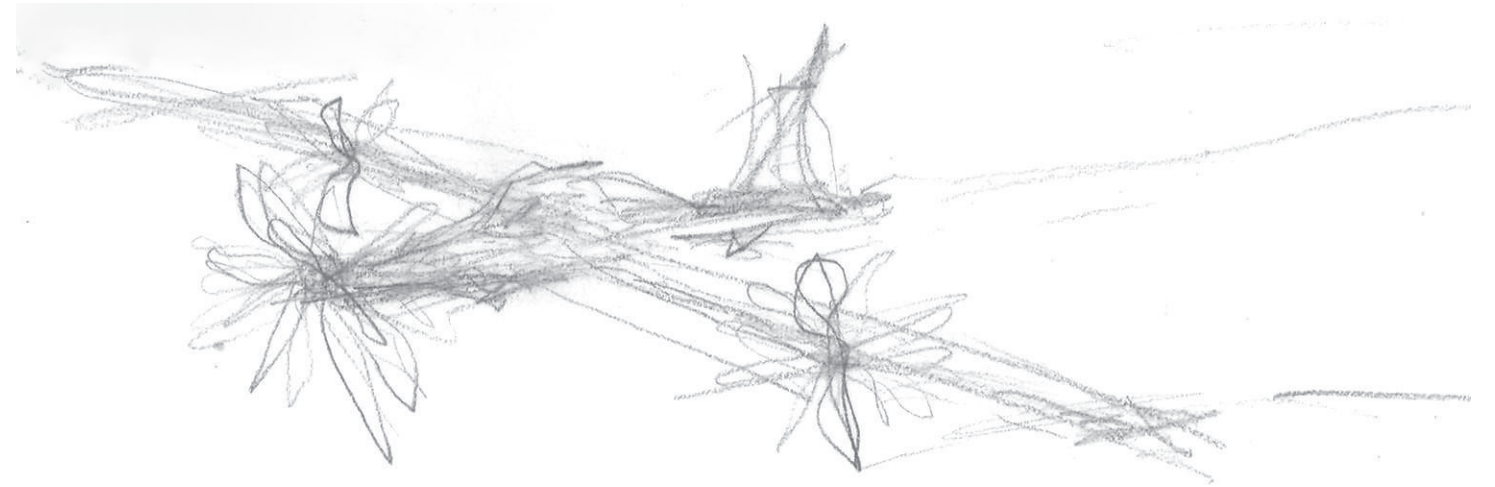


MARCH FIELD AIR MUSEUM

LINDSAY GLOVER
LANDSCAPE DESIGN 7
SPRING 2020
PATRICK REYNOLDS AND
E. ALLAN SPULECKI

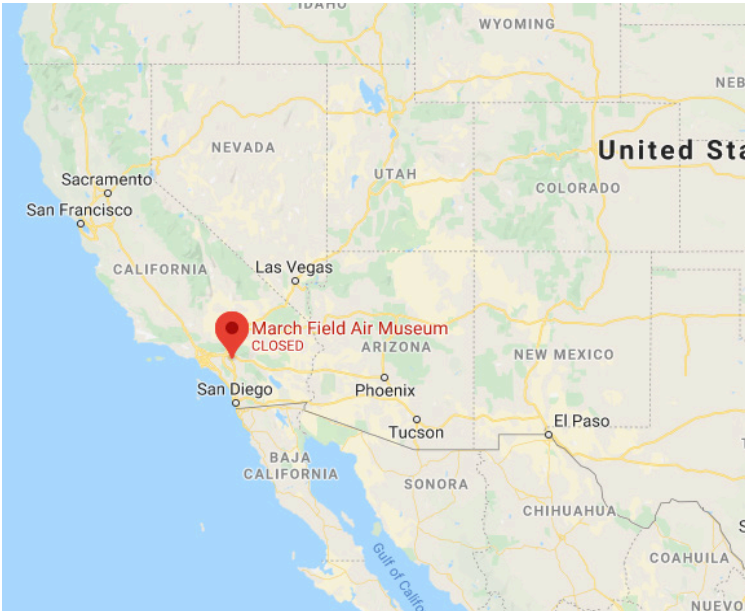
CONTENT



1-2	LOCATION
3	GOALS AND PROGRAM ELEMENTS
4-5	HISTORY
6-12	PRECEDENTS AND CASE STUDIES
13-16	SITE INVENTORY/ANALYSIS
17	DESIGN CONCEPT 1 BUBBLE
18	DESIGN CONCEPT 2 BUBBLE
19	FINAL CONCEPT
20	SCHEMATIC CONCEPT
21	MASTER PLAN
22-24	MEMORIAL GARDEN
25-27	VIETNAM FIRE BASE
28-30	WORLD WAR 1 MEMORIAL
31-34	IRAQI/AFGHANISTAN FORWARD OPERATING BASE
35-39	AIRCRAFT EXHIBIT/SHADED PAVILION
40-45	THE C-141 CAFE/RESTAURANT/PUB

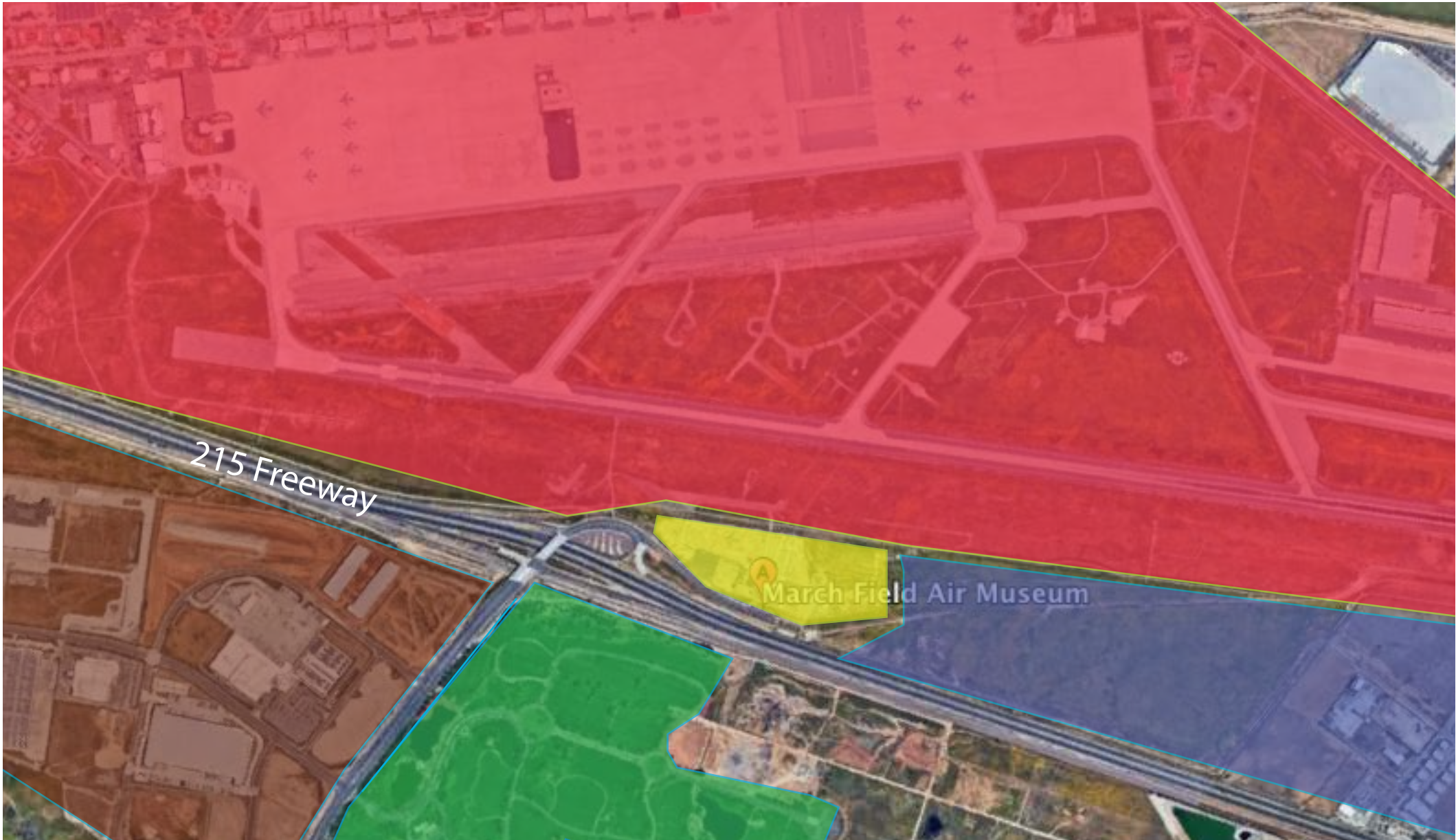
HISTORIC MARCH FIELD AIR MUSEUM

Location Map



- 75 miles east of downtown Los Angeles in the city of Riverside, California.

Vicinity Map

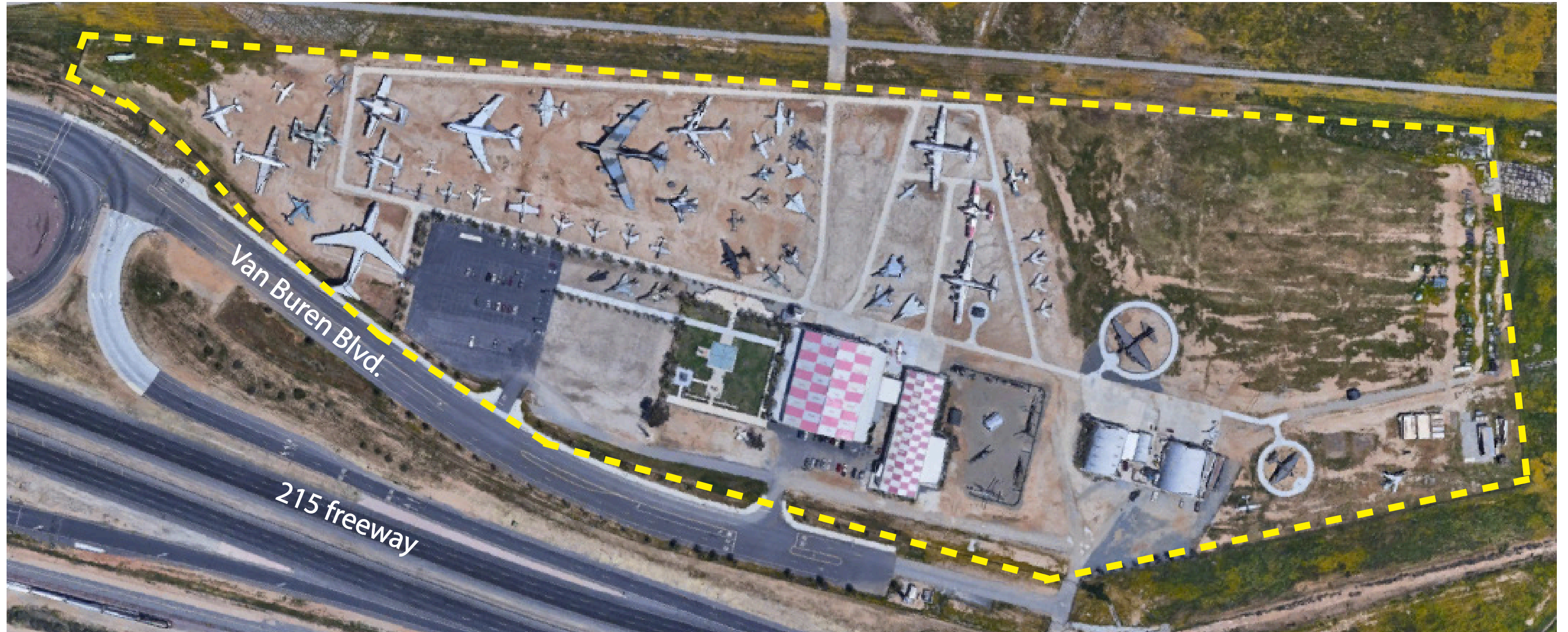


- March Field Air Museum
- Industrial
- March Field Air Reserve Base
- Riverside National Cemetery
- Future Development

0.5 MILES



HISTORIC MARCH FIELD AIR MUSEUM



March Air Field Museum
22550 Van Buren Boulevard
Riverside, Ca. 92518

The property is
approximately 34 acres and is
located off of the 215 freeway
in Riverside

200 ft. 



Project Statement:

- Create a master plan for the March Air Field Museum that will improve existing exhibits as well as creating new ones which will enhance the visitor's experience and understanding of the importance Air Forces role in history.

Project Goals:

- Increase visitor's from 70,000 per yr. to 100,000 per yr.
- Improve the appeal and visibility of the Museum from the 215 freeway
- Improve the museums outdoor exhibits and event spaces to allow for shade and flexibility

Program Elements:

- Redesign of the memorial garden and front parking lot with the inclusion of a new restaurant.
- Improved grand main entrance with new displays and site appropriate landscaping
- Expansion of the main hangar to create shade and expand the current exhibit space
- Develop upon the Vietnam and Iraqi/Afghanistan Fire Bases and create a new WW1 outdoor memorial exhibit

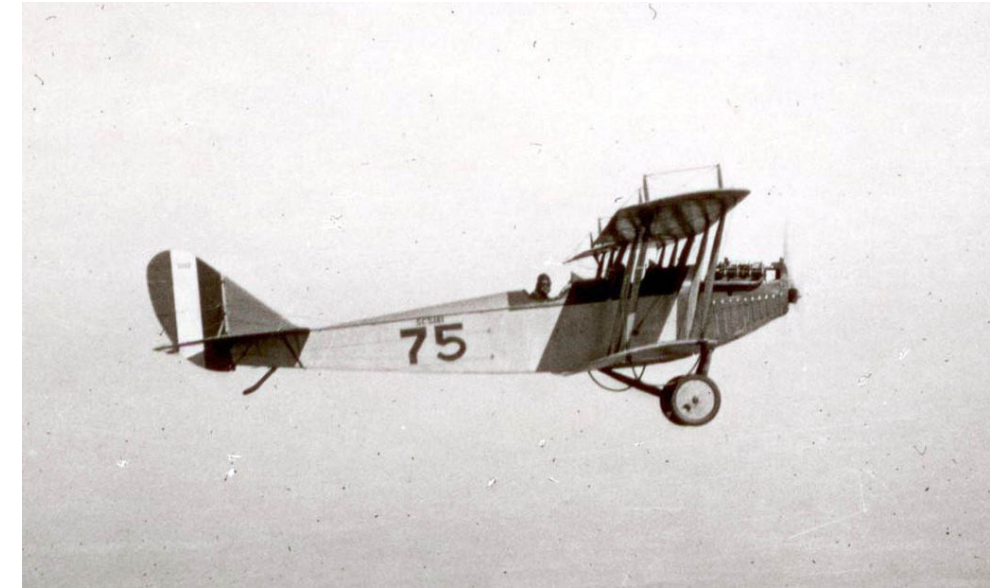
HISTORIC MARCH FIELD AIR FORCE BASE



Oblique aerial photo of March Field, taken in March 1932 looking southeast to northwest.

March is one of the oldest airfields operated by the United States military, being established as Alessandro Flying Training Field in February 1918. It was one of thirty-two Air Service training camps established after the United States entry into World War I in April 1917. The airfield was renamed March Field the following month for 2d Lieutenant Peyton C. March, Jr., the recently deceased son of then-Army Chief of Staff Peyton C. March, who was killed in an air crash in Texas just fifteen days after being commissioned.

March Field served as a base for primary flight training with an eight-week course. It could accommodate a maximum of 300 students. In 1918, flight training occurred in two phases: primary and advanced. Primary training consisted of pilots learning basic flight skills under dual and solo instruction. After completion of their primary training at Mather, flight cadets were then transferred to another base for advanced training.



A Curtiss JN-4 "Jenny" on a training flight during World War I. This is the type of aircraft used at March Field during this era for basic pilot training of military pilots.



Boeing P-26A Peashooters of the 17th Pursuit Group, 18 February 1935. 33-102 sits in the foreground. These aircraft were later sent to the 1st Pursuit Squadron/Group of Philippine Air Force in 1937.



Lockheed F-80s of the 1st Fighter Group, 1949. F-80C 49-493 undergoing maintenance, and F-80B 45-8704 behind it. 45-8704 is now on permanent display at the Aerospace Museum of California, located at the former McClellan AFB, near Sacramento

HISTORIC MARCH FIELD AIR FORCE BASE



On December 19, 1979, Lt. General James P. Mullins, 15th Air Force Commander, delivered an address at the dedication ceremony for the new March Air Force Base Museum. The new museum was initially housed in the 1930 Base theater (shown here), located just north of the Base's parade ground.

The museum's 2,000 square foot main exhibit area was filled with photographs, models and paintings depicting military aviation and the history of March Air Force Base (AFB) from its founding in 1918. An aircraft park, to feature aircraft that once flew from March, was established near the main gate at Cactus and Graham. "It's important to capture the essence of our past and to portray and illustrate the history of March Field," said Major Brian Daly, the museum's first director.



On February 20, 1981, the March Field Museum's first exhibit facility opened its doors to the public in Building 420--the former commissary. The 26,000 square foot building housed offices and smaller collections, plus two or three smaller aircraft. Most of the approximately 50 airplanes were located on a parking ramp on the March AFB flightline.



Designated by the letter A. Attack aircraft fly at low altitudes amid heavy anti-aircraft fire to deliver precision strikes against ground targets.



FB-111A Aardvark

F-15 Eagle



The museum today operates as a public benefit, 501(c)3 non-profit organization. It relies on donations, grant funding, and earned income to continue serving the public, and does not receive ongoing funding from any government entities. After a rigorous process, March Field Air Museum received accreditation from the American Alliance of Museums in 2011. The museum joined an elite group of only 3% of American museums that are accredited. Also in 2011, the museum opened a new 12,000 square foot addition housing educational programs and the museum library, and creating room for private rental events.

Air Museum Precedents and Case Studies

Prima Air and Space Museum, Tuscon, Az.

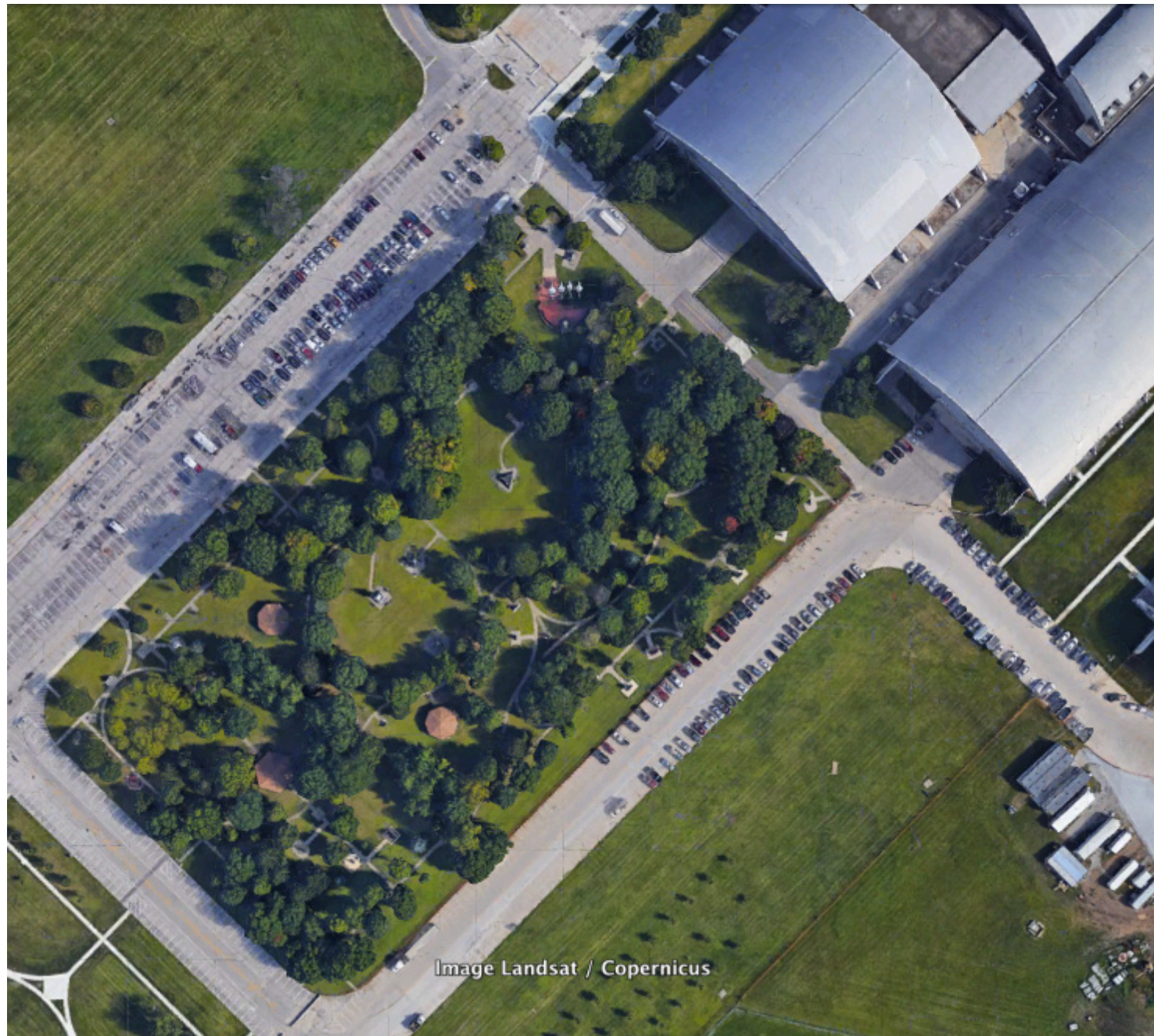
- Tuscon, Az. has a similar climate, hot and dry. Here, the Palo Verde trees are used as landscaping trees that look good and thrive in the heat!
- Museum uses a curvilinear approach to the design layout of the planes on the field.



Air Museum Precedents and Case Studies

National Museum of the USAF, Dayton Ohio

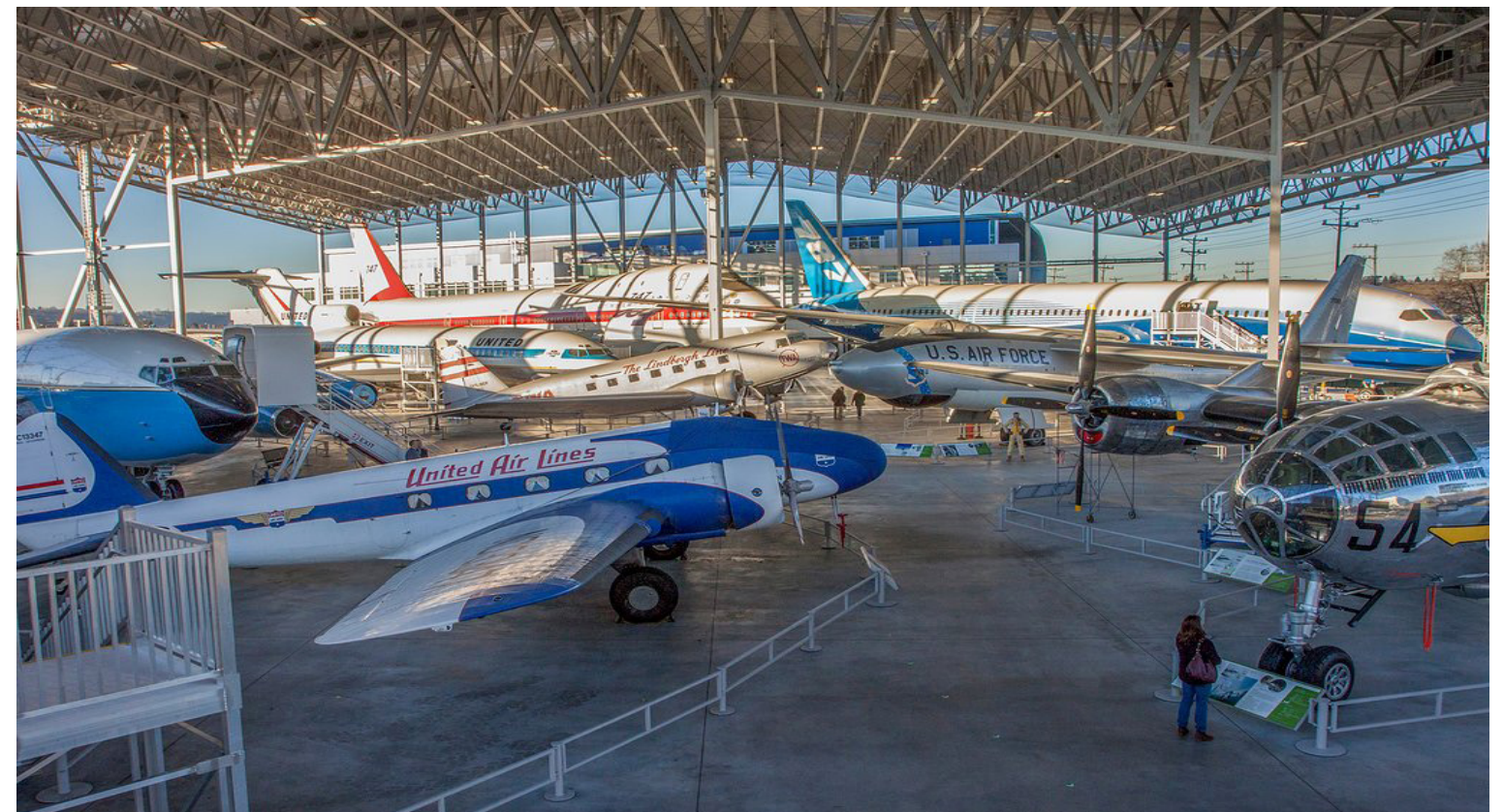
Here at the National Museum of the United States Air Force in Dayton Ohio, depicts a memorial display that really accentuates a dedication for loved ones who did not return from war. The trees and the organic nature of the site help make this memorial successful.(Below) (Right) A downed plane that dramatically illustrates the horrors of war.



