

November 30, 2021

RED SPRING, CROOK WALK, & KENNEDY GRAVESITES TRAM STOP REHABILITATION at Arlington National Cemetery, Arlington, Virginia

PROJECT DESCRIPTION, AREA OF POTENTIAL EFFECTS, & ASSESSMENT OF EFFECT



1 Red Spring
View west McClellan Drive, 2019



3 Kennedy Gravesites Tram Stop
View north along Grant Drive, 2019



2 Crook Walk
View north from McClellan Drive, 2020



2 Crook Walk Red Spring
View north from Wilson Drive, 2020



PROJECT DESCRIPTION

Arlington National Cemetery (ANC) proposes rehabilitating two historic structures and a tram stop near the Kennedy gravesites. The work is part of a roadway repair and repaving project on Sheridan, Wilson, McClellan, and Weeks/Grant Loop Drives and storm drainage pipe replacement in Sections 31 and 37.

At Red Spring, a structure contributing to ANC's National Register Historic District, we plan to replace selected landscape plantings, hardscape, and site furnishings and address deteriorated conditions of spring's red sandstone enclosure.

We propose rehabilitating of Crook Walk sidewalk, another structure contributing to ANC's National Register Historic District, by replacing deteriorated concrete and providing safe stairs and handrails.

At the tram stop on Grant Drive near the Kennedy gravesites, we propose replacing existing landscape plantings, extending and replacing the hardscape, and installing new site furnishings.

See the project descriptions in this package for detailed information on each location within the project.

Kennedy gravesites, Tanner Amphitheater, and Arlington House are the most noteworthy historic properties in the Areas of Potential Effects. They contribute to Arlington National Cemetery's and Robert E. Lee Memorial's National Register of Historic Places historic districts.

The landscape characteristics vary among the areas in which the rehabilitations are proposed. Red Spring – a natural water feature with a sandstone retaining wall surrounding a vault-like spring house – rests on the eastern side of the shady slope surrounded by turf- and headstone-covered hills and at the center of the McClellan Drive cul-de-sac. Crook Walk runs up and down the turf- and headstone-covered slopes connecting the Arlington House, Tanner Amphitheater, Tomb of the Civil War Unknowns, near Lee Drive, with Memorial Amphitheater. The walk passes Red Spring at the bottom of a low valley and crosses Sheridan and McClellan Drives. The tram stop is sandwiched between two cemetery drives (Grant and Sheridan) and sits at the base of a turf-covered hill with headstones that rise to Arlington House. The immediate area around the tram stop is planted with trees and scrubs of varying heights.

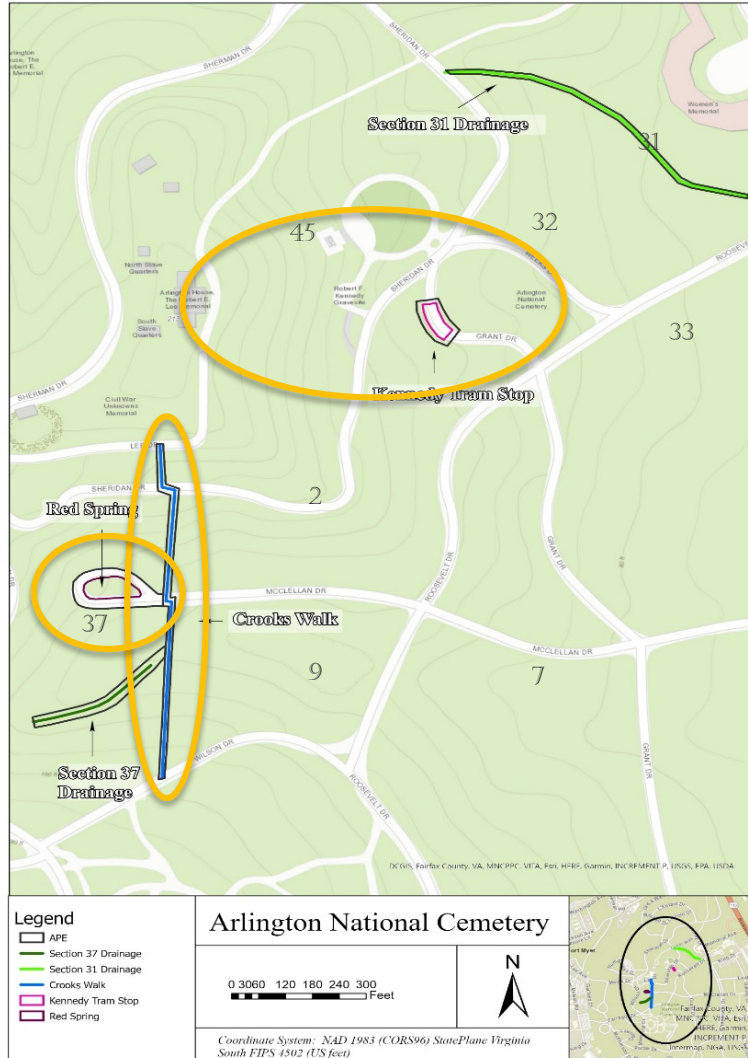
Area of Potential Effects:

The Area of Potential Effects (APE) for the proposed project is shown on the map to the left as yellow ovals. The APE includes all locations where the project may be visible and/or audible and cause ground disturbance.

Historic Properties Located Within the APE:

The entire project area is located within the Arlington National Cemetery Historic District (Virginia Department of Historic Resources [VDHR] #000-0042). Following is a list of structures and features contributing to the district and located within the APE.

- Arlington House (VDHR #000-0001, contributing to Robert E. Lee Memorial Historic District)
- Tomb of the Civil War Unknowns (VDHR #000-0042-0028)
- Old Amphitheater (James Tanner Amphitheater) (VDHR #000-0042-0015)
- Red Spring (VDHR #000-0042-0018)
- Crook Walk (VDHR #000-0042)
- Sir John Dill Monument (VDHR #000-0042-0030)
- Kennedy Gravesites (VDHR #000-042-0033)
- Headstones (VDHR #000-0042-0021)
- Site (including topography, natural features, vegetation, view sheds, picturesque layout, and circulation and cemetery burial sections 2, 9, 31, 32, 37, 45)



DETERMINATION OF EFFECTS

I assessed the effects of the proposed project. Applying the criteria of adverse effects (36 C.F.R. § 800.5[a][1]), I determined the undertaking will have No Adverse Effect on the characteristics which qualify Arlington National Cemetery and Robert E. Lee Memorial historic districts for inclusion on the National Register of Historic Places.

I find the designs avoid and/ or minimize the potential direct, indirect, and cumulative effects on both below- and above-ground historic properties.

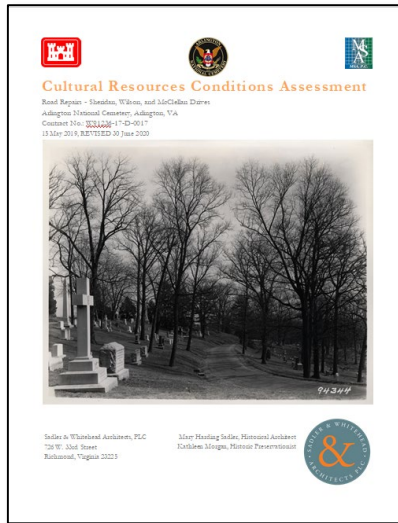
To avoid potential direct effects to the visual qualities that characterize the historic landscape and minimize the visual intrusion:

- Red Spring and Crook Walk rehabilitations remain within their existing footprints and use the areas' existing material palette (red sandstone, concrete walk, bluestone pavers, black metal railings, and ANC's standard site furnishings). These will reduce the rehabilitations presence within the Areas of Potential Effects.
- The Tram Stop on Grant Drive near the Kennedy Gravesites remains minimal in size and scaled to reduce its presence with the Area of Potential Effects with views blocked from the Kennedy Gravesites and Arlington House by new shrubs and trees.

