

# Desert Shield and Desert Storm Memorial

Revised Concept Presentation  
U.S. Commission of Fine Arts  
October 20, 2022





# Agenda

## OVERVIEW + COMMEMORATIVE ELEMENTS

- Introduction and Summary
- Organized in response to CFA guidance

## COMMEMORATIVE WORK

- Storm Wall: Service in the Conflict
  - Material Selection
  - Conflict (bas-relief)
  - Liberation (eagle and falcon sculpture)
- Inscription Wall: Service and Sacrifice
- Unity Shield: Service in the Coalition

## OVERALL SITE DEVELOPMENT

- Paving
- Planting
- Lighting
- Signage





# Memorial Overview





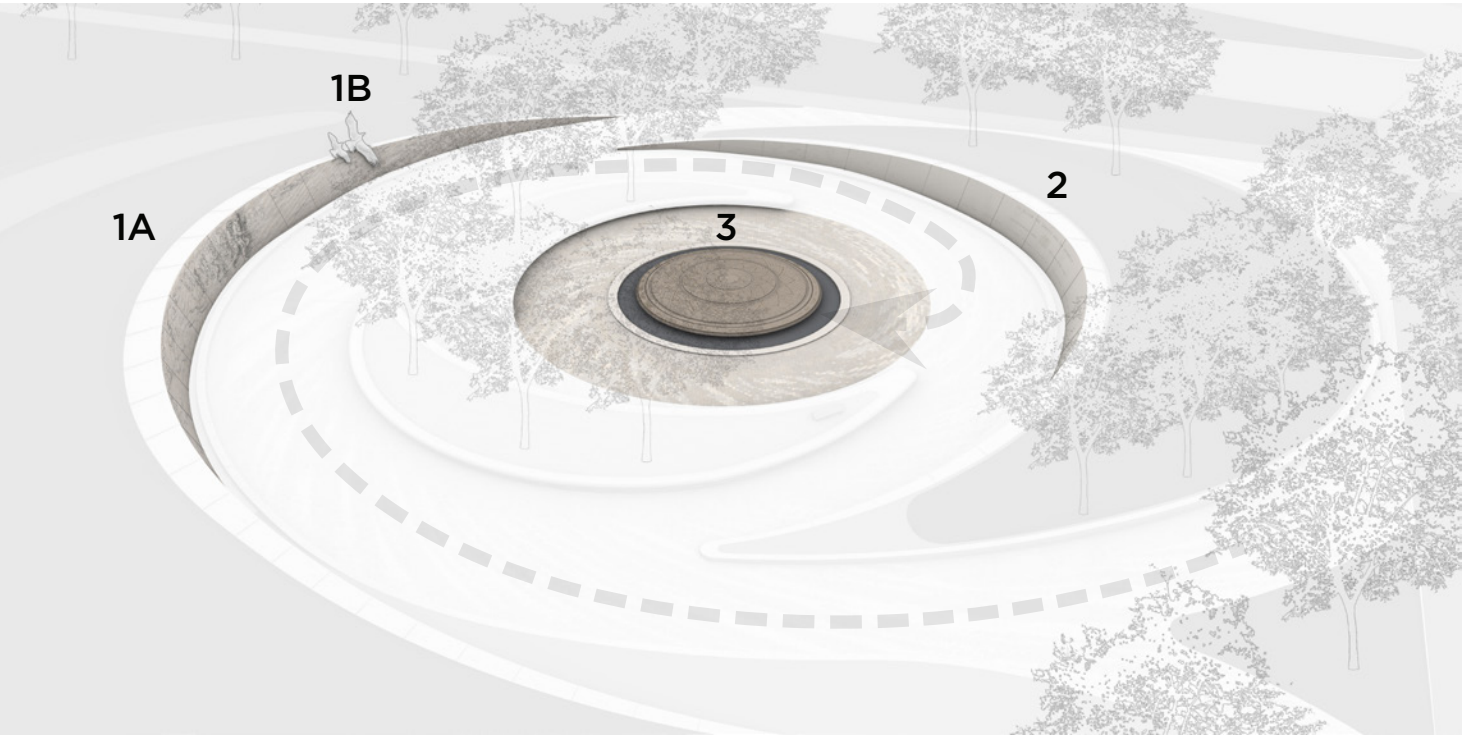
# Commemorative Elements

*To honor those who served.*

**1A. SERVICE IN THE CONFLICT**  
*how they served and changed the nation*



*Bas-relief at Storm Wall*



**2. SERVICE AND SACRIFICE**  
*how they sacrificed*



*Inscription Wall*

**3. SERVICE OF THE COALITION**  
*how they worked together*



*Unity Shield*

**1B. SERVICE IN THE LIBERATION**  
*how they secured freedom for Kuwait*



*Raptors at Storm Wall*



# Dune Wall Precedents





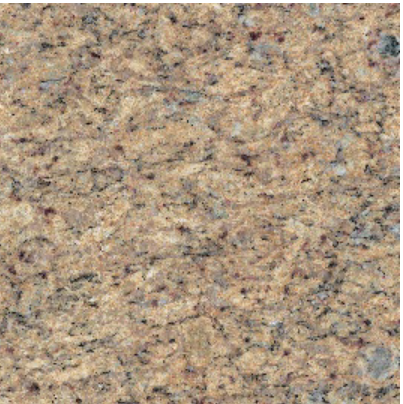
# Dune Wall Material



Champlain Quartzite



Kenoran Sage



Golden Brasil



Carnelian



Kasota Limestone



Kershaw



Phoenician Buff



Mason



Crystal Gold



Indiana Limestone



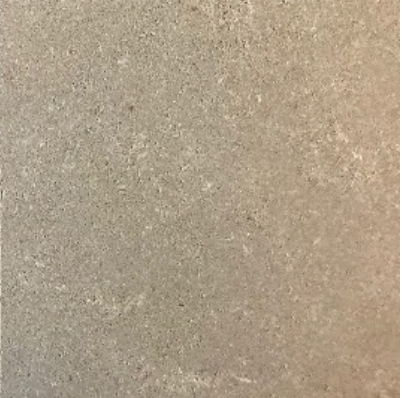
Beige Granite



Buff



Fossil Cream



Euville



Rocherons Dore



Rocherons Dore Clair



Rocherons Dore Fonce



Saint Maximin Liais



Massangis Jaune



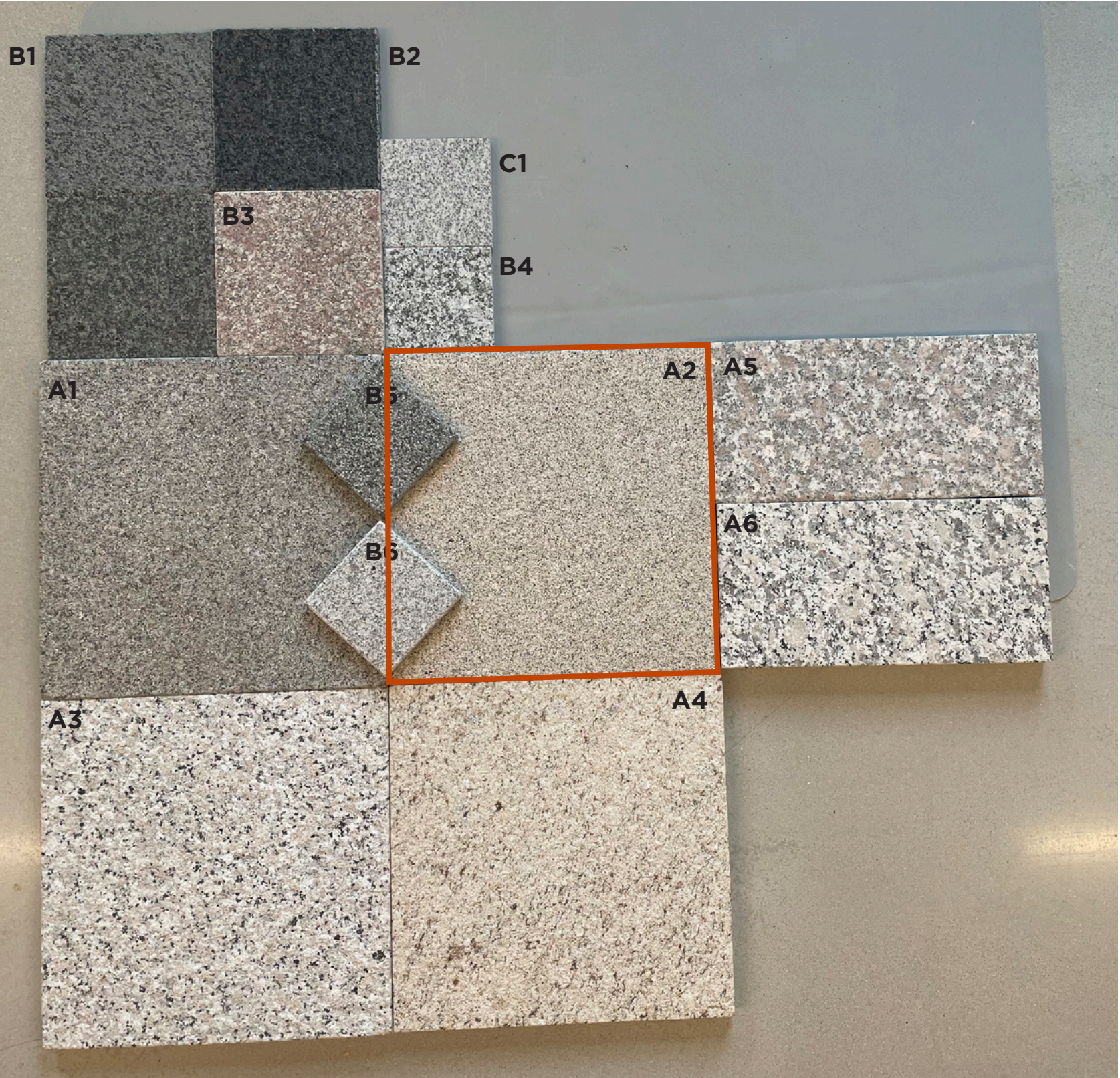
Pouillenay



Giallo Antico



# Dune Wall Material



**SAMPLES FROM RUGO, RECEIVED ON JUNE 3RD 2022:**

- A1: Bohus Grey, sand blasted
- A2: Giallo Antico, sand blasted
- A3: Rosa Beta, bush hammered
- A4: Giallo Santa Cecilia, rubbed 60 grit finished
- A5: Ghiandone, thermal
- A6: Grigio Sardo, thermal
- A7: Impala Black, thermal

**SAMPLES FROM COLDSPRING:**

- B1: Academy Black, rub&sand
- B2: Academy Black, diamond 100
- B3: Echo Lake, diamond 10
- B4: Iridian, thermal
- B5: Charcoal Black, bush hammered
- B6: Sierra White, thermal