Air Museum Precedents and Case Studies

The Museum of Flight, Seattle, WA

- A large outdoor structure provides shade for people while enjoying the planes on display. (below right)



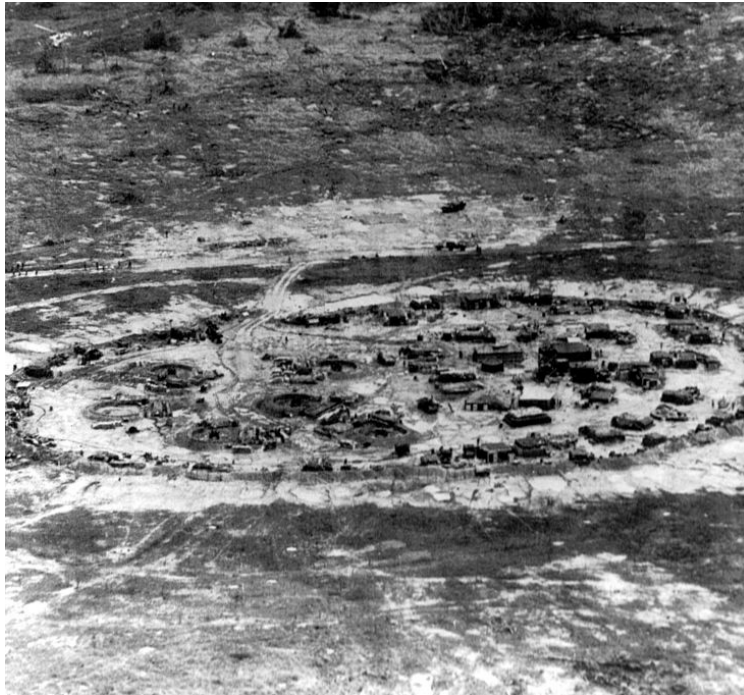
FORWARD OPERATING BASE - IRAQ/AFGHANISTAN

- FORWARD OPERATING BASE IS A STRATEGIC MILITARY BASE THAT OPERATES ON THE FRONT LINES
- USED TO SUPPORT STRATEGIC GOALS AND TACTICAL OBJECTIVES
- SURROUNDED BY CONCRETE AND HESCO BARRIERS
- ENTRY IS ONLY THROUGH FORTIFIED ENTRY POINT OT ENTRY CONTROL POINT (ECP).



FORWARD OPERATING BASE - VIETNAM (FIRE SUPPORT BASE)

- PROVIDES ARTILLERY FIRE SUPPORT TO INFANTRY OPERATING ON THE FRONT LINES.
- THEIR SHAPE AND CONSTRUCTION ARE VARYING BASED ON THE TERRAIN THEY OCCUPY.
- F.S.B. CONTAINS A NUMBER OF HOWITZERS, A PLATOON AF ENGINEERS, AT LEAST 2 LANDING PADS FOR HELICOPTERS, A COMMUNICATION BUNKER AND AN INFANTRY BATTALION.



WW1 LIFE IN THE TRENCHES

After the early war of movement in the late summer of 1914, artillery and machine guns forced the armies on the Western Front to dig trenches to protect themselves. Fighting ground to a stalemate. Over the next four years, both sides would launch attacks against the enemy's trench lines, attacks that resulted in horrific casualties.

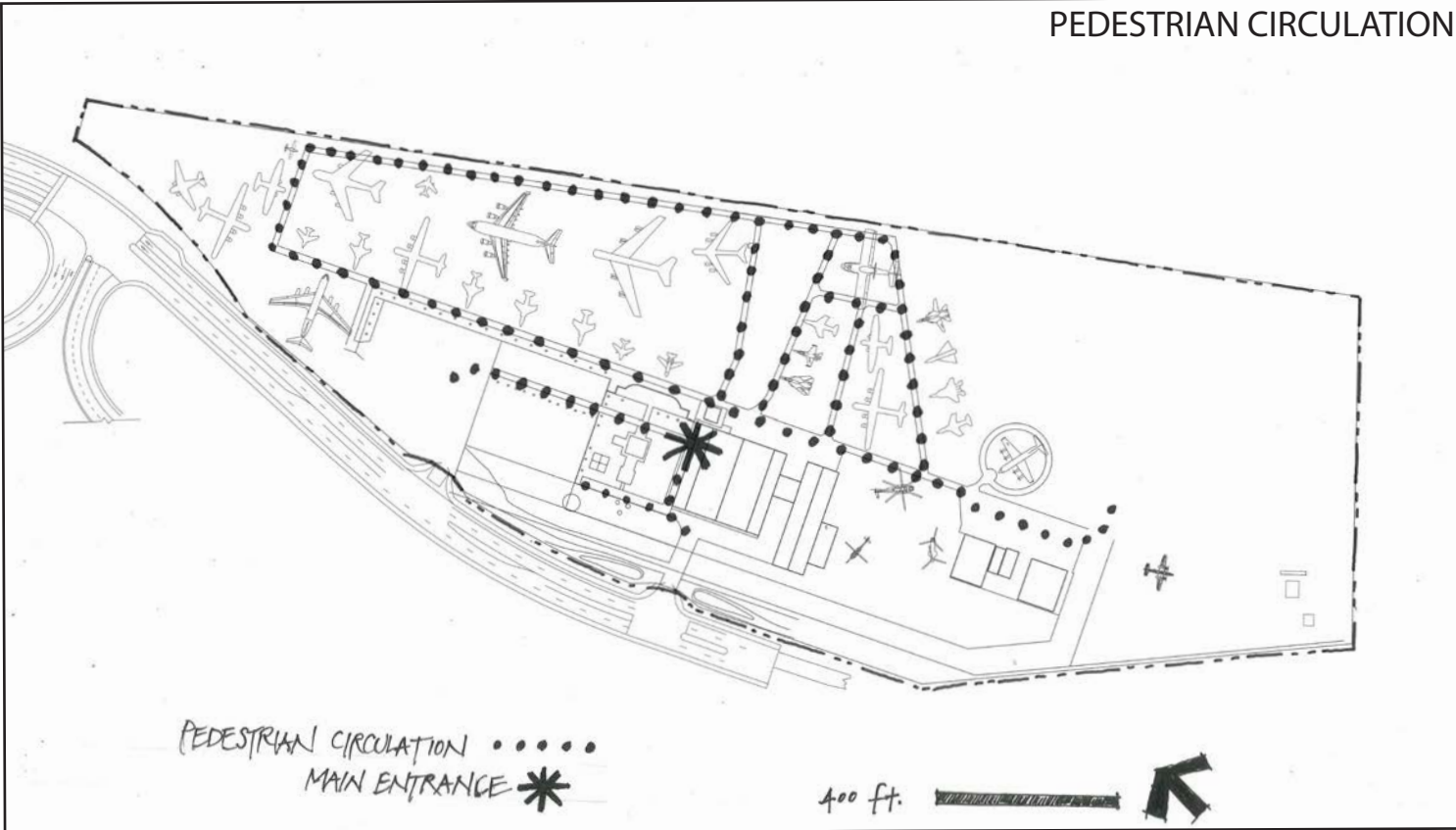


DROUGHT TOLERANT LANDSCAPING AND SHADE STRUCTURES

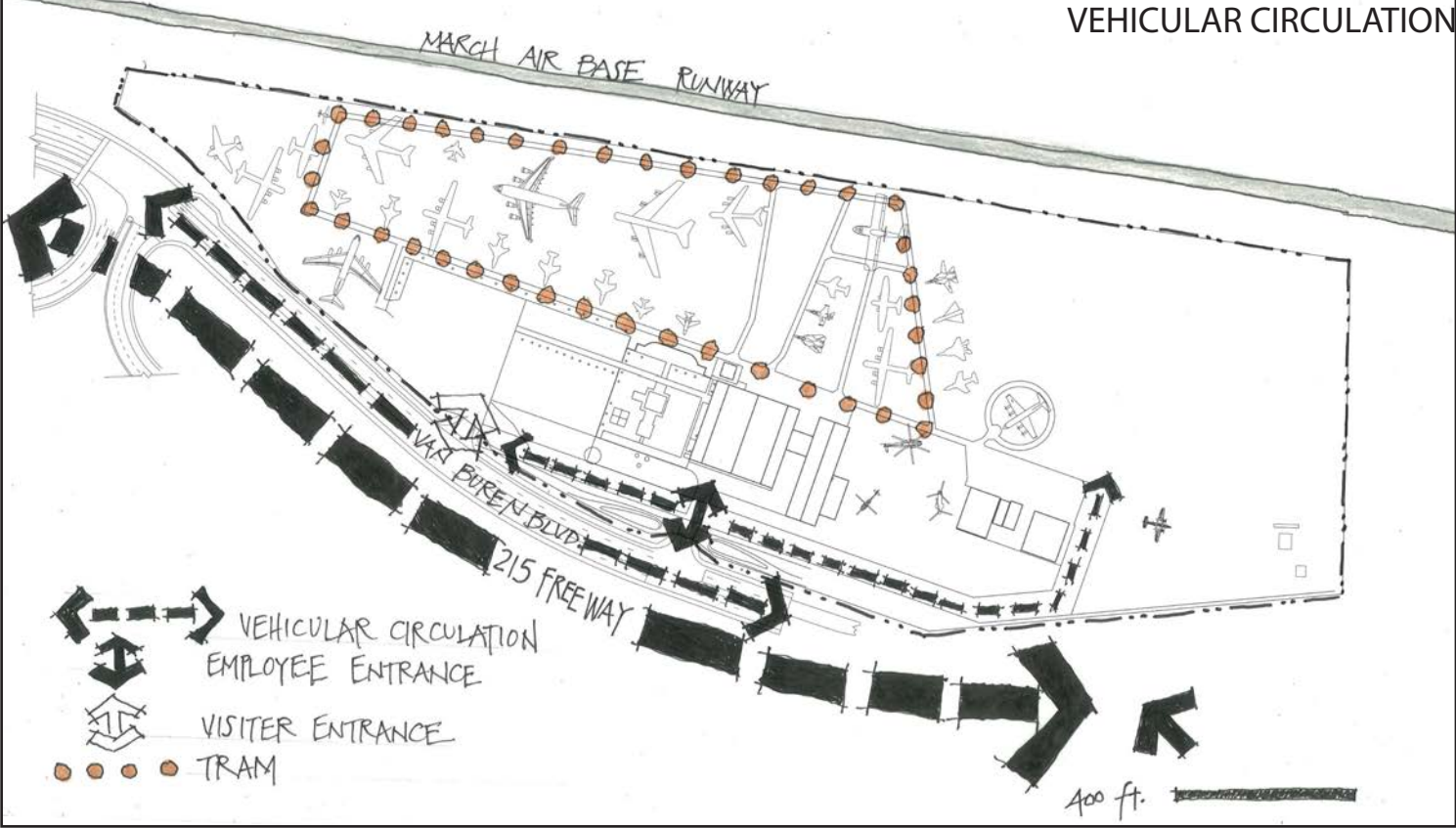


SITE INVENTORY

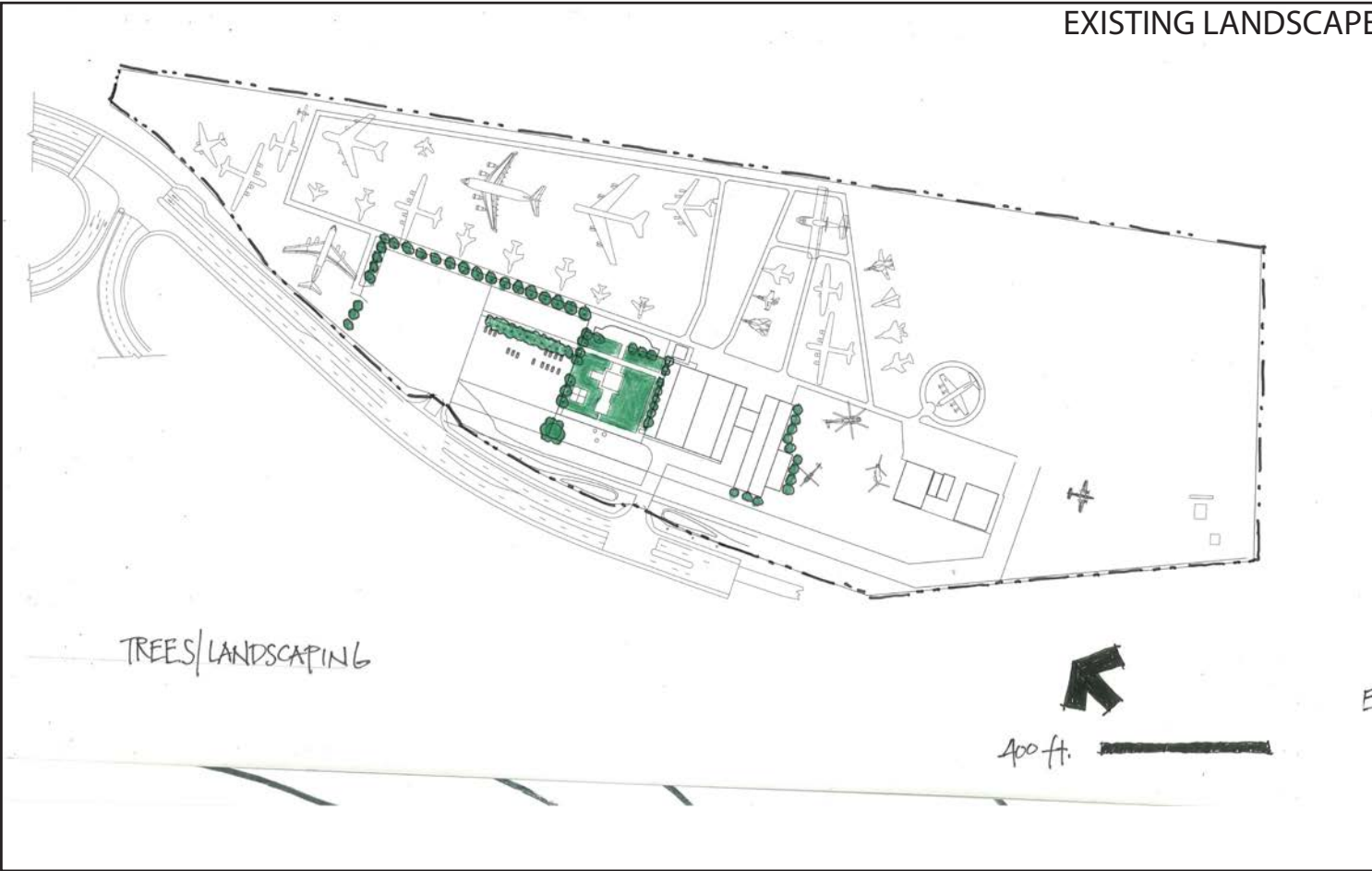
PEDESTRIAN CIRCULATION



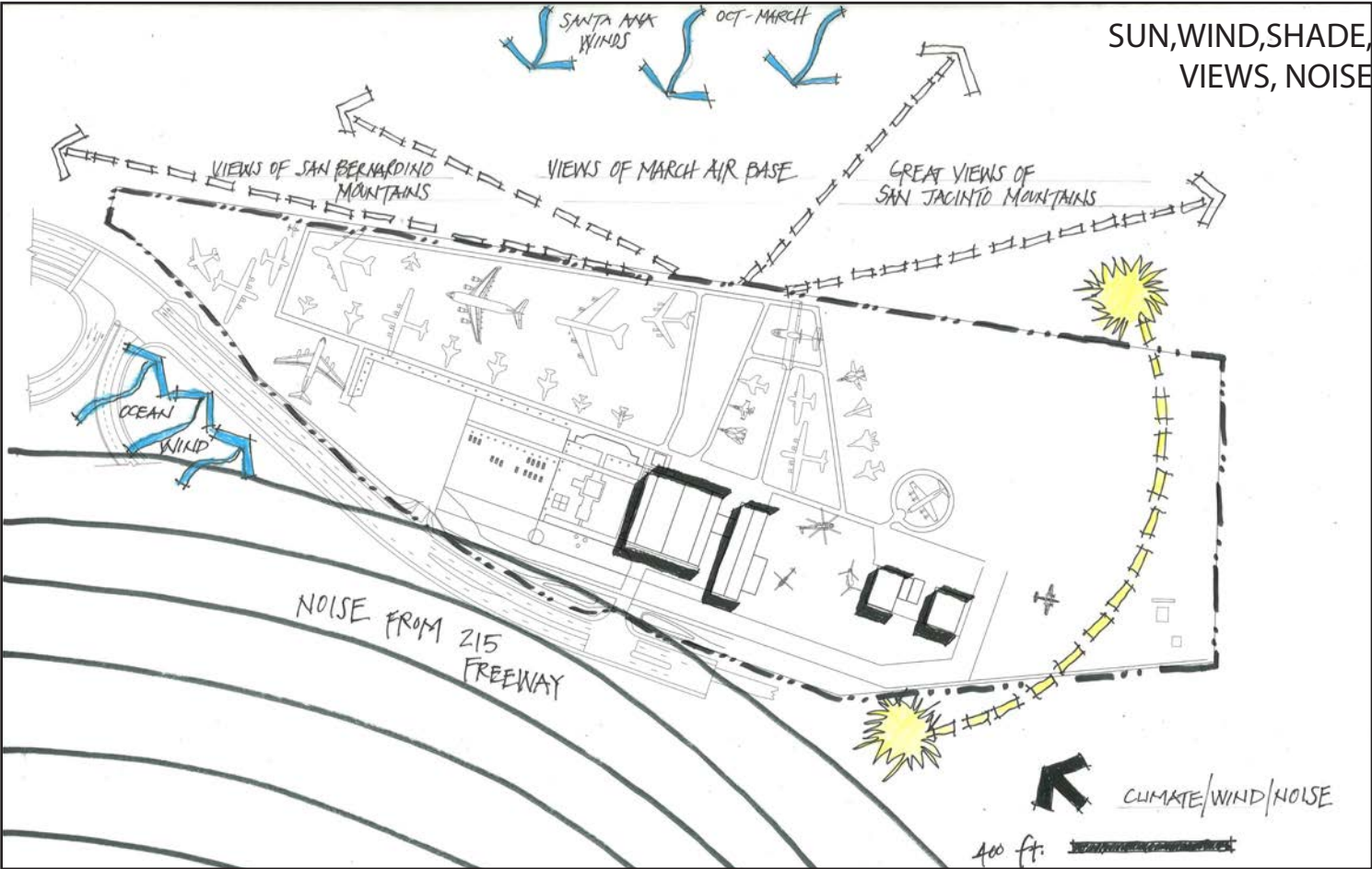
VEHICULAR CIRCULATION



EXISTING LANDSCAPE



SUN, WIND, SHADE, VIEWS, NOISE



SITE INVENTORY - EXISTING AREA USES

SIZE OF MFAM: 33 ACRES
AREA USE MAP



200 ft.

SITE INVENTORY - CURRENT LOCATION OF PLANES



CARGO/REFUELING/UTILITY

C-141
C-123
C-45
R50-5
KC-135
HU-16
C-131
C-119
C-54
C-47
KC-97
U-9

TRAINING AIRCRAFT

SNJ-4
T-33
T-38
C-152
BT-13
T-37
T-39

BOMBERS

B-17
B-29
B-52
FB-111
B-25
B-47
B-57
D3 VAL

ATTACK/FIGHTER/INTERCEPTOR

A-4
A-1E
F-4
F-84
RF-4
A-7
A-26
F-14
F-86
A-9
A-37
F-15
F-89

CENTURY SERIES

F-100
F-102
F-105
F-101
F-104

HELICOPTERS

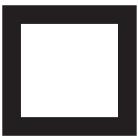
UH-1
HH-34
OH-58
UH-1D
AH-1
OH-6A
H-21

SOVIET BLOCK AIRCRAFT

MIG-15
MIG-19
MIG-23
MIG-17
MIG-21
AN-2

DRONES/MISSILES

D-21
MM2



**PLANES NOT TO BE
MOVED**

AIRCRAFT DISPLAY AREAS SUFFER FROM EXTREME HEAT AND FULL SUN. MUSEUM SEES UP TO 70,000 PEOPLE/YR. GOAL IS TO REACH 100,000 PER/YR. MUST HAVE FENCE BETWEEN DISPLAY AREA AND PARKING/MEMORIAL AREA. NEEDS SHADED PATHWAY/SEATING. PLANES MAY BE REARRANGED EXCEPT THOSE NOTED. BLEACHERS ARE SET UP TO VIEW AIR SHOWS ALONG N-E PATHWAY. MUSEUM IS 40 ACRES. CLIENT PREFERS NOT TO CROWD AIRCRAFT TO ENHANCE THE EXPERIENCE OF THE PLANES ON DISPLAY.

GRAND MALL AREA CAN BE BUILT OUT WITH OVERHEAD STRUCTURE FROM MAIN HANGAR OUT TO FLIGHT LINE TO ACCOMMODATE NEW EXHIBITS AND EVENTS (45') H MAX

OVERFLOW PARKING AREA AND BONE YARD AREA - TO BE REDESIGNED WITH NEW EXHIBIT/EVENT AREAS AND ACCOMMODATE 300 OVERFLOW PARKING SPACES AND 10 RV'S FOR EVENTS. NEEDS SHADE! NO RESTROOMS!

BONE YARD TO REMAIN IR BE RELOCATED

UNDERUTILIZED SPACE COULD BE USED FOR:
*FOOD- BEVERAGE AREA
*CHILDREN S PLAY
*EVENT/EXHIBIT/ OR DISPLAY
*RESTROOM
*NEEDS SHADE STRUCTURE AND SEATING!