ANC's "Programmatic Agreement Among Arlington National Cemetery, the Virginia State Historic Preservation Officer, and the Advisory Council On Historic Preservation for the Operation, Maintenance, and Repair Activities at Arlington National Cemetery, Arlington County, Virginia" (PA) addresses repair of existing roadways; maintenance/ repair of utilities within previously disturbed utility rights-of-way for the same type of utility installations; and in-kind replacement of existing sidewalks and curbs. The signatories to the PA agreed road and utility repairs and sidewalk replacement are undertakings which have limited potential to adversely affect historic properties; therefore, require no future review under the agreement. Reference Item A.3. of "Attachment A, Streamlined Activities: ANC Activities Not Requiring Further Review Under This Agreement". This project's roads and storm drainage repairs are undertakings not included in this Section 106 consultation package because they are covered under ANC's PA under Attachment A.

Rebecca L. Stevens, AIA
Cultural Resources Manager
Arlington National Cemetery

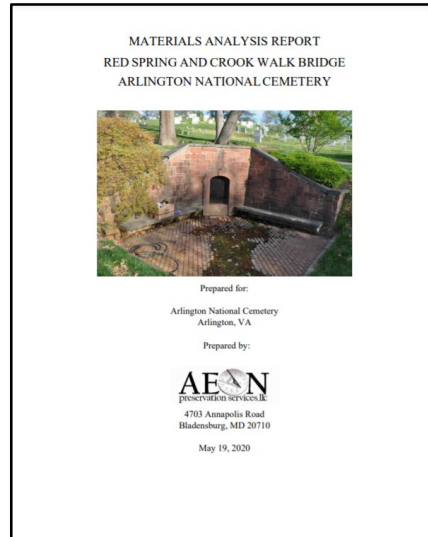
Three documents guided the proposed work for this project:



Cultural Resources Condition Assessment Road Repairs – Sheridan, Wilson, and McClellan Drives Arlington National Cemetery, Arlington, VA.

Sadler and Whitehead Architects, PLC June 2020
(referenced as the *Conditions Assessment*)

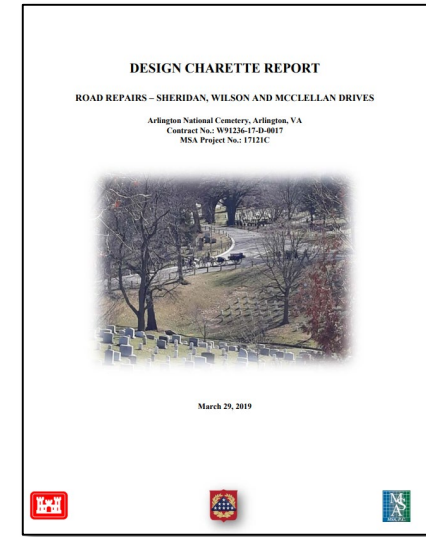
This report documents the investigations and treatment recommendations prepared by historical architects meeting the Secretary of Interior's Standards for Professional Qualifications. It provided a physical description of Crook Walk, Crook Walk Bridge, and Red Spring, as well as the various drainages within these areas. It then provides a condition assessment of each area accompanied by historical information and current photographs.



Materials Analysis Report Red Spring and Crook Walk Bridge, Arlington National Cemetery, Arlington, VA

AEON Preservation Services, LLC May 2020

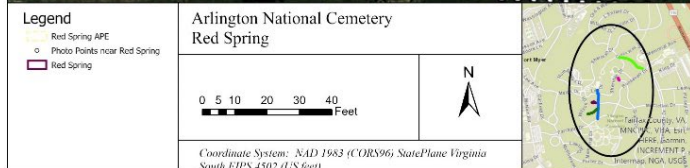
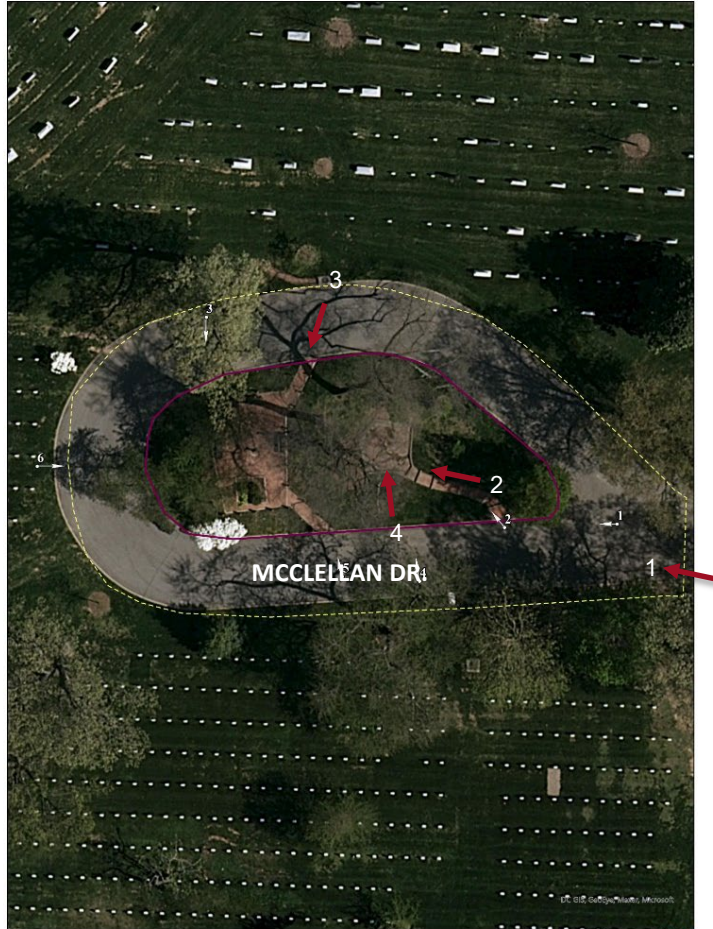
This report details findings for the mortar and parging samples taken at ANC on April 10, 2020. We obtained mortar samples from Red Spring, located in Section 2 of ANC at the end of the McClellan Drive cul-de-sac. A concrete parge coating sample was taken from the Crook Walk footbridge, also located in Section 2 of ANC, along the Crook footpath.



Design Charette Report – Road Repairs- Sheridan, Wilson and McClellan Drives, Arlington National Cemetery, Arlington , VA.

March 2019

This report documents alternative design concepts developed by ANC based on site investigations, code analysis, contract scope of work, and engineering requirements. It includes findings related to deteriorated conditions and safety deficiencies at Red Spring and the tram stop near the Kennedy gravesite and along Crook Walk.



Red Spring

Proposed rehabilitation work includes:

- Replacing the upper-level brick terrace with blue stone pavers.
- Providing accessibility to upper terrace.
- Salvaging and reinstalling existing ANC standard benches and water bubbler on upper terrace.
- Removing post and chain barriers.
- Removing existing lower-level brick terrace and steps and installing blue stone pavers.
- Repointing and repairing historic spring house, retaining wall and drainage structure following recommendations provided by an historical architect and building materials conservator.
- Replacing selected deteriorated sandstone on spring retaining walls.
- Retaining and protecting existing trees. Installing new vegetation to expand existing plantings beds.

Area of Potential Effects (APE)

The APE for Red Spring encompasses the approximately 152-foot by 65-foot Red Spring area including the Seneca red sandstone retaining wall that surrounds a vault-like (spring house) structure set. This is noted as a yellow dashed line on the map to the left. Red Spring, VDHR#000-0042-0018 falls within the APE. The APE extends beyond the yellow dashed line on the map to include areas from which the spring can be seen. This is approximate 200 feet from the spring to the hillsides to the north, south, east, and west and includes Crook Walk (VDHR #000-0042) to the east.

KEY



Direction & Number of
Photograph on this
and following pages.

