisharts Point Road | Residential, 1920 Dwelling | |
| | | 33332 Wisharts Point Road | Residential, 1920 Dwelling | |
| | | 33340 Wisharts Point Road | Residential, 1900 Dwelling | |
| | | 33348 Wisharts Point Road | Residential, 1920 Dwelling | |
| | | 33362 Wisharts Point Road | Residential, 1900 Dwelling | |
| NA | NA | 13454 Arbuckle Neck Road | Residential, 1900 Dwelling | Not Eligible |
| NA | NA | Arbuckle Neck Road (56-A-51) | Residential, 1910 Dwelling | Not Eligible |
| NA | NA | 12001 Atlantic Road | Residential, 1918 Dwelling | Not Eligible |
| NA | NA | 31263 Mappsville Road | Residential, 1930 Dwelling | Not Eligible |
| NA | NA | 13149 Metompkin Road | Residential, 1768 Dwelling | Not Eligible |
| NA | NA | 32307 Mt. Wharton Road | Residential, 1930 Dwelling | Not Eligible |
| NA | NA | 31172 Piece Taylor Road | Residential, 1920 Dwelling | Not Eligible |
| NA | NA | 32468 Taylor Farm Road | Residential, 1920 Dwelling | Not Eligible |
| NA | NA | 33241 Taylor Farm Road | Residential, 1900 Dwelling | Not Eligible |
| NA | NA | 33219 Taylor Farm Road | Residential, 1908 Dwelling | Not Eligible |

| VDHR No. | Name | Address | Property Type | NRHP Status |
|----------|------|---------------------------|----------------------------|--------------|
| NA | NA | 33190 Taylor Farm Road | Residential, 1957 Dwelling | Not Eligible |
| NA | NA | 32168 Wallops Island Road | Residential, 1918 Dwelling | Not Eligible |
| NA | NA | 32145 Wallops Island Road | Residential, 1955 Dwelling | Not Eligible |
| NA | NA | 31494 Wallops Island Road | Commercial, 1965 Building | Not Eligible |

32339 Mt. Wharton Road – NRHP Eligible

The residence at 32339 Mt. Wharton Road (DHR ID 001-0052), historically known as Mount Wharton, was built in circa 1772 (Figure 9). The house is located within the indirect APE. The VCRIS database indicates that a portion of the house was believed built by George Thomas prior to his death in 1772. The house sits on top of a hill overlooking Bogue Bay, Wallops Island, with the ocean beyond. This one-and-one-half-story, Colonial-style, side-gable roof building rests on a brick foundation. The building is five bays in width, one bay in depth, is approximately 25x50 feet and has a cellar. It has a rectangular, center hall interior plan. The building is wood framed and clad with wood clapboard. The roof is clad in asphalt shingles and both slopes of the roof have five, gable dormer windows. The house has two interior end brick chimneys covered in stucco. The main entrance is centered on the façade but is not visible and is sheltered by a front-gable portico supported by four wood-posts with wood balustrade.

In a 1940 Historic American Building Survey (HABS), two historic photographs show the main entrance did not have a portico and the main entrance had a wood paneled door with transom. Fenestration consists of wood-frame, nine-over-nine, double-hung sash windows on the first story, and the roof's dormer windows have wood-frame, six-over-six, double-hung sash windows. A hyphen connects the main house at the southwest (side) elevation to a small, one-story gable-roofed framed wing, both constructed circa 1827. The hyphen's rear elevation has a one-story, shed roof addition that was constructed prior to 1963 based on the historic aerials. The property has a small cemetery with early 19th century graves, and four other unidentified buildings.

In 2008, the property was evaluated as locally significant under Criterion C for architecture with a period of significance of 1772-1827. The house is in very good condition and maintains sufficient aspects of integrity to convey its historic architectural character. The Colonial-style building with its center hall interior plan, interior end chimneys, symmetrical fenestration, and dormer windows signifies the adaption of historic building trends of the region found in Virginia houses of the period. The house is a well-maintained example of Colonial-style architecture from the Eastern Shore Peninsula region. Therefore, the house was recommended as NRHP eligible under Criterion C at the local level on January 24, 2008. The DHR Board of Historic Resources concurred with this opinion on March 20, 2008.

The historic property located at 32339 Mt. Wharton Road continues to be NRHP eligible under Criterion C for architecture. The property is 2.6 miles northwest from the proposed project area and does not directly face towards the tower's project area. There are trees and vegetation overgrowth acting as a visual buffer to the southeast of the property line (Figure 10). The project area is not visible from 32339 Mt. Wharton. In addition, there is a 300-foot tall water tower next

to the project site that is not visible from 32339 Mt. Wharton Road. Although the communications tower would be over twice the height of the water tower, and while the project may have an effect on the historic property, the effect would not be adverse.

13485 Wharton Drive – NRHP and VLR Listed

The residence located at 13485 Wharton Drive (DHR ID 001-0050), historically known as Wharton Place, was built in 1797 (Figure 11). The house is located within the indirect APE. The house and its immediate grounds are surrounded by broad, flat fields and pine-woods, and just to the north are the marshes of Assawoman Creek. On the west side of the house is a formal flower garden with boxwood borders, and the east side has a formal garden that leads to the family cemetery.

This two-story, Federal-style, hipped-roof building sits on a raised brick basement story and is constructed of brick. The roof is clad with asphalt shingles. Projecting from the roof are two interior brick chimneys and a widow's walk. Surrounding the roof's base is a deep cornice with pairs of brackets. The building is five bays in width, four bays in depth, is approximately 46x46 feet, and has a square plan. The symmetrical east and west façades have centered, double wood doors with panels, topped by semicircular fanlights, and feature open pediments supported on half-round pilasters. Presently, the windows are in the process of being restored. However, recent photographs show the basement story has awning-covered, wood-frame, three-light, windows. The first story has wood-frame, nine-over-six, double-hung window sashes, and the second story has wood-frame, six-over-six, double-hung window sashes. All of the windows have white marble lintels and sills, and the west and east entrances have white marble thresholds. All four elevations have white wooden panels between the first and second floors. Projecting from the house's north side is a one-story, side-gable, kitchen wing. The property has eight other buildings, one of which is a contributing frame smokehouse. The house maintains sufficient aspects of integrity to convey its historic architectural character. The house is a well-maintained example of Federal-style domestic architecture from the Eastern Shore Peninsula region. The house was listed in the VLR on April 18, 1972, and was listed in the NRHP on November 3, 1972.

The historic property located at 13485 Wharton Drive is listed in the NRHP under Criterion C for architecture. The property is located 2.9 miles northwest from the proposed project area and it directly faces the project area to the east. The property is situated 42 feet above sea level on one of the highest elevations of the Eastern Shore. There are trees and vegetation overgrowth acting as a visual buffer to the southeast of the property line, including marshlands to the southeast of the property line (Figure 12). Although there would be a potential for the communications tower to be visible from the southeast property line, the effect would not be adverse.

Assateague Beach Coast Guard Station - NRHP and VLR Listed

In a letter dated January 4, 2016, DHR concurred with NASA's determination of establishing a 3-mile radial APE around the proposed tower with the exception of an additional 3.5-mile "bump-out" to expressly include the Assateague Beach Coast Guard Station (DHR ID 001-0172), also known as the Assateague Beach Life-Saving Station, within the indirect APE. DHR included the station within the indirect APE due to the relatively unimpeded view to the proposed tower

location. The station is located off of Beach Road on Fisherman's Point at the southern end of Assateague Island, a coastal island that straddles the Virginia-Maryland border. The life-saving station complex situated on 11.8 acres consists of the 1922 station house, 1938-1939 boathouse, 1922 garage/boathouse, 1959 generator house, 1931-1935 wharf and breakwater, 1922 station house cistern, 1943 boathouse cistern, 1922-1925 lookout tower, and 1940 garage cistern.

The complex of buildings and structures are organized in a narrow, almost linear sequence moving longitudinally north-south through the property's parcel and oriented toward the Atlantic (south) and Tom's Cove (north) shorelines. The station house is a two-story, Colonial Revival-style, gable-on-hip roof building that sits on a raised, poured concrete basement (Figure 13). The wood-frame building is clad with wood clapboard. The building is five bays in width, two bays in depth, is approximately 40x26 feet, and has a rectangular plan. The roof is clad with red, asbestos shingles and has a single brick chimney set off-center on the ridgeline, plank gable rakes and deep soffits, and a copper gutter system. Each gable end has a single, wood-frame, four-light, fixed window with a peaked top. The fenestration consists of wood-frame, six-over-six, double-hung, sash windows that are covered with aluminum storm windows. The south elevation has a one-story porch with a metal-seam flat roof supported by a plank architrave with wood square columns, posts, and pilasters, and is situated on a poured concrete stoop with cast concrete stairs. The south elevation entry has a paneled wood door with six-light window in the upper half. The west elevation has an elevated, one-story, hipped roof porch covered with wood shingles and supported by wood square columns, posts, and pilasters. The underside of the porch is enclosed in diagonal lattice with plank trim. The west elevation entry is similar to the south elevation entry, and the north elevation has an ancillary entry with a paneled wood door that is accessed with an open wood stair and deck. The east elevation had an ancillary entry covered with plywood that provides access to the basement.

Built in 1938-1939, the U.S. Coast Guard (USCG) Boathouse and Marine Rail Launchway anchor the north end of the station complex and are set on the shoreline of Tom's Cove (Figure 13). Around the west, south, and east sides of the building is a wood plank walkway supported on wood piles. The north side of the building has the marine rail launchway that slopes down to the watersheet. It is a one-story, Colonial Revival-style, hipped-roof building that rests on pilings. The building has a wood and steel frame, is three bays in width and five bays in depth, is approximately 46x46 feet, and has a rectangular plan. The roof is clad with red, wood-shingles and has three gabled dormers on the east and west slopes, and a single dormer on the north slope. The dormer windows are wood-frame, six-over-six, double-hung, sash windows with arched upper sashes. The fenestration consists of wood-frame, six-over-six, double-hung, sash windows. The exterior walls are clad with wood shingles and each of the building's corners has paired pilasters that rest on a stepped plank water table and are topped with a wide plank architrave. The main entrance is centered on the south elevation and has a wood paneled door that is flanked by half-height sidelights and topped by a paneled rectangular pediment. The entrance is sheltered by a pedimented gable-roofed porch supported on pairs of wood posts. The north elevation has three boat doors filled with vertical-lift wood panel roll doors with multiple lights in the upper panels. The boat doors are flanked by paired pilasters and topped with rectangular pediments.

Located near the Assateague Beach Coast Guard Station are three contributing buildings and five contributing structures: 1922 garage/boathouse; 1959 generator house; 1931-1935 wharf and

breakwater; 1922 station house cistern; 1943 boathouse cistern; 1922-1925 lookout tower; and 1940 garage cistern. The Assateague Beach Coast Guard Station was listed in the VLR listing on February 20, 1973 and in the NRHP on November 2, 2015. The complex is significant under Criterion A in the area of Maritime History as an example of the federal life-saving station property type within the registration requirements established under the U.S. Government Lifesaving Stations, Houses of Refuge, and pre-1950 USCG Stations Multiple Property Documentation Form (MPDF). The complex maintains sufficient aspects of integrity to convey its national historic significance. The complex possess additional significance under Criterion C in the area of architecture as an example of the work of U.S. Life-Saving Service (USLSS) master architect Victor Mindeleff, as identified in the MPDF. URS concurs with a VDHR 2014 survey that all of the buildings and structures located within the life-saving station complex are in good condition except for 1931-1935 wharf and breakwater, which are in poor condition. The complex maintains sufficient aspects of integrity to convey its historic architectural character.

The Assateague Beach Coast Guard Station does not directly face towards the proposed tower's project area, which would be 6.4 miles to the southwest. The southwest, rear view of the property overlooks the Atlantic Ocean and the shoreline of the tower project area. However, the station building and contributing buildings and structures are focused towards the Atlantic Ocean to the east or to the north towards Tom's Cove (Figure 14). Although there is potential for the communications tower to be visible from the property, the effect would not be adverse.

Assateague Lighthouse - NRHP and VLR Listed

The Assateague Lighthouse (DHR ID 001-0078) is not within the indirect APE but was surveyed as part of our scope of services. The lighthouse was constructed in 1867 and is located at 8250 Beach Road on the southern end of Assateague Island, a barrier island (Figure 15). The lighthouse is 142 foot tall, conical brick tower situated on a 22-foot high dune. The lighthouse has a 12-foot foundation consisting of stone and cement, a rubble stone base to a height of 3 feet 6 inches, and is finished with a granite water table course. The base of the tower has a five step granite and brick stoop that leads to a double set of wooden doors. There are brass-framed, six-over-six, double-hung windows on the south side of the tower at the third, fifth, and seventh landings, and on the north side at the entry level, second, fourth and sixth landings. The tower is constructed with pressed red brick. The base of the tower is over 27 feet in diameter, gradually tapering to 13 feet 7 inches at the parapet, and finishes in the lantern room which is 12 feet in diameter. Surrounding the watch room is a cast iron gallery with wrought iron balustrade. Surrounding the lantern room is a narrower gallery. The lantern room is surrounded by 16 glass storm panels set in metal frames that are 9 feet 7 ³/₄ inches high. The original glass plates have been replaced to increase visibility and to make the lantern room weather tight from water damage. The lantern room is topped by a copper roof lined with zinc, surmounted with a ventilator ball. The lighthouse retains its alternating bands of broad red and white stripes, which were painted by the USCG in 1968. It was originally washed with Venetian red cement. Located near the Assateague Lighthouse are four other contributing buildings/structures: the 1892 oil shed; 1910 keepers' dwelling shed; 1910 Assistant Keepers' Dwelling; and 1900 well.

The Assateague Lighthouse is significant under Criterion A in the area of Maritime History as an example of a navigational aid for national and international commerce and transportation along

the Atlantic Coast during the mid-19th century, and as an example of efforts by the federal government to provide safe passage around the dangerous shoals lying 5 to 12 miles off the coast. The lighthouse was listed in the VLR on April 17, 1973 and in the NRHP on June 4, 1973. The lighthouse maintains sufficient aspects of integrity to convey its national historic significance. The lighthouse possesses additional significance under Criterion C in the area of architecture as an excellent example of a mid-19th century lighthouse design and method construction that characterized first-order coastal lighthouses on the East coast of the United States. It maintains sufficient aspect of integrity to convey its historic architectural character.

The Assateague Lighthouse is outside of the indirect APE and does not directly face towards the proposed tower's project area located 8.4 miles to the southwest. The southwest, or rear, view of the property overlooks Tom's Cove, the Atlantic Ocean and the shoreline. Although there would be potential for the communications tower to be visible from the southwest property line, the effect would not be adverse.

Wallops Beach Life Saving Station/Observation Tower - NRHP and VLR Eligible

The Wallops Beach Life Saving Station (DHR ID 001-0027-0100) and the Observation Tower (DHR ID 001-0027-0101) are within the indirect APE. In 2004, the Wallops Beach Life Saving Station and Observation Tower were determined eligible for NRHP and on January 28, 2005, the DHR concurred with this determination. In 2007, NASA determined that the Wallops Beach Life Saving Station was located between a designated explosive hazard arc and would need to be transferred from Federal ownership and removed from the property. Preparing for said action, NASA contracted with a licensed environmental remediation company to abate the asbestos and remove painted surfaces and plasterwork within the station building. However, in consultation with the SHPO, NASA determined that the transfer and removal of the station building would have an adverse effect on this historic property. NASA's preparation to remove the property from Wallops Island were placed on hold for further consultation with SHPO and the ACHP. In 2014, NASA prepared a Programmatic Agreement (PA), entitled "Programmatic Agreement Regarding the Management of Facilities, Infrastructure, and Sites at the National Aeronautics and Space Administration's WFF, Wallops Island, Accomack, Virginia," to comprehensively address cultural resources at this facility. This PA was executed on December 17, 2014 by NASA, the SHPO, and the Advisory Council on Historic Preservation (ACHP). Pursuant to 42 U.S.C. 2473 (c)(3) and 36 CFR Part 800, NASA and the SHPO agreed that the transfer and removal of the station building could be implemented in accordance with the stipulations outlined in the PA in order to satisfy NASA's Section 106 responsibilities to take into account the effects of this undertaking on historic properties.

The station and tower were constructed in 1936 and are located at the north end of Wallops Island (Figure 16). The station is a two-and-one-half-story, Colonial Revival-style, side-gable roof building that is situated on a raised concrete basement story. The building is five bays in width, three bays in depth, and has a rectangular plan. The roof is clad with wood shingles, has three gable dormers on both slopes, and an interior brick chimney near the roof's northwest corner. The wood-frame building is clad with wood shingles. There is a wooden water table at the base of the second floor windows on all elevations and above the second floor windows on the north and south elevations. The station is absent of paint because of lead abatement conducted in 2008, which

required the building's windows and main entry door to be removed for treatment and covered with plywood. The building has wood-frame, three-over-three, double-hung windows at the basement story, and wood-frame, six-over-six, double-hung windows on the first and second stories. Near the gable peaks are half-moon window openings covered with plywood, which contained four-light lunette windows. The lunette windows were removed and placed into storage during the lead abatement. The façade has a one-story front porch that rest on concrete piers, and has a wood-shingled shed roof supported by square wood columns. Replacement wood steps access the porch. The underside of the porch is enclosed in contemporary wood lattice with plank trim. There is an ancillary entry on the north elevation that has a wood door with lower panels and three-by-two lights at the upper half. The entry is sheltered by a large pedimented canopy supported by wood brackets. The station building is in moderately poor exterior condition because of the lack of paint and the temporary removal of the windows and main entry; however it appears structurally sound with no apparent structural decay or collapse.

The Observation Tower is a four-story, square-plan tower made of steel with concrete plinths supporting the four corner posts. The posts taper in toward the center as the tower rises. A concrete plinth also supports the base of the centrally located steel staircase. The staircase rises to a landing that supports another stair that in turn rises in the opposite direction to a second landing. There are three landing areas that support staircases, before reaching the top of the structure that has metal grate flooring and a guardrail encircling the outside edge. Steel crossbeams and ties are found on each side of the structure and across the interior, supporting the stair landing platforms. The Observation Tower is in good condition and appears to have had no alterations over time.

In 2004, the Wallops Beach Life Saving Station and Observation Tower were determined eligible for NRHP and on January 28, 2005, the DHR concurred with this determination. As a single resource, the station and tower are eligible under Criterion A for their association with the USCG and its predecessor, the USLSS, which played a vital role as protector of shipping and human lives and the economic development of Virginia's Eastern Shore. The station and tower are also eligible under Criterion C for architecture as they are an example of Colonial Revival-style architecture designed and constructed for the Coast Guard mission on the Eastern Shore during the 20th century. The property is outside of the indirect APE and does not directly face towards the project area, located 3.1 miles to the southwest. Creating a visual buffer south of the property line are trees and vegetation (Figure 17). Although there would be a potential for the project to be visible from the property, the effect would not be adverse.

31545 Point Breeze Lane – NRHP Eligible

The residence at 31545 Point Breeze Lane was built in circa 1890 as a vernacular interpretation of the Greek Revival-style (Figure 18). The house is located within the indirect APE. The house overlooks Arbuckle Creek, Womans Bay, and Wallops Island. This two-and-one-half-story, L-shaped plan building stands on a fieldstone foundation. The wood-frame building is clad with wood clapboard. The majority of the wood clapboard is not coated with paint and is unprotected. The house has a combination of two-over-two and six-over-six, wood-frame, double-hung windows topped by wood crowns and wood surrounds. The main section of the house faces southeast, is three bays in width and two bays in depth, and has a side-gable roof. The façade is symmetrical having a centered main entry that is fronted with a modern metal and glass storm

door. At the north corner of the house is a two-story, rear L-extension with a gable roof. The L-extension is one-bay by one-bay. The roofs are clad with asphalt shingles and three of the gable ends have returned eaves with wide inside wood trim. The L-extension's gable end has an interior brick chimney. Following the L-extension's north elevation is a one-and-one-half story gabled roof extension that has shed roof porches on the northwest and southwest elevations and nine-over-nine wood-frame double-hung windows. The house maintains sufficient aspects of integrity to convey its historic architectural character. Other than the lack of paint as a protective barrier to the elements, the house is a well-maintained example of a vernacular interpretation of the Greek Revival-style from the Eastern Shore Peninsula region. Therefore, the house is recommended as NRHP eligible under Criterion C for architecture at the local level.