C-141 PLANE IS USED AS A BANQUET HALL FOR SPECIAL EVENTS

MEMORIAL GARDEN AND PARKING LOT: "TOO LINEAR" NEEDS TO BE REDESIGNED WITH A GRAND ENTRANCE. AREA NEEDS SHADE STRUCTURES OR TREES. MAX HIGHT FOR BOTH IS 40'. NO TREES ALLOWED IN THE AIRCRAFT FIELD. CURRENTLY UNATTRACTIVE AND UNNOTICEABLE TO THE CARS PASSING BY. NEEDS:

- *RE-IMAGINED LANDSCAPE WITH DROUGHT TOLERANT PLANTS
- *USE OF AIRCRAFT PARTS DISPLAYED-FROM PARKING LOT TO MAIN ENTRANCE
- *PALM TREE MAY BE MOVED. CURRENTLY COVERING SIGN
- *PROVIDE AMPHITHEATER FOR EDU. AND EVENTS
- *POSSIBLE AWNING TO HANG OFF HANGARS FOR SHADE
- *MEMORIAL GARDEN TO PROVIDE "SIT AND CONTEMPLATE OPPORTUNITIES" AS WELL AS ADDITIONAL GARDEN SEATING
- *REDESIGNED PARKING LOT WILL INCLUDE A NEW RESTAURANT WITH SHARED PARKING
- *BLOCK WALLS MAY BE REMOVED EXCEPT FOR THE ITEMS TO REMAIN:
 - *LOCATION OF MAIN ENTRANCE
 - *WAR DOG MEMORIAL
 - *DFC MEMORIAL
 - *15TH A.F. MEMORIAL
 - *NEW MEMORIAL TILES CAN BE MOVED

MAIN ENTRY

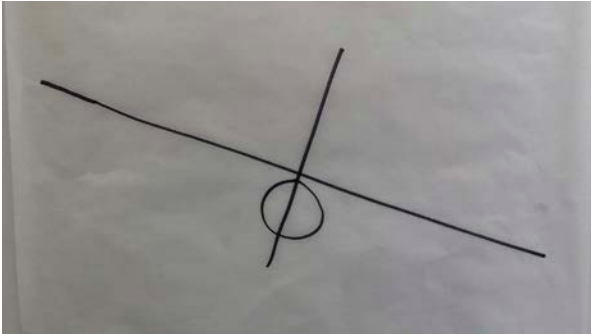
MAIN HANGAR

FRONT OF MUSEUM FACING THE 210 FREEWAY NEEDS A LARGE SIGN OR AIR CRAFT DISPLAY TO TELL PEOPLE THIS IS A MUSEUM AND NOT PART OF THE AIR BASE

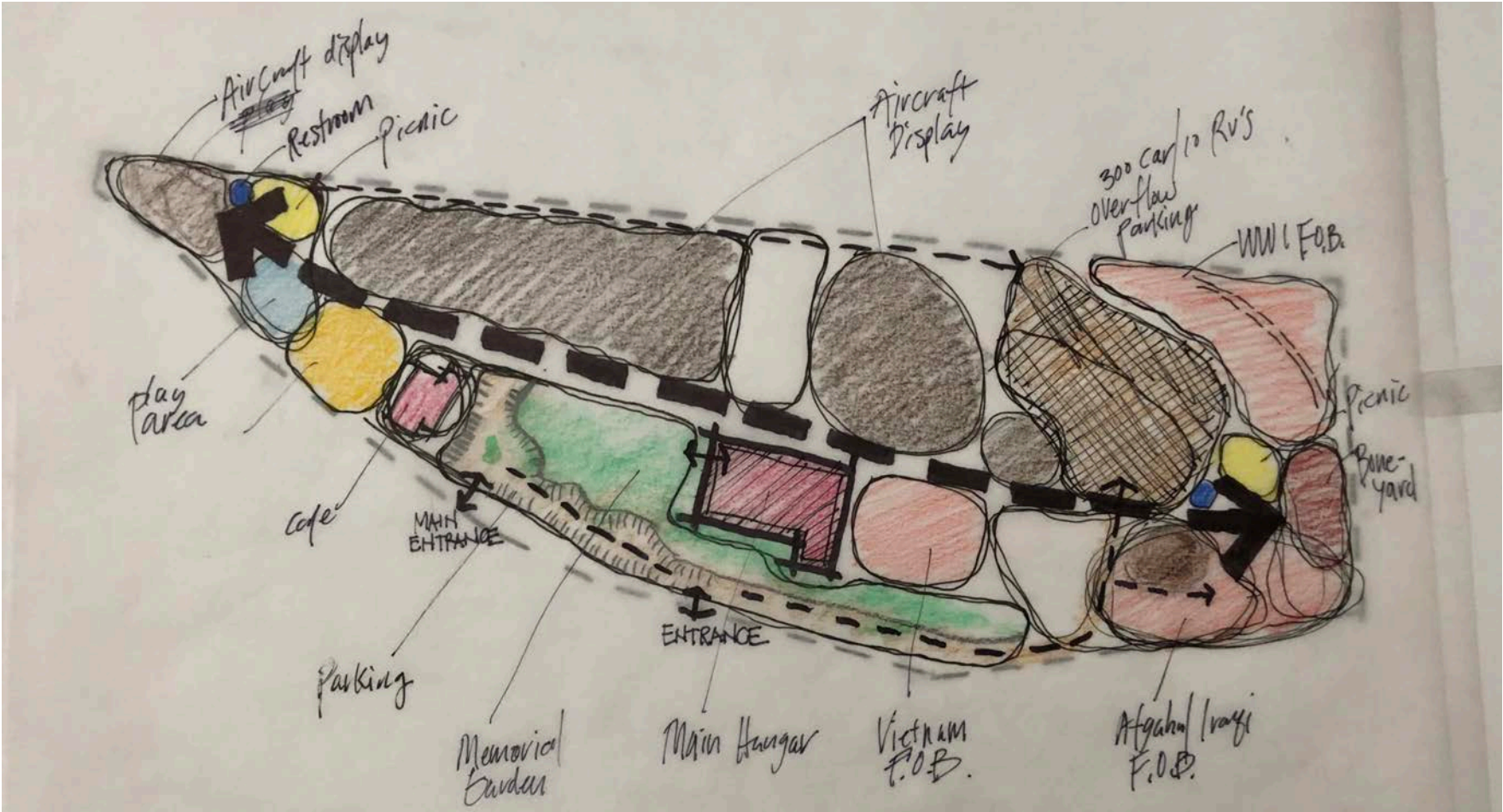
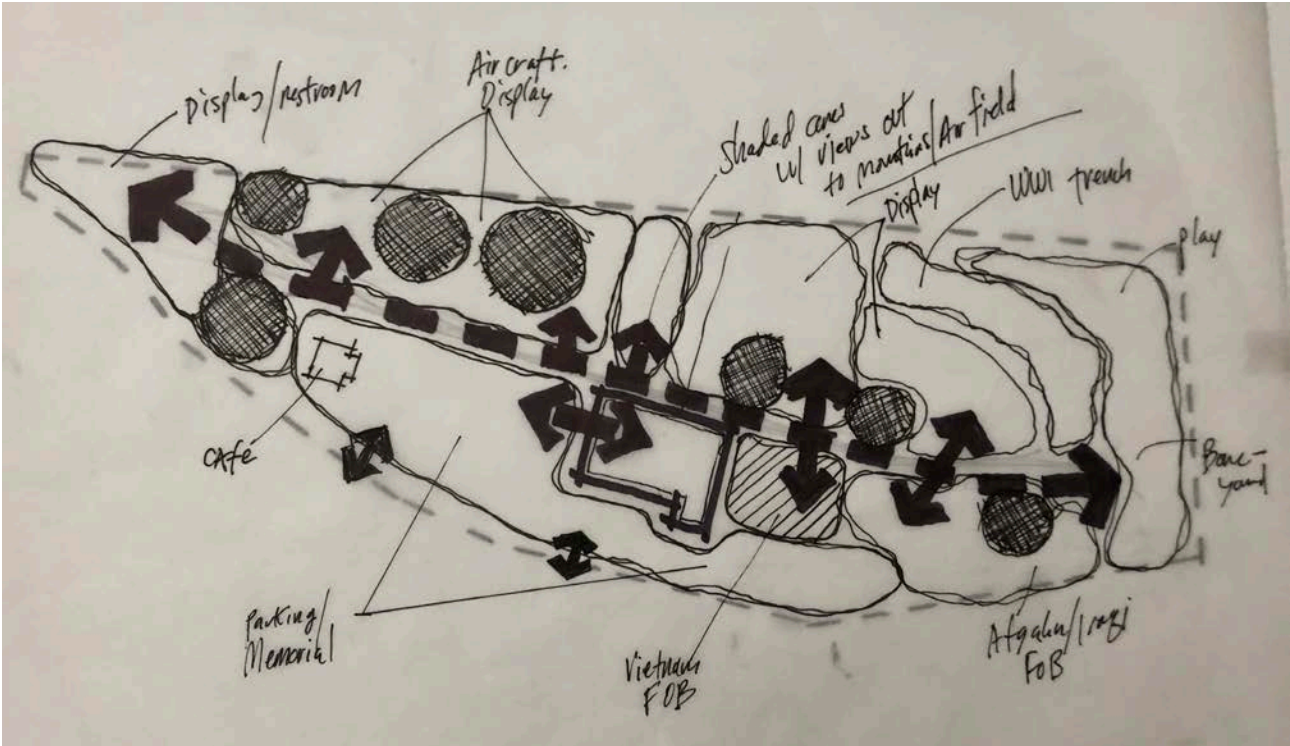
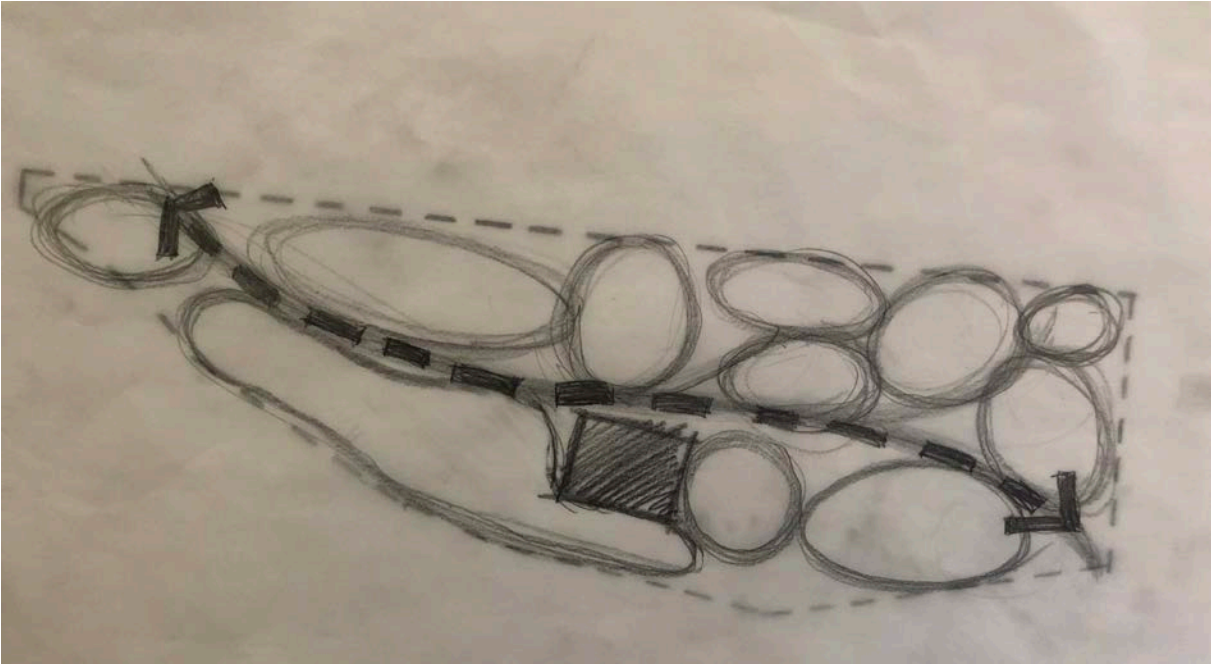
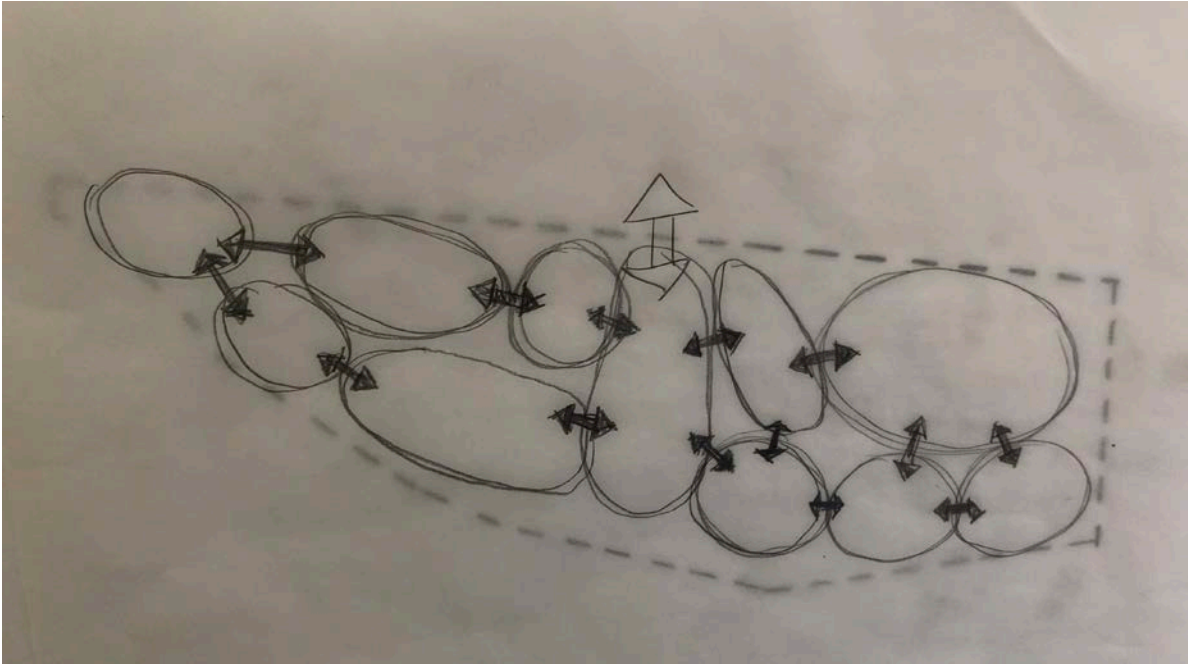
VIETNAM FIRE BASE IS USED FOR EVENTS. GOOD PLACE TO MOVE PALM TREES. THIS AREA HOLD ALL THE HELICOPTERS. IN THE BACKGROUND ARE SOUND EFFECTS OF MACHINE GUNS AND HELICOPTERS CLIENT LIKES THE IDEA OF DISNEYLAND TYPE OF EXPERIENCE FROM THE DISPLAYS. THIS AREA CAN BE DEVELOPED

AFGHAN/IRAQI FIRE BASE. *ENHANCE THE EXPERIENCE OF WAR ZONE THAT INCLUDE IED'S

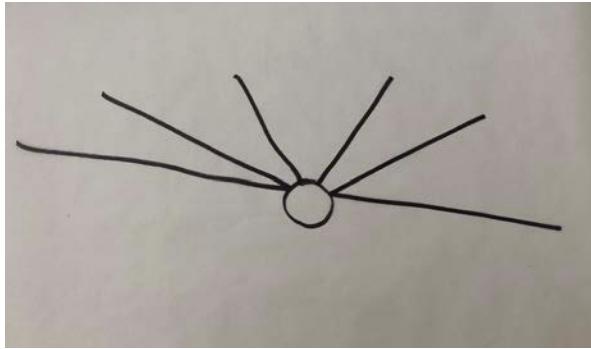
CONCEPT DESIGN 1



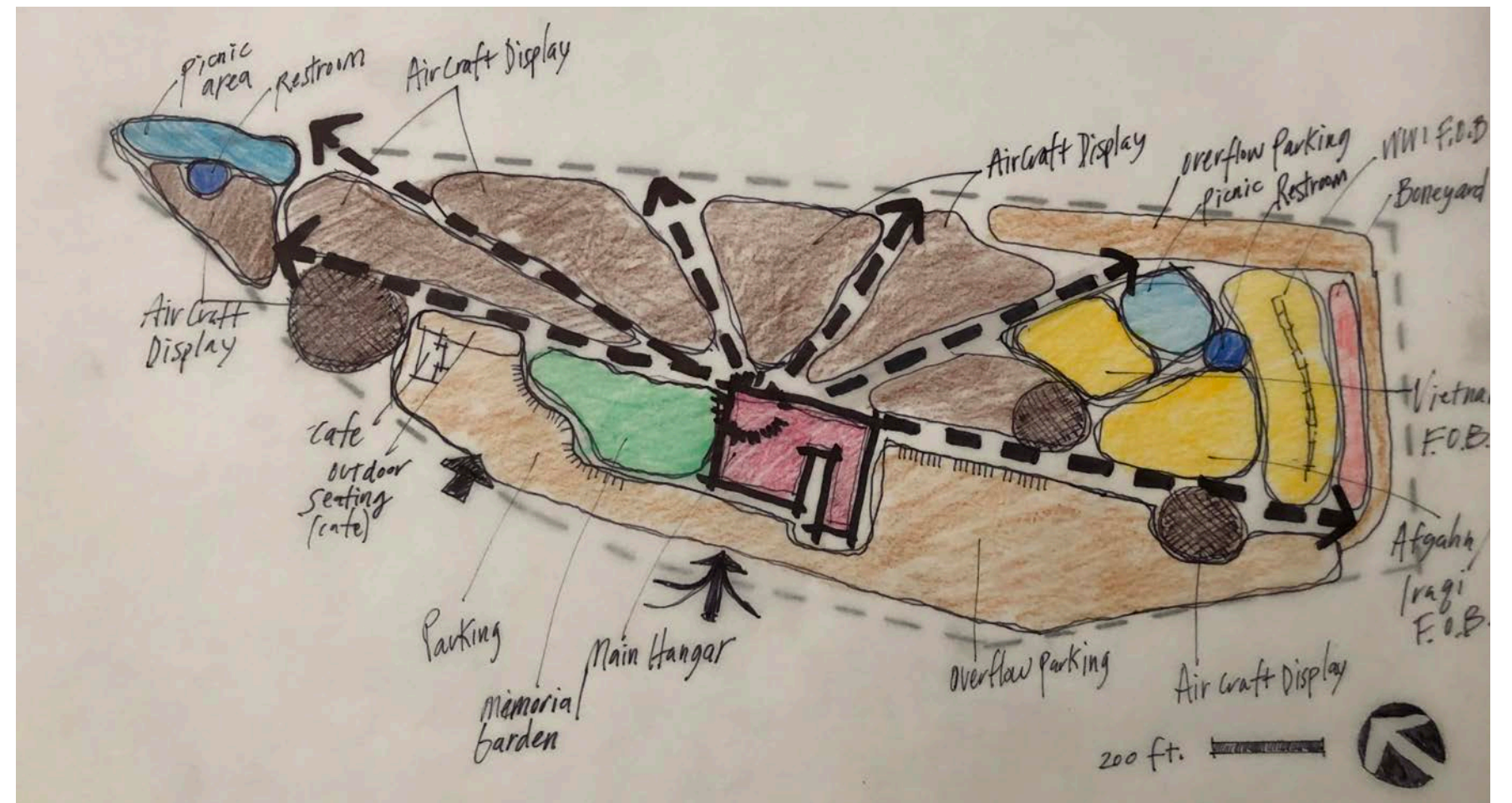
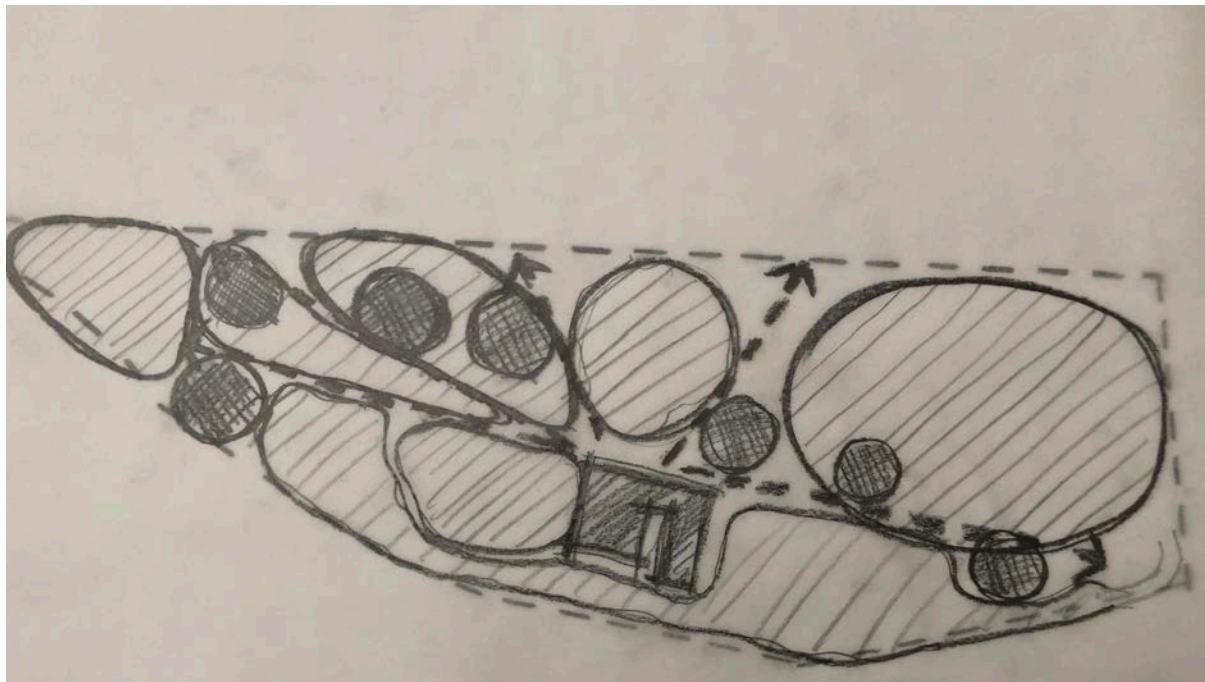
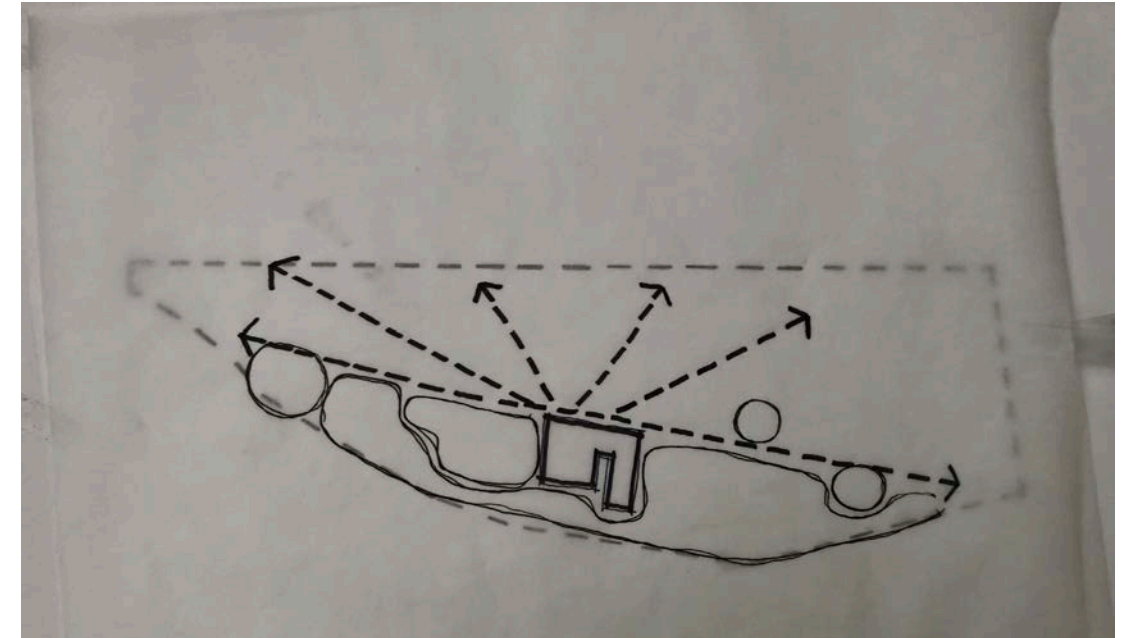
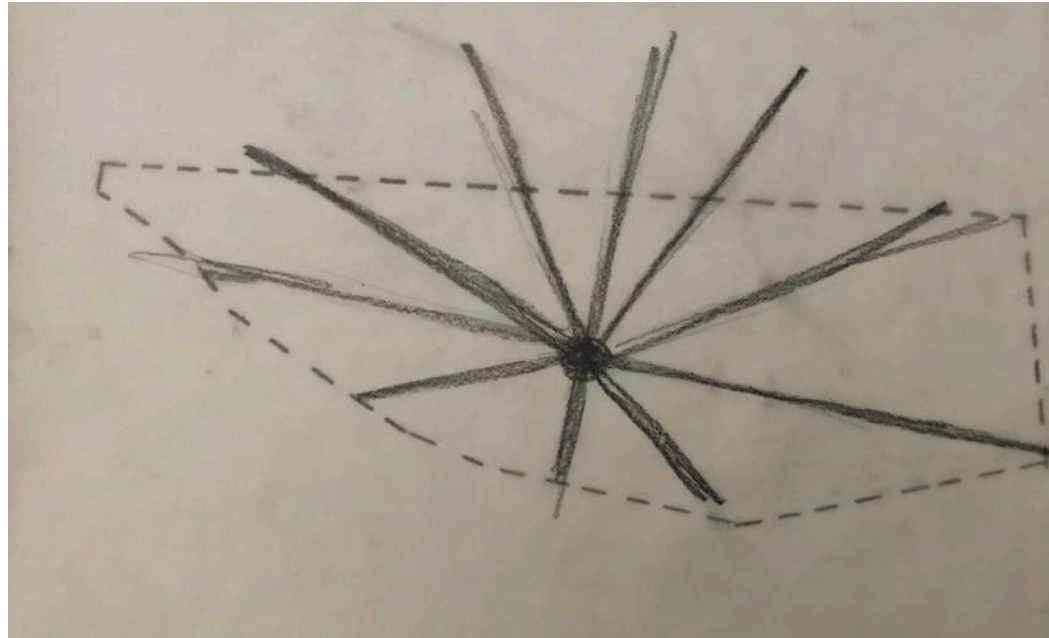
CONCEPT 1: LINEAR



