

WINGS OF WONDER

*Discovering the Legacy of Aviation at
March Field Air Museum*



INTRODUCTION

The March Field Air Museum exhibits a diverse range of approximately 107 aircraft and more than 30,000 individual artifacts that cover almost a century of aviation history.

From the delicate fabric-covered biplanes of the First World War era to the contemporary and sophisticated jet fighters of today, the museum encompasses a wide variety of aircraft and an extensive collection of robust helicopters from the Vietnam period and cutting-edge unmanned aerial vehicles that are expected to dominate future battlefields.

March Field Air Museum is a non-profit 501 (c)3 charitable organization and a member of the American Alliance of Museums.

SPECIAL EVENTS

Air Show - Annual - Food trucks and beer garden

March Field Wing Ding - Annual - Evening of casual fun, period music from the Riverside Swing Ensemble, 1940s costume contests, drink and sampling of food from local restaurants and caterers.



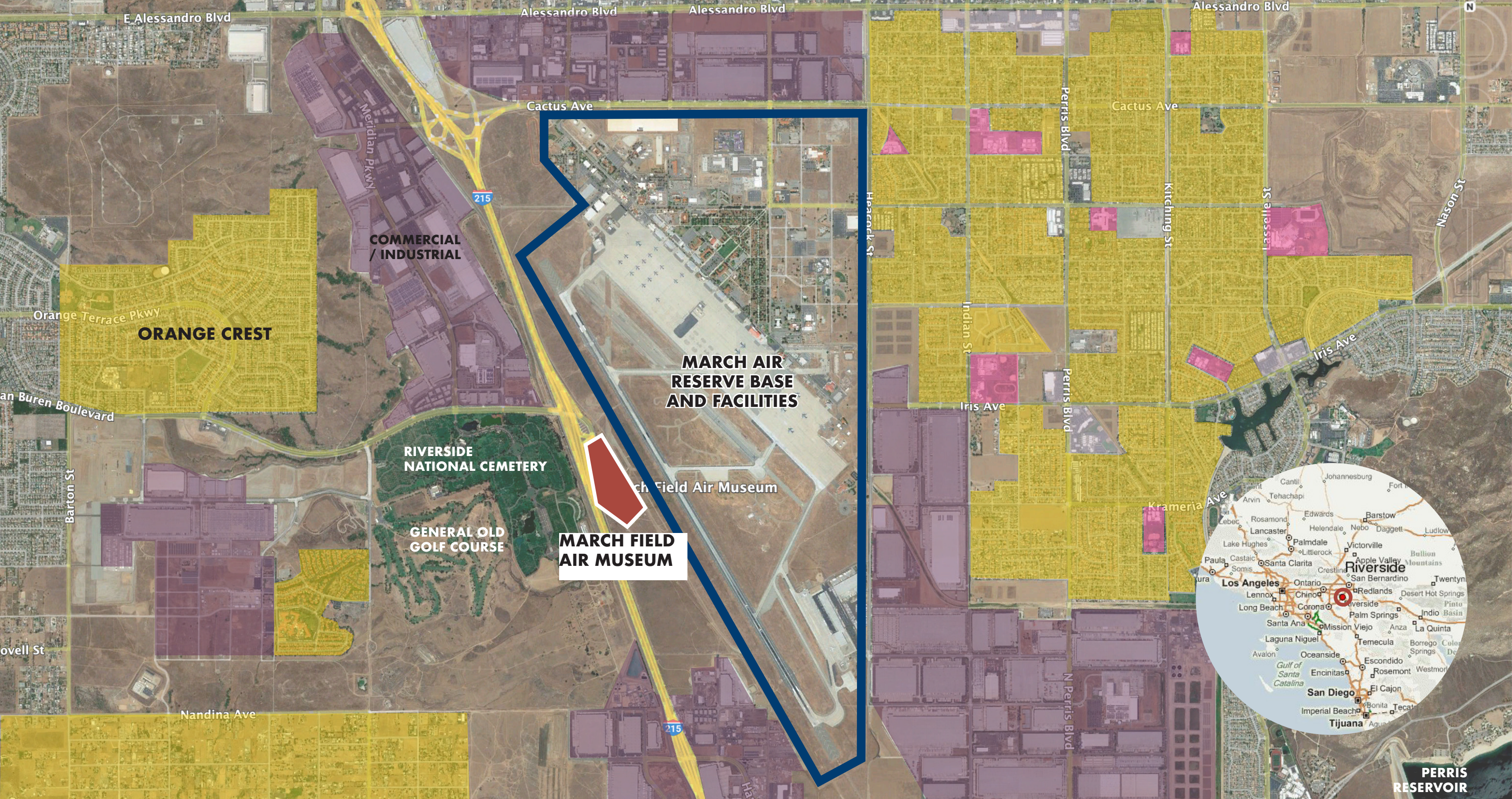
ADDRESS

22550 Van Buren Blvd, Riverside, Ca 92518
Opened February 20, 1981

MUSEUM HOURS

Tuesday-Sunday, 9 a.m. to 5 p.m.





- RESIDENTIAL
- COMMERCIAL - INDUSTRIAL
- SCHOOLS - EDUCATIONAL FACILITIES

SITE LOCATION AND CONTEXT





SAN BERNARDINO MOUNTAINS

RESIDENTIAL

RESIDENTIAL

MARCH AIR RESERVE BASE

MARCH FIELD AIR MUSEUM

I-215 FREEWAY

- ① VISITOR PARKING
- ② OUTDOOR EXHIBIT AREA
- ③ MEMORIAL GARDEN
- ④ INDOOR MUSEUM
- ⑤ VIETNAM FIRE BASE
- ⑥ RESTORATION HANGARS
- ⑦ FUTURE IRAQ-AFGHANISTAN FIRE BASE

MARCH FIELD HISTORY TIMELINE



1917-1918

Construction of an airfield at Alessandro Field, renamed March Field in honor of Second Lieutenant Peyton C. March, Jr.

On May 15, the first JN-4D "Jenny" takes off from March Field.



1921-1923

Activities phase down at March Field in accordance with sharply reduced military budgets. **March Field closes its doors** in 1923 with one sergeant left in charge.



1926

Creation Army Air Corps.

Reopening of March Field in March of 1927.



1931

March Field becomes an operational base

The 7th Bomb Group brings its Condor B-2 and Keystone B-4 bombers to the field.



1941

After the attack on Pearl Harbor, **March Field becomes a major center for training heavy bomber crews.**



1979

March Field Museum is established in the March base theater.



1996

The base is renamed **March Air Reserve Base.**

1993

March Field Museum moves to its current location

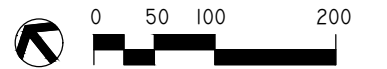
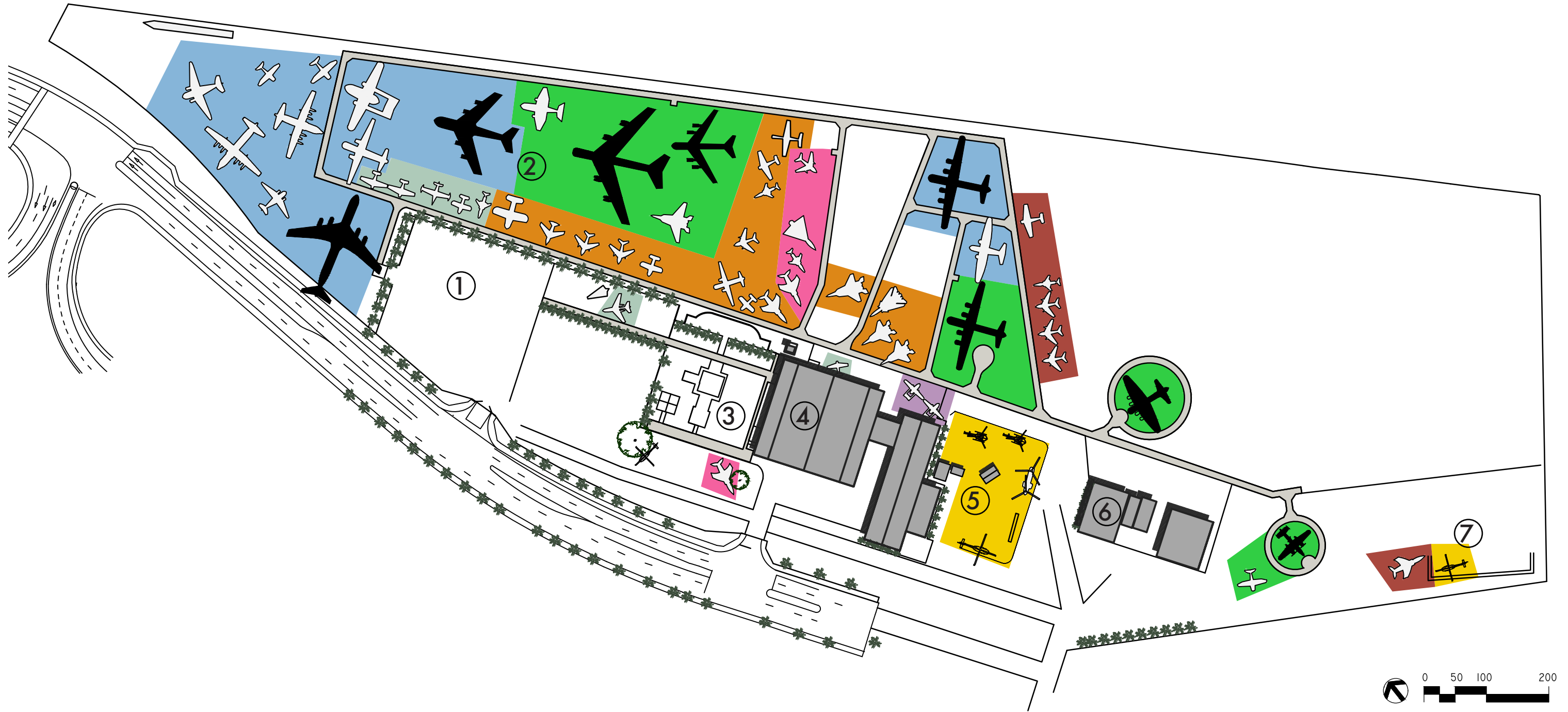


SITE INVENTORY



- | | | | | | | | | | |
|--|-------------------------|--|----------------------|--|---------------------------------|--|--|------------------------|-------------------------------------|
| | ACCESS POINTS | | PARKING AREAS | | VIETNAM FIRE BASE | | OUTDOOR AIRCRAFT EXHIBIT AREA | ① VISITOR PARKING | ⑤ VIETNAM FIRE BASE |
| | SCOPE OF WORK | | PLANTED AREAS | | RESTORATION HANGARS | | FUTURE IRAQ-AFGHANISTAN FIRE BASE | ② OUTDOOR EXHIBIT AREA | ⑥ RESTORATION HANGARS |
| | MEMORIAL GARDEN | | INDOOR MUSEUM | | PEDESTRIAN CONCRETE PATH | | | ③ MEMORIAL GARDEN | ⑦ FUTURE IRAQ-AFGHANISTAN FIRE BASE |
| | IMMOVABLE PLANES | | | | | | | ④ INDOOR MUSEUM | |

SITE INVENTORY - AIRCRAFT



1. CARGO - REFUELLING - UTILITY

C141
C23
C-131
C-119
C-45
C-54
R50-5
C-47
KC-135
KC-97
HU-16
U9

2. TRAINING AIRCRAFT

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

3. ATTACK - FIGHTER - INTERCEPTOR

A-4
A-7
A-1E
F4
F-84
RF-4
A-9
A-26
F-14
F-86
A-37
F45
F-89

4. SOVIET BLOCK AIRCRAFT

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

5. BOMBERS

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

6. CENTURY SERIES

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

8. HELICOPTERS

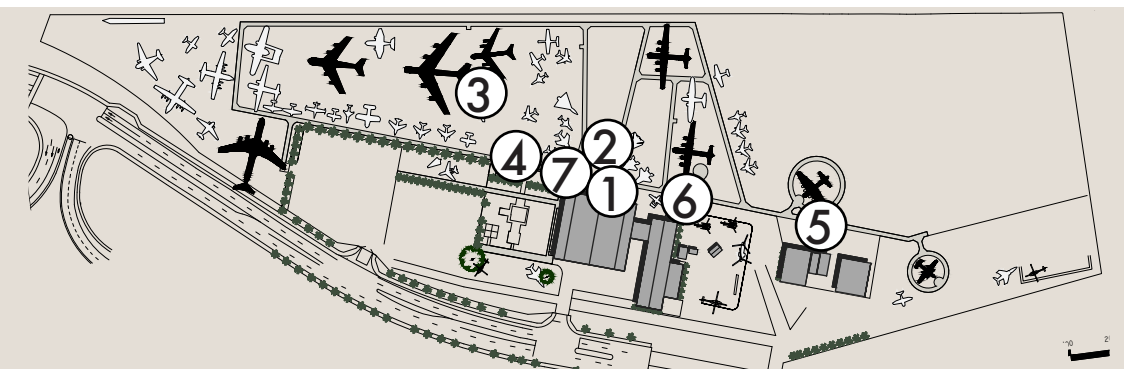
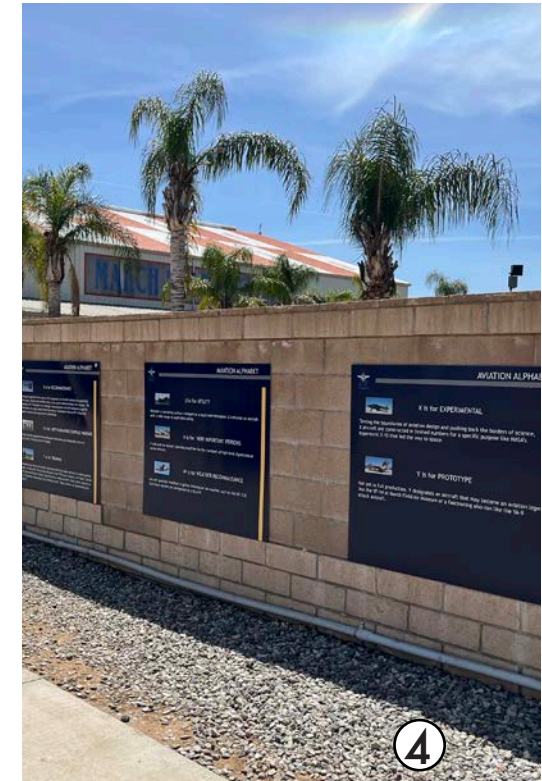
UH-1
HH-34
OH-58
UH-1D
AH-1
OH-6A
H-21

