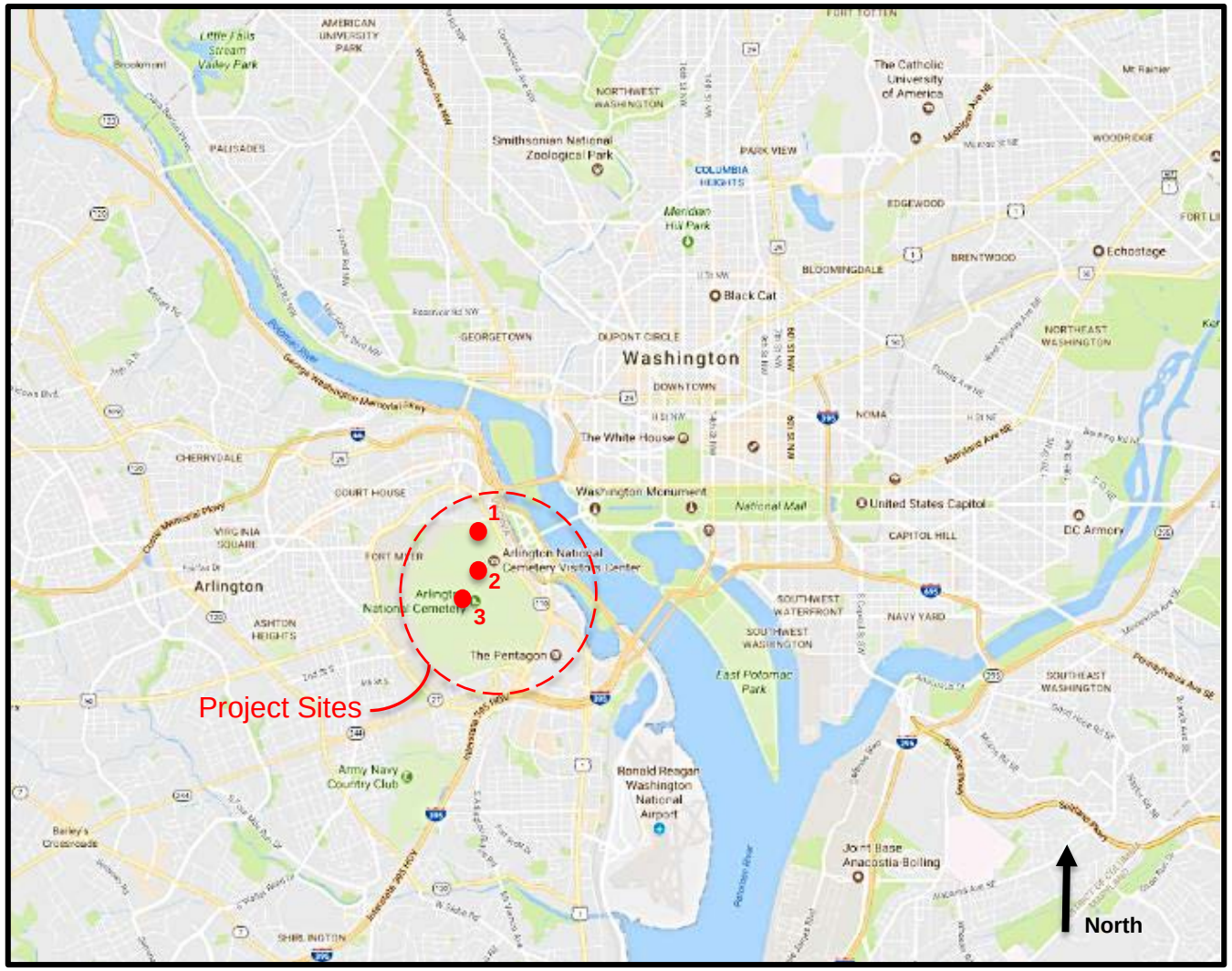
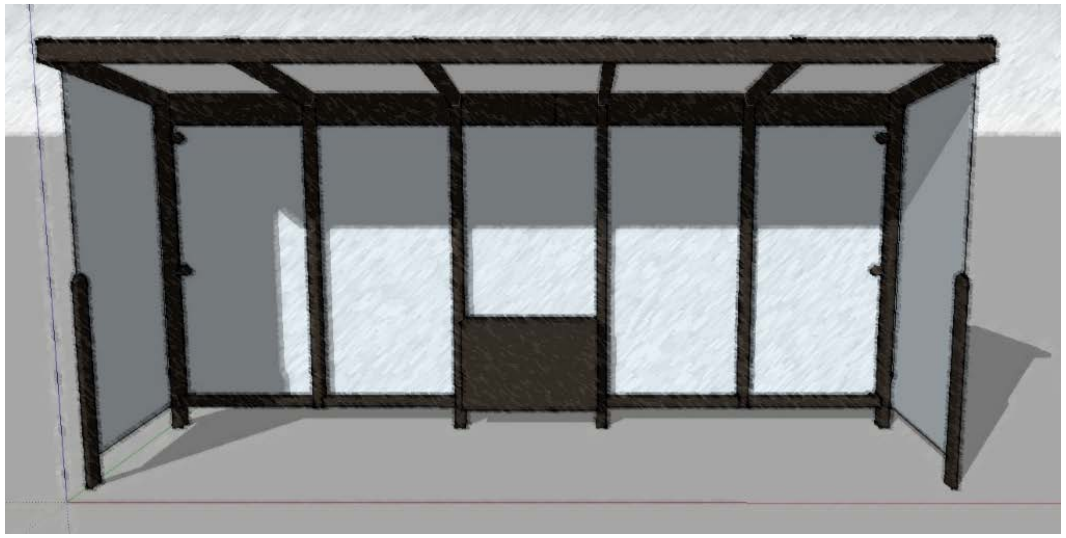
SOLAR PANEL SHELTERS



