



JJRTC

TRAINING FACILITY

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NCPC REPORT

[Abstract](#)

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Project Overview

INTRODUCTION

The proposed Training Facility will be a new venue within the campus of the James J. Rowley Training Center (JJRTC). The project has been included in previous master plans for the JJRTC and was incorporated into, and is consistent with, the most recent update to the Master Plan in 2023, and the 2023 Supplemental Environmental Assessment (SEA).

With USSS intending to begin construction in 2027, the training facility will provide structures, grounds, and venues designed to develop officers' abilities to monitor and [REDACTED]

[REDACTED]

[Contextual Site Plan]

OVERVIEW

The JJRTC is the primary training facility for the USSS; it provides the best training environment available to USSS law enforcement agents, officers, and civilian support personnel. The campus is in Laurel, Maryland, on approximately 490 acres located 2.5 miles north of the Capital Beltway at the northeast corner of the Baltimore-Washington Parkway and Powder Mill Road. The JJRTC is adjacent to the northern boundary of the Beltsville Agricultural Research Center (BARC), operated by the U.S. Department of Agriculture (USDA). A portion of the Patuxent National Wildlife Research Center, operated by the U.S. Geological Survey (USGS), is located northeast of the JJRTC. Approximately 100 feet north of the JJRTC is the Snowden Pond residential community, consisting of approximately 200 acres of single-family houses. The main access point of the JJRTC is located off Powder Mill Road.

The closest public transportation stop is approximately 2.5 miles away from the campus entry.

The facility includes multiple buildings, housing classrooms and conference rooms, spread over the campus. Due to the increased operational tempo, development of new training programs, and campus population growth in recent years, the USSS continues to develop the

JJRTC campus to meet the needs of the USSS's mission. The USSS has planned for the training facility to be in the interior of the JJRTC on a site long reserved for this purpose.

[JJRTC Master Plan Site Plan]

EXISTING SITE CONDITIONS

The training facility site is on 43 acres in the center-east portion of the JJRTC grounds. While mature trees seclude the JJRTC grounds, unprogrammed spaces and partially wooded zones surround the training facility site. Still, there is little visual transmission from the training facility to the JJRTC's perimeter.

The training facility site is currently a wooded area with three distinct forest types: a lowland hardwood forest stand featuring red maples, a mature pine/ hardwood forest stand consisting of mostly pines and oaks, and a mixed hardwood forest. The wooded area needs maintenance; there are several exotic invasive plants and, particularly in the 10 acres of the mixed hardwood forest, there is considerable damage from invasive insects including the Spongy Moth (*Lymantria dispar*). The wooded area may provide a habitat for the Northern Long-eared Bat (*Myotis septentrionalis*) and other significant woodland species.

Topographically, the training facility's site is moderately sloped with maximum slopes of 8-9%. Geologically, the training facility site consists primarily of Galestown sandy soils, which are easily manipulated by wind and water. The soils located adjacent to the stream channels of the Patuxent River are poorly drained, sandy loam Fallsington soils, which consist of old sandy deposits along with silt and clay.

Outreach and Coordination

PUBLIC AND AGENCY INVOLVEMENT

In September 2016, the USSS sent letters to agencies, organizations, and public officials requesting comments or concerns on the proposed projects as part of the Master Plan Supplemental Environmental Assessment (SEA) process to satisfy the National Environmental Policy Act (NEPA). The USSS sent letters to the following organizations:

- National Capitol Planning Commission (NCPC)
- National Park Service (NPS)

- National Aeronautics and Space Administration (NASA)/Goddard Space Flight Center
- United States Army Corps of Engineers (USACE)
- United States Department of Agriculture (USDA)
- Maryland Department of the Environment (MDE)
- Maryland Department of Natural Resources (MDNR)
- Maryland Department of Planning (MDP)
- Maryland Historical Trust (MHT)
- Maryland -National Capital Park and Planning Commission (M-NCPPC)
- Prince George’s County Police
- Prince George’s County Fire/EMS
- Prince George’s County Department of Public Works and Transportation
- Prince George’s County Department of Environmental Resources
- Snowden Pond at Montpelier Homeowners Association
- Other Local, State, and Federal Government Officials

The USSS considered all comments received during the NEPA process. Comments received focused on the following topics:

- Removal of above ground or underground petroleum storage tanks in accordance with applicable regulations
- Disposal of solid and hazardous waste
- Notation that two streams, classified as Use I streams requiring time of year restrictions, would not be affected by the Master Plan

Detailed Project Information

Due to funding availability, procedures, and programmatic changes, USSS anticipates most of the facility to be constructed in one phase; with several elements being constructed as additional funding and building requirements solidify. The Guiding Principles for Sustainable Federal Buildings will function as the sustainability criteria to guide the development of all fully occupied areas of work. The USSS is reviewing and prioritizing the feasibility, cost implications, and sustainability requirements.



s [REDACTED]
[REDACTED] the JJRTC site. While there have been several programmatic changes since the project's preliminary review, these changes reduce the overall impervious area and will not require additional clearing. The proposed facility will address the associated stormwater management as required by the Maryland Department of the Environment (MDE). Bioretention and green infrastructure will provide for surface filtration, aligning with environmental standards while supporting the operational needs of the site. The area of stormwater BMPs, however, will not be reduced in anticipation of future projects.

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] In addition, USSS will extend utilities to the project site and improve existing services to the rest of the JJRTC Campus.

BUILDINGS

Perimeter Buildings

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[Proposed Site Plan]

The Officer Posts will be constructed to different operational levels based on the training requirements; ranging from a fully functioning installation to a prefabricated shelter simply used to denote a place. Furthermore, some of these may be incorporated in later phases. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED] The designers have simplified the building's materiality to be more durable and economical. Concrete, concrete masonry, EIFS, insulated metal panels, and standing seam roofs will be the primary exterior finishes.

The existing topsoil will be tested to see if it can be reused on-site. If so, the topsoil will be stored on-site and reused after grading has been completed. A space for soil storage that does not interfere with building and site modifications or necessary movement through and around the site will be determined. If this is not possible, new soil will be graded over the existing; a new topsoil layer will be placed and fine-graded at the surface up to the perimeters of the buildings.

Trees, Shrubs, and Groundcover

[Visibility Section]

Since extensive re-grading will be required, most of the existing flora and fauna will be removed from the site. The proposed plant selection will include fast-growing and low-maintenance species. The training facility's trees will match [REDACTED] in general size and as either evergreen or deciduous. These types will be selected and placed to match the visual and security functions of the existing trees on the subject site. Deciduous trees should include shade trees and ornamental (flowering trees). At the time of placement, deciduous trees will have at least a 2-inch caliper. Evergreen trees, including conifers, will be no less than 10 feet tall at the time of installation and will be of a similar type to those on the subject site (conifers will be placed in matching locations of conifers). Trees will be similar in scale to the trees on the subject site at maturity.

[REDACTED]
[REDACTED] In these instances, larger, more mature trees may be brought to the training facility to simulate those attributes. Where using more developed plantings is inappropriate, custom artificial flora may be placed on site temporarily or permanently. The project team will determine which, if any, of the trees or other plantings need to be more closely represented on the training facility's site.

[REDACTED]
[REDACTED] The shrub size and shape are tightly controlled [REDACTED] Shrub types may be smaller, slower-growing varieties to reduce maintenance requirements while continuing to demonstrate the characteristics critical for exterior environment training.

[REDACTED]; consultation with the USSS will discuss the representational treatment of these zones on the training facility's site. A mixture of Kentucky Bluegrass (*Poa pratensis*) and Tall Fescue (*Festuca arundinacea*) is the current selection [REDACTED]; these grasses are considered durable; however, native grasses, including Red Fescue (*Festuca rubra*) and Pennsylvania Sedge (*Carex pensylvanica*), may perform better and require less maintenance including. Ground cover elements will be represented by substitute ground cover, shrubs, turf, or mulch.

Peripheral plantings, including bioretention plantings, screening shrubs, and new trees, are an opportunity to meet some of the reforestation requirements generated by the site modifications. Bioretention plantings will be selected from naturalized and indigenous plants appropriate for the soil and water expectations. They will not attempt to match plantings [REDACTED]. Other plantings, particularly trees, will look to meet not only site requirements for screening views and noise but also the Maryland Department of Natural Resources Reforestation and Afforestation requirements.

Fruiting and flowering plants will be avoided. Plantings will be native where possible or naturalized. Invasive species will not be used on the training facility site.

Irrigation will be provided to maintain essential training grounds. [REDACTED]; irrigation will be placed in locations where maintaining the lawns and other required plantings is essential to the mission of the facility. Irrigation will come from a potable water system and will be supplied to support the landscape plantings as needed.

Additional temporary irrigation may be used during the establishment period for plants. However, to maximize site use availability, reduce maintenance, and assist in meeting the requirements for sustainability certification, the site will be designed to reduce the need for irrigation, the reliance on external water sources, and stormwater runoff.

Paving and Site Circulation

Walkways will have the same plan relationships and functions [REDACTED]. The training facility site's pedestrian circulation, including patios, courts, ramps, and stairs will be concrete.

Other distinctions within the pathways, including jointing and texture, will not be matched. The USSS will match the step stones and garden paving to the extent required for training purposes. Gravel and other loose or impermanent pathways will not be replicated; though mulches, both organic and inorganic (gravel), may be simulated with similar materials to reproduce training scenarios.

Walls, Fences, and Other Site Features

The training facility's site features, such as pools, monuments, and site furniture, will be the same general size and have the same location relationship [REDACTED]; these objects will otherwise not be functional. Other elements the training facility will represent on-site include site walls, pergolas, benches, concrete barriers, fences, stairs, bollards, and other site appurtenances. Project fences, site walls, and permanent vehicle and pedestrian control devices

will match the general dimensions and functionality [REDACTED]. The primary perimeter fencing height is capped at approximately seven feet. Gates and drop arms will match the swing direction and range of subject elements. [REDACTED]

[REDACTED] Additional pedestrian access points [REDACTED] will be provided to allow for security activity simulations.