**SAMPLES FROM POLYCOR:**

- C1: Jay White, honed



*partially wet*



*fully wet*



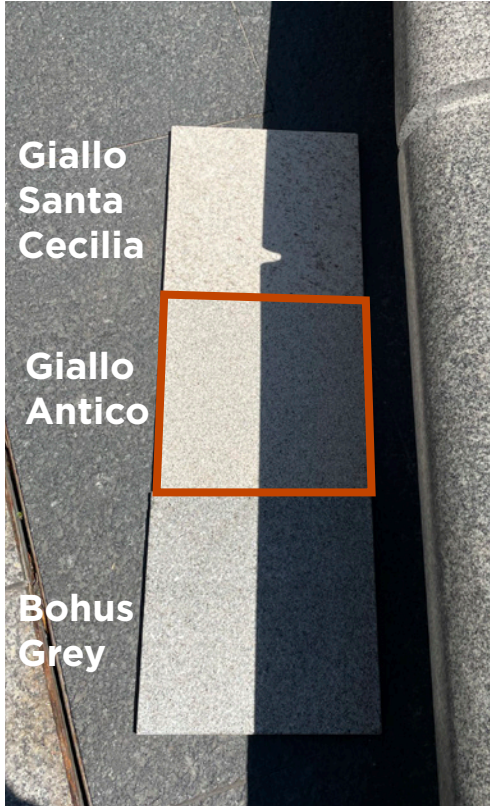
# Dune Wall Material



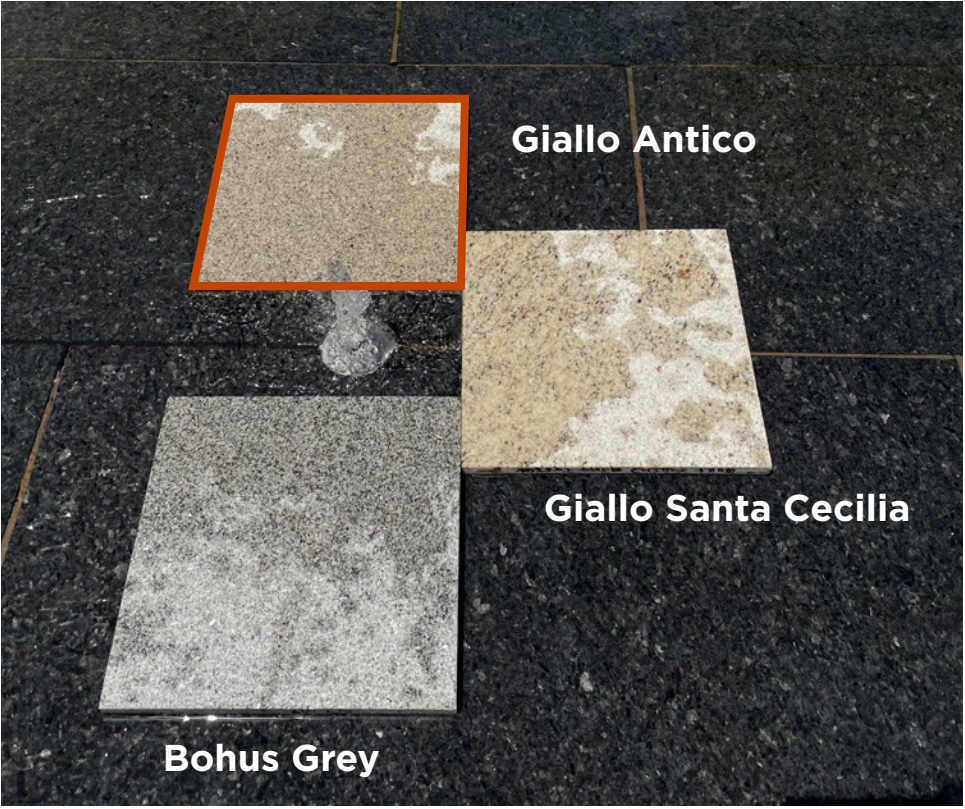
*Under Partial Shade  
Canopy Tree*



*Under Full Shade Canopy  
Tree*



*Under Full Sun and Full Shade*



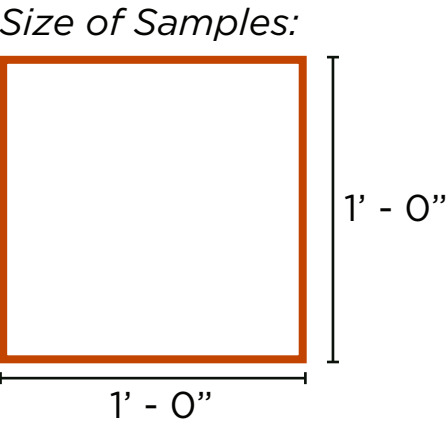
*Wet Condition*



*At Vertical Surfaces*

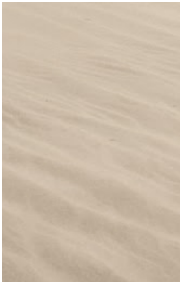


*Next to Groundcover with Fine Textures*





# Storm Wall: Service in the Conflict

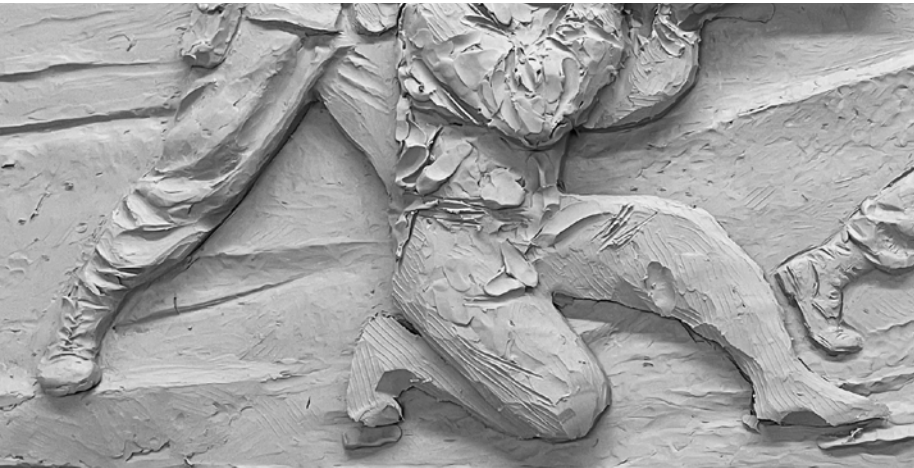




# Storm Wall: Bas-relief (in-progress)



**1** Recent, in-progress granite carving of the armament in the build-up



**2** Early, in-progress clay modeling showing detail at legs and feet



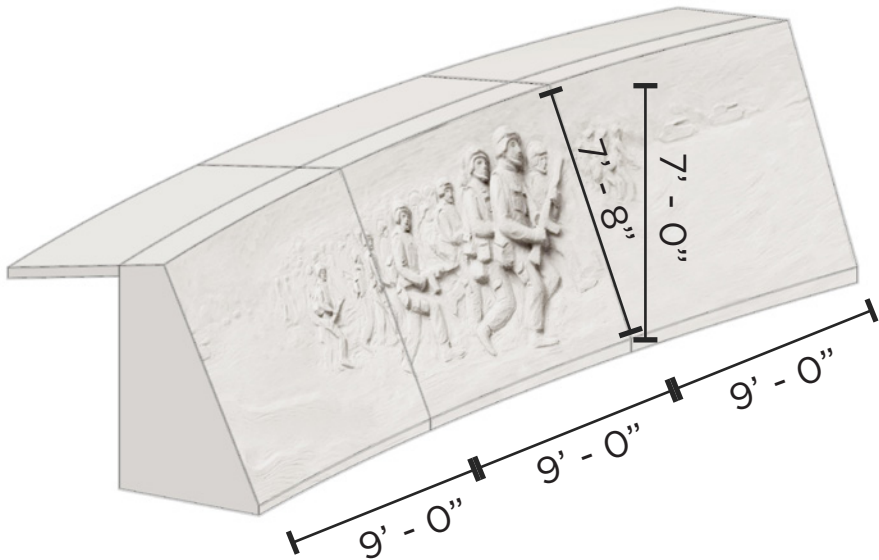
**3** Recent, in-progress granite carving showing detail of a figure and the environment