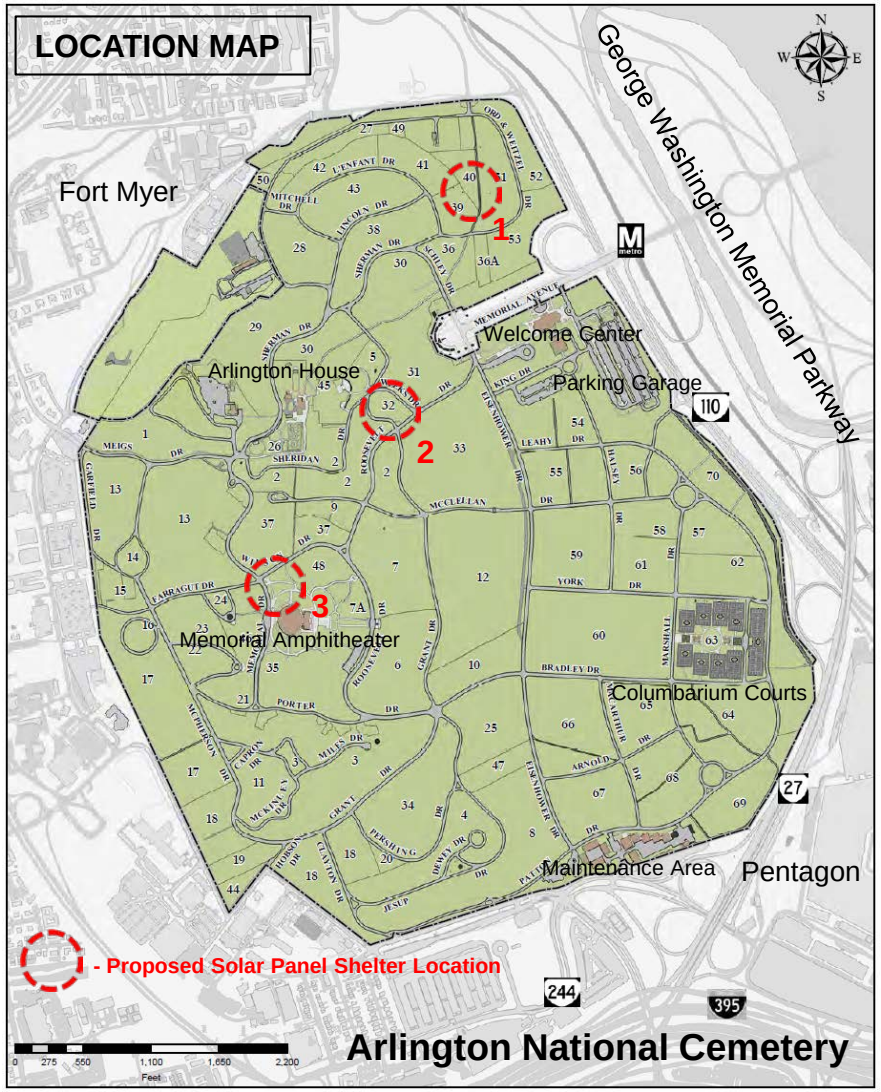


Arlington National Cemetery
Solar Panel Shelters
Arlington, Virginia

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

May 20, 2020

PROJECT DESCRIPTION



PROJECT DESCRIPTION

Arlington National Cemetery (ANC) proposes the installation of metal and glass Solar Panel Shelters at three locations in the cemetery. A sixteen to nineteen feet long by six feet wide shelter is planned for Curtis Walk and Grant Drive and the intersection of Memorial and Wilson Drives. The shelter will include standard cemetery benches.

The proposed structures meet the need for outdoor shelter during inclement weather and provide charging ports for visitors' cell phone and camera batteries.

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

The landscape characteristics vary among the areas in which the three shelter will sit. The proposed shelter on Custis Walk with its wide shoulder of open turf is situated in a landscape characterized by regularly spaced rows of military headstones set in a flat terrain with sparsely spaced tall trees. The shelter proposed for Grant Drive is placed at a tram stop. The tram stop and shelter are sandwiched between two cemetery drives (Weeks and Sheridan) and sit at the base of a turf-covered hill with headstones that rise to Arlington House. The immediate area around the tram stop and shelter is planted with trees and scrubs of varying heights. The shelter at the intersection of Memorial and Wilson Drives is at the northwest corner of Memorial Amphitheater's manicured landscape of turf, shrubs, and trees.

AREA OF POTENTIAL EFFECTS & DETERMINATION OF EFFECTS

AREA OF POTENTIAL EFFECTS

The Area of Potential Effects (APE) for the Solar Panel Shelters is the distance from which one can see the structures. The APE is different for each structure depending on topography and vegetation in the area, but is no less than 100 feet in any direction for all.

NATIONAL REGISTER PROPERTIES IN THE APE

The historic properties in the APEs' which contribute to Arlington National Cemetery's and Robert E. Lee Memorial's National Register of Historic Places Districts are:

Custis Walk
- Lodge 2 (DHR # 000-0042-0002)
- Custis Walk (no DHR #)
- Headstones and Grave Markers (DHR #000-0042-0021)
- Burial Sections 27, 39, 36A, 39, 40 41, 49, 51, 52 and 53 (no DHR #)
- Ord and Weitzel Drives (no DHR #)

Grant Drive
- Arlington House (DHR #000-0001)
- Kennedy Grave Sites (DHR #000-0042-0030)
- Sir John Dill Monument (DHR #000-0042-0033)
- Headstones and Grave Markers (DHR #000-0042-0021)
- Burial Sections 2, 32, 33, and 45 (no DHR#)
- Grant, Roosevelt, Sheridan, and Weeks Drives (no DHR #)

Intersection of Memorial and Wilson Drives
- Memorial Amphitheater (DHR #000-0042-0006)
- Canadian Cross (DHR #000-0042-0026)
- Challenger and Columbia Shuttle Memorials (DHR #000-0042-0041 and 0042)
- Korean War Veterans Memorial (DHR #000-0042-0034)
- Iran Rescue Mission Memorial (DHR #000-0042-0031)
- Headstones and Grave Markers (DHR #000-0042-0021)
- Burial Sections 46 (no DHR #)
- Memorial, Farragut, and Wilson Drives (no DHR #)

DETERMINATION OF EFFECTS

I assessed effects of the proposed installation Solar Panel Shelters on Curtis Walk, along Grant Drive, and at the intersection of Memorial and Wilson Drives. 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 Nationla Cemetery and Robert E. Lee Memorial historic districts for inclusion on the National Register of Historic Places.

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

To avoid potential direct effects to the visual qualities of the burial sections and the character of the historic landscapes, we are placing the shelters in locations where trees and shrubs block views of the structures from a distance.

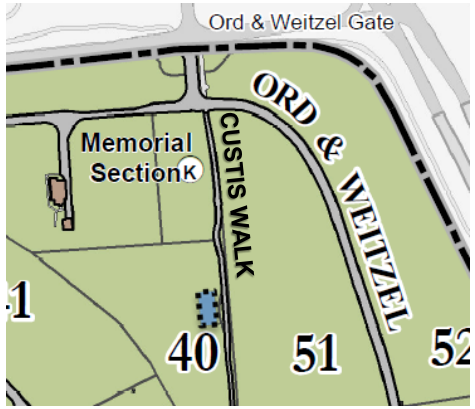
To minimize the visual intrusion of the shelters at a closer range within the Area(s) of Potential Effects, ANC will use black metal structural components with transparent glass infill panels to allow the shelters to recede visually into the background. The shelters are minimal in size and scaled to reduce their presence within the Areas of Potential Effects.

