U.S. COMMISSION OF FINE ARTS PRESENTATION | APRIL 18, 2019

# World War One Memorial

# Response to Walkway, Lighting, & Sculpture Fountain Comments





#### WHERE WE ARE IN THE PROCESS & WHAT WE HAVE HEARD

#### **JULY 2018**

**REVISED CONCEPT** 

#### APPROVAL OF FREESTANDING SCULPTURE FOUNTAIN AND U-SHAPED WALKWAY CONCEPT

#### CLUSTER TOPICS REQUESTED TO SIMPLIFY REVIEW PROCESS

- Refinement of Detailing of the pool and sculpture
- Inscriptions and interpretive elements
- Selection of stone and other materials
- Landscape plans and specifications
- Systems of signage and lighting

#### **OCTOBER 2018**

#### SCULPTURE DETAILING, INTERPRETIVE STRATEGY, PLANTING

#### GUIDANCE AND DIRECTIVES

- Preference for the cantilevered sculpture fountain paired with the monolithic stone for the west cascade
- Supported the general interpretive strategy but requested simplification
- Supported the planting strategy

#### **NOVEMBER 2018**

#### POOL/WALKWAY, SITE ACCESSIBILITY, SCULPTURE REFINEMENTS

#### APPROVAL WITH DIRECTIVES

- Endorsement of Island Walkway configuration with further study of the materials and scale of the scrim
- Praised refinements to reduce the length and enhance the historical accuracy, requested that the proposed revised maquette (anticipated April 2019) include the surrounding stone wall and adjacent water elements
- Endorsement of the proposed accessibility improvements

#### **FEBRUARY 2019**

#### LIGHTING, FURNISHINGS AND MATERIALITY

#### **GUIDANCE AND DIRECTIVES**

- Requested clarity in the proposed lighting strategy to define features & frame spaces while also balancing technical requirements for safety and access
- Requested technical information for illumination levels, color temperature and effect on surrounding buildings
- Support for the low entry signage integral to the existing curbs
- Suggested a single finish for the support of the sculpture rather than multiple to further impart the sense of the sculpture being firmly seated within the monolithic stone wall
- Supported the use of the dark stone for the walkway and bridge
- Advised that shifting the bridge southward would reinforce the aesthetic of the existing landscape, improve circulation, and strengthen the visual connection to the sculpture wall from the Pershing Memorial

# **PRESENTATION CONTENT**

#### SUMMARY OF PREVIOUS / UPCOMING PRESENTATIONS

- Memorial Vision: Primary and Supporting Commemorative Elements (October 2018)
- Pool & Walkway + Access Improvements + Sculpture Refinements (November 2018)
- Concept Lighting, Furnishing and Finishes (February 2019)
- Response to Walkway, Lighting, & Sculpture Fountain Comments (April 2019)
- Interpretation & Detailing (May 2019 tentative)

#### CFA MEETING OBJECTIVES (4/18/2019)

Approval of adjusted walkway configuration Approval of proposed lighting strategy Approval of sculpture fountain detailing refinements and composition Direction and approval of Sculpture Fountain figure heights

#### PRESENTATION OUTLINE

- Walkway
  - Proposed Bridge Strategy
  - Circulation Sequence
- Lighting
  - Existing Conditions
  - Overall Concept (lighting for framing, features, and safety / access)
  - Scale and integration (site sections)
  - Results of Mock Up
  - Feasibility of multi-globe fixture re-use
  - Technical Information (heat maps & color temperature)
  - Visualization (VIDEO)
- Sculpture Fountain
  - October 2018 CFA
  - Detailing
  - Revised Maquette (3D Print with Base and Context)
  - Figure Height

3

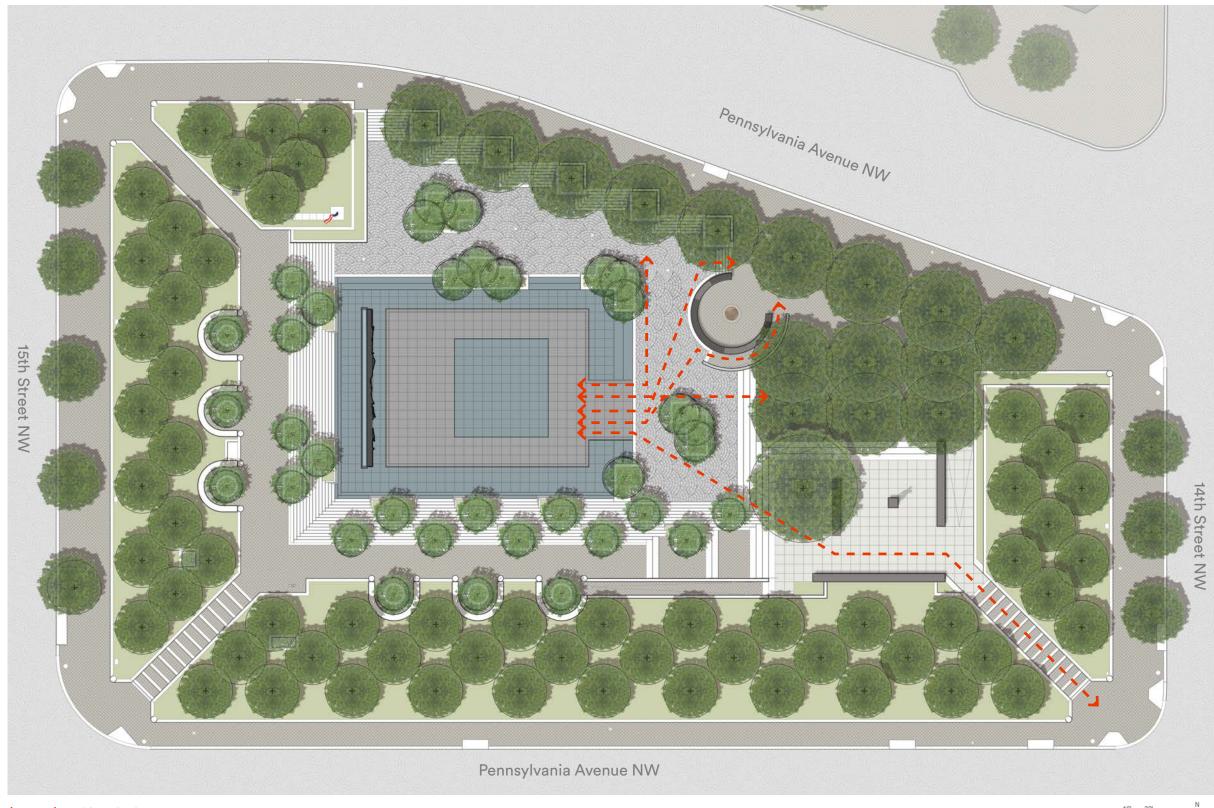
# WALKWAY

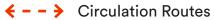
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# WALKWAY: PROPOSED STRATEGY

#### **BRIDGE SHIFTED SOUTH**

- The visitor will be directed more readily to the left of the sculpture; the beginning of the story
- The shift improves the connection between the Pershing Statue and the Memorial Sculpture both visually and physically
- The shift improves circulation from the belvedere by providing more space between the ramp and the walkway
- Asymmetrical bridge fits within the asymmetry of the existing park







# WALKWAY: CIRCULATION SEQUENCE

#### **BRIDGE SHIFTED SOUTH - PERSHING**



### WALKWAY: CIRCULATION SEQUENCE BRIDGE SHIFTED SOUTH - SOUTH BELVEDERE



#### WALKWAY: CIRCULATION SEQUENCE BRIDGE SHIFTED SOUTH - NORTH BELVEDERE

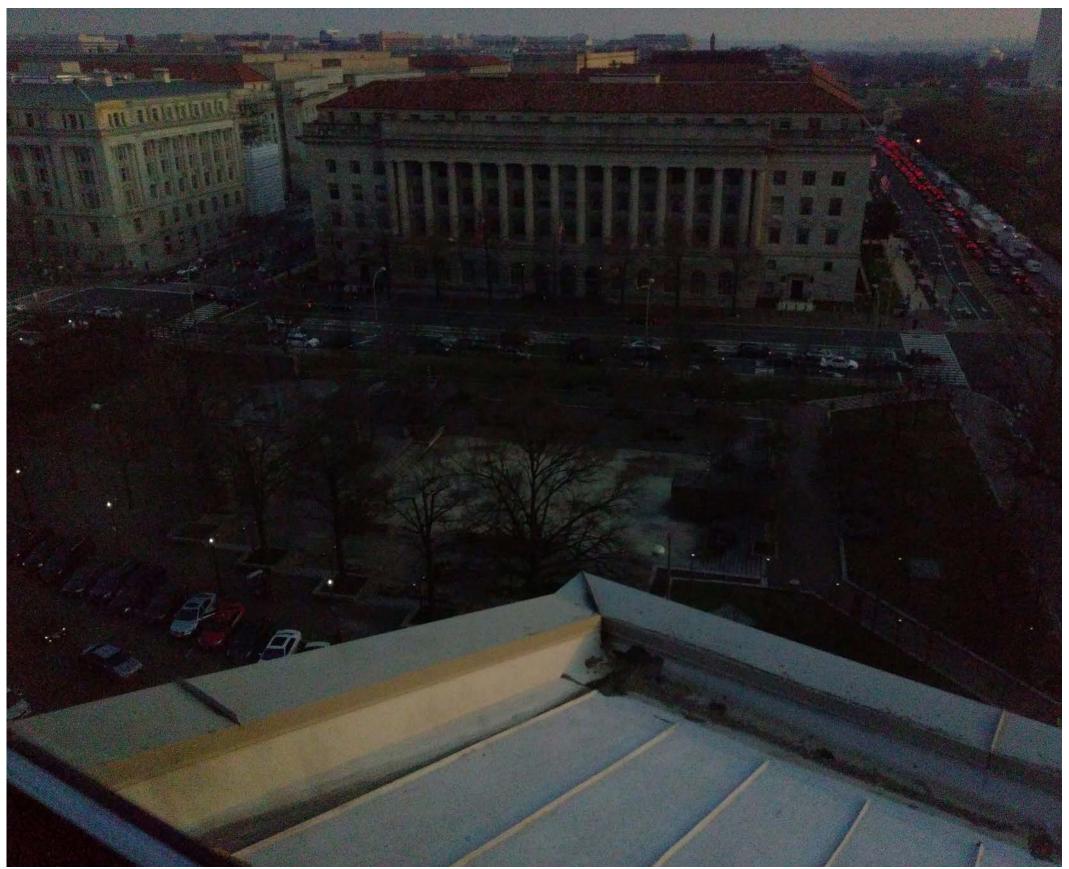


# LIGHTING

9

# LIGHTING: EXISTING CONDITIONS PARK LIGHTING FROM WILLARD

Though much in disrepair, the original lighting strategy focused perimeter lighting on the north and east sidewalks consistent with the PA Avenue and D.C. standards. Moving into the park, each of the 4 main entryways was accented with circulation lighting to pull the visitor into the space. Once at the interior, bright and joyful decorative fixtures framed the south and west terraces, creating a vibrant backdrop for the pool / ice rink. At the lower levels, tall pole mounted flood lights provided light onto the pool / ice rink for adequate light levels when filled with active skaters during the dark winter months. General Pershing was highlighted with a pole mounted accent light which presumably provided lighting for the adjacent walls as well when functioning. The lack of lighting within the grove itself may be a result of the anticipated glow cast by the existing kiosk / concessions structure. The lower terrace to the north and east of the pool are illuminated via the circulation lighting poles used at the site entryways.



#### CENTRAL POOL BASIN

- Ice rink pole mounted floodlights illuminate the central pool with light to support the original park (winter) use

- Lower south terrace lit via overflow from the ice rink poles

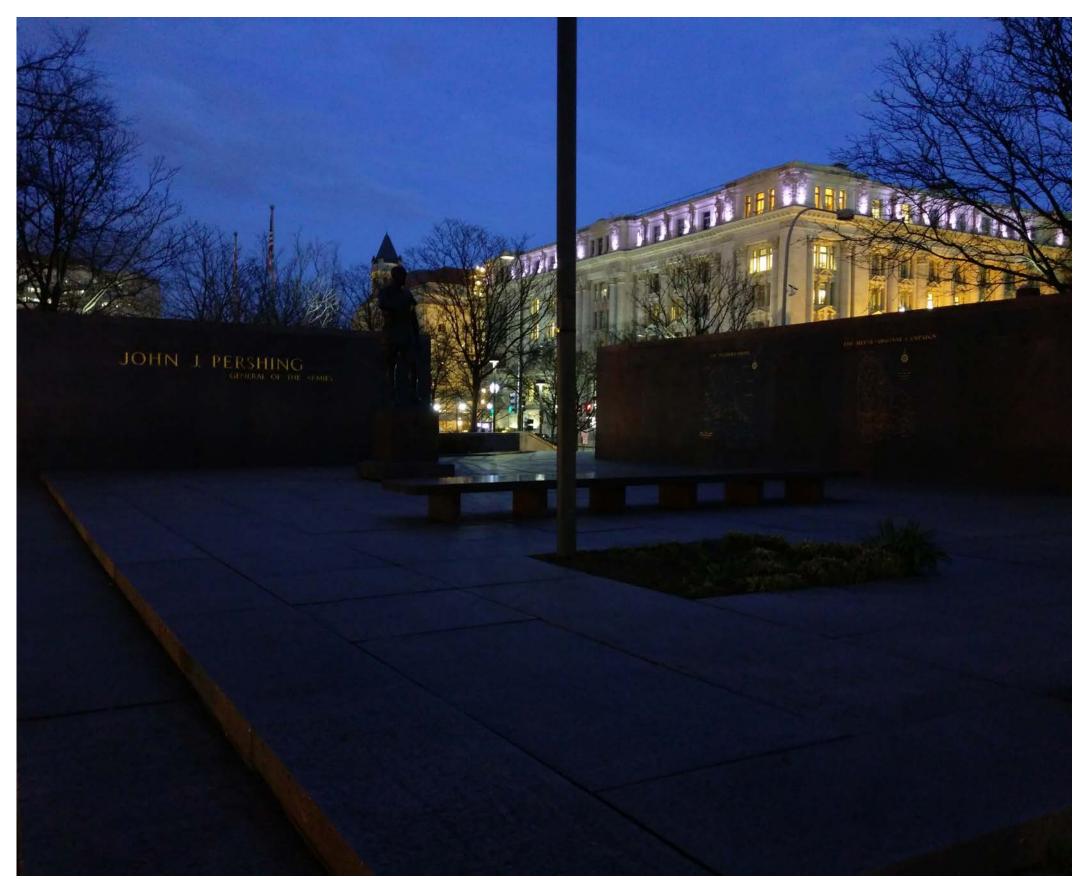
- West terrace and fountain remain in darkness



#### PERSHING AREA

- Pole mounted spotlight focuses on General Pershing (no longer functioning)

- Pershing walls are unlit, daytime viewing only
- Area is lit via ambient lighting only



#### GROVE

- PA Ave lighting standards are continued around the north and east park edges

- PA Avenue fixtures illuminate the periphery of the grove

- Lack of central fixtures leaves the majority of the grove illuminated via ambient light only