7. OBSERVATION

O-2

- ① VISITOR PARKING
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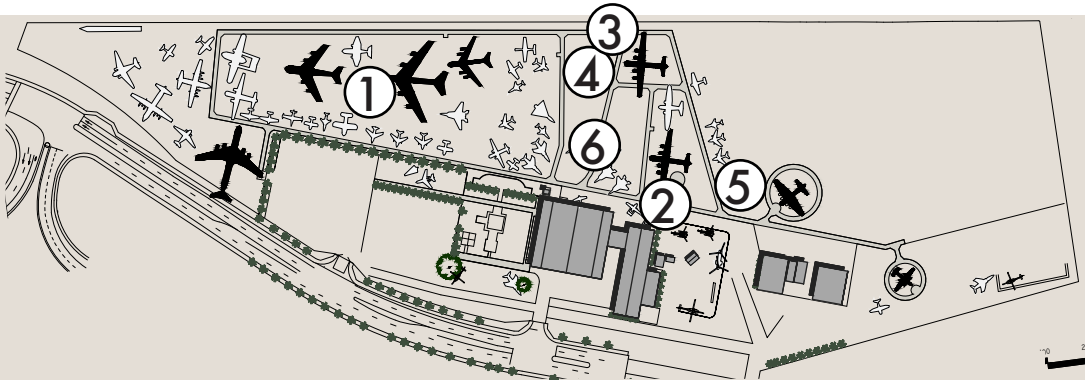
SITE STRUCTURES



SITE PICTURES



THE AIR SHOW



VIETNAM LOCATION EXHIBIT: FIRE BASE ROMEO CHARLIE



HERITAGE COURTYARD



1



2



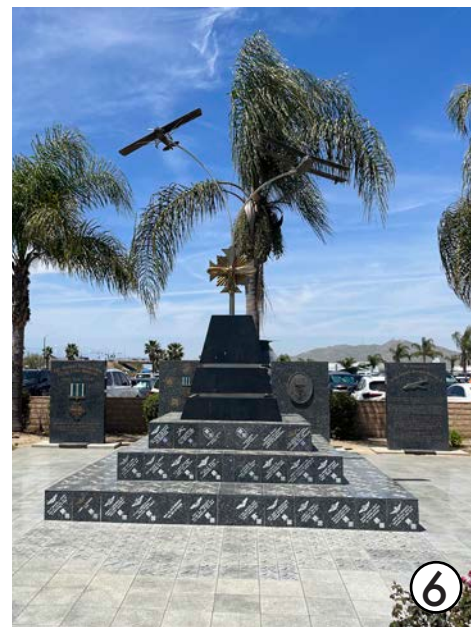
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4



5



6



7



8



9

- 1 Overall view of Memorial Garden. Memorial elements feel sparse and not part of the same design.
- 2 Memorial sculpture for James H. Doolittle with memorial wall behind. Interesting view of planes showing above the wall.

- 3 Landscaped area feels unattended and lacks interest. High water - high maintenance vegetation.
- 4 Freedom shrine with missile and flag on the background. Feels unattractive and dry.

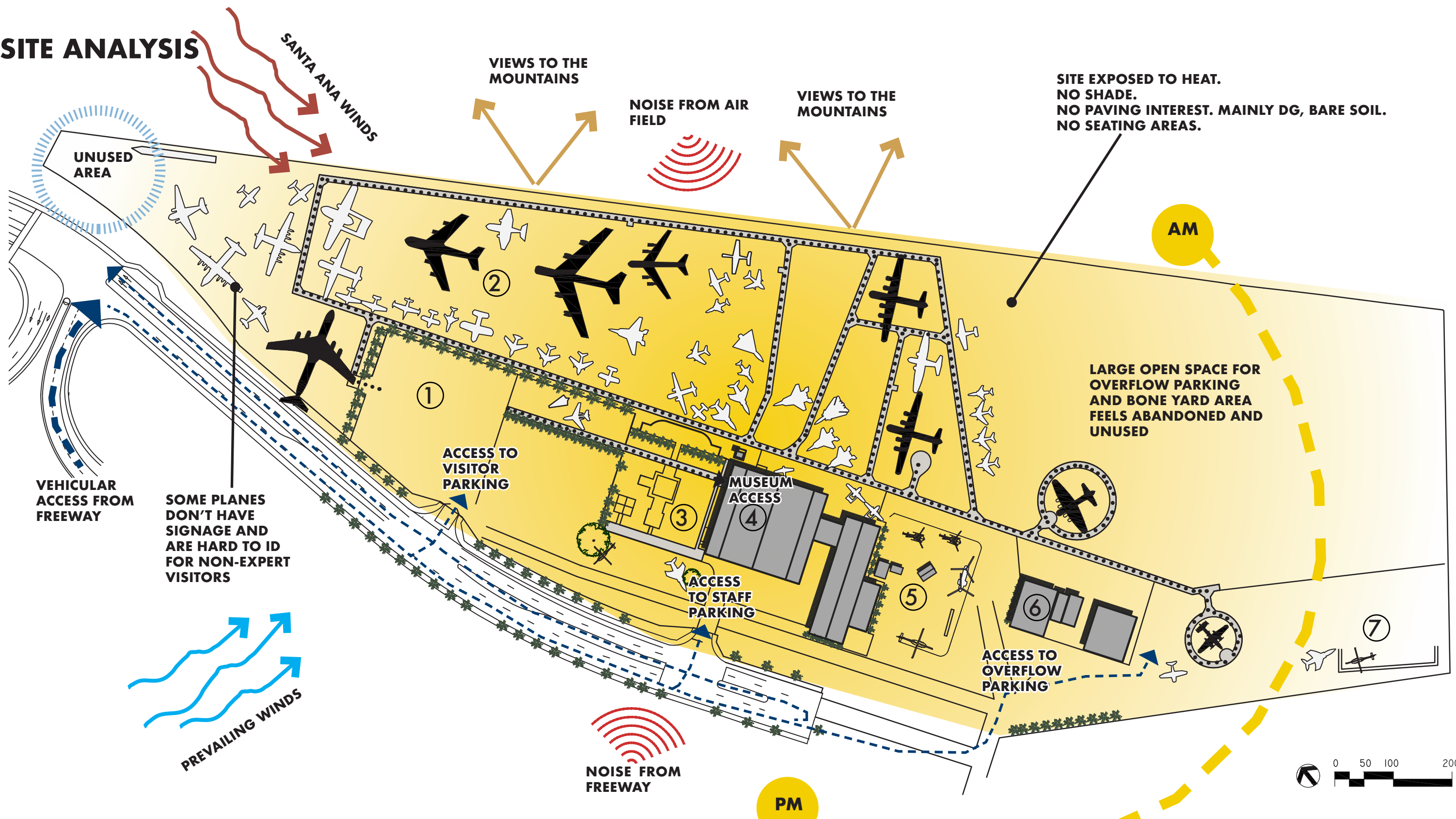
- 5 6 Veterans memorials.

- 7 8 Dogs memorial. Dog names written on tiles

- 9 Veterans names written on tiles on the floor.



SITE ANALYSIS



VEHICULAR ACCESS FROM FREEWAY

SOME PLANES DON'T HAVE SIGNAGE AND ARE HARD TO ID FOR NON-EXPERT VISITORS

PREVAILING WINDS

VIEWS TO THE MOUNTAINS

NOISE FROM AIR FIELD

VIEWS TO THE MOUNTAINS

SITE EXPOSED TO HEAT. NO SHADE. NO PAVING INTEREST. MAINLY DG, BARE SOIL. NO SEATING AREAS.

AM

LARGE OPEN SPACE FOR OVERFLOW PARKING AND BONE YARD AREA FEELS ABANDONED AND UNUSED

ACCESS TO VISITOR PARKING

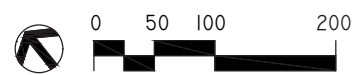
MUSEUM ACCESS

ACCESS TO STAFF PARKING

ACCESS TO OVERFLOW PARKING

NOISE FROM FREEWAY

PM



--- VEHICULAR CIRCULATION
 PEDESTRIAN CIRCULATION

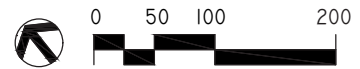
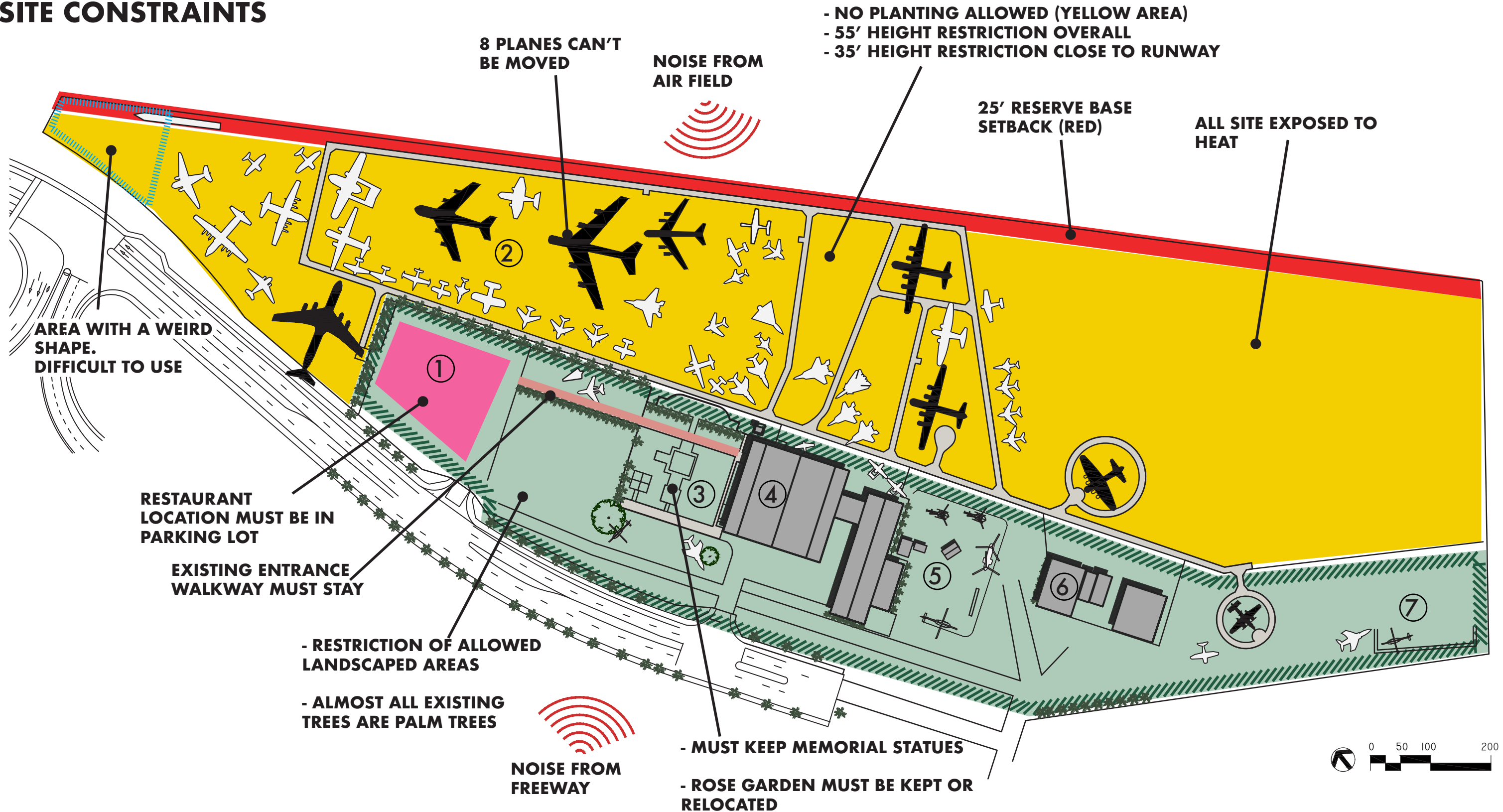


IMMOVABLE PLANES

HEAT

- ① VISITOR PARKING
- ② OUTDOOR EXHIBIT AREA
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SITE CONSTRAINTS



- ① VISITOR PARKING
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SITE OPPORTUNITIES

- PLANES CAN BE REORGANIZED BY THEME.
- SIGNAGE CAN BE ADDED TO MAKE THE MUSEUM EXPERIENCE MORE ATTRACTIVE

FRAME VIEWS TO THE MOUNTAINS

SHADE STRUCTURES CAN BE ADDED TO ENHANCE SOME AREAS TO MAKE THE SPACE COOLER

LARGE OPEN SPACE FOR OVERFLOW PARKING AND BONE YARD

- CAN BE REDESIGN AS A FLEXIBLE SPACE FOR DIFFERENT EVENTS

AREA CAN BE DESIGNED AS A SPECIAL PLACE WITH VIEWS

NEW RESTAURANT:

- VISIBLE FROM THE FREEWAY

- CAN BECOME A HOT SPOT AND ATTRACT MORE VISITORS

- CAN GIVE THE MUSEUM A MORE MODERN FEEL

LANDSCAPED AREAS:

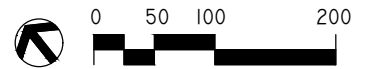
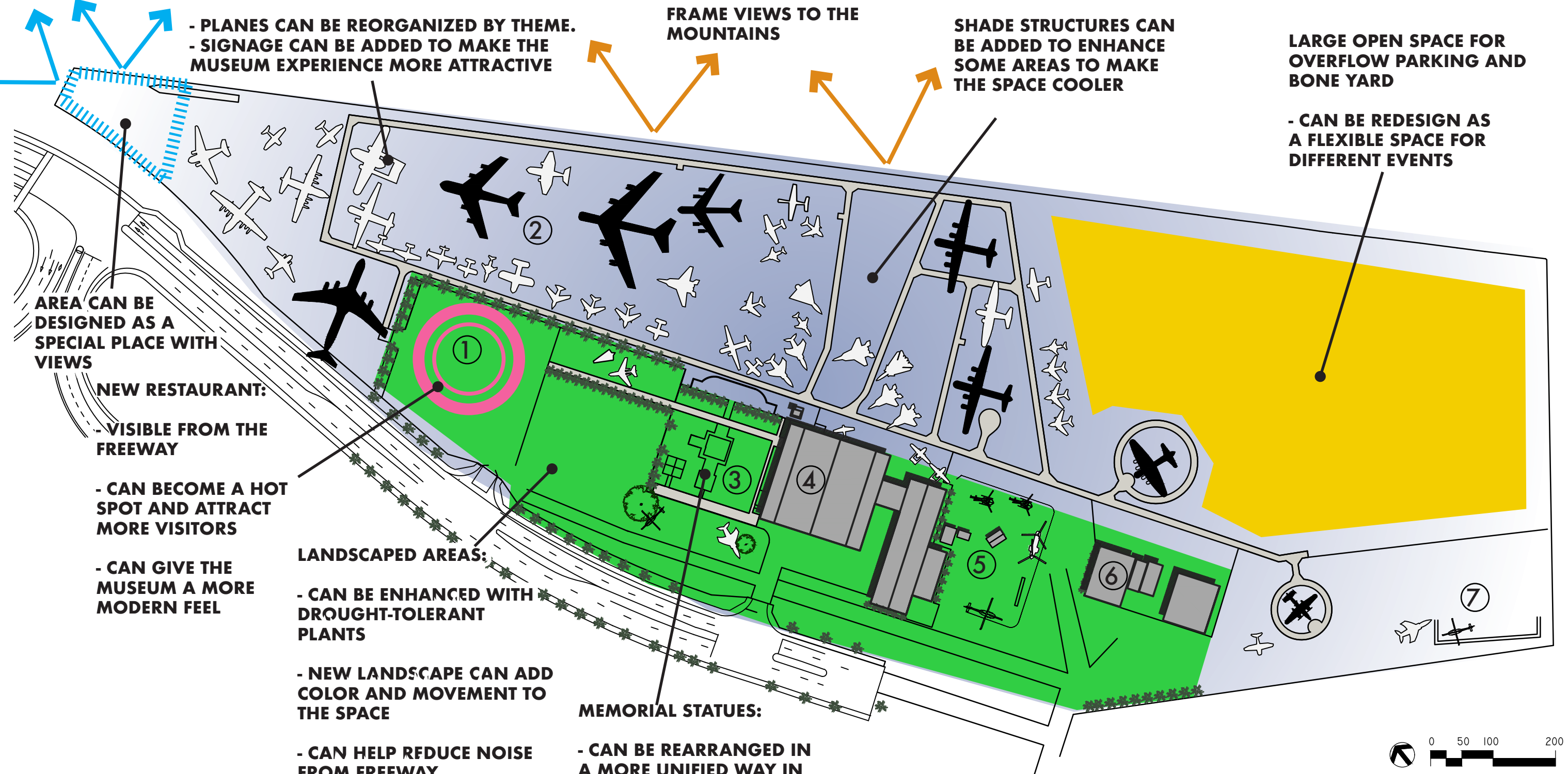
- CAN BE ENHANCED WITH DROUGHT-TOLERANT PLANTS