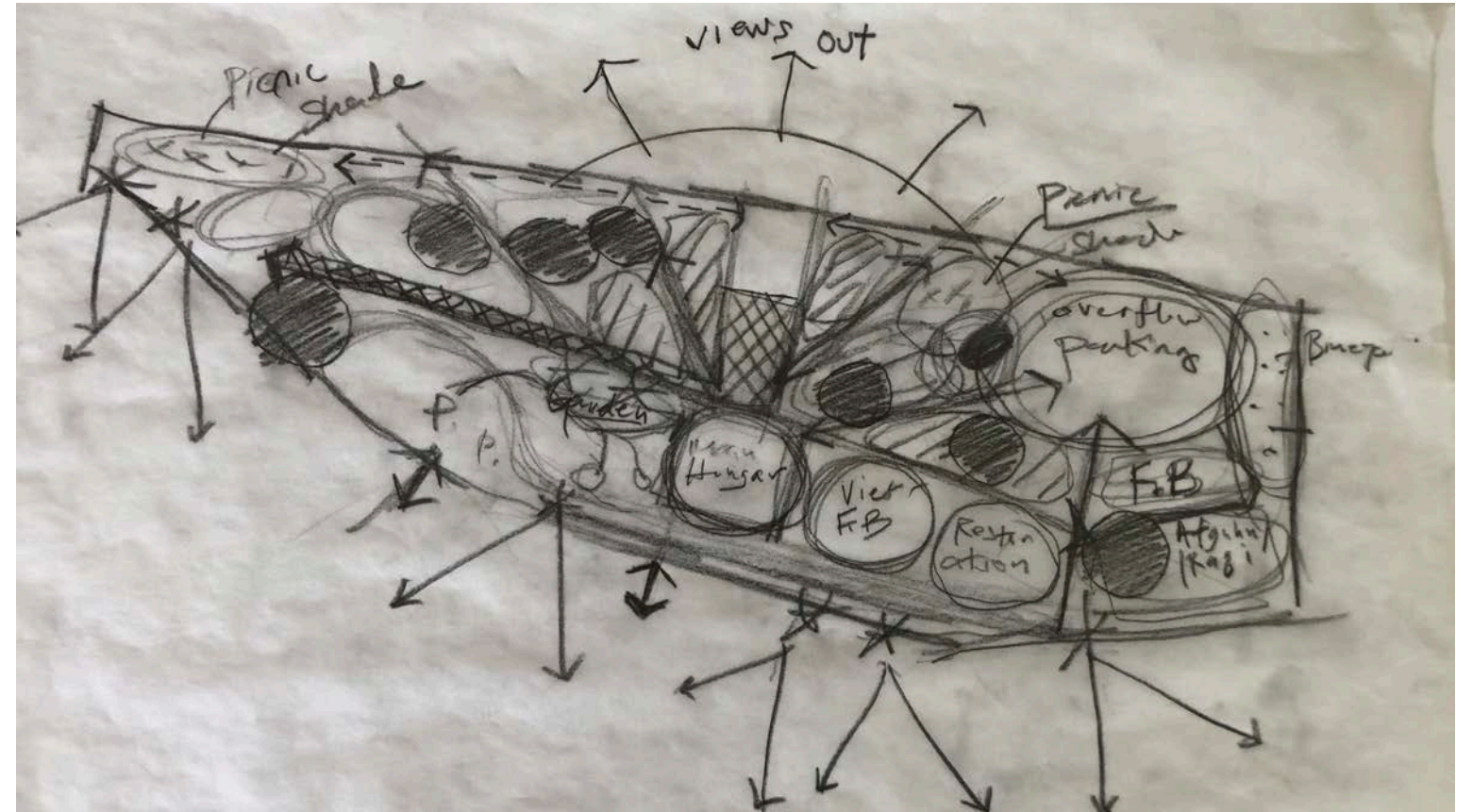
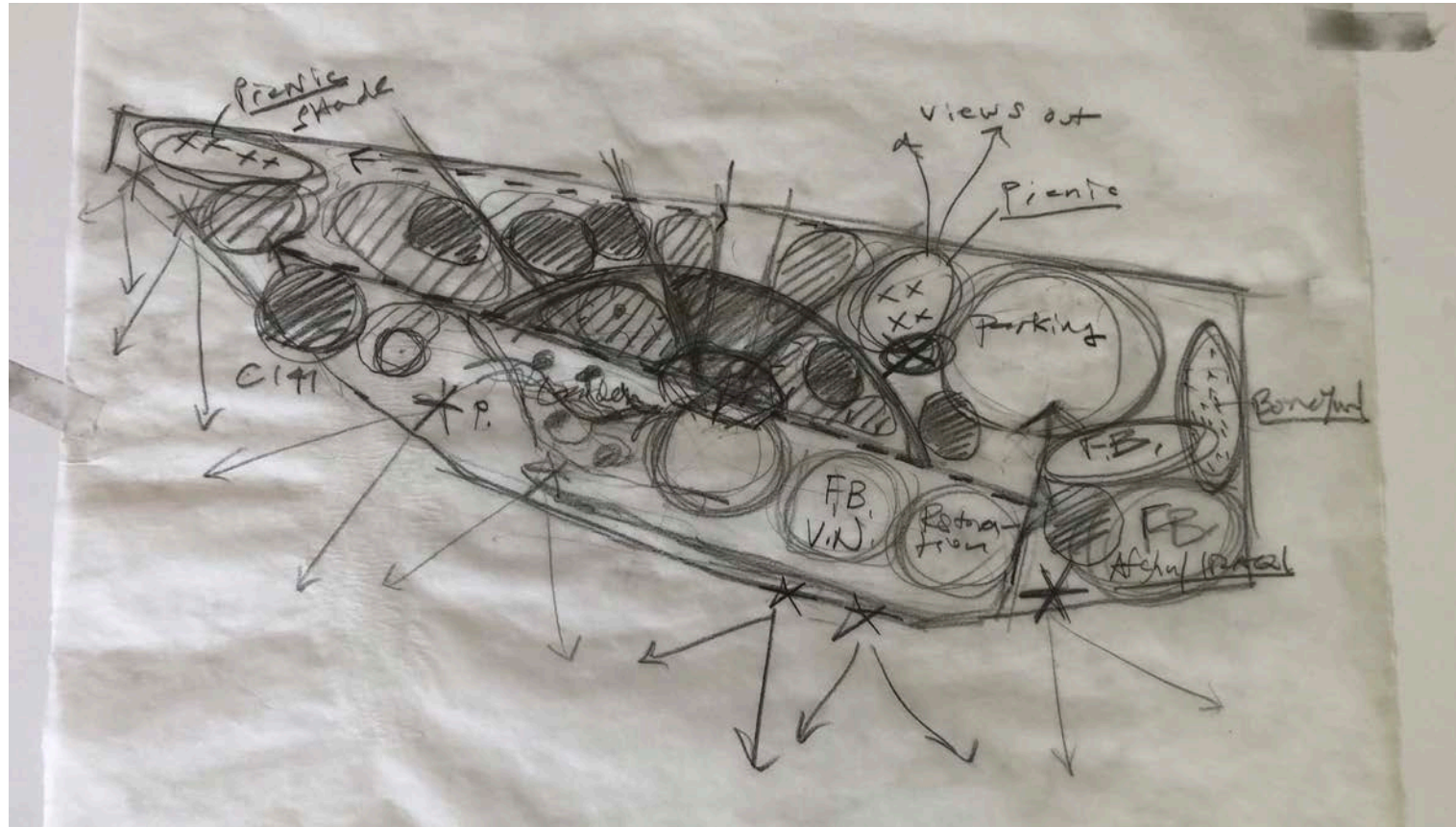
CONCEPT DESIGN 2



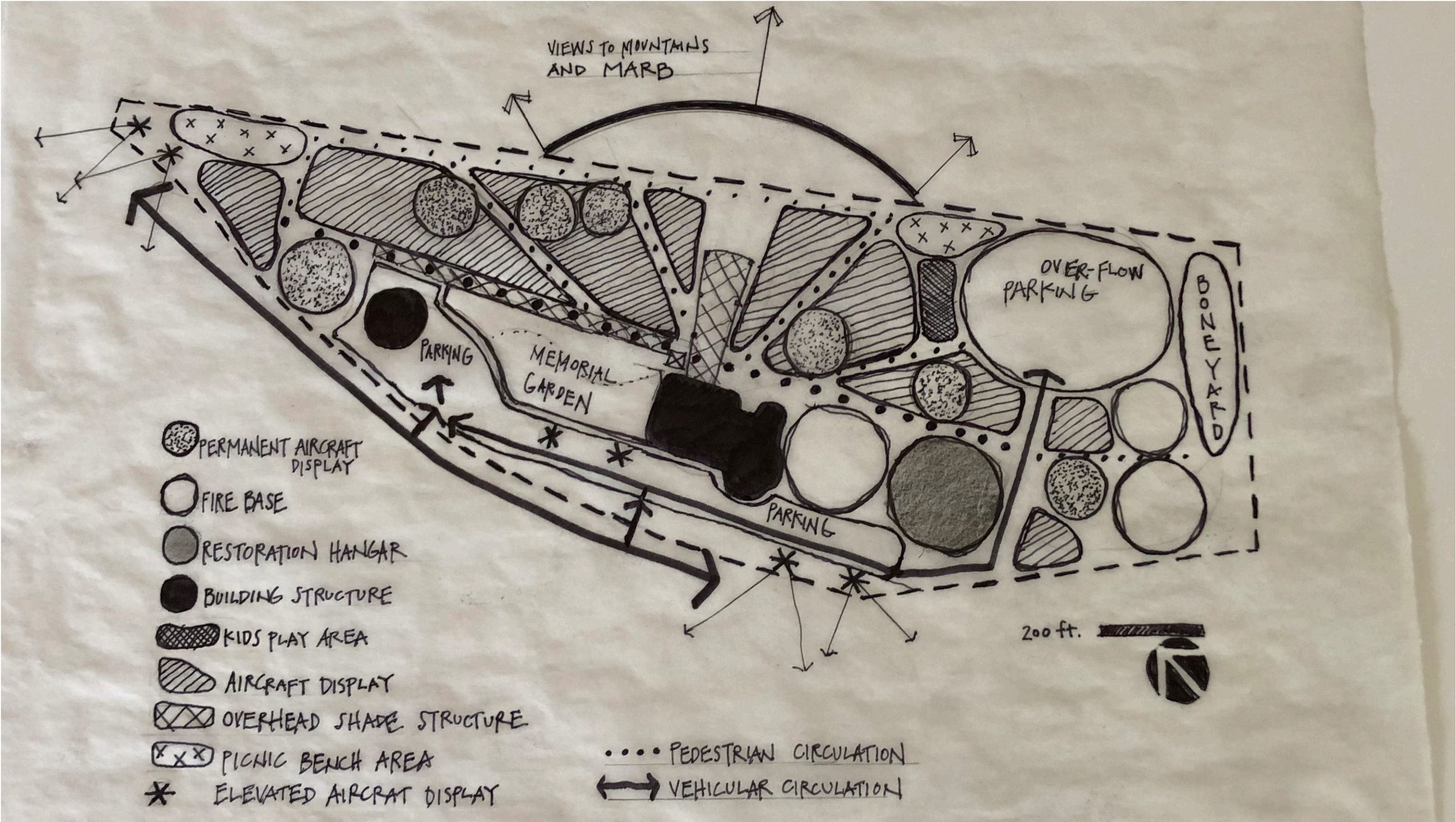
RADIAL CONCEPT: The radial system uses channels that spread out from a center. This system works well when movement starts from a common center or main hub.



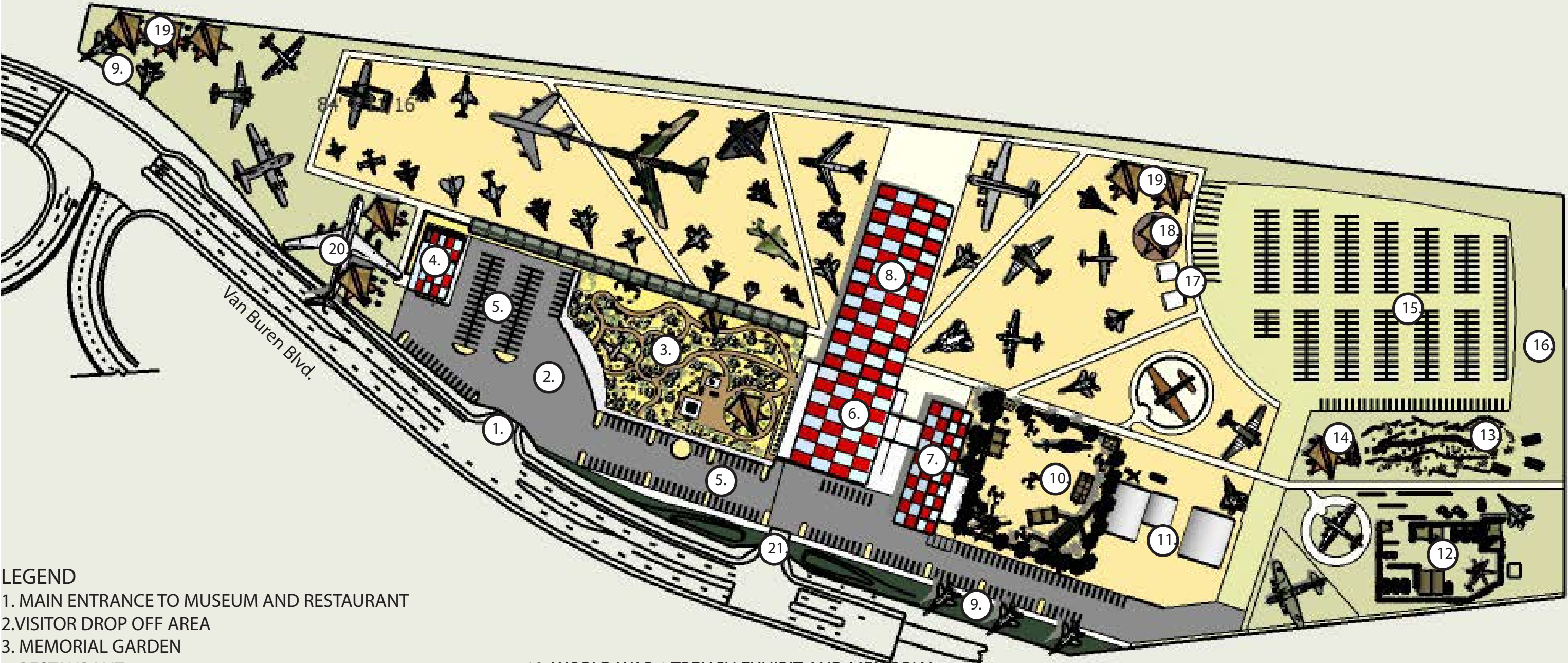
FINAL CONCEPT



SCHEMATIC DESIGN



MASTER PLAN



LEGEND

1. MAIN ENTRANCE TO MUSEUM AND RESTAURANT

2.VISITOR DROP OFF AREA

3. MEMORIAL GARDEN

4. RESTAURANT

5. VISITOR PARKING

6. MAIN HANGAR

7. WW 1 MUSEUM HANGER

8. EXTENDED SHADED EXHIBIT AREA

9. ELEVATED PLANE DISPLAY (to be seen from the 215 freeway)

10. VIETNAM FIRE BASE

11. RESTORATION HANGAR

12. IRAQI/AFGHANISTAN FORWARD OPERATION BASE
13. WORLD WAR 1 TRENCH EXHIBIT AND MEMORIAL

14. WORLD WAR 1 PICNIC AREA

15. OVERFLOW PARKING WITH 400 SPACES AND 10 R.V. SPACES

16. BONE-YARD

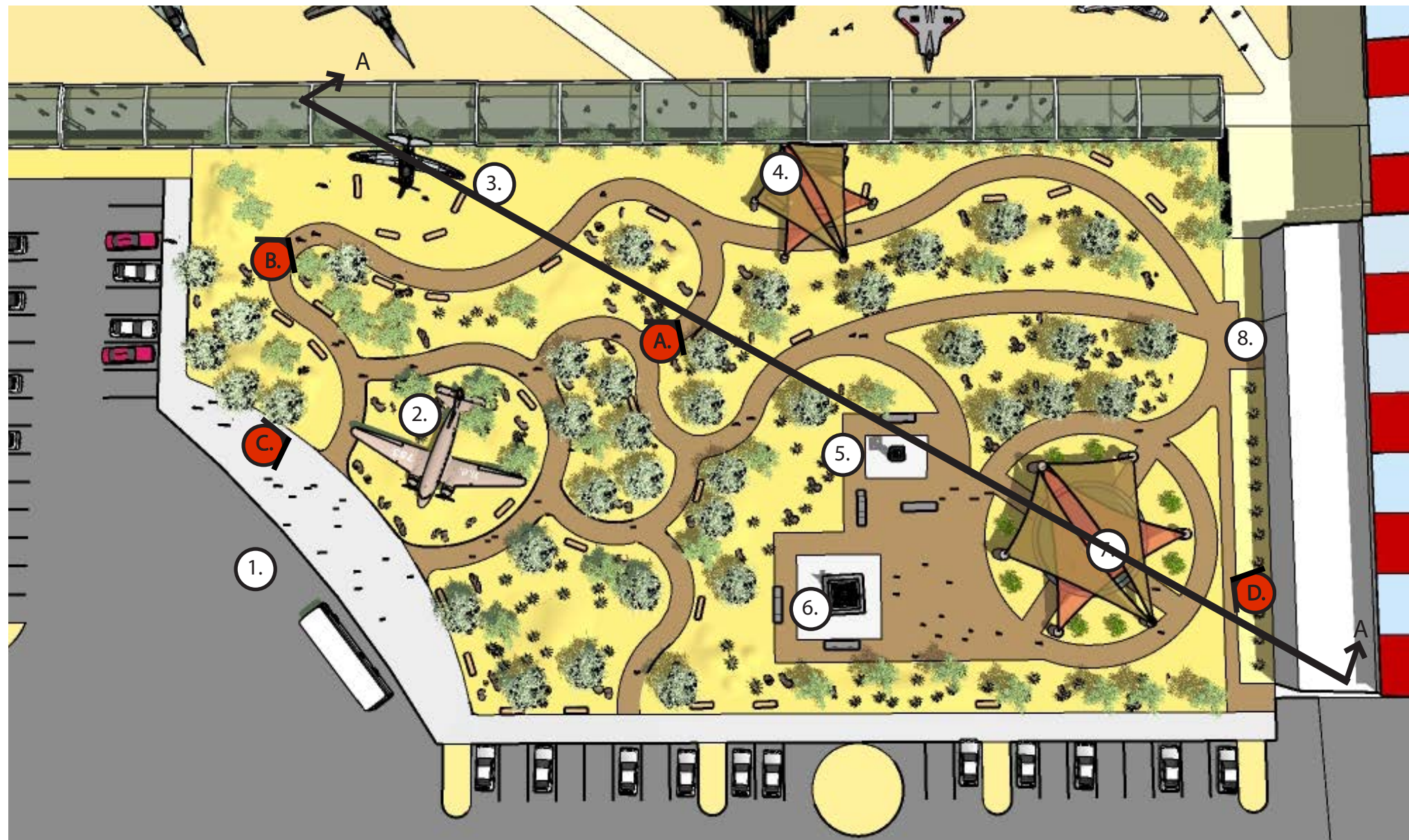
17. RESTROOMS

18. KIDS PLAY AREA

19. SHADED VIEWING AND PICNIC AREA

20. C-141 SHADED PICNIC AREA WITH ACCESS TO RESTAURANT

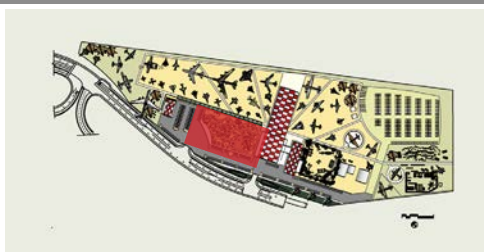
21. SECONDARY PARKING ENTRANCE



Memorial Garden

LEGEND

1. MAIN DROP OFF AREA
2. GRAND ENTRY PLAN DISPLAY
3. DOWNED PLANE MEMORIAL
4. SHADED HAP ARNOLD MEMORIAL
5. WAR DOG MEMORIAL
6. D.F.C. MEMORIAL
7. SHADE OUTDOOR EDUCATIONAL AMPHITHEATER
8. MAIN ENTRANCE TO AIR FIELD MUSEUM