[REDACTED]

FOREST STAND DELINEATION

A Forest Stand Delineation (Appendix A) was prepared in 1995 by VIKA Virginia LLC as part of JJRTC’s comprehensive planning process in accordance with the Prince George’s County Woodland Conservation Program; it was amended in 2015 to reflect changes in the site. The latest amendment in 2025 incorporates changes in the project boundary and reviews previous information. The forest stand delineation describes the following site and project elements:

- Site area
- Anticipated tree removal area
- Existing canopy trees, understory trees, shrubs
- Forest types
- Existing specimen, historic, or champion trees

[Forest Stand Delineation]

Historic aerial photos indicated that much of the training facility site had been used for farmland or industrial purposes, making the woodlands currently on the training facility site a product of forest reclamation. At the time of the initial survey, trees on the training facility site were no more than 12 inches in caliper. However, by 2025, there were 17 specimen trees identified. Additionally, the project area expanded beyond the boundary of the original forest stand survey.

These new areas correspond to the forest stands in the original document and were identified in the addendum. Previously identified forest stands remained largely intact.

[Aerial Photo, 1938]

[Aerial Photo, 1977]

[Aerial Photo, 2022]

Several Specimen Trees were identified in the new Forest Stand Delineation. The nature of the facility will require the removal of the trees; the site re-grading and landscape implementation are critical to the agency’s mission and viable design alternatives do not exist. As the project will be implementing acres of reforestation and not just individual trees, specific remediation for these trees will be established with Maryland DNR.

TREE REPLACEMENT

Due to the requirements of the training facility, grading contractors will be required to clear trees from more than 90% of the training facility’s site before construction can begin. While there will be trees planted on site, it is anticipated that at least 20 acres of replacement trees will be required to meet both the Maryland Department of Natural Resources (MD-DNR) and NCPC tree replacement standards. While both require an acre-per-acre replacement strategy, MD-DNR is prescriptive in the methods and quantities required to meet the tree replacement requirements and will be used for perimeter reforestation and offsite afforestation.

Tree replacement at the JJRTC must respond to aesthetic, functional, and programmatic requirements. The training facility grounds will mimic the number, species, and variety of the trees [REDACTED]. Trees towards the perimeter will provide visual screening, audio screening, and performative ecological intensity. Perimeter trees will have a minimum caliper of 2 inches, have their root balls surrounded by burlap, and, when planted, be spaced approximately 20 feet from each other so that there are approximately 100 new trees per acre; this follows MD-DNR’s Forest Conservation Planting Guide (Appendix B). Perimeter tree species will vary within the species listed in the Perimeter and Bioretention Plant List. (Appendix C)

Off-site tree replacement will be coordinated between MD-DNR, Prince George’s County, NCPC, and the JJRTC to provide appropriate sizing, spacing, and species according to site needs, community interests, and efficiencies. The USSS is pursuing site availability at the adjacent USDA

facilities . It is anticipated that container trees will be planted on a site that has adequate soil. Aesthetic requirements will be met as the location for the new plantings is solidified.

Trees planted for this project, both on and off-site, will be monitored for survivability for five years, meeting NCPC requirements and exceeding maintenance of other local jurisdictions.

Aviation requirements and considerations

The site intends to support helicopter operations into and out of the south lawn area. Several requirements are needed for approaching and departing aircraft with regard to the landing area and approach/departure surfaces. The helicopter that is intended to be used for these operations is the [REDACTED]. The required landing area is 103 feet x 103 feet square and is surrounded by a 163 feet x 163 feet square safety area that is centered on the landing area and must always remain clear.

[Landing area diagram]

Attached to the landing area are the approach and departure surfaces. These are imaginary surfaces that consist of an 8:1 sloped approach/departure surface and two 2:1 sloped transitional surfaces on either side of the approach/departure surface. These surfaces extend outward 4,000 feet and reach an altitude of five hundred feet above ground level (AGL) from the landing area. The intent of these surfaces is to ensure that the flight path is clear of any obstacles or obstructions; thus, it is imperative that nothing penetrates any of the surfaces.

[Approach/Departure surfaces]

[REDACTED]
[REDACTED] If the trees remain in the current location for the training facility layout they will need to remain beneath the approach/departure surface or be trimmed/topped to remain beneath the surfaces. If instead a pole is used in place of a tree, it must be highly visible and have a frangible connection per the Federal Aviation Administration’s (FAA) Advisory Circular (AC) 150/5220-23A, which will have minimal mass and absorb a minimal amount of energy during an impact event.

[Flight path obstructions North]

[Flight path obstructions South]

Environmental and Historical Considerations

OVERVIEW

The 2023 Master Plan addresses environmental and historic considerations. The JJRTC campus has a historic component but is insular. Most of the individual buildings are not contributing; many are scheduled to be replaced as the campus evolves.

The Master Plan SEA was completed in 2018. The project is consistent with the Master Plan; a Categorical Exclusion is the appropriate NEPA documentation for the project.

The Master Plan was determined to have no adverse effect on historic properties, completing the Section 106 compliance. The USSS will continue to coordinate with the NPS due to the Baltimore-Washington Parkway's listing in the National Register of Historic Places.

STORMWATER

The general stormwater management concept for the training facility site initially anticipated the implementation of low-impact development (LID) facilities within the development footprint adjacent to the areas of new impervious area development. However, it was determined that this approach would counter the project's overall goal: [REDACTED]. Implementation of LID facilities would require linear facilities (typically bioswales) along many of the impervious paths proposed or smaller infiltration areas located throughout the training facility site. It was determined that infiltration facilities were not feasible within the training facility site area due to the extensive fill conditions. In addition, any interior facilities would create a contrasting character to the site than originally intended and thus, were not pursued. Therefore, the general stormwater management concept will be based on providing perimeter treatment through bioretention and submerged gravel wetlands meeting both the water quality and partial quantity requirements for the proposed site.

The governing authority for stormwater management at JJRTC is the MDE. The Maryland Stormwater Management Guidelines for State and Federal Projects, published in February 2015, provides direction on the design, review, and approval process for state and federal projects. The design guidelines for addressing MDE criteria and requirements are found in the 2000 Maryland Stormwater Design Manual Volumes I and II, as amended through May of 2009 (Manual). The design standards focus on the implementation of Environmental Site Design (ESD), which is the

implementation of LID facilities to treat stormwater runoff at its source rather than conveying it to larger facilities for treatment and control.

[Stormwater Catchment]

Because this project is a federal facility, it is also subject to requirements outlined in the Energy Independence and Security Act of 2007 (EISA). The applicable requirements are that “the sponsor of any development or redevelopment project involving a Federal facility with a footprint that exceeds 5,000 sq. ft. shall use site planning, design, construction, and maintenance strategies for the property to maintain or restore, to the extent technically feasible, the pre-development hydrology of the property with regards to the temperature, rate, and duration of flow.” The ESD goals required by MDE and the regulations outlined in EISA are similar. All require that the development of a site occur such that the post-development runoff characteristics of the site will mimic the pre-development runoff characteristics of the same site, typically through the implementation of LID facilities. However, there are differences in the methodologies used by each regulation to achieve the stated goals. Given that the subject project is to be permitted through MDE and is subject to EISA, a detailed analysis of both sets of requirements during design is necessary to ensure compliance with both.

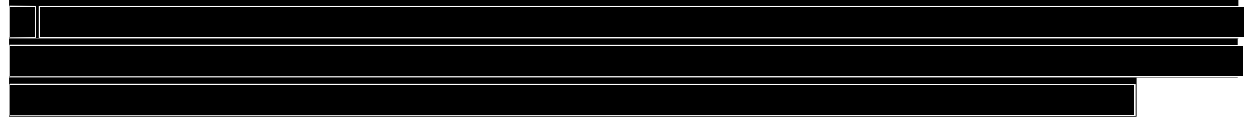
In the current layout of the training facility site, the improvements encompass approximately 43 acres, with approximately 11.31 acres being new impervious area, which would result in a volumetric requirement of approximately 2.23 acre-feet of stormwater management storage to be provided to treat the water quality on-site by perimeter bioretention zones. The bioretention zones would provide most of the site water quality treatment through surface filtration facilities. These facilities would best be located to the west and east of the site where there are available perimeter areas for these types of facilities [REDACTED].

Following MDE Technical Memorandum No. 11, the site was divided into two stormwater management (SWM) Study Areas, DP-1 and DP-2, and calculated separate ESDVs (Environmental Site Design Volume) values, which is WQv (Water Quality Volume) required on site. Under the proposed condition, the training facility site falls under New Development, as the Percentage of Existing Imperviousness (%) is less than 40%.

Equity Considerations

The training facility does not include a site selection component and is not accessible to the public. In addition, the 2018 SEA evaluated the Master Plan’s potential impacts on

socioeconomics, environmental justice, and the protection of children. The SEA determined that no long-term disproportionate impacts on socioeconomics, environmental justice, or the protection of children would occur. The distance between the proposed training facility and nearby residences, as well as topographic variations and the presence of vegetation, would attenuate much of the noise generated by exercises at the training facility. The location of many of the proposed training facility facilities toward the interior of the JJRTC would further minimize impacts from noise on nearby residents. Furthermore, construction would occur entirely within the boundaries of the JJRTC.



IMAGES

Contextual Site Plan

JJRTC Site Plan

Proposed Site Plan **[Redacted Version]**

Visibility Section **[Redacted Version]**

Forest Stand Delineation

Aerial Photo, 1938

Aerial Photo, 1977

Aerial Photo, 2022

Landing area diagram

Approach/Departure surfaces

Flight path obstructions North **[Not to be referenced in Redacted Version]**

Flight path obstructions South **[Not to be referenced in Redacted Version]**

Stormwater Catchment **[Redacted Version]**

APPENDICES

Appendix A – Forest Stand Delineation Report

Appendix B - MD-DNR Forrest Conservation Planting Guide page 12.