- NEW LANDSCAPE CAN ADD COLOR AND MOVEMENT TO THE SPACE

- CAN HELP REDUCE NOISE FROM FREEWAY

MEMORIAL STATUES:

- CAN BE REARRANGED IN A MORE UNIFIED WAY IN MEMORIAL GARDEN REDESIGN



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PROGRAM



PARKING

- Redesign existing parking lot
- ADA parking, employee parking, RV parking, bus drop-off
- Adaptive Reuse of the Overflow Parking Area



SHADE

- Shaded passive use areas throughout the site
- Provide shaded viewing of outdoor exhibit areas



FIRE BASE STATION

- 2 Fire Base Stations in addition to the existing Vietnam era FBS; one representing the Iraq/Afghan conflicts, a second representing a WWII Philippines Fire Base



NEW PROGRAMS

- A Grand Mall that can double as a flexible gathering space
- Restaurant in the front parking lot
- Kids play area



MEMORIAL

- Expansion and redesign of the existing Memorial Plaza
- A dedication space to General Hap Arnold
- A flag court for formal ceremonies



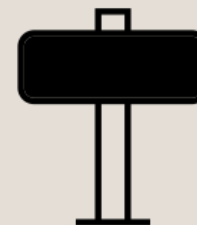
AIRCRAFT

- Reorganize planes by theme or chronologically to enhance the museum experience



CIRCULATION

- Redesign circulation around planes
- Create a grand entrance and gateway to the site



SIGNAGE

- Examples of signage from street and freeway
- Interpretive signage on buildings and planes

PROJECT STATEMENT

Honor the history and technological advancements of aircraft, creating a space that presents to visitors the human perspective of war in a non-glorifying manner.

CREATE AN EDUCATIONAL AND ENGAGING EXPERIENCE



Develop a clear and concise exhibit plan that is attractive and easy to navigate.

ATTRACT DIVERSE AND NEW USERS

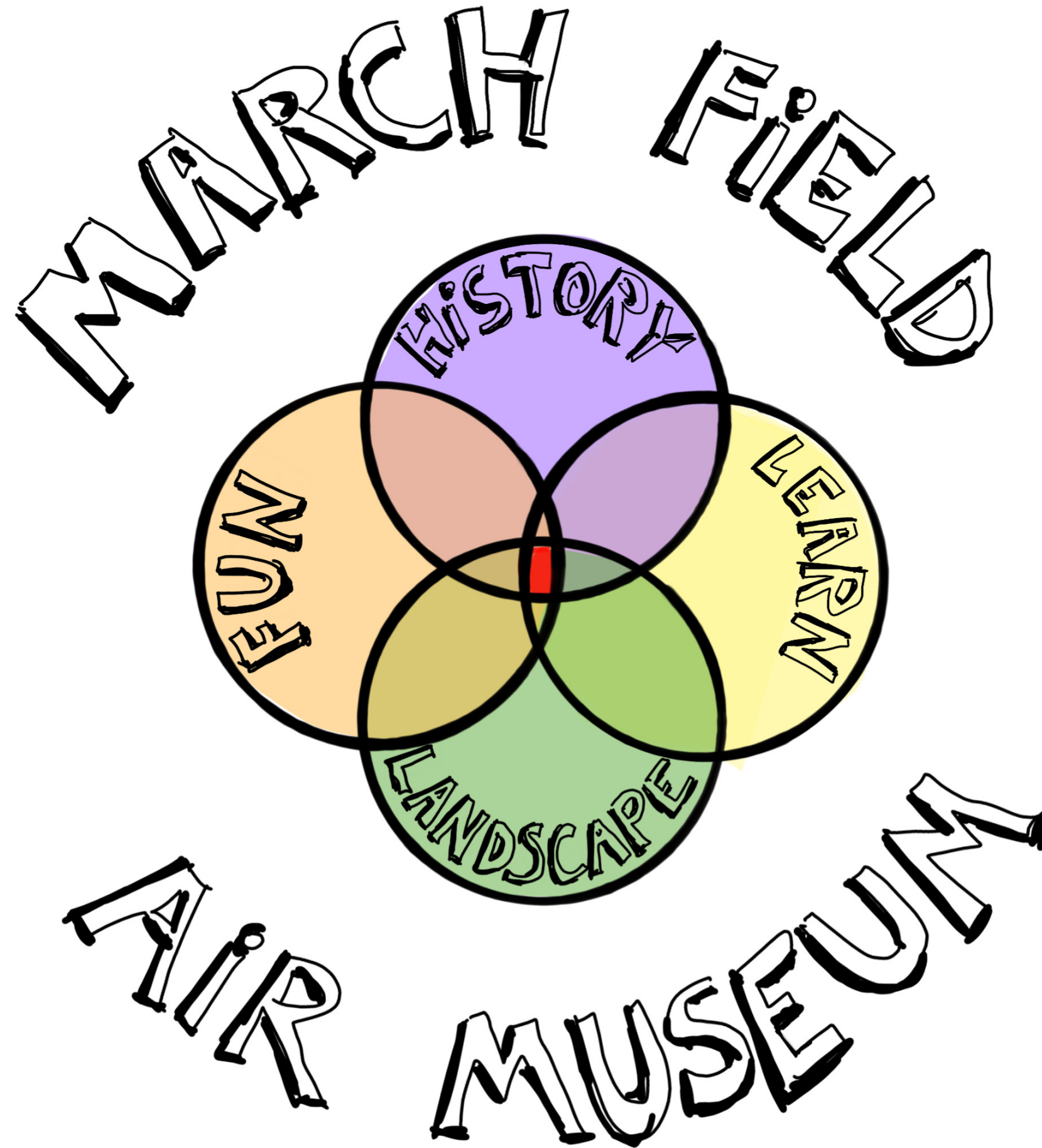


Make the exhibit accessible and inclusive, with content that appeals to a diverse audience of all ages and backgrounds.

HONOR AIR FORCE VETERANS



Create an exhibit and a memorial that promotes empathy and understanding for all those affected by war, including soldiers, civilians, and their families.



AIR MUSEUM PRECEDENT STUDY

FLUGAUSSTELLUNG P. JUNIOR

LOCATION: Hermeskeil, Germany
 OUTDOOR AREA: 18.7 acre
 INDOOR HALLS: Four Halls, 38,750 sqft

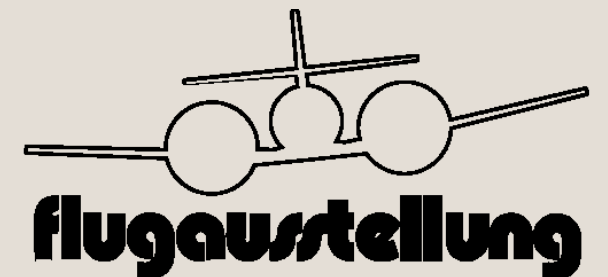


- Dynamic **walking paths** define areas for planes and seating.

- You can take a **peek inside the flight deck** from the outside via stairs.

- The **cafeteria** is inside a replica of a **Concorde** plane.

- **Attractive logo and signage** make the place feel fresh and modern.



AIR MUSEUM PRECEDENT STUDY

SOUTH DAKOTA AIR AND SPACE MUSEUM

LOCATION: 2890 Dave Dr, Ellsworth AFB, SD 57706. At the entry of Ellsworth Air Force Base.

YEAR: 1992



- A variety of paving materials with different textures and colors makes the place more attractive where vegetation is not allowed.
- Use of low drought-tolerant vegetation add color

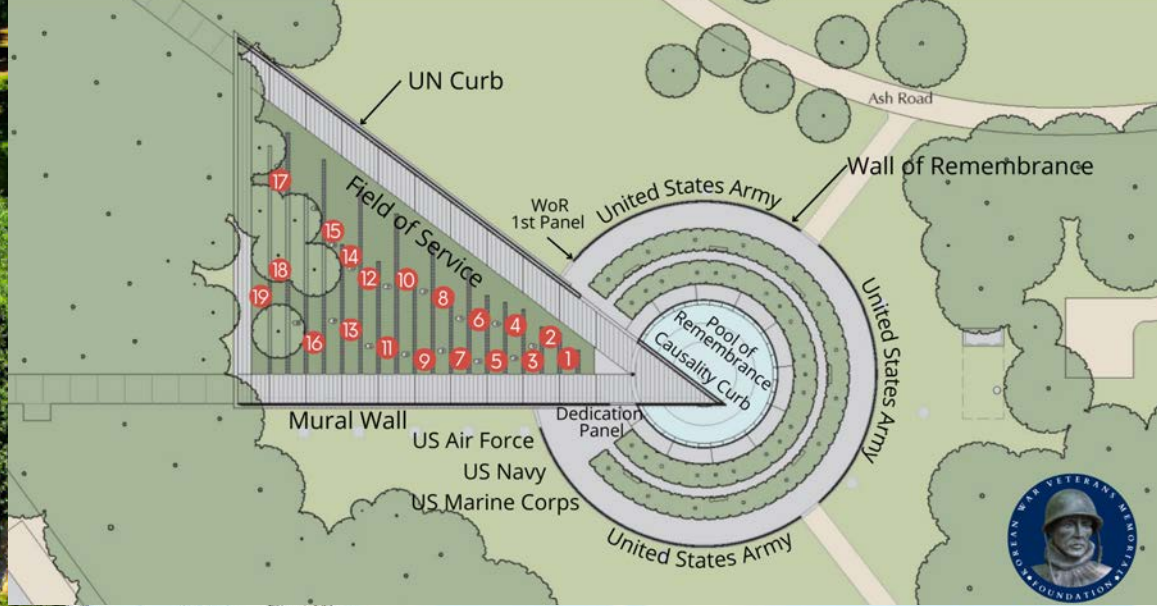
- and movement to the space with minimal maintenance.
- Outdoor exhibit is divided into three different "branches" coming from the central area, making it easier for the visitor to choose a path and take time to appreciate

- each plane.
- Signage on each aircraft educates visitors about the planes and their history. Signage at the entry shows a map with a key of all the aircraft.

MEMORIAL PRECEDENT STUDY

KOREAN WAR VETERANS MEMORIAL

LOCATION: 900 Ohio Dr SW, Washington, DC 20024
 AREA: 95,830 sqft
 YEAR: 1995



- **Simple geometry** makes the memorial a unique and **recognizable monument**, where **every shape has a meaning**.

- A **water feature** is a bold statement

that can enhance a place where vegetation is limited.

- Full-scale **soldier statues** make us think of the **human factor** in war, representing

an **ethnic cross section of America** with 12 Caucasian, 3 African-American, 2 Hispanic, 1 Asian, 1 Native American.

- The **vegetation** under the statues

symbolizes the **rice paddies of Korea**.

- The **remembrance wall** with names is **elevated from the ground** making it accessible and easy to read.

INCLUSIVE DESIGN PRECEDENTS



1



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1. Museo Aeronáutico Tifológico (Spain) has tactile plane models for **people with visual disabilities** and at **wheelchair height**.