KEY PLAN



# Storm Wall: Conflict Detail





# Storm Wall: Conflict Detail

*Dimensions: 22" High x 18" Wide x 3" Relief Projection*

*Scale: 1:1*



*Clay Model*



*Plaster Cast*



*Digital Scan*



*Granite Carving (in-progress)*



# Storm Wall: Conflict Detail



*Detail of boots and legs in sand, clay, in-progress*



*Detail of boots and legs in sand, granite, in-progress*



*Study of figure emerging from sand, granite, in-progress*



# Storm Wall: Technique and Process





# Storm Wall: Technique and Process



*4 ft. x 6 ft. granite panel in mid-morning sun*



*4 ft. x 6 ft. granite panel in mid-day sun*



*4 ft. x 6 ft. granite panel in cloudy weather*



*4 ft. x 6 ft. granite panel in shade*



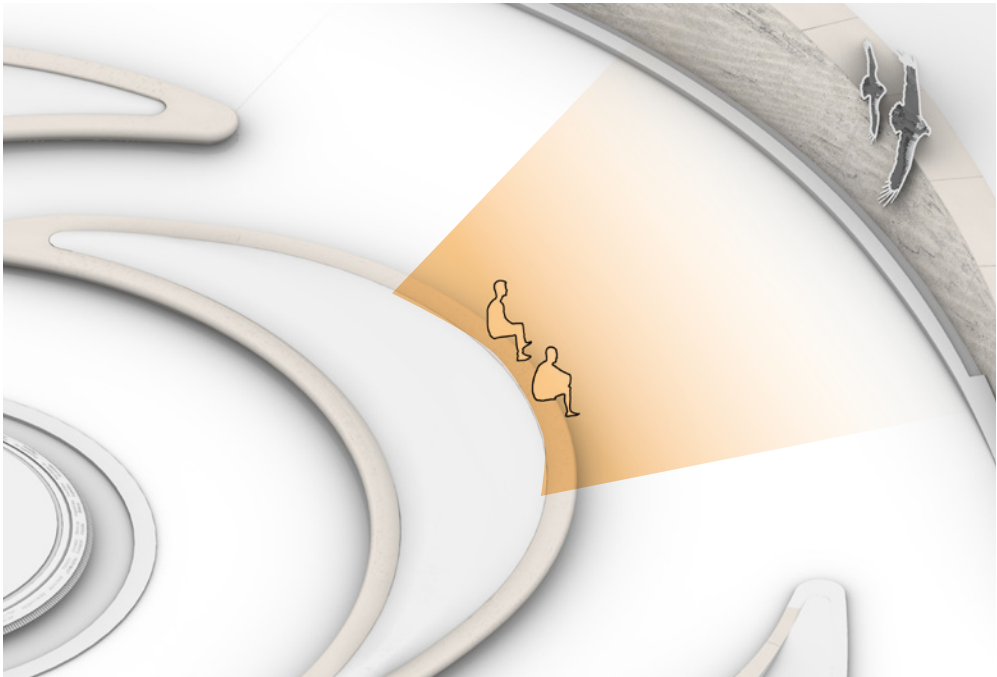
*4 ft. x 6 ft. granite panel at sunset*



*4 ft. x 6 ft. granite panel fully wet*



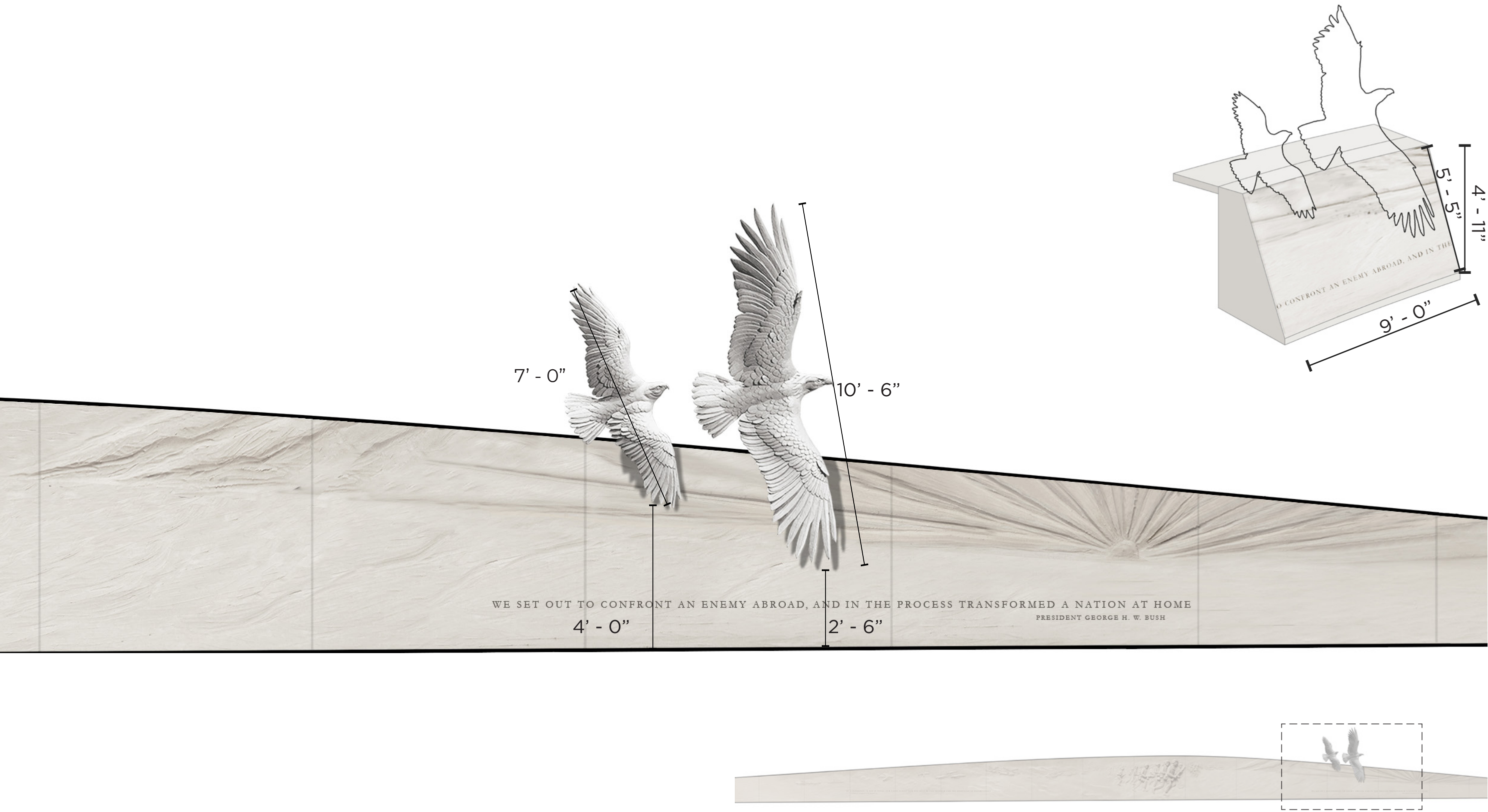
# Storm Wall: Liberation



KEY PLAN



# Storm Wall: Liberation Detail



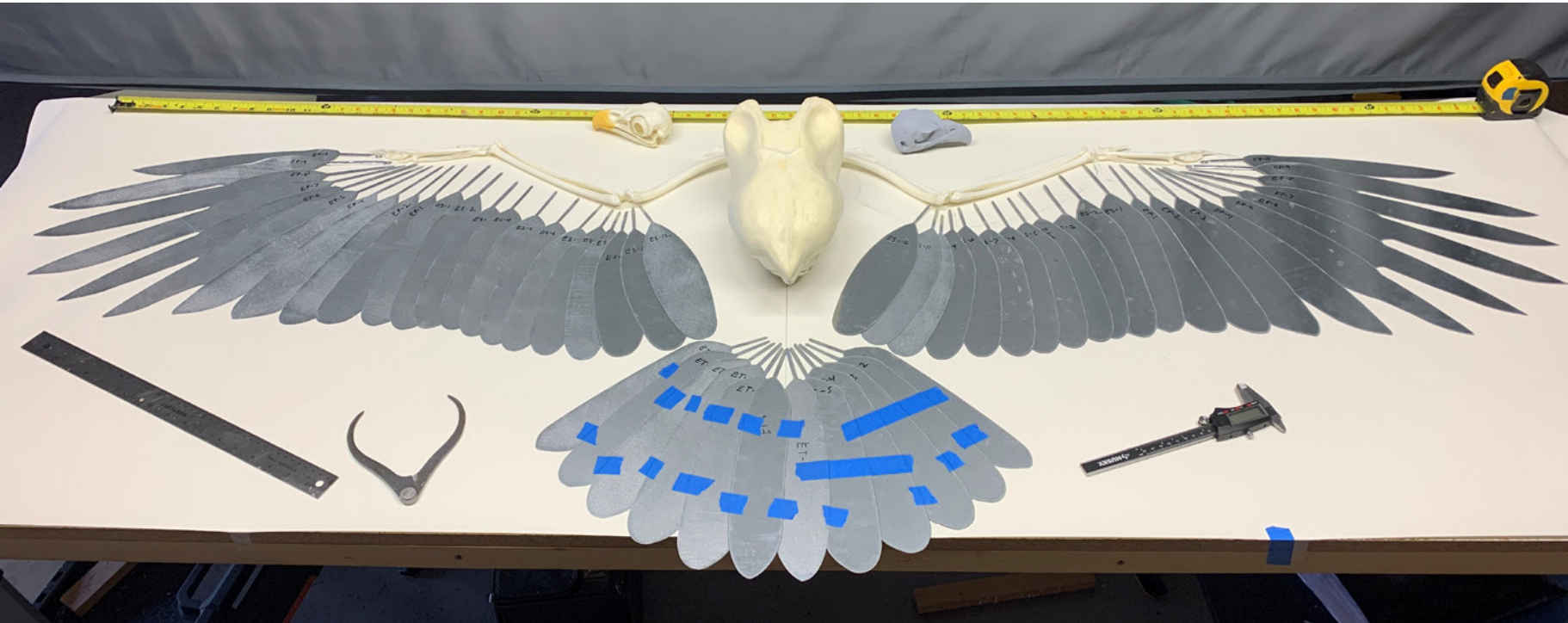
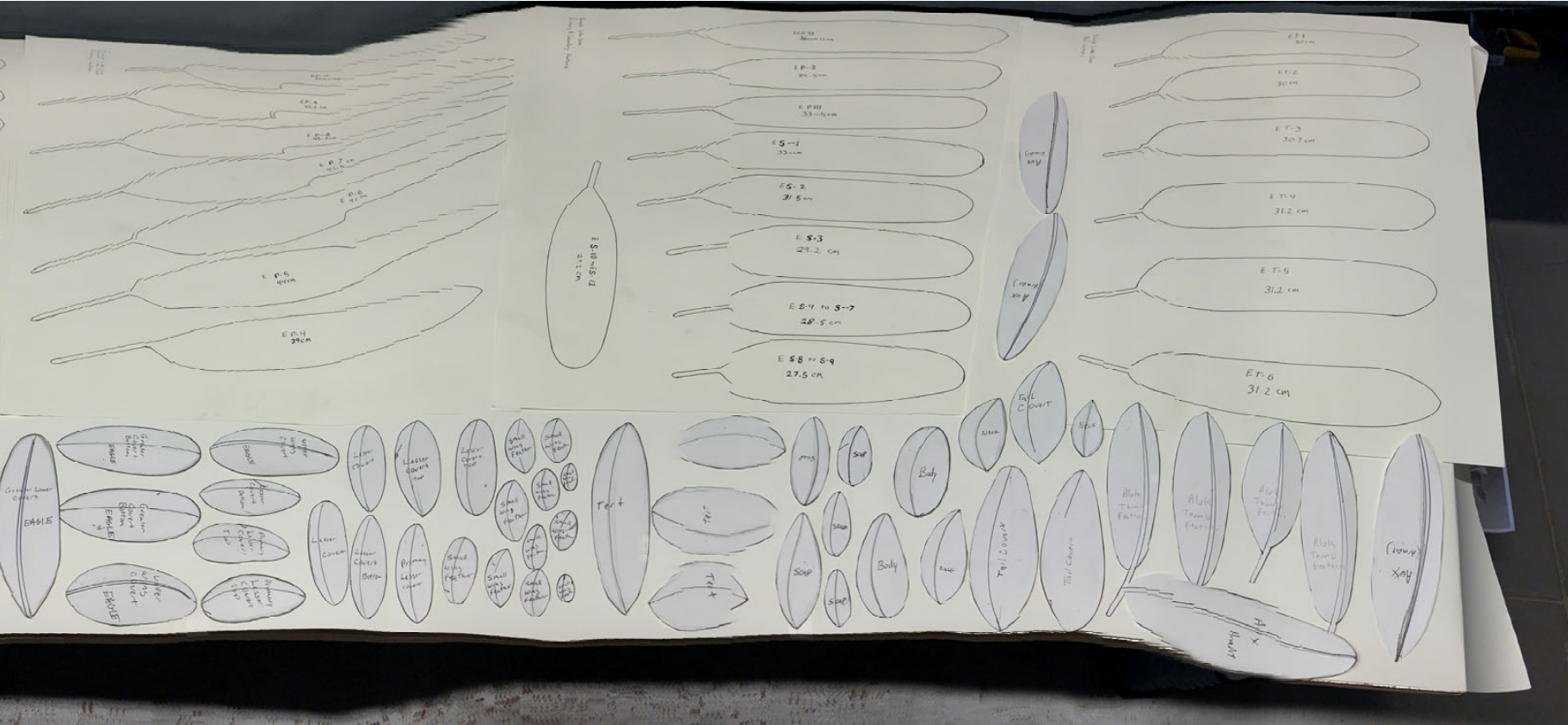


# Storm Wall: Liberation Detail



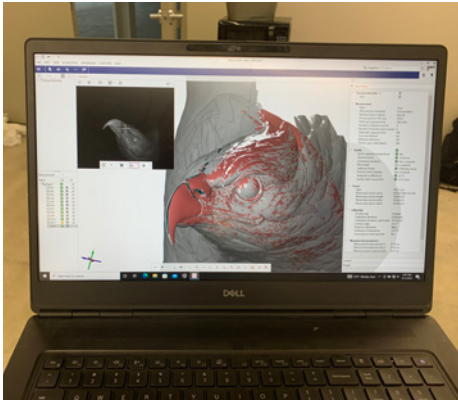


# Storm Wall: Liberation Detail



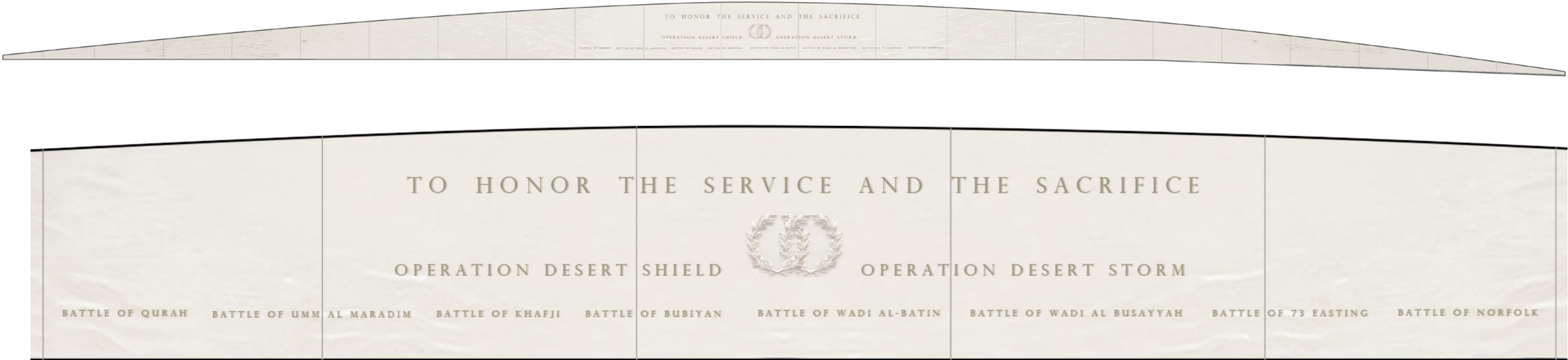


# Storm Wall: Liberation Detail - Eagle and Falcon Details





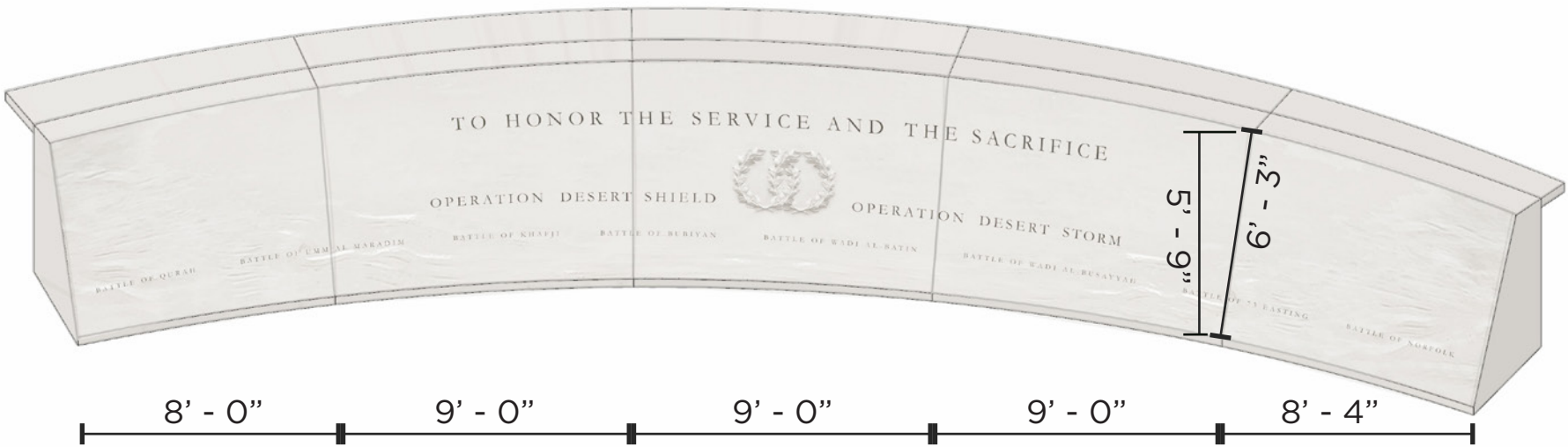
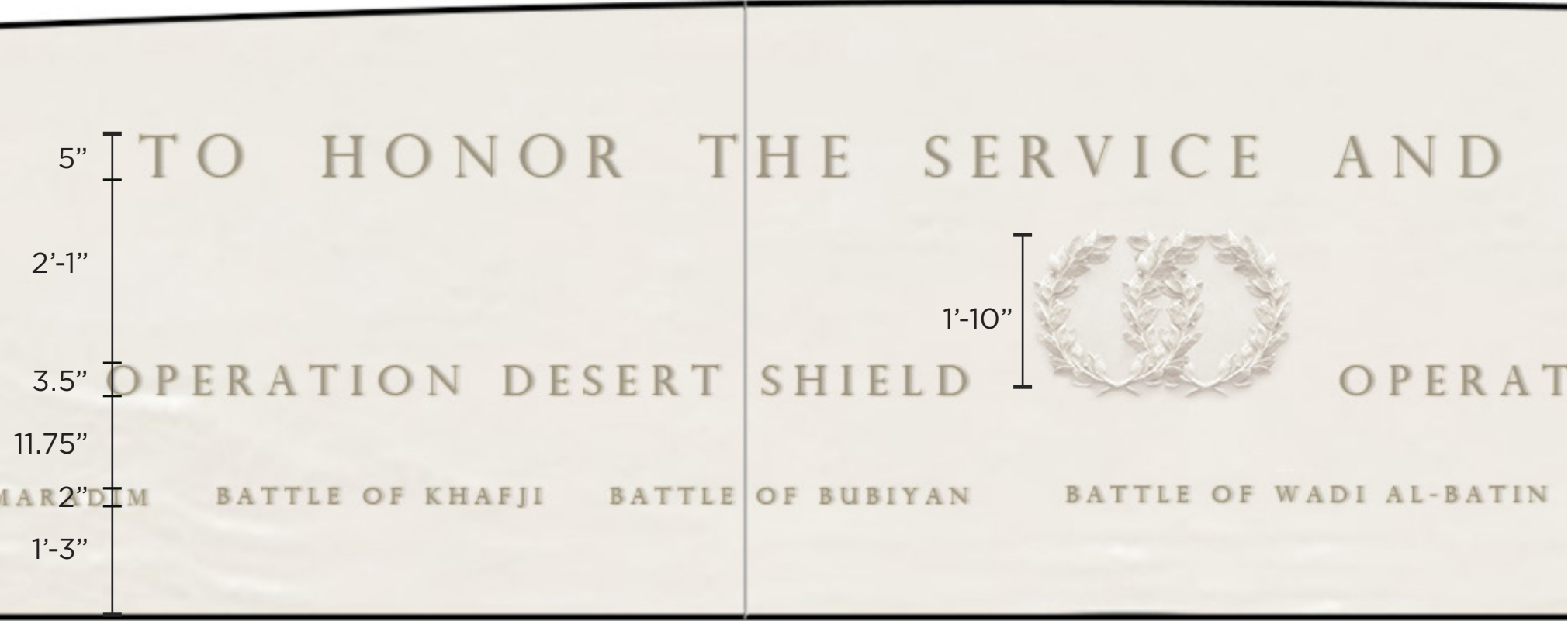
# Inscription Wall: Service and Sacrifice



- BATTLE OF AD DAWRAH
- BATTLE OF QURAH
- BATTLE OF UMM AL MARADIM
- BATTLE OF KHAFJI
- BATTLE OF BUBIYAN
- BATTLE OF WADI AL-BATIN
- BATTLE OF WADI AL BUSAYYAH
- BATTLE OF 73 EASTING
- BATTLE OF NORFOLK
- BATTLE OF MEDINA RIDGE



# Inscription Wall: Inscription and Wreath Details



Full-scale inscription font and color study (top)  
View of wreaths from front, clay (bottom)