Appendix C – Perimeter Tree species list



PLANTING AND FOREST MANAGEMENT PLAN

May 04, 2026

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1. Introduction

The National Capital Planning Commission (NCPC) and the State of Maryland's Department of Natural Resources require a landscape planting plan and a 5-year landscape maintenance plan as part of the approval process for the Defense Training Facility (DTF) located on the James J. Rowley Training Center (JJRTC). The JJRTC is the primary training facility for the United States Secret Service (USSS); it provides the best training environment available to USSS law enforcement agents, officers, and civilian support personnel. The campus is in Laurel, Maryland, on approximately 490 acres located 2.5 miles north of the Capital Beltway at the northeast corner of the Baltimore-Washington Parkway and Powder Mill Road. The JJRTC is adjacent to the northern boundary of the Beltsville Agricultural Research Center (BARC), operated by the United States Department of Agriculture (USDA). A portion of the Patuxent National Wildlife Research Center, operated by the United States Geological Survey (USGS), is located northeast of the JJRTC. The main access points to the JJRTC are located off Powder Mill Road.

[REDACTED]

[REDACTED]

[REDACTED] The DTF is to be located on 43 acres in the center-east portion of the JJRTC grounds. Mature trees seclude the JJRTC grounds and partially wooded zones surround the DTF site. The DTF site is currently a wooded area with three distinct forest types: a lowland hardwood forest stand featuring red maples, a mature pine/ hardwood forest stand consisting of mostly pines and oaks, and a mixed hardwood forest. The wooded area hosts several exotic invasive plants and, particularly in the 10 acres of the mixed hardwood forest, there is considerable damage from invasive insects including the Spongy Moth (*Lymantria dispar*). The wooded area may provide a habitat for the Northern Long-eared Bat (*Myotis septentrionalis*) and other monitored threatened or endangered woodland species.

The landscape planting schedules presented in this report include lists of bioretention plantings, canopy trees, understory trees, shrubs, groundcovers, ferns, and grasses. The nature of the project means that many of the species in some areas will not be native. However, species considered invasive are not included in the plant list. Furthermore, invasive species management and 5-year maintenance plans will ensure invasive plant species are kept at bay and the trees and supported ecosystems can thrive. The plan will require the construction contractor to monitor, maintain and ensure successful plant establishment, maintain the newly planted vegetation and landscape site, and prevent invasive species encroachment for a warranty period of 5 years.

2. Project Description

Successful implementation of the DTF requires clearing and re-grading nearly the entire site. While the program and mission require planting trees; many of the species will not meet Maryland afforestation criteria and not enough trees will be replanted to meet NCPC requirements; additional areas for afforestation have been incorporated.

USSS anticipates most of the project is to be constructed in one phase; with additional elements being constructed as additional funding and building requirements solidify. The Guiding Principles for Sustainable Federal Buildings will function as the sustainability criteria to guide the development of all fully occupied areas of work. The USSS is reviewing and prioritizing the feasibility, cost implications, and sustainability requirements.

[REDACTED]

[REDACTED]

[REDACTED] the JJRTC site. The proposed facility will address the associated stormwater management as required by the Maryland Department of the Environment (MDE). Bioretention and green infrastructure will provide quantity and quality control, aligning with environmental standards while supporting the operational needs of the site.

[REDACTED]

[REDACTED]

[REDACTED] In addition, USSS will extend utilities to the project site and improve existing services to the rest of the JJRTC Campus.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] The landscape will endeavor to meet the aesthetic and functional considerations associated with the training facility's mission as efficiently and cost-effectively as feasible [REDACTED]

[REDACTED]

[REDACTED] landscape will place trees and plantings in

the same general locations, size ranges, phyla, and with the same essential characteristics of the plants [REDACTED]

An overall Forest Stand Delineation (FSD) was originally prepared in July 1995 for a portion of the James J. Rowley Training Center located at the intersection of Powder Mill Road and the Baltimore–Washington Parkway in Prince George’s County, Maryland. The original report was prepared in accordance with the Maryland Forest Conservation Act and the Prince George’s County Woodland Conservation Program as amended in 1992. In 2015, the FSD was amended to update field conditions and confirm the continued applicability of the 1995 forest stand data. That amended report was approved in 2016.

In 2025, the Maryland Department of Natural Resources (DNR) requested an update to the FSD Map to incorporate an expanded study area not included in the original or amended FSD, identify newly located specimen trees with a diameter at breast height (DBH) of 30 inches or greater, and assign all newly mapped forests a stand type. This Amendment supplements the approved 1995 and 2015–2016 FSD reports. The DNR has accepted the narrative content of the previous reports as meeting requirements; therefore, this Amendment focuses on mapping and classifying forest groups in the expanded study area, documenting the location, condition, the species of specimen trees, and providing a consolidated, updated FSD Map showing both the original and expanded areas.

The expanded FSD Study Area is directly adjacent to the original FSD boundary and includes forests that share similar structural, compositional, and ecological characteristics with the previously identified stands. A field review conducted in July and August 2025 confirmed that the forests in this expanded area can be categorized into one of the three forests stand types already documented: Lowland Hardwood Forest (Willow Oak–Loblolly Pine Association), Mature Pine/Hardwood Forest (Willow Oak–Loblolly Pine Association), and Mixed Hardwood Forest (Tulip Poplar Association). No new stand types were identified during this review. The forests in the expanded area display comparable canopy species composition, understory development, shrub density, and herbaceous cover to those found in the original study area.

Specified Plantings

A detailed planting schedule has been prepared for the proposed project area. The project’s plantings are divided into three planting areas: The plan identifies three distinct area for replanting trees: The **Tactical Facility**, the **Facility Perimeter**, and the **Afforestation Areas**. While the plantings for these areas have distinct programming requirements, they address the following themes: provide landscape enhancement, stormwater erosion control, and stabilization of localized soils. Adhering to this plan will meet the requirements of the DTF, increase the resiliency of the impacted sites, and contribute habitat to the existing ecosystems.

The plantings for the **Tactical Facility** include turf grasses, shrubs, and trees; nearly all of which are designed [REDACTED]

Turf in this area will be placed as either sod or seed. Sodded areas will be irrigated and regularly mown [REDACTED] Turf grass species will meet the mix requirements in Table 1.

Table 1: Training Facility Turf

| Common Name | Latin Name | Nursery Stock Type | Percent Mix Composition |
|---------------------|--------------------------------------|-----------------------|-------------------------|
| Tall Fescue | <i>Festuca arundinacea</i> | Sod Mix 1 | 90.0% |
| Kentucky Bluegrass | <i>Poa pratensis</i> | Sun and Partial Shade | 10.0% |
| Chewings Red Fescue | <i>Festuca rubra sub. 'chewings'</i> | Sod Mix 2 Shade | 50.0% |
| Rough Bluegrass | <i>Poa trivialis</i> | | 35.0% |
| Redtop | <i>Agrostis alba</i> | | 15.0% |
| Common Name | Latin Name | Nursery Stock Type | Percent Mix Composition |
| Tall Fescue | <i>Festuca rubra</i> var 1 | Seed Mix | 20.0% |
| Tall Fescue | <i>Festuca rubra</i> var 2 | | 20.0% |
| Tall Fescue | <i>Festuca rubra</i> var 3 | | 20.0% |
| Kentucky Bluegrass | <i>Poa trivialis</i> var 1 | | 20.0% |
| Kentucky Bluegrass | <i>Poa trivialis</i> var 2 | | 20.0% |

Acceptable: Fescue varieties

| | | | | | | | |
|----------------|--------------------|----------|-------------|-----------------|-------------|-------------|-----------|
| 2nd Millennium | 3rd Millennium SRP | Avenger | Bingo | Blackwatch | Bravo | | |
| Constitution | Coyote II | Davinci | Daytona | Endeavor | Faith | Falcon IV | Fidelity |
| Firecracker LS | Forte | Grande | Grande II | Greenkeeper WAF | Guardian 21 | Hound Dog 5 | |
| Hunter | Inferno | Justice | Magellan | Masterpiece | Matador GT | Monet | Penn 1901 |
| Raptor | Raptor II | Rebel IV | Rebel Exeda | Regiment II | Spyder LS | Taos | |
| Tarheel II | Tempest | Titanium | Tombstone | Turbo | Watchdog | Wolfpack | |

Acceptable: Kentucky Bluegrass varieties

| | | | | | | | |
|--------|--------|-----------|---------------|-----------|-----------|---------------|---------|
| Award | Beyond | Brilliant | Courtyard | Diva | Excursion | | |
| Impact | Juliet | Liberator | Midnight | NuDestiny | NuGlade | Princeton 105 | Quantum |
| Leap | Raven | Skye | Sudden Impact | Touché | Yankee | | |

Understory plantings

invasive and species not naturalized to Maryland were not used.

Table 2: Tactical Facility Understory Plantings

| Species Common Name | Latin Name | Nursery Stock Type | Quantity |
|------------------------|---------------------------------|--------------------|----------|
| Deciduous | | | |
| Rose Carolina | <i>Rosa carolina</i> | #3 cont. | 181 |
| Rhododendron | <i>Rhododendron viscosum</i> | #3 cont. | 101 |
| Azalea Rhododendron | <i>Rhododendron indicum</i> | #3 cont. | 74 |
| Catawba Rhododendron | <i>Rhododendron catawbiense</i> | #3 cont. | 263 |
| Red-Osier Dogwood | <i>Cornus sericea</i> | #5 cont. | 21 |
| English Yew | <i>Taxus baccata</i> | #2 cont. | 37 |
| Maple-Leaved Arrowwood | <i>Viburnum acerifolium</i> | #3 cont. | 767 |
| Leatherleaf Viburnum | <i>Viburnum rhytidophyllum</i> | #3 cont. | 3 |
| Black Huckleberry | <i>Gaylussacia baccata</i> | #1 cont. | 548 |
| Virginia Sweetspire | <i>Itea virginica</i> | #3 cont. | 268 |
| Lowbush Blueberry | <i>Vaccinium angustifolium</i> | #5 cont. | 431 |
| Northern Bayberry | <i>Myrica pensylvanica</i> | #3 cont. | 48 |
| William Penn Barberry | <i>Berberis gladywnensis</i> | #3 cont. | 21 |
| Meadowsweet | <i>Spiraea alba</i> | #3 cont. | 30 |
| Sweet Pepperbush | <i>Clethra alnifolia</i> | #3 cont. | 23 |
| High-Tide Bush | <i>Iva frutescens</i> | #3 cont. | 40 |

| | | | |
|-------------------------|--|-----------|-------------|
| Northern Spicebush | <i>Lindera benzoin</i> | #3 cont. | 6 |
| | | | 2862 |
| Evergreen | | | |
| American Holly | <i>Ilex opaca</i> | #5 cont. | 714 |
| Inkberry | <i>Ilex glabra</i> 'shamrock' | #7 cont. | 656 |
| Topal Holly | <i>Ilex attenuata</i> | #15 cont. | 4 |
| Carolina Sentinel Holly | <i>Ilex</i> "carolina sentinel" | #7 cont. | 72 |
| Yaupon Holly | <i>Ilex vomitoria</i> | #15 cont. | 97 |
| Coastal Doghobble | <i>Leucothoe axillaris</i> | #3 cont. | 215 |
| Grey Owl Juniper | <i>Juniperus virginiana</i> "grey owl" | #1 cont. | 21 |
| | | | 1779 |