2. Soldiers Memorial Military Museum (St. Louis, Missouri) was renovated to be **universally accessible**.

3. Vietnam Veterans Memorial wall was

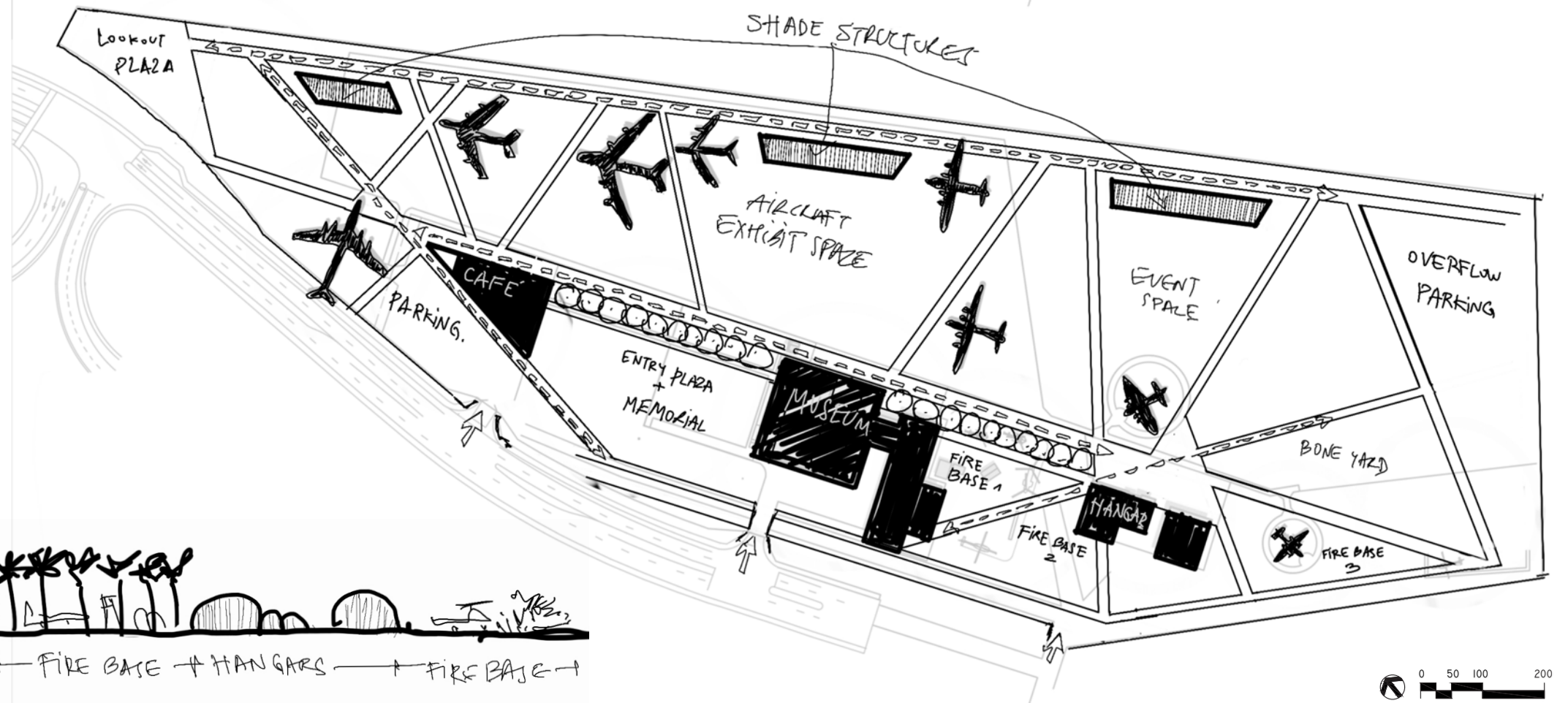
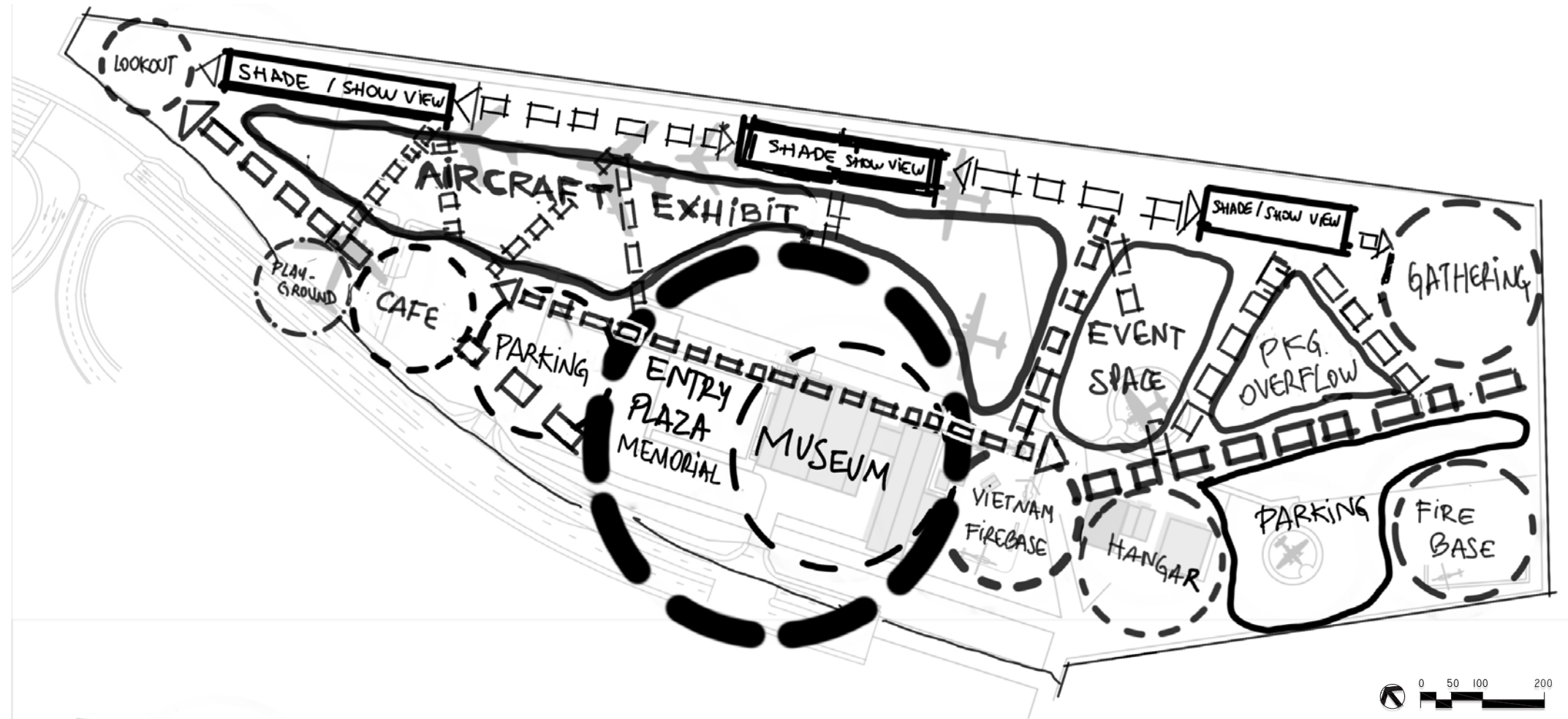
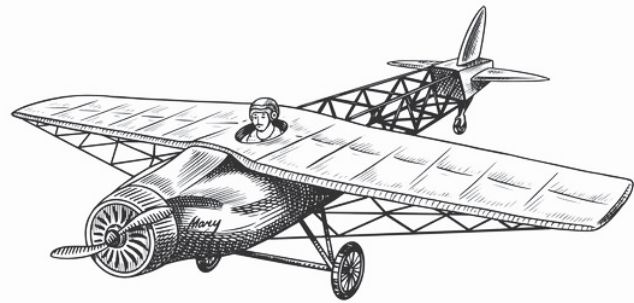
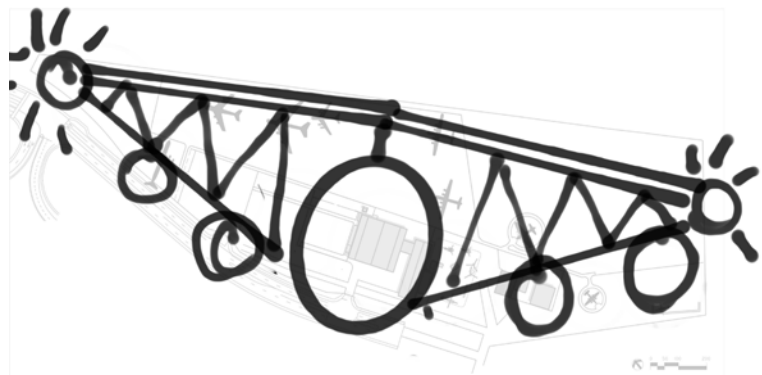
designed at **wheelchair height**, also suitable for **children**.

4. William "Wild Bill" Guarnere memorial in Pennsylvania, who lost one leg in WWII.

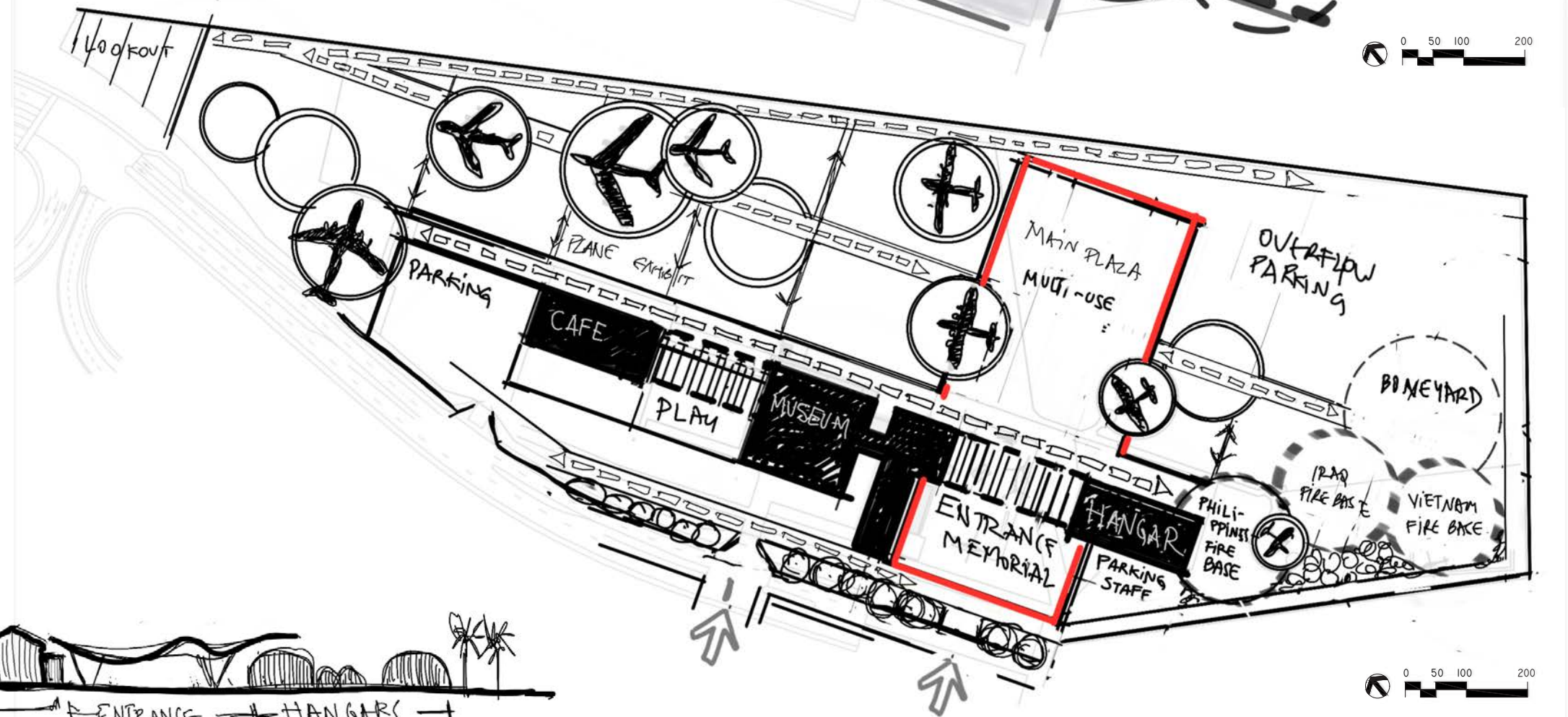
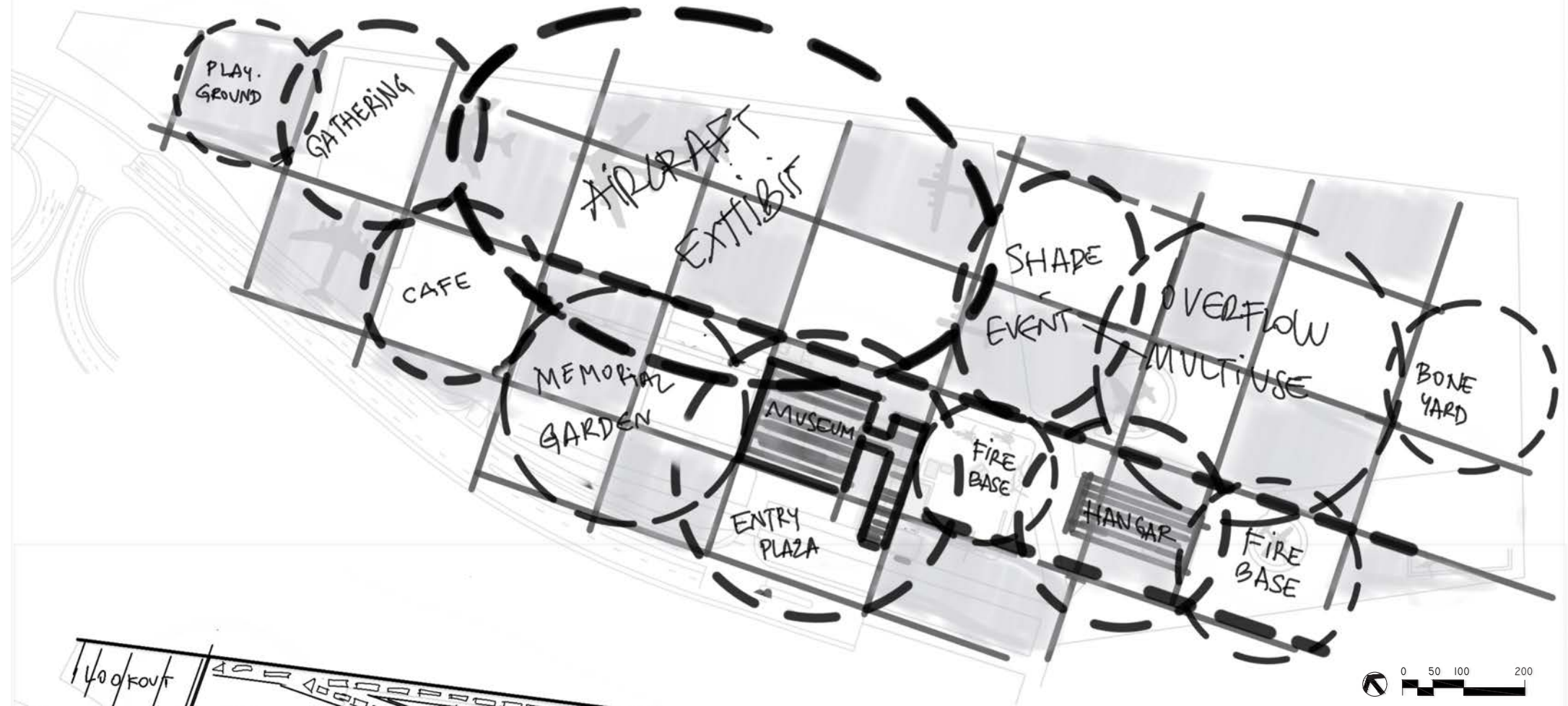
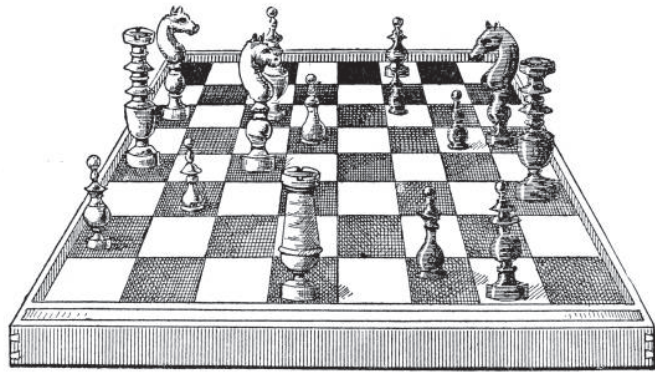
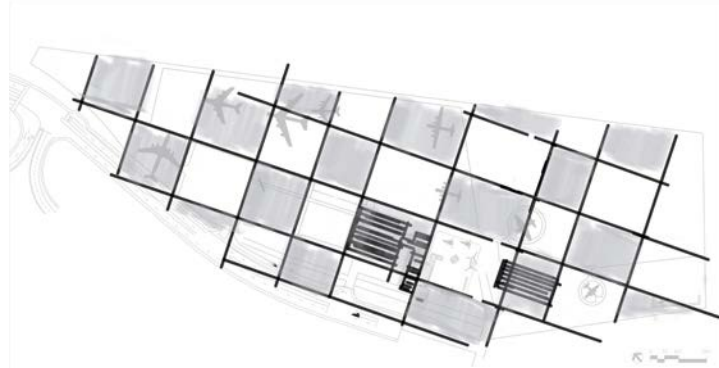
5. WWII Vet Reunites with C-47 (Ohio). He can **touch the plane** from his wheelchair.