The property faces directly east 2.35 miles towards the proposed communication tower's project area (Figure 19). There would be a high potential that the communication tower would be visible from the house's façade, but it would be less visible than the existing 300-foot water tower next to the project site, which currently has large massing with its spherical-shaped reservoir, wide tower, and overall white color. While the project may have an effect on the historic property, the effect would not be adverse.

Wisharts Point Historic District - NRHP Eligible

Near the southeast end of Wisharts Point Road is a former fishing community that accesses Bagues Bay and Powells Bay. The community consists of eight historic houses constructed from 1900 to 1920, of which all are located within the indirect APE. It is NRHP eligible as a historic district under Criterion C for architecture at the local level (Figure 20). The houses are vernacular interpretations of the Greek Revival, Gothic Revival, Colonial Revival, and Bungalow styles. The boundary of the proposed historic district is defined as the northwest property line for 33260 Wisharts Point Road, the northeast side of Wisharts Point Road, the southeast-south peninsula of Wisharts Point Road, and the southwest property line of the eight historic houses. The following brief architectural descriptions of the eight houses are presented from northwest to southeast along Wisharts Point Road.

33260 Wisharts Point Road is a two-story, side-gable roofed house constructed in 1900 in the vernacular interpretation of the Colonial Revival-style (Figure 21). The house is two bays in length and one bay in depth, and has a rectangular plan. The roof is clad with asphalt shingles, has an interior brick chimney, and the gable ends have pediments. The southeast (side) elevation has a one-and-one-half-story, gable roof extension. Alterations include vinyl siding and windows, a one-story, side and rear addition.

33288 Wisharts Point Road is a two-story, side-gable roofed house is constructed in 1920 in the vernacular interpretation of the Greek Revival-style (Figure 21). The house has a concrete block foundation, is three bays in length and two bays in depth, and has a center-hall plan. The roof is clad with asphalt shingles and the gable ends have returned eaves. The southeast (side) elevation has a one-and-one-half-story, gable roof extension with an exterior brick chimney. The rear elevation has a two-story, gable roof extension. Alterations include vinyl siding and windows and a shed roof front porch enclosure.

33298 *Wisharts Point Road* is a one-and-one-half-story, cross-gable roofed house constructed in 1920 in the Bungalow style (Figure 22). The house has a concrete block foundation, is three bays in length and four bays in depth, and has an asymmetrical façade. The roof is clad with asphalt shingles, has an interior brick chimney, and a cross-gable at the southeast (side) slope. The house has wood-frame, four-over-one, double-hung windows that are fronted by aluminum storm windows. The four lights in the upper sashes are vertically oriented. The half story has a fixed wood-frame window with four vertically oriented lights. The main entry has a wood door with four vertically oriented lights, is sheltered by a gable hood supported by brackets, and accessed by four brick steps. Alterations include vinyl siding and shutters.

33322 *Wisharts Point Road* is a two-story house constructed in 1920 in the vernacular interpretation of the Gothic Revival-style (Figure 22). The house is three bays in width and two bays in depth, has a center-hall plan, and sits on a brick foundation. It has a side-gable roof with center gable clad with asphalt shingles. The inside of the center gable is clad with shingles. The gables have returned eaves. Alterations include vinyl siding and windows, a wrap-around-porch addition, bay window addition, and a two-story, side addition at the southeast elevation.

33332 *Wisharts Point Road* is a two-story house with a side-gable roof constructed in 1920 in the vernacular interpretation of the Greek Revival-style (Figure 23). The house is three bays in width and one bay in depth, has a center-hall plan, and rests on a concrete block foundation. The roof is clad with asphalt shingles, the gables have returned eaves, and an exterior concrete block chimney pierces through the southeast gable. The centered main entry is sheltered by a gabled-roof front porch supported by wood posts. Alterations include vinyl siding and windows and a one-story, rear addition.

33340 *Wisharts Point Road* is a two-and-one-half-story house with a front-gable roof constructed in 1900 in the vernacular interpretation of the Greek Revival-style (Figure 23). The house is two bays in width and three bays in depth, has a rectangular plan, and sits on a rusticated concrete block foundation. The roof is clad with asphalt shingles. The gabled ends are clad with wood shingles and have returned eaves. The façade has an exterior, centered brick chimney that pierces through the gable's eave. The house has a combination of wood-frame, two-over-two, double-hung windows and vinyl-frame double-hung windows. Other alterations include vinyl siding, front porch enclosure, and a one-story, rear addition.

33348 *Wisharts Point Road* is a one-and-one-half-story house with a front-gable roof constructed in 1920 in the Bungalow style (Figure 24). The house is two bays in length and four bays in depth, has a rectangular plan, and rests on a rusticated concrete block foundation. The roof is clad with asphalt shingles. Alterations include vinyl siding and window and a replacement door at the main entry.

33362 *Wisharts Point Road* is a two-and-one-half-story house with a side-gable roof constructed in 1900 in the vernacular interpretation of the Greek Revival-style (Figure 24). The house is two bays in length and one bay in depth. The roof is clad with asphalt shingles and has an interior brick chimney. The gable ends have eave returns. The house has wood-frame, three-over-one, double-hung windows that are covered with aluminum storm windows. The three lights in the upper sashes are vertically oriented. The off-centered main entry has a wood door with four lights in the upper

half that are vertically oriented. The off-centered main entry is sheltered by a gable canopy with pediment that is supported by decorative metal posts that rest on a concrete stoop accessed by two concrete steps. The rear elevation has a gabled-roof, two-story extension that is two bays in depth and one bay in length, and has an interior brick chimney. The extension's side elevation has a one-story porch enclosure. Alterations include asbestos siding, a shed addition near the extension's west corner, and the extension's porch enclosure.

The community located on Wisharts Point is NRHP eligible under Criterion C for architecture, at the local level, as a historic district. The community's period of significance is 1900 to 1920 and contains vernacular interpretations of the Gothic Revival, Colonial Revival, Greek Revival, and Bungalow styles. Facing northwest, the eight houses are 2.9 to 3.0 miles northwest of the project area. The proposed project may only be visible to 33362 Wisharts Point Road from its southeast side property line. The project may have an effect on the potential NRHP eligible historic district, but the effect would not be adverse.

Direct APE

The proposed communications tower would be placed on previously disturbed soils resulting from the construction of underground utility conduits, a parking lot, and two modern buildings, X-015 and X-035, east of the project site. These have significantly impacted the original ground surface and any excavations required to bury the new cable run would occur within previously disturbed soils. There is no potential for undisturbed soils or intact cultural deposits within a 2-foot depth of the existing grade. Also, based on the *Cultural Resources Assessment of NASA Wallops Flight Facility* conducted in 2003, the project site would be located in an area of low sensitivity for prehistoric or historic archaeological sites. As such, this proposed undertaking has no potential to impact significant archaeological sites and would have no effect on archaeological historic properties. It is recommended that no archaeological survey would be necessary within the direct APE.

Summary

The proposed communications tower has no potential to affect significant archaeological sites and would have no effect on archaeological historic properties. It is recommended that no archaeological survey would be necessary within the direct APE. While the proposed communications tower may have an effect on the six above-ground historic properties and the one historic district, any effects would not be adverse. No further cultural resource investigations are recommended for this proposed undertaking.

If you have any questions or comments, please feel free to contact me at (301) 820-3145 or scott.seibel@aecom.com.

Sincerely,

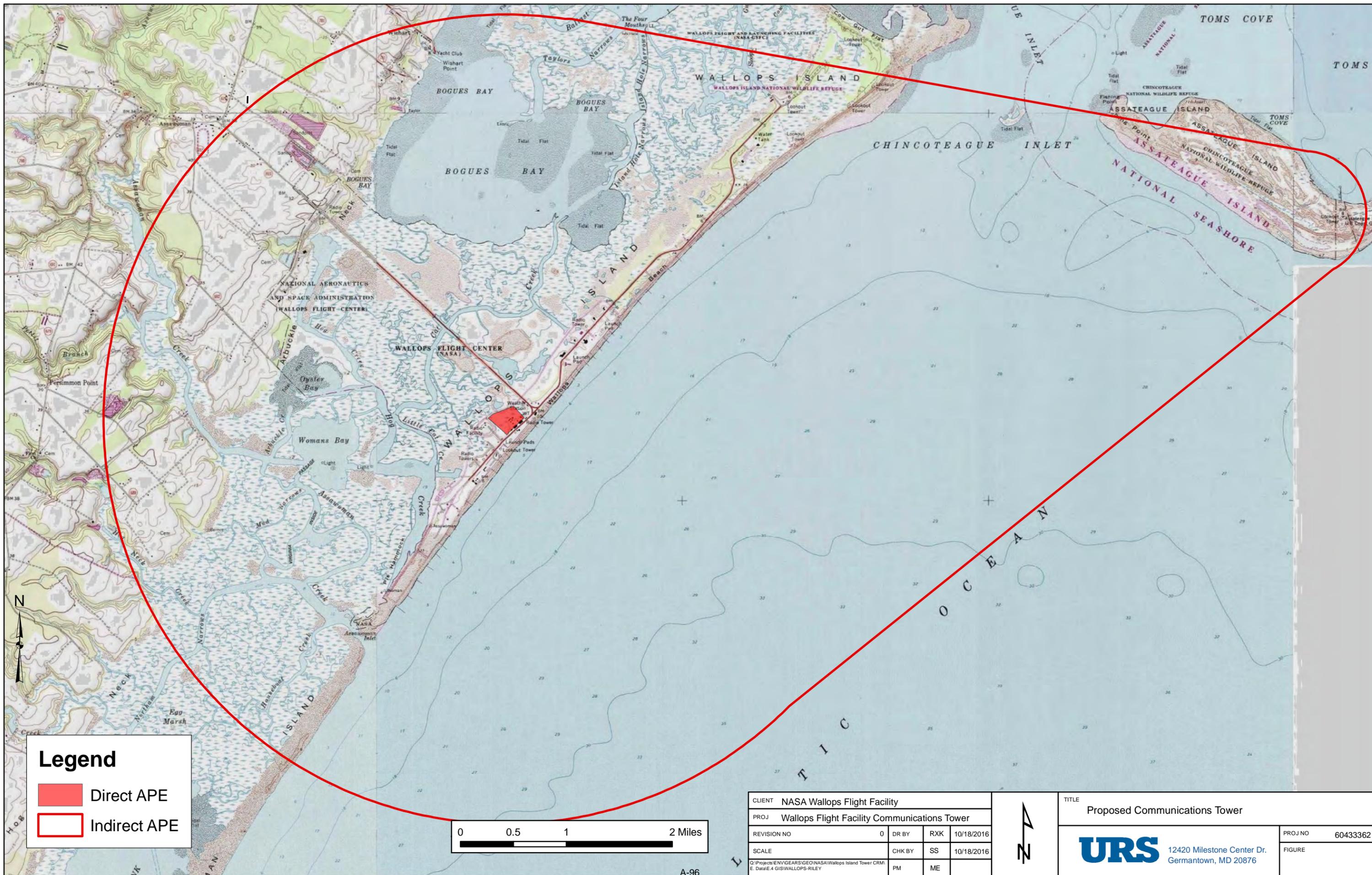
URS Group, Inc.

A handwritten signature in black ink, appearing to be 'S. Seibel', written over a horizontal line.

Scott Seibel, RPA
Archaeology Program Manager

Lorin V. Farris, MA
Architectural Historian

Attachments



Legend

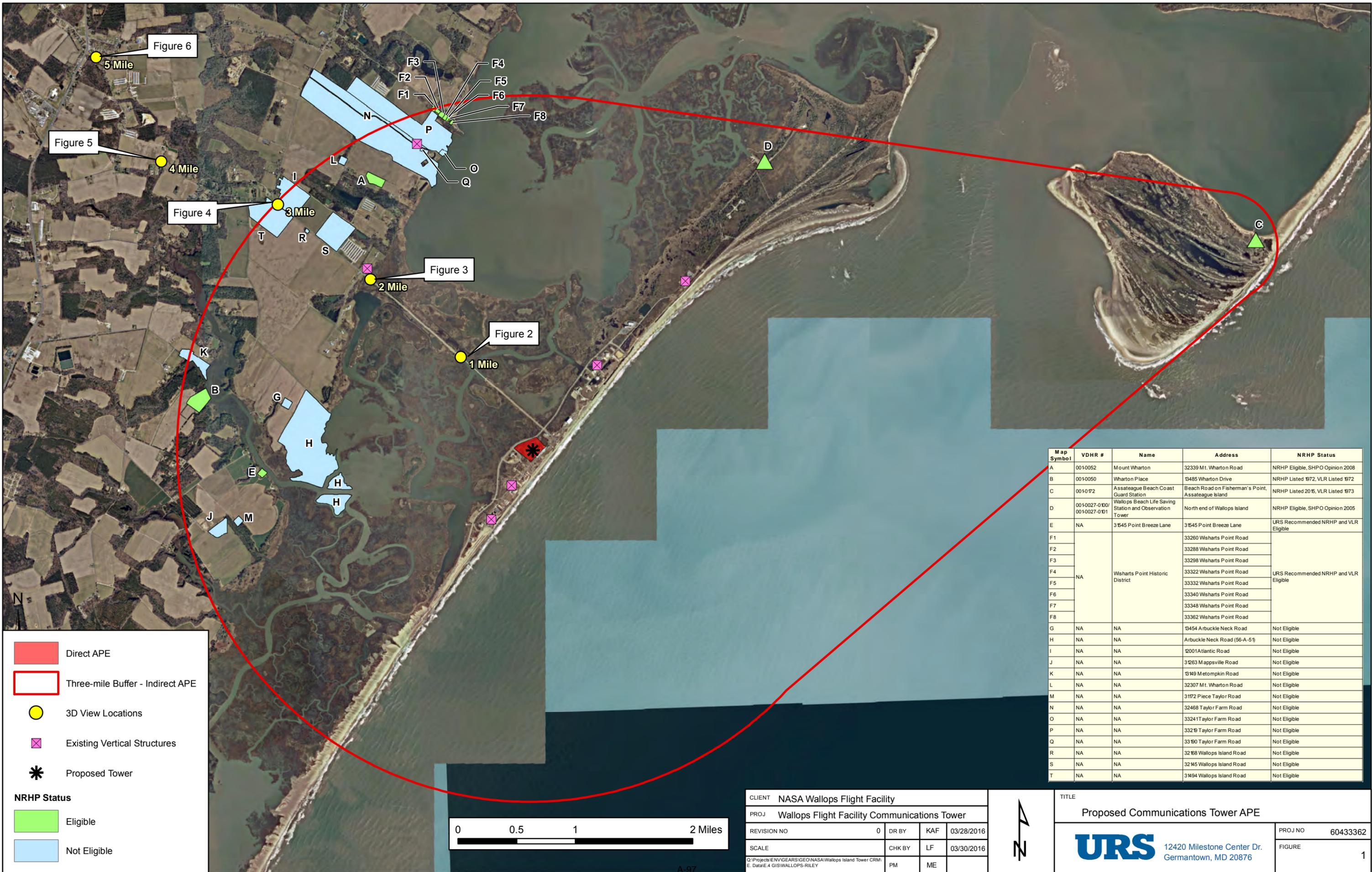
- Direct APE
- Indirect APE



| | | | |
|---|---|--------|----------------|
| CLIENT NASA Wallops Flight Facility | | | |
| PROJ Wallops Flight Facility Communications Tower | | | |
| REVISION NO | 0 | DR BY | RXK 10/18/2016 |
| SCALE | | CHK BY | SS 10/18/2016 |
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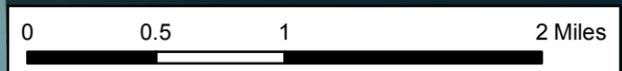
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| TITLE Proposed Communications Tower | |
| 12420 Milestone Center Dr. Germantown, MD 20876 | PROJ NO 60433362 |
| | FIGURE |



| Map Symbol | VDHR # | Name | Address | NRHP Status |
|------------|-------------------------------|---|--|---------------------------------------|
| A | 0010052 | Mount Wharton | 32339 M.L. Wharton Road | NRHP Eligible, SHPO Opinion 2008 |
| B | 0010050 | Wharton Place | 13485 Wharton Drive | NRHP Listed 1972, VLR Listed 1972 |
| C | 0010172 | Assateague Beach Coast Guard Station | Beach Road on Fisherman's Point, Assateague Island | NRHP Listed 2015, VLR Listed 1973 |
| D | 0010027-0100/ 0010027-0101 | Wallops Beach Life Saving Station and Observation Tower | North end of Wallops Island | NRHP Eligible, SHPO Opinion 2005 |
| E | NA | 31545 Point Breeze Lane | 31545 Point Breeze Lane | URS Recommended NRHP and VLR Eligible |
| F1 | NA | Wisharts Point Historic District | 33260 Wisharts Point Road | URS Recommended NRHP and VLR Eligible |
| F2 | | | 33288 Wisharts Point Road | |
| F3 | | | 33298 Wisharts Point Road | |
| F4 | | | 33322 Wisharts Point Road | |
| F5 | | | 33332 Wisharts Point Road | |
| F6 | | | 33340 Wisharts Point Road | |
| F7 | | | 33348 Wisharts Point Road | |
| F8 | | | 33362 Wisharts Point Road | |
| G | NA | NA | 13454 Arbutle Neck Road | Not Eligible |
| H | NA | NA | Arbutle Neck Road (56-A-51) | Not Eligible |
| I | NA | NA | 12001 Atlantic Road | Not Eligible |
| J | NA | NA | 31263 Mappsville Road | Not Eligible |
| K | NA | NA | 13149 Metompkin Road | Not Eligible |
| L | NA | NA | 32307 M.L. Wharton Road | Not Eligible |
| M | NA | NA | 31172 Piece Taylor Road | Not Eligible |
| N | NA | NA | 32468 Taylor Farm Road | Not Eligible |
| O | NA | NA | 33241 Taylor Farm Road | Not Eligible |
| P | NA | NA | 33219 Taylor Farm Road | Not Eligible |
| Q | NA | NA | 33190 Taylor Farm Road | Not Eligible |
| R | NA | NA | 32168 Wallops Island Road | Not Eligible |
| S | NA | NA | 32145 Wallops Island Road | Not Eligible |
| T | NA | NA | 31494 Wallops Island Road | Not Eligible |

Direct APE
 Three-mile Buffer - Indirect APE
 3D View Locations
 Existing Vertical Structures
 Proposed Tower

NRHP Status
 Eligible
 Not Eligible



| | | | | |
|--|--|--------|-----|------------|
| CLIENT | NASA Wallops Flight Facility | | | |
| PROJ | Wallops Flight Facility Communications Tower | | | |
| REVISION NO | 0 | DR BY | KAF | 03/28/2016 |
| SCALE | | CHK BY | LF | 03/30/2016 |
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TITLE: Proposed Communications Tower APE