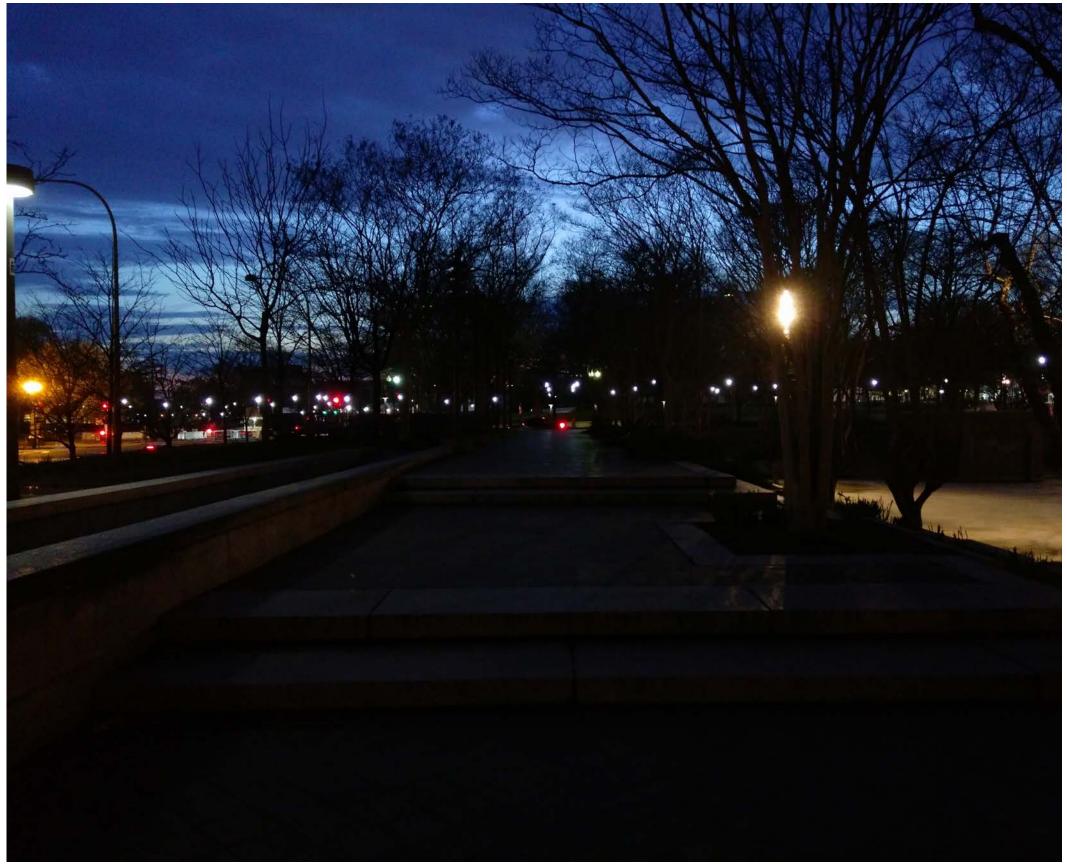
#### UPPER SOUTH TERRACE

- Decorative fixtures frame the central pool and ice rink (multi-globe fixtures) but no longer function leaving much of the upper terrace and seating areas in darkness

- When operational, the existing multi-globe fixtures flood the upper walkways with light. Their lack of shielding creates glare along the walkway

- Adjacent ice rink fixtures are visible through the trees, a lack of shielding creates periphery glare

- Existing ADA ramp subtly illuminated via adjacent poles



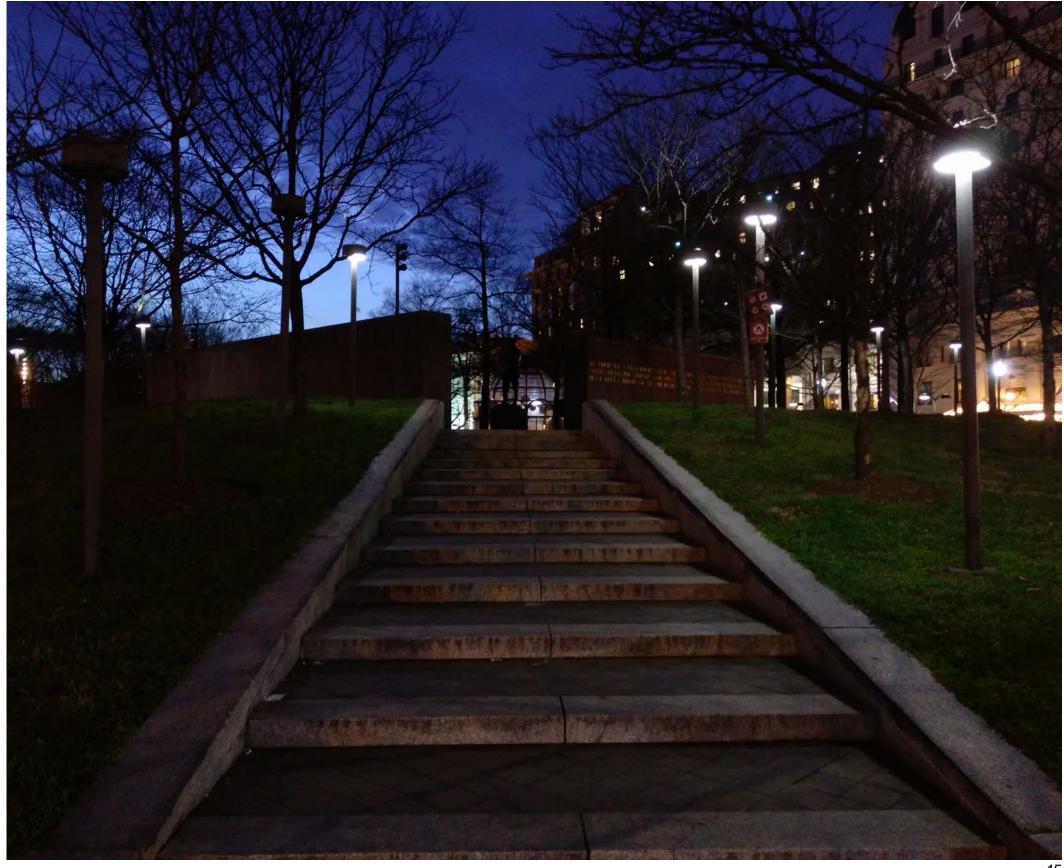
#### SE ENTRY

- Circulation lighting frames the entry stairs leading to the Pershing Memorial

- Nonoperational fixtures to be repaired and reused within the proposed strategy to match the existing design

- The Pershing statue at the top of the stair, currently in darkness

- East Pershing Wall Quote illuminated by adjacent fixtures



#### SOUTH BERM

- South berm is excluded from the park lighting, with only cobra lights for the roadway lighting



# LIGHTING: CONCEPT LAYERS / ZONES

Visitors filter into the park through layers and zones of light which adapt the visitor from the surrounding brightly lit urban context to the more quietly lit landscape. Within this soft landscape lighting are the commemorative elements (both existing and proposed) which emerge from the quiet park lighting with feature illumination, bringing the focus of the nighttime visitor onto the commemorative works.

**1 PERIMETER ADAPTATION supports** sidewalk and street lighting, tying the site into the urban street grid and allowing for a transition from the high brightness light levels of the city to the softer glow of the memorial park

2 CONTEMPLATION TERRACE is a zone of lower brightness that carries visitors into the site while shielding the commemorative works from the adjacent urban glare

**3 INFORMATIVE ARRIVAL functions** similarly to the contemplation terrace as a step down in brightness from the perimeter to pull visitors into the Grove, Belvedere, and Lower Plaza

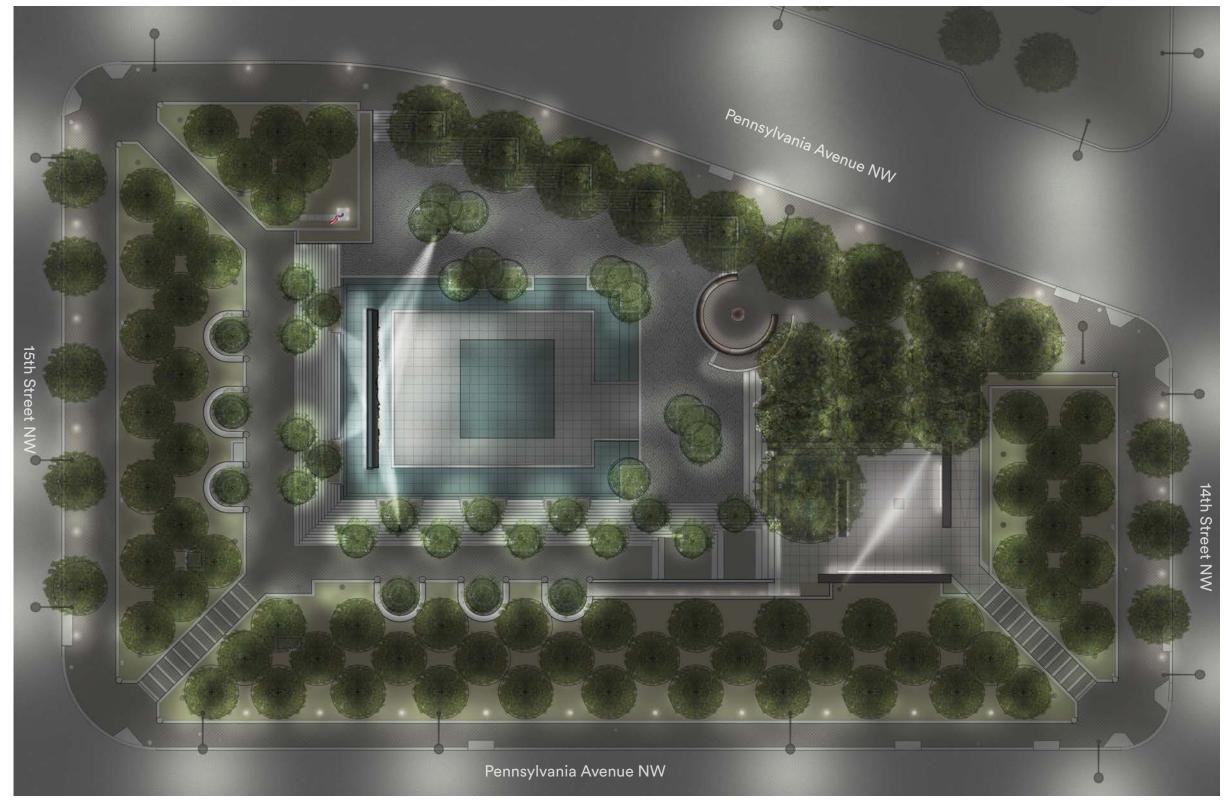
4 COMMEMORATIVE FOCUS the zone in which the commemorative works emerge from the subtle park lighting to pull the focus of the visitor to the memorial elements while providing a contemplative atmosphere, fully sheltered from the surrounding city lights





# LIGHTING: CONCEPT MEMORIAL EXPERIENCE

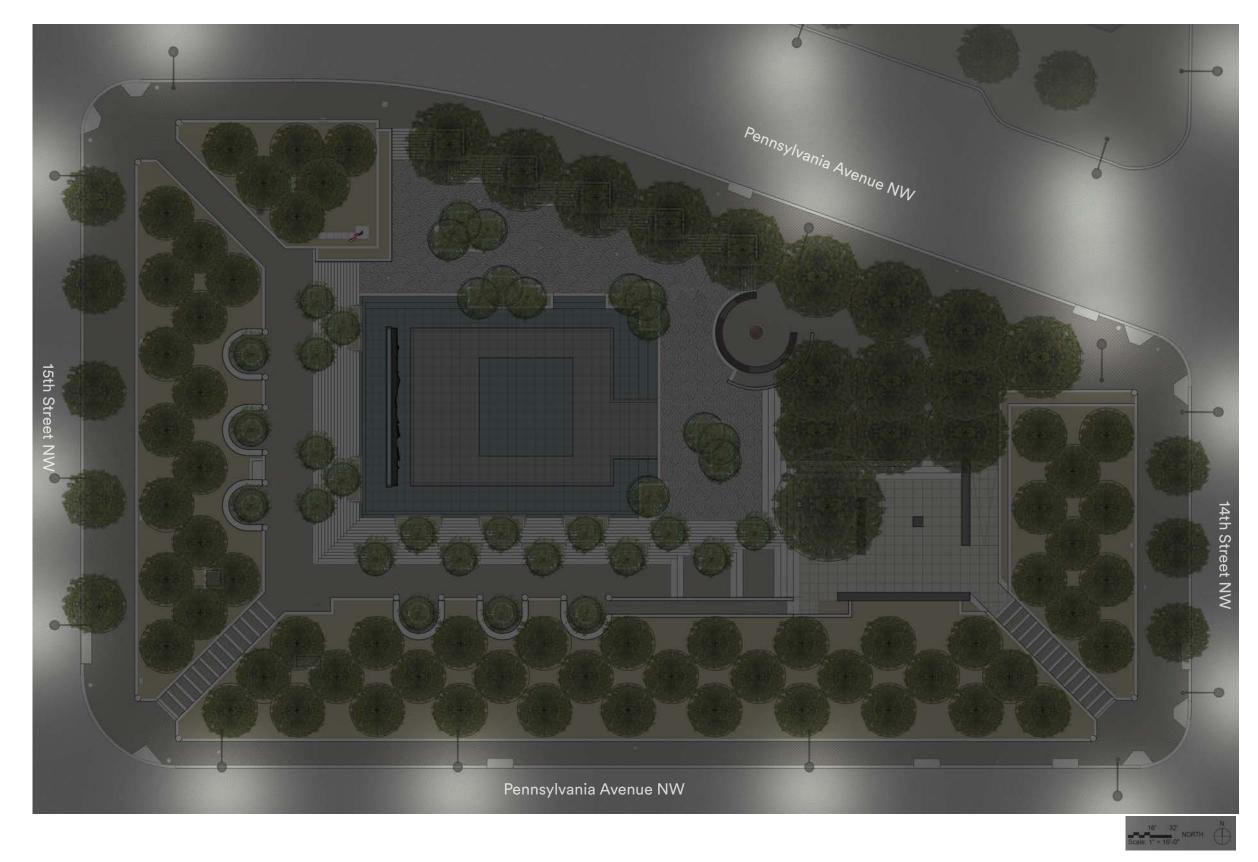
- Lighting Temperature ~3000K for all proposed fixtures provides a consistent white light that complements both the bronze and green landscape of the site (see sample fixtures)
- All park fixtures use the same tone to ensure a cohesive effect across the site