The Solar Shelters requires foundations approximately 28 inches deep and concrete pads on gravel fill; however, their construction and use will have no effect on archeological sites. All the work is in areas with moderate ground disturbance.

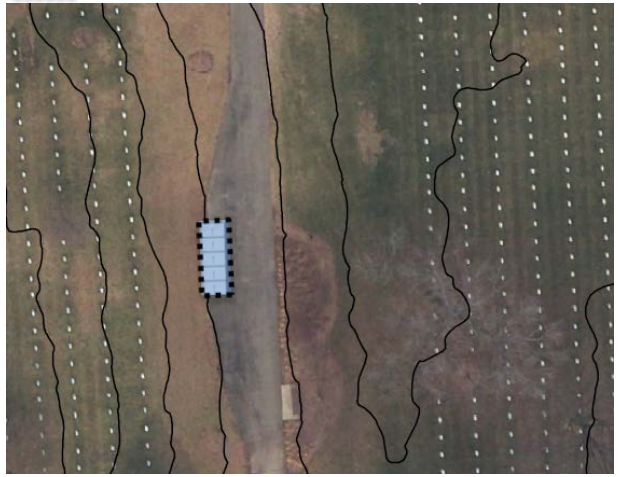
Rebecca L. Stevens
Cultural Resources Manager
Arlington National Cemetery

PROPOSED LOCATION 1 – CUSTIS WALK

Proposed Location 2
Custis Walk



: Proposed Shelter Location



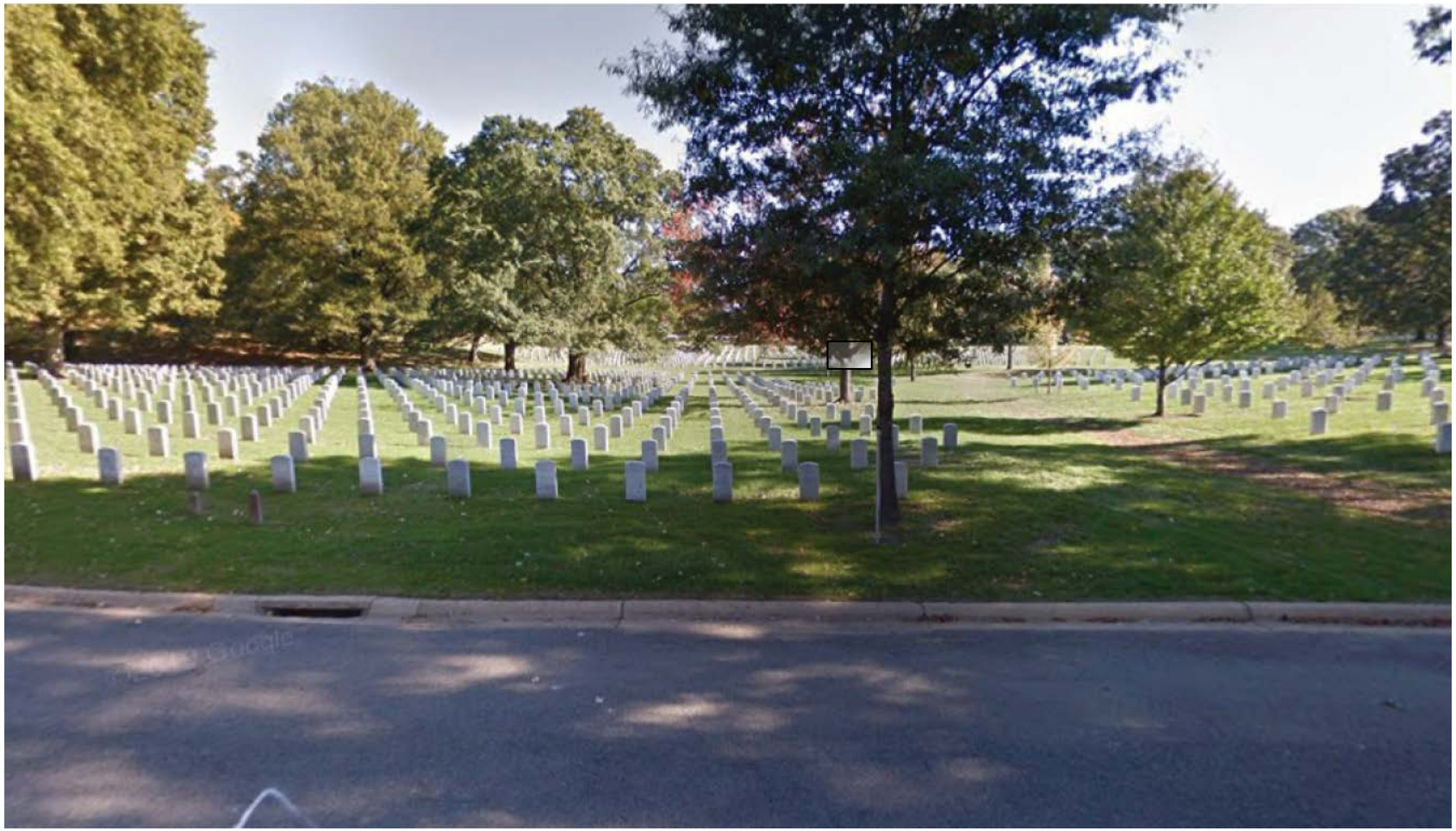
AREA OF POTENTIAL EFFECTS – CUSTIS WALK

AREA OF POTENTIAL EFFECTS
Proposed Location 2
Custis Walk

LEGEND

- Area of Potential Effects
- Proposed Shelter Location
- 1 — Number + Direction of Photograph