12420 Milestone Center Dr.
 Germantown, MD 20876

| | |
|---------|----------|
| PROJ NO | 60433362 |
| FIGURE | 1 |



| | | | | |
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| CLIENT NASA Wallops Flight Facility | | | | |
| PROJ Wallops Flight Facility Communications Tower | | | | |
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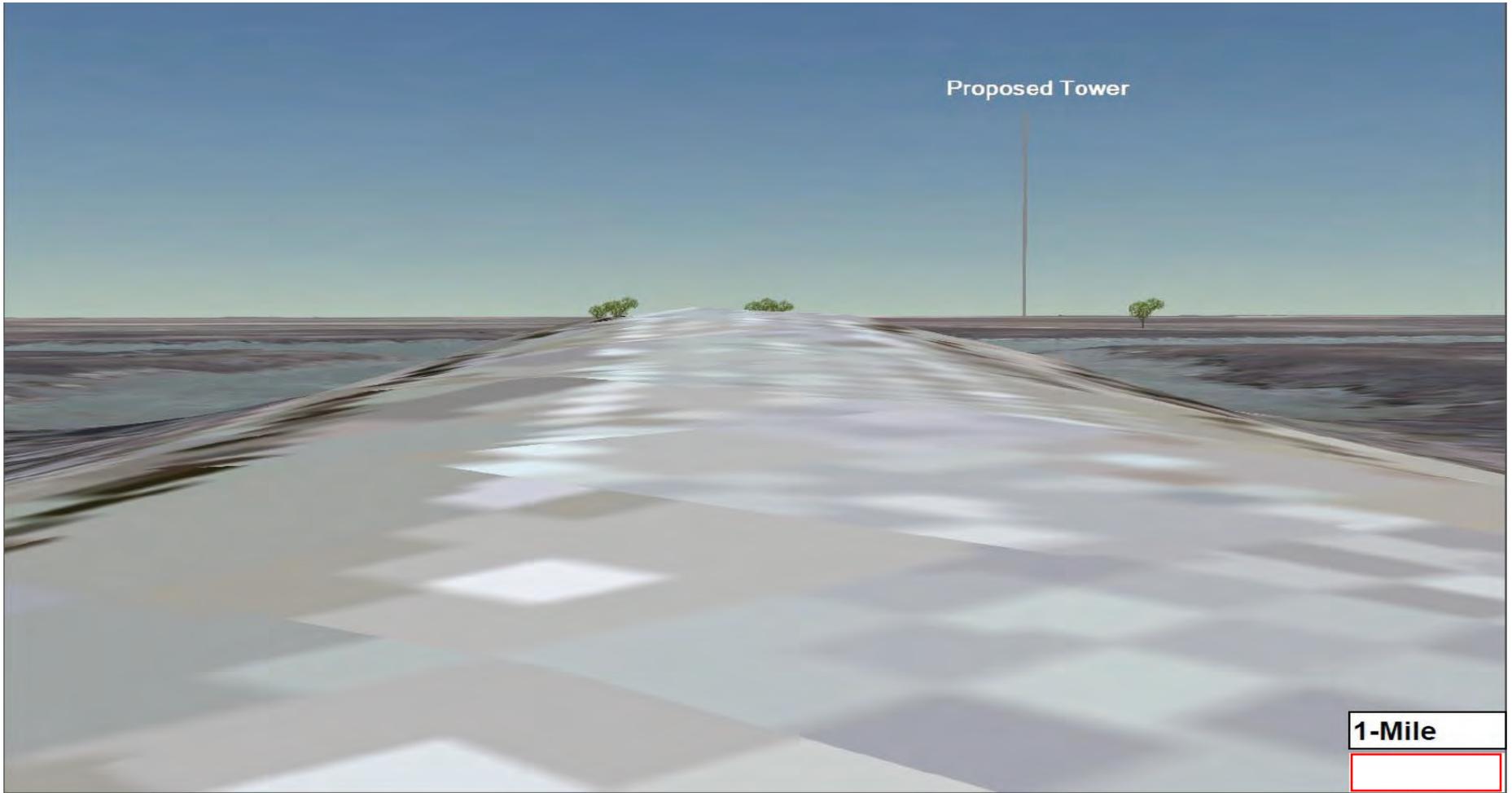


TITLE Proposed Communications Tower - Direct APE

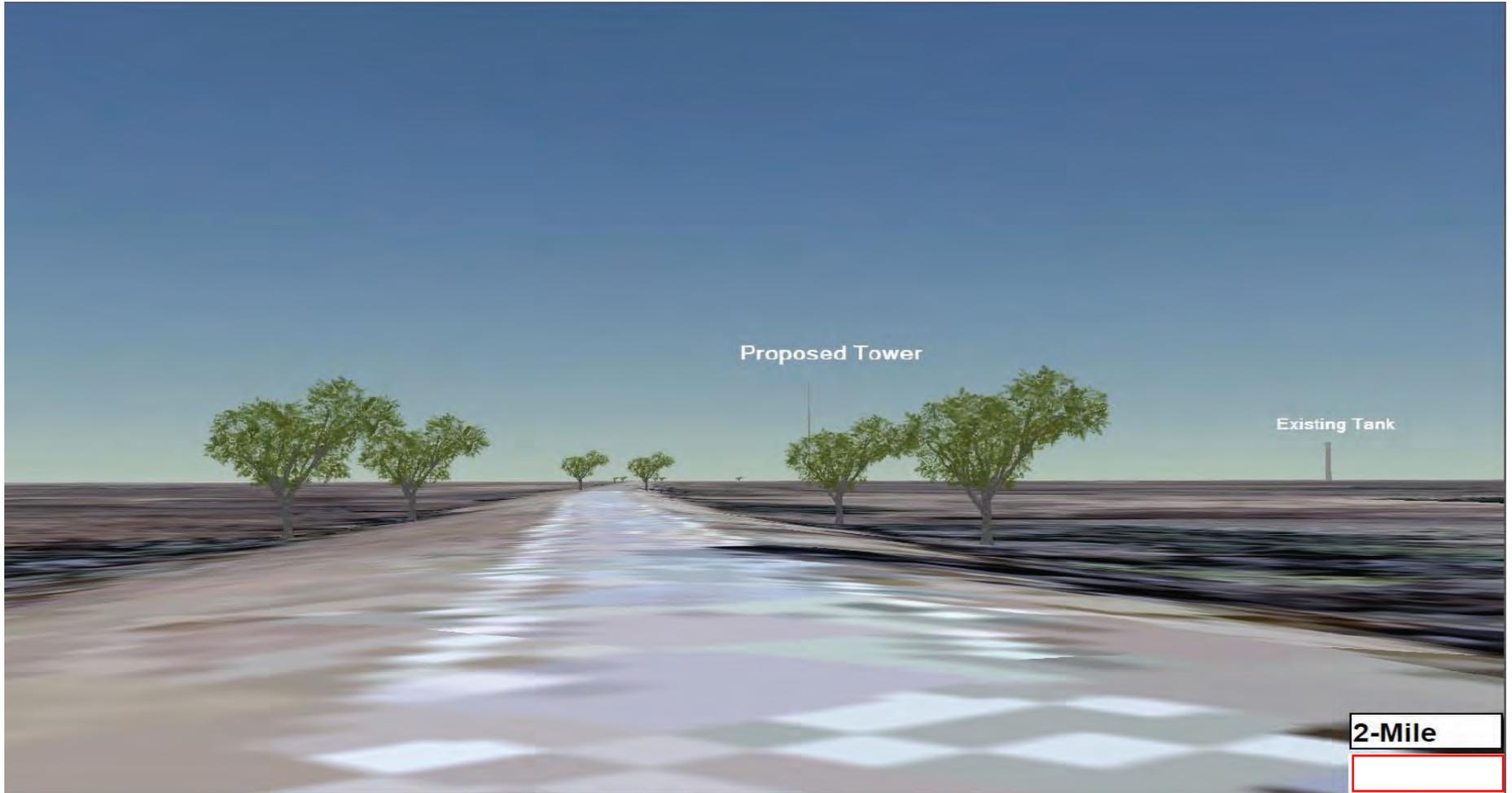
URS 12420 Milestone Center Dr.
Germantown, MD 20876

PROJ NO 60433362

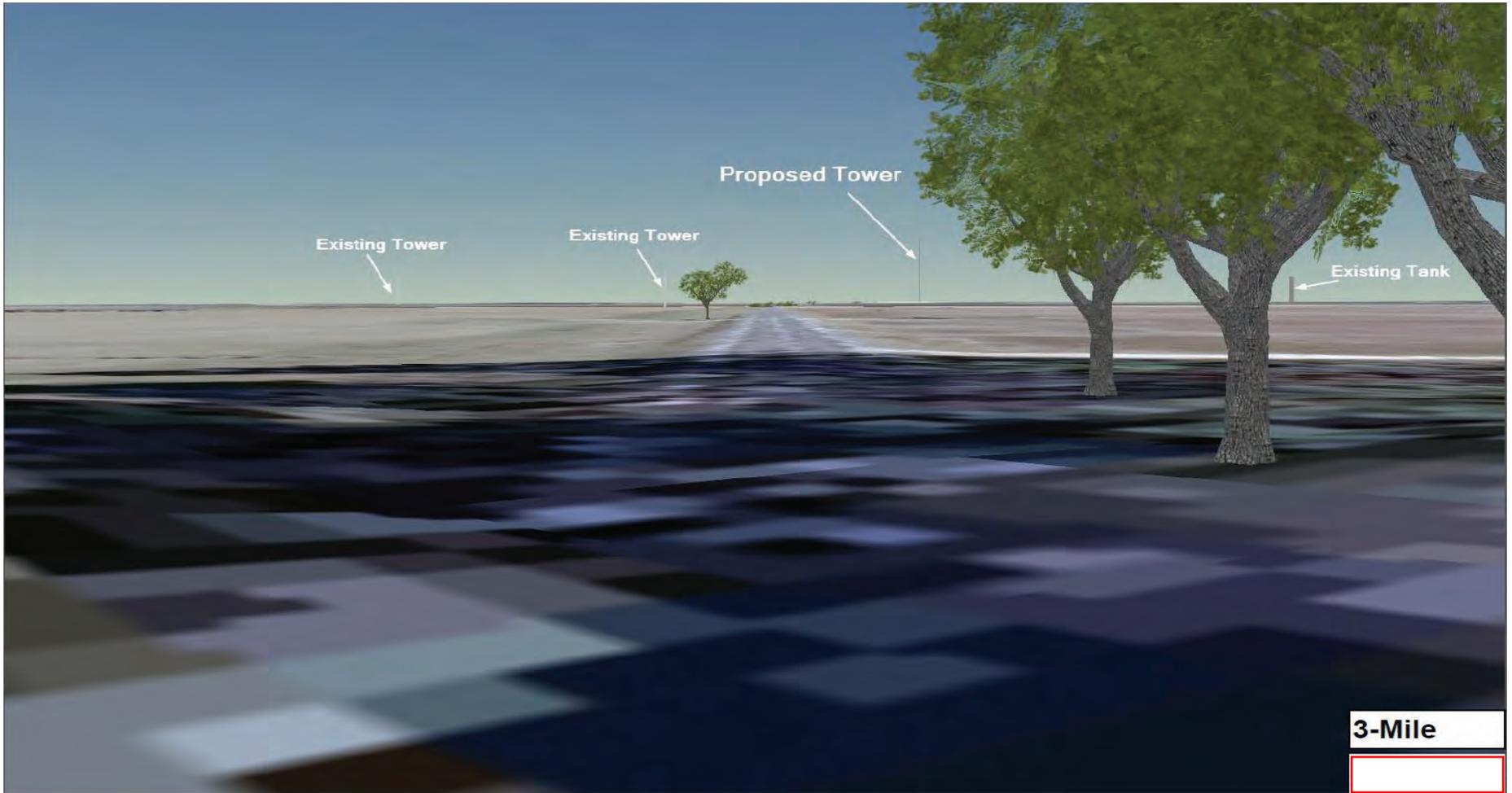
FIGURE 2



| | | | | | | | |
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| CLIENT NASA Wallops Flight Facility | | | | | TITLE Representative Views of Proposed Communications Tower | PROJ NO 60433362 | |
| PROJ Wallops Flight Facility Communications Tower | | | | | | FIGURE 3 | |
| REVISION NO | 0 | DES BY | LF | 02/29/2016 |  12420 Milestone Center Dr. Germantown, MD 20876 | | |
| SCALE | n/a | DR BY | ME | 02/29/2016 | | | |
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| CLIENT NASA Wallops Flight Facility | | | | | TITLE Representative Views of Proposed Communications Tower | PROJ NO 60433362 | |
| PROJ Wallops Flight Facility Communications Tower | | | | | | FIGURE 4 | |
| REVISION NO | 0 | DES BY | LF | 02/29/2016 |  12420 Milestone Center Dr. Germantown, MD 20876 | | |
| SCALE | n/a | DR BY | ME | 02/29/2016 | | | |
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| CLIENT NASA Wallops Flight Facility | | | | |
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| SCALE | n/a | DR BY | ME | 02/29/2016 |
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| CRME, Data/E, 5 Graphics | | | | |

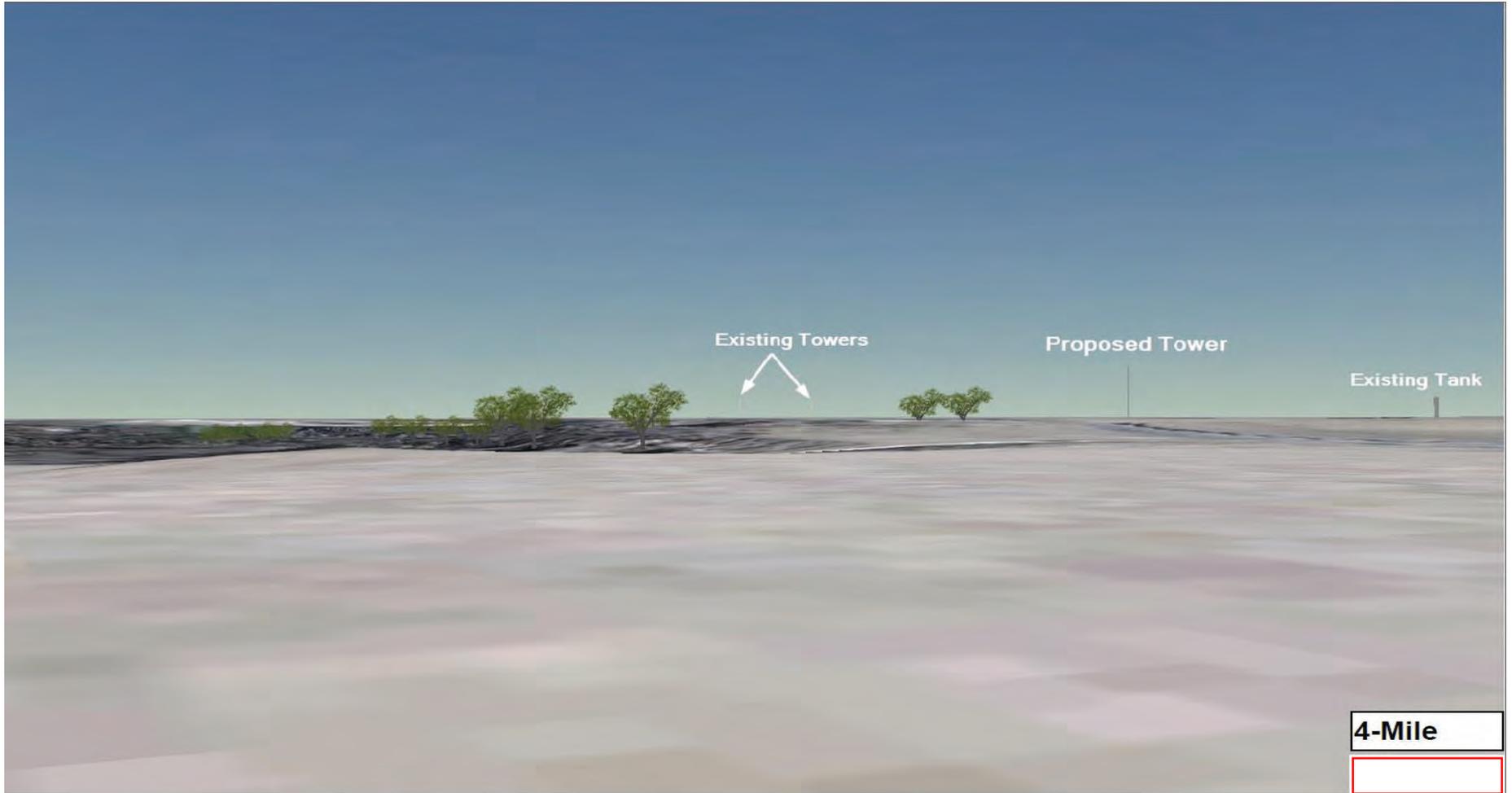
TITLE Representative Views of Proposed Communications Tower



12420 Milestone Center Dr.
Germantown, MD 20876

PROJ NO 60433362

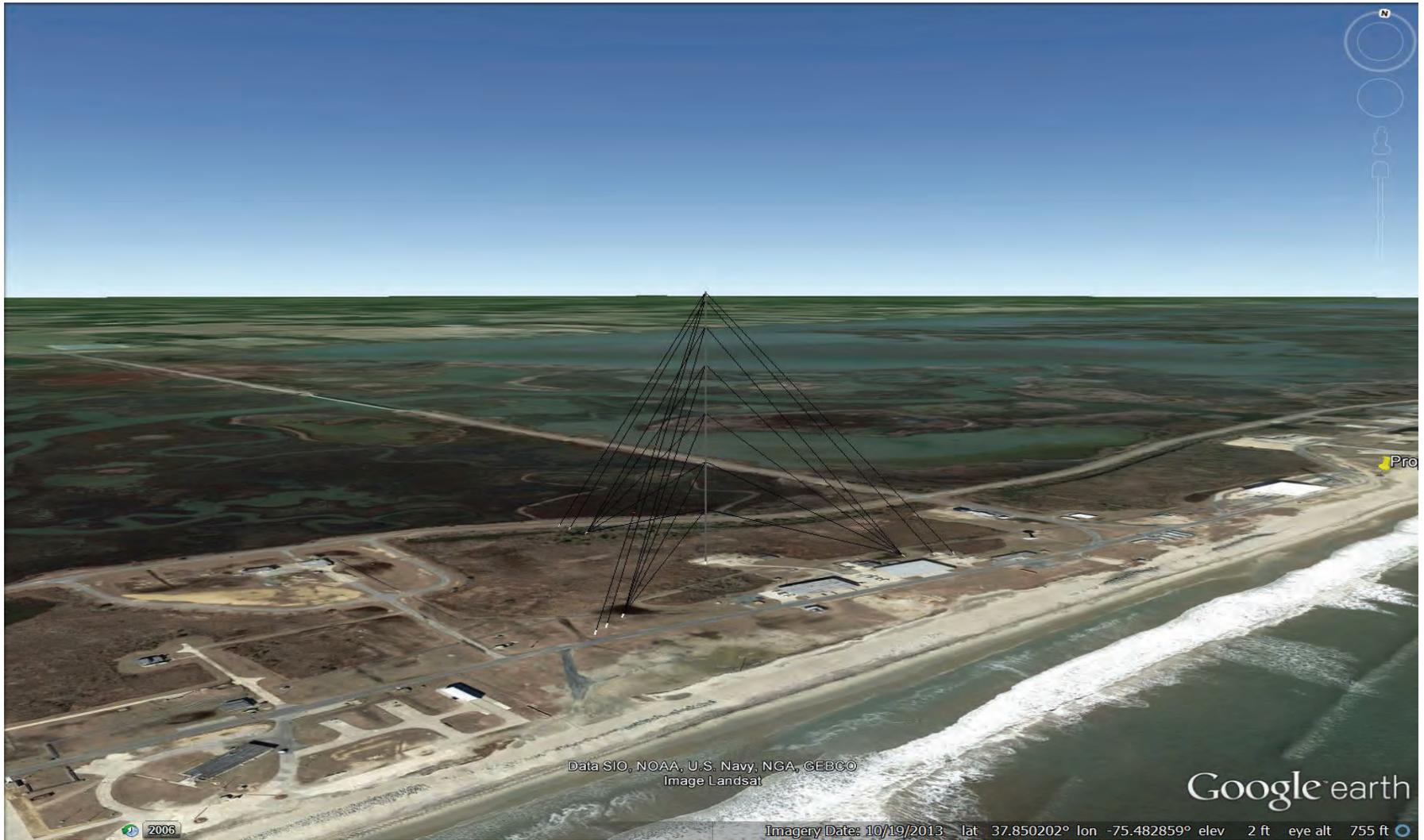
FIGURE 5



| | | | | | | | |
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| CLIENT NASA Wallops Flight Facility | | | | | TITLE | Representative Views of Proposed Communications Tower | |
| PROJ Wallops Flight Facility Communications Tower | | | | | | | |
| REVISION NO | 0 | DES BY | LF | 02/29/2016 |  12420 Milestone Center Dr. Germantown, MD 20876 | PROJ NO | 60433362 |
| SCALE | n/a | DR BY | ME | 02/29/2016 | | FIGURE | 6 |
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| CLIENT NASA Wallops Flight Facility | | | | | TITLE Representative Views of Proposed Communications Tower | | |
| PROJ Wallops Flight Facility Communications Tower | | | | | | | |
| REVISION NO | 0 | DES BY | LF | 02/29/2016 |  12420 Milestone Center Dr. Germantown, MD 20876 | PROJ NO | 60433362 |
| SCALE | n/a | DR BY | ME | 02/29/2016 | | FIGURE | 7 |
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| CLIENT NASA Wallops Flight Facility | | | | | TITLE Proposed Communications Tower and Surrounding Area | |
| PROJ Wallops Flight Facility Communications Tower | | | | | | |
| REVISION NO | 0 | DES BY | LF | 02/29/2016 |  12420 Milestone Center Dr. Germantown, MD 20876 | |
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| | | | | | PROJ NO | 60433362 |
| | | | | | FIGURE | 8 |