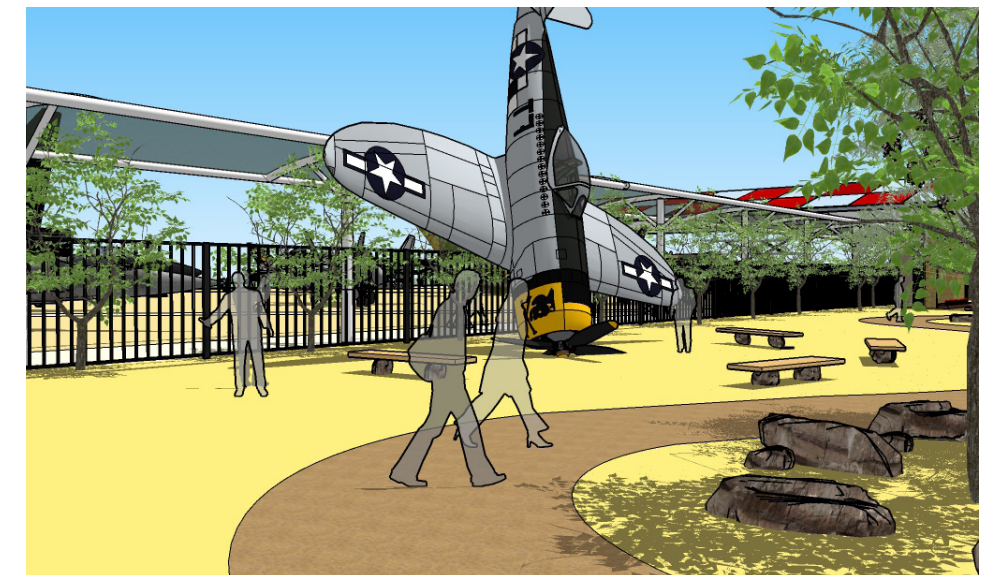


KEY MAP

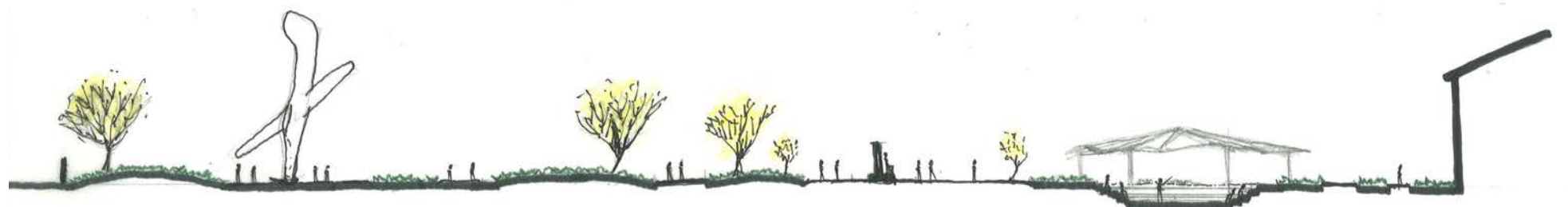
40 FEET



A. VIEW TOWARD HAP ARNOLD MEMORIAL

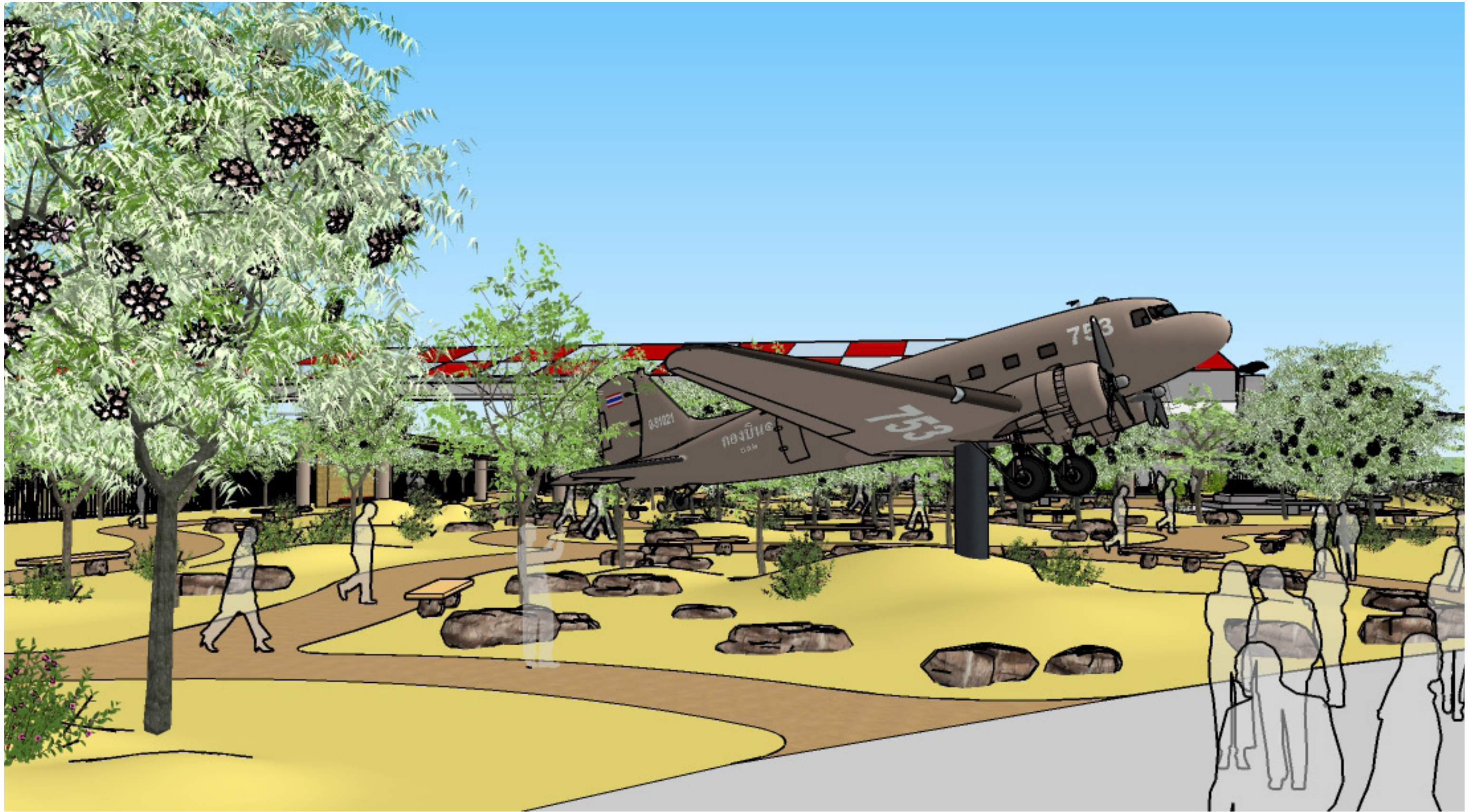


B. VIEW OF THE DOWNED PLANE MEMORIAL

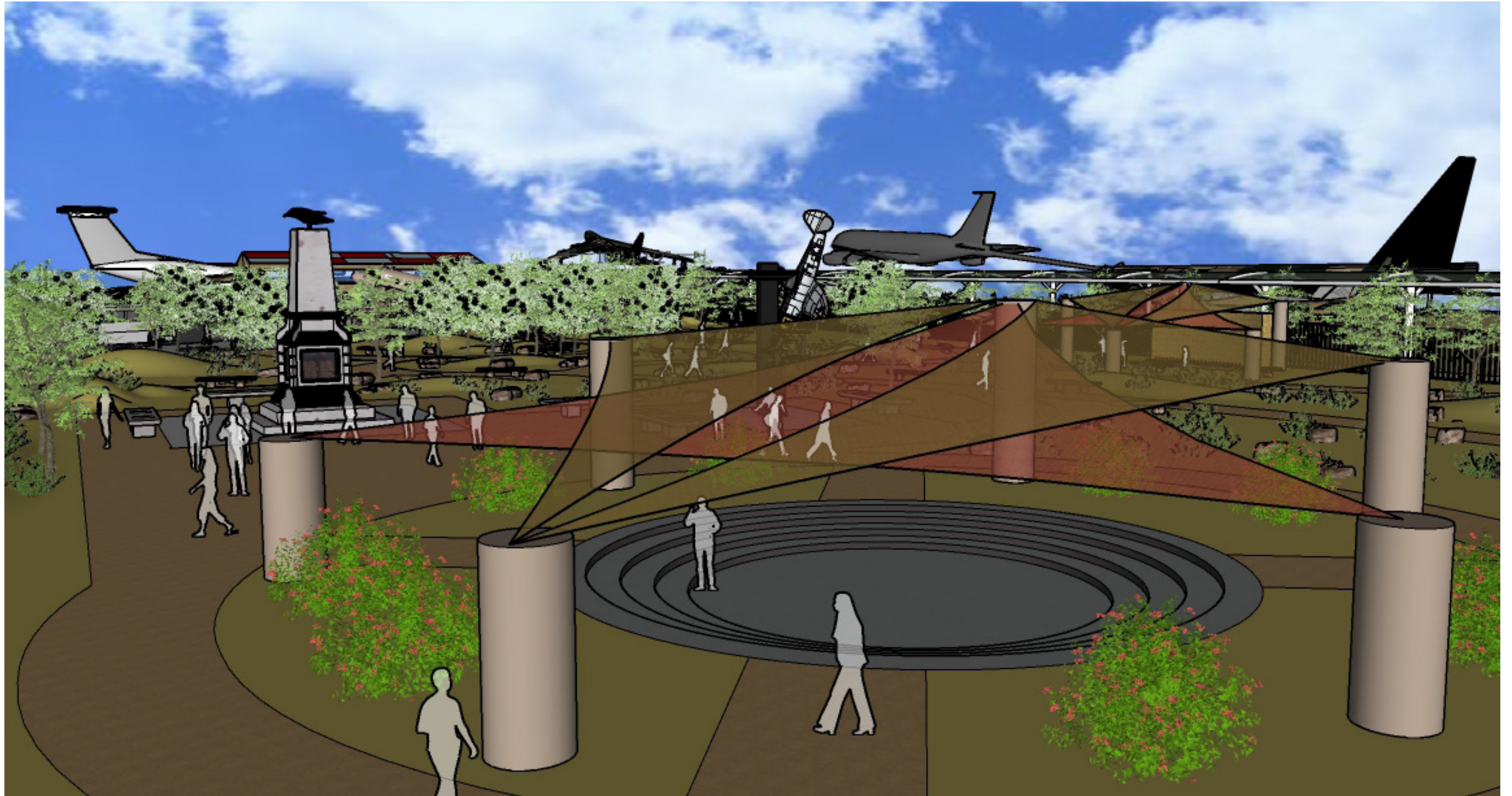


0 10 20 30 40

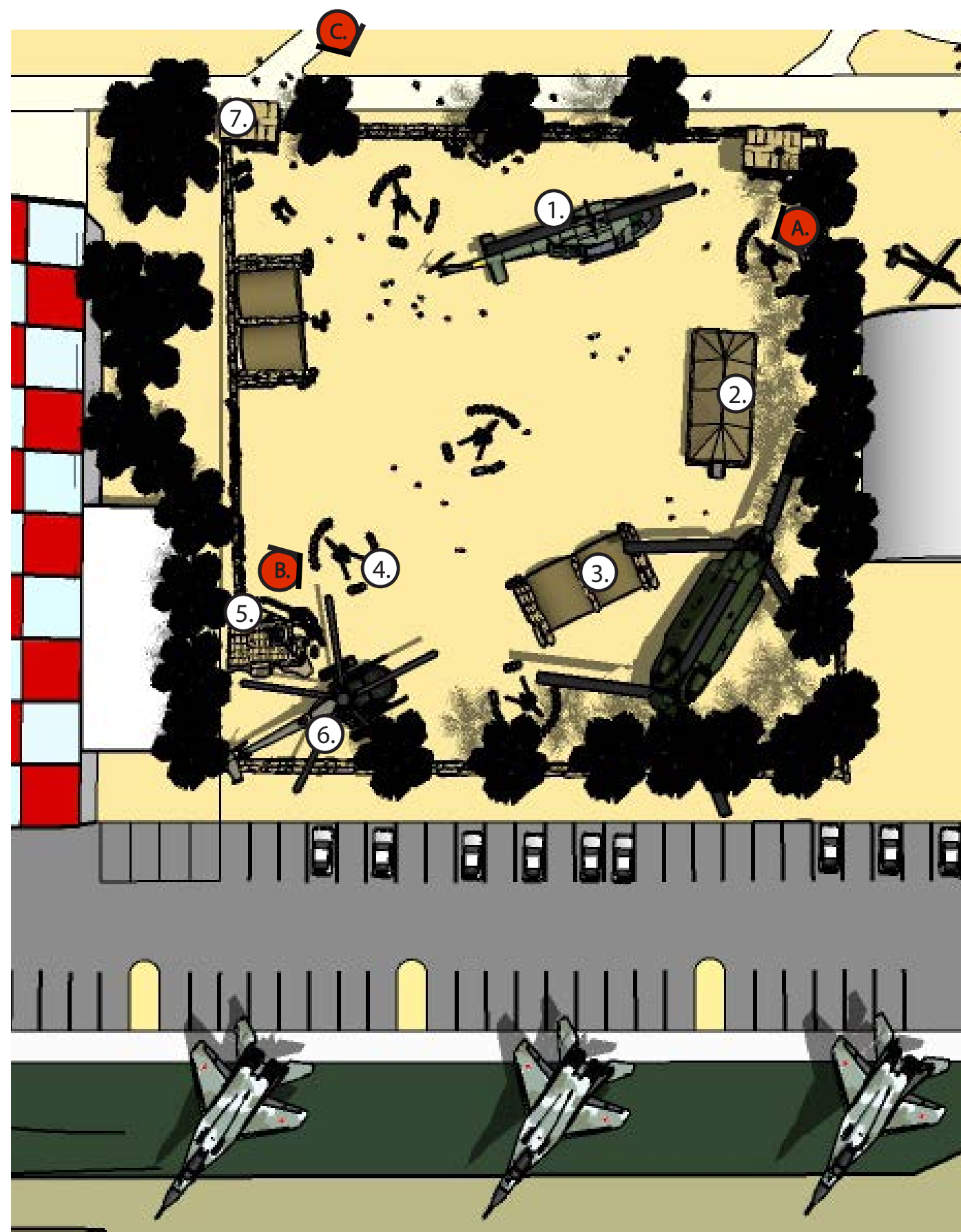
SECTION A-A



C. VIEW OF MAIN ENTRY PLANE DISPLAY

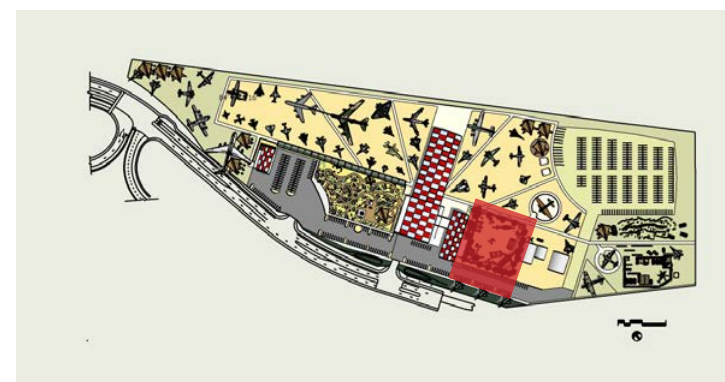


B. VIEW OF OUTDOOR SHADED AMPHITHEATER



40 FEET 

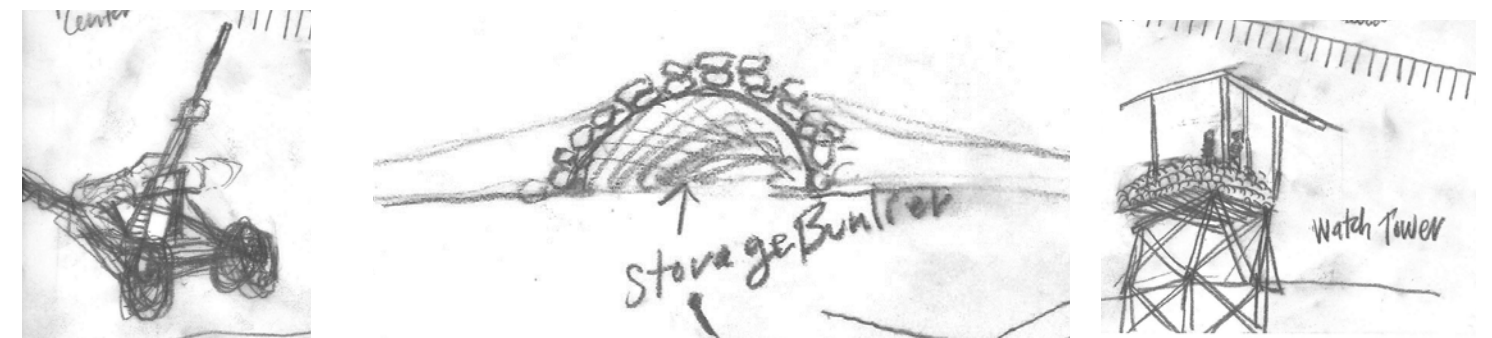
VIETNAM FIRE BASE



LEGEND

1. UH-1 HELICOPTER - RESUPPLY PAD
2. ARMY BUNK AREA
3. STORAGE BUNKER
4. 155 MM HOWITZER
5. T.O.C. TACTICAL OPERATIONS CENTER
6. V.I.P. HELICOPTER PAD
7. WATCH TOWER

KEY MAP



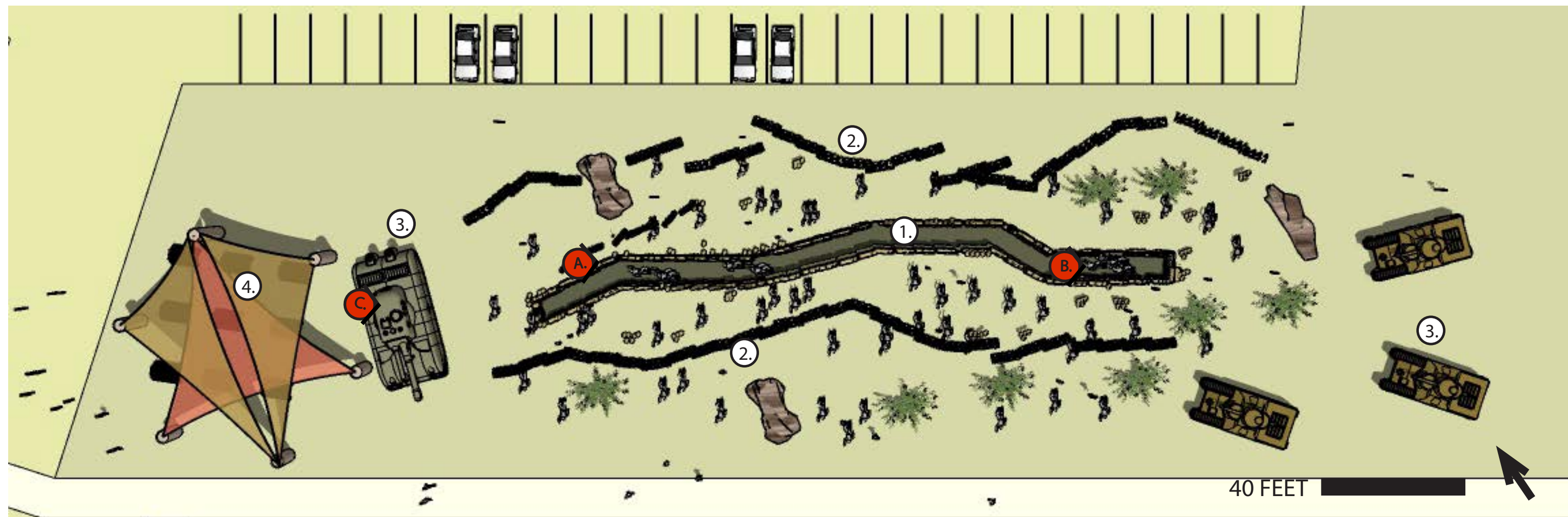
A. VIEW INTO BUNK QUARTERS AND RESUPPLY AREA



B. UP CLOSE VIEW OF 155 MM HOWITZER



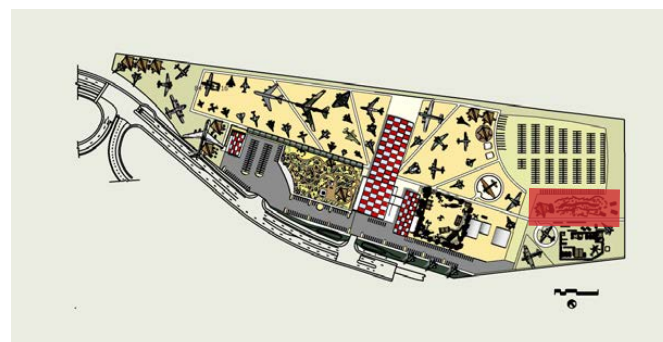
C. OVERHEAD VIEW OF VIETNAM FIRE BASE



WORLD WAR 1 TRENCH AND MEMORIAL

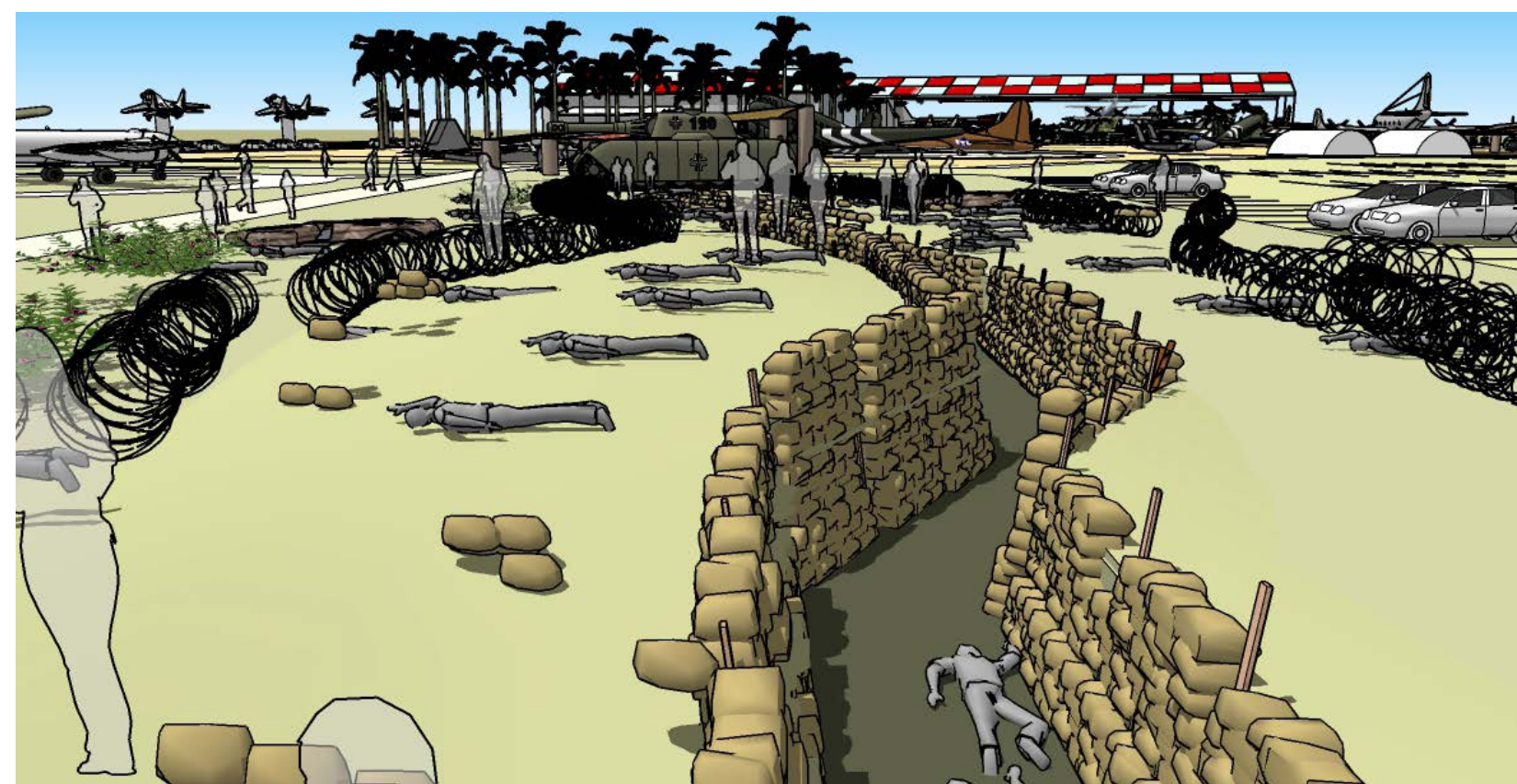
LEGEND

- 1. TRENCH
- 2. BARBED WIRE DEFENSES
- 3. INCOMING TANKS
- 4. WW1 SHADED PICNIC AREA



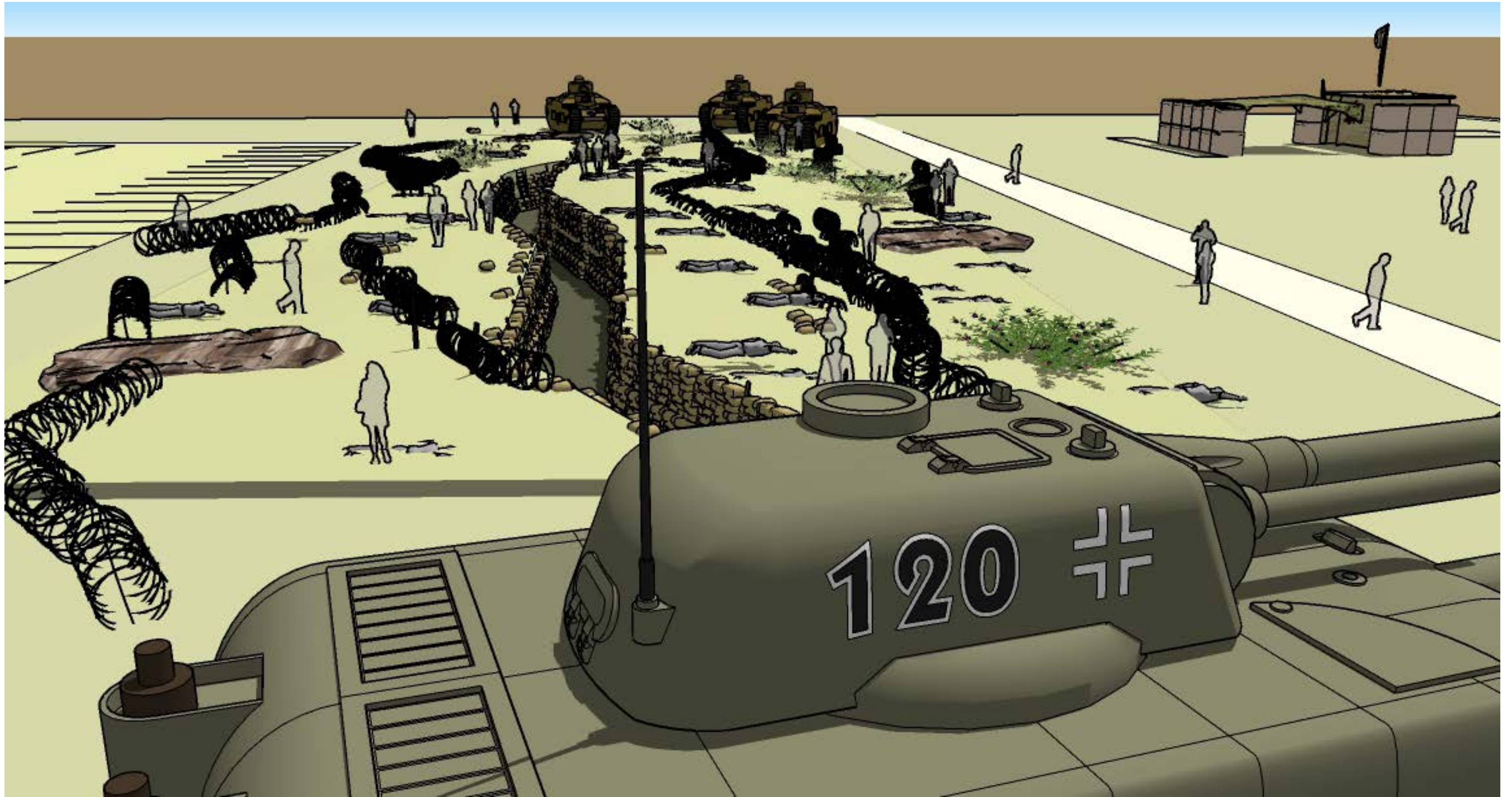
KEY MAP

A.