GENERAL VIEWS OF CUSTIS WALK LOCATION



1 View from L'Enfant Drive (facing northeast).

Proposed Solar Panel Shelter Location

GENERAL VIEWS OF CUSTIS WALK LOCATION

2 View from Section 49 near Lodge 2 (facing southeast).

Proposed Solar Panel Shelter Location

GENERAL VIEWS OF CUSTIS WALK LOCATION

3 View facing south down Custis Walk.

4 View from Ord and Weitzel Drive (facing west).

Proposed Solar Panel Shelter Location

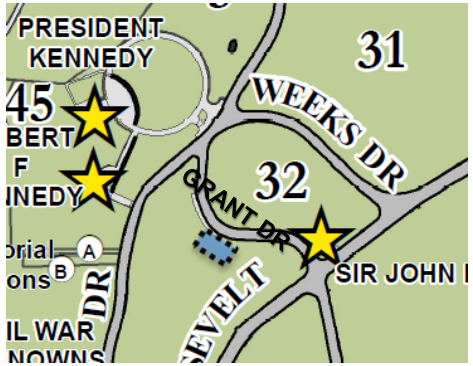
GENERAL VIEWS OF CUSTIS WALK LOCATION

5 View facing north on Custis Walk.

Proposed Solar Panel Shelter Location

PROPOSED LOCATION 2 – Grant Drive

Proposed Location 1
Grant Drive



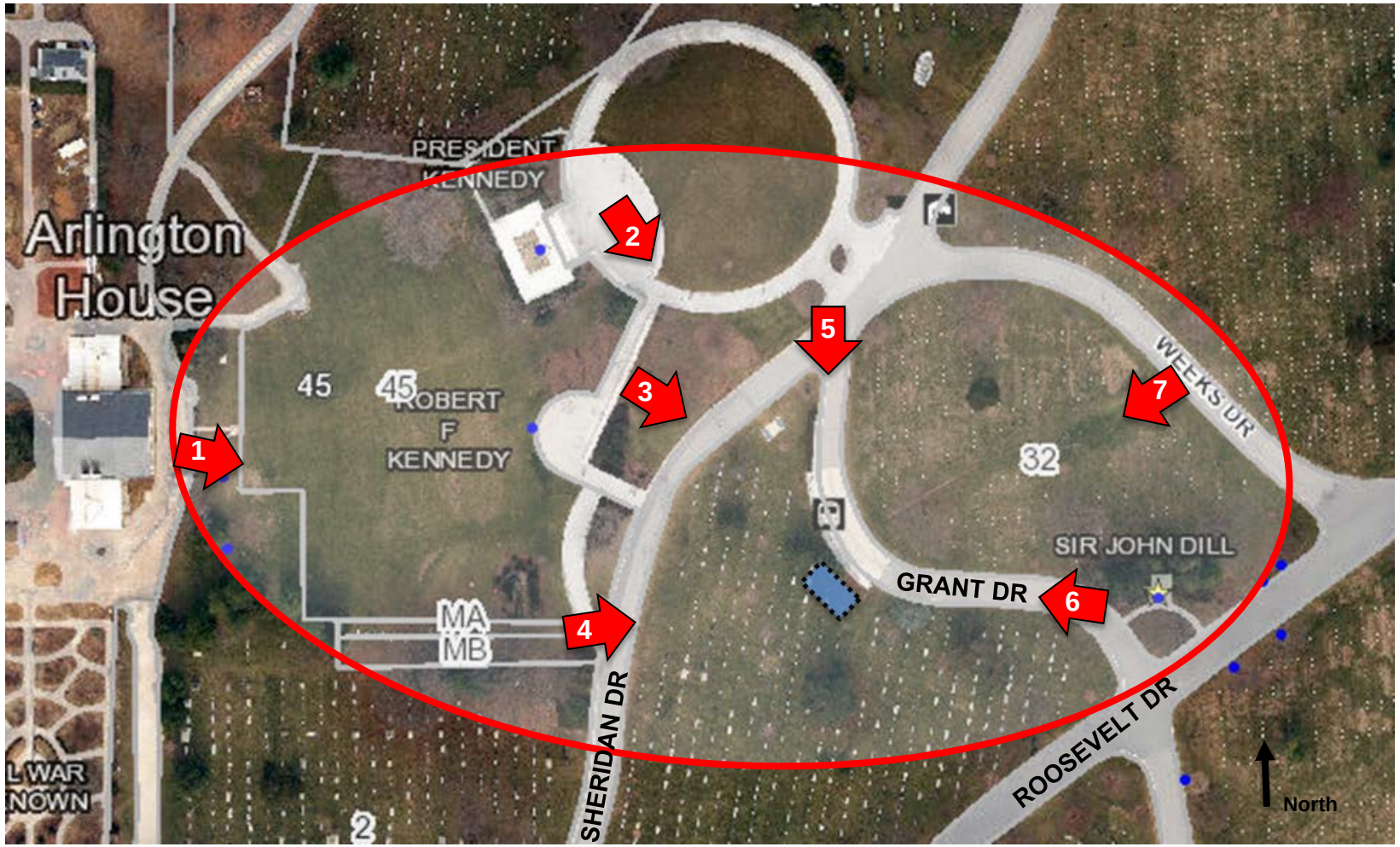
: Proposed Shelter Location

AREA OF POTENTIAL EFFECTS – GRANT DRIVE

AREA OF POTENTIAL EFFECTS
Proposed Location 1
Grant Drive

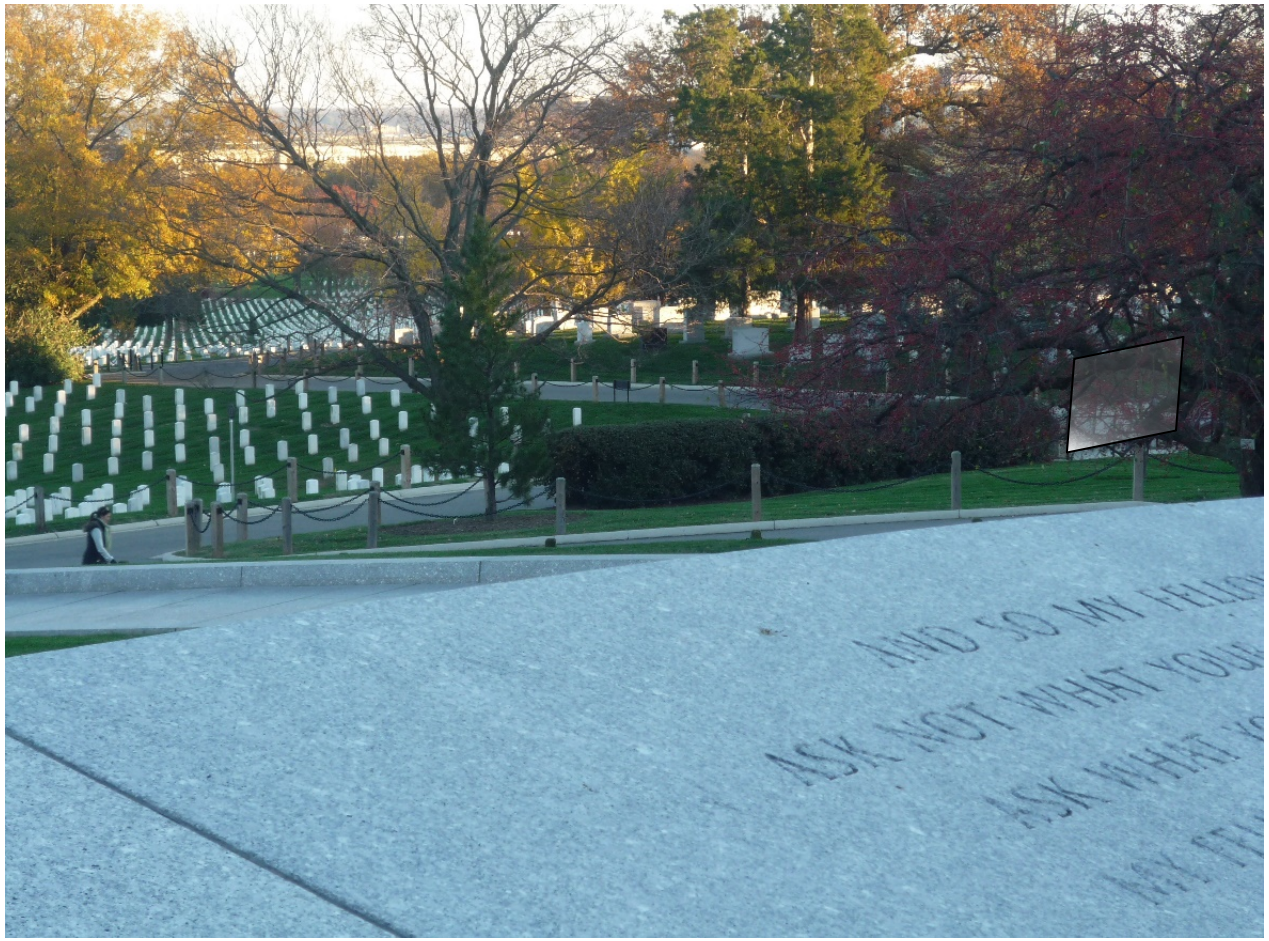
LEGEND

- Area of Potential Effects
- Proposed Shelter Location
- 1 — Number + Direction of Photograph



GENERAL VIEWS OF GRANT DRIVE LOCATION

1 View from Arlington House's east boundary with Arlington National Cemetery (facing southeast). Shelter blocked by vegetation.