# Unity Shield: Service of the Coalition



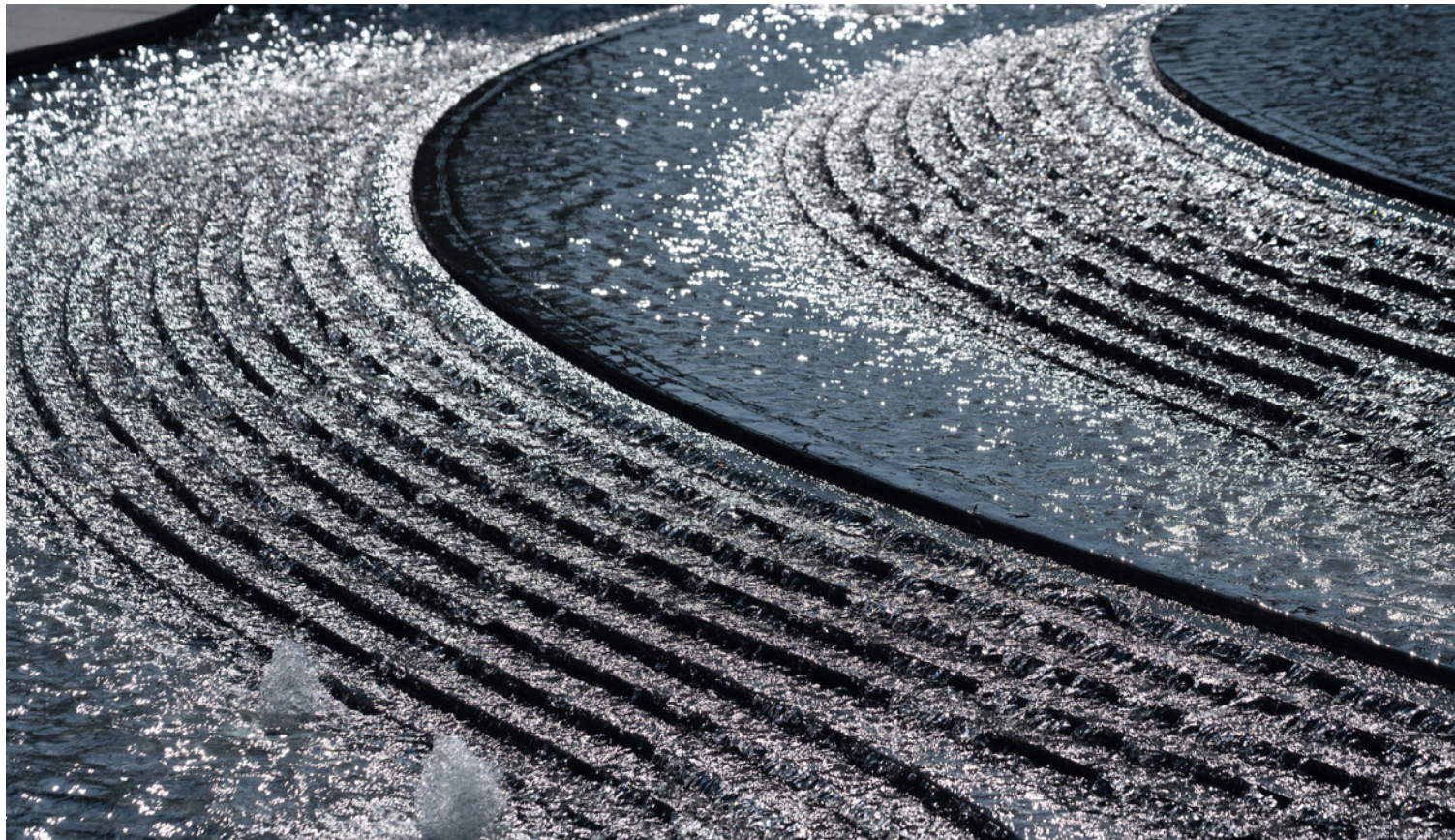
*Historic Middle Eastern Shields*



*Kuwaiti Basket Weaving*



*Kuwaiti National Flower (Arfaj)*



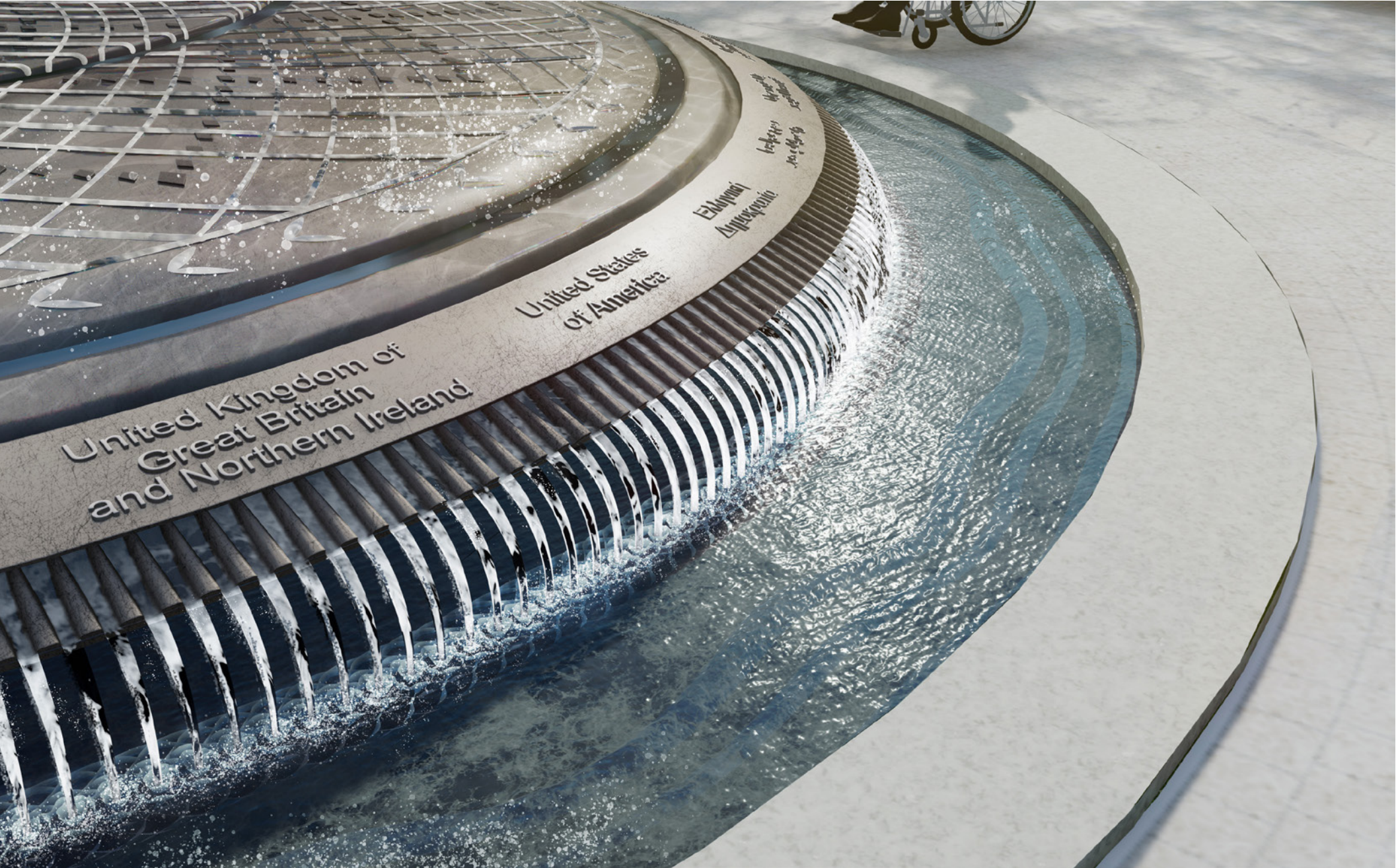


# Unity Shield: Service of the Coalition





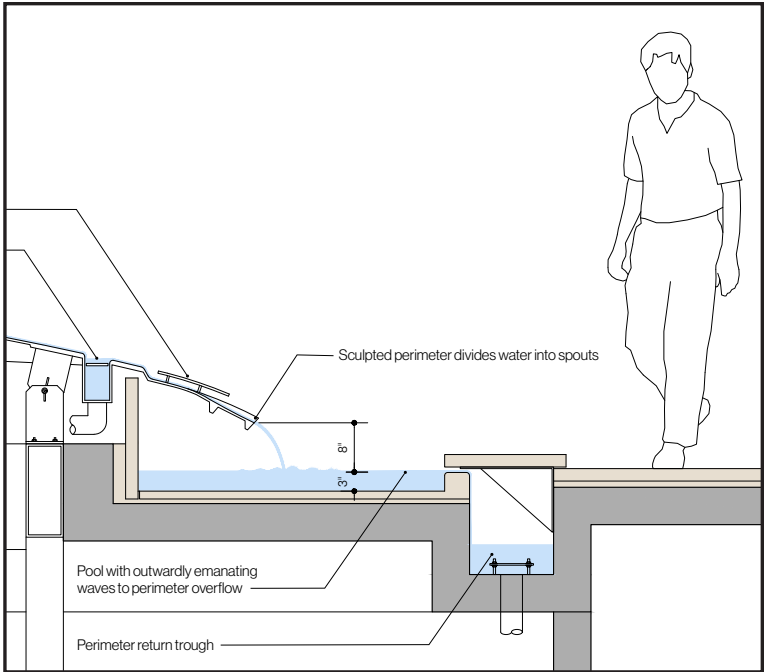
# Unity Shield: Service of the Coalition - Perimeter Detail