6. **Braille flag** installed at Jacksonville National Cemetery.

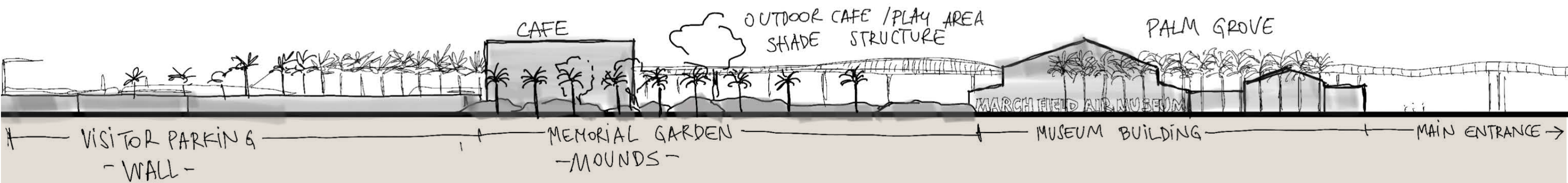
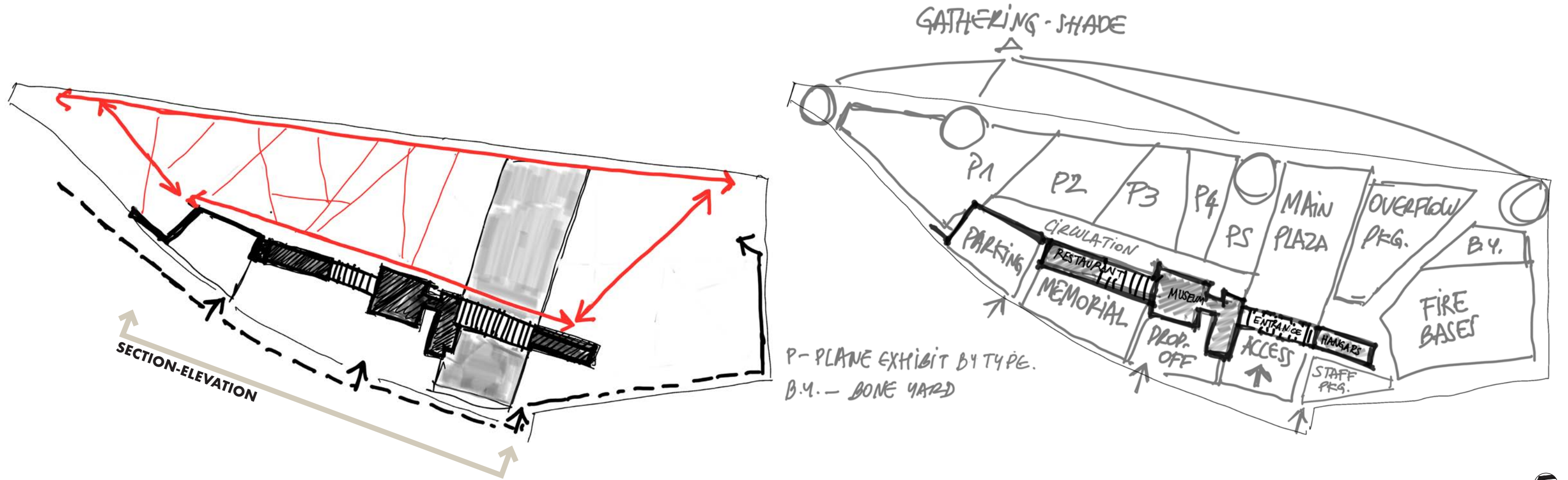
CONCEPT 1 - BIPLANE



CONCEPT 2 - CHESSBOARD

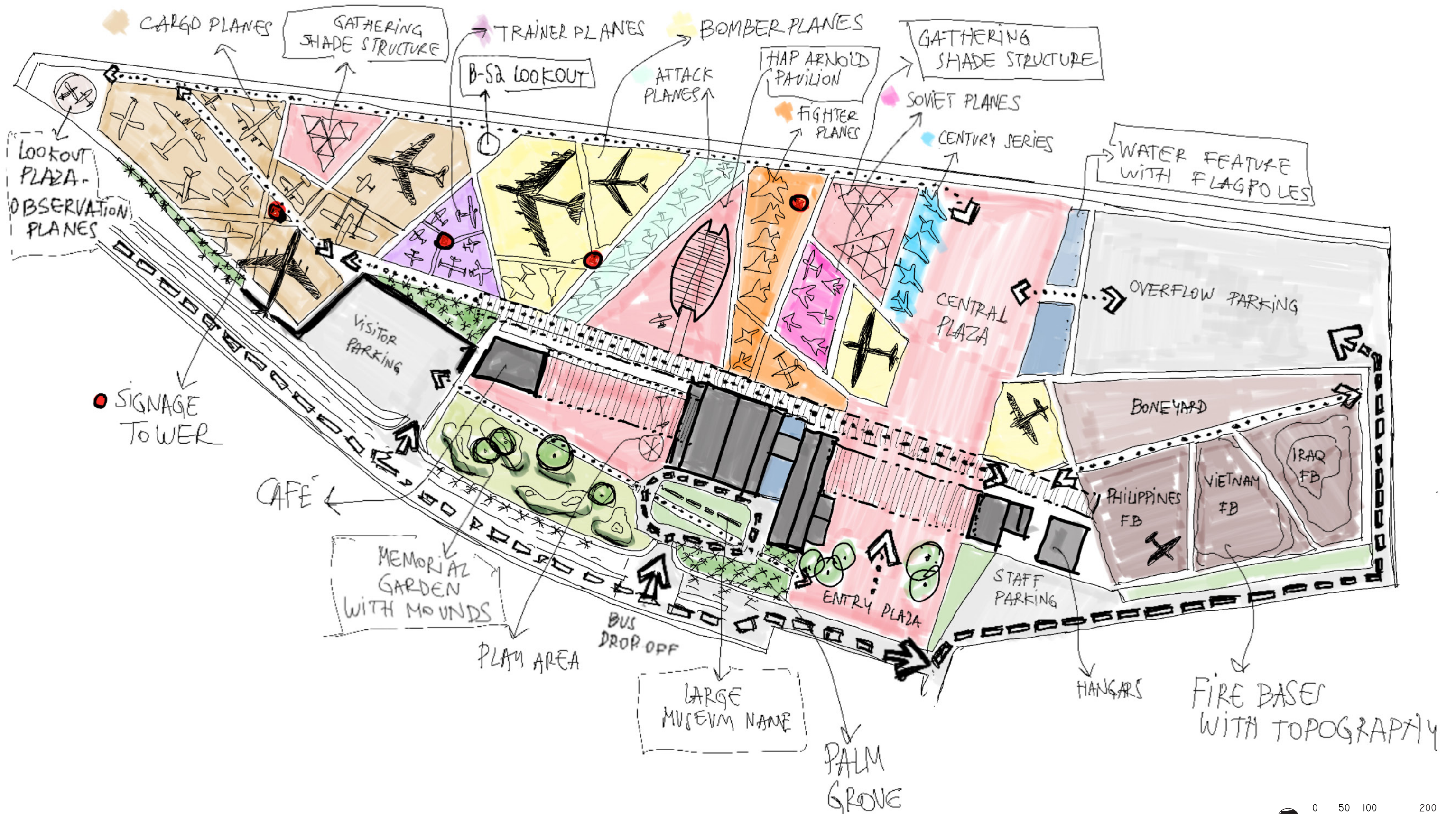


FINAL CONCEPT



SECTION-ELEVATION FROM STREET

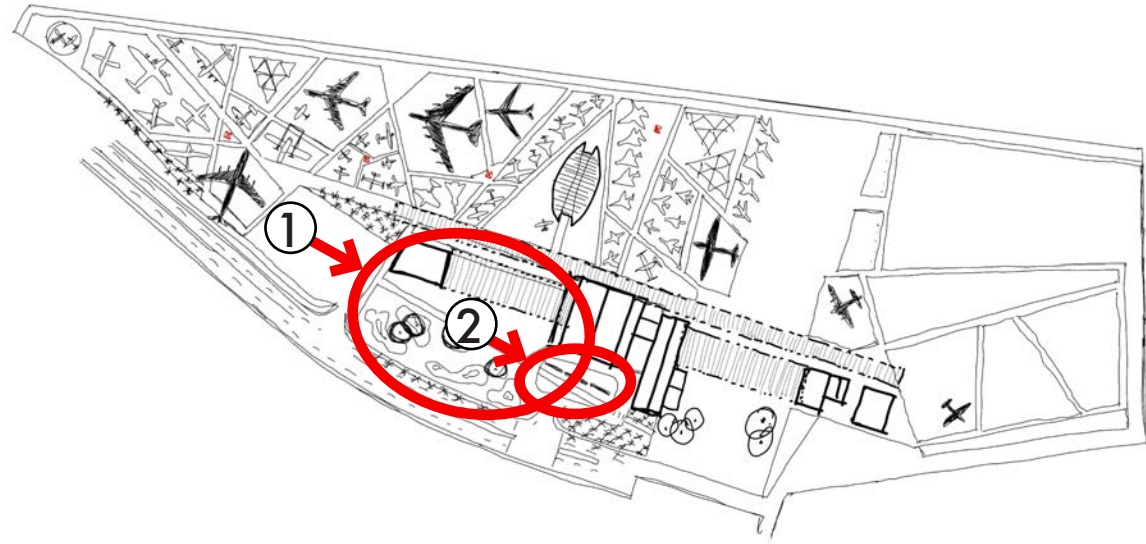
FINAL CONCEPT



PEDESTRIAN WALKWAY FROM VISITOR PARKING TO MAIN ENTRANCE

The memorial garden (left) is a peaceful place to sit and contemplate. Mounds separate it from the street and create an intimate space.

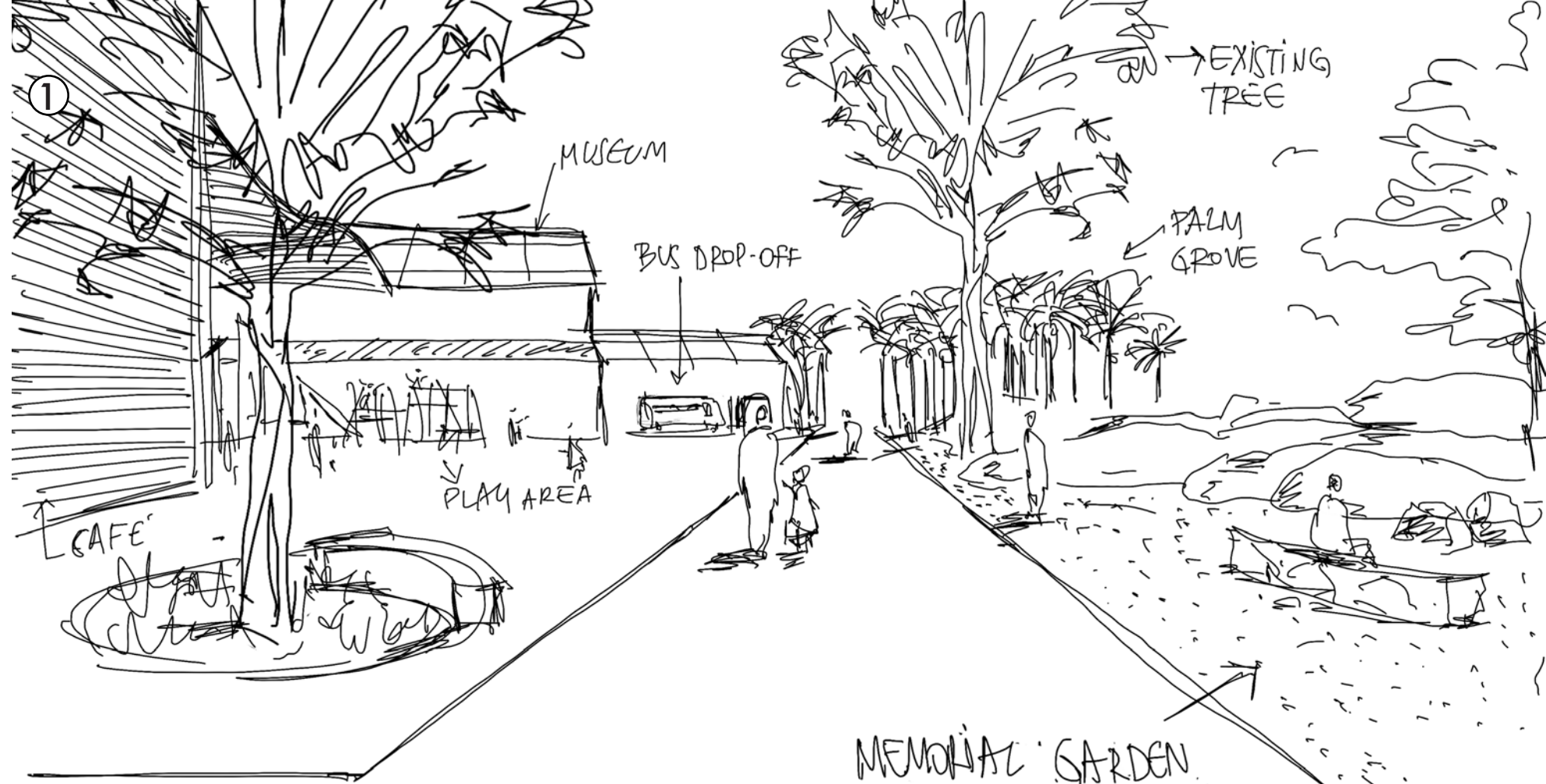
There's a play area between café and museum building. The palm grove on the background is bisected by walkway.



MUSEUM SIGN

Large sign with museum name at the bus drop-off area, and on the way from the visitor parking to the entrance.