Photo 1. 32339 Mt. Wharton Road, Looking Southeast



Photo 2. 32339 Mt. Wharton Road, Looking North

| | | | | | | | |
|--|-----|--------|----|--|--|------------------|--|
| CLIENT NASA Wallops Flight Facility | | | | TITLE Historic Property Photographs | | PROJ NO 60433362 | |
| PROJ Wallops Flight Facility Communications Tower | | | | | | FIGURE 9 | |
| REVISION NO | 0 | DR BY | LF | 02/24/2016 |  12420 Milestone Center Dr Germantown, MD 20876 | | |
| SCALE | n/a | CHK BY | ME | 02/25/2016 | | | |
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Photo 3. 32339 Mt. Wharton Road, Looking Southeast Towards Project Site

| | | | | | | | |
|--|-----|--------|----|--|--|---------|----------|
| CLIENT NASA Wallops Flight Facility | | | | TITLE Historic Property Photographs | | | |
| PROJ Wallops Flight Facility Communications Tower | | | | | | | |
| REVISION NO | 0 | DR BY | LF | 02/24/2016 |  12420 Milestone Center Dr Germantown, MD 20876 | PROJ NO | 60433362 |
| SCALE | n/a | CHK BY | ME | 02/25/2016 | | FIGURE | 10 |
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Photo 1. 13485 Wharton Drive, Looking Northwest



Photo 2. 13485 Wharton Drive, Looking Southwest

| | | | | | | | |
|--|-----|--------|----|--|--|------------------|--|
| CLIENT NASA Wallops Flight Facility | | | | TITLE Historic Property Photographs | | PROJ NO 60433362 | |
| PROJ Wallops Flight Facility Communications Tower | | | | | | FIGURE 11 | |
| REVISION NO | 0 | DR BY | LF | 02/24/2016 |  12420 Milestone Center Dr Germantown, MD 20876 | | |
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Photo 3. 13485 Wharton Drive, Looking East Towards Project Site

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| CLIENT NASA Wallops Flight Facility | | | | TITLE Historic Property Photographs | | PROJ NO 60433362 | |
| PROJ Wallops Flight Facility Communications Tower | | | | | | FIGURE 12 | |
| REVISION NO | 0 | DR BY | LF |  12420 Milestone Center Dr Germantown, MD 20876 | | | |
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| | | | | | | 02/25/2016 | |
| | | | | | | 02/26/2016 | |



Photo 1. Assateague Beach Coast Guard Station, Looking Southeast (VDHR)



Photo 2. Assateague Beach Coast Guard Boathouse and Marine Rail Launchway, Looking Southeast (NPS)

| | | | | | | | |
|---|-----|--------|----|--|--|---------|----------|
| CLIENT NASA Wallops Flight Facility | | | | TITLE Historic Property Photographs | | | |
| PROJ Wallops Flight Facility Communications Tower | | | | | | | |
| REVISION NO | 0 | DR BY | LF | 02/24/2016 |  12420 Milestone Center Dr Germantown, MD 20876 | PROJ NO | 60433362 |
| SCALE | n/a | CHK BY | ME | 02/25/2016 | | FIGURE | 13 |
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Photo 3. Looking Northeast Towards Assateague Beach Coast Guard Station from Project Site

| | | | | | | | |
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| CLIENT NASA Wallops Flight Facility | | | | TITLE Historic Property Photographs | | | |
| PROJ Wallops Flight Facility Communications Tower | | | | | | | |
| REVISION NO | 0 | DR BY | LF | 02/24/2016 |  12420 Milestone Center Dr Germantown, MD 20876 | PROJ NO | 60433362 |
| SCALE | n/a | CHK BY | ME | 02/25/2016 | | FIGURE | 14 |
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Photo 1. Assateague Lighthouse, Looking Northwest (LOC)

| | | | | | | | |
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| CLIENT NASA Wallops Flight Facility | | | | TITLE Historic Property Photographs | | | |
| PROJ Wallops Flight Facility Communications Tower | | | | | | | |
| REVISION NO | 0 | DR BY | LF | 02/24/2016 |  12420 Milestone Center Dr Germantown, MD 20876 | PROJ NO | 60433362 |
| SCALE | n/a | CHK BY | ME | 02/25/2016 | | FIGURE | 15 |
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Photo 1. Wallops Beach Life Saving Station, Looking Northwest



Photo 2. Wallops Beach Life Saving Station and Observation Tower, Looking Southwest

| | | | | | |
|---|-----|--------|----|--|----------|
| CLIENT NASA Wallops Flight Facility | | | | TITLE Historic Property Photographs | |
| PROJ Wallops Flight Facility Communications Tower | | | | | |
| REVISION NO | 0 | DR BY | LF | 02/24/2016 | |
| SCALE | n/a | CHK BY | ME | 02/25/2016 | |
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| | | | | PROJ NO | 60433362 |
| | | | | FIGURE | 16 |



Photo 3. Wallops Beach Life Saving Station and Observation Tower, Looking Southwest to Project Site

| | | | | | | | |
|--|-----|--------|----|--|--|---------|----------|
| CLIENT NASA Wallops Flight Facility | | | | TITLE Historic Property Photographs | | | |
| PROJ Wallops Flight Facility Communications Tower | | | | | | | |
| REVISION NO | 0 | DR BY | LF | 02/24/2016 |  12420 Milestone Center Dr Germantown, MD 20876 | PROJ NO | 60433362 |
| SCALE | n/a | CHK BY | ME | 02/25/2016 | | FIGURE | 17 |
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Photo 1. 31545 Point Breeze Lane, Looking North



Photo 2. 31545 Point Breeze Lane, Looking Southeast

| | | | | | | | |
|---|-----|--------|----|--|--|---------|----------|
| CLIENT NASA Wallops Flight Facility | | | | TITLE Historic Property Photographs | | | |
| PROJ Wallops Flight Facility Communications Tower | | | | | | | |
| REVISION NO | 0 | DR BY | LF | 02/24/2016 |  12420 Milestone Center Dr Germantown, MD 20876 | PROJ NO | 60433362 |
| SCALE | n/a | CHK BY | ME | 02/25/2016 | | FIGURE | 18 |
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Photo 3. 31545 Point Breeze Lane, Looking Southeast to Project Site

| | | | | | | | |
|---|-----|--------|----|--|--|---------|----------|
| CLIENT NASA Wallops Flight Facility | | | | TITLE Historic Property Photographs | | | |
| PROJ Wallops Flight Facility Communications Tower | | | | | | | |
| REVISION NO | 0 | DR BY | LF | 02/24/2016 |  12420 Milestone Center Dr Germantown, MD 20876 | PROJ NO | 60433362 |
| SCALE | n/a | CHK BY | ME | 02/25/2016 | | FIGURE | 19 |
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Photo 1. Wisharts Point Road Historic District, Aerial View (Bing)

| | | | | | | | |
|---|-----|--------|----|--|--|---------|----------|
| CLIENT NASA Wallops Flight Facility | | | | TITLE Historic Property Photographs | | | |
| PROJ Wallops Flight Facility Communications Tower | | | | | | | |
| REVISION NO | 0 | DR BY | LF | 02/24/2016 |  12420 Milestone Center Dr Germantown, MD 20876 | PROJ NO | 60433362 |
| SCALE | n/a | CHK BY | ME | 02/25/2016 | | FIGURE | 20 |
| Q:\Projects\ENV\GEARS\GEO\NASA\Wallops Island Tower CRM | | PM | SS | 02/26/2016 | | | |
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Photo 1. 33260 Wisharts Point Road, Looking Southeast



Photo 2. 33288 Wisharts Point Road, Looking Southwest

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|---|-----|--------|----|--|--|---------|----------|
| CLIENT NASA Wallops Flight Facility | | | | TITLE Historic Property Photographs | | | |
| PROJ Wallops Flight Facility Communications Tower | | | | | | | |
| REVISION NO | 0 | DR BY | LF | 02/24/2016 |  12420 Milestone Center Dr Germantown, MD 20876 | PROJ NO | 60433362 |
| SCALE | n/a | CHK BY | ME | 02/25/2016 | | FIGURE | 21 |
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Photo 3. 33298 Wisharts Point Road, Looking Southwest



Photo 4. 33322 Wisharts Point Road, Looking Southwest

| | | | | | | | |
|--|-----|--------|----|--|--|------------------|--|
| CLIENT NASA Wallops Flight Facility | | | | TITLE Historic Property Photographs | | PROJ NO 60433362 | |
| PROJ Wallops Flight Facility Communications Tower | | | | | | FIGURE 22 | |
| REVISION NO | 0 | DR BY | LF | 02/24/2016 |  12420 Milestone Center Dr Germantown, MD 20876 | | |
| SCALE | n/a | CHK BY | ME | 02/25/2016 | | | |
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Photo 5. 33332 Wisharts Point Road, Looking Southwest



Photo 6. 33340 Wisharts Point Road, Looking Southwest

| | | | | | |
|---|-----|--------|----|--|----------|
| CLIENT NASA Wallops Flight Facility | | | | TITLE Historic Property Photographs | |
| PROJ Wallops Flight Facility Communications Tower | | | | | |
| REVISION NO | 0 | DR BY | LF | 02/24/2016 | |
| SCALE | n/a | CHK BY | ME | 02/25/2016 | |
| Q:\Projects\ENV\GEARS\GEO\NASA\Wallops Island Tower CRM | | PM | SS | 02/26/2016 | |
| | | | |  12420 Milestone Center Dr Germantown, MD 20876 | |
| | | | | PROJ NO | 60433362 |
| | | | | FIGURE | 23 |



Photo 7. 33348 Wisharts Point Road, Looking Southeast



Photo 8. 33362 Wisharts Point Road, Looking Southwest

| | | | | | | |
|--|-----|--------|----|---|---------------------|------------|
| CLIENT NASA Wallops Flight Facility | | | | TITLE Historic Property Photographs | | |
| PROJ Wallops Flight Facility Communications Tower | | | | | | |
| REVISION NO | 0 | DR BY | LF | 02/24/2016 | PROJ NO 60433362 | |
| SCALE | n/a | CHK BY | ME | 02/25/2016 | | |
| Q:\Projects\ENV\GEARS\GEO\NASA\Wallops Island Tower CRM E: Data\E.5 Graphics\Illustrator\Photographs & Graphics | | | | PM | SS | 02/26/2016 |
|  | | | | 12420 Milestone Center Dr Germantown, MD 20876 | | |
| | | | | FIGURE | 24 | |



Photo 1. 13454 Arbuckle Neck Road does not retain integrity because of window replacement, rear additions, and asbestos siding.



Photo 2. House at Arbuckle Neck Road does not retain integrity because of aluminum siding, removal of windows, and deteriorated condition.



Photo 3. 12001 Atlantic Road does not retain integrity because of porch enclosure, corrugated metal awnings, and asbestos siding.



Photo 4. 31263 Mappsville Road does not retain integrity because of vinyl siding, window replacement, and porch enclosures.



Photo 5. 13149 Metompkin Road does not retain integrity because of aluminum siding, porch enclosures, and large, two-story rear addition.



Photo 6. 32307 Mt. Wharton Road does not retain integrity because of window replacement, concrete block cladding at the foundation, and large two-story rear addition.

| | | | | | |
|--|-----|--------|----|--|----------|
| CLIENT NASA Wallops Flight Facility | | | | TITLE Non-Eligible Property Photographs and Condition Assessments | |
| PROJ Wallops Flight Facility Communications Tower | | | | | |
| REVISION NO | 0 | DR BY | LF | 02/24/2016 | |
| SCALE | n/a | CHK BY | ME | 02/25/2016 | |
| Q:\Projects\ENV\GEARS\GEO\NASA\Wallops Island Tower CRM E_Data\E.5 Graphics\Illustrator\Photographs & Graphics | | PM | SS | 02/26/2016 | |
|  12420 Milestone Center Dr Germantown, MD 20876 | | | | PROJ NO | 60433362 |
| | | | | FIGURE | 25 |



Photo 7. 31172 Pierce Taylor Road does not retain integrity because of asbestos siding, window replacement, and front addition.



Photo 8. 32468 Taylor Farm Road does not retain integrity because of front and rear porch enclosures, porch removal, and asbestos siding.



Photo 9. 33241 Taylor Farm Road does not retain integrity because of side addition, porch enclosures, and aluminum siding.



Photo 10. 33219 Taylor Farm Road does not retain integrity because of front porch enclosure and deteriorated condition.



Photo 11. 33190 Taylor Farm Road does not retain integrity because of side addition, window replacement, and vinyl siding.



Photo 12. 32168 Wallops Island Road does not retain integrity because of vinyl siding and side addition.

| | | | | | | | | | | | |
|--|-----|--------|----|------------|--|--|--|--|--|---------|----------|
| CLIENT NASA Wallops Flight Facility | | | | | TITLE Non-Eligible Property Photographs and Condition Assessments | | | | | | |
| PROJ Wallops Flight Facility Communications Tower | | | | | | | | | | | |
| REVISION NO | 0 | DR BY | LF | 02/24/2016 |  12420 Milestone Center Dr Germantown, MD 20876 | | | | | PROJ NO | 60433362 |
| SCALE | n/a | CHK BY | ME | 02/25/2016 | | | | | | FIGURE | 26 |
| Q:\Projects\ENV\GEARS\GEO\NASA\Wallops Island Tower CRM E_Data\E.5 Graphics\Illustrator\Photographs & Graphics | | | | | | | | | | PM | SS |



Photo 13. 32145 Wallops Island Road does not retain integrity because of asbestos siding, and rear porch enclosure.



Photo 14. 31494 Wallops Island Road does not retain integrity because of aluminum siding, side addition, and garage doors and window replacement.

| | | | | | | | |
|--|-----|--------|----|--|--|---------|----------|
| CLIENT NASA Wallops Flight Facility | | | | TITLE Non-Eligible Property Photographs and Condition Assessments | | | |
| PROJ Wallops Flight Facility Communications Tower | | | | | | | |
| REVISION NO | 0 | DR BY | LF | 02/24/2016 |  12420 Milestone Center Dr Germantown, MD 20876 | PROJ NO | 60433362 |
| SCALE | n/a | CHK BY | ME | 02/25/2016 | | FIGURE | 27 |
| Q:\Projects\ENV\GEARS\GEO\NASA\Wallops Island Tower CRM E. Data\E.5 Graphics\Illustrator\Photographs & Graphics | | PM | SS | 02/26/2016 | | | |

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Federal Consistency Determination

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FEDERAL CONSISTENCY DETERMINATION
U.S. AIR FORCE INSTRUMENTATION TOWER ON WALLOPS ISLAND, VIRGINIA

This document provides the Commonwealth of Virginia with the United States Air Force's (USAF) Consistency Determination under the Coastal Zone Management Act (CZMA) section 307(c)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the construction and operation of an instrumentation tower on Wallops Island, Accomack County, Virginia. This Consistency Determination serves to document the U.S. Air Force's determination of consistency of the Proposed Action and potential effects with the enforceable policies of the Virginia Coastal Zone Management (CZM) Program.

This document also considers the connected actions of three other Federal agencies. As the federal landowner, the National Aeronautics and Space Administration (NASA) Goddard Space Flight Center's Wallops Flight Facility (WFF) would authorize the construction and operation of the proposed tower on its property. Along with the U.S. Air Force and NASA, the U.S. Navy's Naval Air Warfare Center – Aircraft Division (NAWCAD) and Naval Sea Systems Command (NAVSEA) would install, operate, and maintain equipment on the proposed tower. As such, because there are multiple Federal agencies involved in the activity considered herein, USAF has assumed the role of lead agency (15 CFR § 930.40) and prepared this consistency review to not only fulfill its own CZMA obligations but also those of NASA, NAWCAD, and NAVSEA.

PROPOSED ACTION

Under the Proposed Action, the U.S. Air Force would install an approximately 750-foot tall, guyed, multi-use tower on Wallops Island, Virginia. The tower would be a typical three-sided lattice structure, approximately 42 inches wide on each side and constructed of galvanized steel. Steel guy wires would be installed along three radii from the tower at angles of 120 degrees from each other, and would extend out a distance of up to 590 feet from the tower base. Guys would be required approximately every 80 feet in height and would tie into two or three anchor points positioned in line with each of the three radii. Therefore, each of the three guy radii could contain up to twelve individual guys depending on final tower height (see Figure 1). The tower would support, at appropriate elevations, a variety of required components including: ultra-high frequency/very high frequency (UHF/VHF) radios, telemetry dishes, global positioning system (GPS) antennas, spectrum-monitoring antennas, a flight termination system, and meteorological instrumentation.

All structural components of the tower would be pile-supported due to the underlying geologic conditions (i.e., silty material beneath a thin layer of sand). Concrete piles would be driven or cast in place to a depth of at least 75 feet. Anchor points for the guy wires would consist either of concrete slabs measuring 14 feet by 14 feet by 5 feet or helical piles, comprised of one to three bearing plates attached to a central shaft and installed by rotation, similar to a screw. The three outermost anchor points would be located approximately 590 feet from the tower base, the three intermediate anchor point would be located approximately 530 feet from the tower base, and the three inner anchor points would be approximately 430 feet from the tower base. If necessary, gravel access roads would be installed from a nearby paved road or parking lot to the tower base.



Sources: Spatial Data courtesy of NASA (2016); Esri (2016); Google (2016) Disclaimer: No warranty is made by AECOM as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. This map is a "living document", in that it is intended to change as new data become available and is incorporated into the GIS database.

Figure 1: Proposed Action

The USAF recognizes that the implementation of the Proposed Action has the potential to adversely impact avian species breeding, nesting, migrating, or otherwise occurring at and in the vicinity of Wallops Island. Therefore, the USAF has incorporated multiple measures into the Proposed Action to minimize impacts on common species of birds. These measures are primarily based on USFWS guidance dated August 2016, entitled *Recommended Best Practices for Communication Tower Design, Siting, Construction, Operation, Maintenance, and Decommissioning* (the Guidance; USFWS 2016). The Guidance presents multiple measures to be considered and used, when feasible, in the siting, design, and construction of communication towers to minimize impacts on birds. Where applicable and feasible, measures included in the Guidance have been incorporated into the Proposed Action. In addition to implementing an Avian Mitigation and Monitoring Plan, and other recommendations from the Guidance, the proposed tower would incorporate bird diverters placed every 30 feet along the inner- and outer-most guys wires; tower lighting would be minimized to ensure it meets FAA requirements in FAA AC 70/7460-1L, *Obstruction Marking and Lighting with Change 1*, but also remains as bird-friendly as possible; and lighting on support facilities associated with the proposed tower would be down-shielded and motion-activated.

In addition to the tower itself, two small (i.e., approximately 10 feet by 20 feet) buildings would be installed at the base of the tower to house equipment associated with the tower's operation and maintenance. Required utility services include electricity and broadband network communication, both of which would be provided by existing infrastructure adjacent to the project site. A 30-kilowatt propane-fueled generator and associated 500-gallon above-ground fuel tank would be installed adjacent to the electronics enclosure to provide electricity in the event of power outages. To mitigate the potential for flooding during storm events, the structure and all supporting equipment would be elevated to at least 11 feet above mean sea level.

The construction phase of the proposed project would begin approximately one month after environmental approval, and be completed over a period of approximately 18 months. While installing the tower would likely only require approximately three months, other activities (e.g., pile driving and electronics outfitting) would take the majority of the construction phase timeframe. Regular maintenance of the tower would be required, and would include tensioning the guy wires, replacing electronics, and trimming vegetation underneath the guy wires. Occasional top-dressing of the gravel access roads also could be necessary.