Satellite Image of Existing Site



1 Red Spring Area in center of
McClellan Drive Cul-de-Sac
View to west, 2020



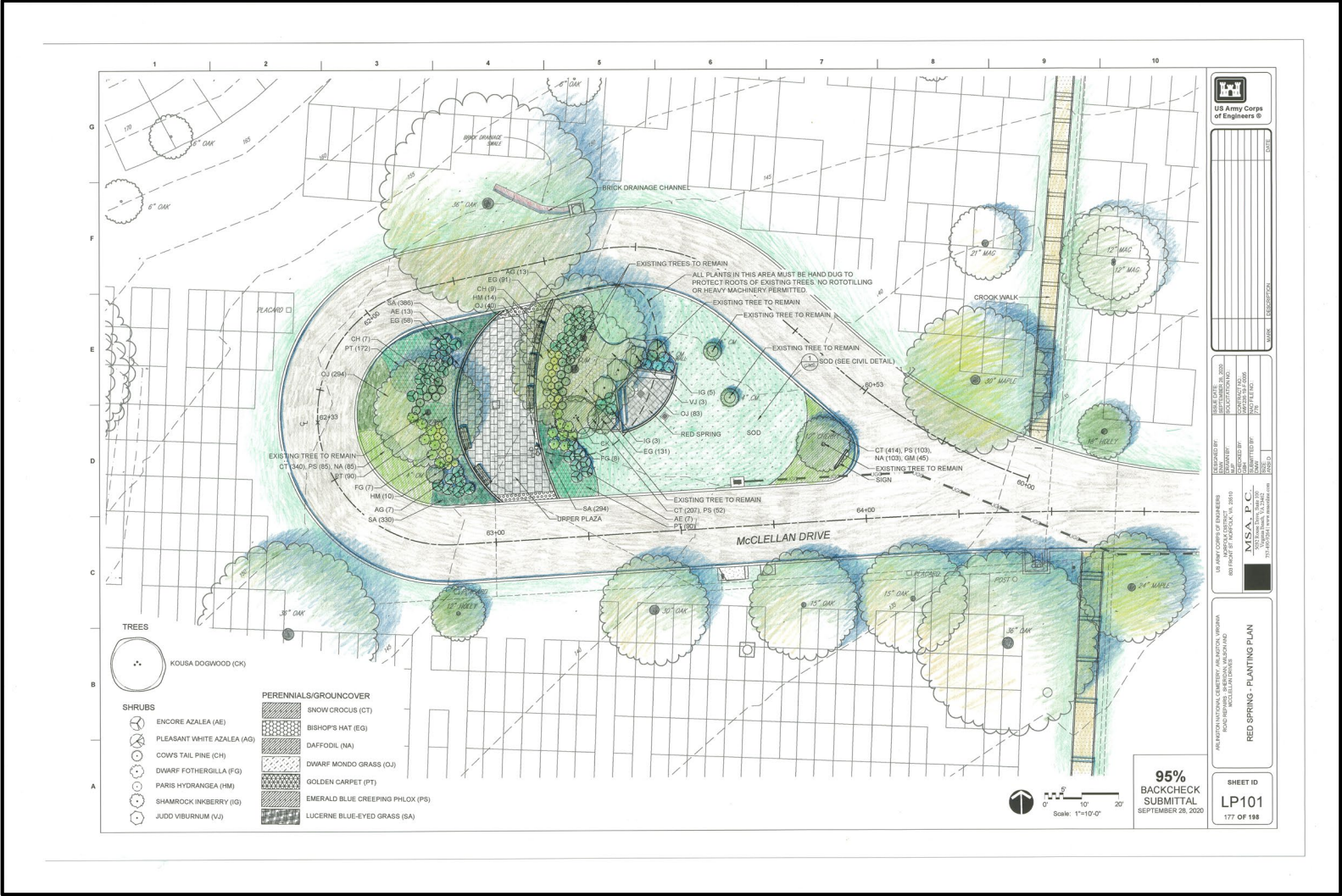
2 Red Spring Upper and
Lower Terrace shown along
with Spring Enclosure
View to west-northwest, 2020



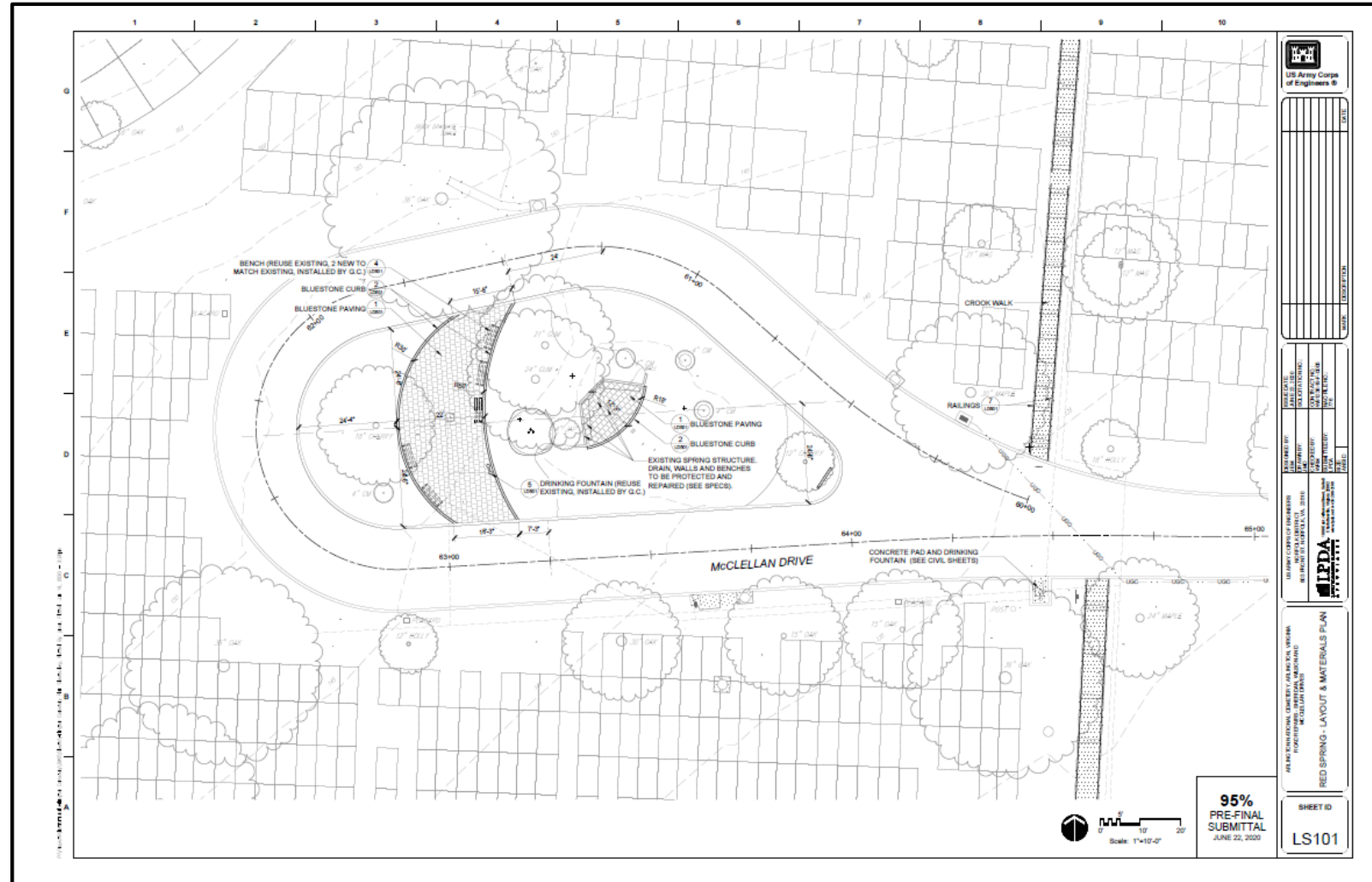
3 Existing Red Spring Upper
Terrace
View to southwest, 2021