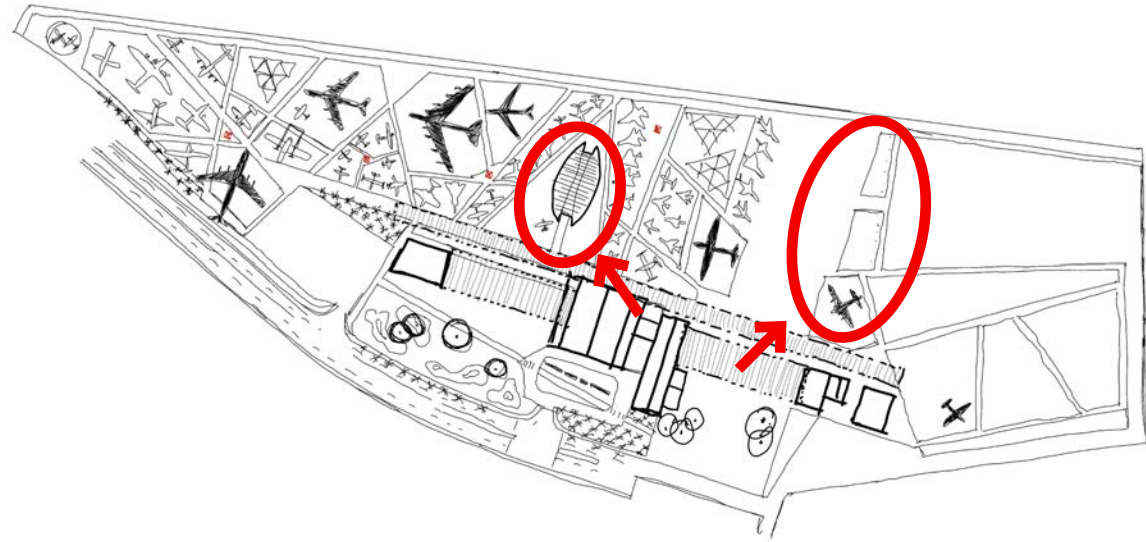
People can take pictures with the sign and the museum building on the background.



MAIN PLAZA

Main plaza has a water feature and flagpoles that can be used as background for formal ceremonies. It is also the access point from the overflow parking.

B-17 is the first plane visitors see when entering the site.

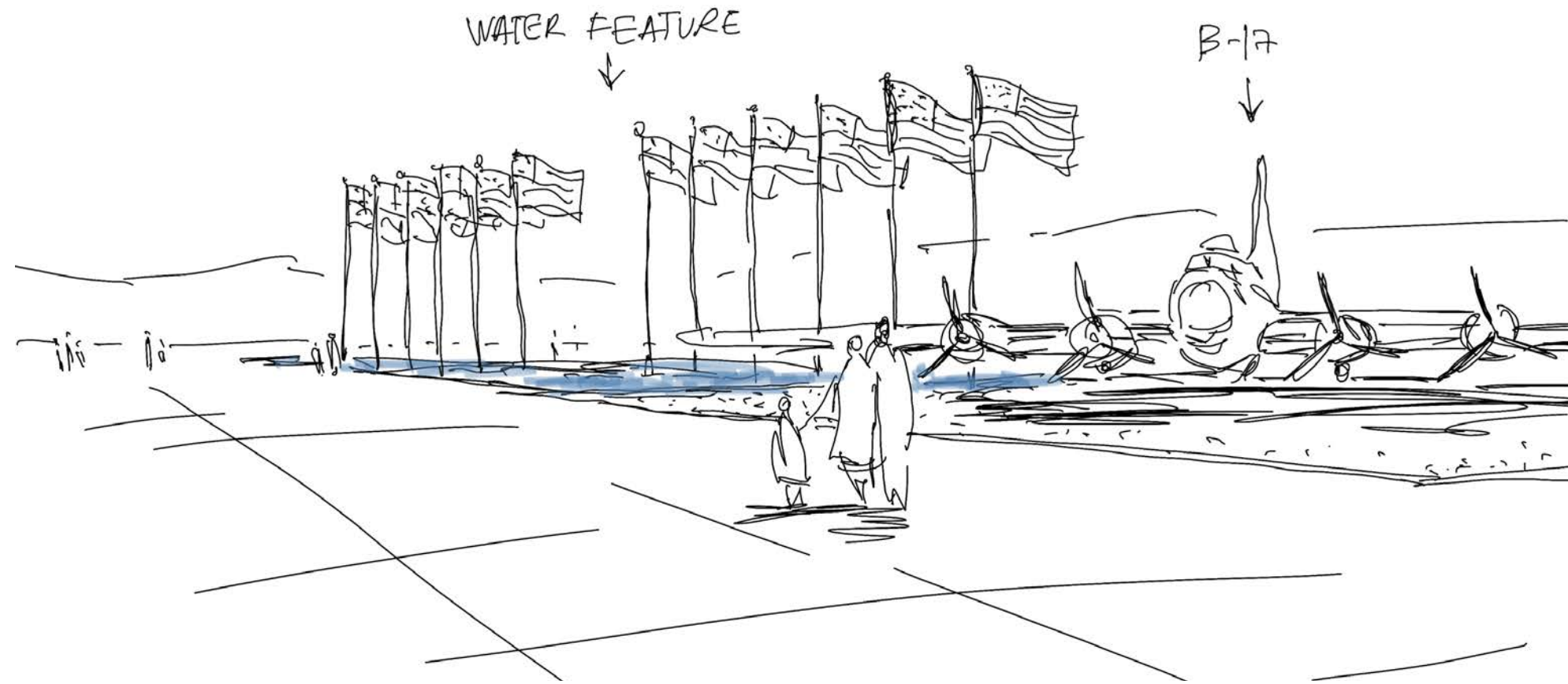


HAP ARNOLD PAVILION

A unique indoor space with lush greenery between the planes.

At the entrance, the Wright flyer represents the beginning of his career.

The greenhouse symbolizes the ranch where he lived after retirement.

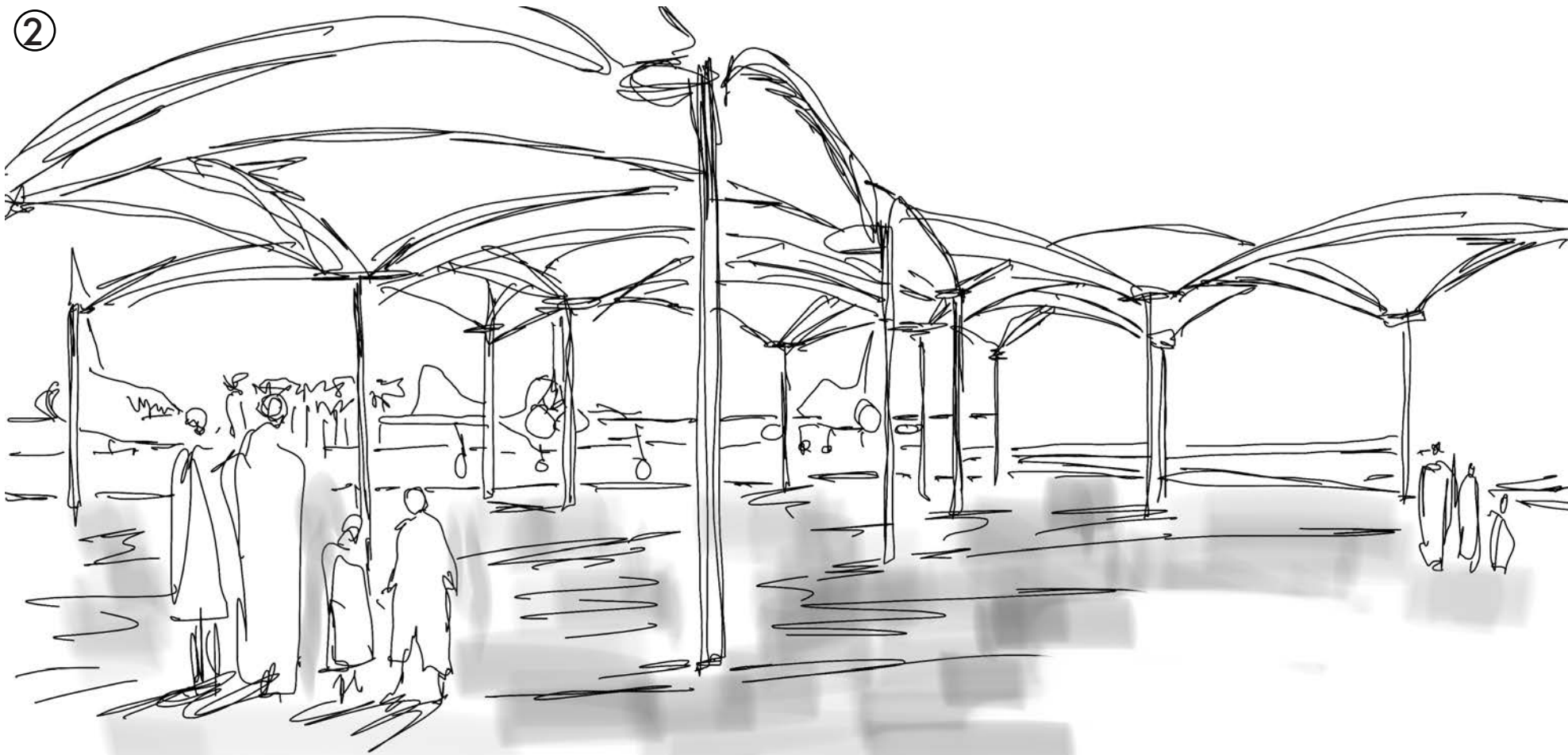
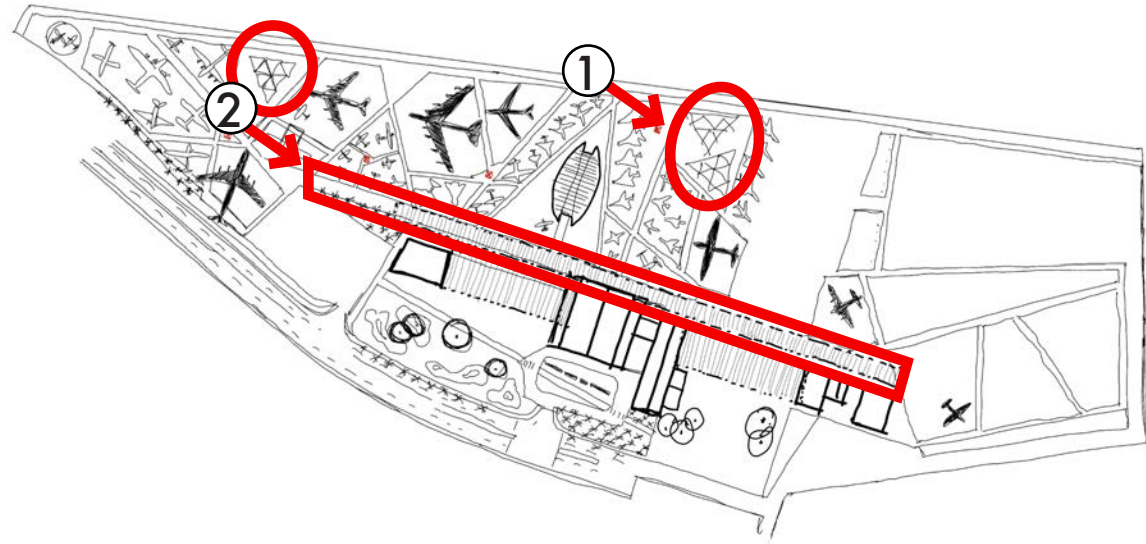


WRIGHT FLYER (where he learned to fly)
AT THE ENTRANCE



- GLASS PAVILION WITH PLANTS.
- CAN BE USED FOR SMALL EVENTS
- ONLY GREEN IN NO-PLANTING AREA - STANDS OUT.

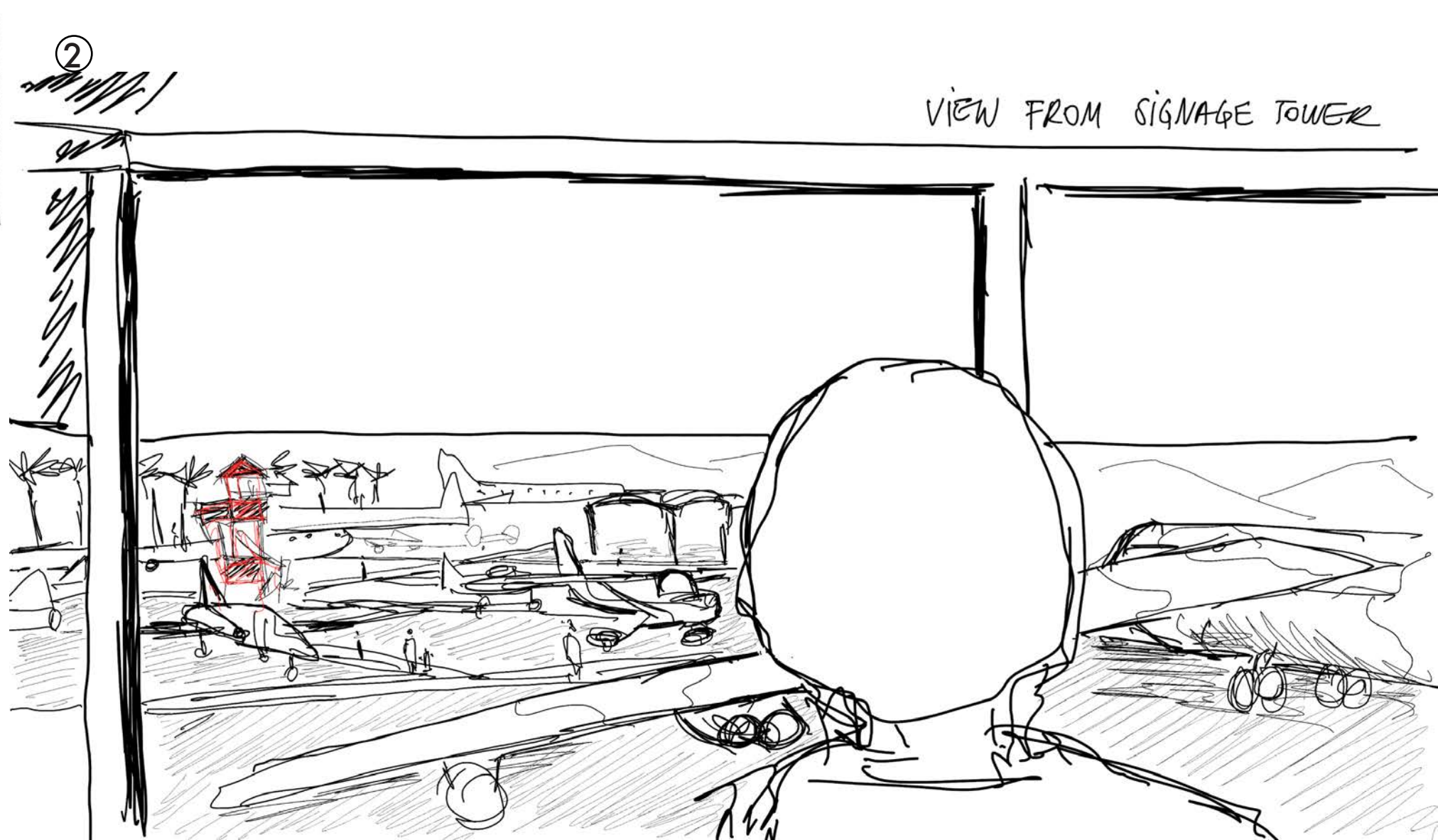
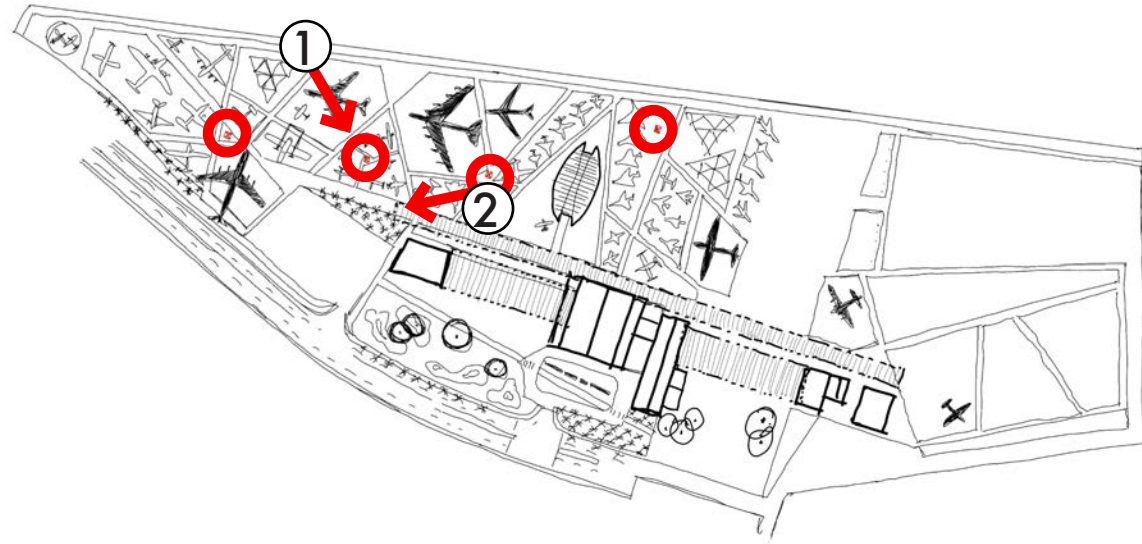
SHADE STRUCTURES