2 View from President John F. Kennedy Gravesite plaza (facing southeast).

Proposed Solar Panel Shelter Location

GENERAL VIEWS OF GRANT DRIVE LOCATION

3 View from Robert F. Kennedy Memorial entry (facing southeast).

4 View from ramp entrance to Robert F. Kennedy Gravesite (facing northeast).

Proposed Solar Panel Shelter Location

GENERAL VIEWS OF GRANT DRIVE LOCATION

5 View from intersection of Grant Drive and Sheridan Drive (facing south).

6 View up Grant Drive near Sir John Dill Monument (facing northeast).

Proposed Solar Panel Shelter Location

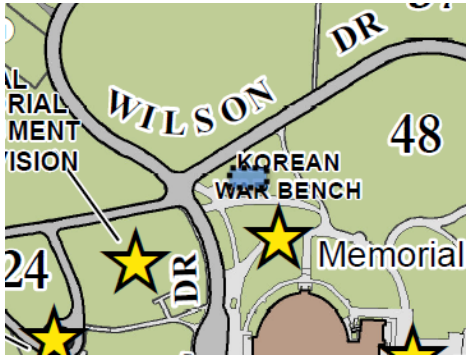
GENERAL VIEWS OF GRANT DRIVE LOCATION

7 View from Weeks Drive (facing southwest).

Proposed Solar Panel Shelter Location

PROPOSED LOCATION 3 – MEMORIAL & WILSON DRIVES

Proposed Location 3
Wilson Drive



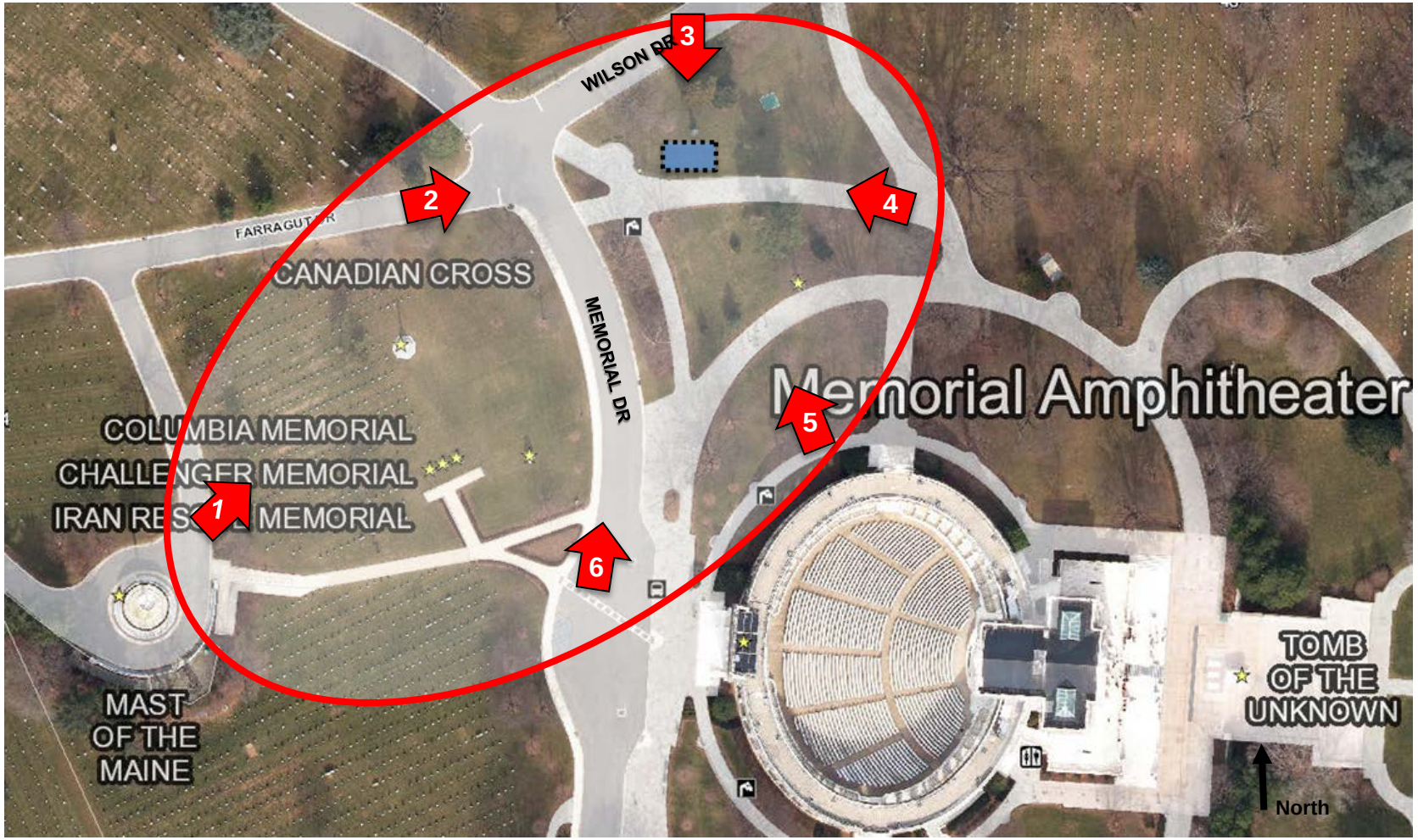
: Proposed Shelter Location

APE – INTERSECTION OF MEMORIAL & WILSON DRIVES

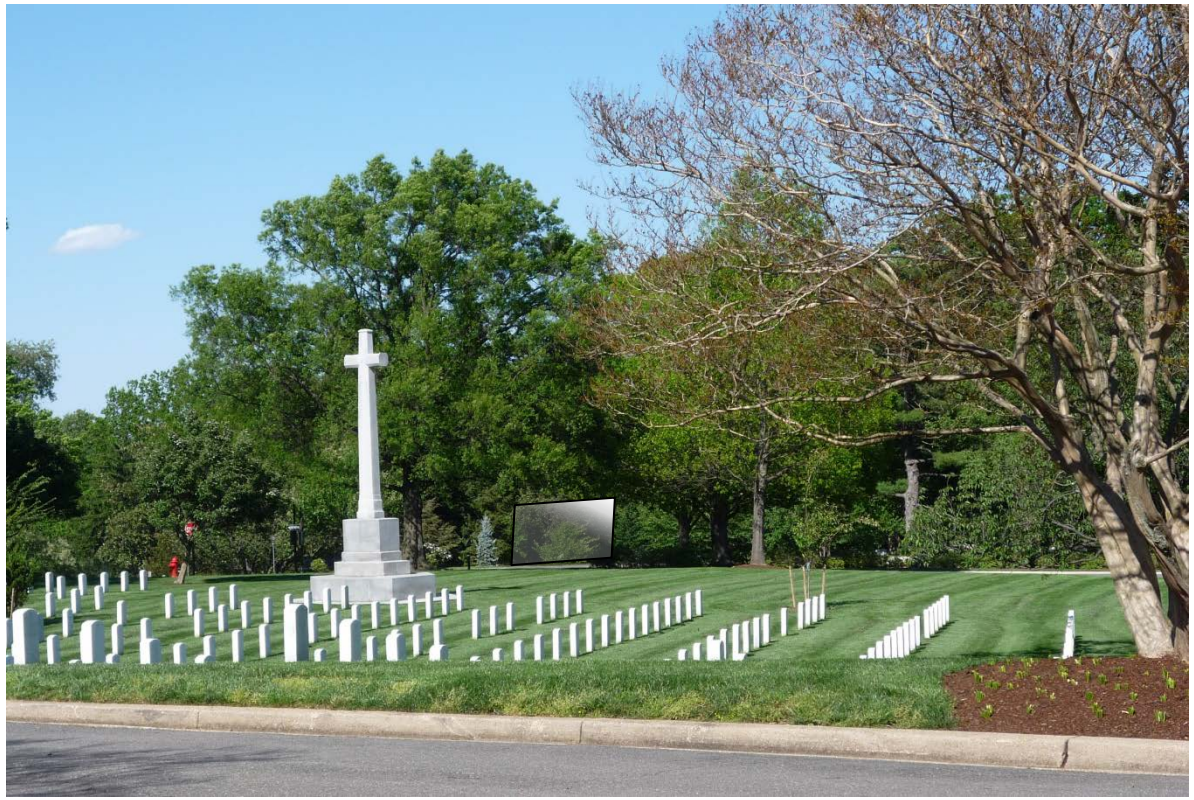
AREA OF POTENTIAL EFFECTS
Proposed Location 3
Wilson Drive

LEGEND

- Area of Potential Effects
- Proposed Shelter Location
- 1 — Number + Direction of Photograph



GENERAL VIEWS – INTERSECTION OF MEMORIAL & WILSON DRIVES LOCATION



1 View from Sigsbee Drive north of USS Maine Memorial (facing northeast).

2 View from Farragut Drive towards Wilson Drive and northwest Memorial Amphitheater grounds. Solar Panel Shelter blocked by vegetation. (facing east).