Trees in this area will match the trees on site with exceptions being made for invasive trees and trees prone to disease (such as Ash); these have been replaced with other species. Trees planted will be at a minimum 3" caliper in size or 10' tall upon installation. Trees in this area may or may not count for towards meeting NCPA afforestation requirements.

| Table 3: Tactical Facility Trees | | | |
|---|--|---------------------------|-----------------|
| Species Common Name | Latin Name | Nursery Stock Type | Quantity |
| American Beech | <i>Fagus grandifolia</i> | B&B | 1 |
| American Holly | <i>Ilex opaca</i> | B&B | 61 |
| American Linden | <i>Tilia americana</i> | B&B | 9 |
| American Planetree | <i>Platanus occidentalis</i> | B&B | 1 |
| American Witch-hazel | <i>Hamamelis virginiana</i> | B&B | 1 |
| American Yellowwood | <i>Cladrastis kentukea</i> | B&B | 3 |
| Atlas Cedar | <i>Cedrus atlantica</i> | B&B | 1 |
| Autumn Higan Cherry | <i>Prunus subhirtella</i> 'Autumnalis' | B&B | 1 |
| Bald Cypress | <i>Taxodium distichum</i> | B&B | 23 |
| Black Gum | <i>Nyssa sylvatica</i> | B&B | 3 |
| Blackjack Oak | <i>Quercus marilandica</i> | B&B | 1 |
| Blue Atlas Cedar | <i>Cedrus atlantica</i> 'Glauca' | B&B | 1 |
| Bur Oak | <i>Quercus macrocarpa</i> | B&B | 5 |
| Canadian Hemlock | <i>Tsuga canadensis</i> | B&B | 1 |
| Cedar of Lebanon | <i>Cedrus libani</i> | B&B | 1 |
| Chokecherry | <i>Prunus virginiana</i> | B&B | 11 |
| Common Pawpaw | <i>Asimina triloba</i> | B&B | 2 |
| Dawn Redwood | <i>Metasequoia glyptostroboides</i> | B&B | 1 |
| Downy Serviceberry | <i>Amelanchier arborea</i> 'austromontana' | B&B | 4 |
| Eastern Hophornbeam | <i>Ostrya virginiana</i> | B&B | 4 |
| Eastern Redbud | <i>Cercis canadensis</i> | B&B | 2 |
| Eastern Redcedar | <i>Juniperus virginiana</i> | B&B | 9 |
| Eastern White Pine | <i>Pinus strobus</i> | B&B | 6 |
| Emerald Sentinel Juniper | <i>Juniperus virginiana</i> 'Emerald Sentinel' | B&B | 2 |
| English Yew | <i>Taxus baccata</i> | Container | 1 |
| European Beech | <i>Fagus sylvatica</i> | B&B | 1 |
| Fern-Leaf Beech | <i>Fagus sylvatica</i> 'Asplenifolia' | B&B | 5 |
| Flowering Dogwood | <i>Cornus florida</i> | B&B | 18 |
| Fringe Tree | <i>Chionanthus virginicus</i> | B&B | 1 |
| Ginko 'Autumn Gold' | <i>Ginkgo biloba</i> 'Autumn Gold' | B&B | 2 |
| Horse Chestnut | <i>Aesculus hippocastanum</i> 'Baumannii' | B&B | 12 |

Table 3: Tactical Facility Trees

| Species Common Name | Latin Name | Nursery Stock Type | Quantity |
|---------------------------------|---|--------------------|----------|
| Hybrid Elm | <i>Ulmus wilsoniana X japonica</i> | B&B | 5 |
| Japanese Flowering Crap Apple | <i>Malus floribunda</i> | B&B | 4 |
| Japanese Maple "Wolf" | <i>Acer palmatum 'Emperor I'</i> | Container | 1 |
| Japanese Pagoda Tree | <i>Sophora japonica</i> | B&B | 1 |
| Japanese Threadleaf Maple | <i>Acer palmatum 'Inaba Shidare'</i> | B&B | 1 |
| Japanese Tree Lilac | <i>Syringa reticulata</i> | B&B | 1 |
| Jefferson American Elm | <i>Ulmus americana 'Jefferson'</i> | B&B | 8 |
| Leyland Cypress | <i>Cupressocyparis x leylandii</i> | B&B | 18 |
| Linden 'PNI6025' | <i>Tilia cordata 'Greenspire'</i> | B&B | 7 |
| Loblolly Pine | <i>Pinus taeda</i> | B&B | 1 |
| London Planetree | <i>Platanus x acerfolia</i> | B&B | 1 |
| Lusterleaf Holly | <i>Ilex latifolia</i> | B&B | 6 |
| Merril Magnolia | <i>Magnolia X loebneri 'Merrill'</i> | B&B | 1 |
| Nellie Stevens Holly | <i>Ilex x Nellie Stevens</i> | B&B | 8 |
| Northern Red Oak | <i>Quercus rubra</i> | B&B | 3 |
| Persian Parrotia | <i>Parrotia persica</i> | B&B | 1 |
| Pin Oak | <i>Quercus Palustris</i> | B&B | 1 |
| Princeton American Em | <i>Ulmus americana 'Princeton'</i> | B&B | 50 |
| Purple Beech | <i>Fagus sylvatica 'Atropunicea'</i> | B&B | 5 |
| Red Maple | <i>Acer rubrum</i> | B&B | 3 |
| River Birch | <i>Betula Nigra</i> | B&B | 1 |
| Sassafras | <i>Sassafras albidum</i> | B&B | 16 |
| Saucer Magnolia | <i>Magnolia x soulangeana</i> | B&B | 22 |
| Scarlet Oak | <i>Quercus coccinea</i> | B&B | 5 |
| Serviceberry | <i>Amelanchier arborea</i> | B&B | 4 |
| Shortleaf Pine | <i>Pinus echinata</i> | B&B | 1 |
| Silver Linden | <i>Tilia tomentosa</i> | B&B | 4 |
| Silver Maple | <i>Acer saccharinum</i> | B&B | 1 |
| Southern Magnolia | <i>Magnolia grandiflora</i> | B&B | 19 |
| Star Magnolia | <i>Magnolia stellata</i> | B&B | 5 |
| Sugar Maple | <i>Acer saccharum</i> | B&B | 7 |
| Swamp White Oak | <i>Quercus bicolor</i> | B&B | 1 |
| Tulip Popular | <i>Liriodendron tulipifera</i> | B&B | 3 |
| Valley Forge American Elm | <i>Ulmus americana 'Valley Forge'</i> | B&B | 22 |
| Weeping Laceleaf Japanese Maple | <i>Acer palmatum dissectum 'Red Dragon'</i> | B&B | 2 |
| White Oak | <i>Quercus alba</i> | B&B | 4 |
| White Saucer Magnolia | <i>Magnolia X soulangiana 'Alba'</i> | B&B | 1 |
| Willow Oak | <i>Quercus phellos</i> | B&B | 77 |
| Winterberry | <i>Ilex verticillata</i> | B&B | 35 |
| Yellow Buckeye | <i>Aesculus flava</i> | Container | 2 |
| Yoshino Cherry | <i>Prunus x yedoensis</i> | B&B | 1 |

The plantings in the **Perimeter Facility** must protect and maintain sloping soils, screen views, and, where required, contribute to Best Management Practice (BMP) performance. All trees in this area will be native to Maryland and, if feasible, replace Forest Stands and habitat that were removed as part of the construction process. Evergreen groups will be used to screen the Tactical Facility activities from other venues, Powder Mill Road, and neighboring uses. BMP plantings contribute to the BMP stabilization and the nutrient intake of BMP soils; these plants should be native where possible but may be naturalized. In no case are invasive species to be used.

Table 4: Perimeter Facility Trees

| Species Common Name | Latin Name | Nursery Stock Type | Quantity |
|--------------------------|--|--------------------|------------|
| Allegheny chinquapin | <i>Castanea pumila</i> | B&B | 5 |
| American Beech | <i>Fagus grandifolia</i> | B&B | 10 |
| American Holly | <i>Ilex opaca</i> | B&B | 30 |
| American Linden | <i>Tilia americana</i> | B&B | 1 |
| American Witch-hazel | <i>Hamamelis virginiana</i> | B&B | 29 |
| Bald Cypress | <i>Taxodium distichum</i> | B&B | 14 |
| Black Gum | <i>Nyssa sylvatica</i> | B&B | 13 |
| Blackjack Oak | <i>Quercus marilandica</i> | B&B | 12 |
| Canadian Hemlock | <i>Tsuga canadensis</i> | B&B | 24 |
| Downy Serviceberry | <i>Amelanchier arborea 'austromontana'</i> | B&B | 5 |
| Eastern Hophornbeam | <i>Ostrya virginiana</i> | B&B | 13 |
| Eastern Redbud | <i>Cercis canadensis</i> | B&B | 8 |
| Eastern Redcedar | <i>Juniperus virginiana</i> | B&B | 30 |
| Emerald Sentinal Juniper | <i>Juniperus virginiana 'Emerald Sentinel'</i> | B&B | 40 |
| Fringe Tree | <i>Chionanthus virginicus</i> | B&B | 11 |
| Loblolly Pine | <i>Pinus taeda</i> | B&B | 3 |
| Pitch Pine | <i>Pinus rigida</i> | B&B | 2 |
| Red Maple | <i>Acer rubrum</i> | B&B | 9 |
| River Birch | <i>Betula Nigra</i> | B&B | 10 |
| Sassafras | <i>Sassafras albidum</i> | B&B | 22 |
| Serviceberry | <i>Amelanchier arborea</i> | B&B | 19 |
| Shortleaf Pine | <i>Pinus echinata</i> | B&B | 15 |
| Silky Dogwood | <i>Cornus amomum</i> | Container | 5 |
| Smoothbark Hickory | <i>Carya glabra</i> | B&B | 1 |
| Southern Red Oak | <i>Quercus falcata</i> | B&B | 5 |
| Sweet Gum | <i>Liquidambar styraciflua</i> | B&B | 2 |
| Sweetbay Magnolia | <i>Magnolia virginiana</i> | B&B | 2 |
| Virginia Pine | <i>Pinus virginiana</i> | B&B | 13 |
| White Oak | <i>Quercus phellos</i> | B&B | 3 |
| | | | 356 |