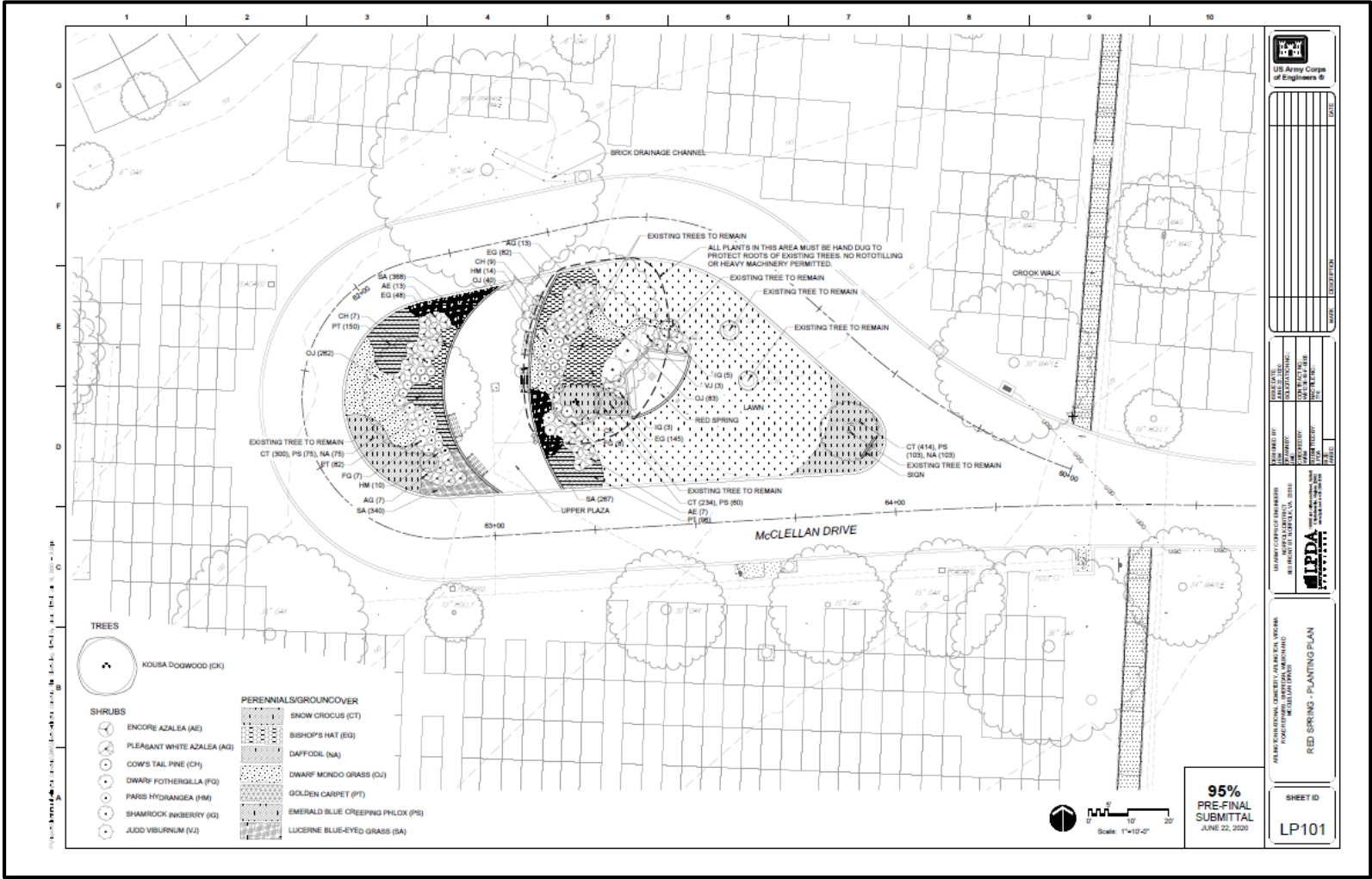
4 Red Spring Lower
Terrace and Spring
Enclosure
View north, 2020



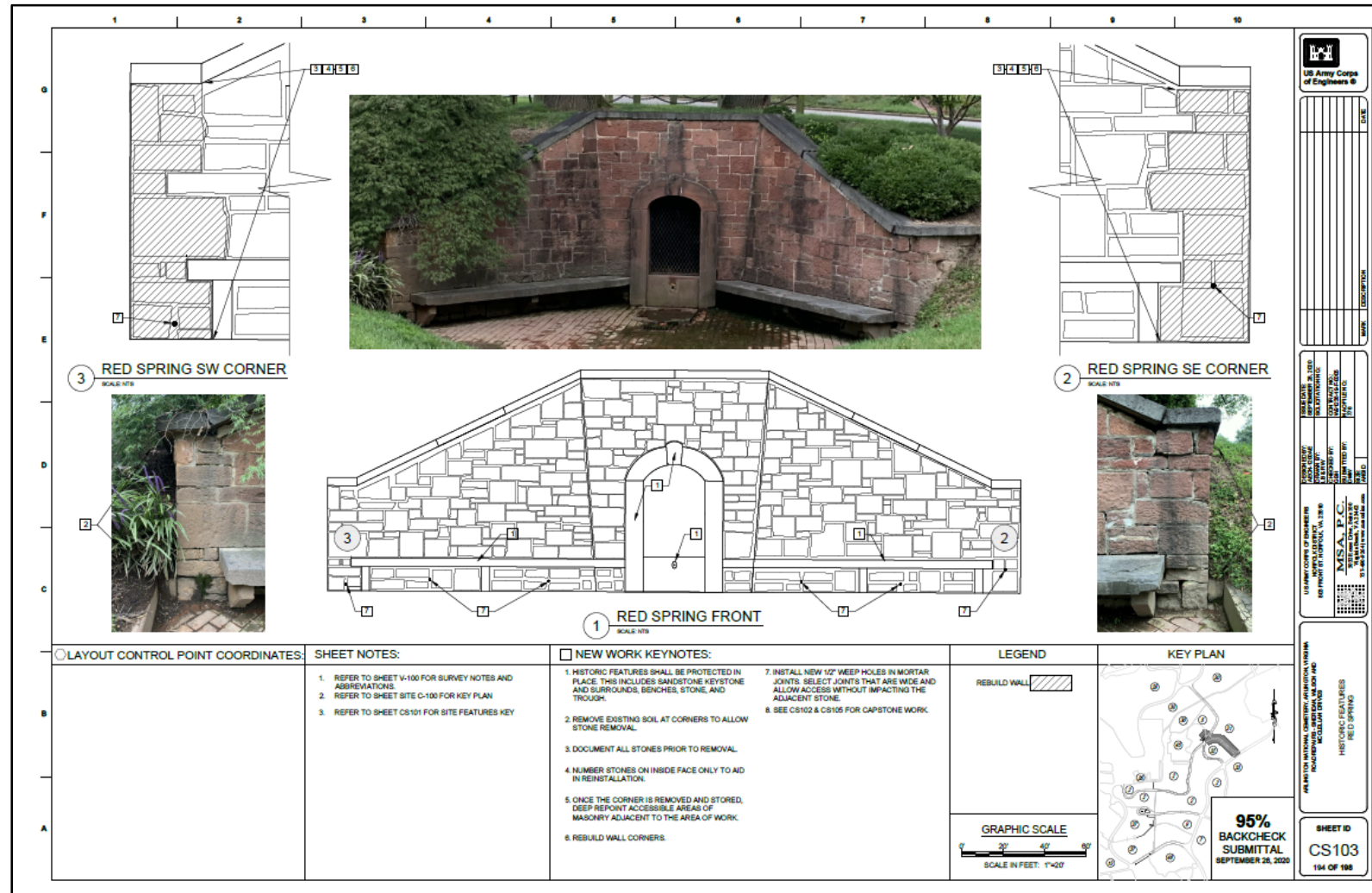
Proposed Rehabilitation Site Plan Drawing