Edge Rendering



Perimeter Spout Precedent



Edge Detail



# Unity Shield: Service of the Coalition



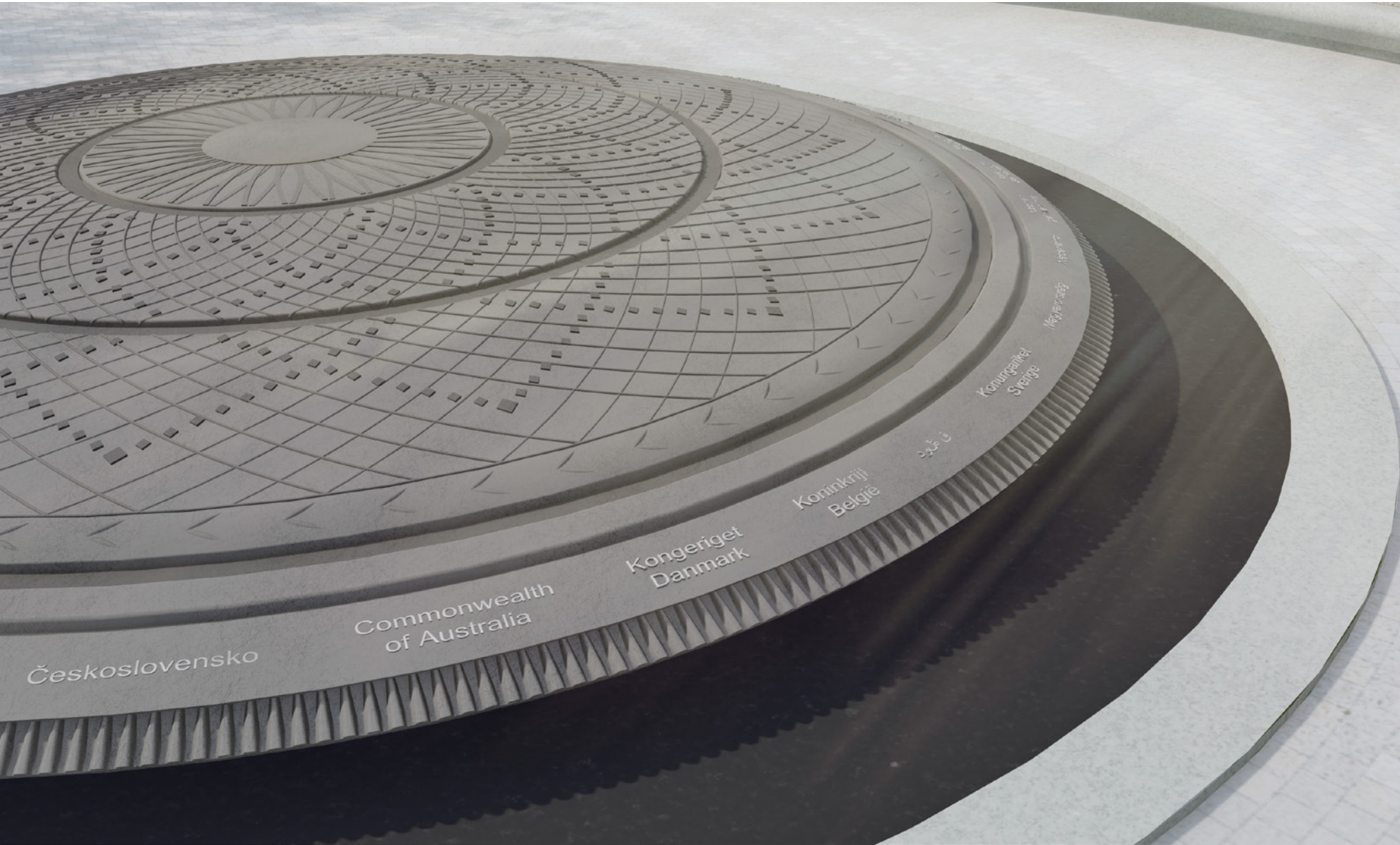
*Dry Condition*



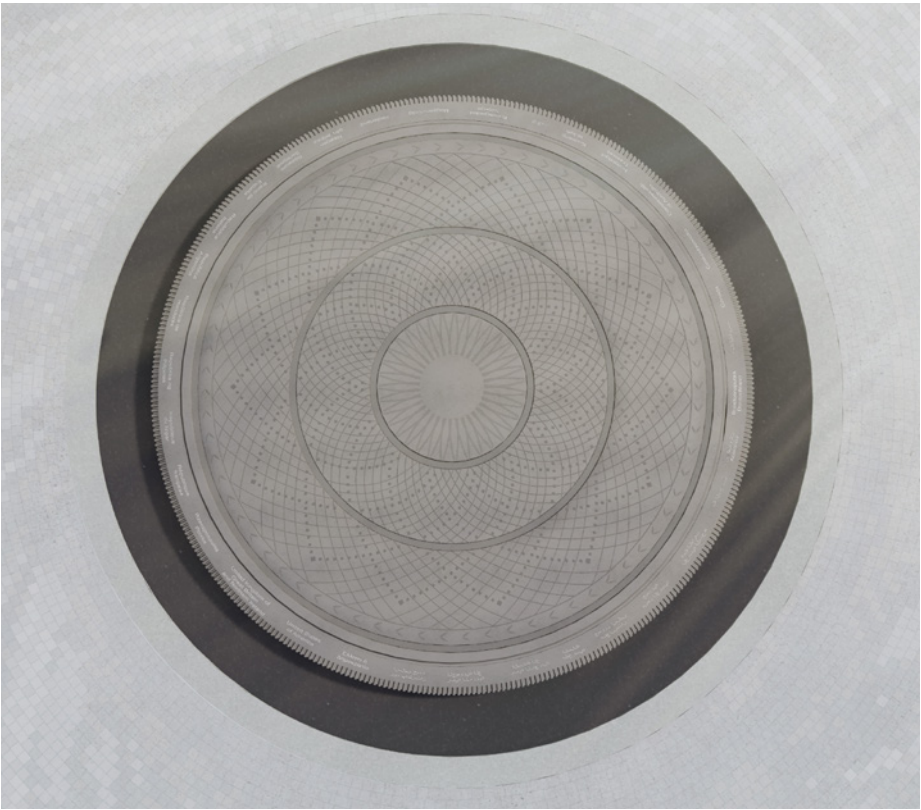
*Wet Condition*



# Unity Shield: Pattern Exploration - Woven Spiral



Perspective



Plan



Elevation

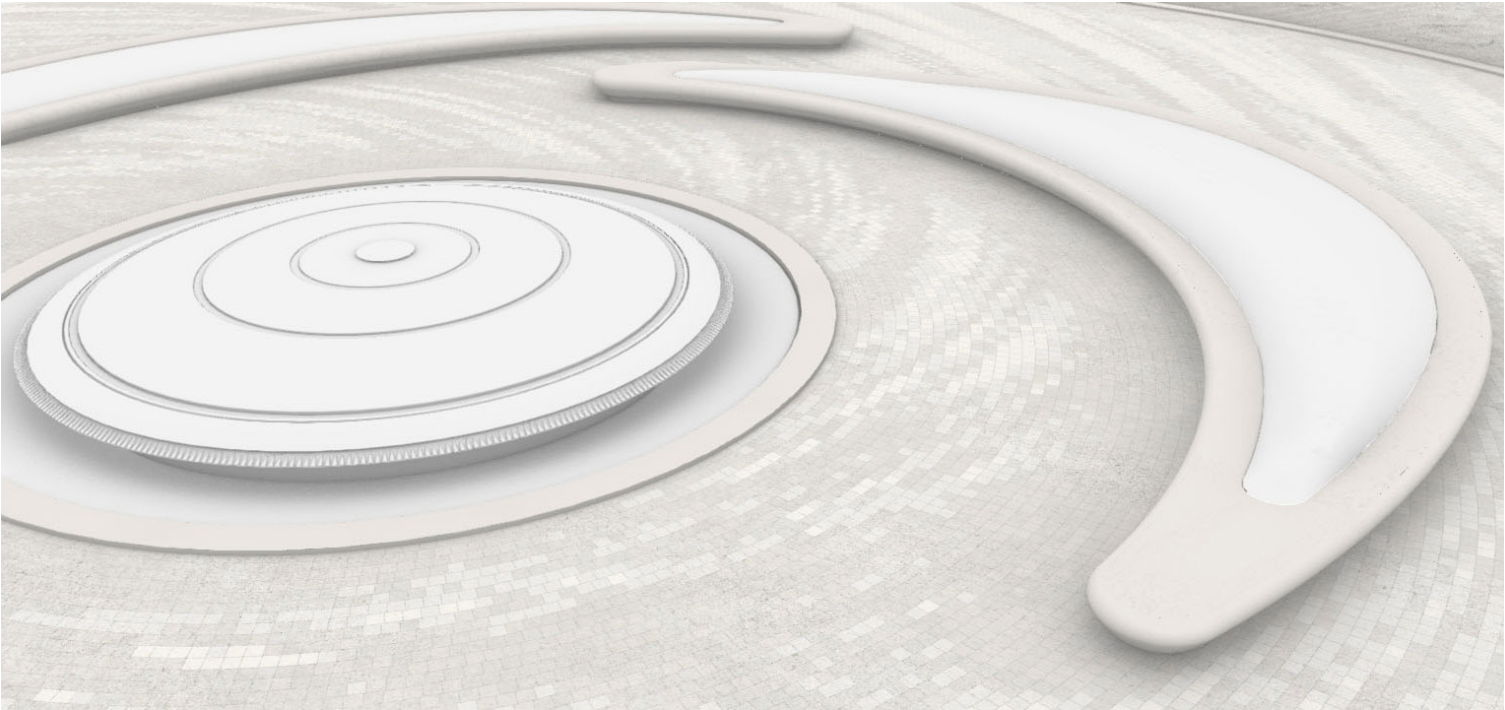
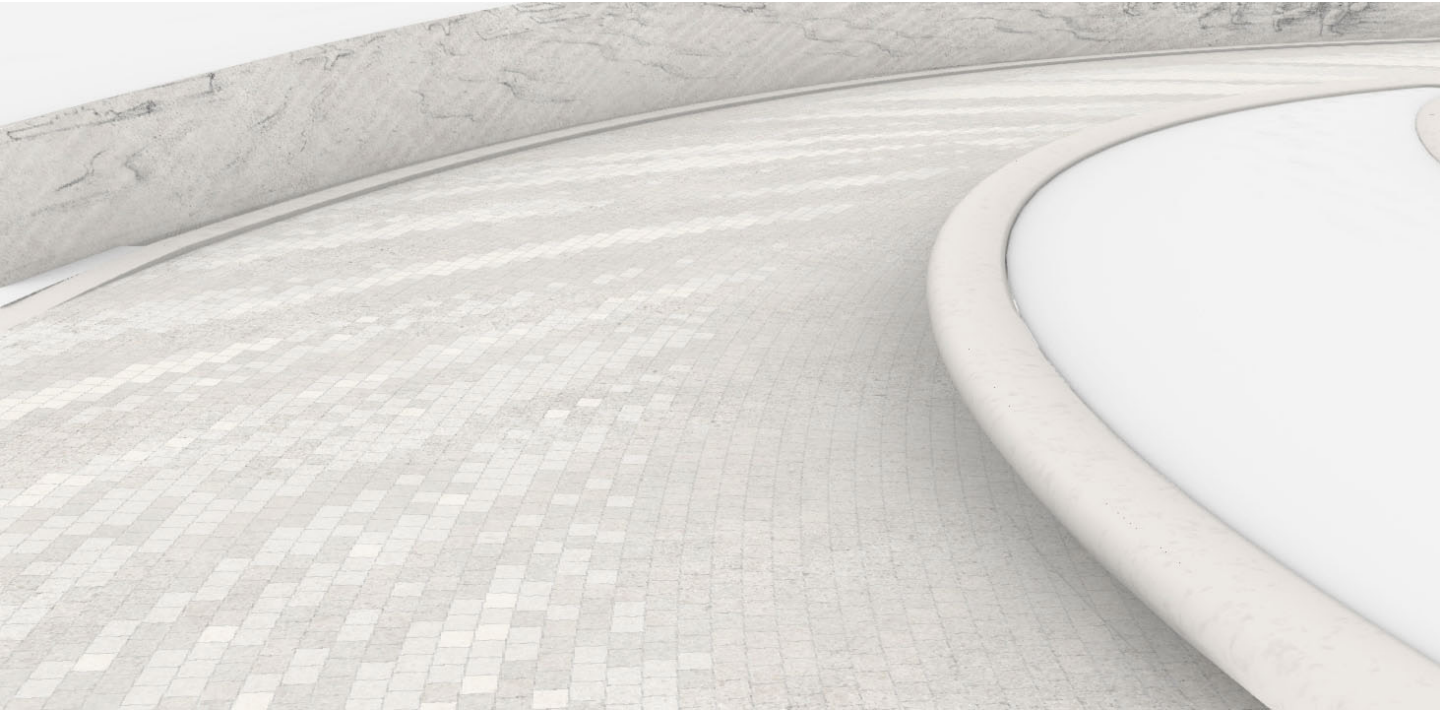
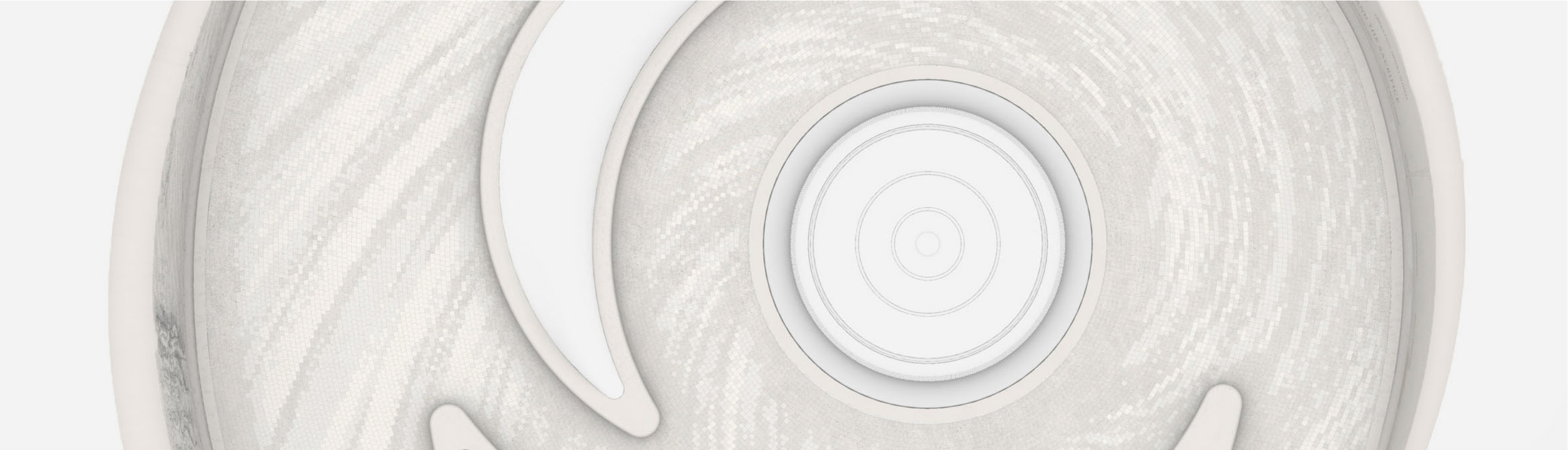


# Paving



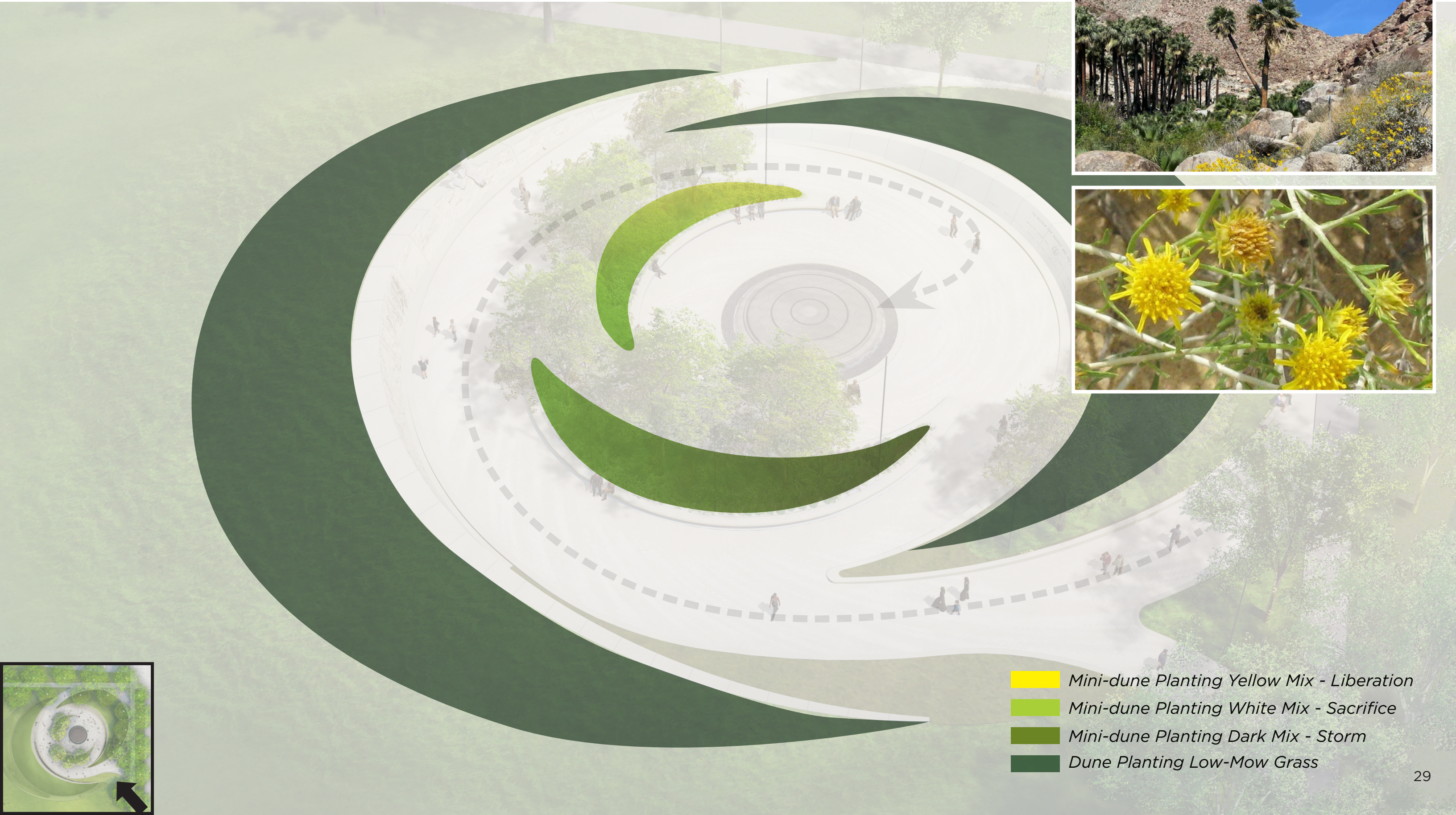


# Paving





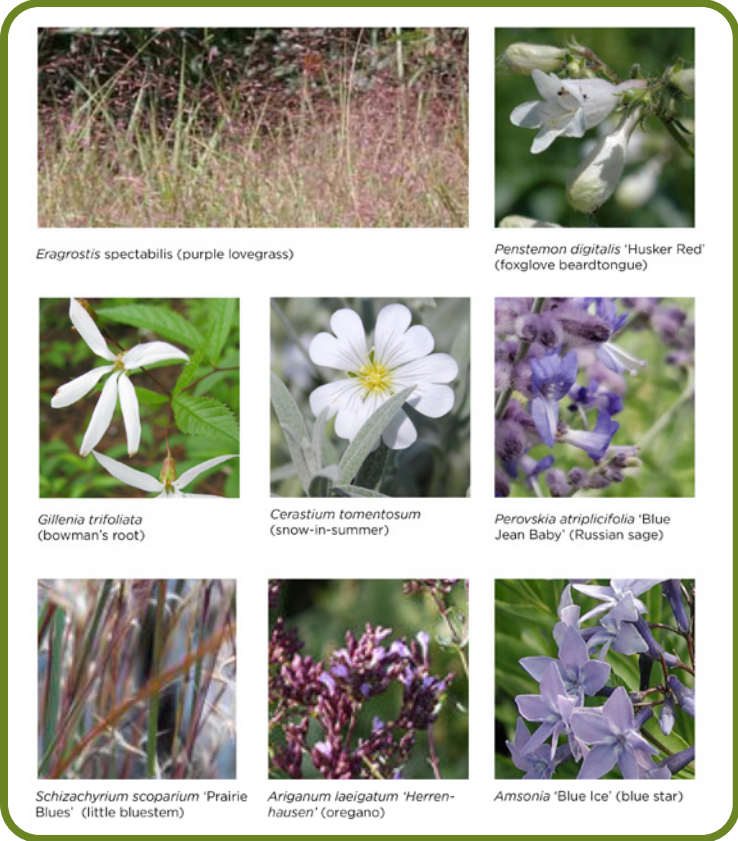
# Planting - Overall



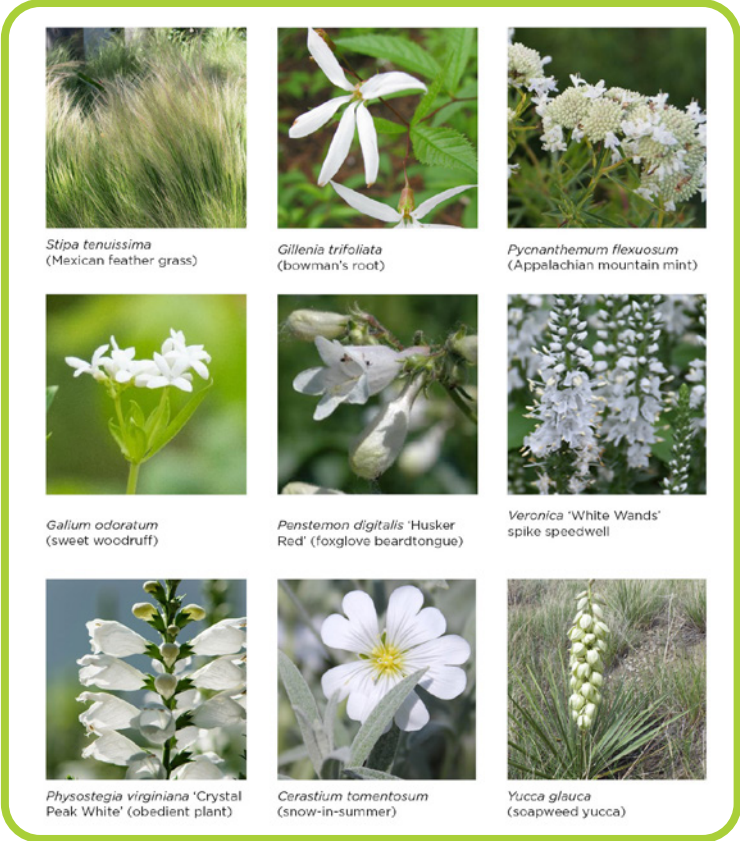
- Mini-dune Planting Yellow Mix - Liberation
- Mini-dune Planting White Mix - Sacrifice
- Mini-dune Planting Dark Mix - Storm
- Dune Planting Low-Mow Grass