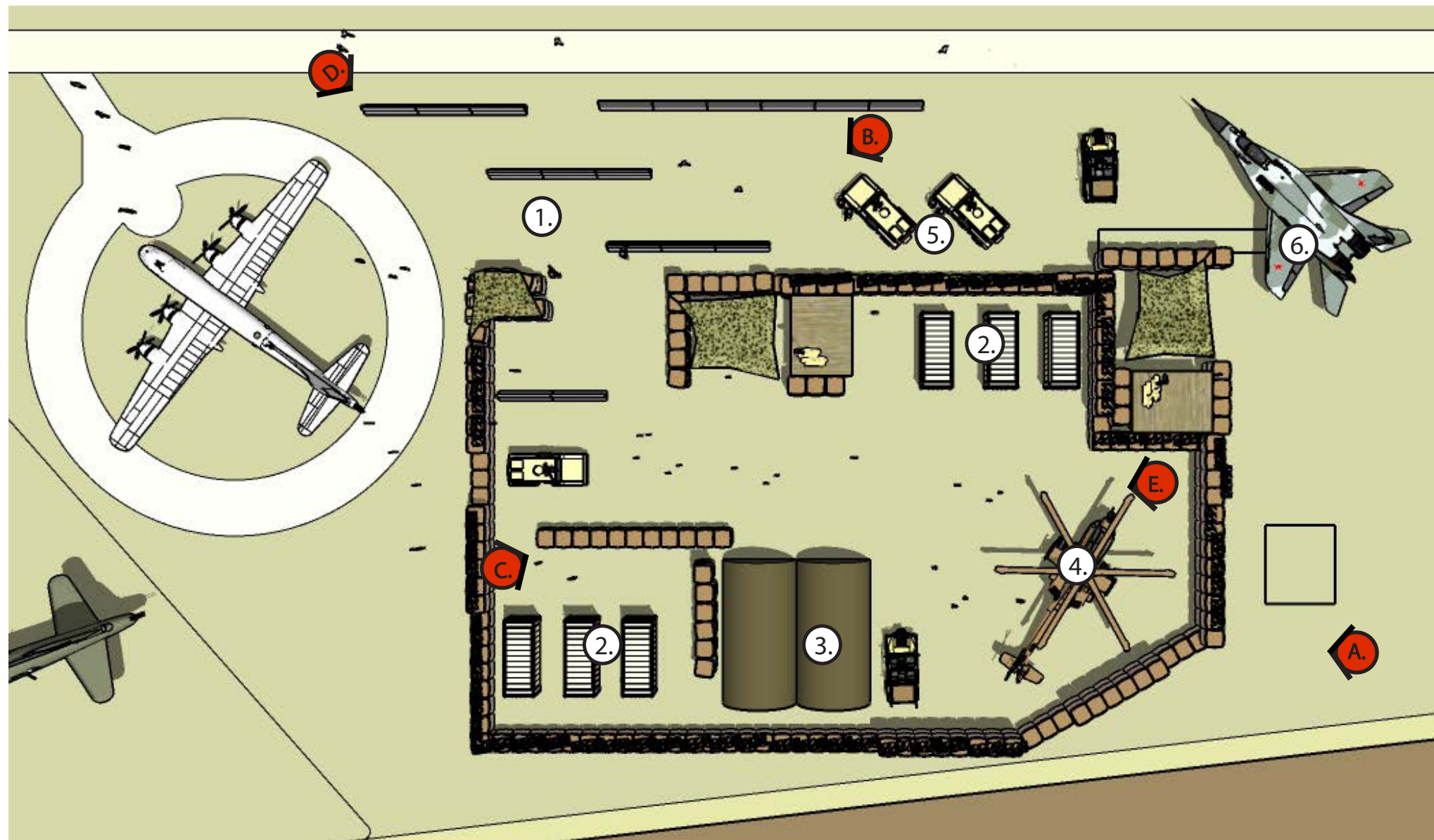




B. PERSPECTIVE VIEW IN THE TRENCH



C. PERSPECTIVE VIEW OF THE TRENCH AND TANKS



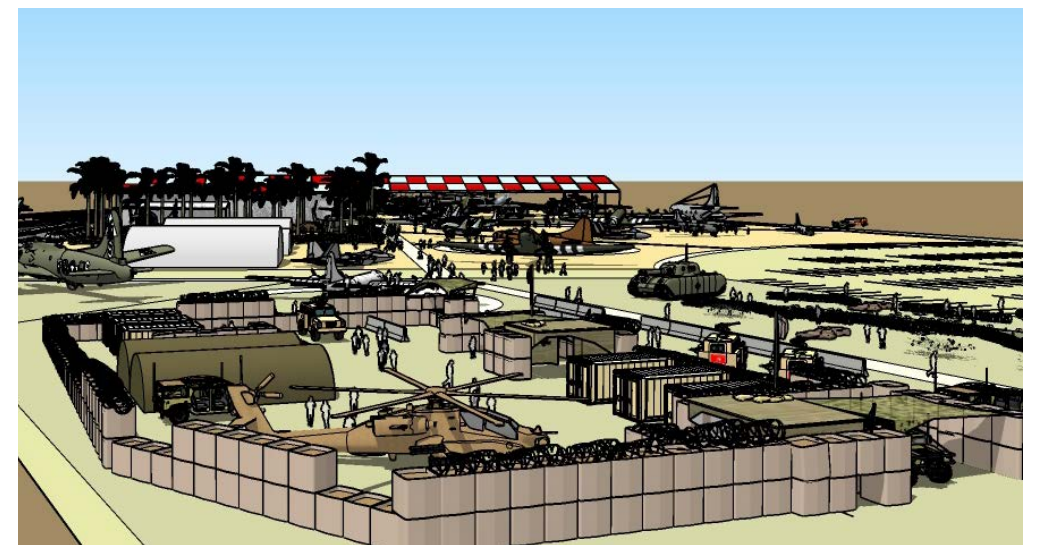
IRAQ/AFGHANISTAN FORWARD OPERATING BASE

LEGEND

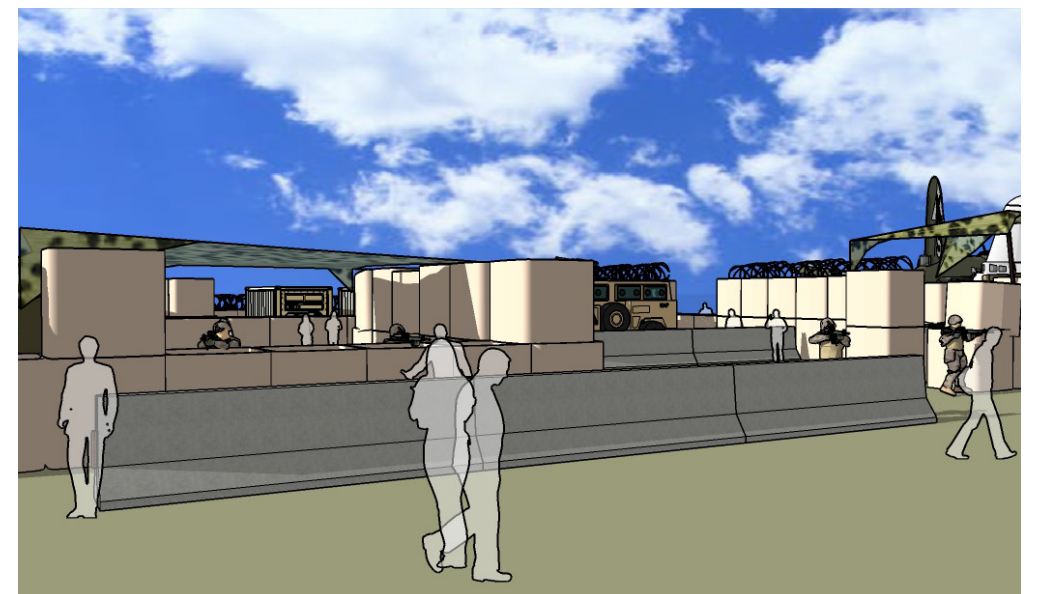
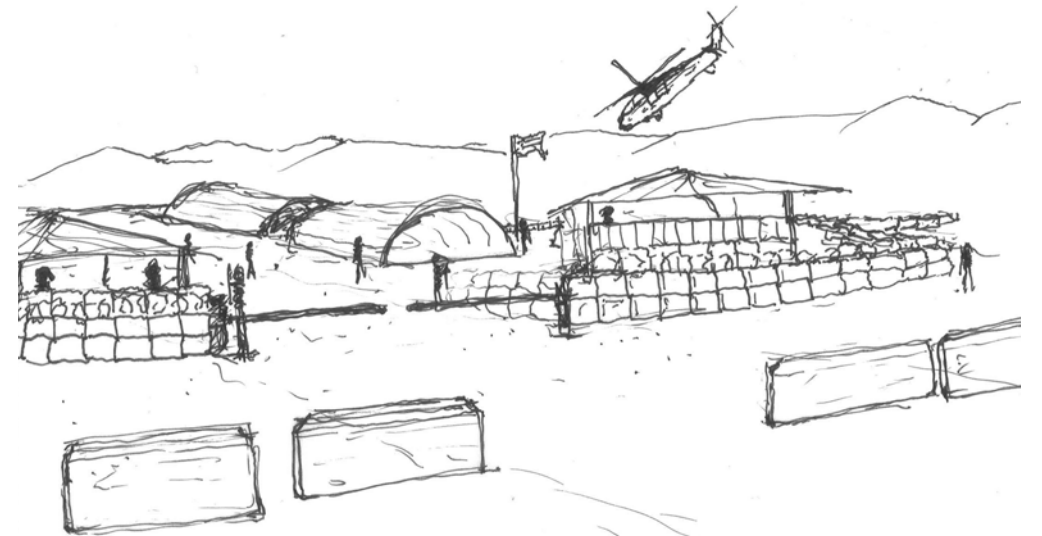
- 1. ENTRY CONTROL POINT (E.C.P.) FORTIFIED BY CONCRETE AND HESCO BARRIERS
- 2. SLEEPING QUARTERS/LIVING QUARTERS IN CONEX CONTAINERS
- 3. SUPPLY/STORAGE
- 4. CHOPPER
- 5. HUMMERS
- 6. FIGHTER JET