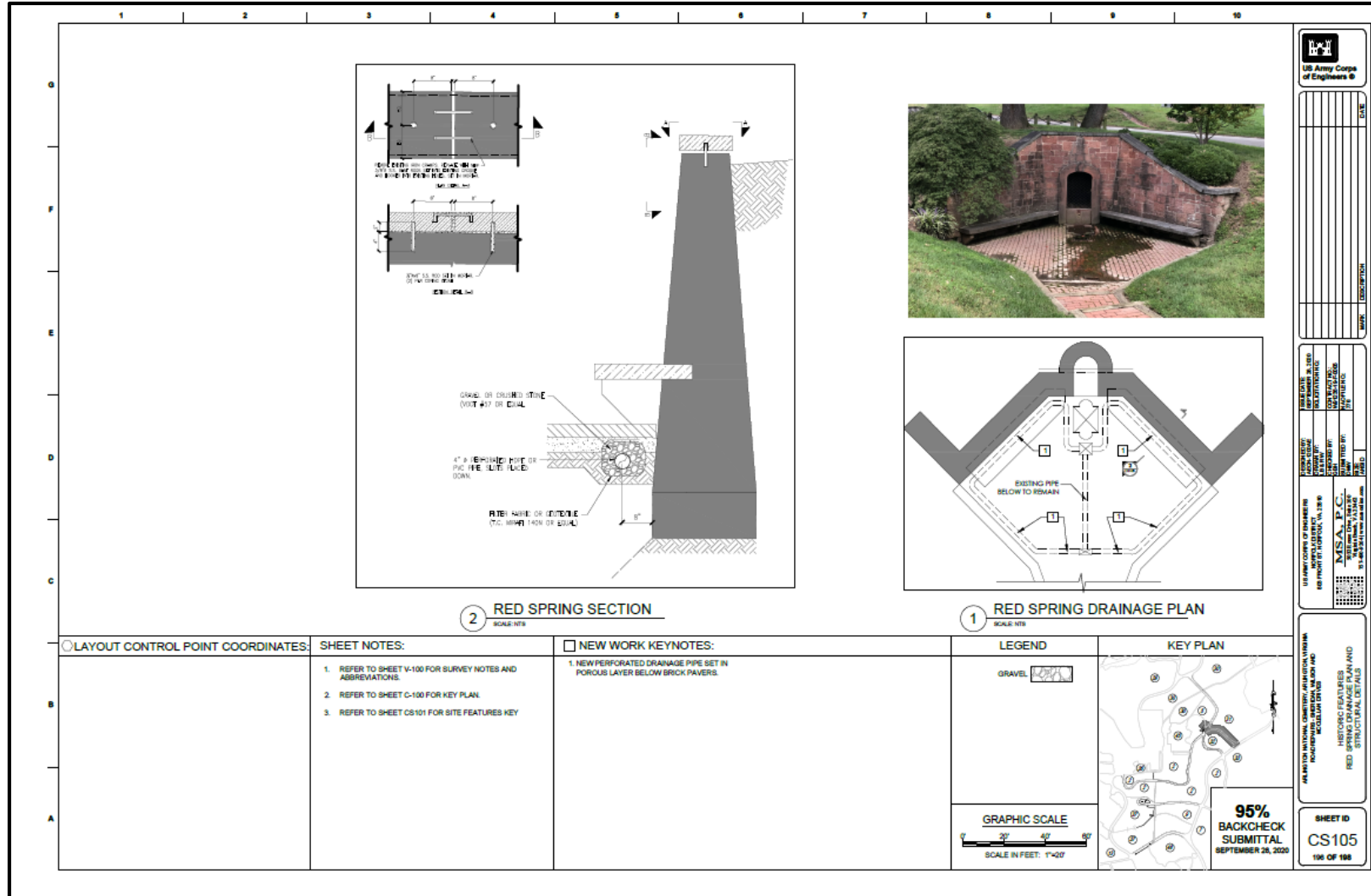
Proposed Hardscape Rehabilitation Plan



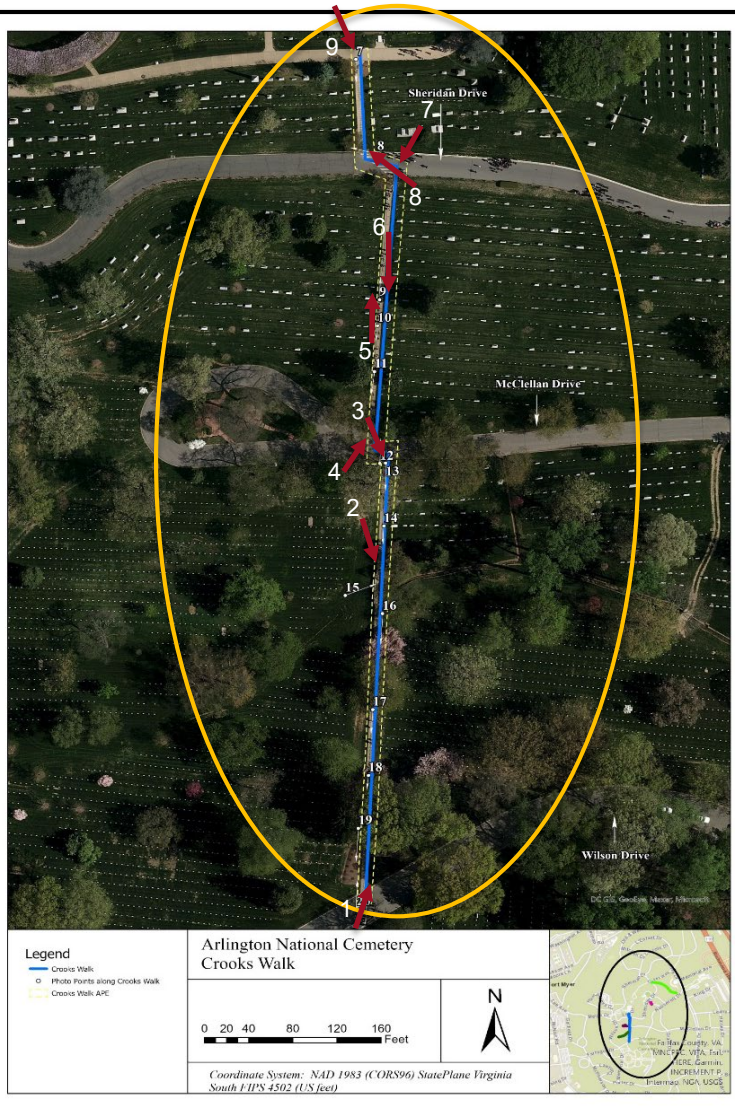
Proposed Planting Plan



Proposed Preservation Work on Red Spring Retaining Wall and Spring Enclosure



Proposed Drainage Improvement and Capstone Resetting Plan for Red Spring



Crook Walk

Proposed scope of work includes:

- Replacing the entire concrete Crook Walk (approximately 800 linear feet) from Lee to Wilson Drives with a new concrete sidewalk and steps to meet minimum accessibility, safety, and access requirements.
- Retaining existing historic alignment, width, overall form, materials, and finishes of the pathway.
- Retaining historic Crook Walk Bridge. (Patching the stucco finish on the bridge at voids resulting from removal of handrails extending into the bridge structure.)

The design retains the essential character-defining features of the walk which convey significance including the straight alignment of walk segments, how the straight segments contrast from the mostly curvilinear road alignments, the way the walk fits the terrain creating a site-specific sequence of steps and landings and ramps, the corridor effects of continuous handrails, and how the walk alignments contribute to the spatial organization of the proximate cemetery areas. New materials (concrete and metal pipe railings) are compatible with the existing.

Area of Potential Effects (APE)

The APE for Crook's Walk encompasses the entire approximately 800 linear feet long by 10 feet wide of Crook's Walk. This is noted as a yellow dashed line on the map to the left. The APE extends beyond the path itself to the surrounding areas to include areas from which Crook Walk can be seen. This is approximate 200 feet in all directions from walk due to its location along hillsides and up to the ridges. Crook's Walk VDHR#000-0042, Red Spring (VDHR #000-0042-0018), Tomb of the Civil War Unknowns (VDHR #000-0042-0028), Old Amphitheater (James Tanner Amphitheater) (VDHR #000-0042-0015) fall within this APE.