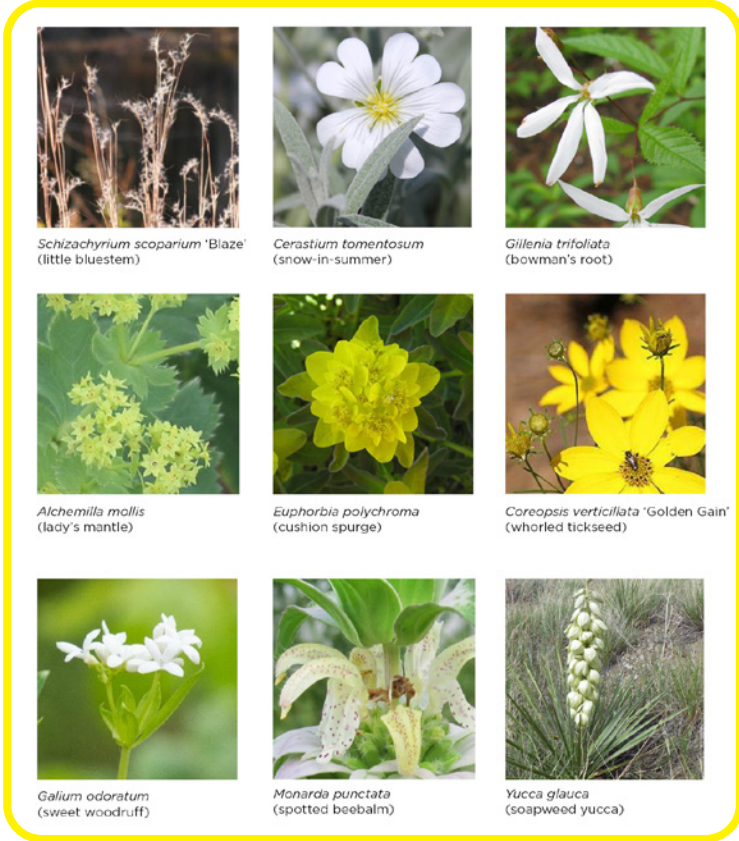
# Planting - Mini-dunes



Mini-dune Planting Dark Mix - Storm



Mini-dune Planting White Mix - Sacrifice



Mini-dune Planting Yellow Mix - Liberation



Inspiration - National Flower of Kuwait: *Rhanterium epapposum* (Al-arfaj flower)



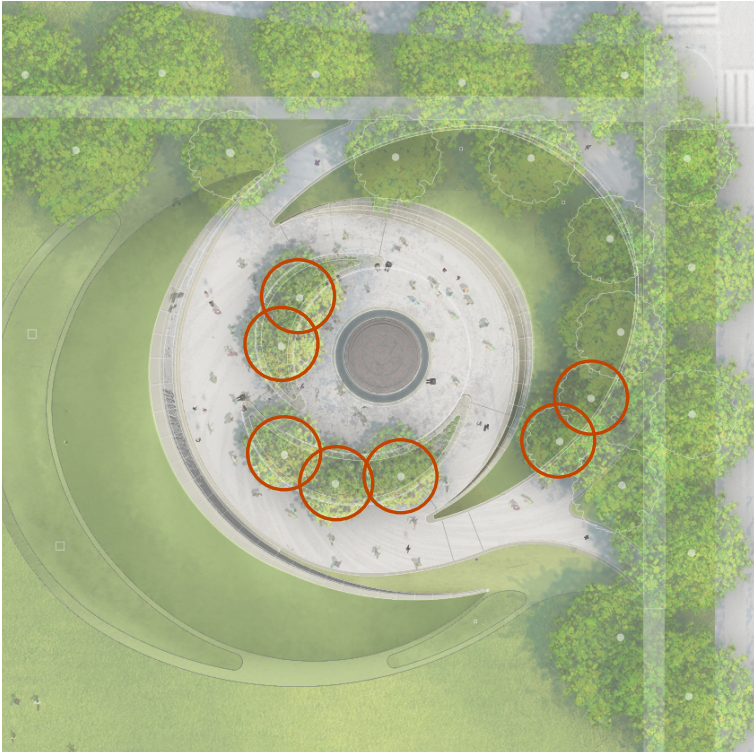
Mini-dunes from Coalition Grove



Mini-dunes looking toward Coalition Grove



# Planting - Mini-dune Trees



*Yellowwood (Cladrastis kentukea)*



*Spring*



*Summer*



*Fall*



*Winter*



# Planting - Dune Landform



*Storm Wall Dune*



*Inscription Wall Dune*



*Carex praegracilis*

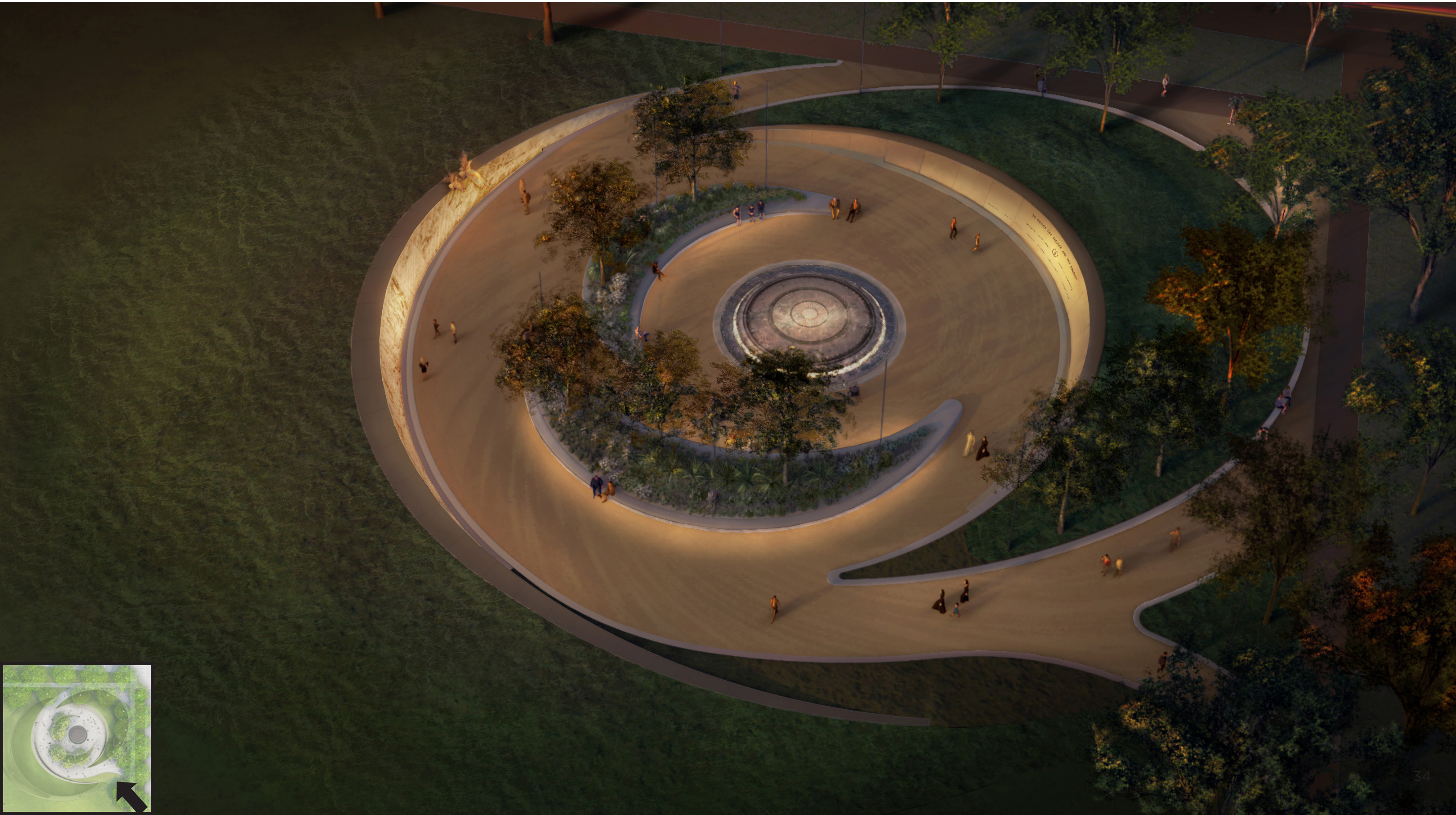


# Lighting



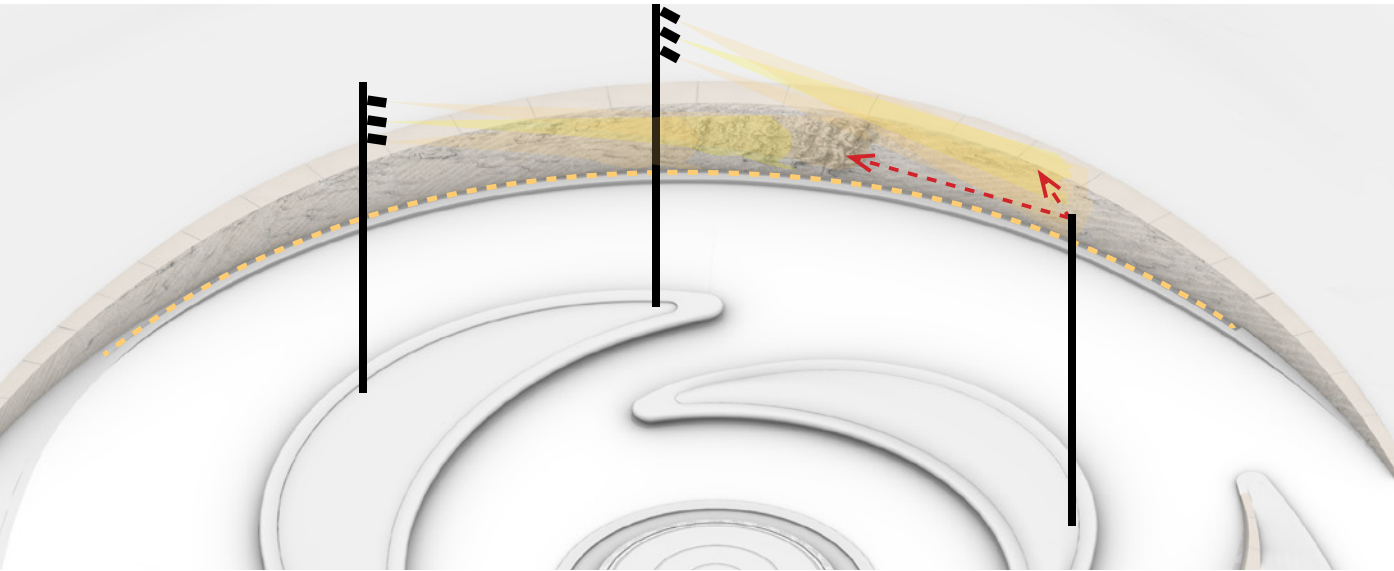


# Lighting

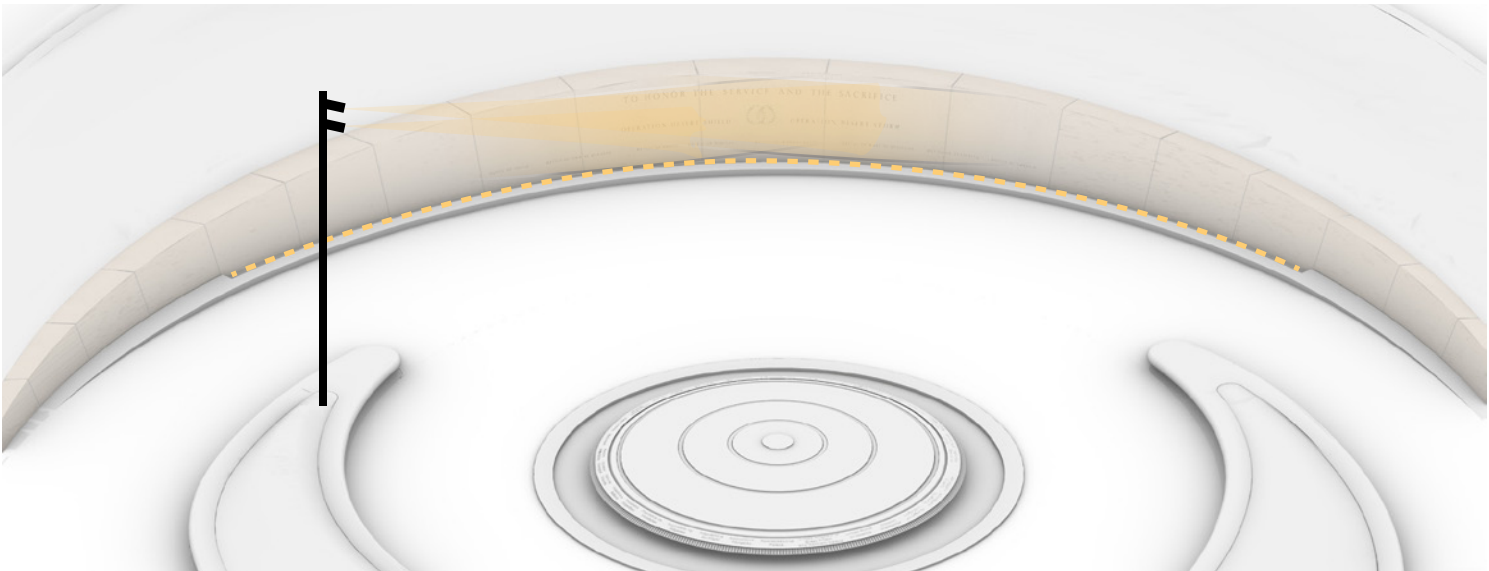




# Lighting the Commemorative Work



STORM WALL (CONFLICT + LIBERATION)