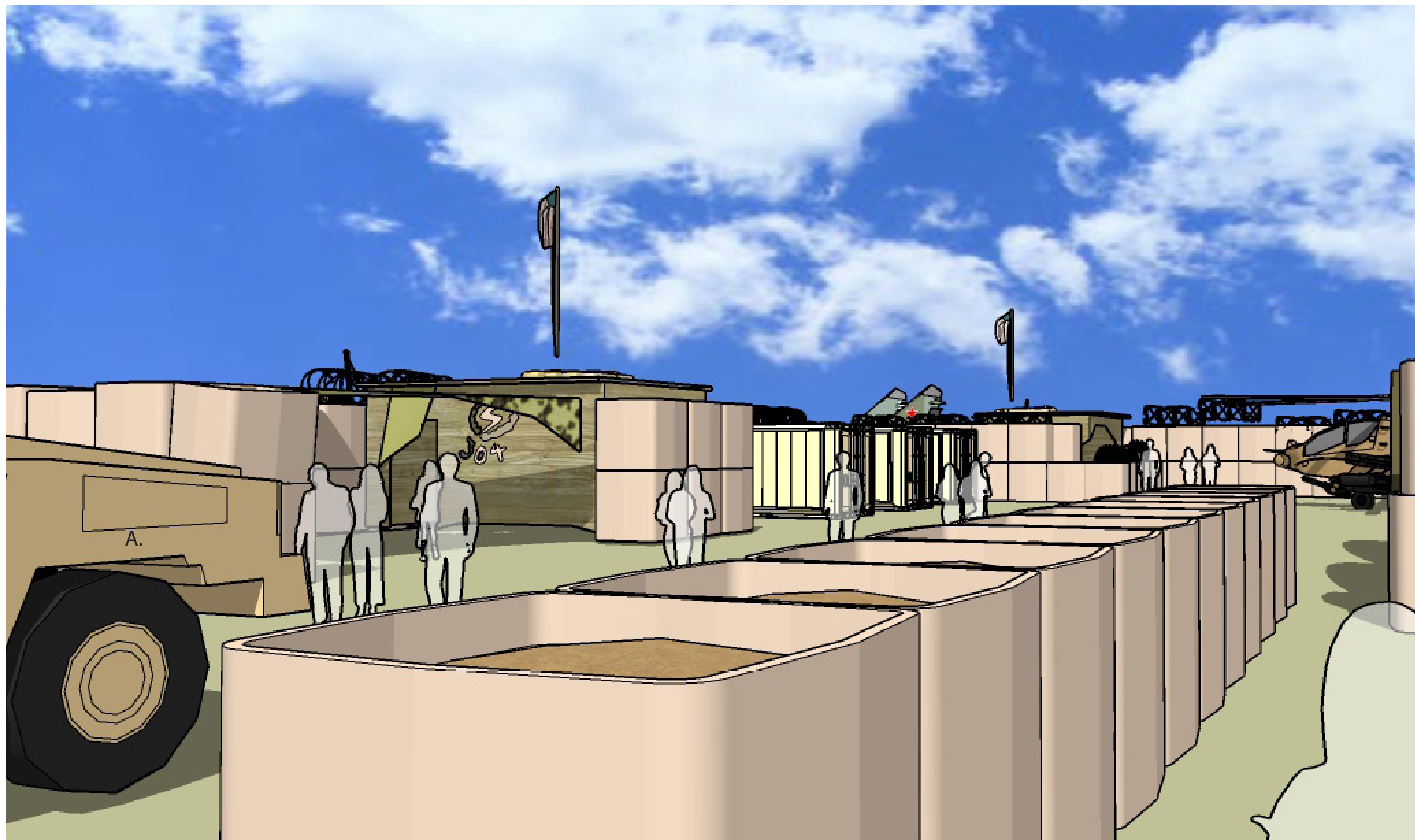
KEY MAP



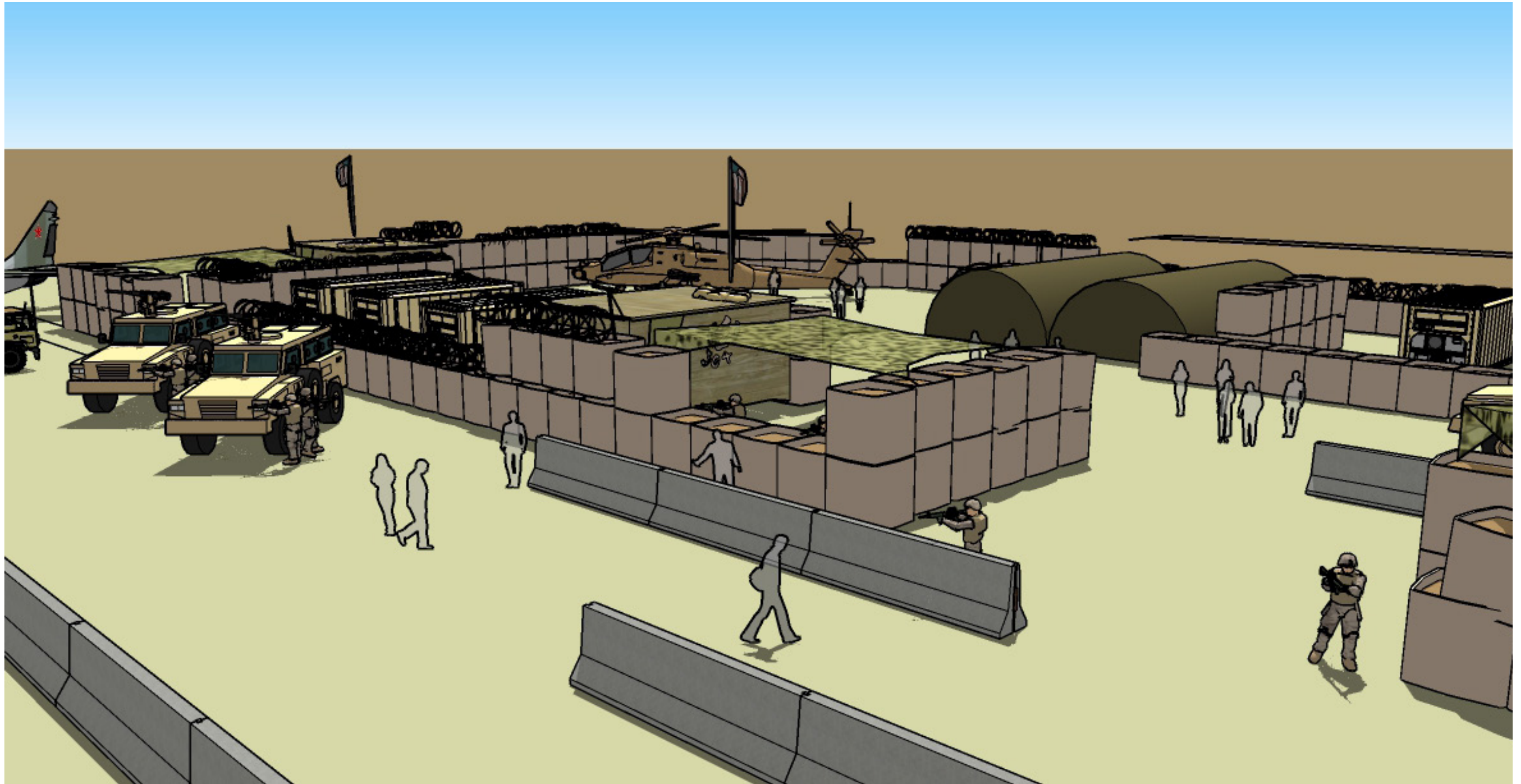
A. BIRDS EYE VIEW OF BASE



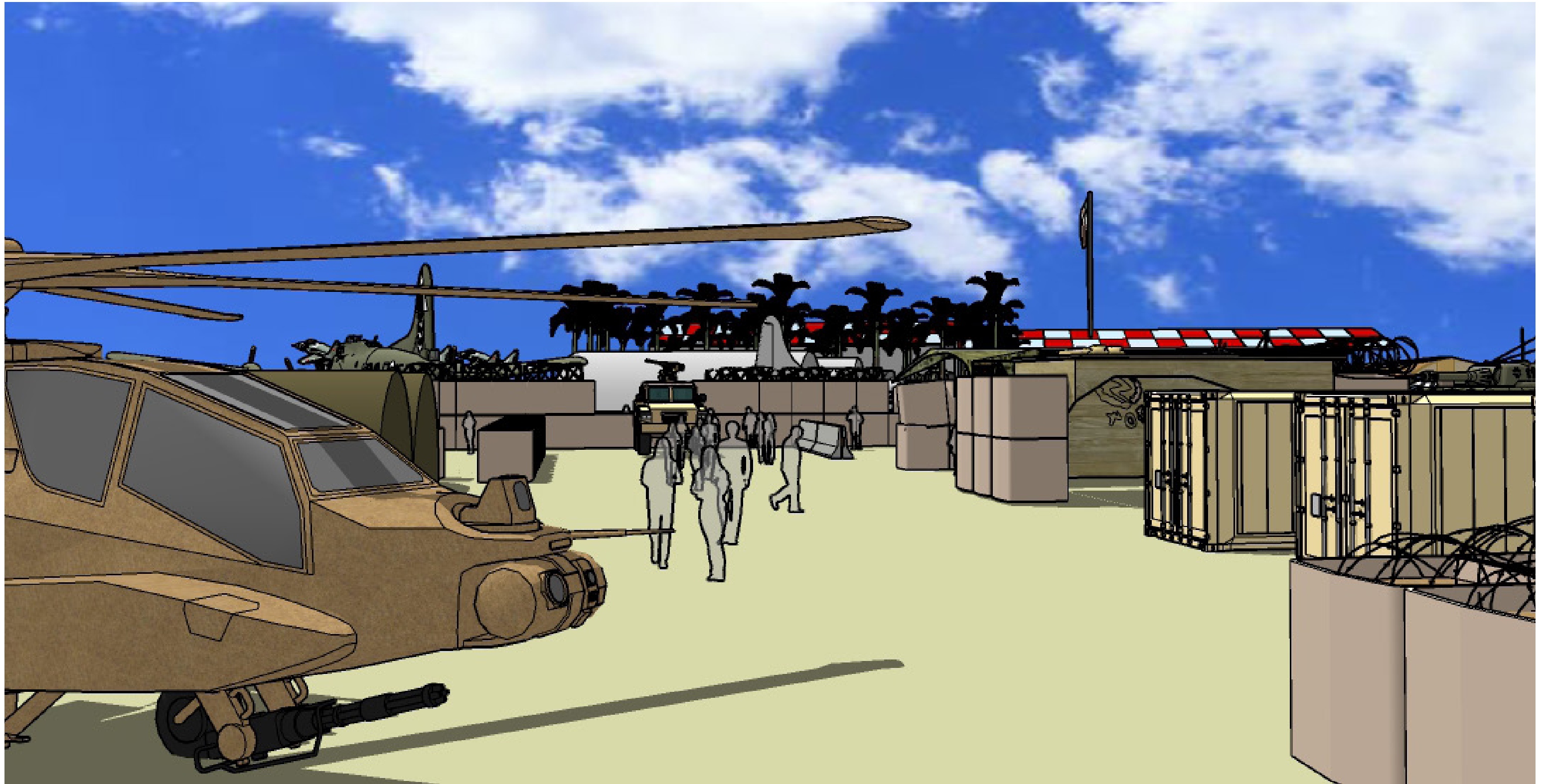
B. CONCRETE BARRIERS AT FRONT ENTRANCE



C. HESCO BARRIERS AND CONEX LIVING QUARTERS - IRAQ/AFGHANISTAN FORWARD OPERATING BASE

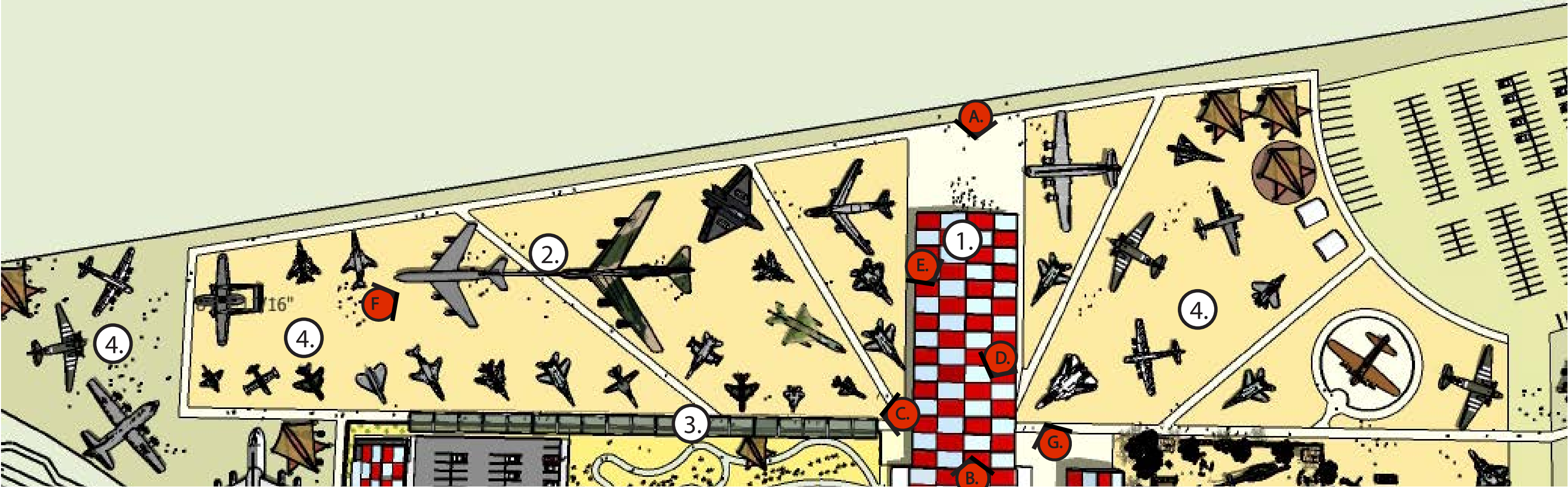


D. ENTRY CONTROL POINT AT THE IRAQ/AFGHANISTAN FORWARD OPERATING BASE



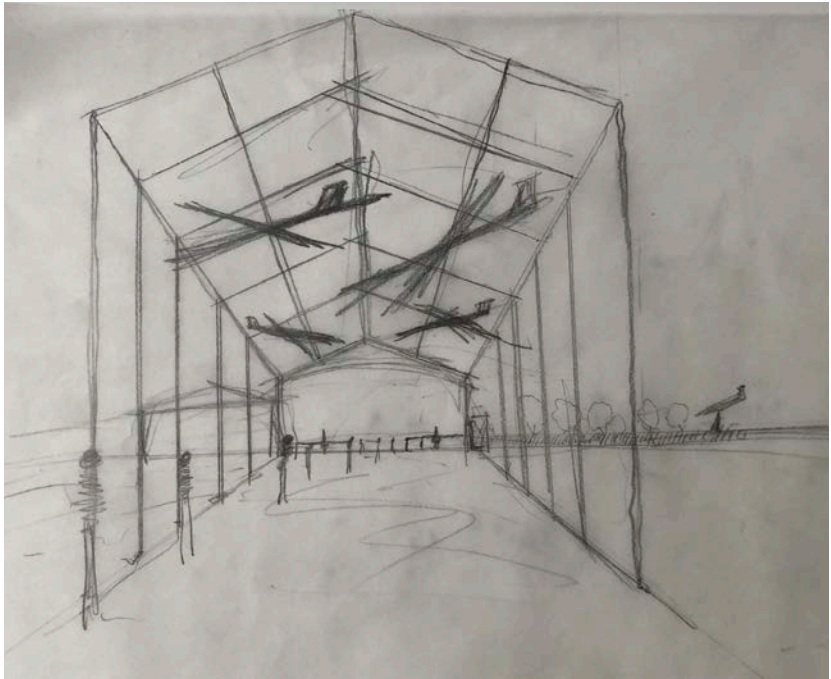
E. CHOPPER INSIDE THE IRAQ/AFGHANISTAN FORWARD OPERATING BASE

AIRCRAFT EXHIBIT

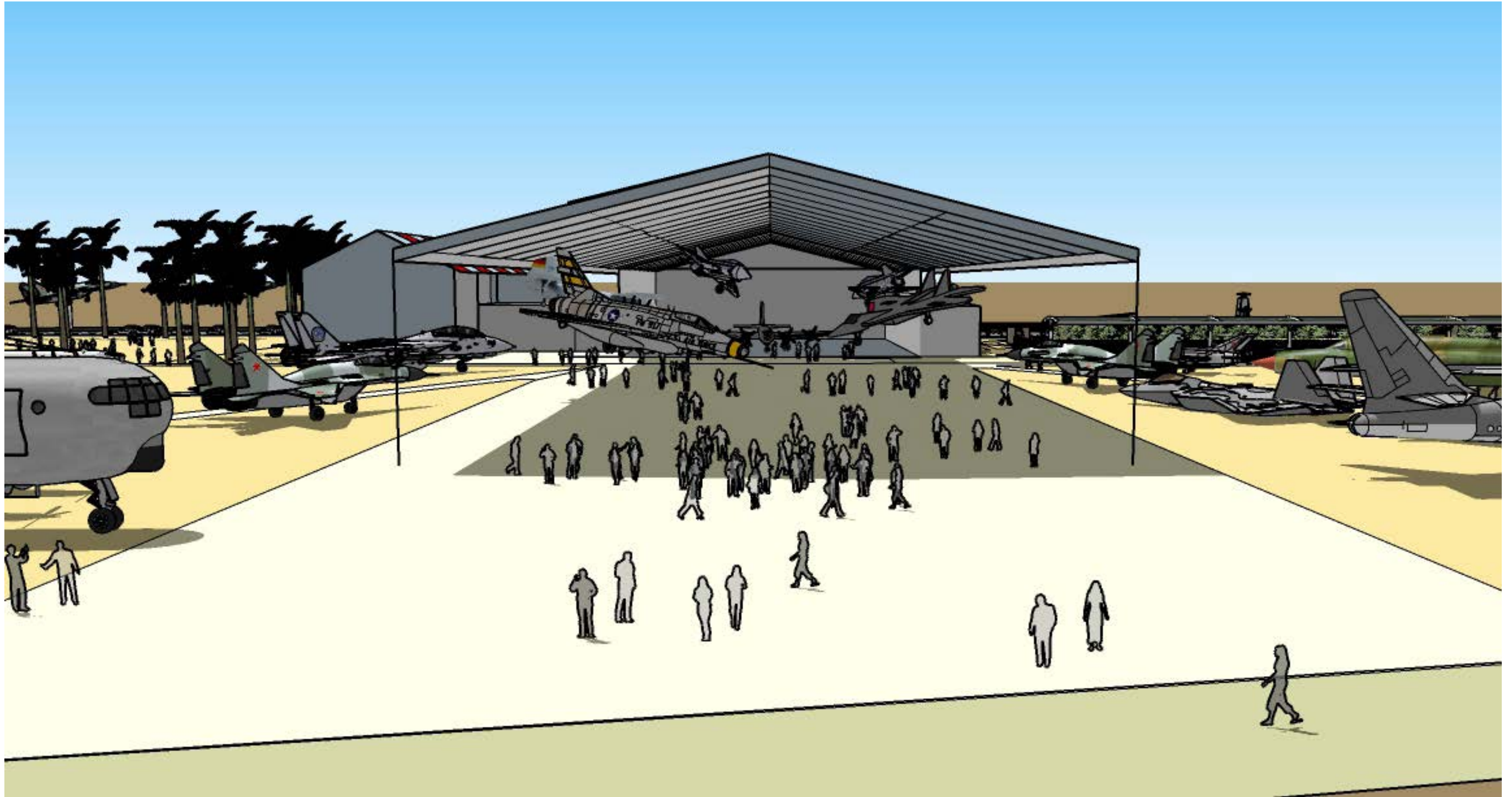


AIRCRAFT EXHIBIT AREA AND SHADED PAVILION

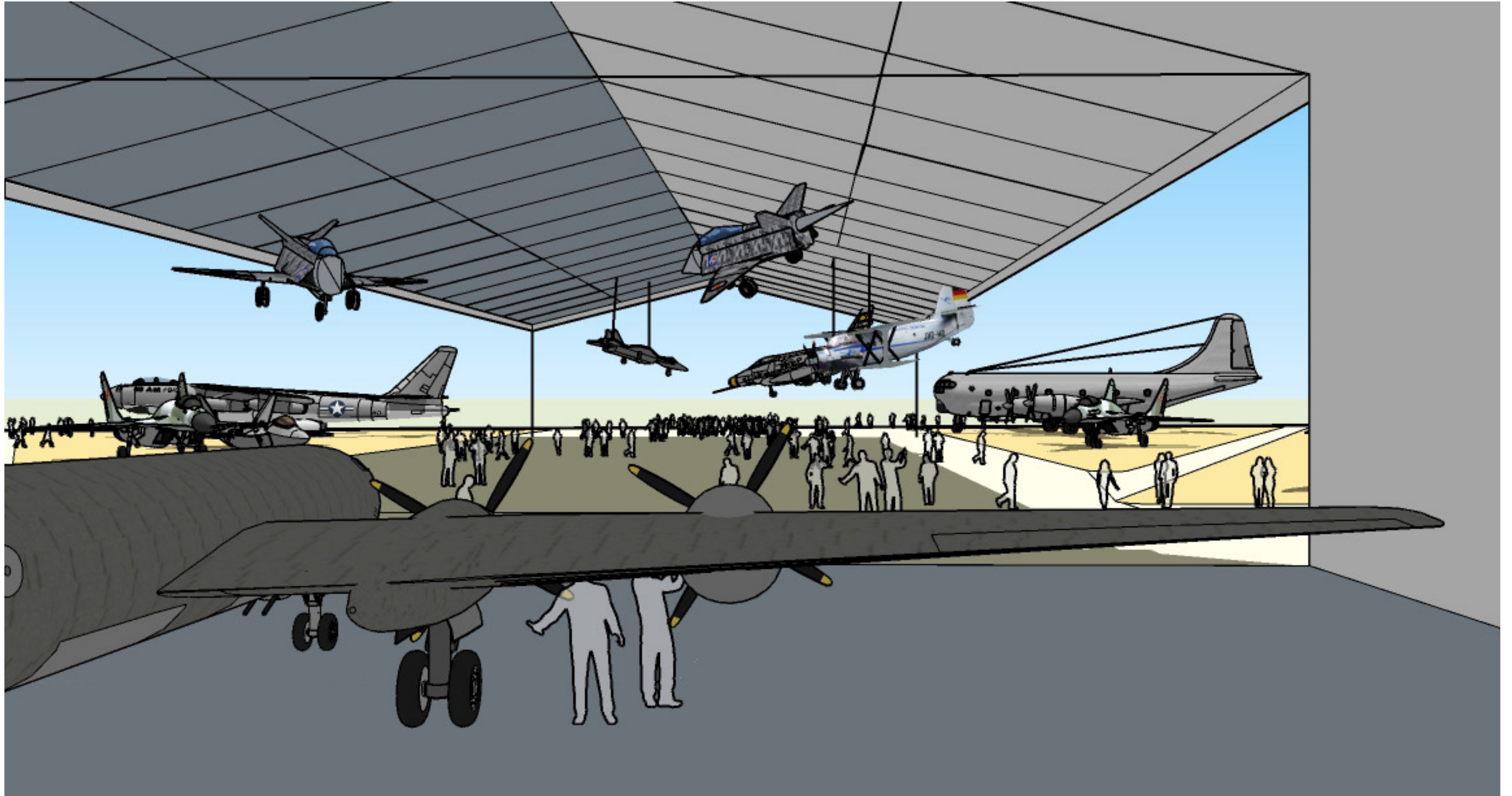
- LEGEND
- 1. SHADED GRAND MALL WITH ELEVATED AIRCRAFT DISPLAY
 - 2. REFUELING EXHIBIT OF THE B-52 BOMBER
 - 3. SHADED PROMENADE
 - 4. AIRCRAFT ON DISPLAY