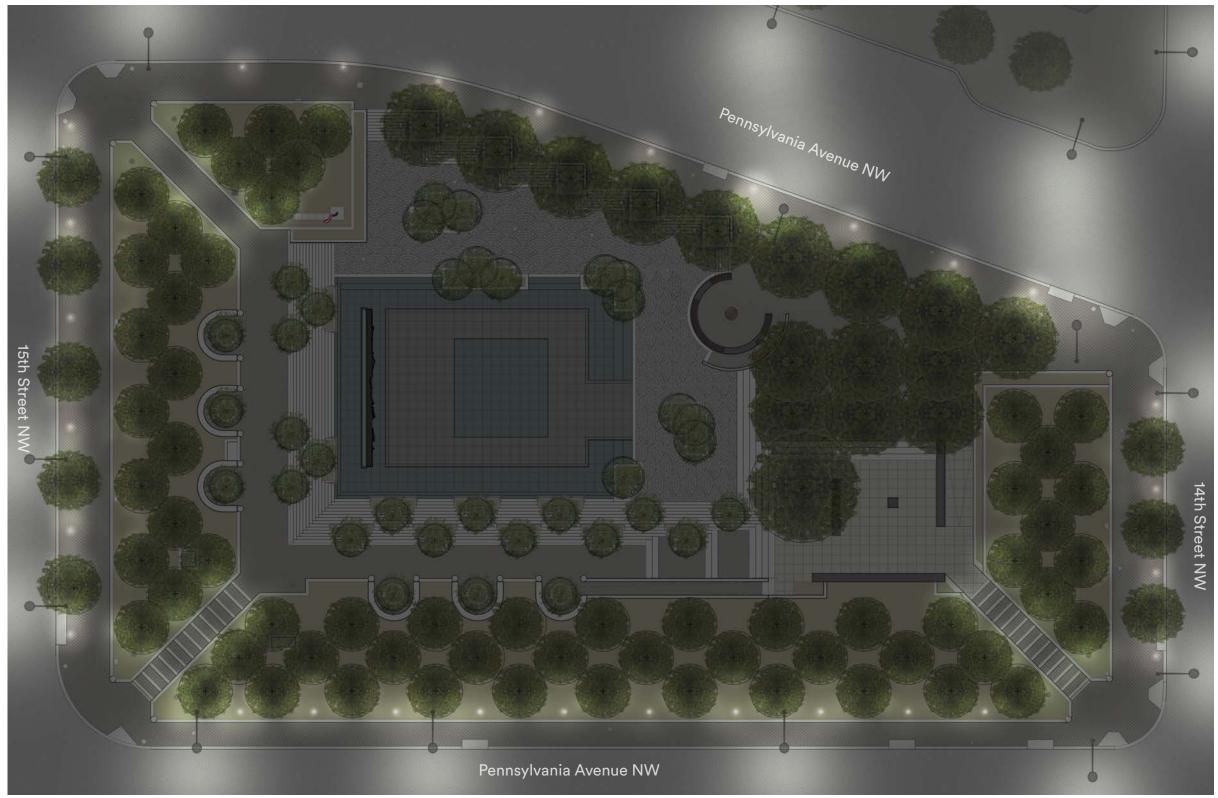
# LIGHTING: CONCEPT CONTEXT

 Existing street lighting illuminates the park context



# LIGHTING: CONCEPT PERIMETER ADAPTATION

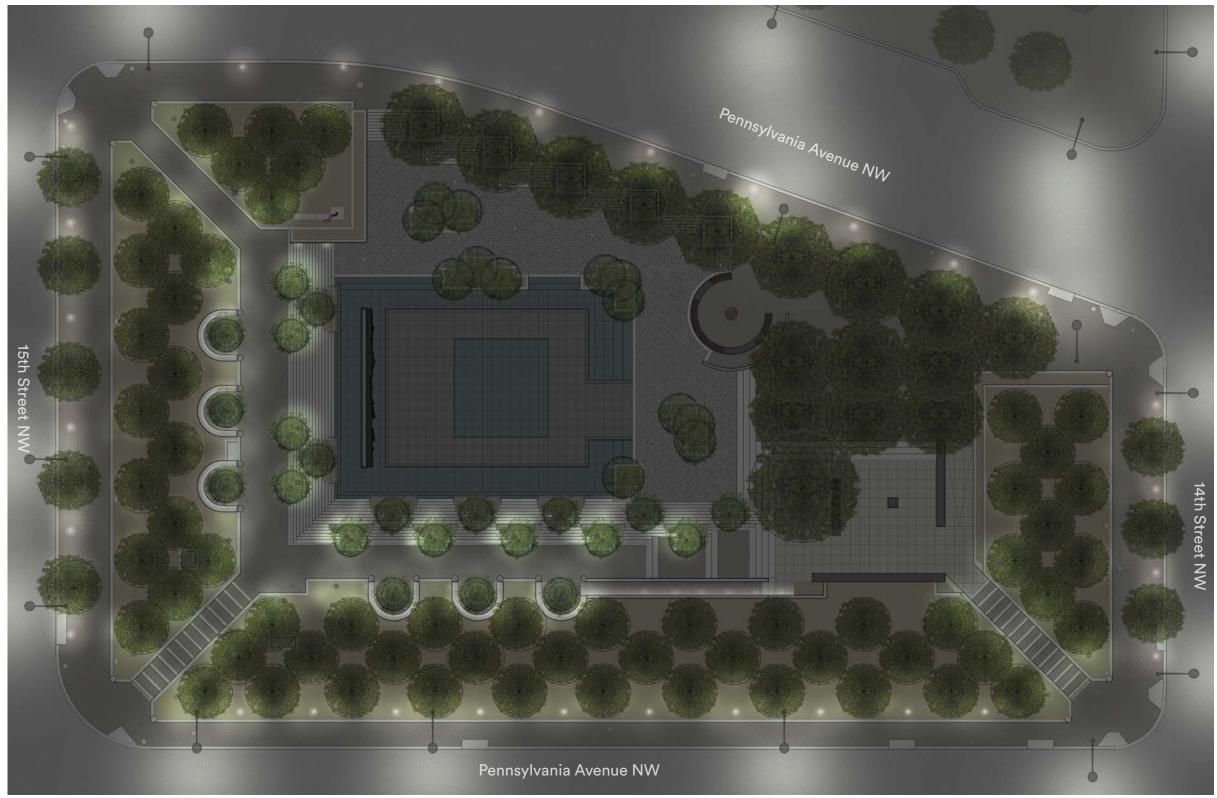
- Existing roadway cobra lights remain to illuminate the adjacent driving lanes
- Existing Washington Globe fixtures remain along the northern stretch of PA Avenue NW and 14th Street NW
- Washington Globe fixtures are added to the southern stretch of PA Avenue NW and 15th Street NW to illuminate the sidewalks and put soft lighting in the trees, continuing the park to the curb rather than stopping at the top of the berm
- Circulation lighting remains at each of the entryways, illuminating the stairs and walks that lead into the site





# LIGHTING: CONCEPT CONTEMPLATION TERRACE

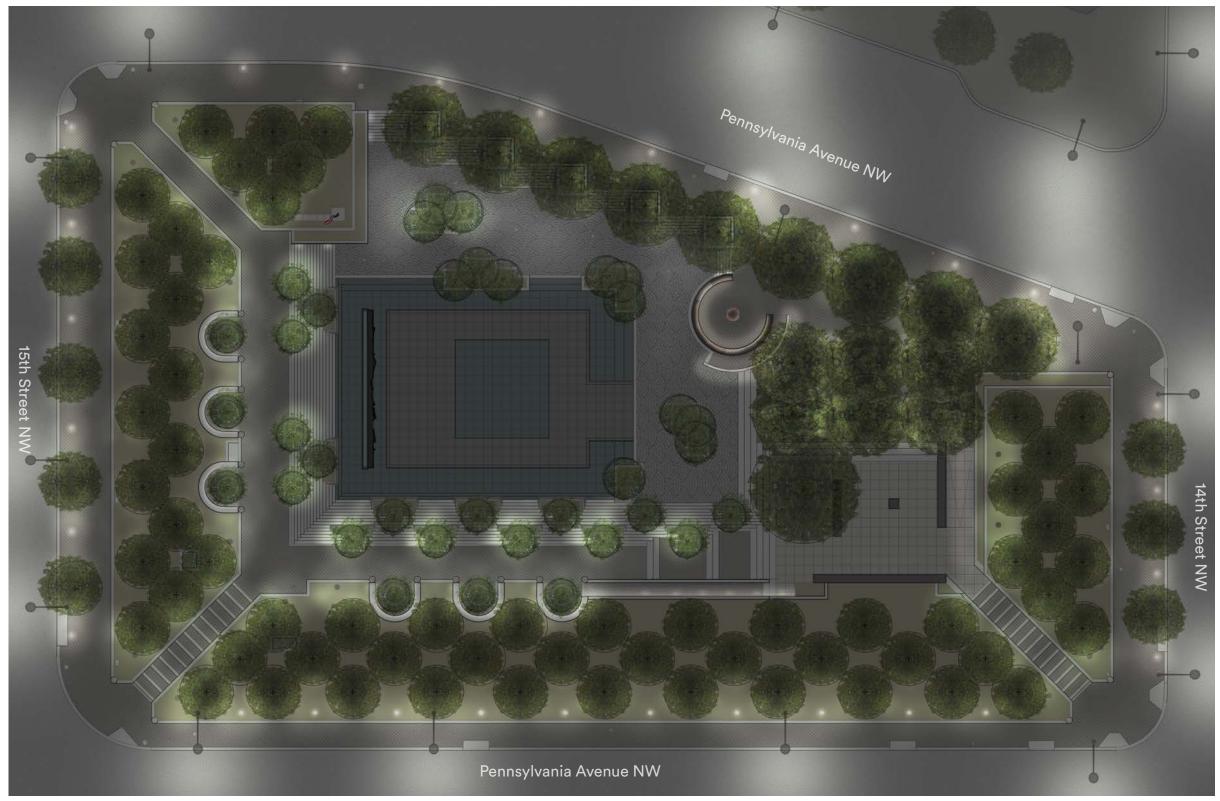
- Subtle circulation lighting replaces the bright and playful multi-globe fixtures of the previous ice rink to softly illuminate the upper terrace and create a gentle glow within the trees for a contemplative memorial backdrop
- Existing seating alcoves receive soft ground illumination from under the benches to create a comfortable place to sit during the evening hours
- Wall mounted step lights illuminate the accessible ramp to direct visitors through the site





# LIGHTING: CONCEPT INFORMATIVE ARRIVAL

- PADC light fixtures are continued along the edge of the site consistent with the existing park character
- PADC fixtures are carried into the grove as an extension of PA Avenue to draw visitors into the space
- Soft illumination of the belvedere from wall mounted step lights and a handrail light at the ramp draws visitors into the interpretive hinge where the memorial unfolds before them
- Linear lighting recessed into the framing device of the interpretive panels provides legibility for the interpretive content





# LIGHTING: CONCEPT COMMEMORATIVE FOCUS

#### A SOLDIER'S JOURNEY

- 2 accent lighting poles provide focused lighting at strategic angles to illuminate the sculpture and provide depth with highlight and shadow (see lighting mock up slides)
- Northern pole is tucked within the lower plaza planter to minimize its impact upon the site
- Southern pole is aligned and set just above the terrace planter to hide the pole into the tree canopy

#### PEACE FOUNTAIN

- A linear light is set below the water level to illuminate the entire cascade
- 2 accent lights in the adjacent terrace planters provide focused light upon the quote for legibility

#### PERSHING MEMORIAL

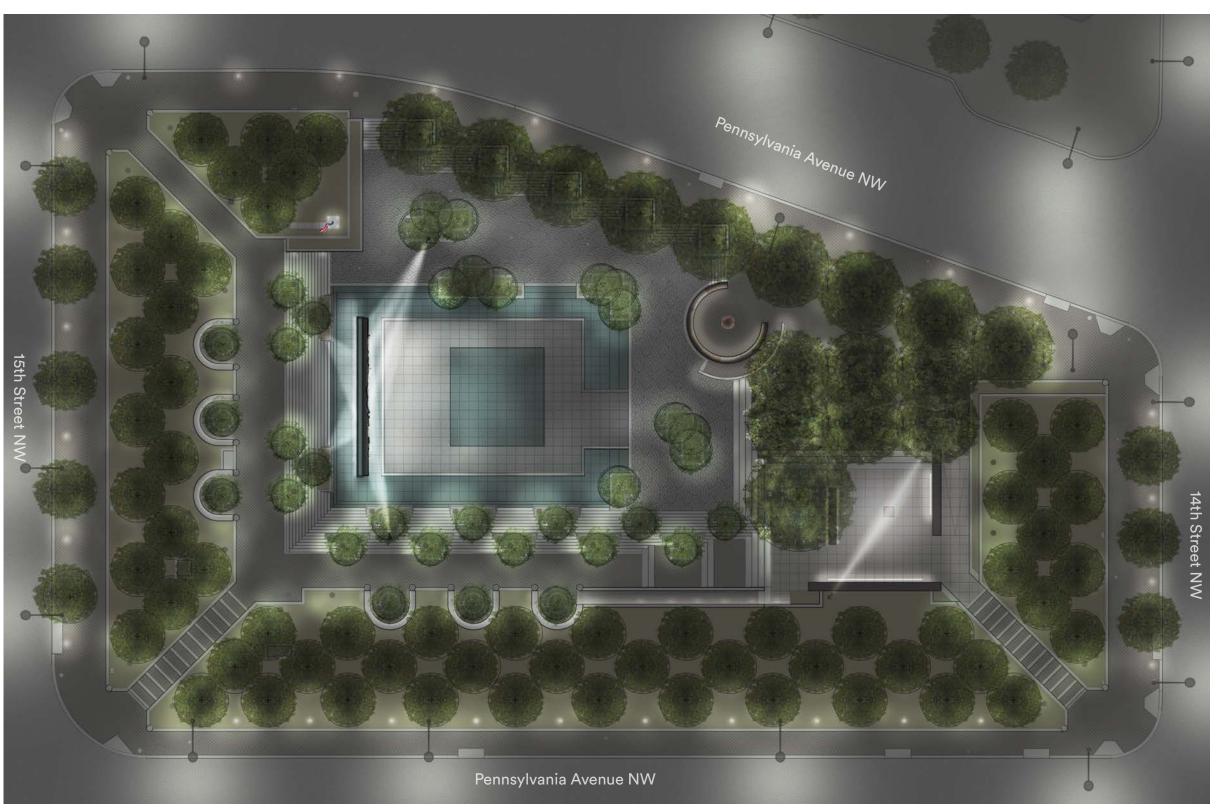
- 2 accent light poles provide directional lighting to illuminate the statue of General Pershing from opposite directions to inform his shape
- Linear uplights illuminate the inscriptions on the Pershing walls for nighttime legibility
- Underbench lighting of the Pershing bench provides a soft comforting glow within the Pershing plaza

#### WALKWAY

• Circulation lighting in the surrounding planters create a shadow which defines the curb and illuminates the walking surface