It is assumed that the tower would remain at Wallops Island for an approximately 20-year period beginning in 2018. At that point, the need for the tower would be reevaluated. When the tower is no longer needed, the tower and associated equipment would be dismantled, recycled, and/or disposed of in accordance with applicable regulations at that time.

Alternative Sites on Wallops Island

Pursuant to the requirements of the National Environmental Policy Act of 1969 (42 United States Code [U.S.C.] §§4321 et seq.); the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 CFR §§1500-1508); and the U.S. Air Force Environmental Impact Analysis Process (32 CFR §989) the U.S. Air Force is developing

an Environmental Assessment (EA) as the lead agency for this project. As part of this analysis, two sites on Wallops Island, Virginia, are being considered for the Proposed Action (see Figure 2). The X-015 site is the Preferred Alternative.

CONSISTENCY DETERMINATION

The Virginia CZM Program consists of nine enforceable policies (see Table 1).

Table 1: Virginia CZM Program Enforceable Policies

| Enforcement Policy | Administrating Entity or Entities |
|------------------------------------|--|
| Fisheries Management | VMRC; VDGIF; VDH (shellfish) |
| Subaqueous Lands Management | VMRC |
| Wetlands Management | VMRC (tidal); VDEQ (tidal and non-tidal) |
| Dunes Management | VMRC |
| Non-point Source Pollution Control | VDEQ |
| Point Source Pollution Control | VDEQ |
| Shoreline Sanitation | VDH |
| Air Pollution Control | VDEQ |
| Coastal Lands Management | VDEQ |

Key: VDEQ = Virginia Department of Environmental Quality; VDGIF = Virginia Department of Game and Inland Fisheries; VDH = Virginia Department of Health; VMRC = Virginia Marine Resources Commission

The USAF has determined that the construction and operation of its instrumentation tower on Wallops Island, Virginia, may affect the land or water uses or natural resources of Virginia’s Coastal Zone and must, therefore, be consistent with the enforceable policies comprising Virginia’s Coastal Zone Management Program. USAF’s consistency analysis follows:

Fisheries Management

The Proposed Action would not involve construction in or impacts to waterways. Therefore, no impacts to Fisheries Management are anticipated.

Subaqueous Lands Management

The Proposed Action would not involve construction in or impacts to state-owned bottomlands. Therefore, no impacts to Subaqueous Lands Management are anticipated and a permit for such impacts is not required.

Wetlands Management

The Proposed Action would have minor and temporary impacts to wetlands. The construction of guy wire anchors and access paths is expected to result in negligible short-term and negligible long-term impacts which would not exceed more than 1,300 square feet (approximately 0.03 acres) of wetlands. The U.S. Air Force would secure all necessary permits for disturbances to wetlands prior to construction.



Sources: Spatial Data courtesy of NASA (2016); Esri (2016) Disclaimer: No warranty is made by AECOM as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. This map is a "living document", in that it is intended to change as new data become available and is incorporated into the GIS database.

Figure 2: Alternative Tower Locations

Dunes Management

The Proposed Action would not involve construction in or impacts to dunes. Therefore, no impacts to Dunes Management are anticipated.

Non-point Source Pollution Control

Soil excavation and vegetation removal during the construction of the proposed tower would expose soils and make them susceptible to erosion from wind and water. The nearly level condition of the project site and adherence to erosion and sediment controls during construction would ensure that any such erosion would remain minimal.

Because construction of the Proposed Action would disturb more than 10,000 square feet of land, the construction contractor would be required to prepare an erosion and sediment control plan in accordance with the Virginia Erosion and Sediment Control Regulations (4 VAC 50-30).

Adherence to measures specified in the erosion and sediment control plan, such as establishing and maintaining an entrance to the project site for construction vehicles and equipment, would minimize the erosion of exposed soils and the sedimentation of receiving water bodies.

If, as the design of the project is finalized, it is determined that one acre or more of land would be disturbed during the construction of the proposed tower, the construction contractor also would be required to obtain coverage under the General Permit for Discharges of Stormwater from Construction Activities (General Permit) in accordance with 9 VAC 25-880. Acquisition of coverage under the permit would require the preparation of a Stormwater Pollution Prevention Plan (SWP3). NASA would review construction and development plans involving land disturbance and would conduct periodic inspections and any necessary enforcement in accordance with the terms of the erosion and sediment control and/or stormwater management plans. Compliance with the requirements set forth in the erosion and sediment control plan, the General Permit, the SWP3, and oversight from NASA would minimize impacts resulting from construction-related soil erosion and stormwater runoff.

Construction equipment would use petroleum-based fuels and lubricants. Inadvertent spills or leaks of these substances would have the potential to adversely affect soils underlying the project site. NASA would require the USAF's construction contractor to implement site-specific best management practices (BMPs) for vehicle and equipment fueling and maintenance, as well as spill prevention and control measures as specified in the WFF Integrated Contingency Plan (ICP). Adherence to such BMPs would ensure that the potential for inadvertent spills of petroleum products during construction activities would be eliminated or remain minimal.

In accordance with the 2014 NASA WFF *Wallops Island Phragmites Control Plan*, in order to prevent the accidental introduction of *Phragmites australis* to the project site during construction of the tower, all tracked equipment involved in earth work would be inspected and cleaned to remove any rhizomes and seeds prior to arrival on and upon exiting the project site.

Following the completion of construction activities, any disturbed areas of the project site not built on or otherwise developed would be returned to a pre-construction condition. As necessary, clean fill soils would be imported to the site if existing soils are determined to be inadequate to

support the construction of the proposed tower. Soils remaining exposed following the completion of the proposed tower would be re-vegetated with native grasses.

As a result of these actions, impacts from non-point source pollution are anticipated to be negligible.

Point Source Pollution Control

The project would not involve a new point source discharge to Virginia waters. As such, impacts from point source pollution would not occur.

Shoreline Sanitation

The Proposed Action would not involve installation or use of a septic tank. Therefore, no impacts to Shoreline Sanitation are anticipated.

Air Pollution Control

The Proposed Action would involve temporary, minor impacts to air quality as a result of construction activities. To minimize emissions of criteria pollutants and greenhouse gases during construction activities, the USAF would implement measures such as prohibiting the idling of construction vehicles and equipment for extended periods, and requiring contractors to maintain exhaust systems on construction vehicles and equipment in optimal condition. A 30-kilowatt propane-fired emergency generator and 500-gallon propane tank would be installed as part of the proposed action. The U.S. Air Force would secure all necessary permits for these air emission sources through the VDEQ prior to construction in order to comply with applicable Virginia and federal regulations. As such, air pollution resulting from the Proposed Action would be minimal, temporary, and transient.

Coastal Lands Management

The Proposed Action would not include land development activities that would impact the Chesapeake Bay or its tributaries. Moreover, although Accomack County has adopted the Chesapeake Bay Preservation Act restrictions for its seaside riparian areas, NASA's Wallops Island is specifically excluded from this overlay area. Therefore, no impacts to coastal lands are anticipated.

ANALYSIS

The Proposed Action would result in no or negligible impacts to seven of nine enforceable policies of the Virginia Coastal Zone Management Program. The two enforceable policies which may be subject to more than negligible impacts from the Proposed Action are Wetlands Management and Non-point Source Pollution Control. However, as described above, USAF would secure necessary permits in advance and ensure that impacts remain minor through the use of BMPs and minimization of disturbed areas.

Based upon the foregoing information, data, and analysis, USAF finds that the construction and operation of its instrumentation tower on Wallops Island, Virginia, would be consistent, to the

maximum extent practicable, with the enforceable policies of the Virginia Coastal Zone Management Program.

CONCLUSION

Pursuant to 15 CFR Section 930.41, the Virginia Coastal Zone Management Program has 60 days from the receipt of this letter in which to concur with or object to this Consistency Determination, or to request an extension under 15 CFR section 930.41(b). Virginia's concurrence will be presumed if its response is not received by the U.S. Air Force on the 60th day from receipt of this determination. The Commonwealth's response should be sent to:

Ronald J. Onderko, P.E.
U.S. Air Force Materiel Center
Wright-Patterson Air Force Base, Ohio

Email: tower.comments@aecom.com

Public Review of the Draft EA

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Notice of Availability (NOA) and Affidavits of Publication

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Eastern Shore Weather



ACCUWEATHER® FIVE-DAY FORECAST FOR ACCOMACK AND NORTHAMPTON COUNTIES

| Saturday | Sunday | Monday | Tuesday | Wednesday |
|--|--|---|---|---|
| | | | | |
| A thunderstorm in spots in the afternoon | Mostly sunny | Mostly sunny | Humid with clouds and sun | Mostly cloudy and humid |
| 87-96/65-74 Wind: SW at 6-12 mph | 80-89/62-71 Wind: ENE at 4-8 mph | 83-92/70-79 Wind: SSW at 6-12 mph | 86-95/72-81 Wind: S at 6-12 mph | 85-94/62-71 Wind: NNE at 6-12 mph |

SUN AND MOON

| | Sunrise | Sunset |
|-----------|-----------|-----------|
| Saturday | 5:48 a.m. | 8:27 p.m. |
| Sunday | 5:49 a.m. | 8:27 p.m. |
| Monday | 5:50 a.m. | 8:26 p.m. |
| Tuesday | 5:50 a.m. | 8:26 p.m. |
| Wednesday | 5:51 a.m. | 8:25 p.m. |

| | Moonrise | Moonsset |
|-----------|------------|-----------|
| Saturday | 8:02 p.m. | 5:26 a.m. |
| Sunday | 8:47 p.m. | 6:16 a.m. |
| Monday | 9:28 p.m. | 7:10 a.m. |
| Tuesday | 10:07 p.m. | 8:06 a.m. |
| Wednesday | 10:43 p.m. | 9:04 a.m. |

SOLUNAR TABLES

The solunar period schedule allows planning days so you will be fishing in good territory or hunting in good cover during those times. Major periods begin at the times shown and last for 1.5 to 2 hours. The minor periods are shorter.

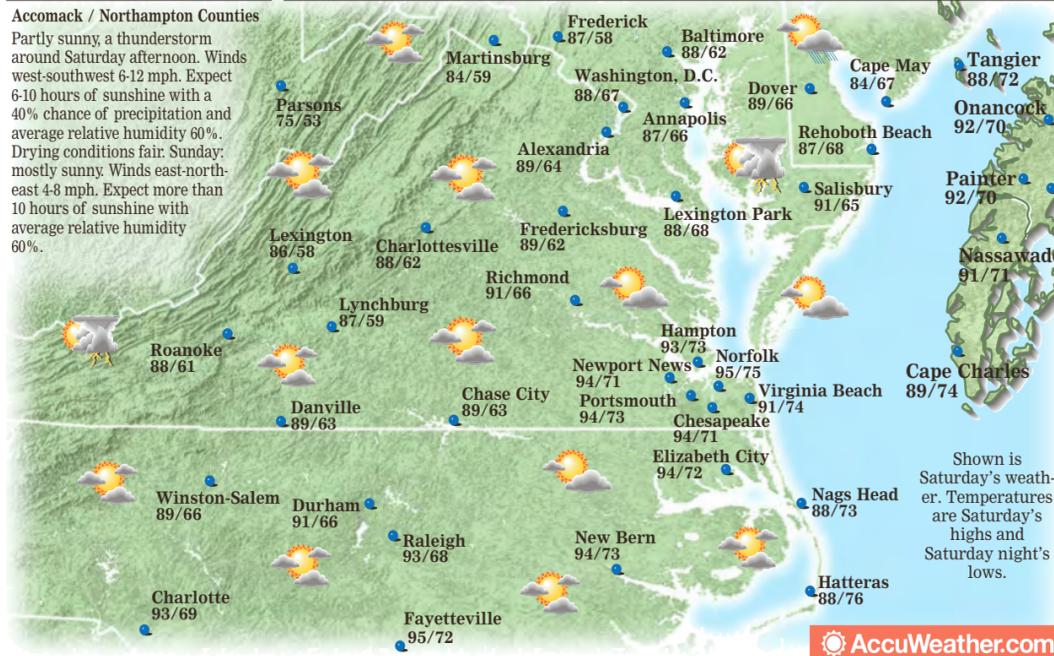
| | Major | Minor | Major | Minor |
|------|---------|--------|---------|--------|
| 7/8 | 11:18 a | 5:05 a | 11:42 p | 5:30 p |
| 7/9 | 12:06 p | 5:54 a | --- | 6:18 p |
| 7/10 | 12:32 a | 6:44 a | 12:56 p | 7:08 p |
| 7/11 | 1:24 a | 7:36 a | 1:48 p | 8:00 p |
| 7/12 | 2:17 a | 8:29 a | 2:41 p | 8:52 p |

| | Full | Last | New | First |
|---------|------|------|-----|-------|
| July 8 | | | | |
| July 16 | | | | |
| July 23 | | | | |
| July 30 | | | | |

AGRICULTURE

Accomack / Northampton Counties
Partly sunny, a thunderstorm around Saturday afternoon. Winds west-southwest 6-12 mph. Expect 6-10 hours of sunshine with a 40% chance of precipitation and average relative humidity 60%. Drying conditions fair. Sunday: mostly sunny. Winds east-northeast 4-8 mph. Expect more than 10 hours of sunshine with average relative humidity 60%.

REGIONAL WEATHER



MARINE

Chincoteague
88/69
Shown is Saturday's weather. Temperatures are Saturday's highs and Saturday night's lows.

Chesapeake Bay
Wind from the west-southwest at 6-12 knots Saturday. Seas 2 feet or less. Visibility clear. Wind north at 6-12 knots Sunday. Seas less than a foot. Visibility clear.

Atlantic Ocean
Wind southwest at 7-14 knots Saturday. Seas 2-4 feet. Visibility under 2 miles in a thunderstorm. Wind north 6-12 knots becoming east Sunday. Seas 1-3 feet. Visibility clear.

TIDES

| | Bayside | Oceanside |
|-----------------------------|----------------------|----------------------|
| Cape Charles | | |
| July 8 | 9:22 a.m. 3:36 a.m. | 9:38 p.m. 3:26 p.m. |
| July 9 | 10:01 a.m. 4:12 a.m. | 10:14 p.m. 4:05 p.m. |
| July 10 | 10:38 a.m. 4:47 a.m. | 10:51 p.m. 4:45 p.m. |
| July 11 | 11:16 a.m. 5:23 a.m. | 11:28 p.m. 5:25 p.m. |
| July 12 | 11:55 a.m. 6:01 a.m. | --- |
| Pungoteague Creek | | |
| July 8 | 11:48 a.m. 6:06 a.m. | --- |
| July 9 | 12:04 a.m. 6:42 a.m. | 12:27 p.m. 6:35 p.m. |
| July 10 | 12:40 a.m. 7:17 a.m. | 1:04 p.m. 7:15 p.m. |
| July 11 | 1:17 a.m. 7:53 a.m. | 1:42 p.m. 7:55 p.m. |
| July 12 | 1:54 a.m. 8:31 a.m. | 2:21 p.m. 8:37 p.m. |
| Saxis Island | | |
| July 8 | 12:07 a.m. 7:09 a.m. | 12:29 p.m. 6:59 p.m. |
| July 9 | 12:45 a.m. 7:45 a.m. | 1:08 p.m. 7:38 p.m. |
| July 10 | 1:21 a.m. 8:20 a.m. | 1:45 p.m. 8:18 p.m. |
| July 11 | 1:58 a.m. 8:56 a.m. | 2:23 p.m. 8:58 p.m. |
| July 12 | 2:35 a.m. 9:34 a.m. | 3:02 p.m. 9:40 p.m. |
| Quinby Inlet | | |
| July 8 | 8:13 a.m. 2:01 a.m. | 8:27 p.m. 2:00 p.m. |
| July 9 | 8:53 a.m. 2:43 a.m. | 9:04 p.m. 2:42 p.m. |
| July 10 | 9:32 a.m. 3:23 a.m. | 9:40 p.m. 3:23 p.m. |
| July 11 | 10:10 a.m. 4:01 a.m. | 10:17 p.m. 4:02 p.m. |
| July 12 | 10:50 a.m. 4:37 a.m. | 10:57 p.m. 4:40 p.m. |
| Wachapreague Inlet | | |
| July 8 | 8:41 a.m. 2:47 a.m. | 9:17 p.m. 2:41 p.m. |
| July 9 | 9:27 a.m. 3:29 a.m. | 10:01 p.m. 3:23 p.m. |
| July 10 | 10:13 a.m. 4:09 a.m. | 10:43 p.m. 4:03 p.m. |
| July 11 | 10:58 a.m. 4:48 a.m. | 11:24 p.m. 4:43 p.m. |
| July 12 | 11:40 a.m. 5:26 a.m. | --- |
| Wallops Island | | |
| July 8 | 7:43 a.m. 1:49 a.m. | 8:09 p.m. 1:37 p.m. |
| July 9 | 8:26 a.m. 2:27 a.m. | 8:50 p.m. 2:18 p.m. |
| July 10 | 9:08 a.m. 3:05 a.m. | 9:31 p.m. 2:58 p.m. |
| July 11 | 9:50 a.m. 3:44 a.m. | 10:11 p.m. 3:40 p.m. |
| July 12 | 10:32 a.m. 4:24 a.m. | 10:51 p.m. 4:23 p.m. |
| Nassawadox Creek | | |
| July 8 | 10:23 a.m. 4:20 a.m. | 10:45 p.m. 4:15 p.m. |
| July 9 | 11:02 a.m. 4:59 a.m. | 11:23 p.m. 4:55 p.m. |
| July 10 | 11:41 a.m. 5:37 a.m. | --- |
| July 11 | 12:00 a.m. 6:15 a.m. | 12:19 p.m. 6:15 p.m. |
| July 12 | 12:38 a.m. 6:52 a.m. | 12:58 p.m. 6:56 p.m. |
| Onancock Creek | | |
| July 8 | 12:10 a.m. 6:52 a.m. | 12:32 p.m. 6:42 p.m. |
| July 9 | 12:48 a.m. 7:28 a.m. | 1:11 p.m. 7:21 p.m. |
| July 10 | 1:24 a.m. 8:03 a.m. | 1:48 p.m. 8:01 p.m. |
| July 11 | 2:01 a.m. 8:39 a.m. | 2:26 p.m. 8:41 p.m. |
| July 12 | 2:38 a.m. 9:17 a.m. | 3:05 p.m. 9:23 p.m. |
| Oceohannock Creek | | |
| July 8 | 10:46 a.m. 5:35 a.m. | 11:14 p.m. 5:17 p.m. |
| July 9 | 11:26 a.m. 6:12 a.m. | 11:52 p.m. 5:53 p.m. |
| July 10 | 12:07 p.m. 6:47 a.m. | --- |
| July 11 | 12:32 a.m. 7:20 a.m. | 12:50 p.m. 7:07 p.m. |
| July 12 | 1:12 a.m. 7:53 a.m. | 1:33 p.m. 7:49 p.m. |
| Hunting Creek | | |
| July 8 | 12:10 a.m. 6:49 a.m. | 12:27 p.m. 6:44 p.m. |
| July 9 | 12:49 a.m. 7:28 a.m. | 1:06 p.m. 7:24 p.m. |
| July 10 | 1:27 a.m. 8:06 a.m. | 1:45 p.m. 8:04 p.m. |
| July 11 | 2:04 a.m. 8:44 a.m. | 2:23 p.m. 8:44 p.m. |
| July 12 | 2:42 a.m. 9:21 a.m. | 3:02 p.m. 9:25 p.m. |
| Gargatha Neck | | |
| July 8 | 9:10 a.m. 3:20 a.m. | 9:36 p.m. 3:08 p.m. |
| July 9 | 9:53 a.m. 3:58 a.m. | 10:17 p.m. 3:49 p.m. |
| July 10 | 10:35 a.m. 4:36 a.m. | 10:58 p.m. 4:29 p.m. |
| July 11 | 11:17 a.m. 5:15 a.m. | 11:38 p.m. 5:11 p.m. |
| July 12 | 11:59 a.m. 5:55 a.m. | --- |
| Chincoteague Channel | | |
| July 8 | 8:18 a.m. 2:33 a.m. | 8:44 p.m. 2:29 p.m. |
| July 9 | 9:00 a.m. 3:15 a.m. | 9:24 p.m. 3:09 p.m. |
| July 10 | 9:40 a.m. 3:55 a.m. | 10:04 p.m. 3:49 p.m. |
| July 11 | 10:21 a.m. 4:34 a.m. | 10:43 p.m. 4:28 p.m. |
| July 12 | 11:02 a.m. 5:12 a.m. | 11:24 p.m. 5:10 p.m. |

Proposed Construction and Operation of Instrumentation Tower

- Draft Environmental Assessment Available
- Public Comment Period

The U.S. Air Force Materiel Command is pleased to announce the availability of a Draft Environmental Assessment (Draft EA) for the proposed construction and operation of an instrumentation tower at NASA's Wallops Flight Facility. The Draft EA evaluates the environmental effects of building, operating, and maintaining a 750-foot tall, guyed instrumentation tower on Wallops Island for a period of approximately 20 years. The U.S. Air Force is the lead agency preparing the Draft EA. NASA and the U.S. Navy are serving as cooperating agencies.