Proposed Solar Panel Shelter Location

GENERAL VIEWS – INTERSECTION OF MEMORIAL & WILSON DRIVES LOCATION

3 View from Wilson Avenue. Solar Panel Shelter blocked by vegetation (facing south).

4 View from the bluestone walkway east of the proposed shelter location (facing west).

Proposed Solar Panel Shelter Location

GENERAL VIEWS – INTERSECTION OF MEMORIAL & WILSON DRIVES LOCATION

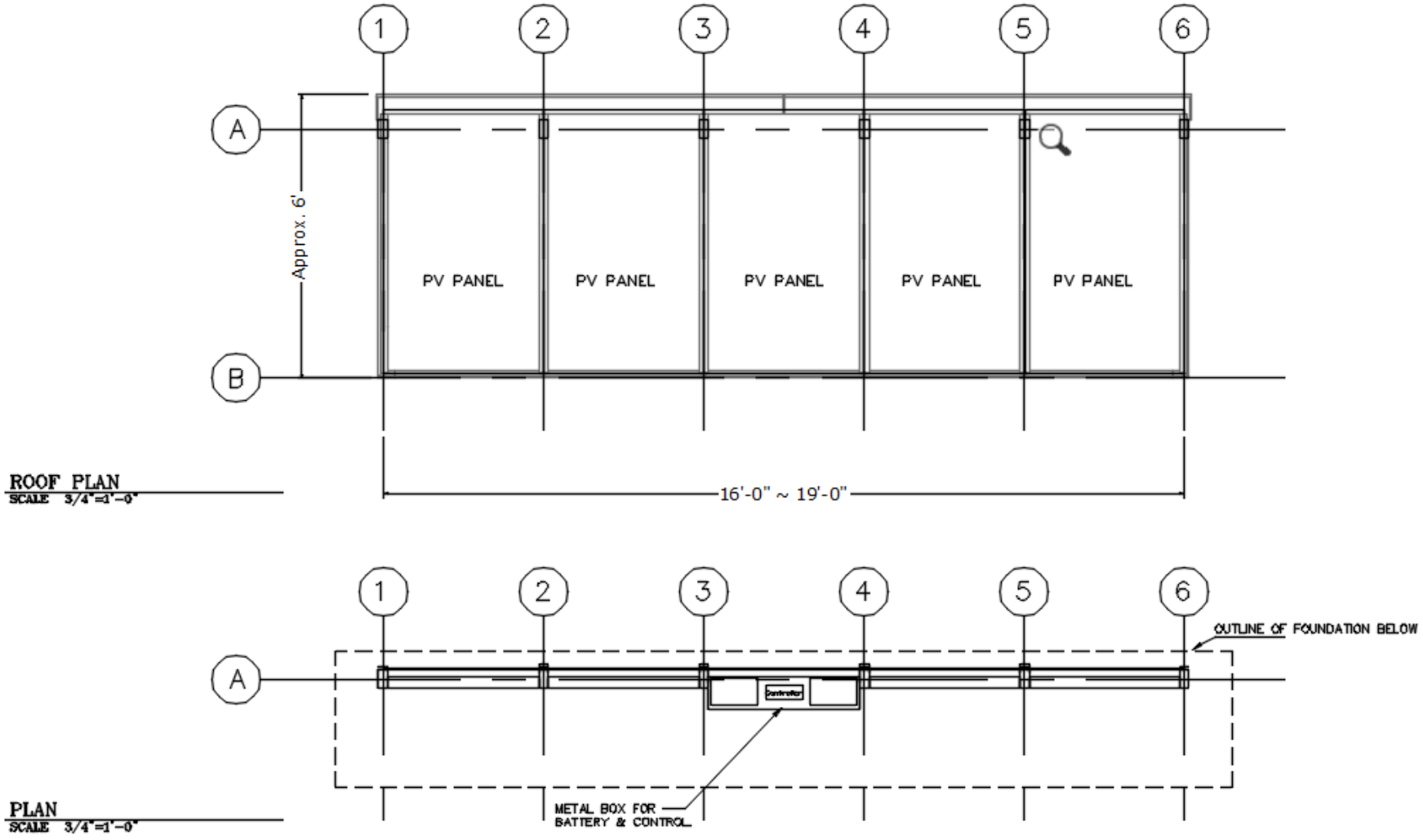
5 View from Memorial Amphitheater north sidewalk. Korean War Veterans Memorial in left center of image. Trees block view of Solar Panel Shelter from Amphitheater. (facing northwest).

6 View from the crosswalk in front of Memorial Amphitheater. Trees and shrubs south of the Solar Panel Shelter block the view of it from center front of Memorial Amphitheater. (facing north).