Gathering areas with light shade sails in between the aircraft exhibit.

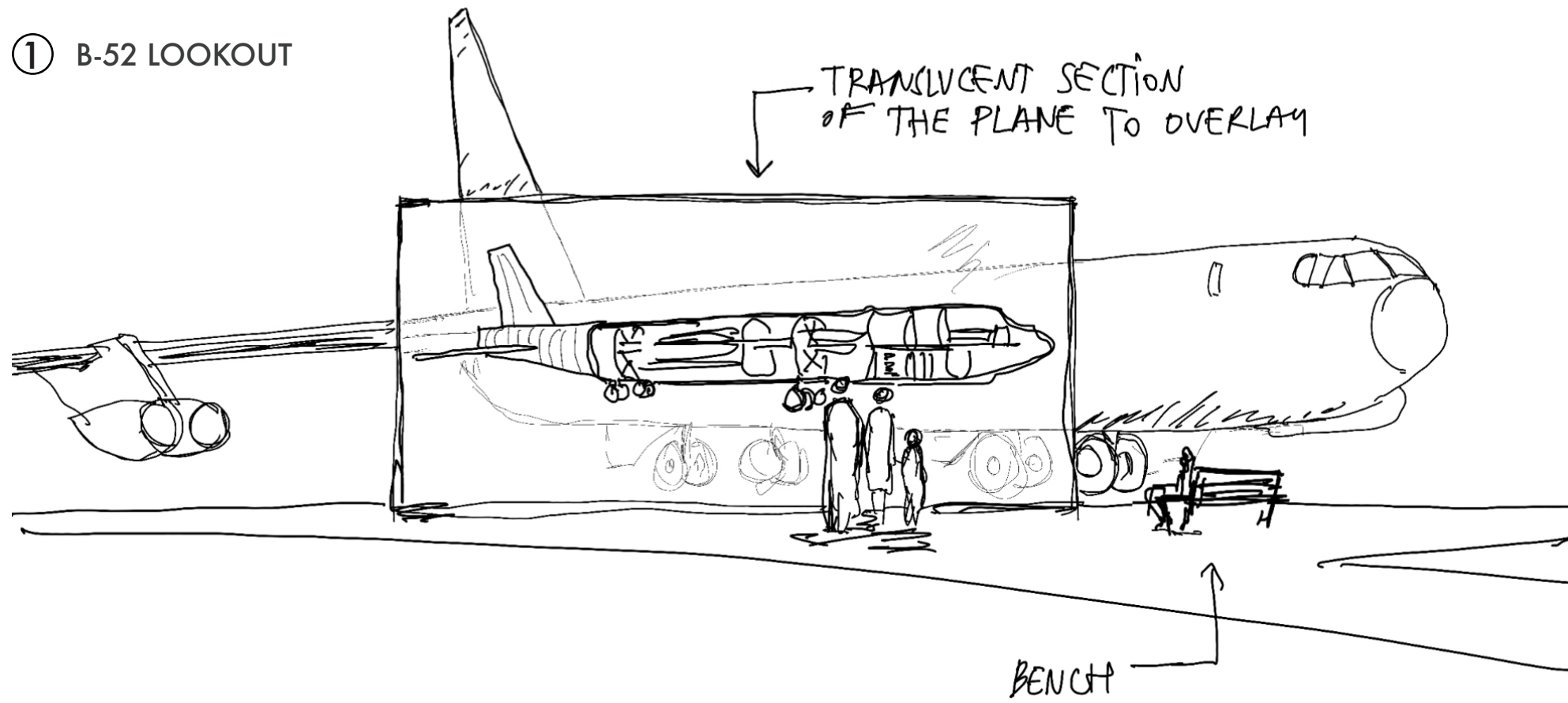
Can be used for gathering or to watch the air show.

SIGNAGE TOWERS

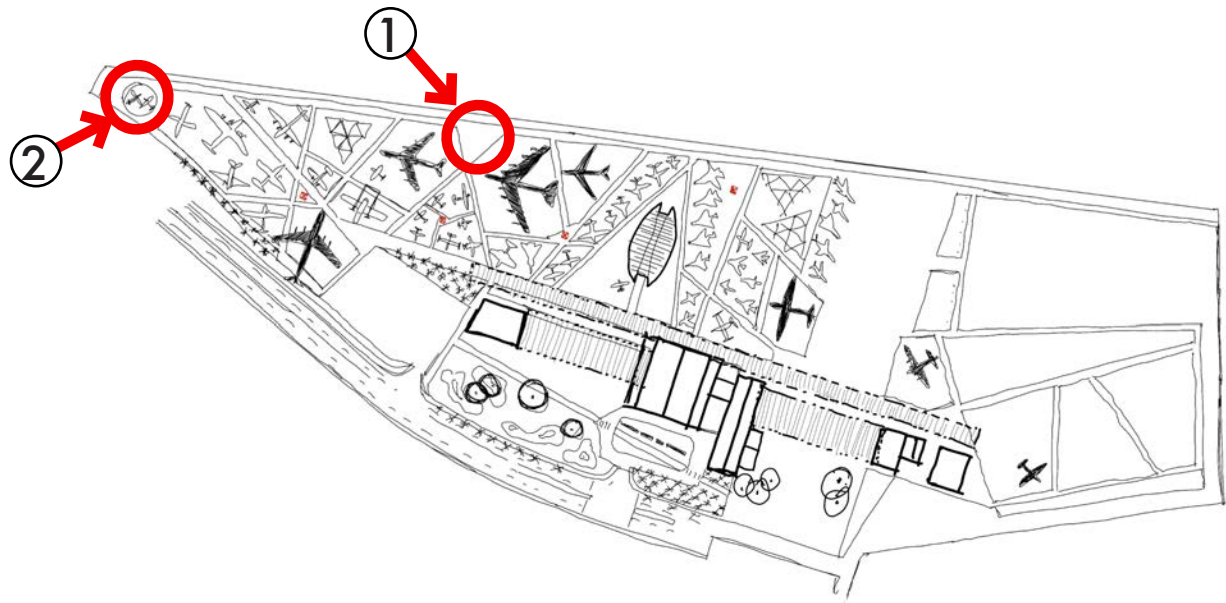
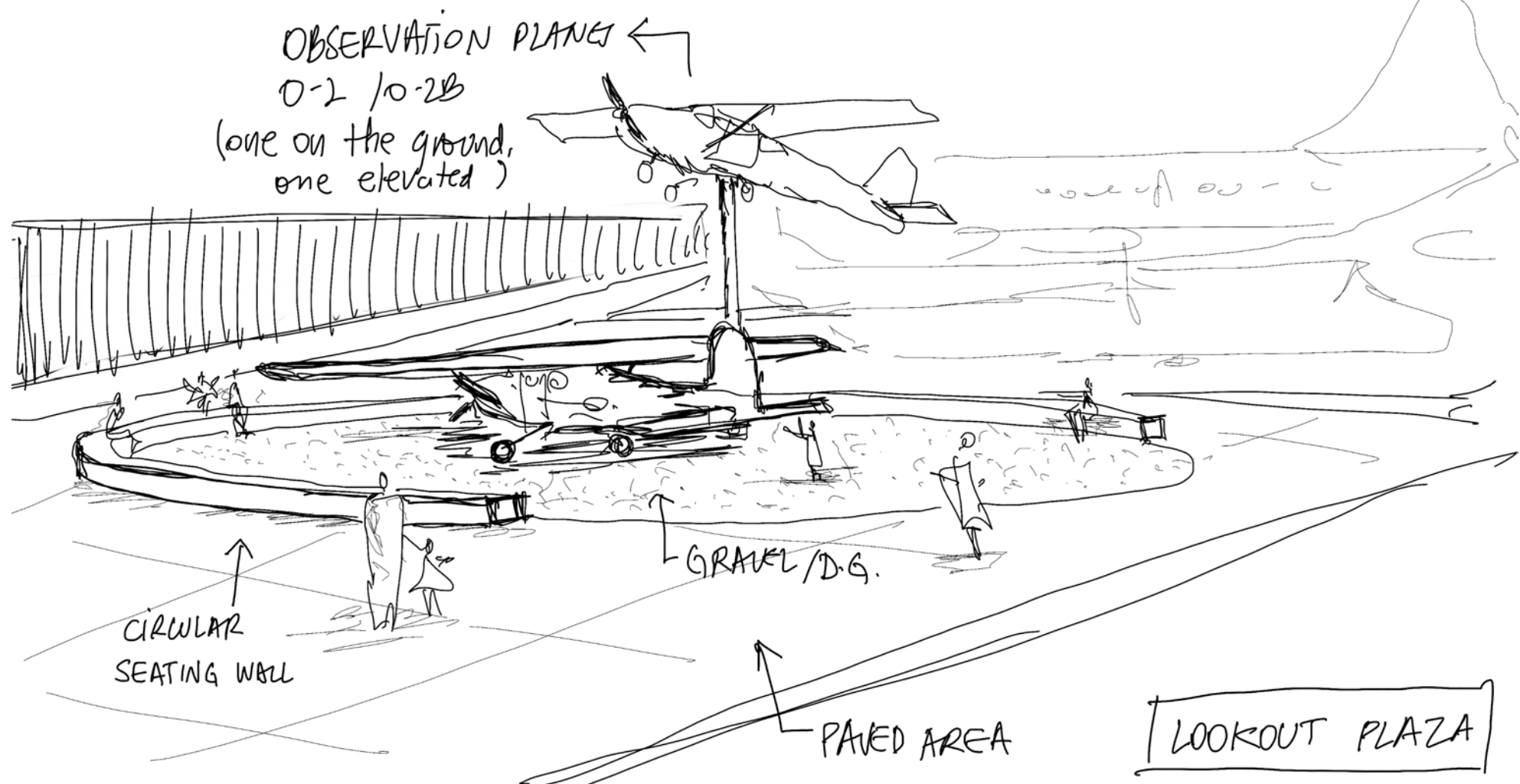


LOOKOUT PLAZAS

① B-52 LOOKOUT



② MOUNTAINS LOOKOUT



SITE PLAN



- | | | | | | | |
|-------------------|--------------------------|------------------------------|-------------------------|-------------------|-----------------------|--------------------------------------|
| ① VISITOR PARKING | ⑤ ENTRY PLAZA | ⑨ VIETNAM FIRE BASE | ⑬ B-17 PLANE | ⑰ FIGHTER PLANES | ⑳ BOMBER PLANES | ㉕ LOOKOUT PLAZA (OBSERVATION PLANES) |
| ② RESTAURANT | ⑥ HANGARS | ⑩ BONE YARD | ⑭ B-29 PLANE | ⑱ ATTACK PLANES | ㉑ CARGO PLANES | ㉖ STAFF PARKING |
| ③ MEMORIAL GARDEN | ⑦ ASIA-PACIFIC AIRFIELD | ⑪ OVERFLOW PARKING | ⑮ CENTURY SERIES PLANES | ㉒ SOVIET AIRCRAFT | ㉓ B-52 LOOKOUT POINT | ㉗ SEATING AREA |
| ④ INDOOR MUSEUM | ⑧ JUNGLE TRAINING CENTER | ⑫ FLAG COURT - WATER FEATURE | ⑯ HAP ARNOLD PAVILION | ㉔ TRAINING PLANES | ㉘ SHADED EVENT SPACES | ㉙ PLAYGROUND |