INSCRIPTION WALL



*(2-3) Framing Projectors  
Lighting the central soldiers  
of the bas-relief*

*(2-3) Framing Projectors  
Lighting the Raptors*



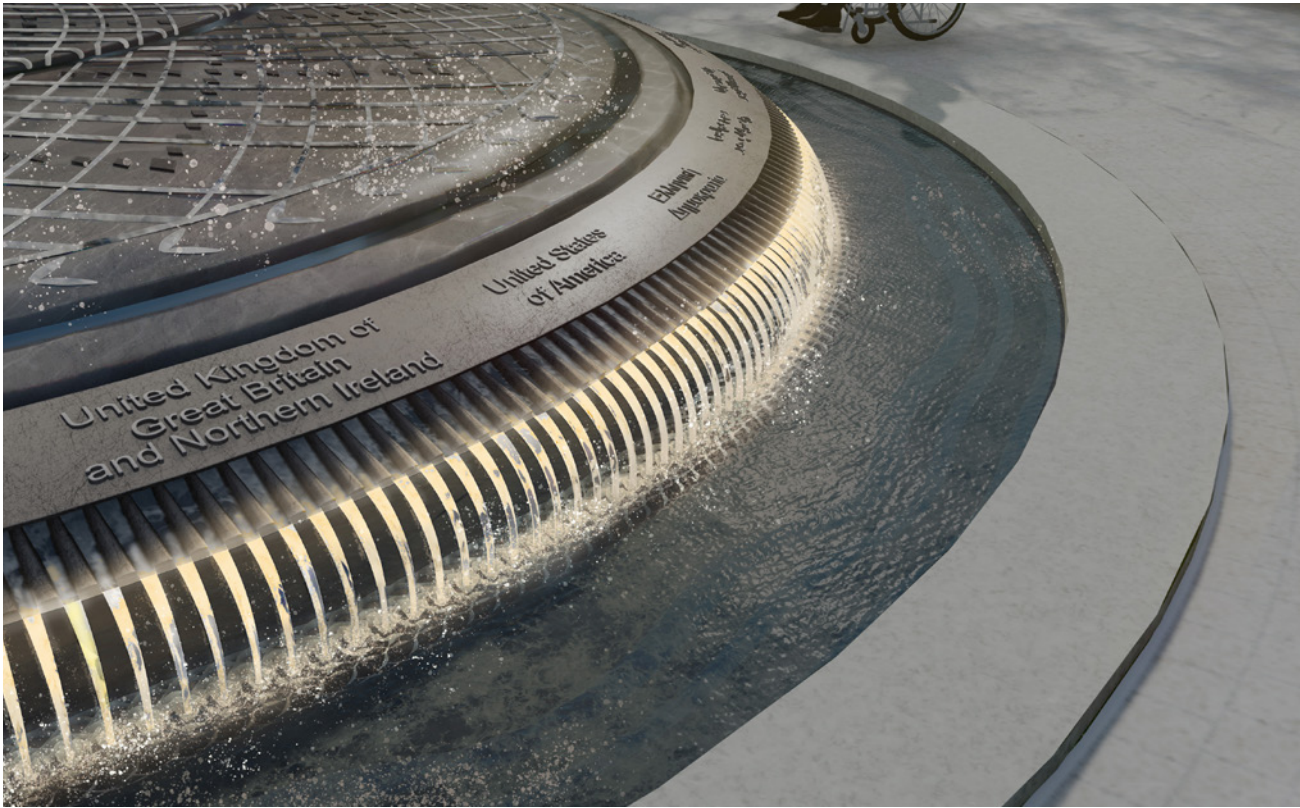
*(2-3) Gobo Projectors Lighting Inscription Wall Center*



# Lighting the Commemorative Work



*Light Pole for Unity Shield*



*Edge of Unity Shield*



# Signage









# APPENDIX

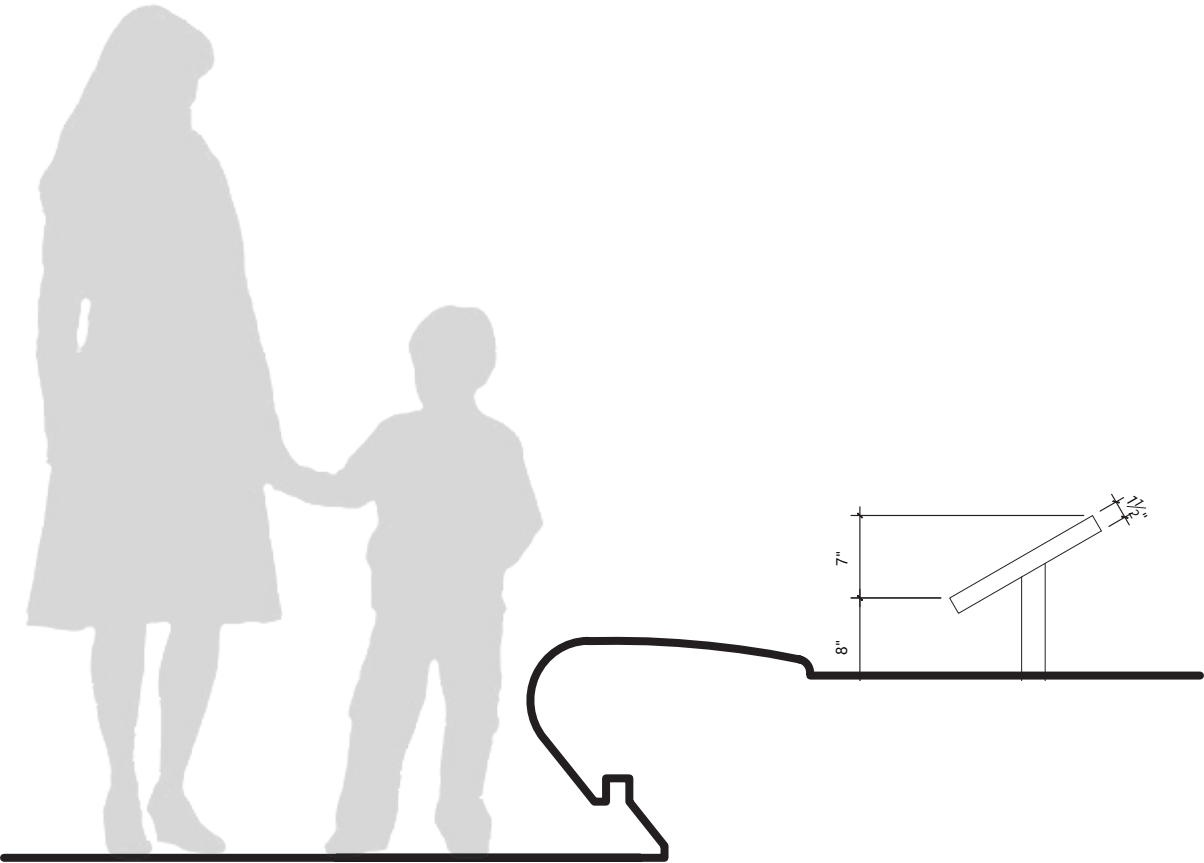
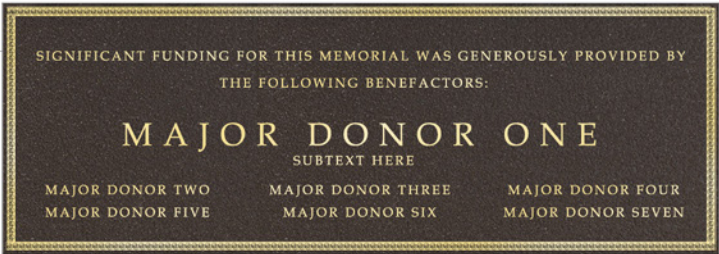
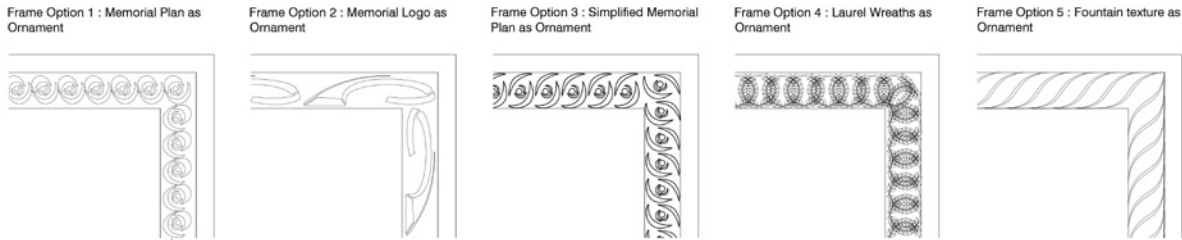


# Memorial Site and Massing





# Donor Plaque





# Storm Wall: Service in the Conflict



STORM WALL AT OCTOBER 2021 CFA SUBMISSION



## KEY OBSERVATIONS FROM FEBRUARY 2022 ON-SITE STAKING AND 1:1 MOCK-UPS

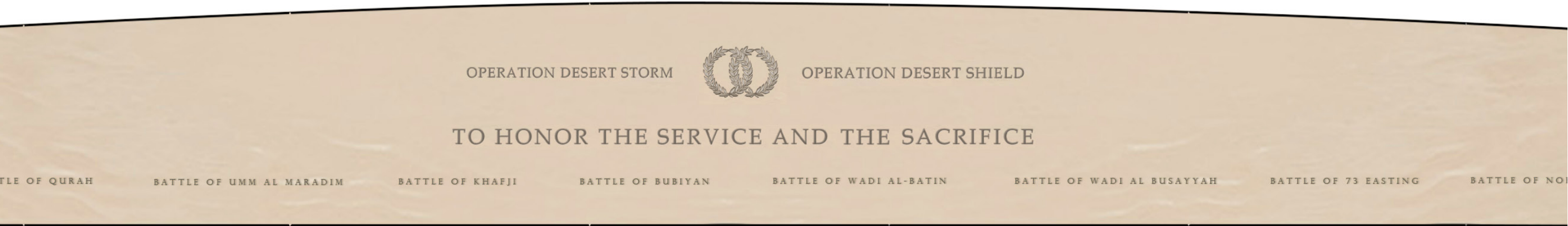
- Raptors are scaled from 6' and 9' to 7' and 10.5'
- Raptors are shifted 9.5' to the left
- Sunrise is shifted approx. 11' to the right
- Both quotes are moved toward center of wall, with equal spacing to the central figures



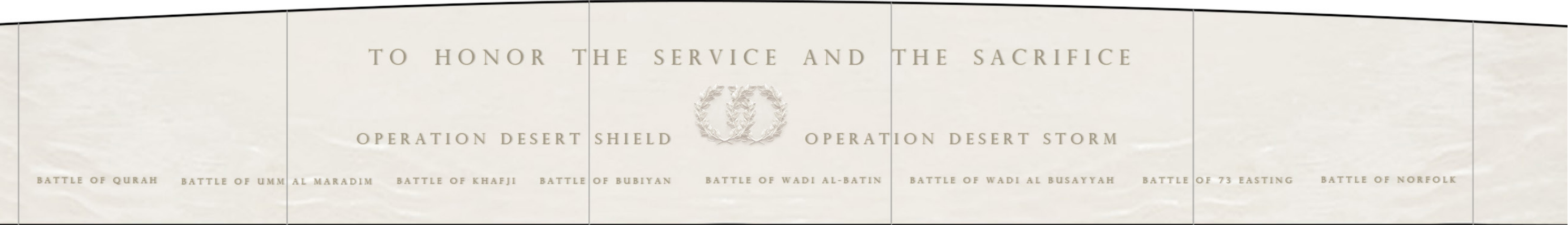
CURRENT STORM WALL (color adjusted to accurately reflect Giallo Antico)



# Inscription Wall: Service and Sacrifice


























































INSCRIPTION WALL AT OCTOBER 2021 CFA SUBMISSION



CURRENT INSCRIPTION WALL (color adjusted to accurately reflect Giallo Antico)



# Planting - Mini-dunes

Botanical Name	Common Name	Category	Height	Width	Flower & Foliage Color	Spring		Summer			Fall		Winter			Sun	Water	Soil	Maintainance	Mix %	Notes	
						Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec							Jan
DARK TONE (STORMY)																						
Amsonia tabernaemontana 'Blue Ice'	'Blue Ice' blue star	perennial	12-18"	12-24"														full sun to part shade	moist	loamy, well-drained soil		Full sun, dappled shade, partial shade. Drought-tolerant once established
																						
Ariganum laeigatum 'Herrenhausen'	oregano	perennial	24-48"	24-36"														full sun	medium	average to sandy well-drained soil		Prefers slightly alkaline conditions
																						
Gillenia trifoliata	bowman's root	perennial	24-36"	24-36"														part shade to shade	moist	Well-drained, rich, rocky, acid soil. Tolerates alkaline soil.		
																						
Penstemon digitalis 'Husker Red'	'Husker Red' foxglove beardtongue	perennial	28-32"	15-18"														full sun to part shade	dry	very well-drained soil		At least 3 hours of direct sunlight; does well with morning sun and afternoon shade
																						
Perovskia atriplicifolia 'Blue Jean Baby'	'Blue Jean Baby' Russian sage	perennial	28-34"	30-36"														full sun	medium	very well-drained soil		will die in standing water
																						
Cerastium tomentosum	snow-in-summer	groundcover	8"	24"														full sun to part shade	dry	well-drained soil		Tolerates a wide range of soils as long as they are well-drained. Great for ground covers or rock gardens
																						
Eragrostis spectabilis	purple lovegrass	grass	8-18"	12-24"														full sun	moist	sandy, well-drained soil		
																						
Schizachyrium scoparium 'Prairies Blues'	'Prarie Blues' little bluestem	grass	24-36"	12-24"														full sun	medium to dry	well-drained soil		'Prairie Blues' Little Bluestem will grow in almost any soil.
																						
WHITE TONE (SACRIFICE)																						
Gillenia trifoliata	bowman's root	perennial	24-36"	24-36"														part shade to shade	moist	Well-drained, rich, rocky, acid soil. Tolerates alkaline soil.		
																						