KEY

- ← Direction & Number of Photograph on this and following pages.
- Area of Potential Effects



1 Crook Walk at intersection
with Wilson Drive near
Memorial Amphitheater
View north, 2021



2 Crook Bridge midway
along Crook Walk between
McClellan and Wilson Drives
towards Memorial
Amphitheater (No changes
proposed to bridge as part of
this project.)
View south, 2019



3 Crook Walk from McClellan
Drive towards Crook Bridge
View south, 2021



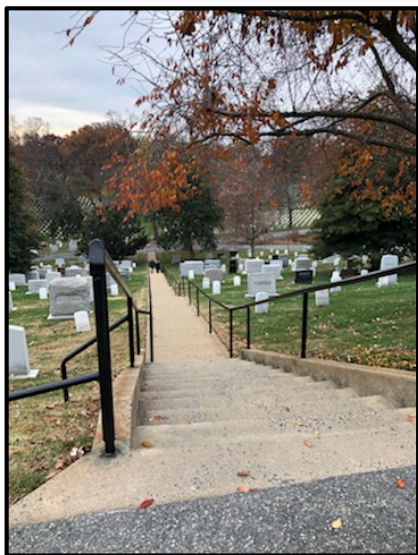
4 Crook Walk from McClellan
Drive towards Sheridan Drive
View north, 2021



5 Crook Walk midway
between McClellan and
Sheridan Drives
View north, 2019



6 Crook Walk midway
between McClellan and
Sheridan Drives (Red Spring
pictured on right in
background.)
View south, 2019



7 Crook Walk at
intersection with south
side of Sheridan Drive
towards McClellan Drive
View south, 2020



8 Crook Walk at
intersection with
north side of
Sheridan Drive
toward Lee Drive
View northwest, 2021



9 Crook Walk at
intersection with
Lee Drive
towards Sheridan
Drive
View south, 2020



One of the types of
existing handrail /
barriers used along
Crook Walk
2019



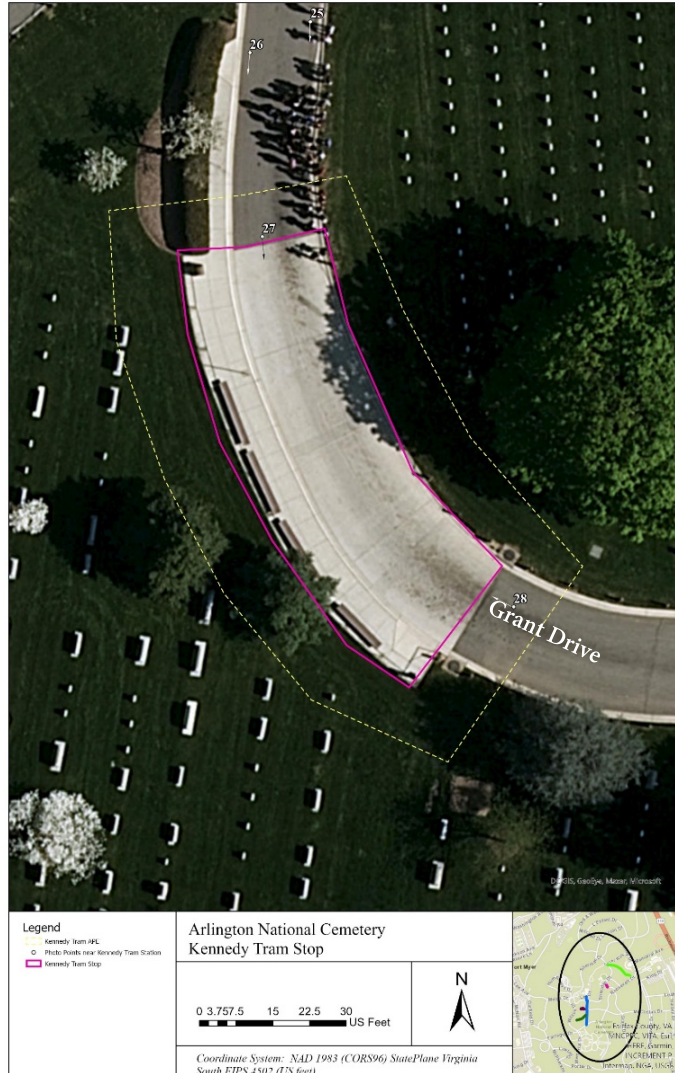
Proposed replacement
railing for Crook Walk -
black steel pipe and ball
design with the "knuckle"
at the joints



Proposed replacement
railing for Crook Walk -
black steel pipe and ball
design with the "knuckle"
at the joints



Proposed replacement
railing for Crook Walk -
black steel pipe and ball
design with the "knuckle"
at the joints



Tram Stop Near Kennedy Gravesites

Proposed scope of work includes:

- Removing existing concrete walkway along the west length of Grant Drive and the curb at the intersection of Sheridan and Grant Drives to provide an assessable transition between the road and new walkway at the tram stop.
- Extending the walkway and pedestrian ingress area at tram stop with concrete paving from the intersection of Sheridan and Grant Drives and along Grant Drive.
- Increasing the number and installing new ANC standard benches along tram stop.
- Constructing a low retaining wall for seating at the intersection of Sheridan and Grant Drives.
- Planting new trees, shrubs, and ground covers to provide increased shade and screen tram stop from surrounding areas.
- Resurfacing associated roadway.
- Installing an irrigation system to support new plantings.
- Placing new wayfinding, traffic control, and informational signs to replace existing signs which meet ANC standards.

The proposed rehabilitation creates safe pedestrian movements between the tram stop and the Kennedy Gravesites and improves seating capacity for visitors waiting to embark and disembark from trams. The design is understated and compatible with the character of the Kennedy Gravesites and cemetery landscape. New materials are concrete walks and neutral-colored natural stone-faced seat walls with a pre-cast concrete cap.




Area of Potential Effects (APE)

The APE for the tram stop encompasses the existing tram stop, which measures approximately 88 feet long by 38 feet wide (yellow dashed line). The APE extends beyond the yellow dashed line on the map to the left to include areas from which the tram stop can be seen, which is 500 feet to the Arlington House and 150 feet to the north, east, and south. Reference the satellite image on the following page which shows the extended APE. Sir John Dill Monument (VDHR #000-0042-0030), Kennedy Gravesites (VDHR #000-0033), and Arlington House (VDHR #000-0001) fall within the APE.

Satellite Image of Existing Site



KEY

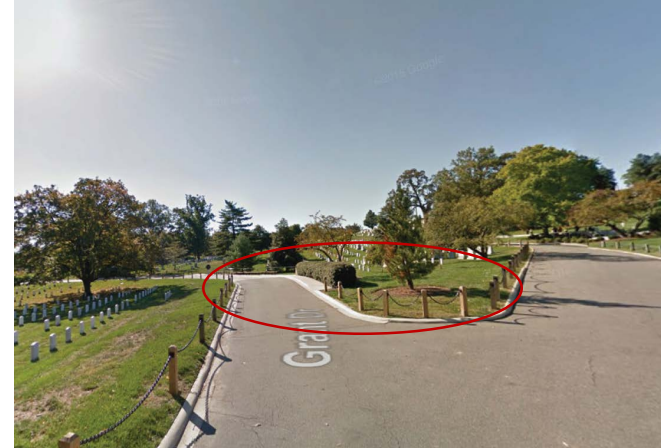
-  Direction & Number of Photograph on this and following pages.
-  Tram Stop Rehabilitation Area Circled on this and following pages.
-  Area of Potential Effects

APE for Proposed Tram Stop Rehabilitation - Satellite Image

Tram Stop Near Kennedy Gravesites



1 Existing Tram Stop
near Kennedy Gravesites
View south along Grant Drive, 2020



2 Existing Tram Stop at Intersection of
Grant and Sheridan Drives near Kennedy
Gravesites
View south southwest along Grant Drive, 2020