| Table 5: Perimeter Bioretention Trees | | | |
|---------------------------------------|--|--------------------|-----------|
| Species Common Name | Latin Name | Nursery Stock Type | Quantity |
| American Witch-hazel | <i>Hamamelis virginiana</i> | B&B | 1 |
| Bald Cypress | <i>Taxodium distichum</i> | Container | 18 |
| Canadian Hemlock | <i>Tsuga canadensis</i> | Container | 1 |
| Downy Serviceberry | <i>Amelanchier arborea 'austromontana'</i> | Container | 1 |
| Eastern Hophornbeam | <i>Ostrya virginiana</i> | Container | 2 |
| American Fringetree | <i>Chionanthus virginicus</i> | Container | 1 |
| Willow Oak | <i>Quercus phellos</i> | Container | 1 |
| | | | 25 |

| Table 6: Perimeter Bioretention Plantings | | | |
|---|-------------------------------|--------------------|---------------|
| Species Common Name | Latin Name | Nursery Stock Type | Quantity |
| Broad-Leaf Arrowhead | <i>Sagittaria latifolia</i> | Container | 818 |
| Fowl Mannagrass | <i>Glyceria striata</i> | Container | 818 |
| Common Rush | <i>Juncus effusus</i> | Container | 8050 |
| Prairie Cordgrass | <i>Spartina pectinata</i> | Container | 244 |
| Scouring Rush | <i>Equisetum x schaffneri</i> | Container | 8050 |
| Swamp Aster | <i>Aster puniceus</i> | Container | 818 |
| Swamp Milkweed | <i>Asclepias incarnata</i> | Container | 244 |
| Switchgrass | <i>Panicum virgatum</i> | Container | 244 |
| Virginia Blueflag | <i>Iris virginica</i> | Container | 818 |
| Virginia Wild Rye | <i>Elymus virginicus</i> | Container | 8050 |
| | | | 27,424 |

The tree species in the **Afforestation Areas** have been specifically chosen to meet the NCPC and DNR requirements. The trees will be native to Maryland and, if feasible, reflect the habitats that were removed during construction. These trees will be planted in a variety of sizes to promote the resilience of the Forest Stands they will be creating.

| Table 7: Afforestation Trees | | | | |
|------------------------------|--------------------------------|--------------------|----------|-------------------------|
| Species Common Name | Latin Name | Nursery Stock Type | Quantity | Percent Mix Composition |
| Canopy Trees | | | | |
| American Beech | <i>Fagus grandiflora</i> | B&B | 1190 | 9.1% |
| Black Gum | <i>Nyssa sylvatica</i> | | 1190 | 9.1% |
| Loblolly Pine | <i>Pinus taeda</i> | | 1190 | 9.1% |
| Pitch Pine | <i>Pinus rigida</i> | | 1190 | 9.1% |
| Red Maple | <i>Acer Rubrum</i> | | 1190 | 9.1% |
| Southern Magnolia | <i>Magnolia grandiflora</i> | | 1190 | 9.1% |
| Southern Red Oak | <i>Quercus falcate</i> | | 1190 | 9.1% |
| Sweet Gum | <i>Liquidambar styraciflua</i> | | 1180 | 9.0% |
| Virginia Pine | <i>Pinus virginia</i> | | 1190 | 9.1% |
| Willow Oak | <i>Quercus phellos</i> | | 1190 | 9.1% |
| White Oak | <i>Quercus alba</i> | | 1190 | 9.1% |
| | | | | 13080 |
| Understory Trees | | | | |

| Table 7: Afforestation Trees | | | | |
|------------------------------|----------------------------|--------------------|-------------|-------------------------|
| Species Common Name | Latin Name | Nursery Stock Type | Quantity | Percent Mix Composition |
| American Holly | <i>Ilex Opaca</i> | Container | 655 | 12.5% |
| Blackjack Oak | <i>Quercus marilandica</i> | | 655 | 12.5% |
| Dwarf Chestnut | <i>Castanea pumila</i> | | 655 | 12.5% |
| Eastern Redbud | <i>Cercis canadensis</i> | | 655 | 12.5% |
| Flowering Dogwood | <i>Cornus florida</i> | | 655 | 12.5% |
| Pignut Hickory | <i>Carya glabra</i> | | 655 | 12.5% |
| Sassafras | <i>Sassafras albidum</i> | | 655 | 12.5% |
| Sweet Bay Magnolia | <i>Magnolia virginiana</i> | | 655 | 12.5% |
| | | | 5240 | |

Initial Planting Requirements

Initial planting requirements for the project are detailed in the **DTF Issued for Construction Drawings** and **Issued for Construction Specifications** dated April 30, 2026. Topics covered include but are not limited to soil preparation, soil testing, mulching, plant storage and handling, and acceptable time of year planting dates. It is anticipated that the fallow tracts identified on the USDA campus for afforestation will not require much preparation to bring to suitable planting conditions for the plantings. Upon acceptance of the project by USSS the construction contractor will be required to monitor, maintain and ensure successful plant establishment, maintain the newly planted vegetation and landscape site, and prevent invasive species encroachment for a warranty period of 5 years.

3. Five-Year Landscape Maintenance Plan

The Five-Year Maintenance Plan will be implemented within the project LOD and the Afforestation Areas for a period of 5 years upon completion of and acceptance of construction by NCPD and Maryland DNR. The contractor will be required to maintain the project plantings during the 5-year maintenance and monitoring period and shall repair any disturbances or failed plantings prior to release of the maintenance obligations. **Table 8** below details the quarterly maintenance schedule by year work cycle broken out by monitoring year. While some maintenance activities are only applicable in Year 0-2 and some are only applicable to the perimeter and afforestation areas. The contractor will be responsible for complete all required tasks in the maintenance window and during the monitoring period where they apply. When invasive species management is required, the contractor must identify the technique that will be most applicable for invasive species management based on species identified, as specified in **Section 4: Invasive Species Management** later in this report. In all maintenance activity maintaining native vegetation is a priority. If deemed necessary by the monitoring report, vegetation planting/replanting will be conducted between November 15 and March 15, unless otherwise noted in the monitoring reports.

Fertilizers may be applied once at the time of planting only, unless approved on a case-by-case basis. AECOM recommends mechanical vegetation removal to manage invasive species, and this should be the primary means of invasive species management. Herbicides may be used to control aggressive volunteer and invasive vegetation, but they must be applied in accordance with product labeling, and any herbicides used near streams must be approved for aquatic use. Aerial application of herbicides is not allowed. The maintenance activities for the project are the contractor's responsibility alone; neither USSS nor JJRTC will be responsible for any maintenance tasks during the 5-year monitoring period.

Table 8: Annual Maintenance Schedule

| Monitoring Year(s) | December - February | March - May | June - August | September - November |
|--------------------|---|--|---|---|
| Year 0 - 2 | <ul style="list-style-type: none"> • Add new mulch to plantings where the mulch depth has been reduced to less than 2 inches (5 cm) thick. • Ensure planting density requirements are on track. If not, supplement with additional planting. • Ensure deer exclusion fencing posts and lines are upright and secure. Trim or remove vegetation that may affect ability for deer deterrent. | <ul style="list-style-type: none"> • Conduct monthly light watering. • Ensure deer exclusion fencing posts and lines are upright and secure. Trim or remove vegetation that may affect ability for deer deterrent. • Mow No-Mow area once. • Monitor and control for noxious weeds and invasives. | <ul style="list-style-type: none"> • Conduct monthly light watering. • Ensure deer exclusion fencing posts and lines are upright and secure. Trim or remove vegetation that may affect ability for deer deterrent. • Monitor and control for noxious weeds and invasives. | <ul style="list-style-type: none"> • Ensure deer exclusion fencing posts and lines are upright and secure. Trim or remove vegetation that may affect ability for deer deterrent. • Inventory all plant materials. Inventory shall include an exact count of all shrubs and trees, itemized in plant schedule. Check tree stems and foliage for pest damage. Replace any dead or missing plants. • Ensure planting density requirements are on track. If not, supplement with additional planting. • Submit annual monitoring report to the NPS. |
| Year 3 - 5 | <ul style="list-style-type: none"> • Prune any tree branches that interfere with public safety. Prune all trees yearly to encourage strong upward growth. Do not top trees. • Add new mulch to plantings where the mulch depth has been reduced to less than 2 inches (5 cm) thick. • Ensure planting density requirements are on track. If not, supplement with additional planting. • Ensure deer exclusion fencing posts and lines are upright and secure. Trim or remove vegetation that may affect ability for deer deterrent. | <ul style="list-style-type: none"> • Ensure deer exclusion fencing posts and lines are upright and secure. Trim or remove vegetation that may affect ability for deer deterrent. • Mow No-Mow area once. • Monitor and control for noxious weeds and invasives. • After initial establishment, native trees should not require additional watering beyond what occurs naturally. If the season is particularly dry, water trees at a rate of 2-3 gallons per week. | <ul style="list-style-type: none"> • Ensure deer exclusion fencing posts and lines are upright and secure. Trim or remove vegetation that may affect ability for deer deterrent. • Monitor and control for noxious weeds and invasives. • After initial establishment, native trees should not require additional watering beyond what occurs naturally. If the season is particularly dry, water trees at a rate of 2-3 gallons per week. | <ul style="list-style-type: none"> • Ensure deer exclusion fencing posts and lines are upright and secure. Trim or remove vegetation that may affect ability for deer deterrent. • Inventory all plant materials. Inventory shall include an exact count of all shrubs and trees, itemized in plant schedule. Check tree stems and foliage for pest damage. Replace any dead or missing plants. • Ensure planting density requirements are on track. If not, supplement with additional planting. • Submit annual monitoring report to the NPS. |

General Monitoring Requirements

Site monitoring for the project site should occur for 5 years post-construction as described in the annual maintenance schedule in **Table 8**. If a trend toward achieving the performance standards have not been met before the 5th (fifth) year, additional remedial maintenance or adaptive management approaches should be taken and the maintenance and monitoring period may be extended.