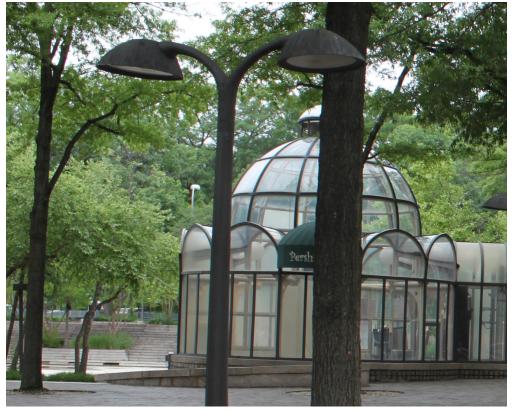
#### FLAGSTAFF

• Uplights gently illuminate the flag





## **LIGHTING: PALETTE CIRCULATION LIGHTING**



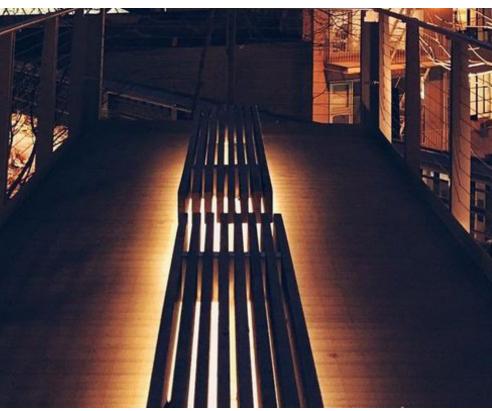
PADC PEDESTRIAN LIGHTING



EXISTING PARK CIRCULATION LIGHTING



INTEGRAL HANDRAIL LIGHTING



UNDERBENCH LIGHTING

#### WALL MOUNTED STEP LIGHTS

# **LIGHTING: PALETTE ROADWAY / SIDEWALK LIGHTING**



WASHINGTON GLOBE

WASHINGTON GLOBE WITH FINIAL



EXISTING ROADWAY COBRA POLES

# **LIGHTING: PALETTE COMMEMORATIVE ELEMENT LIGHTING**



POLE ACCENT LIGHTS



CASCADE UPLIGHTING



CASCADE QUOTE ACCENT LIGHTS (DOT / SPOT, TBD)



PERSHING WALL IN GRADE UPLIGHTS



FLAGSTAFF UPLIGHTING

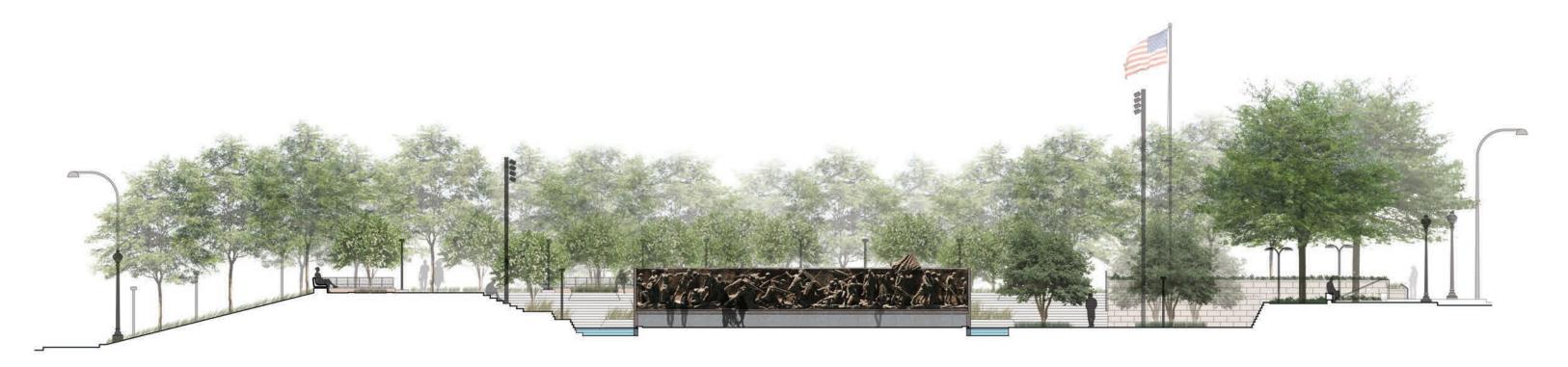
# LIGHTING: PALETTE INTERPRETIVE ELEMENT LIGHTING



INTERPRETIVE PANEL LIGHTING

# LIGHTING: SCALE AND INTEGRATION SITE SECTION

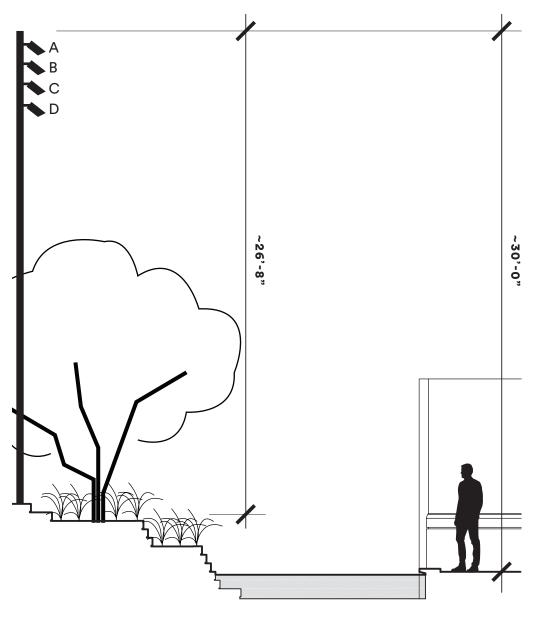




# LIGHTING: RESULTS OF MOCK UP

#### SOUTHERN POLE

- Softer light from the southern pole provides balance and fill to the figures from the secondary facing direction of the sculpture (backs of figures) to inform their shape and provide depth
- Each fixture focuses on a specific portion of the sculpture and can be dimmed / filtered as needed to compose the complete lighting effect
- All fixtures have snoots / glare control louvers for fully focused lighting that does not extend beyond the sculpture or produce glare elsewhere in the park



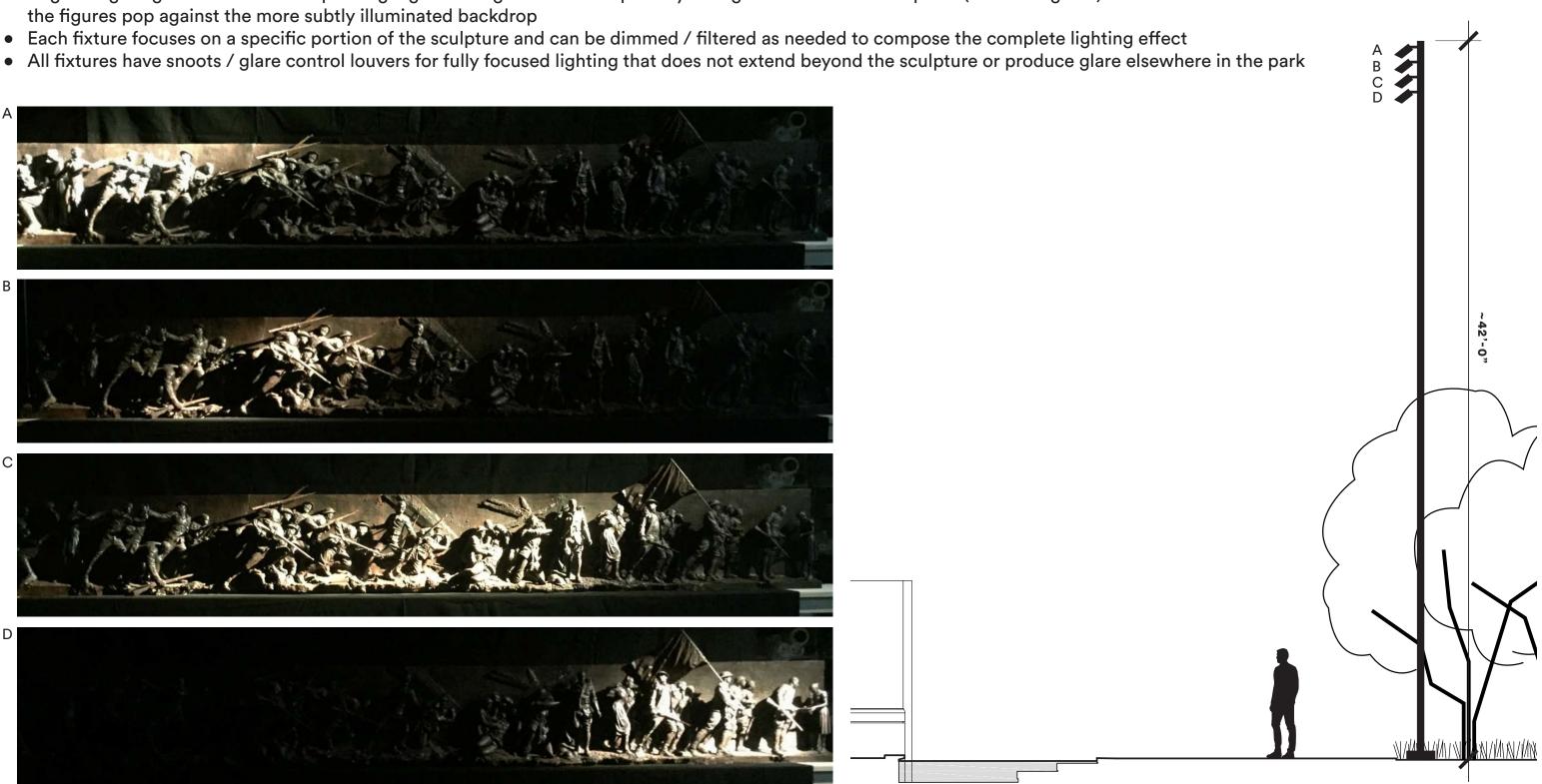


Photos are provided to represent the intended lighting strategy based on equipment available during the lighting mock up at 1:6 scale and are as accurate as possible, but are subject to distortion through camera exposure / shutter speed.

# LIGHTING: RESULTS OF MOCK UP

#### **NORTHERN POLE**

- Brighter lighting from the northern pole highlights the figures from the primary facing direction of the sculpture (faces of figures) and casts shadows to make the figures pop against the more subtly illuminated backdrop



Photos are provided to represent the intended lighting strategy based on equipment available during the lighting mock up at 1:6 scale and are as accurate as possible, but are subject to distortion through camera exposure / shutter speed.

# LIGHTING: RESULTS OF MOCK UP

#### FULL LIGHTING EFFECT IN CONTEXT

Circulation lighting on the west terrace creates a gentle glow within the trees allowing the sculpture to fade into its context



The sculpture shown in this rendering is a photograph of the maquette taken during the lighting mock up

# LIGHTING: FEASIBILITY OF MULTI-GLOBE FIXTURE RE-USE **PROPOSED EFFECT VS IMPACT OF MULTI-GLOBE FIXTURE (WEST TERRACE)**



**Lighting Considerations** 

- Quiet glow of Western terrace softens the edge of the sculpture allowing the sculpture to fade into its context
- Viewing experience is comfortable without glare from beyond the sculpture
- Proposed pole is more quiet and in keeping with the somber character of a memorial
- Proposed pole directs light into the site as opposed to the sky and site adjacencies



Locations of existing multi-globe fixtures



**Lighting Considerations** 

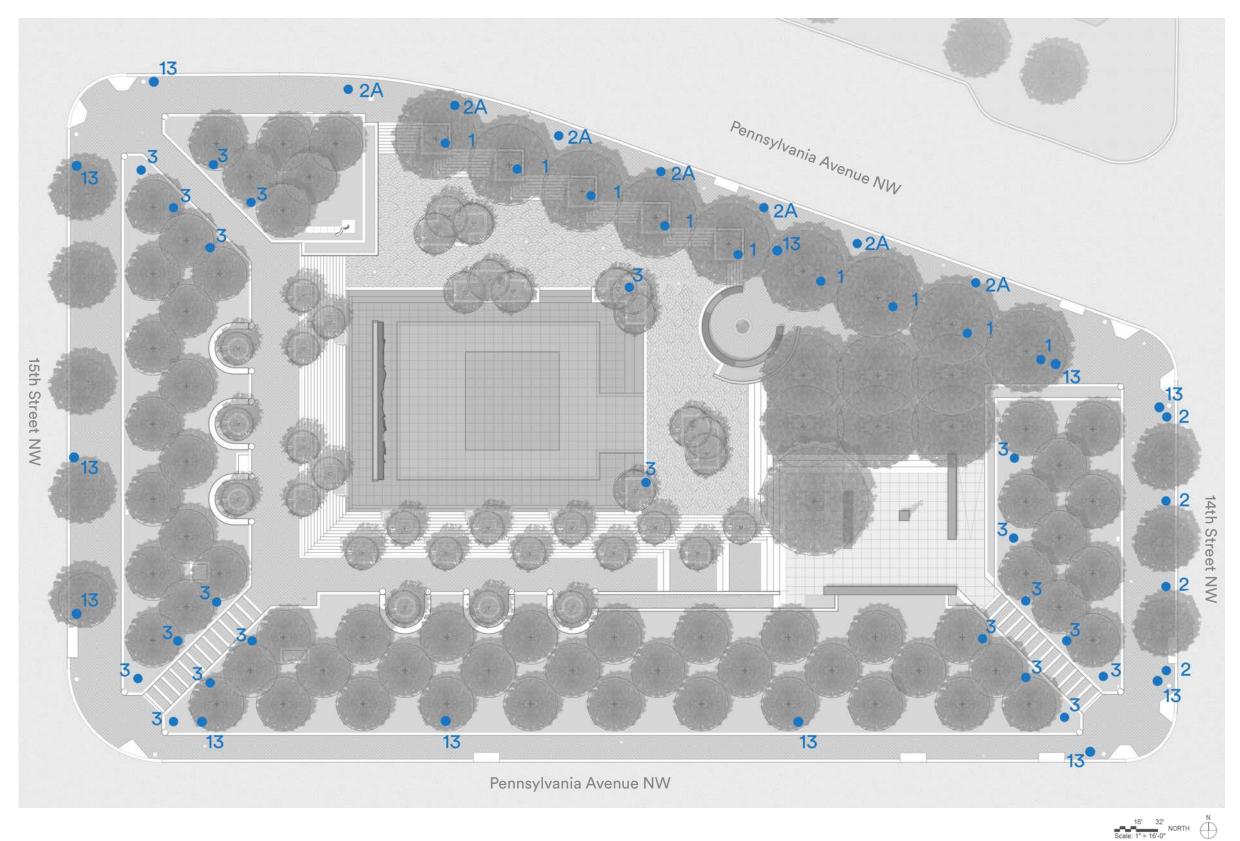
- context
- Multi-globe fixtures have no shielding, causing glare for park users and site adjacencies
- Playful character is more fitting to the ice rink than the memorial
- contemporary energy standards.