3 Close-up of Tram Stop
near Kennedy Gravesites
View south along Grant Drive, 2020

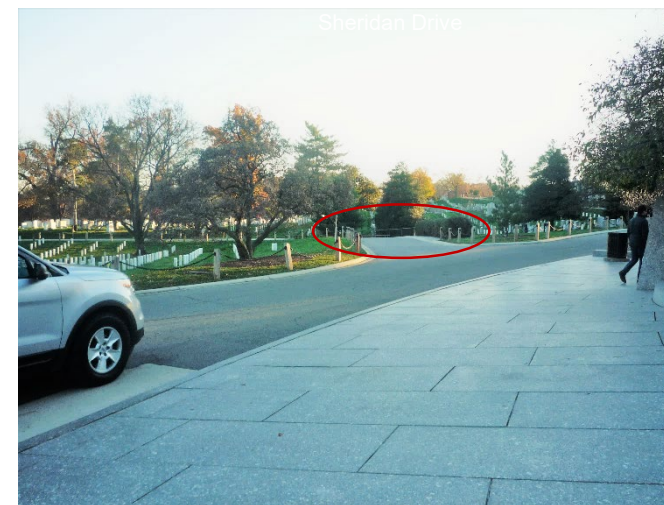


4 Existing Tram Stop on Grant Drive
adjacent to Sir John Dill Monument
View west along Grant Drive, 2020

Tram Stop Near Kennedy Gravesites



5 Existing Tram Stop from
President John F.
Kennedy Gravesite plaza
View southeast 2020



6 Existing Tram Stop from
entrance to Kennedy
Gravesites on Sheridan Drive
View south 2020

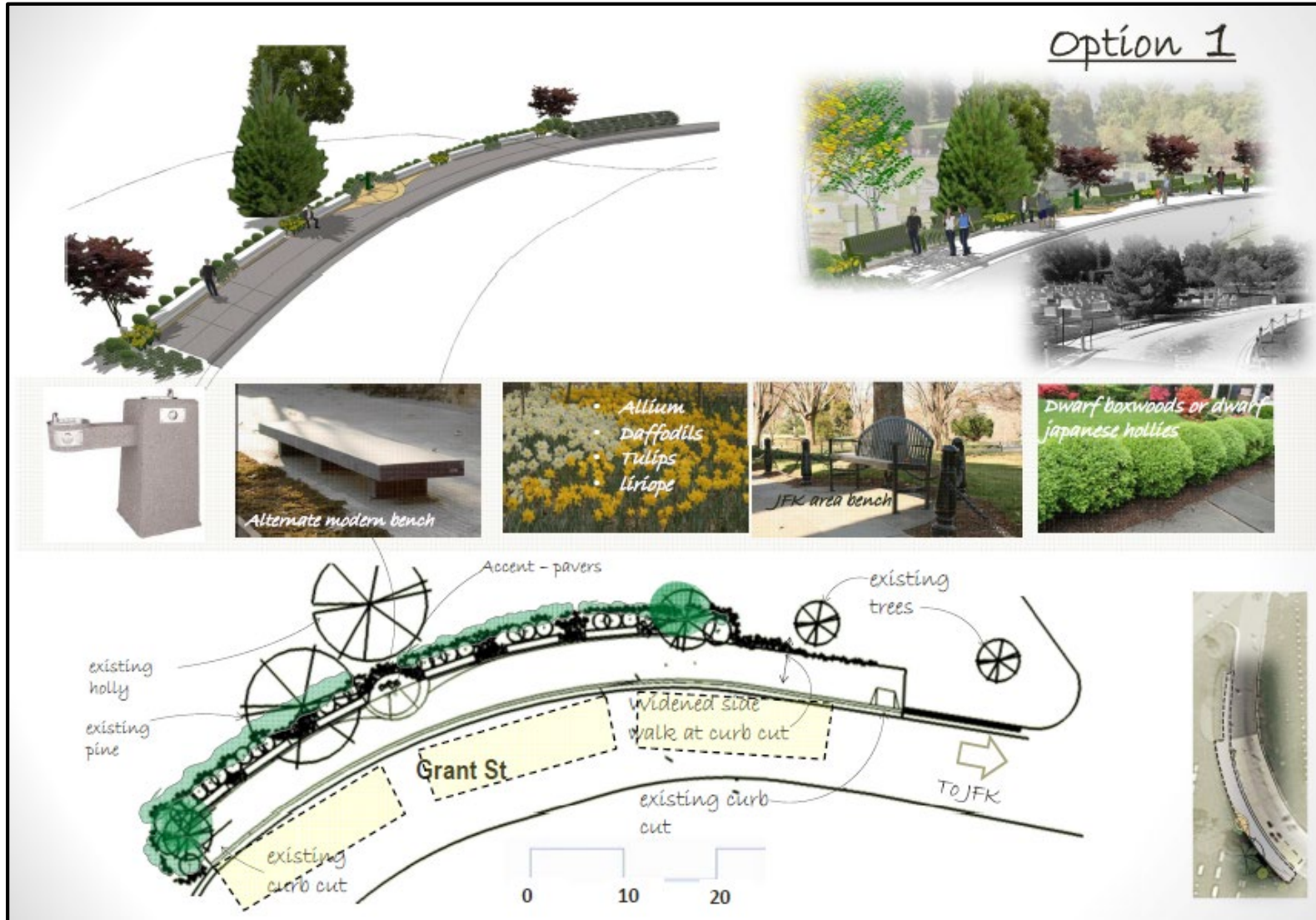


7 Existing Tram Stop from
intersection of Grant and
Sheridan Drives
View south 2020



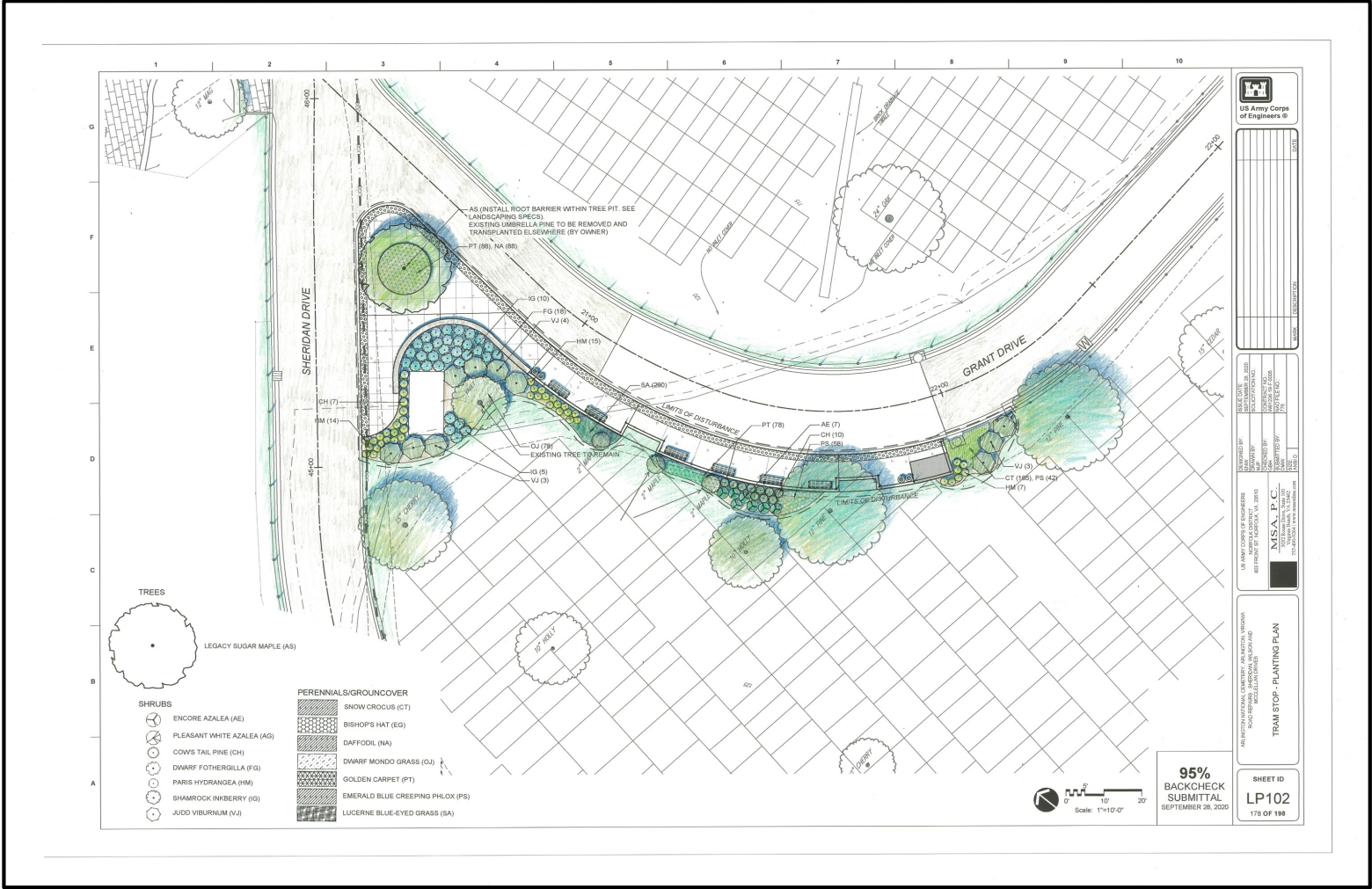
8 Existing Tram Stop from
Robert Kennedy Memorial
Grave (Low planting will
screen view of proposed
tram stop.)
View east 2020