USSS/USDA will be conducting periodic site inspections throughout the monitoring period (minimum 1 site visit/year). USSS/USDA may, at any time during the monitoring period, require removal, treatment, or management of undesirable plant or animal species, including physical removal, use of herbicides, live trapping, confining wires or nets, etc. Herbicide applications must be conducted in accordance with all state/federal application laws and regulations and accepted by the EPA, USACE and Maryland Department of the Environment (MDE).

Unless otherwise specified, monitoring reports should be completed each year for the duration of the monitoring period and should include observations from a site walk, photo documentation, and recommendations for maintenance. Photo monument locations should be established during Year 1 monitoring.

Monitoring Reports will be provided to the USSS/USDA for review no later than November 30 of the year of monitoring. Reports should be kept clear and concise and not overburdened with unnecessary project information or background. The reports should be illustrative with site conditions of each afforestation tract. The report will indicate dates information was collected. If the monitoring reports indicate that remedial action is necessary, additional monitoring may be required if the activities cannot be accomplished during the planting or construction season. USSS/USDA will review and provide comments on monitoring reports within 90 days of submittal. If no comments are received within 90 days, then the monitoring report will be considered adequate and approved.

Planted vegetation must be in the ground for at least 180 days prior to the initiation of the first year of monitoring (Year 1) for those observations to be considered for success criteria for Year 1.

Vegetation Performance Standards

Native non-invasive herbaceous should achieve greater than 65% cover of the project site 1 year after completion of project construction and 80% cover by Year 3 of monitoring. At least 90% cover should be maintained from Year 3 and beyond. Success criteria are specified in **Table 10**.

| Table 9: Planting Success Rates | | | |
|--|---------------------|--------|--------|
| Performance Standard by Plant Type | Year 1 | Year 3 | Year 5 |
| HERBACEOUS PLANT COVER – Native non-invasive | ≥65% | ≥80% | ≥90% |
| INVASIVE SPECIES Non-native/noxious | ≤15% | ≤15% | ≤15% |
| TREE SURVIVABILITY PERCENT | | | |
| Tactical Facility | 100% | 100% | 100% |
| Perimeter Facility | 100% | 100% | 100% |
| Afforestation Areas | See Table 10 | | |

| Table 10: Tree Survivability Requirements – Afforestation Areas | | | |
|---|-----------------|------------------------------------|-------------------------------------|
| Type | Number Per Acre | Approximate Spacing Feet on Center | Survival Required - End of Season 2 |
| Bare Root Seedlings or Whips | 700 | 8 x 8 | 55% |
| Container Grown 1, 2 or 3 Gallon | 350 | 12 x 12 | 75% |
| Container Grown 5, 7 or 1" B & B | 200 | 15 x 15 | 85% |
| Container Grown 15, 25 Gallon or 1.5" - 2" Caliper B&B | 100 | 20x20 | 100% |

4. Invasive Species Management

Special Considerations

Though removal will be almost exclusively mechanical, any chemical treatments should be applied by a Toxic Substance Division Licensed Pesticide Applicator and in accordance with the herbicide label; *the label is the law*. The herbicide applicator must post herbicide application signs during application and for 48 hours after. All spray applications and chemical use must comply with Environmental Protection Agency standards and be coordinated with the United States Secret Service. Care should be taken to prevent direct spray, drift, and/or volatilization of herbicides on broadleaf landscape plantings and other desirable vegetation. Temperature and wind speed should be monitored, and drift control adjuvants should be used as appropriate. Spraying should not take place when sustained wind speeds exceed 10 mph and/or when rain is falling or forecast in the upcoming 12 hours. Care should be taken to avoid damage to turf grass, desirable vegetation, and other non-invasive landscaping elements during all treatments, both mechanical and chemical.

Tools and equipment that have vegetative fragments, fruits, and seed in or on them can re-introduce and spread invasive species throughout the project LOD via contaminated topsoil or equipment. Care should be taken to minimize the spread of invasive species.

Wetlands and other Waters of the U.S. are delineated adjacent to the invasive species treatment areas. Therefore, chemical applications must adhere to Best Management Practices for herbicide use within or near wetlands and waterways. In these areas, the certification for the pesticide applicator must include the "right-of way" and "aquatic" categories. Use of heavy machinery within wetlands and waterways is restricted. Before applying any of the herbicide products listed above, surface runoff to nearby tributaries must be considered.

Types of Treatment

Cultural, mechanical, chemical, and combination treatments may be used throughout the 5 years of this Invasive Species Management Plan. Cultural methods are aimed at changing human behavior to address the spread of invasive species. Mechanical treatments may include clearing and grubbing of existing vegetation, mowing, string trimming, cutting, and manual removal (hand weeding or digging). All mechanical methods should be done before plant fruits develop. Chemical treatments may include pre-emergent application or selective/ nonselective foliar herbicide treatments. Combination treatments may include mechanical cutting of unwanted vegetation followed by chemical treatments of cut vines, stems, or stumps.

Clearing or Grubbing should occur during the initial phase of construction and will serve as the initial invasive species removal treatment.

Mowing / String Trimming / Cutting should only occur during the growing season (April 15 through October 15) and should not allow temporary and permanent turf grass stabilization areas to exceed 12 inches in height.

Note: This treatment should not be used in permanent landscape planting beds or tree pits.

Mowing, string trimming, and cutting should be coordinated with chemical treatments to allow at least 5 days after herbicide application before mowing occurs.

Pre-emergent Broadleaf Herbicide should be applied to permanently stabilized areas to suppress germination of unwanted species as needed. Treatment details are as follows:

- Apply once during the treatment window of March 15 through March 30. The window for treatment may be earlier or later depending on the target species.
- Apply isoxaben and trifluralin (Snapshot® 2.5 TG) per manufacturer's recommendations using a properly calibrated rotary or drop-type sprayer.
- Repeat annually until completion of the 5-year Invasive Species Management Plan.
- Pre-emergent treatment on non-turf areas will require the approval of NPS.

Selective / Non-Selective Foliar Herbicide spot treatments should be applied to the foliage of targeted invasive species during the growing season to eradicate these plants as needed. Care should be taken to avoid herbicide drifting onto desirable vegetation. Based on the results of the periodic inspections, spot treatments should be performed as needed during the growing season. Treatment details are as follows:

- For non-selective spot treatments, apply glyphosate (such as Roundup Original / Original II/Pro®, Rodeo®, or Aquaneat®) or other approved herbicides per manufacturer's recommendations in a properly maintained and calibrated low-volume backpack sprayer capable of delivering the desired volumes. Note: Only Rodeo® or Aquaneat® are safe for use over or near water.
- For selective broadleaf invasive spot treatments in both warm and cool season grass areas, apply triclopyr (Garlon 3A®) or other approved herbicides per manufacturer's recommendations in a properly maintained and calibrated low-volume backpack sprayer capable delivering the desired volumes. Note: Garlon 3A® is safe for use over or near water.
- For selective grass invasive spot treatments, apply fluazifop-p-butyl (such as Roundup Trimark®, Ace®, Ornamec®, or Spectracide®) or other approved herbicides per manufacturer's recommendations in a properly maintained and calibrated low-volume backpack sprayer capable of delivering the desired volumes.
- Apply throughout the growing season as recommended by the periodic inspections until the completion of the 5-year Invasive Species Management Plan. All local herbicide restrictions and limitations should be followed.

Cut Stump Method spot treatments should be applied to cut vines, stems, or stumps of invasive species during the growing season. Care should be taken to avoid drift onto desirable vegetation. Treatment details are as follows:

- For non-selective spot treatments, apply Glyphosate (such as Roundup Original/ Original II / Pro®, Rodeo®, or Aquaneat®) or other approved herbicides per manufacturers' recommendations in a properly maintained and calibrated low-volume backpack sprayer capable of delivering the desired volumes. Note, only Rodeo® or Aquaneat® are safe for use over or near water.

- Cut vines, stems, or stumps and within two (2) hours apply non-selective herbicide to cut surfaces using an oil carrier with blue marker dye.
- Apply throughout the growing season and as recommended by the periodic inspections until the completion of the 5-year Invasive Species Management Plan. All local herbicide restrictions and limitations should be followed.

Treatment Method by Species

The following treatment methods have been identified for each of the invasive species observed to be present at the time of the field surveys. It is assumed that the initial construction, clearing, and grubbing activities will have removed existing populations of invasive species within the project LOD. Therefore, mechanical and chemical spot treatment methods will primarily target regrowth and emerging plants. Invasive plants encroaching from areas outside of the LOD will be treated as necessary and would be identified throughout the growing season during the periodic inspections.

- *Hedera helix* (common ivy)
 - Mechanical (on ground)
 - Ivy is best removed in wet winter conditions when roots are least likely to adhere to the soil. A rake or trowel can be used to gather and separate clumps of vines. In smaller infestations, vines should be removed by hand. Take care to separate ivy vines from any native plants before removal.
 - Mechanical (on trees)
 - Slice completely through the ivy vine with appropriately sized pruners, loppers, or a saw around the base of the tree and again at eye-level and remove the section of cut vines so that there is a vine-free ring at the base of the tree.
 - Do not remove vines on the tree above the eye-level cut line since this can damage the tree bark. Severed ivy will die.
 - Remove ivy vines and roots in a 3- to 4-foot radius around the base of the tree.
 - Monitor remaining ivy to ensure that it does not regrow and take root after cutting.
 - Chemical
 - If ivy needs to be removed from a surface or tree that must not sustain any damage due to mechanical removal, a combination of mechanical and chemical treatment is recommended. Cut an inch-long section from the ivy vine and apply a non-selective herbicide [REDACTED]. Repeat this process every 2 to 3 feet up the vine.
 - Monitor ivy growth and repeat the Cut-Stump method until ivy dies and falls off the tree.
 - Application of broadleaf herbicide is not typically effective on English ivy because the waxy coating on the leaves provides a barrier that protects the plant from chemical applications.
 - Using herbicides in winter on a dry day will make the application of herbicides more effective.
- *Lonicera spp.* (Japanese honeysuckle)
 - Mechanical
 - If the vine has climbed onto other shrubs or trees, using a pair of pruners, unwrap vines from native plants. At the base of the vine, unroot it by hand.