• Bright multi-globe points of light around the sculpture cause distraction and are out of

• Existing fixtures are in disrepair and would require significant upgrades to repair - This includes the necessity of altering the historic look and feel of the fixture by replacing the original visible incandescent light with a dedicated LED alternate to comply with

# **LIGHTING: TECHNICAL INFORMATION** EXISTING FIXTURES TO REMAIN WITHIN THE PROPOSED LIGHTING STRATEGY





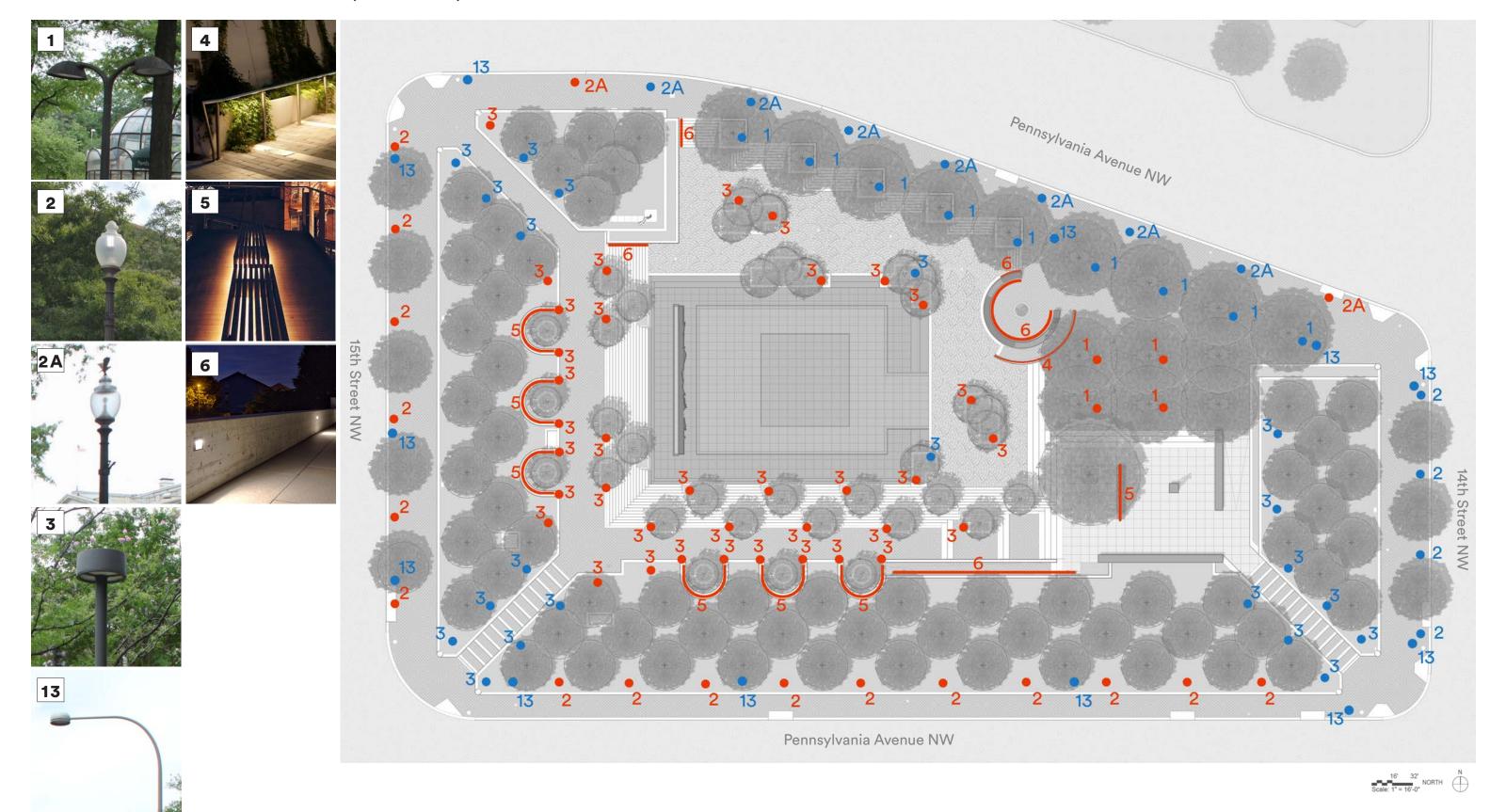
# LIGHTING: TECHNICAL INFORMATION ILLUMINANCE PSEUDO COLOR DIAGRAMS - CIRCULATION LIGHTING ONLY

Technical footcandle mapping of only the lighting required for circulation



# LIGHTING: TECHNICAL INFORMATION CIRCULATION LIGHTING ONLY (FIXTURES)

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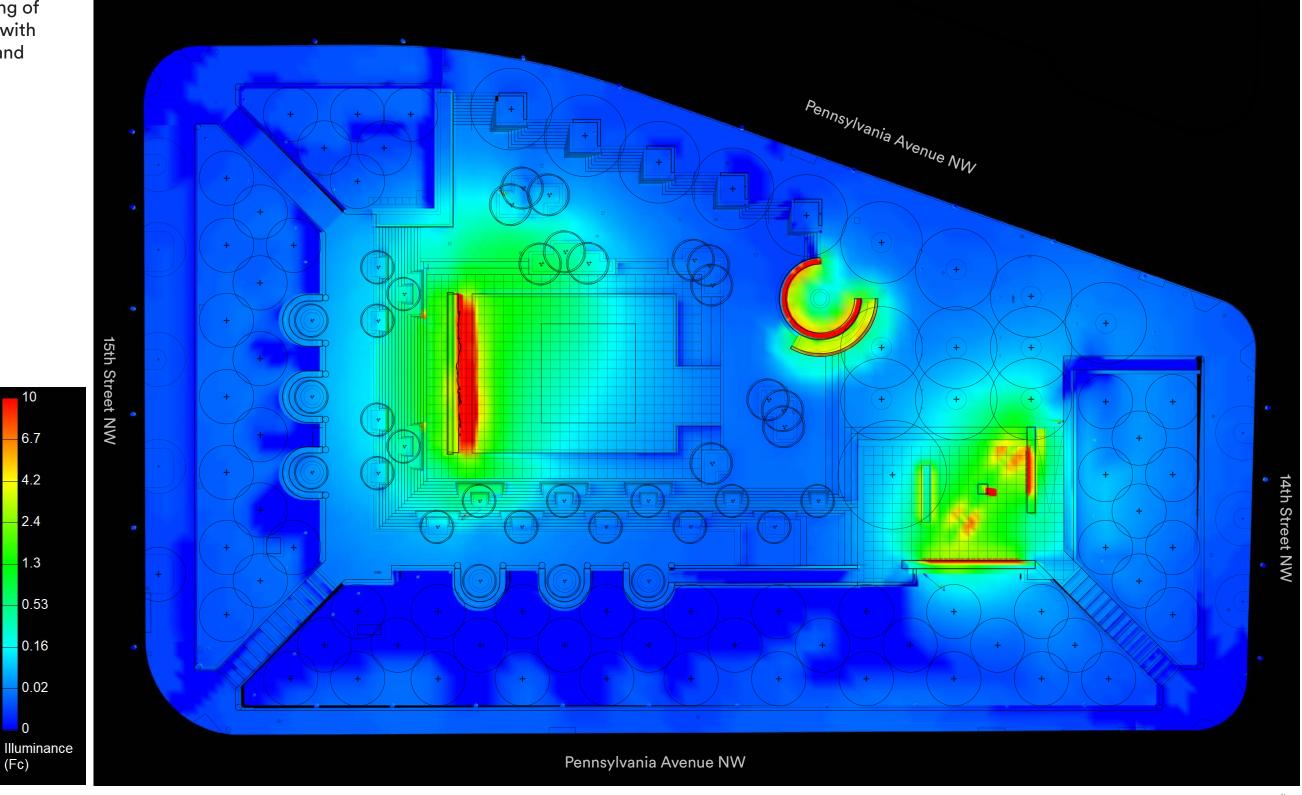


# LIGHTING: TECHNICAL INFORMATION **ILLUMINANCE PSEUDO COLOR DIAGRAMS - MEMORIAL LIGHTING ONLY**

Technical footcandle mapping of only the lighting associated with the commemorative works and interpretive elements

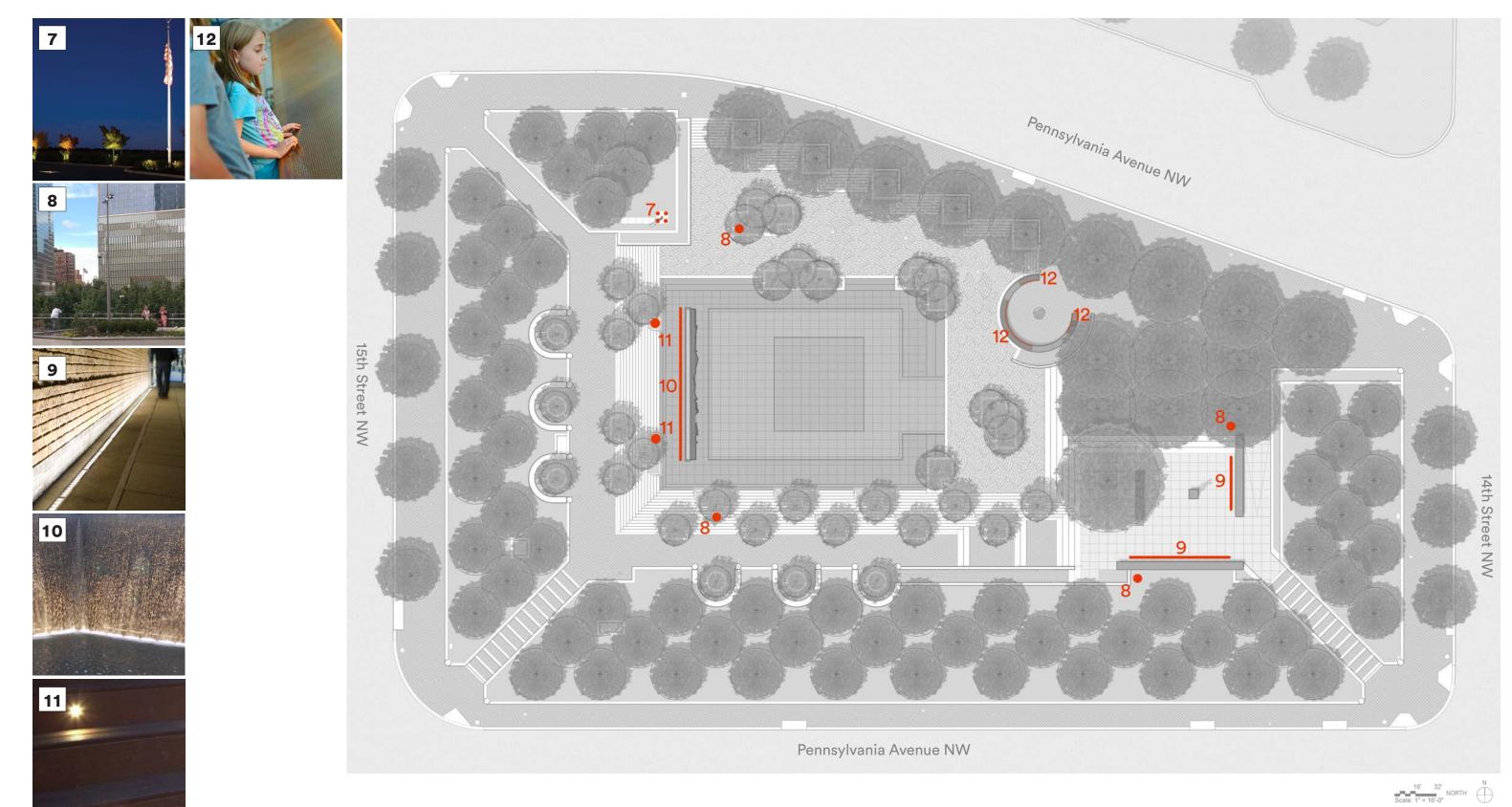
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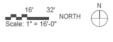
# LIGHTING: TECHNICAL INFORMATION MEMORIAL LIGHTING ONLY (FIXTURES)