Yucca glauca	soapweed yucca	perennial evergreen	16-20"	24-36"														full sun	dry	well-drained soil		
																						
Penstemon digitalis 'Husker Red'	'Husker Red' foxglove beardtongue	perennial	28-32"	15-18"														full sun to part shade	dry	very well-drained soil		At least 3 hours of direct sunlight; does well with morning sun and afternoon shade
																						
Physostegia virginiana 'Crystal Peak White'	'Crystal Peak White' obedient plant	perennial	16-18"	12-15"														full sun	dry	tolerates clay to sandy soil		
																						
Pycnanthemum flexuosum	Appalachian mountain mint	perennial	24-36"	12-36"														full sun to part shade	medium to dry	rich, loamy well-drained soil		Tolerant of drier conditions once established
																						
Veronica 'White Wands'	spike speedwell	perennial	14-16"	16-20"														full sun to part shade	medium	well-drained soil		
																						
Cerastium tomentosum	snow-in-summer	groundcover	8"	24"														full sun to part shade	dry	well-drained soil		Tolerates a wide range of soils as long as they are well-drained. Great for ground covers or rock gardens
																						
Galium odoratum	sweet woodruff	groundcover	6-12"	8-16"														shade	moist to medium	well-drained soil		Fragrant flowers. Grows most vigorously in damp to wet soil conditions, but it also tolerates dry shade. To prevent it from
																						
Stipa tenuissima	Mexican feather grass	grass	12-36"	12"														Full sun to partial sun	medium to dry	moderately fertile, well-drained soil		Drought-tolerant once established
																						
YELLOW TONE (LIBRATION)																						
Alchemilla mollis	lady's mantle	perennial	12-18"	24-30"														full sun to part shade	moist	well-drained soil		Drought-tolerant once established. However, it will require supplemental water in high heat or full sun areas to prevent leaves from
																						
Coreopsis verticillata 'Golden Gain'	'Golden Gain' whorled tickseed	perennial	24"	44"														full sun	dry	well-drained soil		Tolerates hot, dry conditions once established
																						
Yucca glauca	soapweed yucca	perennial evergreen	16-20"	24-36"														full sun	dry	well-drained soil		
																						
Euphorbia polychroma	cushion spurge	perennial	12-18"	12"														full sun to part shade	dry	sandy or rocky well-drained soil		
																						
Gillenia trifoliata	bowman's root	perennial	24-36"	24-36"														part shade to shade		Well-drained, rich, rocky, acid soil. Tolerates alkaline soil.		
Monarda punctata	spotted beebalm	perennial	12-36"	9-12"														full sun to part shade	dry	well-drained soil		
Cerastium tomentosum	snow-in-summer	groundcover	8"	24"														full sun to part shade	dry	well-drained soil		Tolerates a wide range of soils as long as they are well-drained. Great for ground covers or rock gardens
Galium odoratum	sweet woodruff	groundcover	6-12"	8-16"														shade	moist to average	well-drained soil		Fragrant flowers. Grows most vigorously in damp to wet soil conditions, but it also tolerates dry shade. To prevent it from
Schizachyrium scoparium 'Blaze'	'Blaze' little bluestem	grass	36-42"	12-24"														full sun	medium to dry	well-drained soil		
Echinacea purpurea	rainbow marcella coneflower	perennial	24-36"	18-24"														full sun to part shade		well-drained soil		



# Planting - Mini-dunes

Dark Tone

*Gillenia trifoliata* (bowman's root)



*Schizachyrium scoparium* 'Prairie Blues' (little bluestem)



*Penstemon digitalis* 'Husker Red' (foxglove beardtongue)



*Perovskia atriplicifolia* 'Blue Jean Baby' (Russian sage)



*Centranthus ruber* (red valerian)



*Amsonia* 'Blue Ice' (blue star)



*Eragrostis spectabilis* (purple lovegrass)



*Cerastium tomentosum* (snow-in-summer)



White

*Gillenia trifoliata* (bowman's root)



*Pycnanthemum flexuosum* (Appalachian mountain mint)



*Penstemon digitalis* 'Husker Red' (foxglove beardtongue)



*Stipa tenuissima* (Mexican feather grass)



*Physostegia virginiana* 'Crystal Peak White' (obedient plant)



*Monarda punctata* (spotted beebalm)



*Galium odoratum* (sweet woodruff)



*Veronica* 'White Wands' spike speedwell



*Cerastium tomentosum* (snow-in-summer)



Yellow

*Gillenia trifoliata* (bowman's root)



*Schizachyrium scoparium* 'Blaze' (little bluestem)



*Echinacea purpurea* 'Rainb299' (rainbow marcella coneflower)



*Coreopsis verticillata* 'Golden Gain' (whorled tickseed)



*Physostegia virginiana* 'Crystal Peak White' (obedient plant)



*Alchemilla mollis* (lady's mantle)



*Euphorbia polychroma* (cushion spurge)



*Galium odoratum* (sweet woodruff)



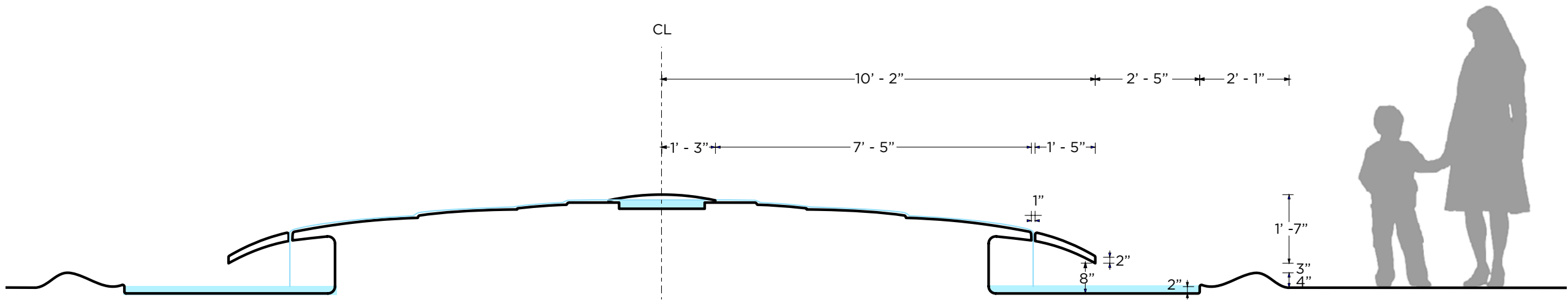
*Cerastium tomentosum* (snow-in-summer)



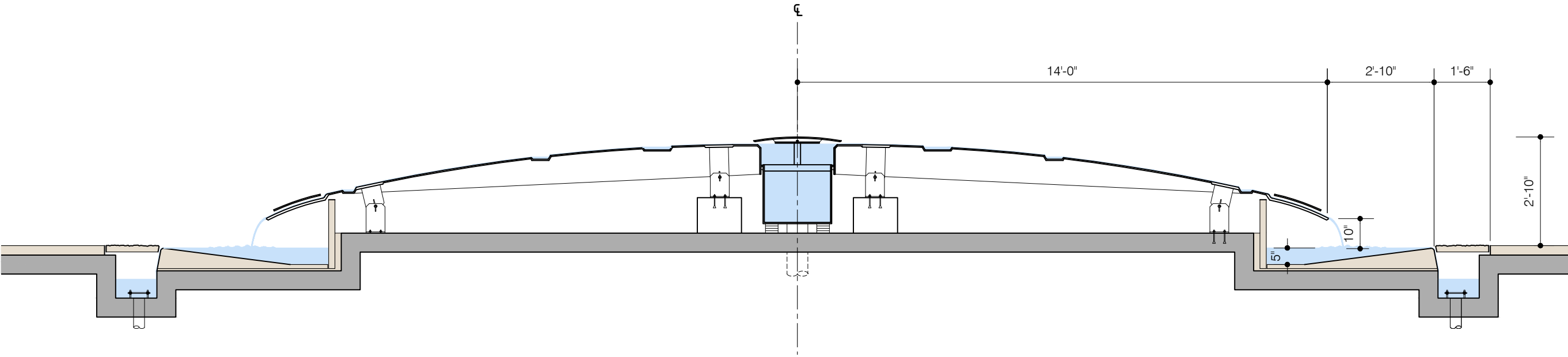
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# Unity Shield



UNITY SHIELD AT OCTOBER 2021 CFA SUBMISSION

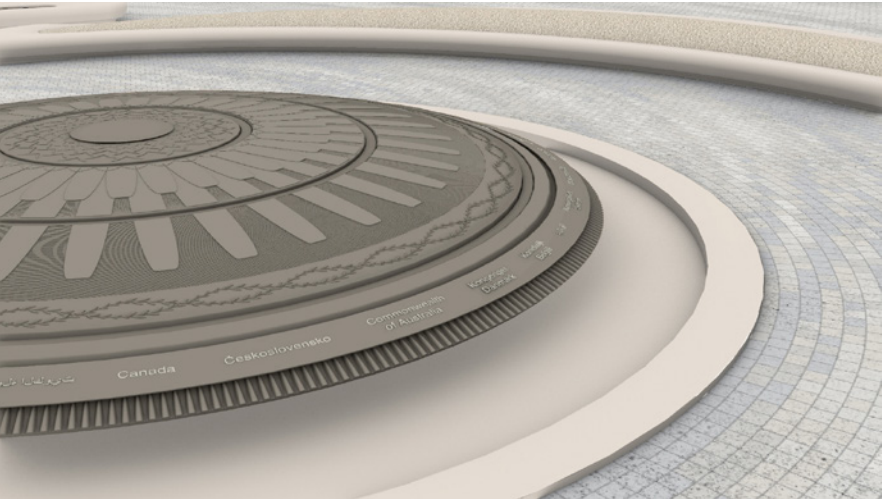


CURRENT SHIELD SIZE AND CURVATURE



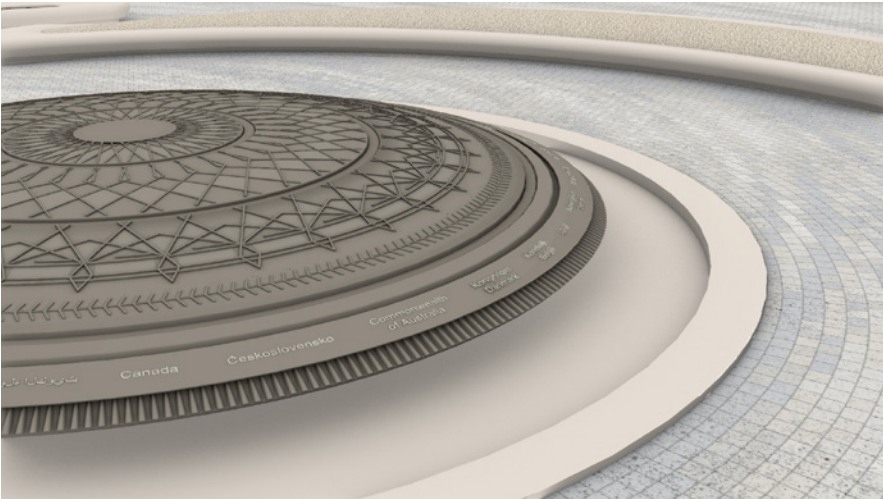
# Unity Shield: Pattern Exploration - Additional Studies

RADIAL (ARFAJ FLOWER)



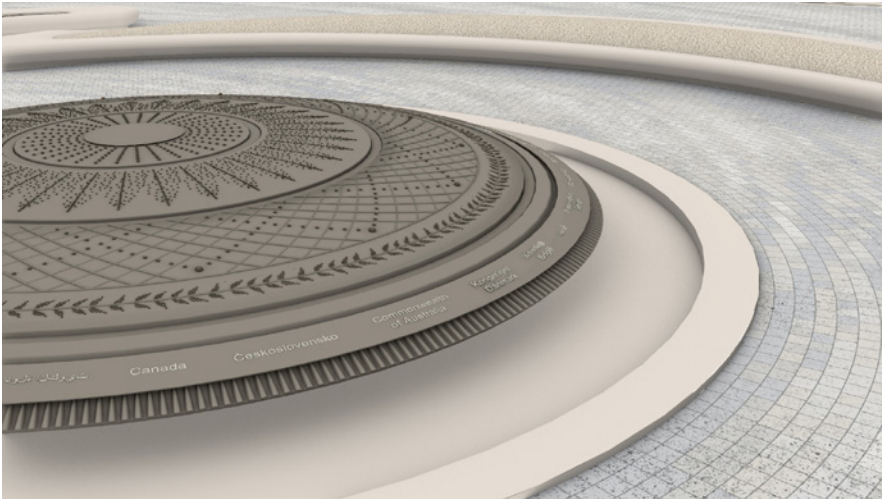
Perspective

ABSTRACTED GEOMETRIC PATTERN



Perspective

BEADED



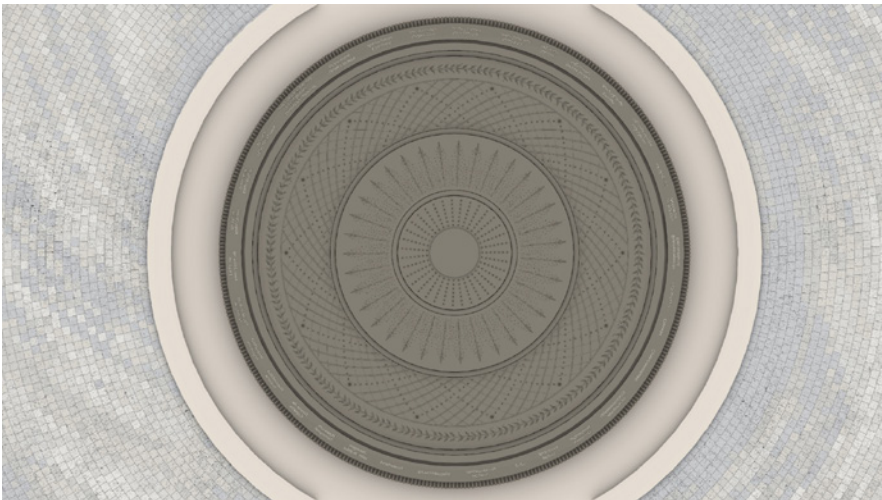
Perspective



Plan



Plan



Plan



Elevation



Elevation



Elevation

Additional patterns were considered for the Unity Shield, including a radial pattern that reflects the Arfaj flower; an abstracted geometric pattern that incorporates inspiration from tanks, boats, and planes; and a beaded pattern that includes elements of the woven spiral pattern.