Proposed Solar Panel Shelter Location

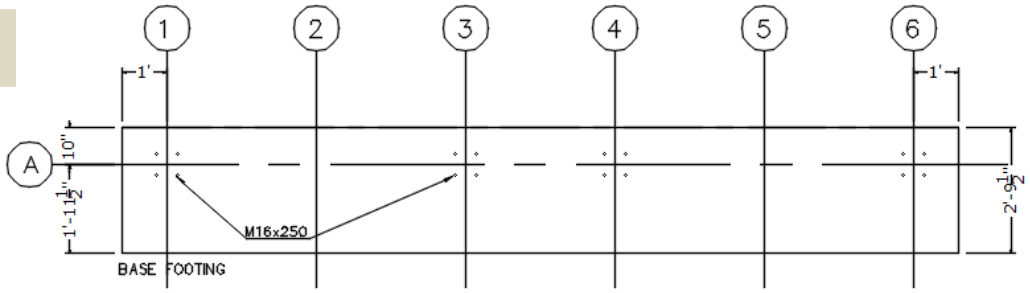
PROPOSED DESIGN

Plans



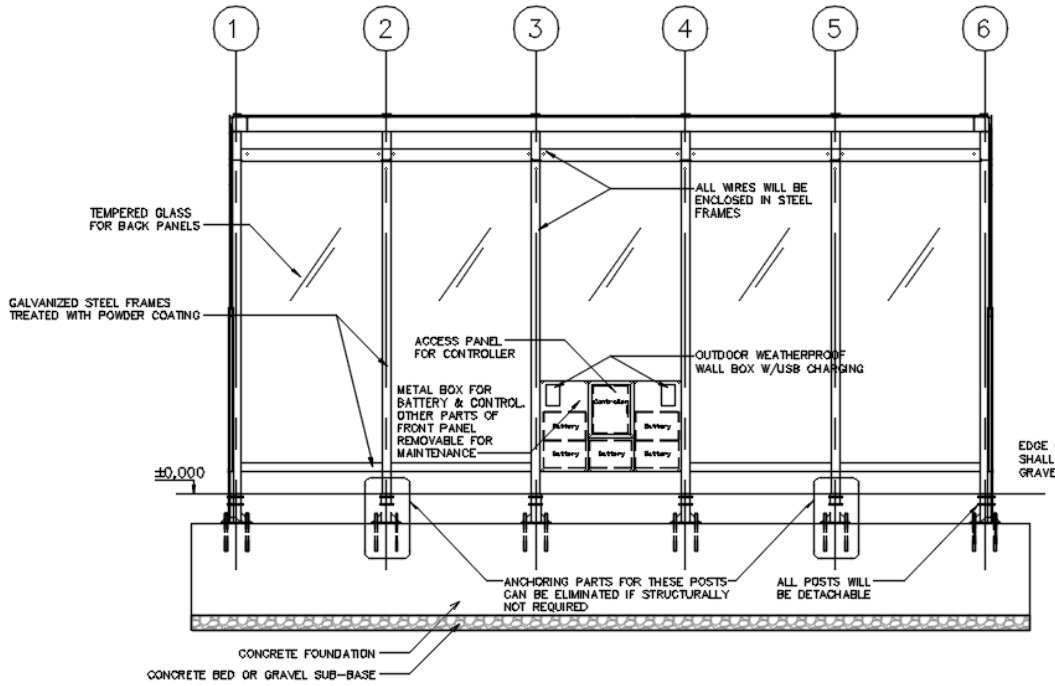
PROPOSED DESIGN

Foundation Plan & Elevations

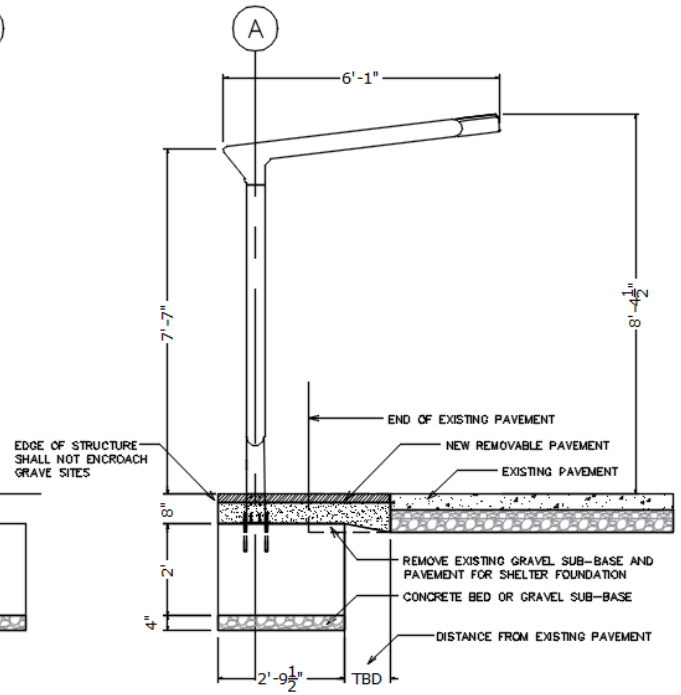


FOUNDATION PLAN
SCALE 3/4"=1'-0"

IT IS TO BE TO KEEP THE SPOT HEIGHT OF THE UPPER EDGE OF CONCRETE BASE 200mm UNDER PAVING LEVEL IN THE MIDDLE OF THE SHELTER II CONCRETE C20/25. ANCHORED BY CHEMICAL ANCHOR TO PRE-DRILLED AND CLEAN