# LIGHTING: TECHNICAL INFORMATION ILLUMINANCE PSEUDO COLOR DIAGRAMS - COMBINED LIGHTING

Technical footcandle mapping of the full combined lighting effect on the site

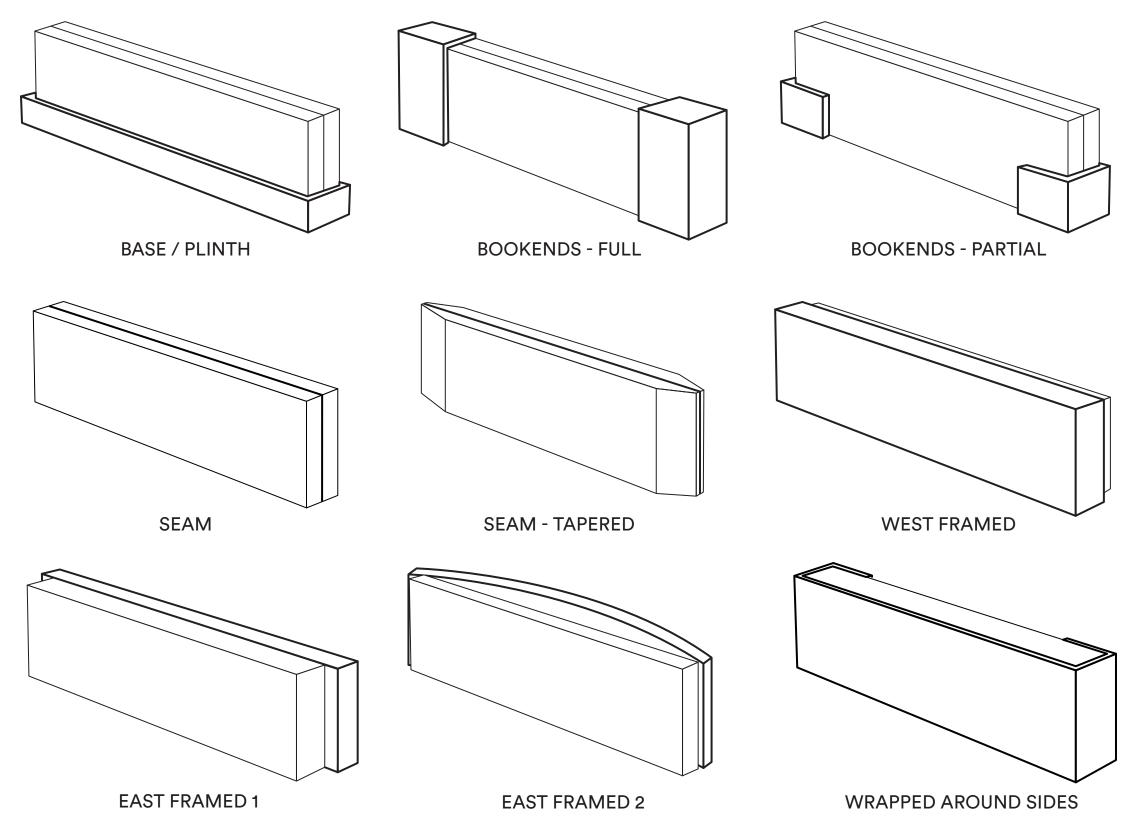


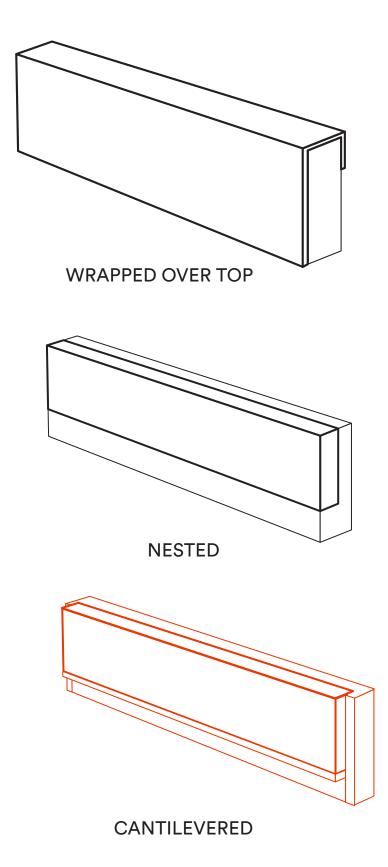


# SCULPTURE FOUNTAIN

# **SCULPTURE FOUNTAIN: OCTOBER 2018**

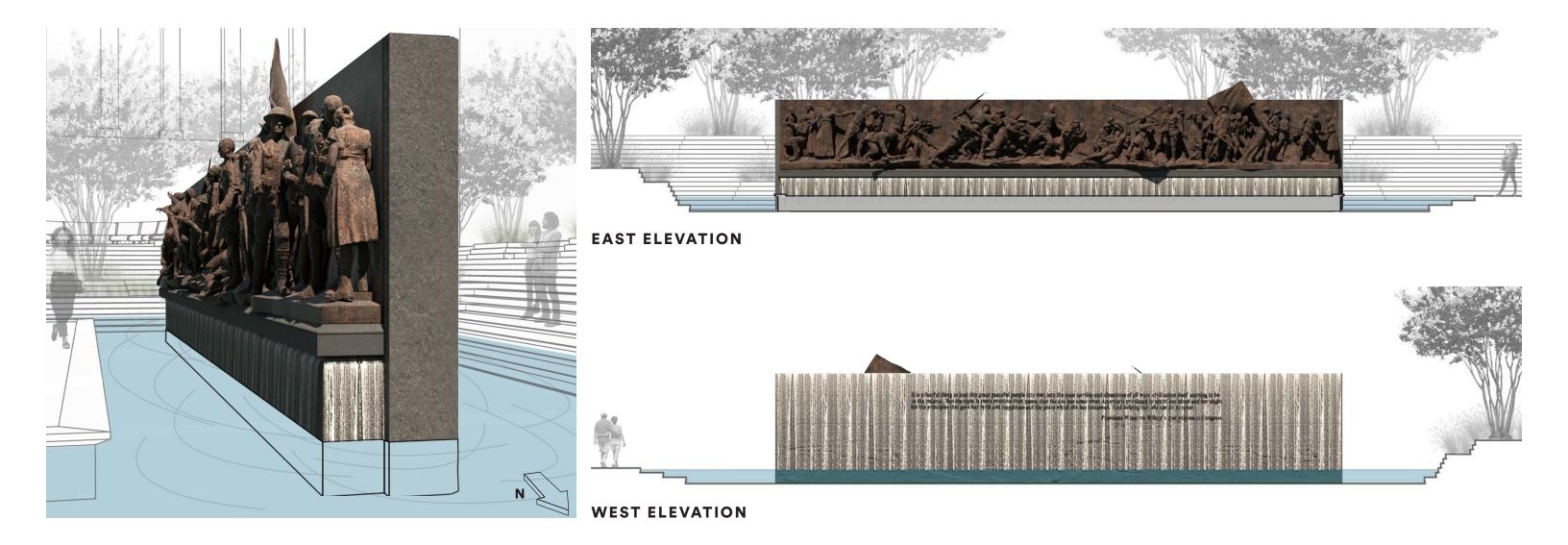
**STUDIES / PROCESS** 





40

# **SCULPTURE FOUNTAIN: OCTOBER 2018** CANTILEVERED CONCEPT WITH MONOLITHIC FOUNTAIN (PREFERRED DIRECTION AS ADVISED BY CFA)



## SCULPTURE FOUNTAIN: DETAILING REFINED CANTILEVERED CONCEPT WITH MONOLITHIC FOUNTAIN

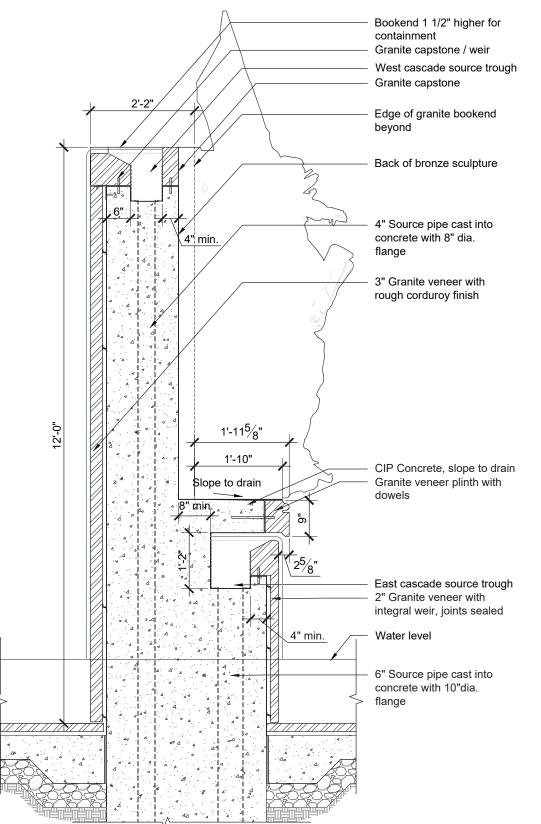
Directives + Responses October 2018 CFA

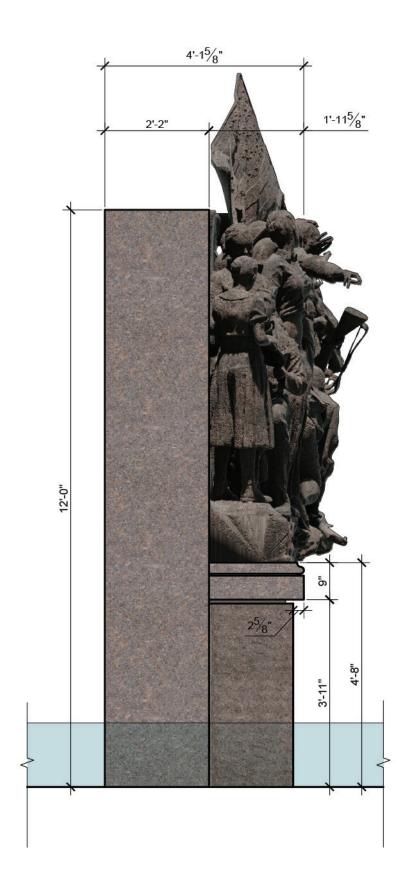
- Strong preference for the option in which the bronze sculpture rests on a stone shelf projecting above a recessed linear waterfall paired with the monolithic stone wall on the west side
- Further developed the preferred option
- Recommended developing the light quality and ethereal character by making the stone shelf as thin as possible and further recessing the waterfall
- Coordinated with structural and fountain team to develop the narrowest internal profile possible to support the bronze sculpture and desired cascade effects
- Preference for the darker granite to match the Pershing Walls
- Pursued the use of the Carnelian granite to match the existing Pershing Walls



# SCULPTURE FOUNTAIN: DETAILING

#### **REFINED CANTILEVERED CONCEPT WITH MONOLITHIC FOUNTAIN**





#### DIGITIZING THE MAQUETTE TO MAINTAIN THE SPACING AND POSING OF FIGURES BETWEEN VERSIONS

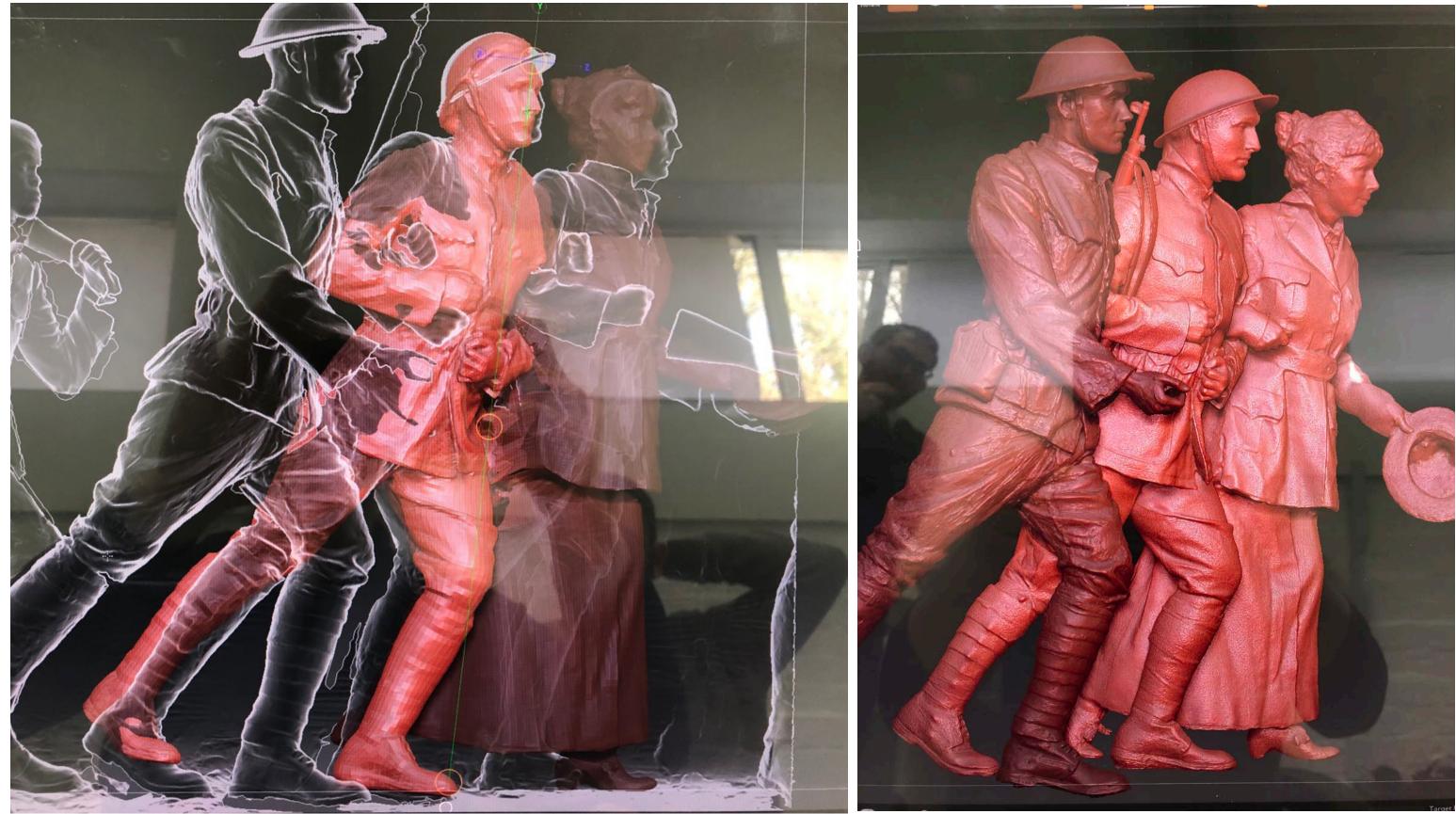


# **SCULPTURE FOUNTAIN: REVISED MAQUETTE STEP 2** PHOTOGRAMMETRY OF NEW & REWORKED ELEMENTS (PRESENTED OCTOBER 2018)





#### COMPILING THE PHOTOGRAMMETRY AND PREVIOUS MAQUETTE INTO A SINGLE DIGITAL SCULPTURE



TEST PRINTING SELECTIONS OF THE DIGITAL MAQUETTE AT VARIOUS SCALES TO BETTER UNDERSTAND PROPORTIONS



4A - Small Scale

4B - Full Size

Test prints shown on this page were generated by the Pangolin foundry to test the process and do not represent an actual figure from the maquette.



POWDER PRINTING THE ENTIRE COMPOSITION FIGURE BY FIGURE TO CHECK THE ACCURACY OF THE LINES AND ARCS AS DESIGNED BY SABIN



#### PHYSICAL HAND SCULPTING OF THE BASE TO COORDINATE WITH THE SURROUNDING ARCHITECTURE



RE-DIGITIZING THE FINAL MAQUETTE WITH THE ADDED HAND SCULPTING IN ORDER TO PRODUCE A FILE READY FOR A FULL SCALE MILLING OR REPRINTING AT ENLARGED SCALES



3D Print with added hand sculpting

#### COMPARISON

The proposed compression of the sculpture to achieve the reduced length as presented in May 2018 (based upon studies of the scale maquette) was determined to cause visual distortions when enlarged to full scale for testing at the foundry.

As such, two options have emerged for the sculpture fountain:

A: Continue with the desired 6'-6" **FIGURE HEIGHT** (as determined by May 2018 CFA) which results in a longer sculpture fountain totaling 59'-4" when including the stone bookends (58'-4" of just bronze)

B: Continue with the previously approved sculpture fountain **LENGTH** of 57'-6" (56'-6" just bronze) and scale the figure height down to a 6'-2" figure height to fit the approved length

Please Note:

The scale figures (shown at 5'-6 1/2") represent the median height of the average U.S. male (5'-9") and female (5'-4")

The sculpture and scale figures are shown on this page in true elevation. The perception of the height differences is increased when viewed in perspective, see full scale prints available during CFA presentation on 04/18/2018