- For larger infestations, a rake can be used to lift clumps of vines, and shears may be used to cut the base. This method will require revisiting the site to hand pull any vines that regrow.
- Chemical
 - Glyphosate herbicide can be applied in non-winter months, preferably in fall when most native plants have gone dormant.

The following invasive species were not specifically recorded at the project site but are known to be problematic species in the vicinity of JJRTC and the USDA campus, so management techniques are specified in case maintenance is needed at or around the project site.

- (*Pueraria*) kudzu
 - Mechanical
 - Kudzu is a pervasive invasive species when allowed to proliferate. The key to management is early identification and removal.
 - To remove a vine, follow the vine to its rooting location. Cut the vine and dig around the rooting location to dig up the crown of the plant, making sure to remove as many taproots as possible.
 - Mowing can also suppress kudzu, although it needs to be done frequently (twice a week recommended) to kill the vine. This method alone may take several years to kill the kudzu vine.
 - Chemical
 - The most effective technique for removing a kudzu infestation is typically a combination of mechanical and chemical treatment.
 - When digging out the kudzu crown, spray the surrounding area with a broadleaf herbicide to prevent taproots from regrowing.
 - Mowing activities should be followed up with a broadleaf herbicide for the most effective removal.
- (*Fallopia japonica*) Japanese knotweed
 - Mechanical
 - Trim the canes of Japanese knotweed as close to the ground as possible.
 - Remove the roots with a trowel.
 - Mow the infested area weekly.
 - Chemical
 - Apply glyphosate to areas infested with knotweed at least twice per year.

5. References

Dingman, S., S.R. Abella, M. Frey, P. Budde, and T. Hogan. 2018. Invasive plant management planning: Technical considerations. Natural Resource Report NPS/NRSS/BRD/NRR—2018/1820. National Park Service, Fort Collins, Colorado

Maryland Invasive Species Council. <http://mdinvasives.org>

Swearingen, J., B. Slattery, K. Reshetiloff, and S. Zwicker. 2010. Plant Invaders of Mid-Atlantic Natural Areas, 4th ed. National Park Service and U.S. Fish and Wildlife Service. Washington, DC. 168pp.

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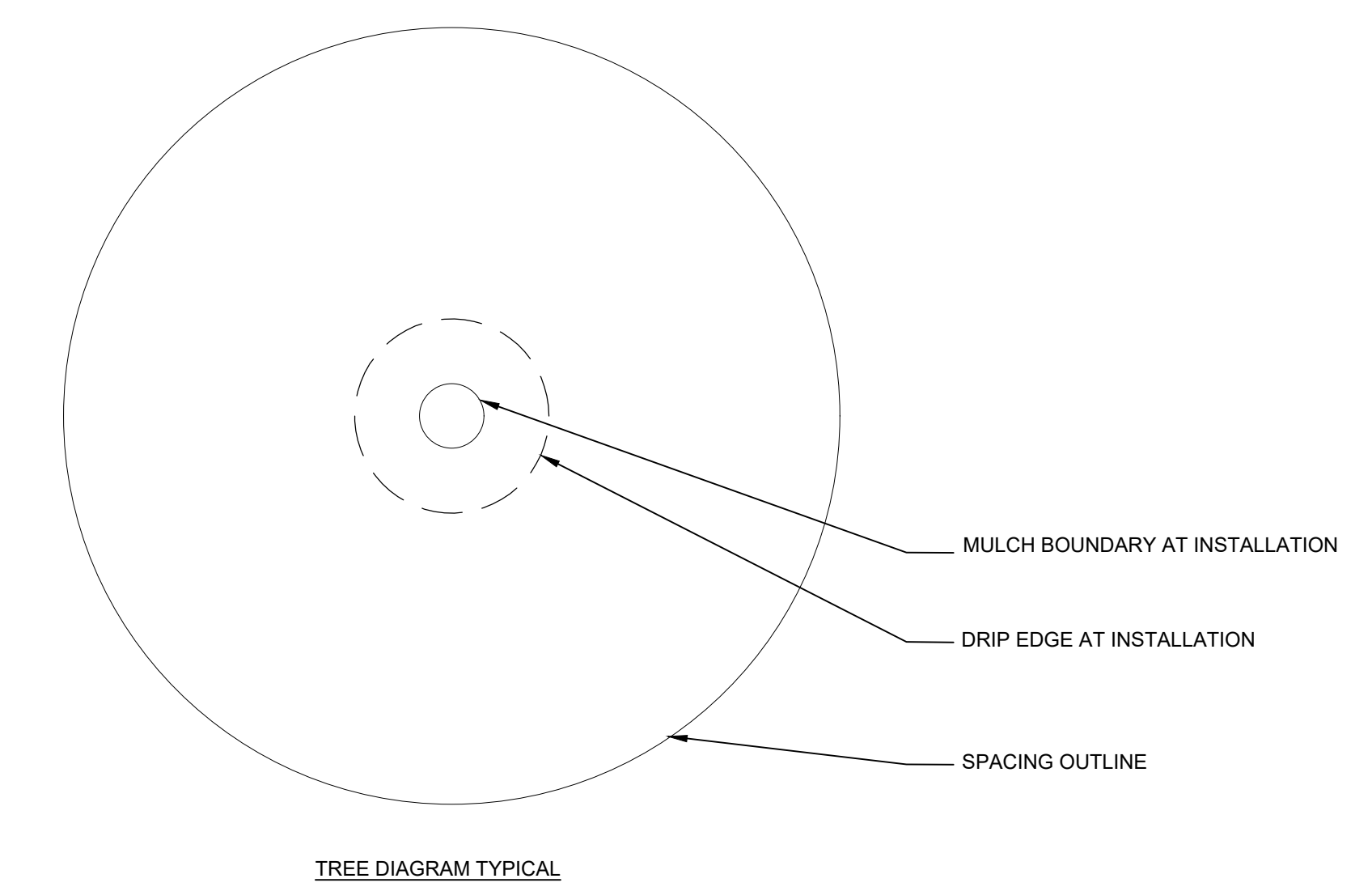
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|---------------------------|--|
| DESIGNED BY: M. ARNOLD | ISSUE DATE: 03/02/2023 |
| DRAWN BY: S. EARLY | SOLICITATION NO.: 702050182AECONT06 |
| CHECKED BY: R. BISHA | CONTRACT NO.: |
| APPROVED BY: A. BISHA | DATE: |
| DATE: | DESCRIPTION: |
| MARK: | DATE: |

UNITED STATES SECRET SERVICE
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AFCON
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SUITE 600
ARLINGTON, VA 22201