VIEW FROM FREEWAY



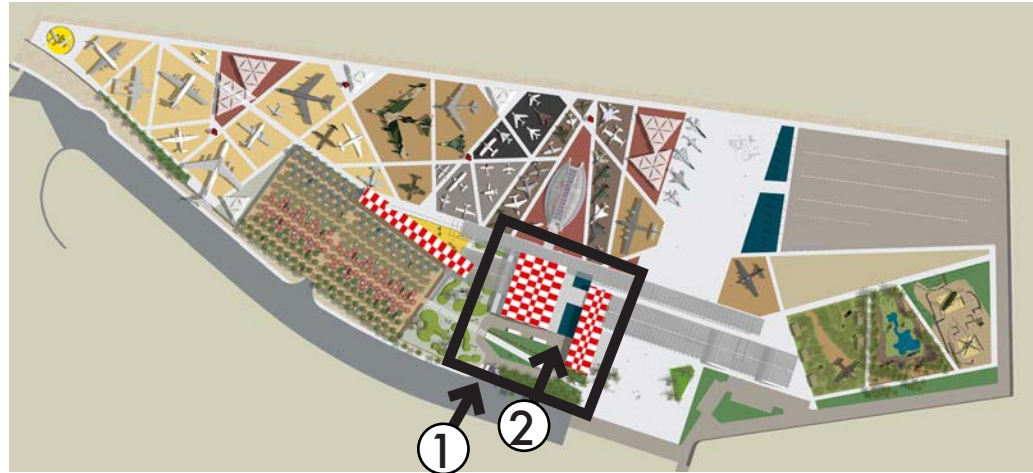
VISITOR PARKING TREE GROVE



MEMORIAL GARDEN



BUS DROP-OFF ACCESS



SEE-THROUGH MUSEUM HALLWAY
RAINWATER FOUNTAIN

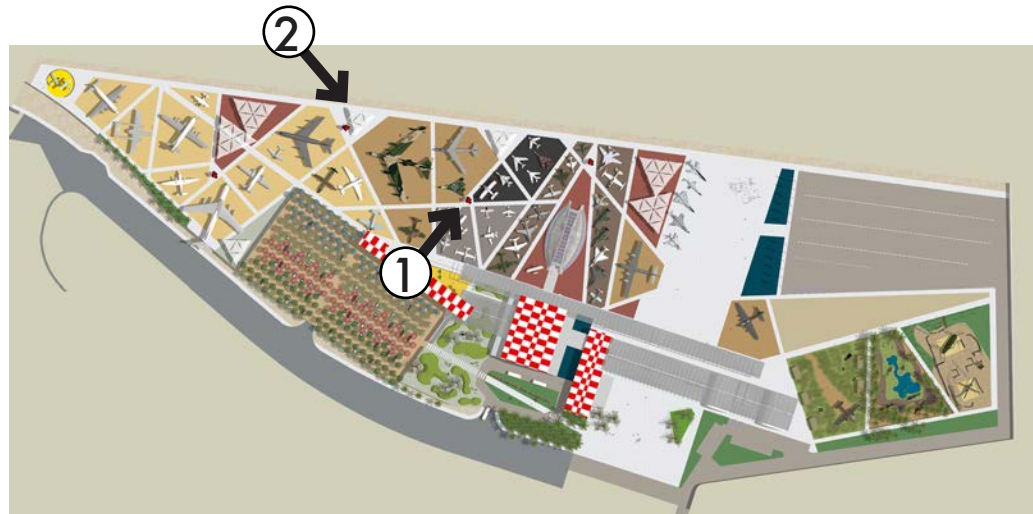
ENTRY PLAZA



ENTRY PLAZA FROM OVERFLOW PARKING



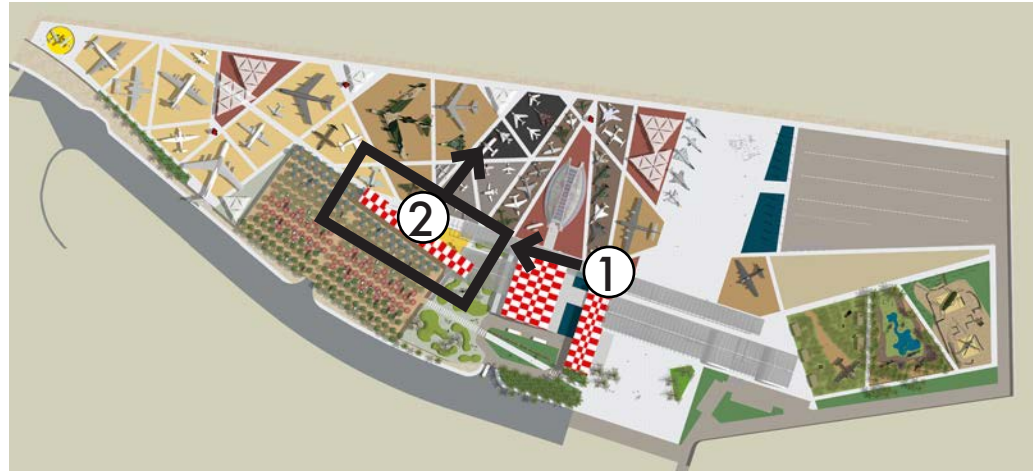
PLANES SIGNAGE AND LOOKOUT TOWER



B-52 LOOKOUT



RESTAURANT ACCESS RAMP AND PLAYGROUND



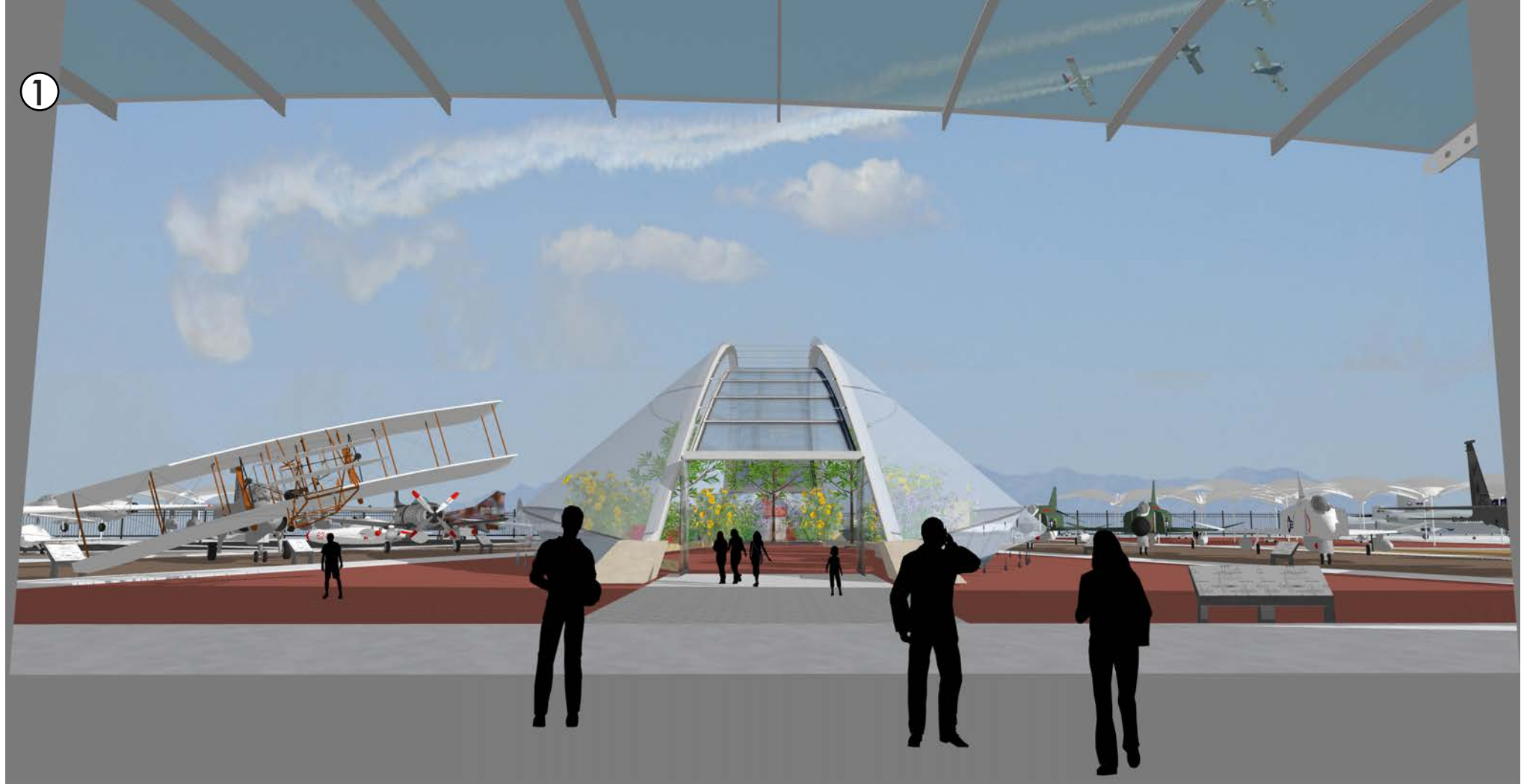
VIEW FROM ELEVATED RESTAURANT



VIEW OF HAP ARNOLD PAVILION FROM MUSEUM BUILDING



LOOKOUT PLAZA



FIRE BASES

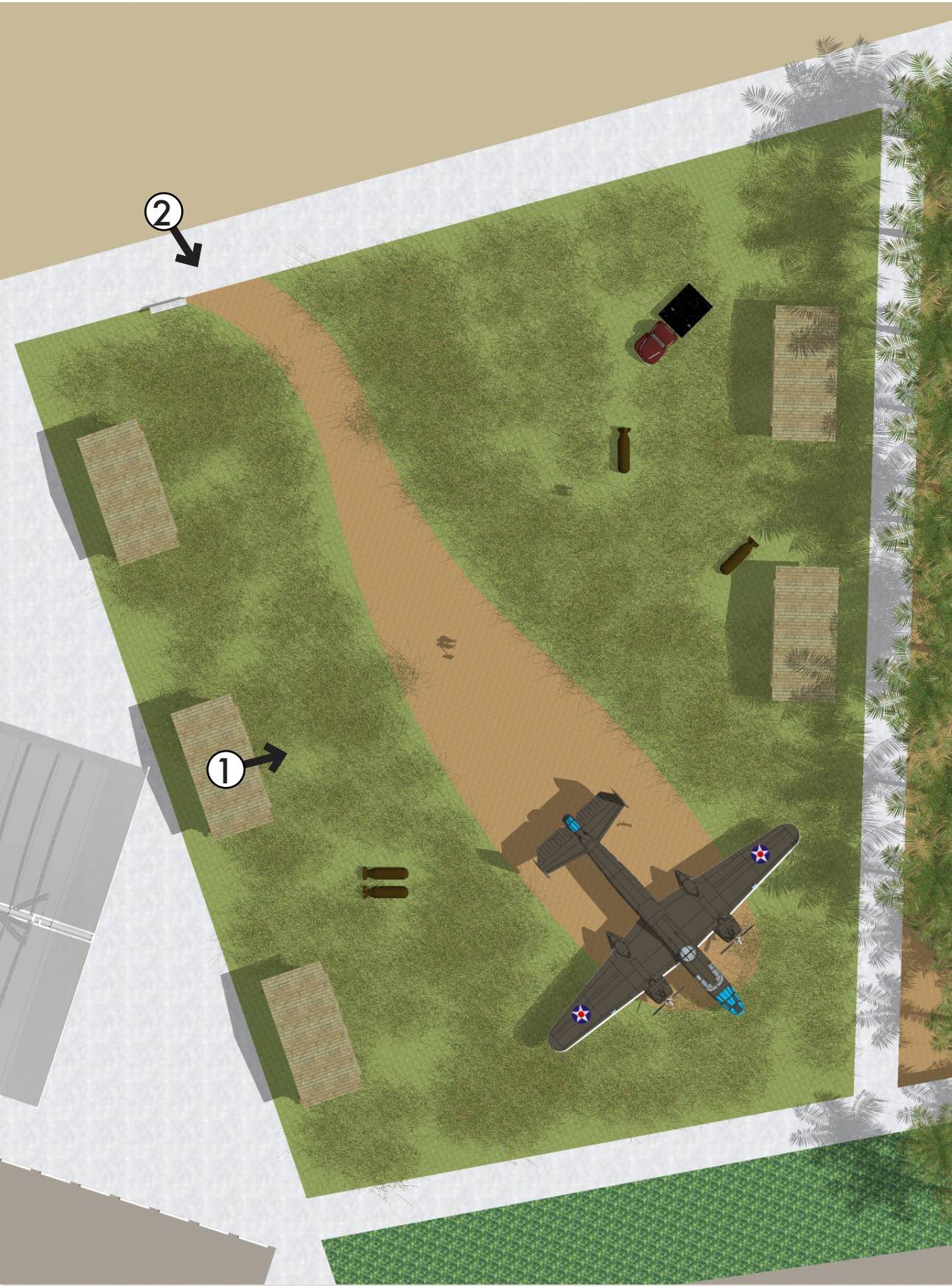


PHILIPPINES AIR FIELD BASE DEL MONTE AIRFIELD - PRECEDENT



U.S. Army Air Corps planes land at Del Monte in 1935. U.S. Army Air Corps photo.

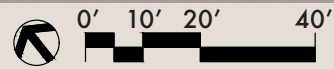
PHILIPPINES AIR FIELD BASE



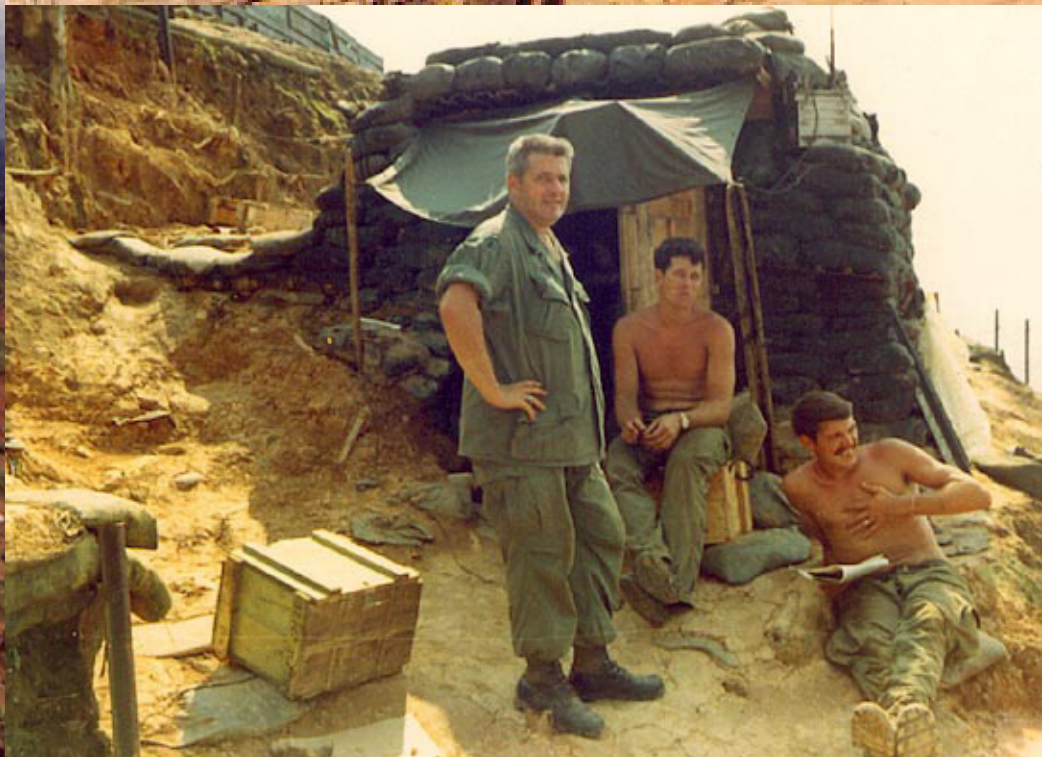
JUNGLE TRAINING BASE FORT SHERMAN JUNGLE WARFARE SCHOOL - PRECEDENT



JUNGLE TRAINING BASE



VIETNAM FIRE BASE
FIRE SUPPORT BASE SARGE - PRECEDENT



VIETNAM FIRE BASE



MEMORIAL GARDEN