Viewing surface

May 2018 Approved Height



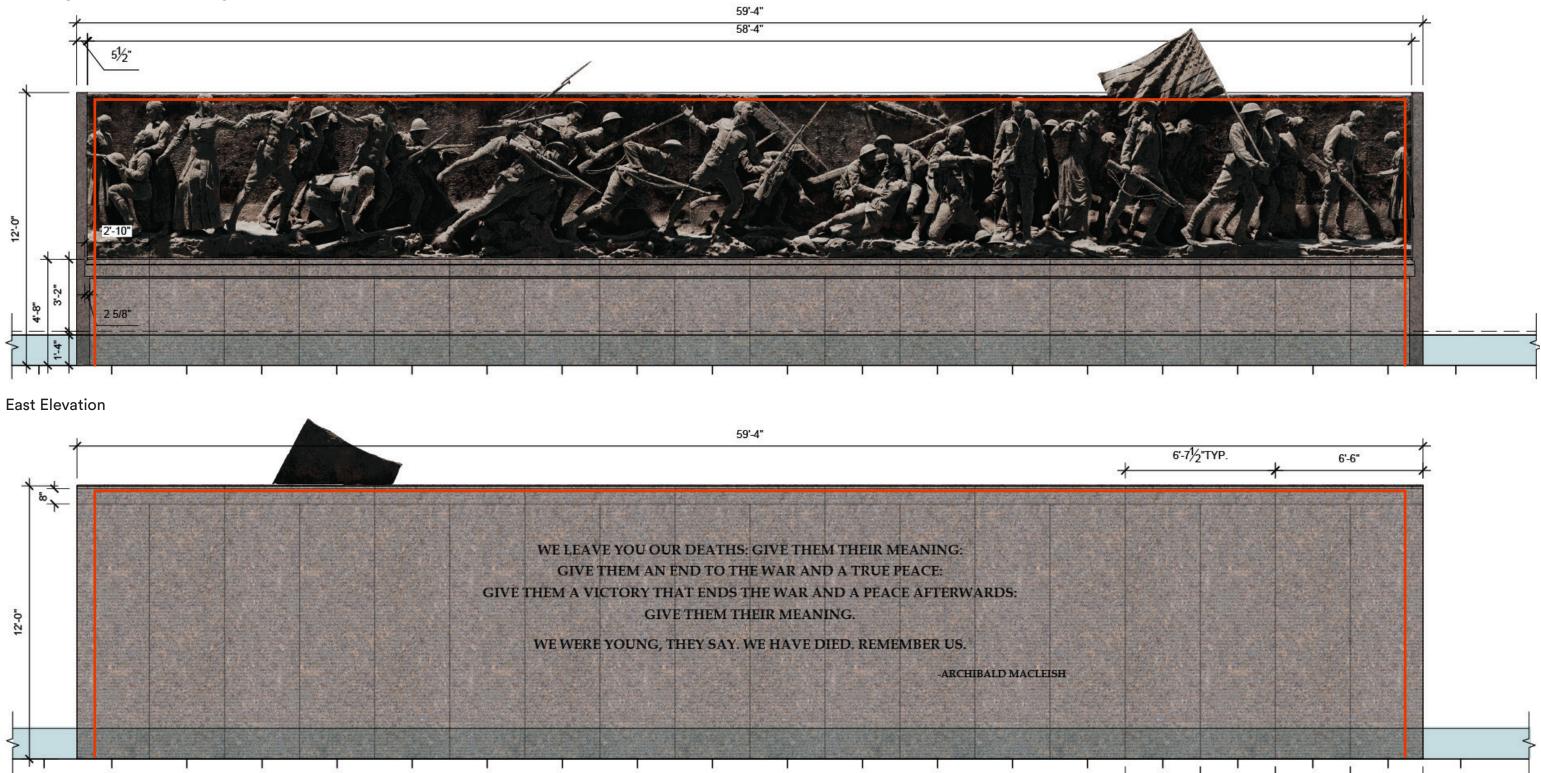
May 2018 Approved Length





Existing Pershing Statue for Comparison

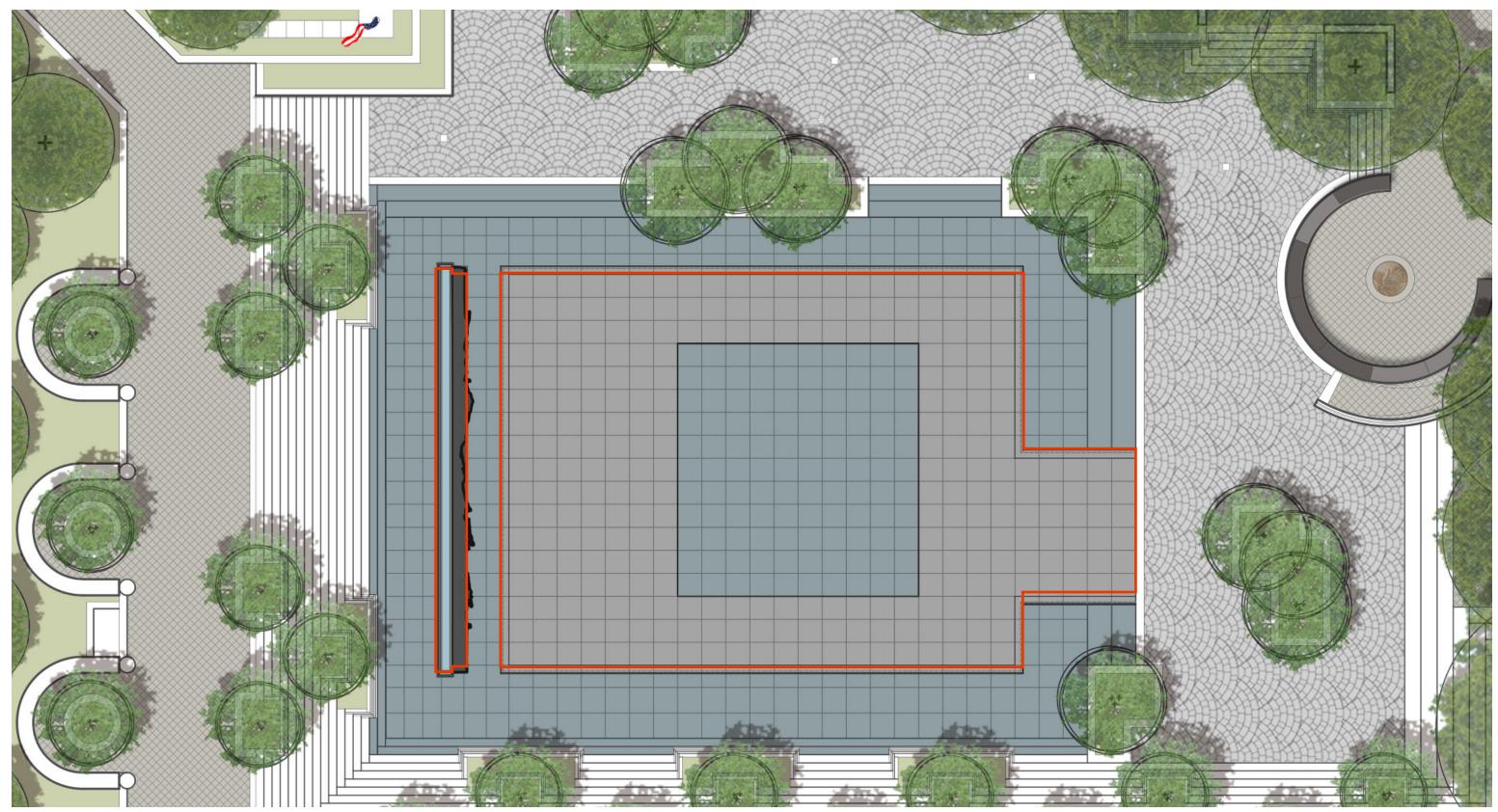
#### **IMPACT IN ELEVATION**





Orange outline represents extents of sculpture fountain at previously approved LENGTH

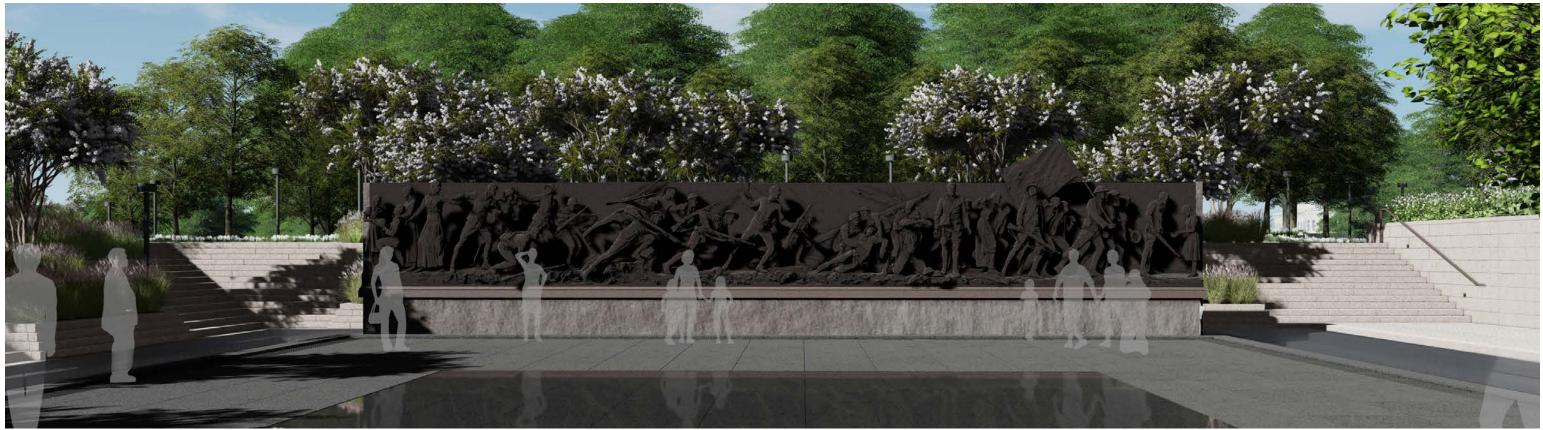
#### **IMPACT ON SITE LAYOUT**



Orange outline represents extents of sculpture fountain and associated walkway relationships at previously approved LENGTH (bridge shifts slightly between options based on paving patterning associated with each length)

# SCULPTURE FOUNTAIN: FIGURE HEIGHT IN CONTEXT COMPARISON





#### IN CONTEXT COMPARISON



#### IN CONTEXT COMPARISON





# SCULPTURE FOUNTAIN REFINED CANTILEVERED CONCEPT WITH MONOLITHIC FOUNTAIN

Directives + Responses October 2018 CFA

- Strong preference for the option in which the bronze sculpture rests on a stone shelf projecting above a recessed linear waterfall paired with the monolithic stone wall on the west side
- Further developed the preferred option
- Recommended developing the light quality and ethereal character by making the stone shelf as thin as possible and further recessing the waterfall
- Coordinated with structural and fountain team to develop the narrowest internal profile possible to support the bronze sculpture and desired cascade effects
- Preference for the darker granite to match the Pershing Walls
- Pursued the use of the Carnelian granite to match the existing Pershing Walls

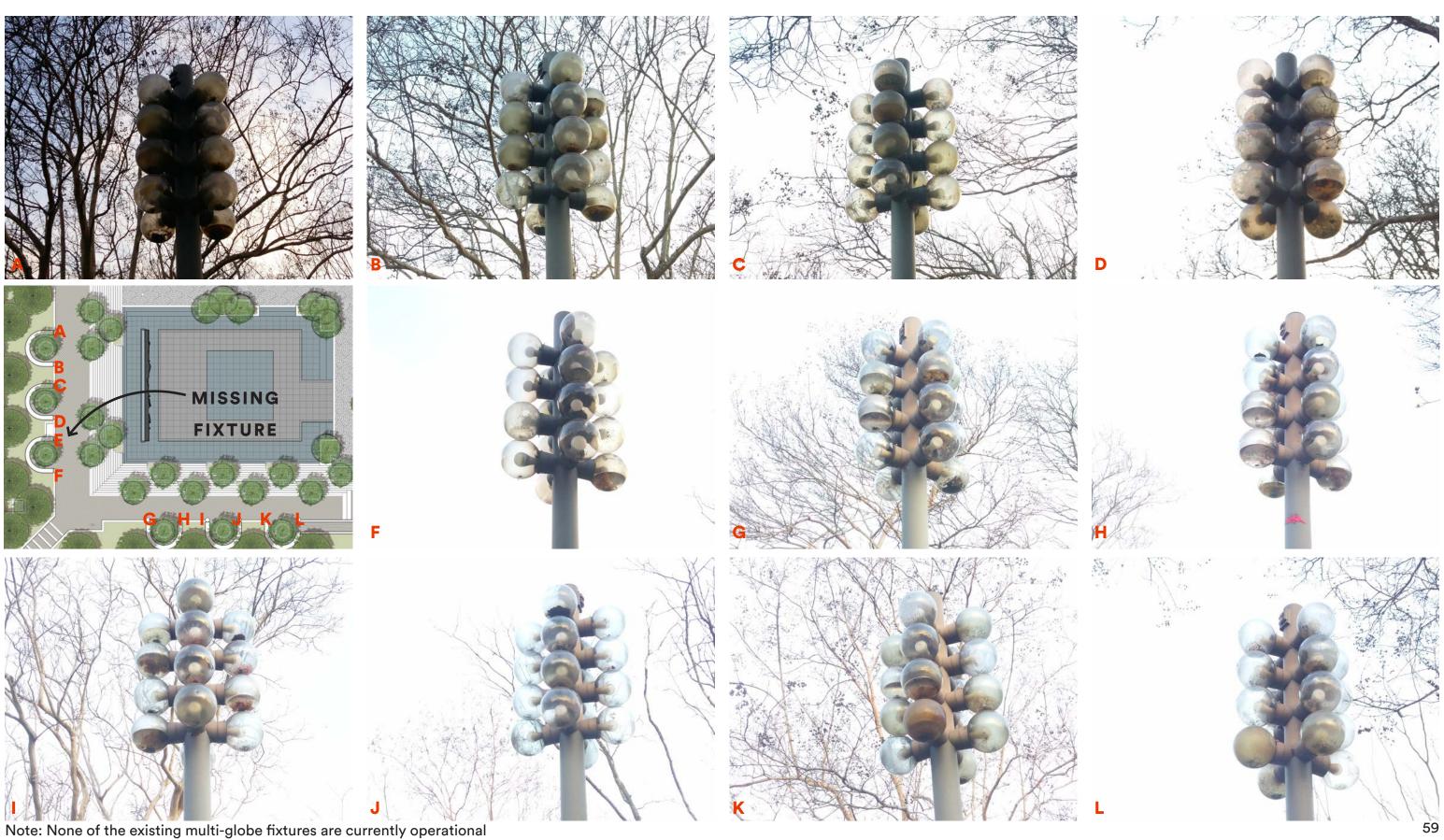


# APPENDIX

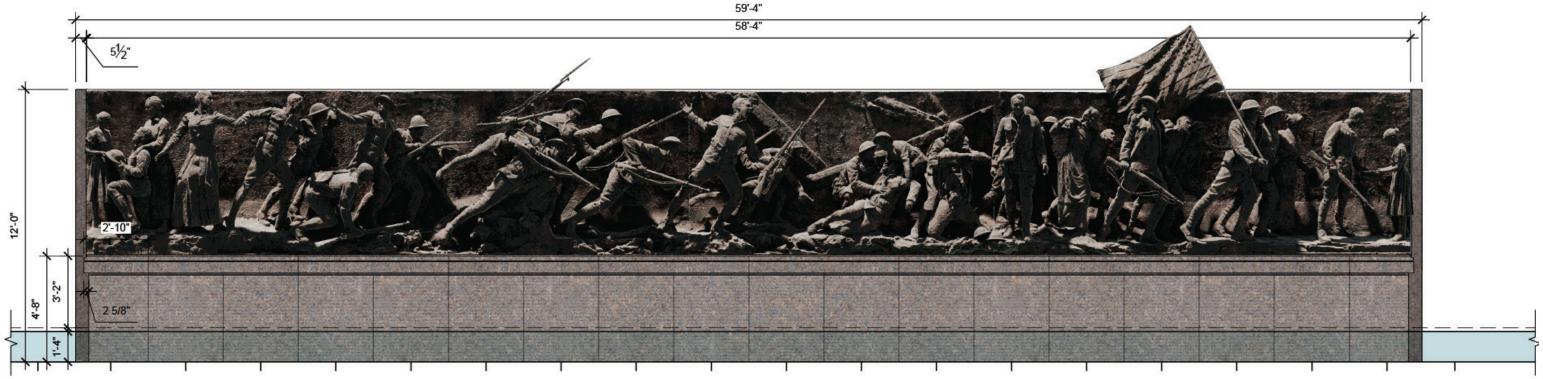
EXISTING LIGHTING ASSESSMENT SCULPTURE DETAILING + DIMENSIONS FIGURE HEIGHT PRECEDENTS