The document is available for public review at the following locations:

- Chincoteague Island Library, Chincoteague, VA
- Eastern Shore Public Library, Accomack, VA
- Wallops Flight Facility Visitors Center, VA Rt. 175

A limited number of printed copies of the Draft EA are available by contacting:

Shari Fort
Air Force Materiel Center
Tower Project
c/o URS Corp.
12420 Milestone Center Drive, Suite 150 (4th floor - Boose)
Germantown, MD 20876
tower.comments@aecom.com

The Draft EA is also available on the internet in Adobe® portable document format (PDF) at:

https://sites.wff.nasa.gov/code250/Instrumentation_Tower_DEA.html

Comments are requested by August 14, 2017.

Comments submitted by mail should be addressed to:

Shari Fort
Air Force Materiel Center
Tower Project
c/o URS Corp.
12420 Milestone Center Drive, Suite 150 (4th floor)
Germantown, MD 20876

Comments may also be submitted via e-mail to: tower.comments@aecom.com

For additional information, please call 757-824-2958, 8 a.m. to 4:30 p.m., M-F.

MD-00084326

Senior Farmers Market Nutrition Program

The Virginia Department for the Aging will be providing coupons to seniors whose income is below 150% of the poverty level. The coupons can be exchanged for fresh fruits and vegetables at authorized roadside stands. Eligible participants must be age 60 or over and will be able to receive \$40 for individuals or \$80 a couple in coupons.

The coupons will be issued upon application completion. One form of identification and household income will be requested at the time of visit. If applying for another person you will need their identification and proof of household income. The coupons are distributed on a first come, first served basis.

The program will begin July 11, 2017. Applications will be taken at the following locations on the following dates:

- July 11 Antioch Baptist Church Treherneville, VA 9:00AM - 11:00AM
- July 12 Accomack Head Start 9:00AM - 11:00 AM
- July 13 Eastern Shore Area Agency on Aging/CAA 9:00AM - 11:00AM

For more information, call the Eastern Shore Area Agency on Aging/Community Action Agency at (757) 442-9652

MD-000842255



KIDS ALIVE!

A Weeklong Summer Drama/Music Camp

for children who have COMPLETED Kindergarten through 5th Grade FREE!!!

Market Street United Methodist Church
75 Market St., Onancock VA 23417

Dates: August 7-11, 2017 9 AM - 12 Noon

Registration Deadline July 30, 2017

INFO & REGISTRATION:

Call 787-4873 or email mktstumc@verizon.net

Proposed Construction and Operation of Instrumentation Tower

• Draft Environmental Assessment Available

• Public Comment Period

The U.S. Air Force Materiel Command is pleased to announce the availability of a Draft Environmental Assessment (Draft EA) for the proposed construction and operation of an instrumentation tower at NASA's Wallops Flight Facility. The Draft EA evaluates the environmental effects of building, operating, and maintaining a 750-foot tall, guyed instrumentation tower on Wallops Island for a period of approximately 20 years. The U.S. Air Force is the lead agency preparing the Draft EA. NASA and the U.S. Navy are serving as cooperating agencies.

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THE DAILY TIMES
DELMARVA'S LARGEST NEWSPAPER
618 BEAM STREET
SALISBURY, MARYLAND 21801
PHONE: 410-749-7171

ATTN: Craig Carver
4840 Cox Road
Glen Allen, VA 23060
Dear Sir:

Here is the Certification of Publication for your ad that ran
7/08/17 and 7/13/17.

Sincerely

Carrie Ellis, Legals Department
Legals EXT. 4621

CERTIFICATION OF PUBLICATION

We hereby certify that the annexed: 7/08/17 and 7/13/17

Was published 7/08/17 and 7/13/17 in Eastern Shore News and The Chincoteague Beacon.



The Daily Times

AFFIDAVIT

Eastern Shore Post, Inc.
P.O. Box 517
Onley, Va: 23418

We, Eastern Shore Post, Inc., publishers of the Eastern Shore Post, a weekly newspaper published in Onley, State of Virginia, do hereby certify that the enclosed notice has been published.

Published on _____

July 7, 2017 (ON PAGES)

In the said Eastern Shore Post aforementioned.

Attest: Constance Morrison
Constance Morrison, Editor

Dated today 7/7/17

[Redacted]

Phone: 757-789-7678
Fax: 757-789-7681



x Angela H. Crutchley
x 7/7/2017

Public Meeting Materials (July 19, 2017)

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Instrumentation Tower on Wallops Island Draft Environmental Assessment

FACT SHEET

The United States Air Force (USAF) proposes to install and operate a 750-foot instrumentation tower at the NASA Goddard Space Flight Center's Wallops Flight Facility (WFF) to conduct testing in collaboration with other Department of Defense services and government agencies. NASA, the Naval Air Warfare Center – Aircraft Division, and Naval Sea Systems Command (NAVSEA SCSC) are cooperating agencies in this project.



Modeled rendering of the proposed tower.

Why does the USAF need a 750-foot tower?

To support mission demands, the USAF has identified the need to develop a larger research, development, test, and evaluation (RDT&E) footprint in the Virginia Capes Range Complex. These new capabilities would minimize the usage of costly airborne and surface instrumentation systems currently in use. In addition, extending the range of communication coverage would enable aircraft to operate farther offshore, thereby minimizing the risk of crashes or other incidents over land and corresponding risks to human safety and personal property. Through preliminary analysis of testing and technology requirements, the USAF has determined that stationary instrumentation with an elevation of 750 feet located in a coastal setting would provide the extended communication coverage necessary to fulfill RDT&E mission requirements.

Instrumentation mounted at a lower elevation and located at an inland area would not provide sufficient coverage and thus, would fail to meet the USAF's need. Mounting instrumentation at heights between 100 and 200 feet above ground level (AGL) would result in a coverage range between 17 and 23 miles, respectively, for an offshore surface target of about 6 feet in height. In contrast, mounting instrumentation as proposed on the new tower would result in coverage to approximately 41 miles offshore for a similarly-sized target. Thus, in comparison to a 100-foot tall structure, a tower of the height proposed by the USAF would enable an estimated 20 additional nautical miles of coverage when tracking aircraft at typical flight test altitudes (between 10,000 and 20,000 feet AGL).

What is the Proposed Action?

The proposed tower would be 750 feet tall and would be a three-sided lattice structure built of galvanized steel, 42 inches wide on each side. Guy wires would be required along the tower's vertical height to provide structural support and would tie into nine anchor points on the ground. The tower would require 12 steel guy wires on each of three sides, installed along radii extending horizontally out from the tower at angles of 120 degrees from each other and anchored in three groups. The three outermost anchor points would be located approximately 590 feet out from the tower base, three intermediate anchor point will be located approximately 530 feet from the tower base, and the three innermost anchor points would be approximately 430 feet from the tower base (all measurements indicate horizontal distances). Anchor points for the guy wires would consist either of concrete slabs measuring 14 by 14 by 5 feet or helical piles, which consist of one to three bearing plates attached to a central shaft and installed by rotation, similar to a screw. A conceptual rendering of the proposed tower as it would appear on the Proposed Action Alternative site is shown on the previous page. The tower would support, at appropriate elevations, a variety of equipment including ultra-high frequency (UHF)/very high frequency (VHF) radios, telemetry dishes, global positioning system (GPS) antennas, spectrum-monitoring antennas, a flight termination system, and meteorological instrumentation.

What was the process for selecting project alternatives?

The USAF developed criteria in the early stages of project planning for this Draft Environmental Assessment (Draft EA) to guide the identification and selection of alternative sites on which to build and operate the proposed tower. To be considered a reasonable alternative, the location for the proposed instrumentation tower must meet the following criteria:

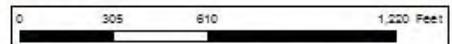
- 1) Within 10 nautical miles of the Atlantic coast in the region of southern Maryland or northern Virginia, with sites closer to the coast preferred;
- 2) On a guarded military or other government-owned facility to meet security requirements;
- 3) On a site that provides vehicular access and is served by existing electrical and communications infrastructure, and does not require substantial site preparation and/or additional infrastructure investment;
- 4) In an open area that accommodates the approximately 590-foot radius of the required guy wire footprint (i.e., approximately 25 acres, at minimum);
- 5) Outside of an established or proposed aircraft flight corridor, thereby enabling the construction of a 750-foot tower; and
- 6) Result in no or manageable impacts on uses and activities adjacent to or near the tower site.

Based on the site selection and alternatives review process, the USAF identified sixteen potential sites at Wallops Flight Facility. One of the sites was located on Mainland and the remainder were located on Wallops Island. The USAF, in coordination with NASA and NAVSEA SCSC, reviewed each site for compatibility with mission operations, range safety, constructability, and natural resources. Based on this analysis, the Mainland site and 13 of the potential Wallops Island sites were rejected from further consideration due to encroachment upon aircraft approaches and rocket launches; interference with radar systems; safety considerations; and susceptibility to storm damage. The two remaining alternative sites are located on mid-Wallops Island and were the subject of further analysis in the Draft EA. The USAF has determined that these two sites best meet the selection criteria and would fulfill the purpose and need for the Proposed Action. The Proposed Action Alternative site is located northwest of Building X-015 and the Alternative 1 site is located northwest of Building X-079. The two alternative sites are shown on the next page.

Action Alternatives



- Proposed Action Alternative Proposed Tower Footprint
 Proposed Action Alternative Site
- Alternative 1 Proposed Tower Footprint
 Alternative 1 Site



Sources: Spatial Data courtesy of NASA (2016), Esri (2016) Disclaimer: No warranty is made by AECOM as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. This map is a "living document", in that it is intended to change as new data become available and is incorporated into the GIS database.

The National Environmental Policy Act

The National Environmental Policy Act (NEPA) establishes a framework for considering environmental values early in the federal decision-making process. Public involvement is an essential part of the process. Through involving the public and completing detailed environmental analysis, the NEPA process helps the decision-maker arrive at the best possible informed decision.

The USAF is seeking public input as well as any suggestions the public might have for the proposed activities addressed in the Draft EA. The USAF first identified the type and extent of impacts resulting from the proposed then collected data, conducted research, and analyzed potential impacts associated with the proposed action. The environmental analysis examined resources such as water, coastal zone management, avifauna, special-status species, and cultural resources. The degree to which these impacts might potentially affect resources were then presented in the Draft EA currently available for public viewing and comments.

How can you be involved?

Your involvement in the decision-making process is important to the USAF. There are several ways to submit a comment on the project:

1. Fill out a comment form at public information meeting and give to a representative
2. Website: https://sites.wff.nasa.gov/code250/Instrumentation_Tower_DEA.html
3. Comments can be mailed to the following address:

Ms. Shari Fort
Air Force Materiel Center
Tower Project c/o URS Corp
12420 Milestone Center Drive, Suite 150 (4th floor)
Germantown, MD 20876
E-mail: tower.comments@aecom.com

For additional information, please call 757-824-2958, 8 a.m. to 4:30 p.m., M-F.

To ensure full consideration, please provide your comments no later than August 14, 2017.



Scan this QR code
to access the
project webpage
directly.



Instrumentation Tower on Wallops Island Draft Environmental Assessment

PURPOSE AND NEED

To support mission needs, the USAF has identified the need to develop a larger RDT&E footprint in the Virginia Capes Range Complex. These new capabilities would minimize the usage of costly airborne and surface instrumentation systems currently in use. In addition, extending the range of communication coverage would enable UAS to operate farther offshore, thereby minimizing the risk of crashes or other incidents over land and corresponding risks to human safety and personal property. Through preliminary analysis of testing and technology requirements, the USAF has determined that stationary instrumentation with an elevation of 750 feet located in a coastal setting would provide the extended communication coverage necessary to fulfill RDT&E mission requirements.

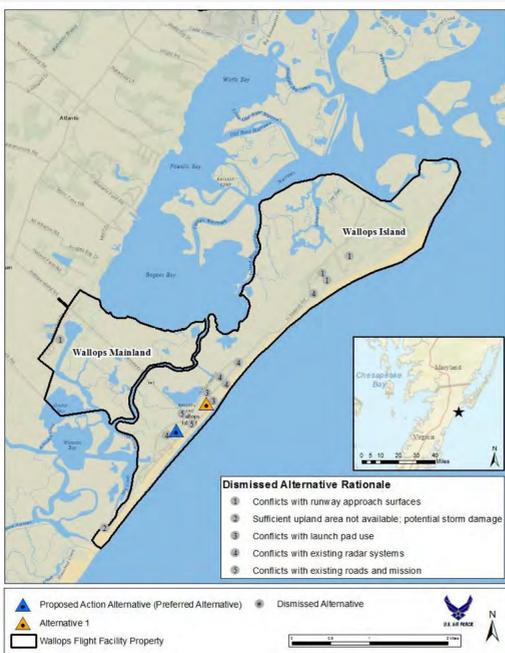
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ALTERNATIVES SELECTION PROCESS



The USAF developed criteria in the early stages of project planning to guide the identification and selection of alternative sites on which to build and operate the proposed tower. To be considered a reasonable alternative, the location for the proposed instrumentation tower must meet the following criteria:

- 1) Within 10 nautical miles of the Atlantic coast in the region of southern Maryland or northern Virginia, with sites closer to the coast preferred;
- 2) On a guarded military or other government-owned facility to meet security requirements;
- 3) On a site that provides vehicular access and is served by existing electrical and communications infrastructure, and does not require substantial site preparation and/or additional infrastructure investment;
- 4) In an open area that accommodates the approximately 590-foot radius of the required guy wire footprint (i.e., approximately 25 acres, at minimum);
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Instrumentation Tower on Wallops Island Draft Environmental Assessment

ENVIRONMENTAL IMPACT ANALYSIS PROCESS

The National Environmental Policy Act guides the environmental impact analysis in the Draft Environmental Assessment (EA).

Your involvement and input are essential to this process.

Calendar

Stakeholder Scoping Letters
(February 2016 & March 2017)



Preparation of Draft EA



Notice of Availability of Draft EA
(July 2017)



Public Comment Period
(July 9 – August 14, 2017)



Preparation of Final EA



Notice of Availability of Final EA
(October 2017)



FONSI/FONPA (if warranted)
(October 2017)



Lead Agency

United States Air Force (USAF)



Cooperating Agencies

National Aeronautics and Space Administration (NASA)



Naval Air Warfare Center – Aircraft Division (NAWCAD)



Naval Sea Systems Command (NAVSEA)

Draft Environmental Assessment

The Instrumentation Tower on Wallops Island Draft EA analyzes the potential effects of project alternatives on the following resources:

Physical:

Water

Coastal Zone Management
Hazardous Substances

Biological:

Avifauna

Special-Status Species

Social:

Cultural Resources

Visual Quality and Aesthetics

Cumulative effects are also analyzed, as are the various mitigation and minimization measures proposed for implementation for this project.

The Draft EA is available for review at the following locations:

- Chincoteague Island Library, Chincoteague Island, VA
 - Eastern Shore Public Library, Accomac, VA
 - Wallops Flight Facility Visitor Center

or online at

https://sites.wff.nasa.gov/code250/Instrumentation_Tower_DEA.html

You may also scan this QR code to access the project webpage directly





Instrumentation Tower on Wallops Island Draft Environmental Assessment

SUMMARY OF ENVIRONMENTAL IMPACTS BY ALTERNATIVE

| Resource Area | No Action | Proposed Action Alternative (Preferred Alternative): X-015 Site | Alternative 1: X-079 Site |
|--------------------------------|-------------|--|---|
| Water Resources | No impacts. | Wetlands: negligible short-term and negligible long-term impacts would not exceed more than 1,300 square feet, or approximately 0.03 acre. Floodplains: negligible impacts. | Alternative 1 would disturb a larger area of wetlands relative to the Proposed Action Alternative (i.e., approximately 0.3 acre of temporary and 0.06 acre of permanent wetland impacts); however, short-term and long-term impacts on wetlands would remain negligible. Impacts on floodplains would be similar to the Proposed Action Alternative. |
| Coastal Zone Management | No impacts. | The Proposed Action Alternative would be consistent to the maximum extent practicable with the enforceable policies of Virginia's Coastal Zone Management (CZM) Program. The USAF has submitted a Federal Consistency Determination to VDEQ for review. Concurrence with this determination by VDEQ is pending. | Similar to the Proposed Action Alternative. |
| Hazardous Materials and Wastes | No impacts. | Negligible short-term and long-term impacts from the use of hazardous substances and generation of hazardous waste during the construction and operation of the proposed tower. No impacts from former remediation sites that have received regulatory closure underlying the Proposed Action Alternative site. | No hazardous substances are used on the site, and no hazardous wastes are generated or stored on the site. The presence of hazardous substances exceeding regulatory thresholds in soil or groundwater is not known. Impacts from the use of hazardous substances and generation of hazardous waste during the construction and operation of the proposed tower would be similar to those described for the Proposed Action Alternative. |
| Avifauna (common bird species) | No impacts. | Low to moderate adverse effects on avifauna based on implementation of the following measures: <ul style="list-style-type: none"> - collocation of equipment on the proposed tower; - coordination with USFWS to develop an avian mitigation and monitoring plan; - constructing the tower at a previously developed area near similar types of vertical structures; - incorporating bird diverters placed every 30 feet along the inner and outer most guys; - minimizing tower lighting to ensure it meets FAA requirements in FAA AC 70/7460-1L for type G3 towers (i.e., a 700- to 1,050-foot structure with a less than 40-foot appurtenance), but also remains as bird-friendly as possible; and - using down-shielded and motion-activated lighting on support facilities associated with the proposed tower to minimize impacts on wildlife in the vicinity of the proposed tower. | Impacts would be similar to those described for the Proposed Action Alternative. |
| Special-Status Species | No impacts. | In correspondence dated April 11, 2017, the USFWS concurred with the USAF's determination that the Proposed Action Alternative may affect, but is not likely to adversely affect, red knots, piping plovers, and northern long-eared bats at Wallops Island. The Proposed Action Alternative would have no potential to affect any other special-status terrestrial or marine species. | Impacts would be similar to those described for the Proposed Action Alternative. |
| Cultural Resources | No impacts. | No adverse effects on historic properties listed or eligible for listing in the National Register of Historic Places (NRHP). Concurrence by the Virginia Department of Historic Resources (VDHR) is pending. | Impacts would be similar to those described for the Proposed Action Alternative. |
| Visual Quality and Aesthetics | No impacts. | Negligible short-term impacts and minor long-term impacts. | Impacts would be similar to those described for the Proposed Action Alternative. |
| Cumulative Effects | No impacts. | Would not result in cumulatively significant impacts when considered along with relevant past, present, and reasonably foreseeable future projects at WFF. | Would not result in cumulatively significant impacts when considered along with relevant past, present, and reasonably foreseeable future projects at WFF. |

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Table A-1: Summary of Comments on the Draft EA Received during the 30-day Public Review Period