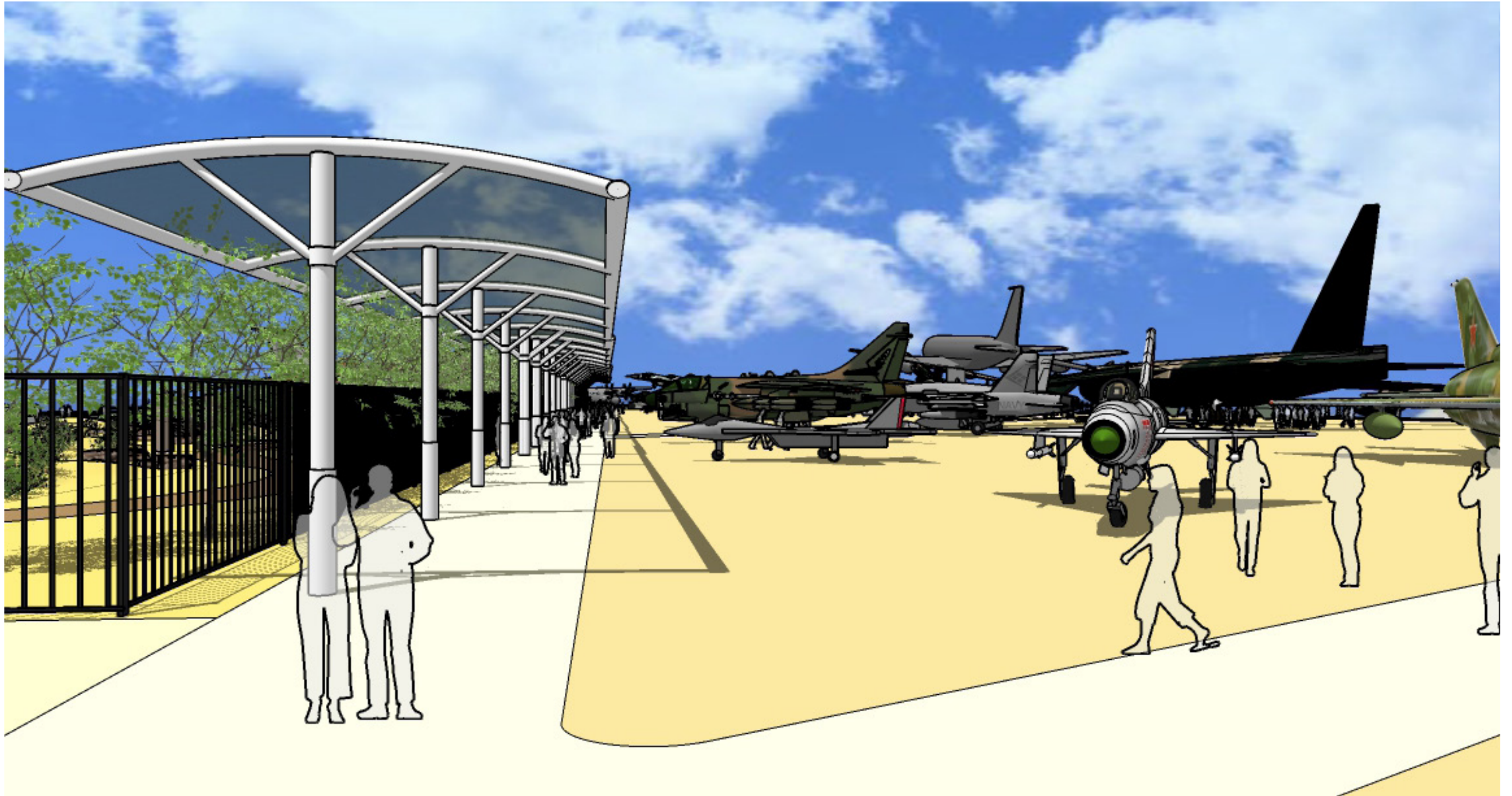
80 FEET 



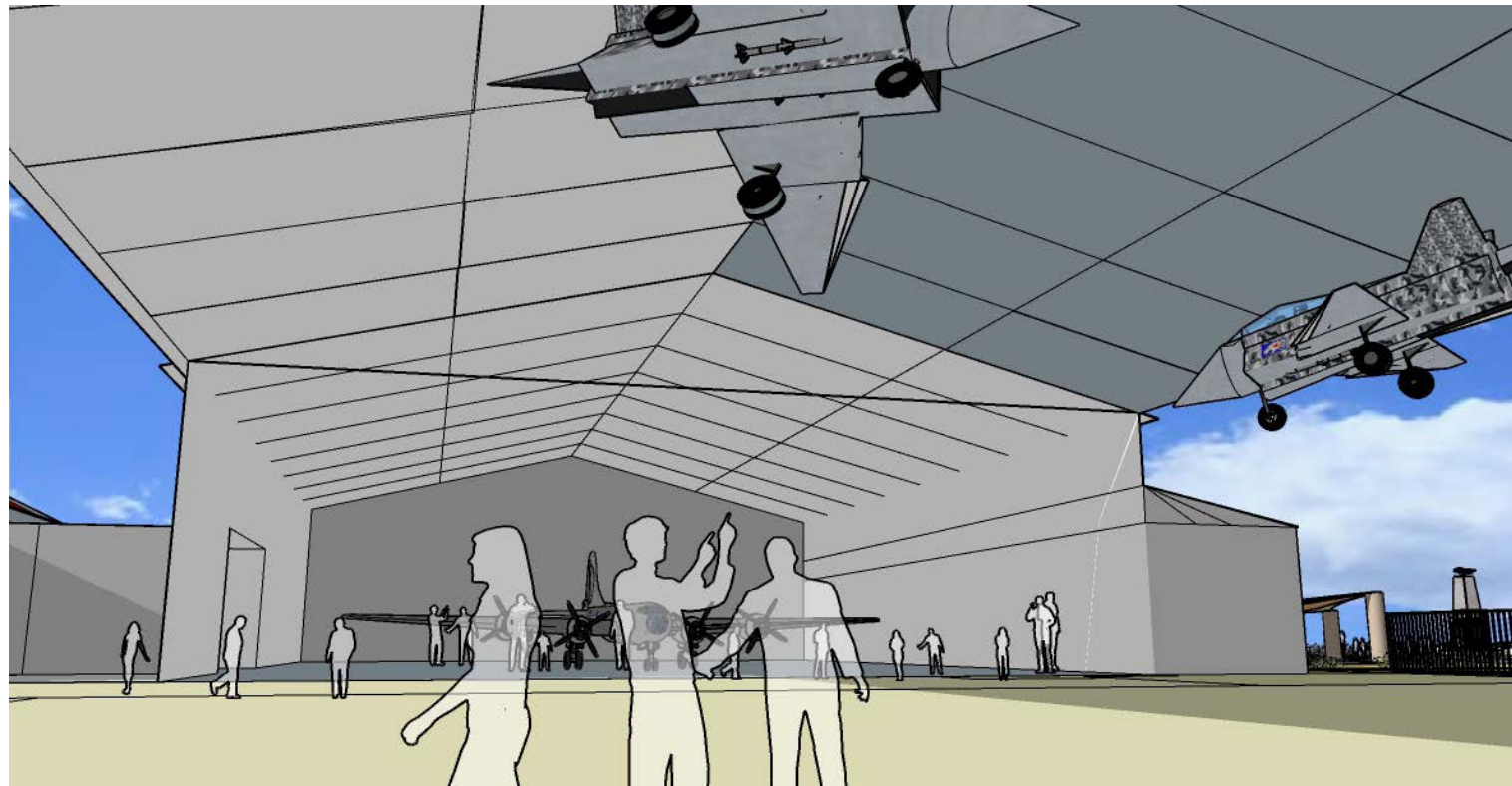
A. EXHIBIT SPACE IN THE SHADED PAVILION



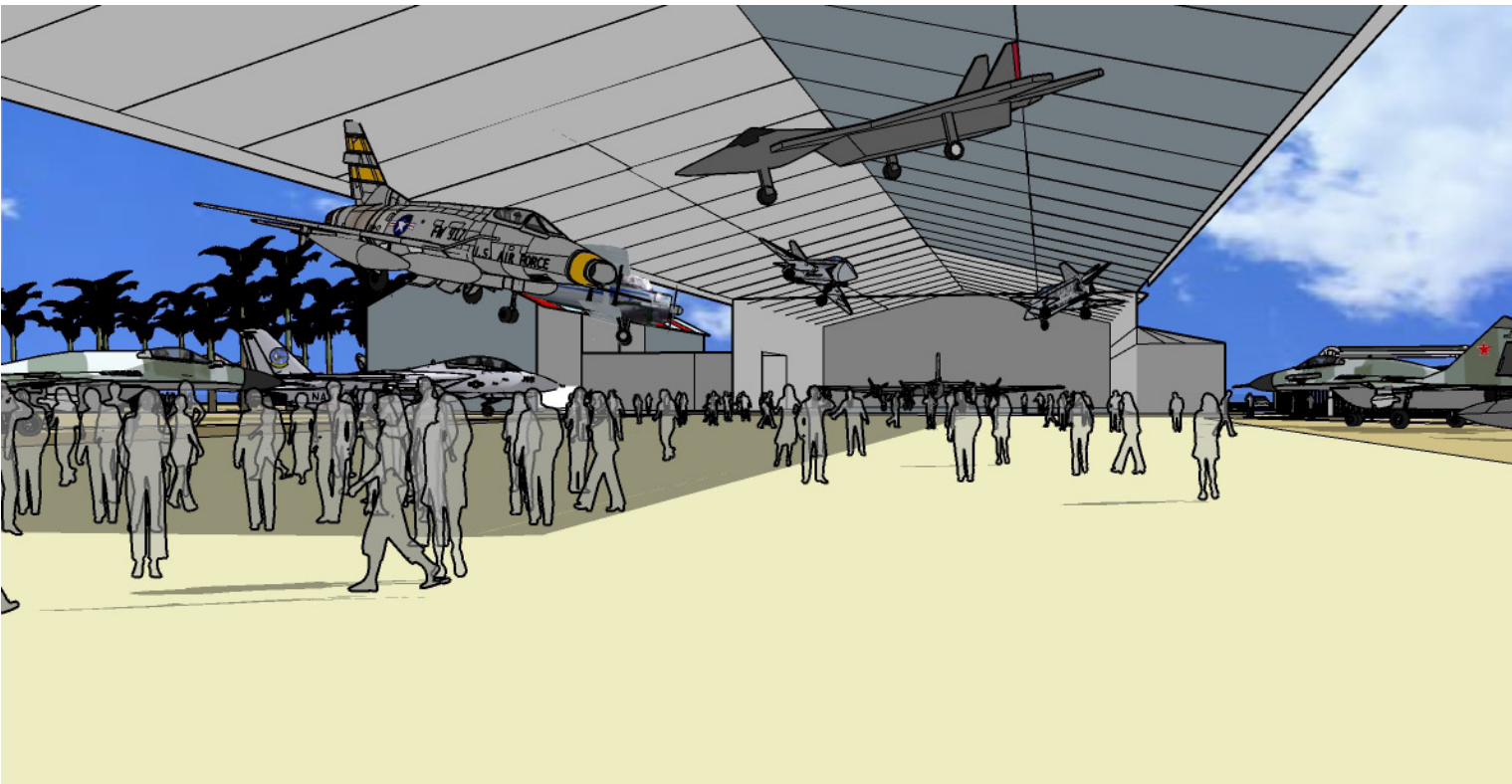
C. VIEW LOOKING OUT INTO THE SHADED PAVILION



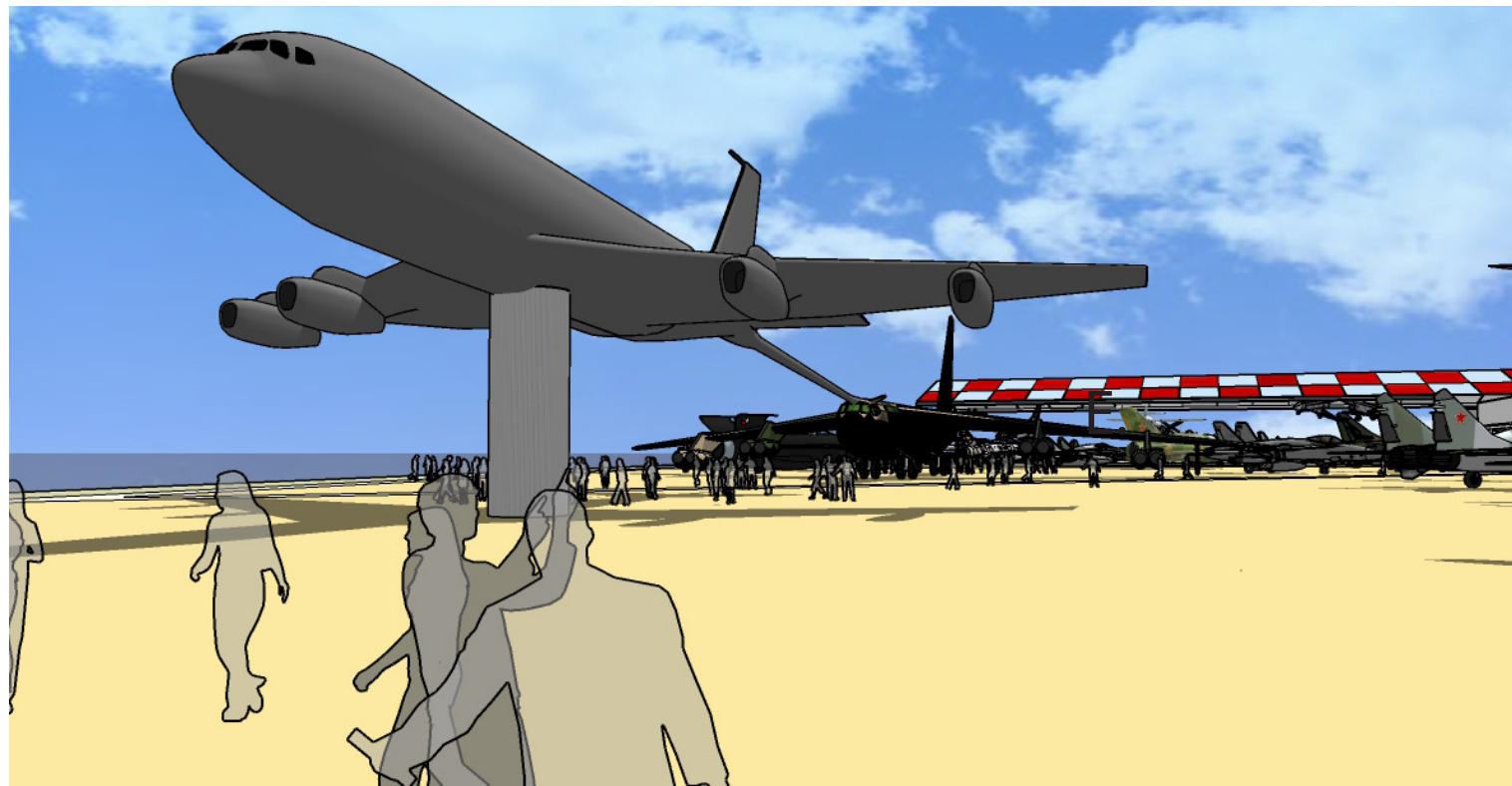
C. VIEW LOOKING NORTH ALONG THE SHADED PROMENADE



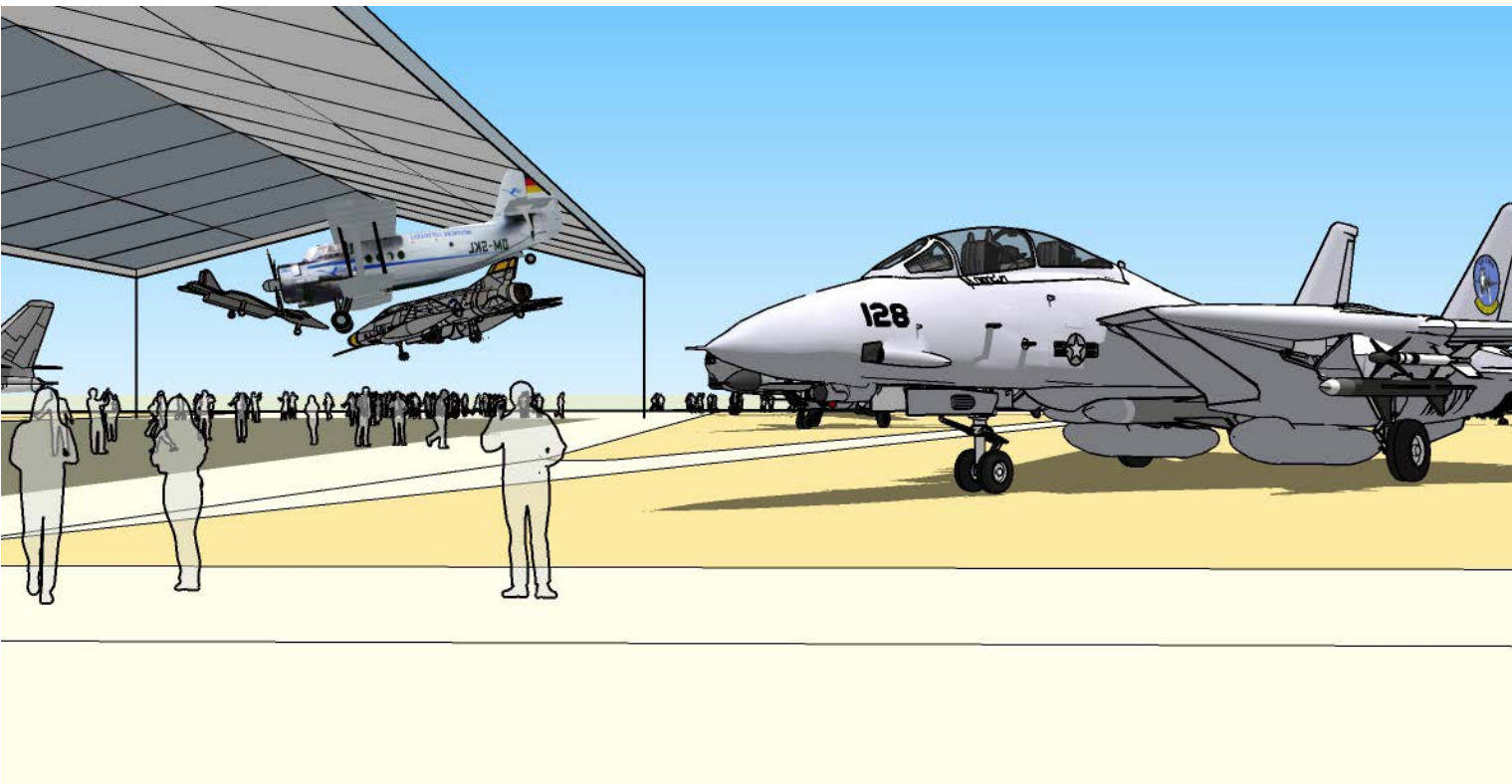
E. SHADED OUTDOOR PAVILION



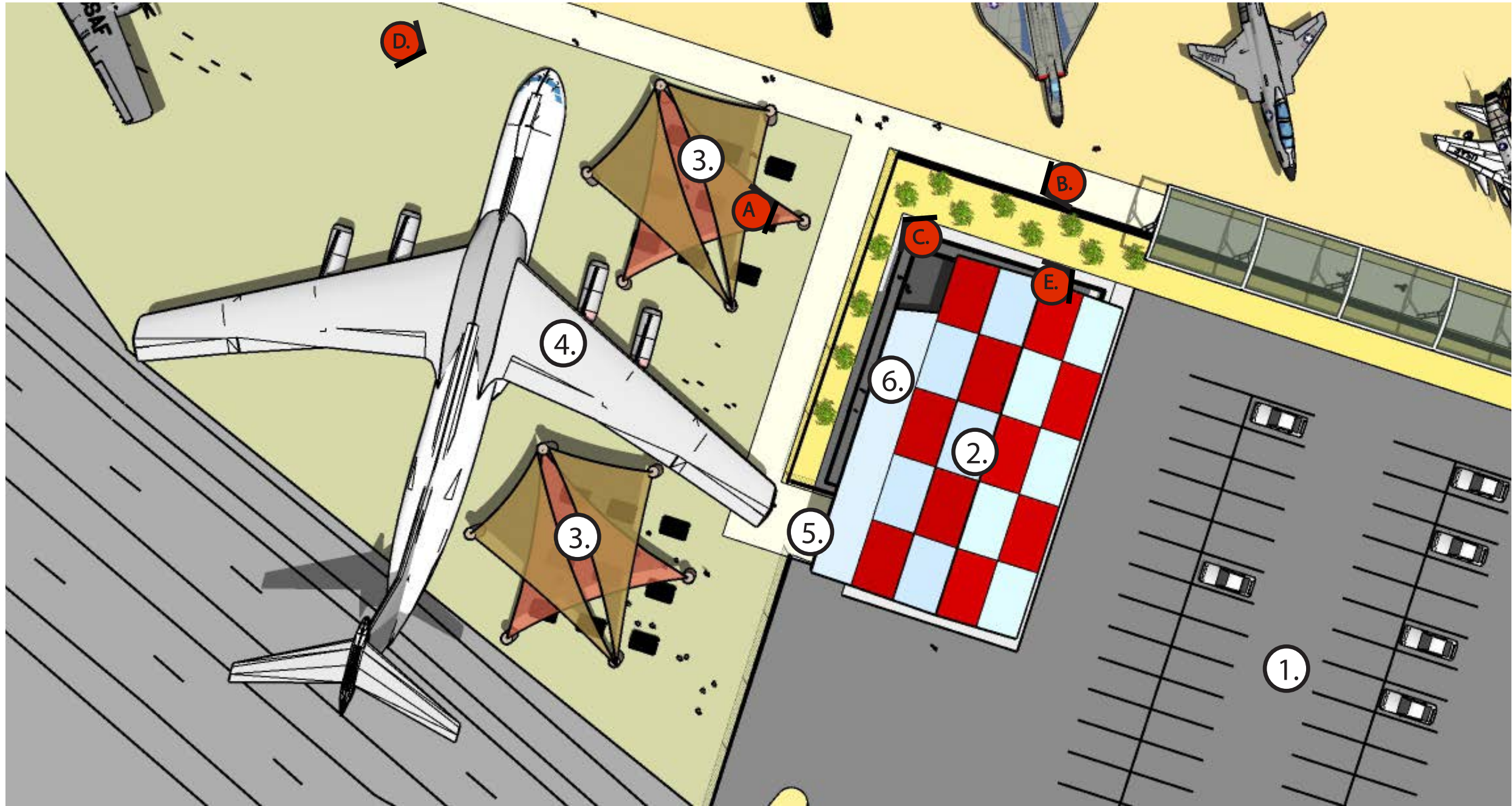
F. SHADED OUTDOOR PAVILION



G. KC-135 REFUELING B-52



H. F-14 AIRCRAFT AND PAVILION



KEY MAP

THE C-141 CAFE/RESTAURANT/PUB

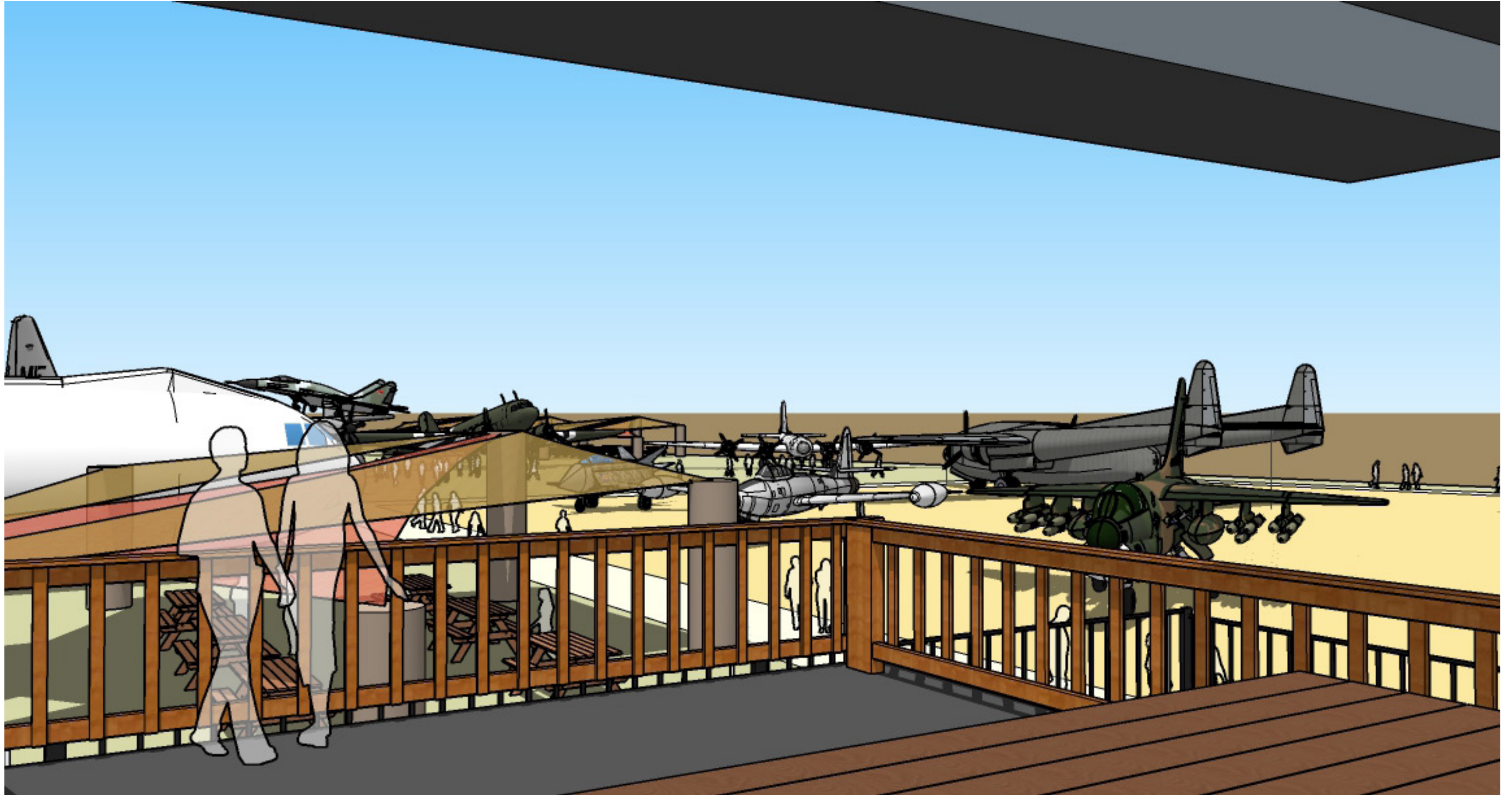
- LEGEND
- 1. SHARED PARKING FOR MUSEUM AND THE C-141 RESTAURANT
 - 2. 2 STORY RESTAURANT/CAFE/PUB WITH OUTDOOR DECK SEATING WITH VIEWS TO MUSEUM
 - 3. SHADED OUTDOOR PICNIC AREA FOR MUSEUM VISITORS
 - 4. C-141 OPERATES AS AN OPEN BANQUET FOR SPECIAL EVENTS
 - 5. WALK UP COUNTER FOR VISITORS AT THE MUSEUM
 - 6. UPPER AND LOWER DECK SEATING



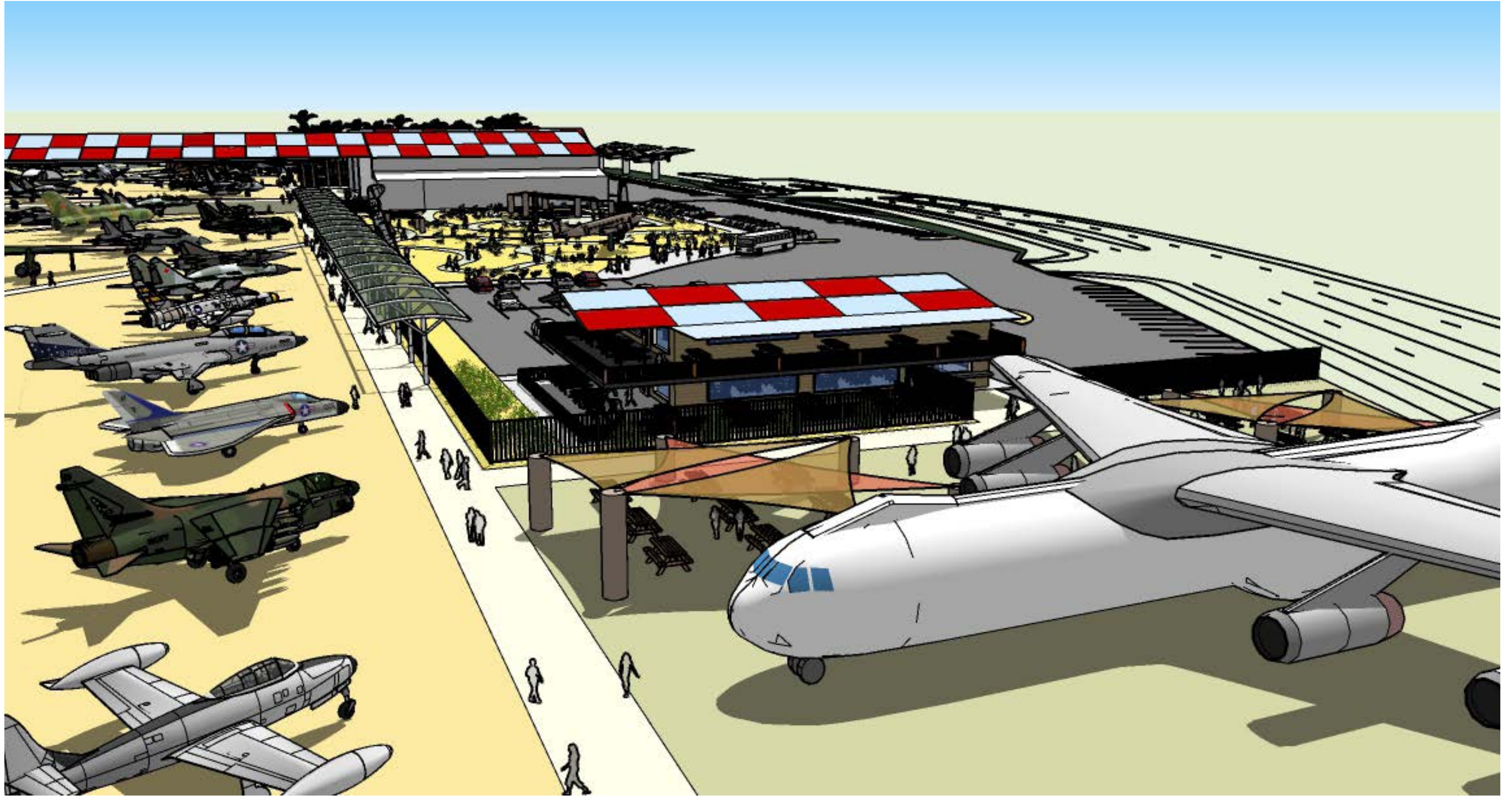
A. VIEW OF RESTAURANT AND AIRCRAFT IN THE MUSEUM



E. OUTDOOR SEATING AREA WITH VIEWS INTO MUSEUM



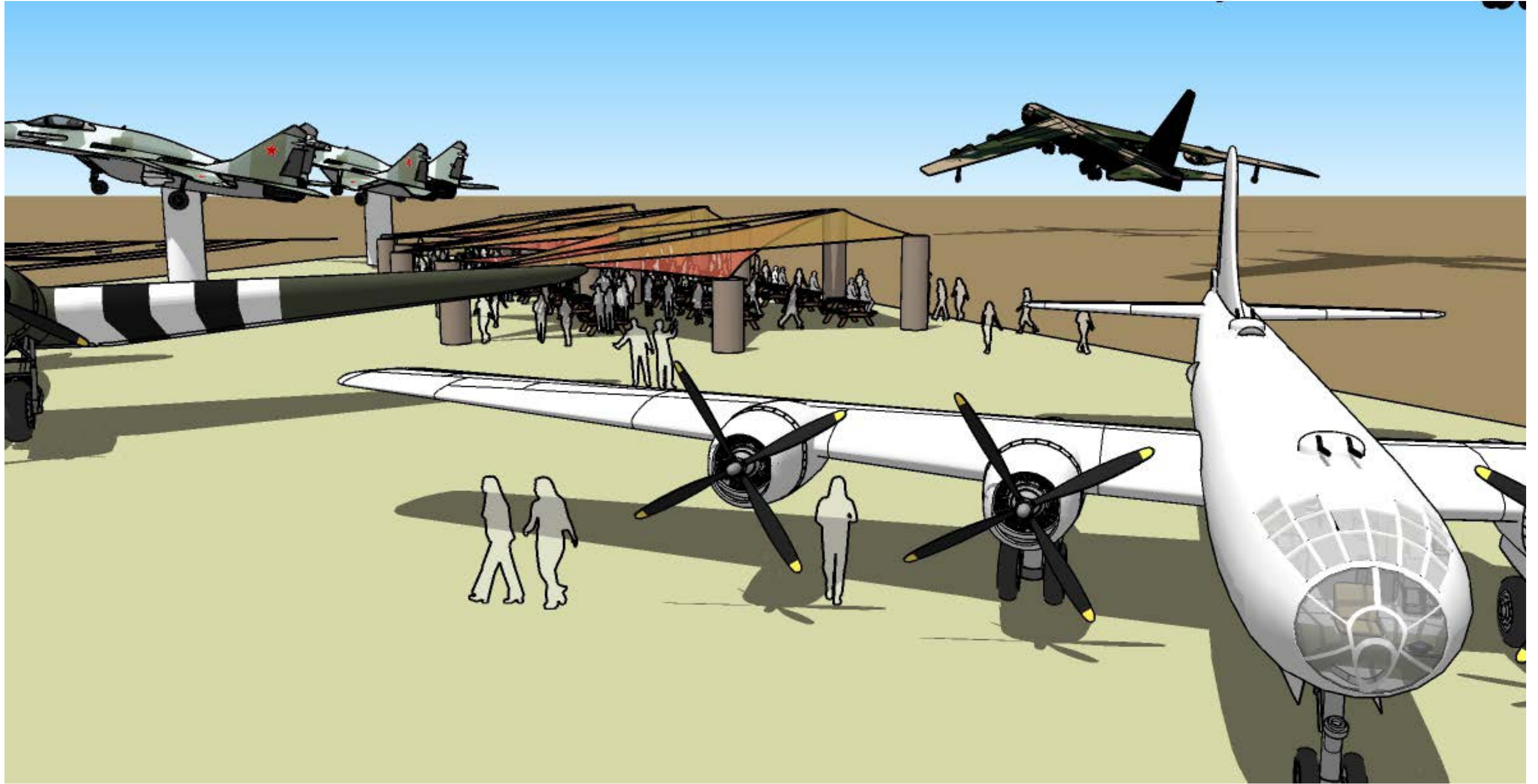
C. UPPER LEVEL DINNING AREA WITH VIEWS OUT INTO MUSEUM



D. BIRDS EYE VIEW OF THE C-141 RESTAURANT



E. UPPER LEVEL DINNING AREA WITH VIEWS OUT INTO MUSEUM



THANK YOU.