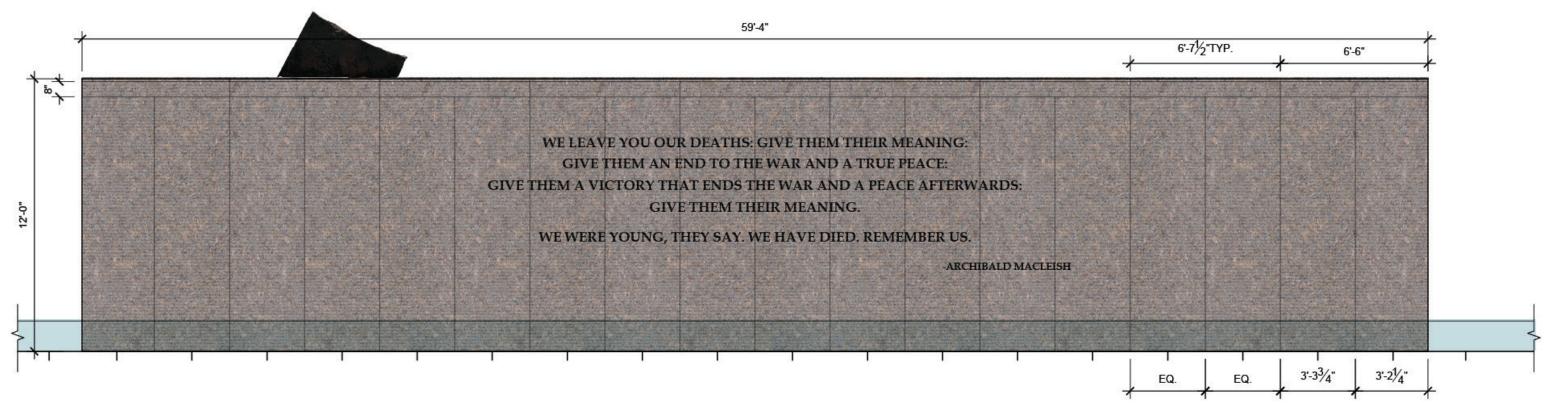
# **APPENDIX: EXISTING LIGHTING ASSESSMENT**

#### **EXISTING MULTI-GLOBE FIXTURES**

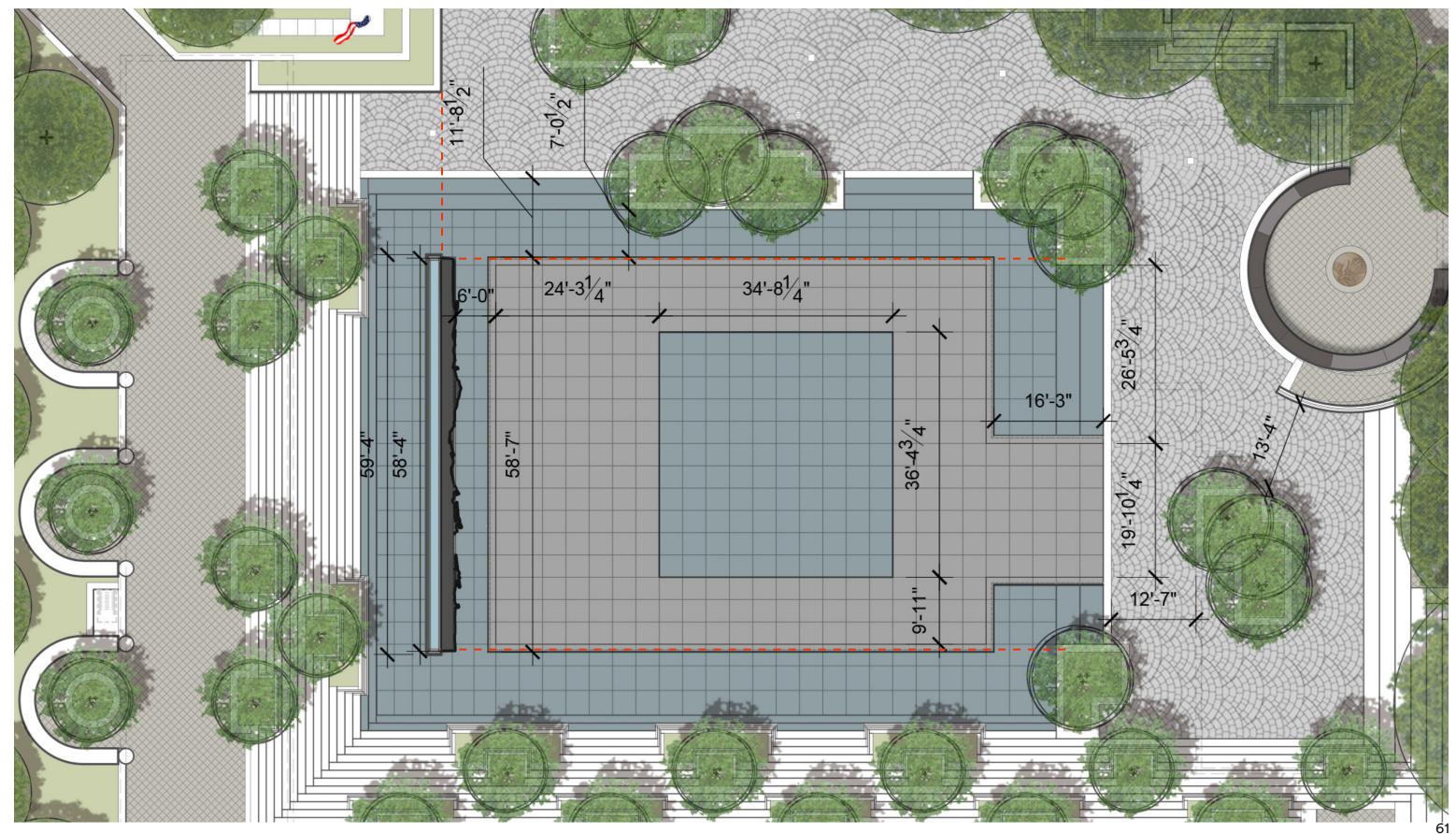


#### FIGURE HEIGHT 6'-6"

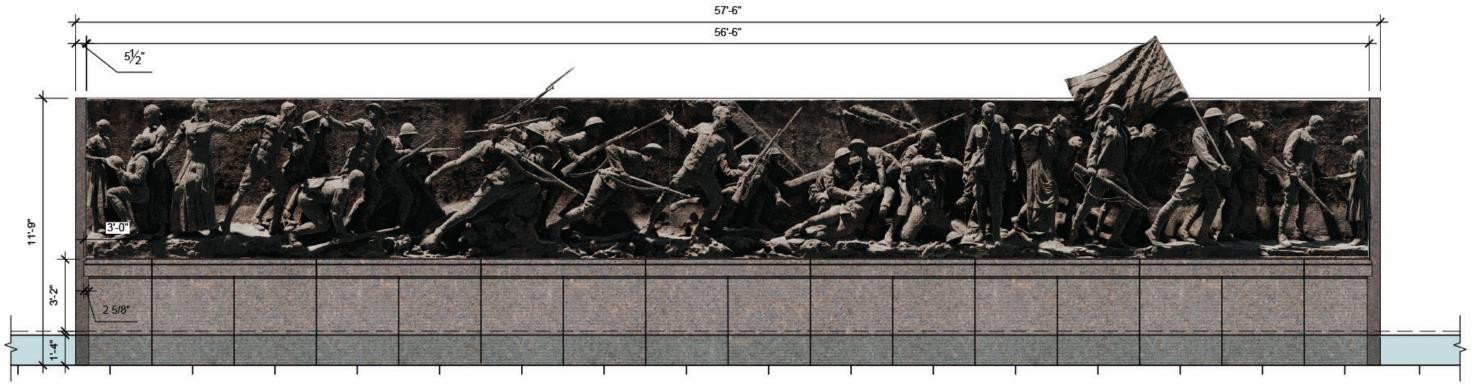




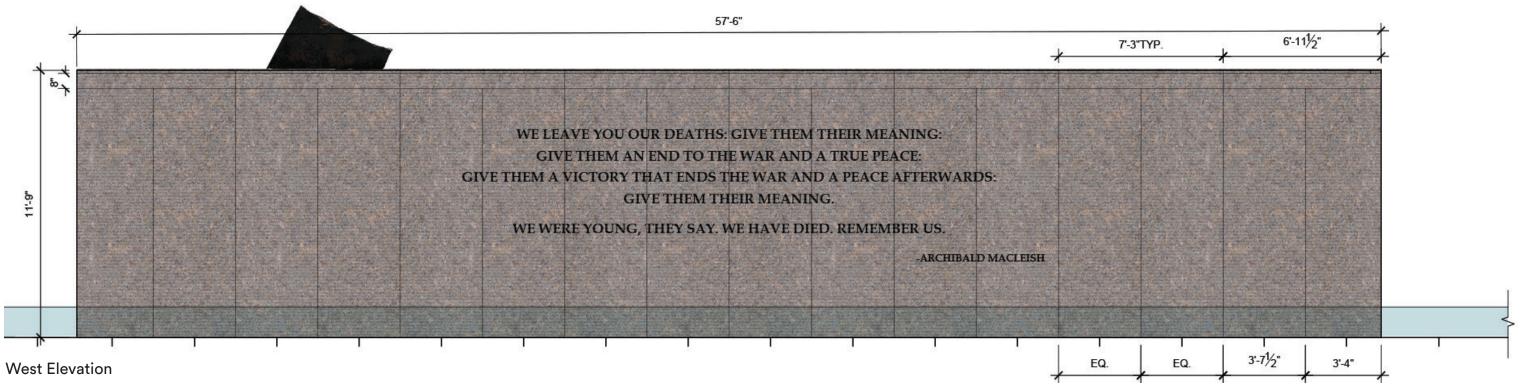
#### FIGURE HEIGHT 6'-6"



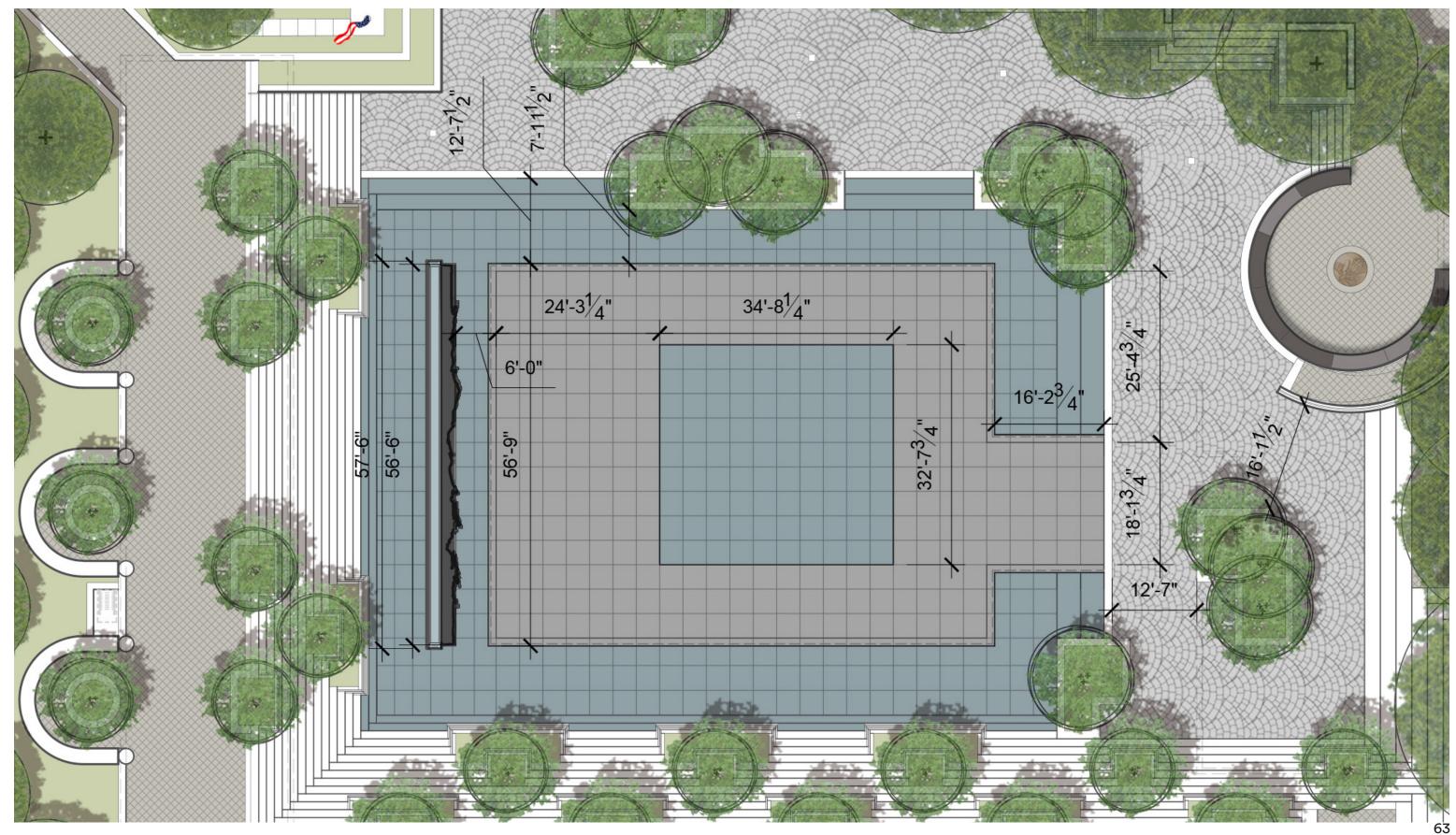
#### FIGURE HEIGHT 6'-2"



East Elevation



#### FIGURE HEIGHT 6'-2"



# **APPENDIX: FIGURE HEIGHT PRECEDENTS**

#### **OTHER D.C. MEMORIALS**



UNITED STATES NAVY MEMORIAL BASE HEIGHT: 0'-4" FIGURE HEIGHT: 7'-0"



KOREAN WAR VETERANS MEMORIAL BASE HEIGHT: 0'-0" FIGURE HEIGHT: 7'-4"



**GENERAL PERSHING MEMORIAL** BASE HEIGHT: 4'-0" FIGURE HEIGHT: 8'-0"



VIETNAM VETERANS MEMORIAL BASE HEIGHT: 1'-0" FIGURE HEIGHT: 8'-0"



D.C. COURTS - LINCOLN STATUE BASE HEIGHT: 9'-4" FIGURE HEIGHT: 9'-0"



**GRAND ARMY OF THE REPUBLIC** BASE HEIGHT: 11'-0" FIGURE HEIGHT: 6'-6"



JOHN MARSHALL PARK BASE HEIGHT: 3'-2" FIGURE HEIGHT: 8'-0"



BASE HEIGHT: 0'-0" FIGURE HEIGHT: 5'-10"

FRANKLIN DELANO ROOSEVELT MEMORIAL