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Table A-1: Summary of Comments Received During the 30-day Draft EA Public Review Period

| Comment No.¹ | Agency / Organization | Comment | USAF Response | Final EA text revised based on comment? (Yes/No) |
|--------------------------------|--|---|--|---|
| 1 | Virginia Dept. of Health, Office of Drinking Water | There are no apparent impacts to public drinking water sources due to this project. Potential impacts to public water distribution systems or sanitary sewage collection systems must be verified by the local utility. | Comment noted. Utility locations would be identified prior to construction of the proposed project. The proposed project would not require the creation of new wells or increase withdrawals from existing wells. The proposed project would not create a new source of potable water usage or sewage generation. | No |
| 2 | Virginia Marine Resources Commission | The Preferred Alternative and Alternative 1 would not fall within the Commission's jurisdiction. No authorization would be required from the Marine Resources Commission. | Comment noted. | No |
| 3 | Private Citizen (1 signatory) | Important to maintain clean air space for migrating birds. No the tower [sic]. | As described in the Final EA (see Section 2.1.1), the proposed tower would incorporate a number of mitigation measures to minimize impacts to birds, including migratory birds. The USAF would conduct monitoring of bird collisions and adjust mitigation measures (i.e., adaptive management approach) accordingly based on the species and numbers of birds impacted by the proposed tower. | No |

Table A-1: Summary of Comments Received During the 30-day Draft EA Public Review Period

| Comment No. ¹ | Agency / Organization | Comment | USAF Response | Final EA text revised based on comment? (Yes/No) |
|--------------------------|-----------------------|---|--|--|
| 4 | USEPA ² | <p>(Draft EA p. 2-6) It is assumed that 11 feet AMSL is appropriate for protection of the generator and fuel tank in the event of flooding. It would be helpful in the documentation to state if the plan is following guidelines from FEMA or the source of modeling used to confirm the proposed elevation appropriate for protection. Will there be challenges or risks when needed to fill the fuel tank? Are there guidance/contingency plans in place for this specific action or do the plans need to be altered to address this action (filling raised tanks)?</p> <p>Will the elevated platforms be built to withstand flooding and future climate scenarios? It would be helpful if the documentation discussed any modeling or analysis to evaluate future climate scenarios and weather events. Describe how those scenarios may impact the project and its design. Any assessment done to identify climate trends and sustainable design should be discussed in the Final EA. USEPA recommends considering climate adaptation measures based on how future climate scenarios may impact the project.</p> | <p>The USAF's basis for establishing the 11 feet AMSL level is clarified in the Final EA (see Section 2.2).</p> <p>Text describing the USAF procedures for filling and maintaining the elevated tank has been added to the Final EA (see Section 3.1.3.3).</p> <p>Text regarding the engineering of the proposed tower platform to resist flooding-induced forces has been added to the Final EA (see Section 2.2).</p> | Yes |
| 5 | USEPA | <p>(Draft EA p. 3-5) Would...floodplain encroachment need to be evaluated and coordinated with the Federal Emergency Management Agency (FEMA)? Please consider, discuss and address in the Final EA.</p> | <p>No comments on the Draft EA were received from FEMA during the public review period.</p> <p>The USAF has prepared a Finding of No Practicable Alternative (FONPA) addressing construction in, and impacts on, the 100-year floodplain prior to building and operating the proposed tower. A copy of the signed FONPA is included in the Final EA.</p> | No |

Table A-1: Summary of Comments Received During the 30-day Draft EA Public Review Period

| Comment No. ¹ | Agency / Organization | Comment | USAF Response | Final EA text revised based on comment? (Yes/No) |
|--------------------------|-----------------------|--|--|--|
| 6 | USEPA | (Draft EA p. 2-6) It is assumed that the piling depth of 75 feet is needed to support the height of the tower (750 feet). Have there already been borings to determine that the 75 feet depth can be met? Is there a boring log that can be included in the Final EA? | The proposed piling depth is based on the findings of a site-specific geotechnical study prepared in support of the Proposed Action; this geotechnical study is cited in the EA (see Section 2.2). Borings were conducted during the preparation of the geotechnical study; however, the inclusion of the boring logs is not appropriate or necessary for this NEPA document (i.e., the EA). The results of the geotechnical study, which determined the proposed 75-foot depth could be met, would be used during the design and engineering phases of the proposed tower. | No |
| 7 | USEPA | (Draft EA p. 3-8) What is the size of the concrete slab for the tower? How many pilings will be necessary to support the tower and each of the anchor points? Will the pilings impact submerged aquatic resources? If so, please identify and estimate the impact. In addition, please discuss if the pilings will affect hydrology. | <p>As noted in Section 3.1.1.3, the USAF would obtain permits from applicable regulatory agencies prior to construction to address impacts on wetlands and appropriate mitigation requirements, including impacts from the proposed slab and anchor points. Adherence to avoidance, compensation, and/or mitigation measures specified in applicable Federal and/or state permit(s) during and following the proposed project's construction phase would ensure that impacts on wetlands, including submerged aquatic resources, would remain minimal. No impacts to submerged aquatic resources are anticipated.</p> <p>A brief description of the proposed slab supporting tower is included in the Final EA (see Section 2.2). The number of pilings required has not been determined at this stage of planning.</p> <p>A description of the minimal effects that the proposed tower, including the proposed slab and pilings, would have on hydrology was added to the Final EA in Section 3.1.1.3.</p> | Yes |
| 8 | USEPA | (Draft EA p. 3-8) Please include the Finding of No Practical Alternative in the Final EA. | The Final FONPA is included in the Final EA. | No |

Table A-1: Summary of Comments Received During the 30-day Draft EA Public Review Period

| Comment No. ¹ | Agency / Organization | Comment | USAF Response | Final EA text revised based on comment? (Yes/No) |
|--------------------------|-----------------------|--|--|--|
| 9 | USEPA | (Draft EA p. 2-7, Figure 2-3) Please describe the function of Building X-015... and describe and discuss potential human health impacts, if relevant. | A brief discussion of the current and future use of Building X-015, as well as potential impacts on the facility from the proposed project, is included in the Final EA in Section 2.1.1.3 and Table 3-1 . | Yes |
| 10 | USEPA | (Draft EA p. 3-11) Is it possible that MECs can be uncovered in the area proposed for the tower? Is there a contingency plan in place if MECs are discovered in the area of tower construction? Is there a possible risk to workers? Please cite worker safety plans and contingency plans in the event of discovery of MEC and/or contamination, etc. | Text within the Final EA has been revised to describe the procedures that USAF's contractor would follow in the event that undocumented MECs are encountered during construction of the proposed tower (see Section 3.1.3.3). | Yes |
| 11 | USEPA | (Draft EA p. 3-44) The sensitivity to relocating the telemetry dish to areas of similar infrastructure is appreciated. It is hoped that there is no viewshed impact to the several eligible and recommended eligible NRHP sites on WFF. Although this may have been assumed, stating this in the Final EA (FEA) would be beneficial. | Text within the Final EA has been revised to identify that there would be no viewshed impacts on eligible and/or recommended eligible NRHP properties on WFF from the proposed relocation of the telemetry dish (see Section 3.3.1.3). | Yes |

Table A-1: Summary of Comments Received During the 30-day Draft EA Public Review Period

| Comment No. ¹ | Agency / Organization | Comment | USAF Response | Final EA text revised based on comment? (Yes/No) |
|--------------------------|-----------------------|---|--|--|
| 12 | USEPA | (Draft EA p. A-63) [C]ould there be a more pronounced visual impact [from the proposed tower on properties evaluated in the Phase II cultural resources survey] once the leaves drop from the trees in the fall and winter? Is this a concern for the residences? Has there been public outreach to the eight residents whose properties are Recommended NRHP and VLR Eligible? Please address in the Final EA. | <p>Due to the density and depth of existing vegetation/forested areas, there would not be a more pronounced visual effect once the leaves drop from the trees in the fall and winter (Note: the first cultural resources survey was conducted in February 2016, during the leaf-off period). In addition, the referenced eight residences face away from the proposed tower, further minimizing any potential effects. This should not be a concern for the residents.</p> <p>No public outreach was conducted for the residents of the historic properties recommended NRHP and VLR eligible as part of the Phase II Cultural Resources Analysis; however, the public has been provided with three opportunities to provide comments on the Proposed Action during the preparation of the EA (i.e., February 2016 and March 2017 scoping periods, and the 30-day Draft EA public review period conducted July-August 2017).</p> <p>Consultation between the USAF and VDHR (SHPO) with regard to the proposed project is ongoing; concurrence, concerns, and/or other information provided by VDHR as part of the NHPA Section 106 consultation process is addressed accordingly in the Final EA (see Section 3.3.1).</p> | No |

Table A-1: Summary of Comments Received During the 30-day Draft EA Public Review Period

| Comment No. ¹ | Agency / Organization | Comment | USAF Response | Final EA text revised based on comment? (Yes/No) |
|--------------------------|---|--|---|--|
| 13 | The Nature Conservancy (TNC) ² | [TNC] has significant concerns about the adverse impacts on migratory birds and bats that the proposed instrumentation tower, as described in the draft EA, will have. [TNC does] not agree that there is enough evidence to conclude that the project will have "low to moderate adverse effects" on avifauna. Furthermore, we believe that given the unique location of Wallops Island in the Atlantic Flyway and its ecological importance to migratory birds and bats, this is not an appropriate location for the proposed instrumentation tower. | <p>The USAF conducted an extensive site selection process for the proposed tower, which is documented in the EA (see Section 2). No sites outside of WFF met the USAF's requirements and thus, did not meet the purpose of or need for the Proposed Action.</p> <p>The USAF would incorporate a number of mitigation measures into the design and construction of the proposed tower to minimize impacts on avian species. Monitoring would be conducted during the tower's operational phase to record the number and species/taxa of birds colliding with the tower. Mitigation measures would then be adjusted as necessary (i.e., adaptive management approach) to minimize impacts on birds to the extent possible.</p> | No |
| 14 | TNC | [TNC does] not agree with [the conclusion of low to moderate adverse effects on avifauna] based on the study by Paxton and Wilson (2015), which suggests that there are several species in the region with a high risk of collision and medium to high risk of experiencing population level impacts. The study also highlights the lack of information required to carry out a full assessment on expected bird mortality rate caused by the proposed project. We do not believe this assessment translates to a low to moderate risk for the avifauna of the region. | The conclusion of low to moderate adverse effects is based on the review of existing data, studies, and other information. It is not possible to predict with certainty what impacts the proposed tower would have on birds, as no similar towers exist in the vicinity of WFF. As noted in the EA, the design of the tower would incorporate mitigation measures to minimize impacts on birds to the extent possible, and these measures would be adjusted as necessary based on information gathered during the post-construction monitoring of bird collisions. | No |

Table A-1: Summary of Comments Received During the 30-day Draft EA Public Review Period

| Comment No. ¹ | Agency / Organization | Comment | USAF Response | Final EA text revised based on comment? (Yes/No) |
|--------------------------|-----------------------|---|--|--|
| 15 | TNC | <p>[TNC is] concerned about several project design characteristics that will increase the chance of adverse impacts to migratory birds and bats:</p> <ul style="list-style-type: none"> a. the tower's height of 750 feet; a significant decrease in mortality is associated with reduced tower height; b. 12 steel guy wires on each of 3 sides; guyed towers cause higher mortality than non-guyed towers; c. required lighting; tall, guyed towers lit with steady-burning lights have the highest fatality rates. Fewer bird fatalities have been documented at towers equipped with only red or white flashing lights as compared to towers with nonflashing, steady-burning lights. d. proximity to the coast; towers taller than 450 feet are generally recommended to be sited away from coastal zones, bird staging areas, colonial nesting sites, and Western Hemisphere Shorebird Reserve Network sites. <p>The EA proposes some mitigating design features, such as flight diverters and blinking lights. We consider these steps to be important and necessary, but they would not ultimately alter the fundamental project characteristics that we are concerned about.</p> | <p>As noted in the Draft EA, the height and location of the proposed tower are based on the USAF's mission requirements (see Sections 1.3, 1.4, and 2.1). A shorter tower and/or a tower in a location other than WFF would fail to meet the purpose of and need for the Proposed Action.</p> <p>Lighting would be limited to the minimum amount required by the Federal Aviation Administration (FAA) for a tower of the size and configuration of the proposed USAF tower. The tower would include six L-864 type medium intensity red beacons operating at 20 to 40 flashes per minute (fpm) for nighttime lighting and nine L-856 type high intensity white beacons operating at 40 fpm for day time lighting in accordance with FAA requirements. No steady-burning lights are proposed for the tower's lighting scheme.</p> <p>As noted in Responses to Comments 13 and 14, the USAF would conduct post-construction monitoring of bird collisions at the proposed tower and would adjust mitigation measures as necessary.</p> | No |
| 16 | TNC | <p>No viable location alternative is proposed to reduce adverse effects. In fact, the proposed location and alternative are both located on Wallops Island, within the Atlantic Flyway, an ecologically important area, and are separated by only 2,300 feet, which means adverse effects will be identical in both cases.</p> | <p>The extensive site selection process undertaken by the USAF to identify a suitable site for the proposed tower is documented in the Draft EA (see Section 2.1). No other alternative sites would meet USAF's requirements or satisfy the purpose and need for the Proposed Action. The two sites meeting the USAF's requirements were those on Wallops Island and analyzed in the Draft EA.</p> | No |

Table A-1: Summary of Comments Received During the 30-day Draft EA Public Review Period

| Comment No. ¹ | Agency / Organization | Comment | USAF Response | Final EA text revised based on comment? (Yes/No) |
|--------------------------|-----------------------|--|--|--|
| 17 | TNC | The draft EA presents a site-specific assessment of the impacts a single tower would cause at the proposed location. However, the potential population level impacts of such structures could occur over a much broader geographic area and these cumulative impacts must be considered when siting such projects and have not been considered in the draft EA. | <p>The presence of other towers within a 10-mile radius of Wallops Island is identified and considered in the cumulative effects analysis presented in the Draft EA (see Section 3.4). The impacts of those towers on birds have not been documented. However, as all of those other towers are less than 500 feet in height and many are less than 200 feet in height, it can be reasonably concluded that the impacts of those towers on birds is less than significant, as non-guyed towers less than 500 feet in height have been found to pose a notably lower collision risk than guyed towers taller than 500 feet (Gehring et al. 2011).</p> <p>The proposed tower, including implementation of identified mitigation measures by the USAF, would not result in significant impacts to birds. Thus, the cumulative effect of the proposed tower on birds, when considered in conjunction with the effects of the existing towers, was concluded to be less than significant. This conclusion is supported by the USFWS' concurrence that the proposed tower would be "not likely to adversely affect" Federal-listed bird species. Please refer to the revised Cumulative Effects Analysis presented in Section 3.4 of the Final EA.</p> | Yes |
| 18 | TNC | The draft EA contains a Monitoring and Mitigation plan calling for a minimum of two complete field seasons post-construction, between March 15 and November 15, to document the extent of avian mortality. We consider this plan to be inadequate in that it is short-term and limits the sampling season, which should, instead occur year-round, to also account for winter mortality. | [Final response pending based on further USAF/NASA discussions.] | TBD |

Table A-1: Summary of Comments Received During the 30-day Draft EA Public Review Period

| Comment No. ¹ | Agency / Organization | Comment | USAF Response | Final EA text revised based on comment? (Yes/No) |
|--------------------------|---|--|--|--|
| 19 | TNC | The draft EA does not provide a contingency plan containing specifications on possible measures to adopt in case, after construction, the tower is found to cause serious adverse effects. | The Avifauna and Protected Avian Species Monitoring and Mitigation Plan will incorporate the principles of adaptive management to continually evaluate the effectiveness of monitoring and mitigation methods and revise those mitigation methods as determined necessary, depending upon the monitoring results. The Avifauna and Protected Avian Species Monitoring and Mitigation Plan s presented in Appendix C of the Final EA. | No |
| 20 | National Oceanic and Atmospheric Administration (NOAA) / National Environmental Satellite, Data, and Information Service (NESDIS) | The [proposed] 750-foot tower can potentially generate Radio Frequency Interference (RFI) and Electromagnetic Interference (EMI), which will impact the satellite communications and potentially impact sensitive satellite ground station electronics. The same may be true for the Air Force's [proposed] instrumentation suite. | The proposed tower would not change the established WFF frequency management process. With regard to frequency management, the WFF Test Director and the Wallops Spectrum Manager are responsible for the operational control of the radio frequency (RF) spectrum at WFF. These personnel perform their frequency management duties in close coordination with NASA's tenants and partners, including NOAA and the U.S. Navy. Frequency utilization and management policies and procedures applicable to all range user activities at WFF are detailed in the <i>Wallops Flight Facility Frequency Utilization Management Handbook</i> (NASA 2004). | Yes |
| 21 | NOAA / NESDIS | [The] draft Environmental Assessment does not address any impact the 750' tower or its extensive steel guy wire infrastructure, may or may not have, on existing Radio Frequency (RF) environment at Wallops. The lack of an RF impact study is a serious omission and needs to be addressed before consideration can be given to accepting this location for tower construction and operation. Any attenuation, reflection or interference of the radiated transmissions by this proposed tower will degrade NOAA's ability to meet mission objectives for providing satellite imagery to generate forecasts and warnings that protect life and property. | Prior to the implementation of the proposed project, the WFF Test Director and the Wallops Spectrum Manager would review the construction and operation of the proposed tower and the equipment that would be installed on it, and coordinate with WFF mission partners, including the U.S. Navy and NOAA, to ensure that the proposed tower's operation would not interfere with existing equipment operating at and in the vicinity of WFF. Please refer to Section 2.2 of the Final EA where this information has been added. | Yes |

Table A-1: Summary of Comments Received During the 30-day Draft EA Public Review Period

| Comment No. ¹ | Agency / Organization | Comment | USAF Response | Final EA text revised based on comment? (Yes/No) |
|---|----------------------------------|---|--|--|
| 22 | NOAA / NESDIS | NESDIS has serious concerns regarding the Air Force's draft Environmental Assessment on the proposed construction and operation of an instrumentation tower on Wallops Island without adequate consideration of the Wallops Command and Data Acquisition Station (WCDAS) RF Spectrum impacts. The assessment must include consideration for potential RFI and EMI of NOAA/NESDIS equipment. | | Yes |
| 23 | Private Citizens (6 signatories) | We are concerned with high-powered lighting on the structure. We do not need to be blasted with any more light pollution on Accomack County's Seaside. White Strobes during the day are probably necessary, however, less powerful red lighting should be used at night. | <p>As noted in the Draft EA (see Section 2.2), lighting would be limited to the minimum amount required by the Federal Aviation Administration (FAA) for a tower of the size and configuration of the proposed USAF tower. The tower would include six L-864 type medium intensity red beacons operating at 20 to 40 flashes per minute (fpm) for nighttime lighting and nine L-856 type high intensity white beacons operating at 40 fpm for day time lighting in accordance with FAA requirements.</p> <p>While this lighting would be visible from a distance, based on the height of the proposed tower and as intended to warn approaching pilots, it is anticipated that such lighting would not generate an increased or noticeable amount of illumination that would cause annoyance to nearby residents.</p> | No |
| <p>Notes:</p> <ol style="list-style-type: none"> Comments are listed in the table in the order they were received during the 30-day Draft EA public review period. Comments from this agency or organization were provided in a single letter, but are presented as multiple entries for the purpose of clarity. | | | | |

Correspondence Received during the 30-day Draft EA Public Review Period

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[REDACTED]

From: Warren, Arlene (VDH) [REDACTED]
Sent: Tuesday, July 11, 2017 11:51 AM
To: AMER-US-MD Germantown-Tower Comments
Subject: RE: Notice of Availability on Draft Environmental Assessment: Instrumentation Tower at Wallops

Project Name: Draft Environmental Assessment: Instrumentation Tower at Wallops

Project #: N/A
UPC #: N/A
Location: Accomack Co.

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

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

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

The project is not within the watershed of any public surface water intakes.

There are no apparent impacts to public drinking water sources due to this project.