Tram Stop Near Kennedy Gravesites

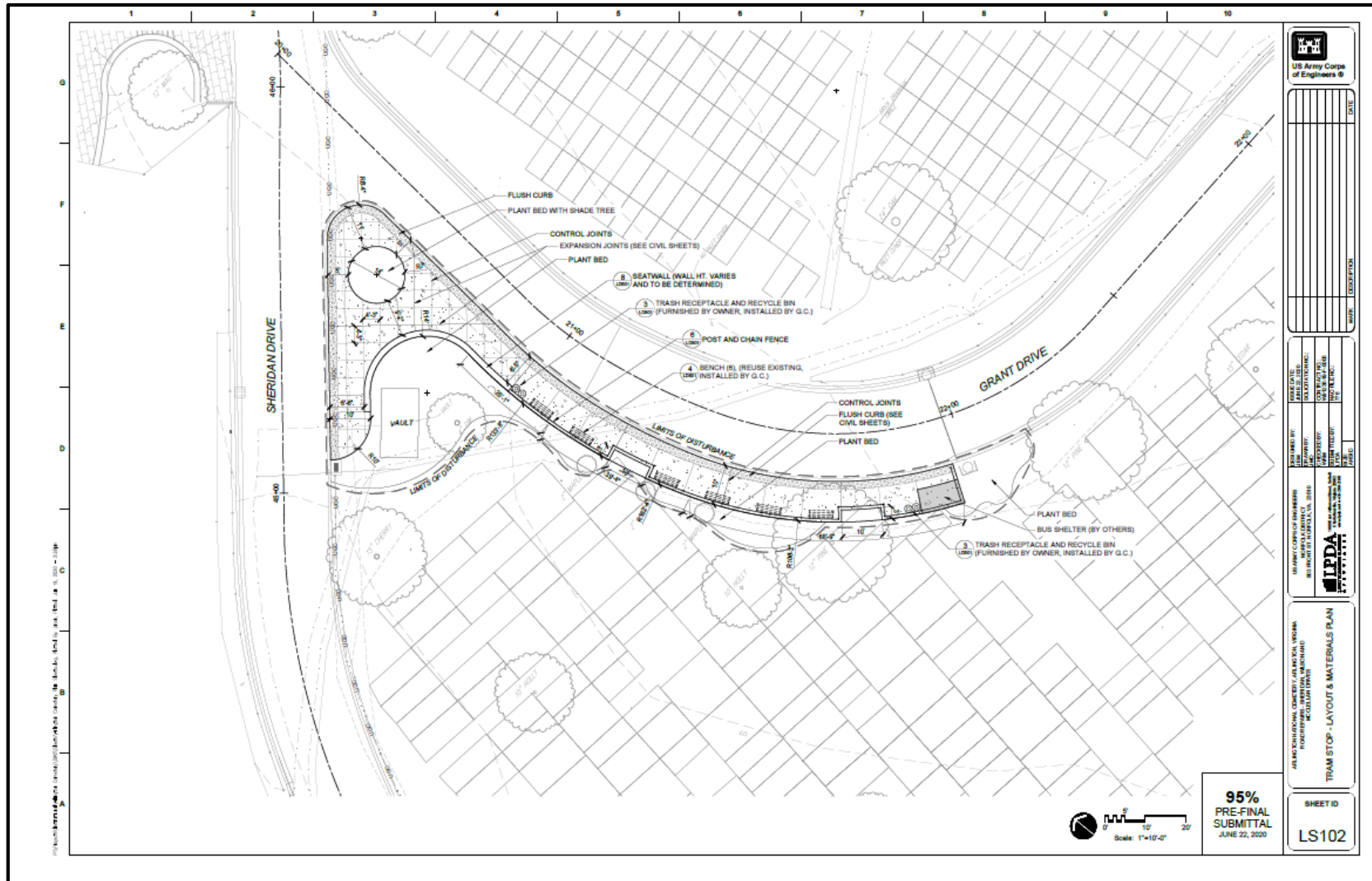


Kennedy Gravesites Tram Stop

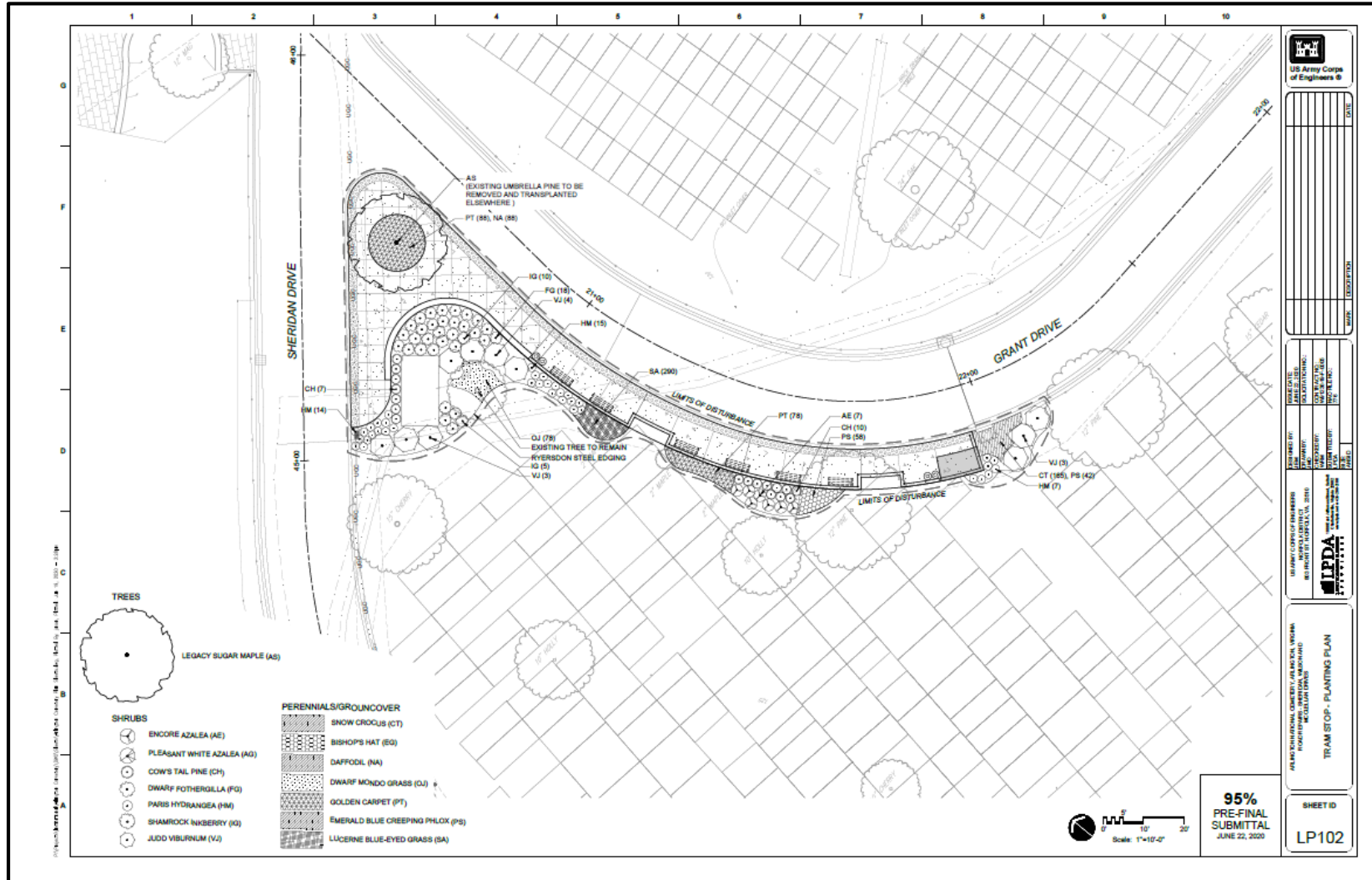
Pictured is one of several options considered. Final design proposal is similar. It extends the walkway toward the intersection of Grant and Sheridan Drives, creates seating on the retaining wall along the extended walkway, and provides an accessible transition between the road and walkway for the full length of the Tram Stop.



Proposed Rehabilitation Plan for Tram Stop



Proposed Hardscape Rehabilitation Plan



Proposed Rehabilitation Planting Plan