HOLES ON THE CHEMICAL MORTAR (HILTI HIT-HY 150 OR COMPARABLE). DIAMETER OF THE DRILLED HOLE IS 2mm BIGGER THAN DIAMETER OF ANCHOR. ANCHORES STAND OUT 70mm ABOVE THE CONCRETE BASE.



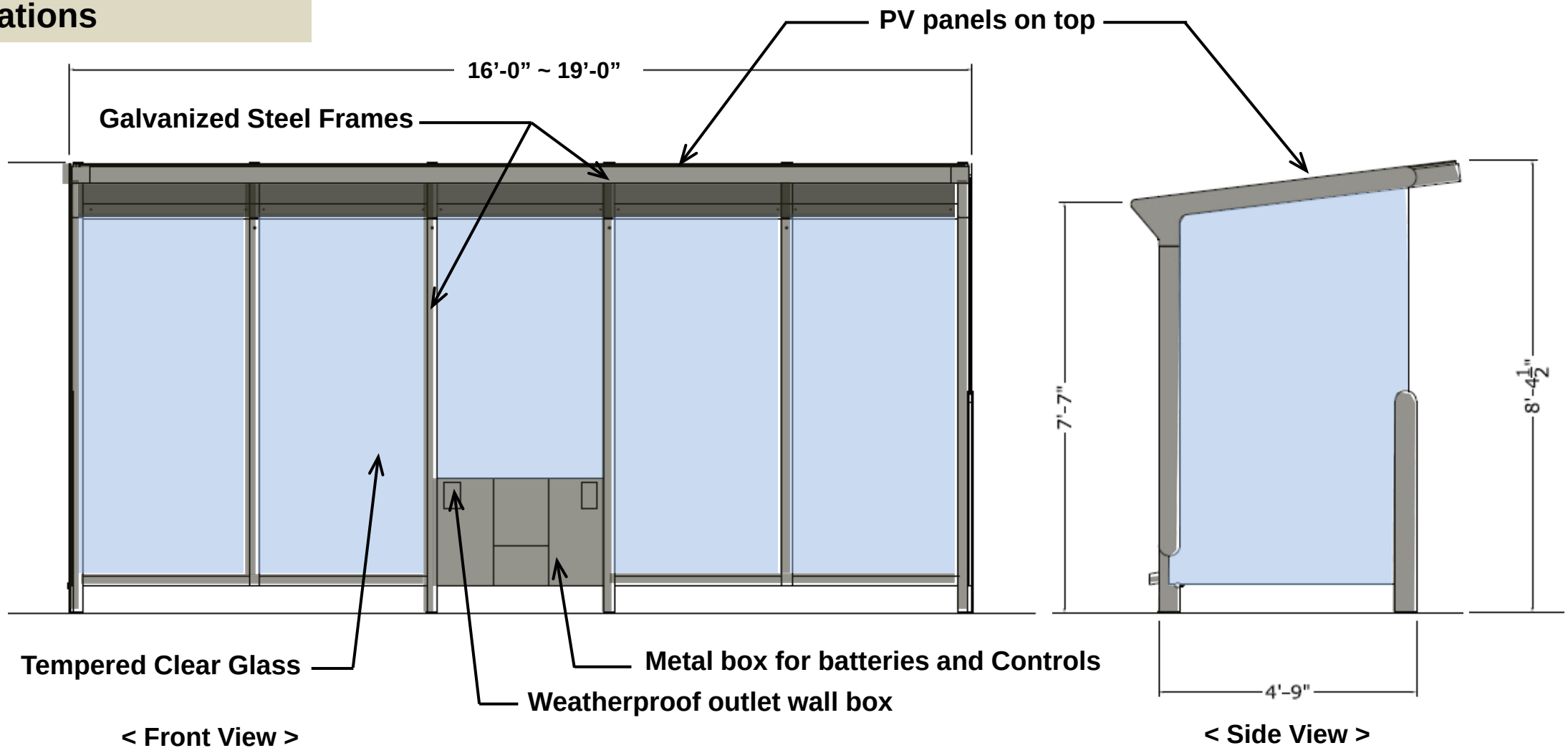
FRONT ELEVATION
SCALE 3/4"=1'-0"



SIDE ELEVATION
SCALE 3/4"=1'-0"

PROPOSED DESIGN

Elevations



< Front View >

< Side View >

PROPOSED DESIGN

Material & Detail Example

Glass PV panels

Existing Benches on site will be used.

Detachable Posts