Best Regards,

Arlene Fields Warren
[REDACTED]
Office of Drinking Water
Virginia Department of Health
[REDACTED]
Richmond, VA 23220
[REDACTED]

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

From: WFF-Information [<mailto:wff-information@mail.nasa.gov>]
Sent: Thursday, July 06, 2017 9:52 AM
Subject: Notice of Availability on Draft Environmental Assessment: Instrumentation Tower at Wallops

Sent on behalf of the U.S. Air Force

Notice of Availability on Draft Environmental Assessment for the Proposed Construction and Operation of an Instrumentation Tower on Wallops Island, VA

In accordance with the National Environmental Policy Act of 1969 (NEPA), as amended, the United States Air Force (USAF) is announcing the availability for public review and comment on a draft Environmental Assessment (EA) that

analyzes the potential impacts associated with the proposed construction and operation of a 750-foot-tall instrumentation tower on Wallops Island in Accomack County, Virginia (proposed action). The draft EA includes the draft finding of No Significant Impact (FONSI)/Finding of No Practicable Alternative (FONPA) and draft mitigation and monitoring plan (MMP).

The documents may be downloaded from the following website:

https://sites.wff.nasa.gov/code250/Instrumentation_Tower_DEA.html

Hard copies are also available at the Eastern Shore Public Library, Accomac, Virginia; Chincoteague Island Library, Chincoteague, Virginia; and the NASA WFF Visitors Center, Wallops Island, Virginia.

The public comment period opened July 5, 2017; the USAF respectfully requests comments be submitted by August 14, 2017. Please e-mail responses/inquiries to tower.comments@aecom.com or mail to the following address:

Tower Project

c/o URS Corporation

[REDACTED]

12420 Milestone Center Drive, Suite 150 (4th Floor)

Germantown, MD 20876

Additionally, NASA Wallops is holding its next quarterly Public Information Session from 5 to 7 p.m., Wednesday, July 19, at the Wallops Visitors Center. The tower project will be among the programs/topics presented during the poster-style information session. The Wallops Visitors Center is located on Virginia Route 175 about six miles from U.S. Route 13 and five miles from Chincoteague.

[REDACTED]

July 14, 2017

Tower Project
c/o URS Corporation
[REDACTED]
12420 Milestone Center Drive
Suite 150 (4th Floor)
Germantown, Maryland 20876

Re: USAF Wallops Island, Tower

Dear Mr. Boose:

You have inquired regarding the construction of a 750-foot-tall instrumentation tower on Wallops Island in Accomack County, Virginia.

The Marine Resources Commission requires a permit for any activities that encroach upon or over, or take use of materials from the beds of the bays, ocean, rivers and streams, or creeks which are the property of the Commonwealth.

Based upon my review of the "Draft Environmental Assessment" it appears that the Preferred Alternative and Alternative 1 will not fall within the Commission's jurisdiction, therefore, no authorization would be required from the Marine Resources Commission. If, however any portion of your proposed project encroaches channelward of mean low water a permit may be required.

If I may be of further assistance, please do not hesitate to contact me at [REDACTED].

Sincerely,



George H. Badger, III
Environmental Engineer

[REDACTED]

[REDACTED]

From: Patricia Wolf [REDACTED]
Sent: Saturday, July 15, 2017 9:15 AM
To: AMER-US-MD Germantown-Tower Comments
Subject: no to the tower

Important to maintain clean air space for migrating birds. No the tower. Patty Wolf

The USAF developed criteria in the early stages of project planning to guide the identification and selection of alternative sites on which to build and operate the proposed tower. Based on the site selection criteria and alternative review process, the USAF identified two alternative sites location on mid-Wallops Island for further analysis in the DEA. They are: Proposed Action Alternative (Preferred Alternative) Building X-015 Site and Alternative 1: Building X-079 Site.

As a result of our review of the DEA, EPA developed comments and questions presented in the enclosed Technical Comments document for your consideration. Comments and questions are specific to aquatic resources/floodplains/climate change, human health, hazardous substances, and cultural resources. Thank you for the opportunity to review this project. If you have questions regarding these comments, the staff contact for this project is Karen DelGrosso; she can be reached at [REDACTED] or [REDACTED]

Sincerely,



Barbara Rudnick
NEPA Team Leader
Office of Environmental Programs

Enclosure (1)

Technical Comments
Construction and Operation of an Instrumentation Tower at Wallows Island, Virginia

Aquatic Resources/Floodplains/Resiliency

Page 2-6 states, “A 30-kilowatt propane-fueled generator and associated 500-gallon above-ground fuel tank would be installed near the prefabricated structures to provide electricity in the event of power outages. To mitigate potential flooding during storm events, the prefabricated structures and all equipment associated with the proposed tower would be installed on one or more elevated platforms at least 11 feet above mean sea level (AMSL).” It is assumed that 11 feet AMSL is appropriate for protection of the generator and fuel tank in the event of flooding. It would be helpful in the documentation to state if the plan is following guidelines from FEMA or the source of modelling used to confirm the proposed elevation appropriate for protection. Will there be challenges or risks when needed to fill the fuel tank? Are there guidance/contingency plans in place for this specific action or do the plans need to be altered to address this action (filling raised tanks)?

Will the elevated platforms be built to withstand flooding and future climate scenarios? It would be helpful if the documentation discussed any modeling or analysis to evaluate future climate scenarios and weather events. Describe how those scenarios may impact the project and its design. Any assessment done to identify climate trends and sustainable design should be discussed in the Final EA. EPA recommends considering climate adaptation measures based on how future climate scenarios may impact the project.

Page 3-5 states, “The entirety of each alternative site is located in a portion of the 100-year floodplain designated Zone AE, Special Flood Hazard Areas Subject to Inundation by the 1% Annual Chance Flood, Base Flood Elevations Determined (FEMA 2017b).” Would this type of floodplain encroachment need to be evaluated and coordinated with the Federal Emergency Management Agency (FEMA)? Please consider, discuss and address in the Final EA.

Page 2-6 states, “All structural components of the tower would be pile-supported, as necessitated by underlying geologic conditions (i.e., silty materials beneath a thin layer of sand). Concrete piles would be driven or cast in place. Piles would be installed to a depth of at least 75 feet (USTS 2015).” It is assumed that the piling depth of 75 feet is needed to support the height of the tower (750 feet). Have there already been borings to determine that the 75 feet depth can be met? Is there a boring log that can be included in the Final EA?

Page 3-8 states, “As currently designed, each of the concrete guy wire anchor points (assuming 14-foot by 14-foot concrete slabs) would have an area of 196 square feet, for a total cumulative area of 1,764 square feet.” What is the size of the concrete slab for the tower? How many pilings will be necessary to support the tower and each of the anchor points? Will the pilings impact submerged aquatic resources? If so, please identify and estimate the impact. In addition, please discuss if the pilings will affect hydrology.

Page 3-8 states, “The USAF has prepared a Draft FONPA in accordance with 32 CFR §989.14(g) to address impacts on wetlands and floodplains potentially resulting from the implementation of the Proposed Action Alternative.” Please include the Finding of No Practical Alternative in the Final EA.

Human Health

Page 2-7, Figure 2-3 provides a conceptual rendering of the Proposed Tower on the Proposed Action Alternative Site (Preferred Alternative) near Building X-015. Please describe the function of Building X-015. It would be helpful to state if people would be utilizing the building on a daily basis; or if it is a storage building. Is there a risk to human health as a result of the proximity of the tower to the building and the two prefabricated structures that would be installed near the base of the tower to house equipment/fuel? If people occupy this building or any other building nearby (Building X-35, etc.), is there an exposure impact of electromagnetic fields from the tower? Please describe and discuss potential human health impacts, if relevant.

Hazardous Substances

Page 3-11 states, “Backfill containing munitions and explosives constituents (MEC) was used in an approximately 0.15-acre area of the former power generating plant approximately 165 feet southeast of where the base of the proposed tower would be located. A surface sweep of the area was completed and anomalies were excavated to two feet below ground surface (bgs). No soil contaminant testing specific to munitions has reportedly been conducted, and a dig permit/excavation request process has been instituted for any activities that would disturb the soil of the backfill area and immediate surrounding areas.”

EPA appreciates that a dig permit/excavation request process would be instituted for activities that would disturb the soil of the backfill area and immediate surrounding areas. Is it possible that MECs can be uncovered in the area proposed for the tower? Is there a contingency plan in place if MECs are discovered in the area of tower construction? In addition, the proposed action would involve digging 75-feet for pilings and since previous excavation was only two feet below ground surface and no soil contaminant testing specific to munitions has reportedly been conducted, is there a possible risk to workers? Please site worker safety plans and contingency plans in the event of discovery of MEC and/or contamination, etc.

Cultural Resources

As noted throughout the DEA and in particular on page 3-44, it states, “The proposed relocation of the telemetry dish would have no impacts on the visual quality and aesthetics of WFF, as the dish would be installed on existing infrastructure in a previously developed area of the Mainland or Wallops Island. Its appearance would be consistent with other facilities and equipment that support the missions of WFF and its tenants.” The sensitivity to relocating the telemetry dish to areas of similar infrastructure is appreciated. It is hoped that there is no viewshed impact to the several eligible and recommended eligible NRHP sites on WFF. Although this may have been assumed, stating this in the Final EA (FEA) would be beneficial.

As noted in Appendix A (page A-63) within the Wallops Island Tower, Cultural Resources Analysis – Phase II, Management Summary (Draft), June 2017; it states: “Based on the findings from both surveys, the line of sight to the alternative sites is blocked by the overgrowth of vegetation from the eight architectural resources’ southwest property lines. Therefore, the undertaking will have No Adverse Effect on the potential NRHP eligible historic district. Additionally, URS does not recommend further inspection of the potential historic district at the intensive level, as the research conducted during this survey was exhaustive and did not yield any undiscovered significant aspects of Virginia’s maritime

history for the time period or region.” EPA appreciates and respects the evaluation provided. However, could there be a more pronounced visual impact once the leaves drop from the trees in the fall and winter? Is this a concern for the residences? Has there been public outreach to the eight residents whose properties are Recommended NRHP and VLR Eligible? Please address in the Final EA.

August 8, 2017

Tower Project
c/o URS Corporation

[REDACTED]
12420 Milestone Center Drive, Suite 150 [REDACTED]
Germantown, MD 20876

RE: Draft Environmental Assessment - Construction and Operation of an Instrumentation Tower at Wallops Island, Virginia

Dear [REDACTED],

Thank you for this opportunity to provide comments to the U.S. Air Force and NASA Goddard Space Flight Center's Wallops Flight Facility (NASA-WFF) regarding the Draft Environmental Assessment (EA) carried out for the construction and operation of an instrumentation tower at Wallops Island, Virginia.

The Nature Conservancy (the Conservancy) is a non-profit organization with a mission to conserve the lands and waters on which all life depends. For over four decades, the Conservancy has worked with state, federal and local partners on Virginia's Eastern Shore to conserve a 134,000-acre network of protected lands called the Virginia Coast Reserve (VCR). The Conservancy owns and manages all or part of 14 of Virginia's barrier islands including more than 40 miles of Virginia's Atlantic shoreline. The primary reason that the Conservancy has so deeply invested in this area is its location along the Atlantic Flyway, a critically important migration corridor in North America used year-round by heavy concentrations of a wide range of bird species, including waterfowl, shorebirds, raptors and neotropical land birds. In recognition of this uniquely protected stretch of Atlantic Coast wilderness and its significance for birds, VCR has been designated a United Nations International Man and the Biosphere Reserve, a U.S. Department of the Interior National Natural Landmark, a National Science Foundation Long-Term Ecological Research Site, an Audubon Global Important Bird Area, and a Western Hemisphere International Shorebird Reserve Network Site. Of note, at least 25-30% of the federally listed *rufa* subspecies of the red knot are supported by the Virginia barrier islands as well as 15% of the federally threatened Atlantic Coast piping plover. Additionally, the Virginia barrier island system supports over 54% of all breeding waterbirds in the state, 100% of the state breeding population of Wilson's plovers, and 90% of the state breeding population of American Oystercatchers (Paxton and Wilson 2015).

Given our unique standing as a coastal land owner neighboring WFF and our commitment to migratory bird conservation, the Conservancy has significant concerns about the adverse impacts on migratory birds and bats that the proposed instrumentation tower, as described in the draft EA, will have. The Conservancy consulted about this project with other partners that are part of the Virginia Coast Avian Partnership, a group of federal, state, academic and non-governmental organization partners dedicated to monitoring, managing and conserving Virginia's avian resources. After thorough review of the draft EA, we do not agree that there is enough evidence to conclude that the project will have "low to moderate adverse effects" on avifauna. Furthermore, we believe that given the unique location of Wallops Island in the Atlantic Flyway and its ecological importance to migratory birds and bats, this is not an appropriate location for the proposed instrumentation tower. We express our specific concerns below.

- (1) The draft EA draws the conclusion that adverse effects to avifauna will be low to moderate. We do not agree with this conclusion based on the study by Paxton and Wilson (2015), which suggests that there are several species in the region with a high risk of collision and medium to high risk of experiencing population level impacts. The study also highlights the lack of information required to carry out a full

assessment on expected bird mortality rate caused by the proposed project. We do not believe this assessment translates to a low to moderate risk for the avifauna of the region.

- (2) We are concerned about several project design characteristics that will increase the chance of adverse impacts to migratory birds and bats. Paxton and Wilson (2015) reference a worst-case scenario: “Manville (2001) states that a worst-case scenario would be a 1000+ foot tower, multiple-guyed, with multiple solid or pulsating lights, in a bird migratory corridor, near or next to a wetland. [...] The proposed tower fits many of the worst case scenario”. The following project design characteristics align with that scenario:
- a. the tower’s height of 750 feet; a significant decrease in mortality is associated with reduced tower height (Crawford and Engstrom 2001);
 - b. 12 steel guy wires on each of 3 sides; guyed towers cause higher mortality than non-guyed towers (Gehring et al. 2011; Dickey et al. 2012; Gehring and Walter 2012); one study showed 70 times as many collisions at tall, guyed towers (towers 1,000 feet or more in height) than on non-guyed, medium-height towers (towers between 380 feet and 479 feet in height) (Gehring et al. 2011);
 - c. required lighting; tall, guyed towers lit with steady-burning lights have the highest fatality rates (Carter III and Parnell 1976, 1978; Erickson et al. 2005). Fewer bird fatalities have been documented at towers equipped with only red or white flashing lights as compared to towers with nonflashing, steady-burning lights (Carter III and Parnell 1976, 1978; Gehring et al. 2009, 2011). Extinguishing steady-burning, red tower lights have been determined to reduce avian collisions with towers by 70 percent (Kemper 1996; Gehring and Walter 2012);
 - d. proximity to the coast; towers taller than 450 feet are generally recommended to be sited away from coastal zones, bird staging areas, colonial nesting sites, and Western Hemisphere Shorebird Reserve Network sites (FCC 2012);

The EA proposes some mitigating design features, such as flight diverters and blinking lights. We consider these steps to be important and necessary, but they would not ultimately alter the fundamental project characteristics that we are concerned about.

- (3) No viable location alternative is proposed to reduce adverse effects. In fact, the proposed location and alternative are both located on Wallops Island, within the Atlantic Flyway, an ecologically important area, and are separated by only 2,300 feet, which means adverse effects will be identical in both cases.
- (4) The draft EA presents a site-specific assessment of the impacts a single tower would cause at the proposed location. However, the potential population level impacts of such structures could occur over a much broader geographic area and these cumulative impacts must be considered when siting such projects and have not been considered in the draft EA.
- (5) The draft EA contains a Monitoring and Mitigation plan calling for a minimum of two complete field seasons post-construction, between March 15 and November 15, to document the extent of avian mortality. We consider this plan to be inadequate in that it is short-term and limits the sampling season, which should, instead occur year-round, to also account for winter mortality.
- (6) The draft EA does not provide a contingency plan containing specifications on possible measures to adopt in case, after construction, the tower is found to cause serious adverse effects.

Again, thank you for providing the Conservancy with the opportunity to submit comments to the draft Environmental Assessment for the construction and operation of an Instrumentation Tower at Wallops Island, Virginia. I can be contacted at [REDACTED]

Sincerely,



Jill Bieri
Director, Virginia Coast Reserve



[REDACTED]

AUG 09 2017

Air Force Materiel Center

Tower Project

C/O URS Corp.

12420 Milestone Center Drive, Suite 150 ([REDACTED])

Germantown, MD 20876

RE: Comment on Draft Environmental Assessment on Proposed Construction and Operation of Instrumentation Tower on Wallops Island

To whom it may concern:

National Oceanic and Atmospheric Administration's (NOAA), National Environmental Satellite, Data and Information Service (NESDIS) prepared the following comments to the Air Force's Draft Environmental Assessment on Proposed Construction and Operation of Instrumentation Tower on Wallops Island.

The Wallops Command and Data Acquisition Station (WCDAS), adjacent to the National Aeronautics and Space Administration's (NASA) Wallops Flight Facility (WFF), is responsible for control of and data flow from NOAA, NASA, DoD and many other international satellites. WCDAS manages, operates, and maintains the station which executes spacecraft commands and schedules. Additionally WCDAS acquires, maintains, and distributes a continuous flow of meteorological satellite data to the national and international communities.

The 750 foot tower can potentially generate Radio Frequency Interference (RFI) and Electromagnetic Interference (EMI), which will impact the satellite communications and potentially impact sensitive satellite ground station electronics. The same may be true for the Air Force's instrumentation suite.

NOAA satellite systems, as well as the other Federal agency and international satellite systems, are dependent on the RF Spectrum for collecting and disseminating information about the atmosphere, oceans, and hydrologic sciences, which contributes to National Defense, Aviation & Maritime operations, weather prediction, and early warning systems. NOAA's Primary Mission Essential Functions within the Department of Commerce include:

(a) Satellite Imagery - to collect and provide the Nation with critical intelligence data, imagery, and other essential information for predictive environmental and atmospheric modeling systems and space-based distress alert systems by operating NOAA-controlled satellites, communications equipment, and associated systems;

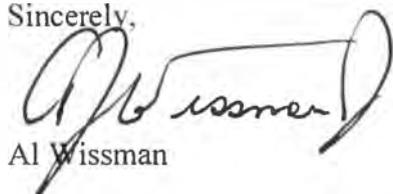
(b) Meteorological Forecasts - provide the Nation with environmental forecasts, warnings, data, and expertise critical to public safety, disaster preparedness, all hazards response and recovery, the national transportation system, safe navigation, and the protection of the Nation's critical infrastructure and natural resources.

(c) Satellite Command and Control – transmission of radio frequencies that may be attenuated, reflected or interfered with by sensors and instrumentation on the Air Force tower.

NOAA notes the draft Environmental Assessment does not address any impact the 750' tower, or its extensive steel guy wire infrastructure, may or may not have, on existing Radio Frequency (RF) environment at Wallops. The lack of an RF impact study is a serious omission and needs to be addressed before consideration can be given to accepting this location for tower construction and operation. Any attenuation, reflection or interference of the radiated transmissions by this proposed tower will degrade NOAA's ability to meet mission objectives for providing satellite imagery to generate forecasts and warnings that protect life and property.

NESDIS has serious concerns regarding the Air Force's draft Environmental Assessment on the proposed construction and operation of an instrumentation tower on Wallops Island without adequate consideration of the WCDAS RF Spectrum impacts. The assessment must include consideration for potential RFI and EMI of NOAA/NESDIS equipment.

Sincerely,



Al Wissman

Chief, Data Management & Continuity Operations Branch
Office of the Assistant Chief Information Officer
National Environmental Satellite, Data & Information Service
National Oceanic and Atmospheric Administration

██████████
██████████

[REDACTED]

From: Garnett A. Kellam [REDACTED]
Sent: Monday, August 14, 2017 3:54 PM
To: AMER-US-MD Germantown-Tower Comments
Cc: Robert Crockett
Subject: FW: 700 FT USAF Tower on Wallops Island

Please see below.

From: Garnett A. Kellam [REDACTED]
Sent: Monday, August 14, 2017 3:49 PM
To: 'towercomments@aecom.com' <towercomments@aecom.com>
Cc: 'rdcrockett55@yahoo.com' [REDACTED]
Subject: 700 FT USAF Tower on Wallops Island

Good afternoon,

We are concerned with high powered lighting on the structure. We do not need to be blasted with anymore light pollution on Accomack County's Seaside. White Strobes during the day are probably necessary, however, less powerful red lighting should be used at night.

Sincerely,

Garnett A. Kellam
Jane G. Kellam
Pierce B. Taylor III
Nadean Moore
Ace Sebolt
Rachel C. Kellam