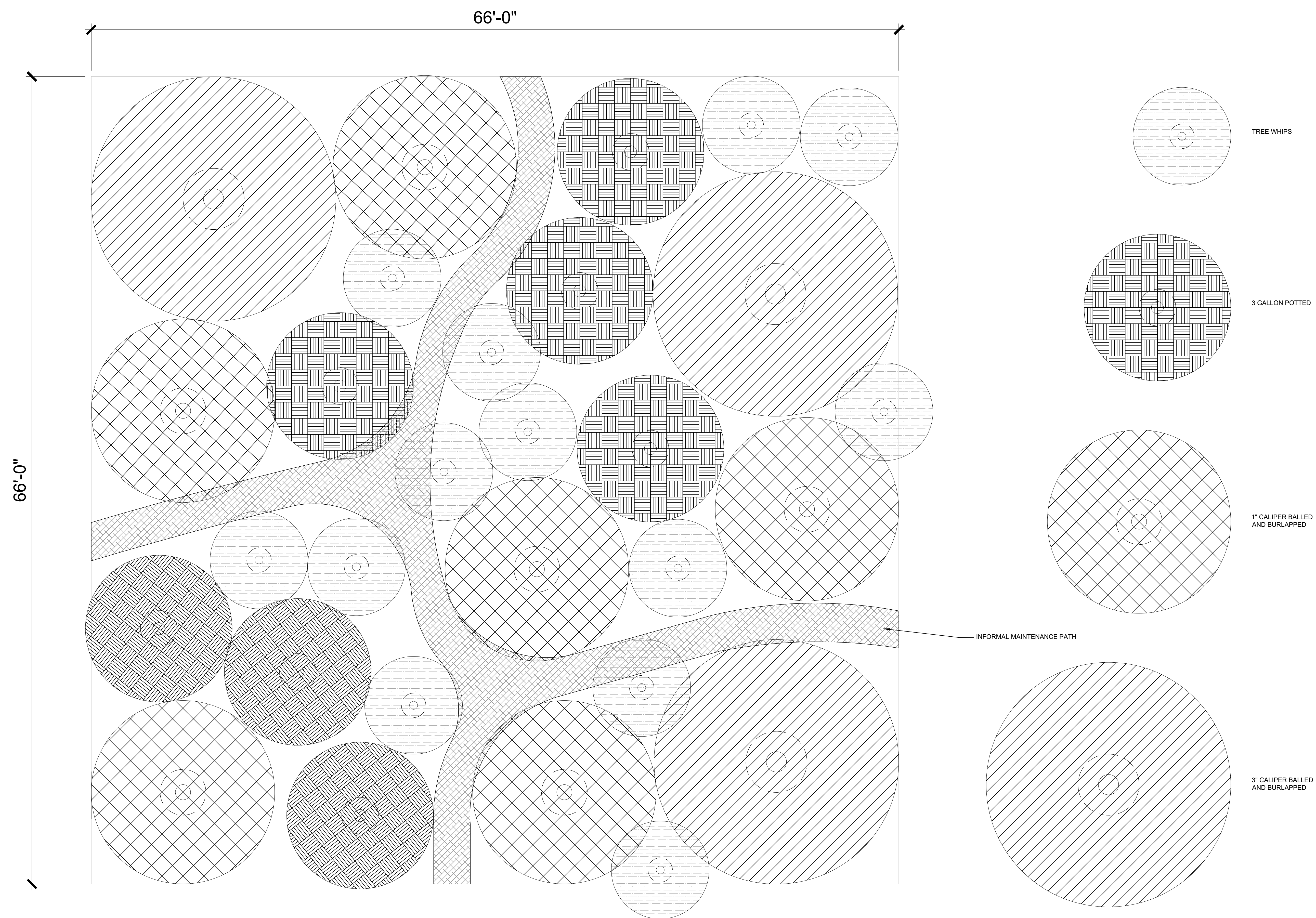
AECOM

JAMES J. ROWLEY TRAINING CENTER
LAUREL, MARYLAND
SPECIALIZED MISSION TRAINING FACILITY
AFFORESTATION DETAILS



| REQUIREMENTS | | | |
|---------------------------------|------------|-----------------|---------------|
| TYPE | # PER ACRE | SPACING | SURVIVAL RATE |
| WHIPS | 700 | 8'-0" x 8'-0" | 55% |
| 3 GALLONS | 350 | 12'-0" x 12'-0" | 75% |
| 1' BALL AND BURLAP | 200 | 15'-0" x 15'-0" | 85% |
| 3" CALIPER BALLED AND BURLAPPED | 100 | 20'-0" x 20'-0" | 100% |

NOTE: 50 ACRES OF OPEN LAND MUST BE SECURED TO ALLOW FOR ADEQUATE REFORESTATION/AFFORESTATION. TREES DIAGRAM PROVIDE A PLANTING DIAGRAM FOR 1/10 AN ACRE AND CAN BE REPEATED IN MIRROR OR ROTATION THROUGHOUT ENTIRE 50 ACRES SITE.

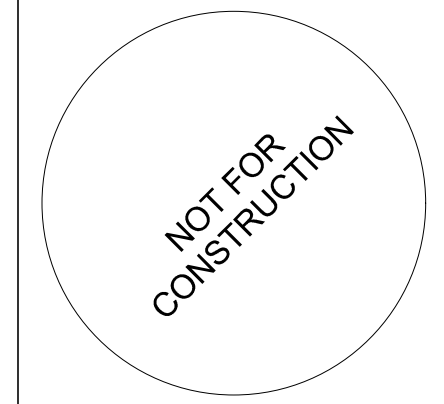


| # | SEASONALITY | HEIGHT | SIZE | SITE TOTAL |
|---|-------------|------------|------------|------------|
| 2 | DECIDUOUS | CANOPY | 3" CALIPER | 100 |
| 1 | EVERGREEN | CANOPY | 3" CALIPER | 50 |
| 2 | DECIDUOUS | CANOPY | 1" CALIPER | 100 |
| 1 | EVERGREEN | CANOPY | 1" CALIPER | 50 |
| 2 | DECIDUOUS | UNDERSTORY | 1" CALIPER | 100 |
| 1 | EVERGREEN | UNDERSTORY | 1" CALIPER | 50 |
| 2 | DECIDUOUS | CANOPY | 3" GALLONS | 100 |
| 2 | EVERGREEN | CANOPY | 3" GALLONS | 100 |
| 2 | DECIDUOUS | UNDERSTORY | 3" GALLONS | 100 |
| 1 | EVERGREEN | UNDERSTORY | 3" GALLONS | 50 |
| 4 | DECIDUOUS | CANOPY | WHIPS | 200 |
| 4 | EVERGREEN | CANOPY | WHIPS | 200 |
| 3 | DECIDUOUS | UNDERSTORY | WHIPS | 150 |
| 2 | EVERGREEN | UNDERSTORY | WHIPS | 100 |

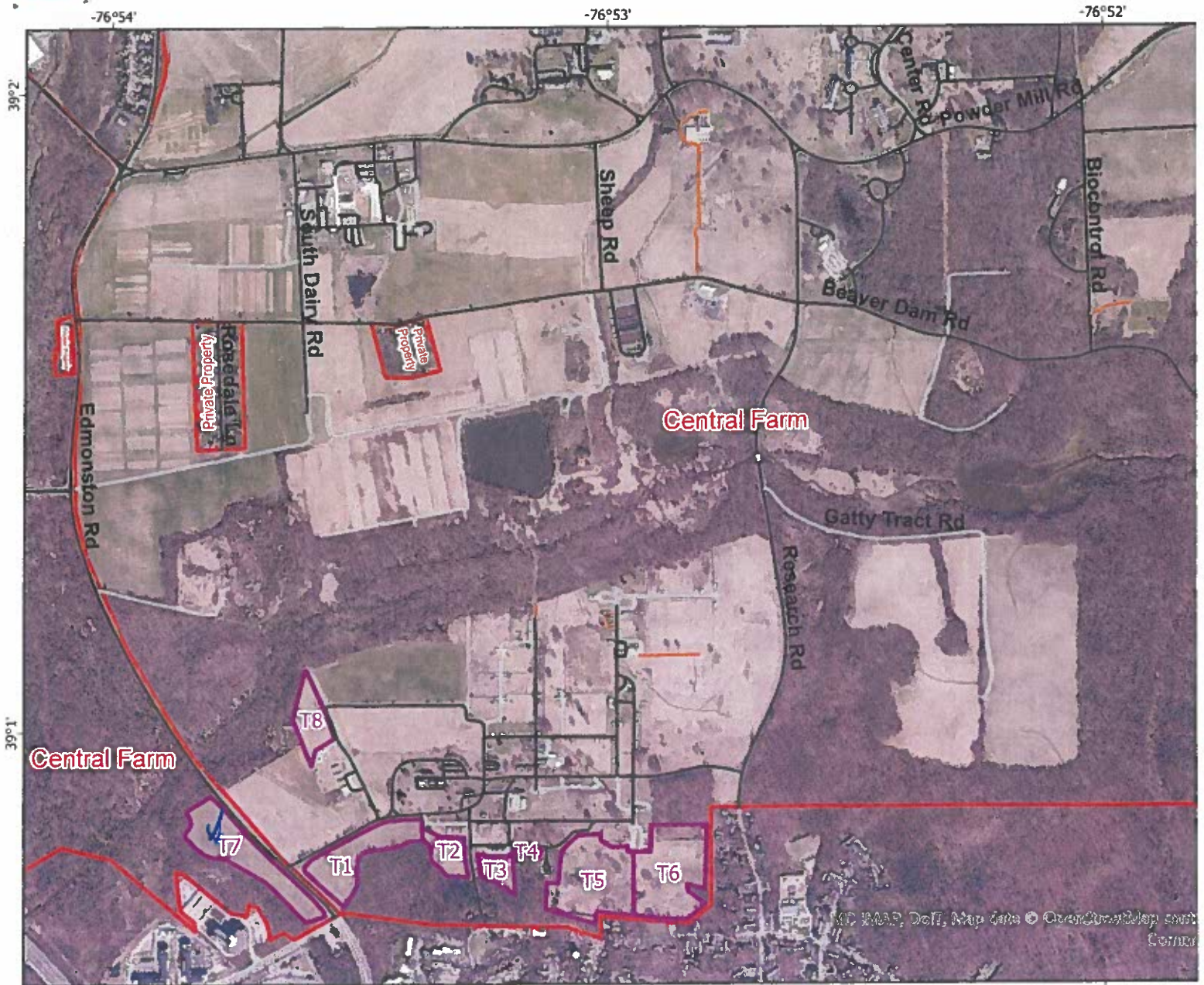
| LIST OF ACCEPTABLE SPECIES | |
|----------------------------|-------------------|
| CANOPY TREES - 70% | |
| ACER RUBRUM | RED MAPLE |
| FAGUS GRANDIFLORA | BEECH |
| LIQUIDAMBAR STYRACIFLUA | SWEET GUM |
| MAGNOLIA VIRGINIANA | MAGNOLIA |
| NYSSA SYLVATICA | BLACK GUM |
| QUERCUS ALBA | WHITE OAK |
| QUERCUS FALCATE | SOUTHERN RED OAK |
| QUERCUS PHELLOS | WILLOW OAK |
| PINUS RIGIDA | PITCH PINE |
| PINUS TAEDA | LOBLOLLY PINE |
| PINUS VIRGINIANA | VIRGINIA PINE |
| UNDERSTORY TREES - 30% | |
| CARYA GLABRA | PIGNUT HICKORY |
| CASTANEA PUMILA | DWARF CHESTNUT |
| CERCIS CANADENSIS | EASTERN REDBUD |
| CORNUS FLORIDA | FLOWERING DOGWOOD |
| ILEX OPACA | AMERICAN HOLLY |
| QUERCUS MARILANDICA | BLACKJACK OAK |
| SASSAFRAS ALBIDUM | SASSAFRAS |

6 REFORESTATION DIAGRAM
SCALE: N.T.S.

GRAPHIC SCALE SEAL



Beltsville Agricultural Research Center



- 76°54'
- 39°1'
- Asphalt
- Gravel
- Dirt
- Concrete
- BARC Boundary
- Possible Mitigation Sites

| Name | Acres |
|------|-------|
| T1 | 7.82 |
| T2 | 2.88 |
| T3 | 2.09 |
| T4 | 0.48 |
| T5 | 12.05 |
| T6 | 12.4 |

| Name | Acres |
|------|-------|
| T7 | 10.08 |
| T8 | 4.02 |
| T9 | 2.97 |
| T10 | 0.68 |
| T11 | 5.17 |
| T12 | 2.11 |

Sum Total
62.75 Acres



Path: C:\GIS\APU\USSSMitigation.aprx
Author: George.Meyers Research S

60+
69 acres

MC MAP, DoIT, Map data © OpenStreetMap contributors

- 30' from fence





4-7

4-8
Waters

4-10

4-15A

4-15B

Waters

4-16

4-11

4-17

4-18

4-25

Private Property

4-23A

