



March Field Air Museum

Michael Meskin

Student of Landscape Architecture

UCLA EXTENSION Spring 22
Landscape Design 7

March Field Air Museum

Riverside, CA

The museum was **founded in 1979** and originally named the March Air Force Base Museum. The museum moved to a few different locations throughout the March Air Force Base before locating to its current location west of the runway along the 215 Freeway in 1993.

The museum was formerly owned and operated by the Air Force, which changed in 1996 when the operations were transferred to a non-profit organization. They do not receive government funding and relies on donations, grant funding, and earned income to service the public.

In 2011, the museum joined a group of **only 3% of American Museums receiving accreditation from the American Alliance of Museums in 2011.**

The museum holds an outdoor memorial, indoor exhibits, outdoor fire base exhibits, planes on display, and community event spaces.

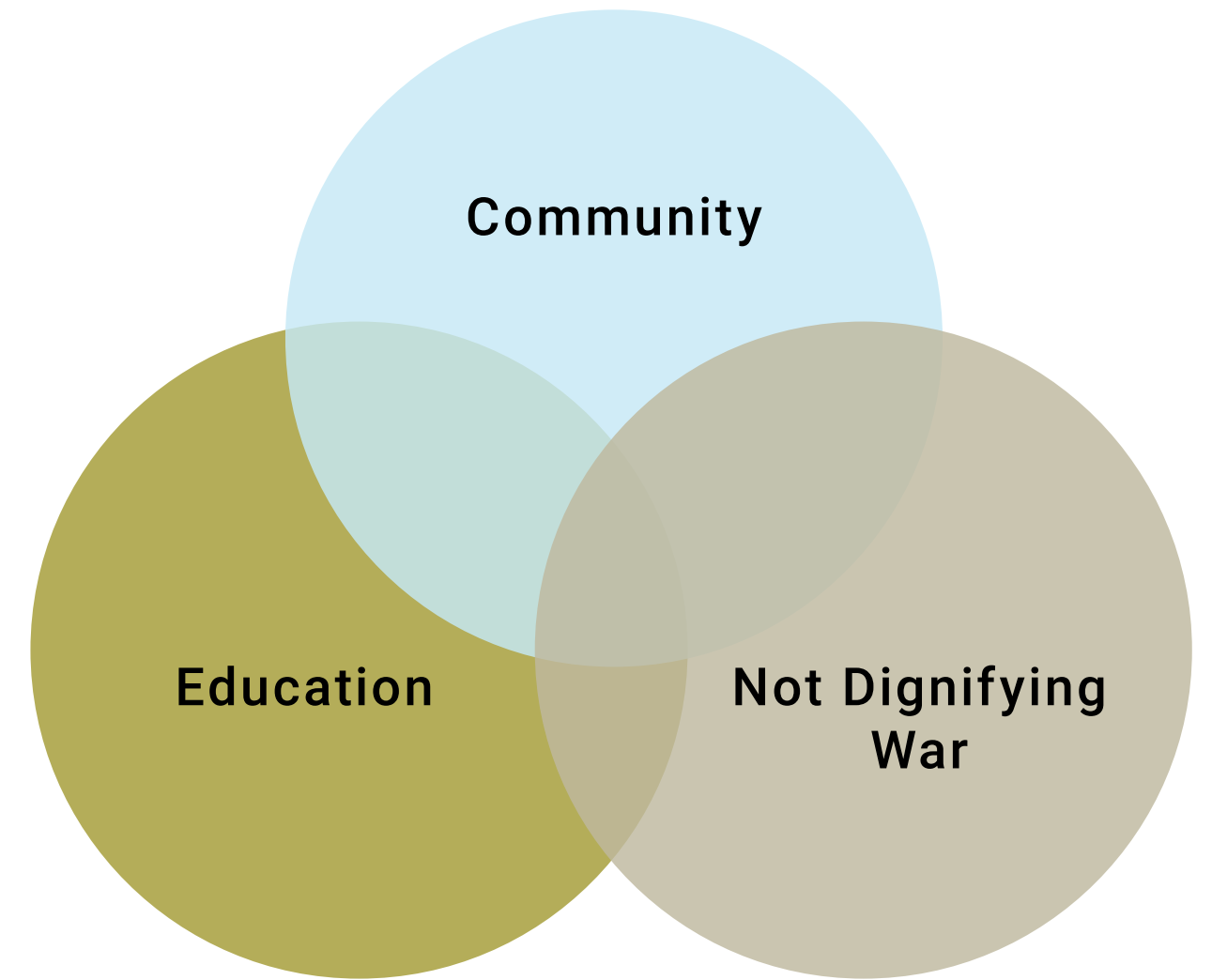


Project Statement

The March Air Field Museum project explores creating a more **attractive destination for the surrounding communities** while allowing more diverse age groups to enjoy the space **without dignifying the aspects of war**. The Landscape Architecture redesign will focus on education, events, memorials, entrances, and immersive experiences.

Program

- Educational signage
- Event Space
- Eat and Drink
- Enhance Memorial Space
- Kids Space- Play, craft, learn, fun
- Native Garden Presentation
- Native Shrimp creek preservation
- Grand Entrance Enhancement
- Immersive Experiences
- Tram Tour
- Airplane "Passport" to stamp at each aircraft





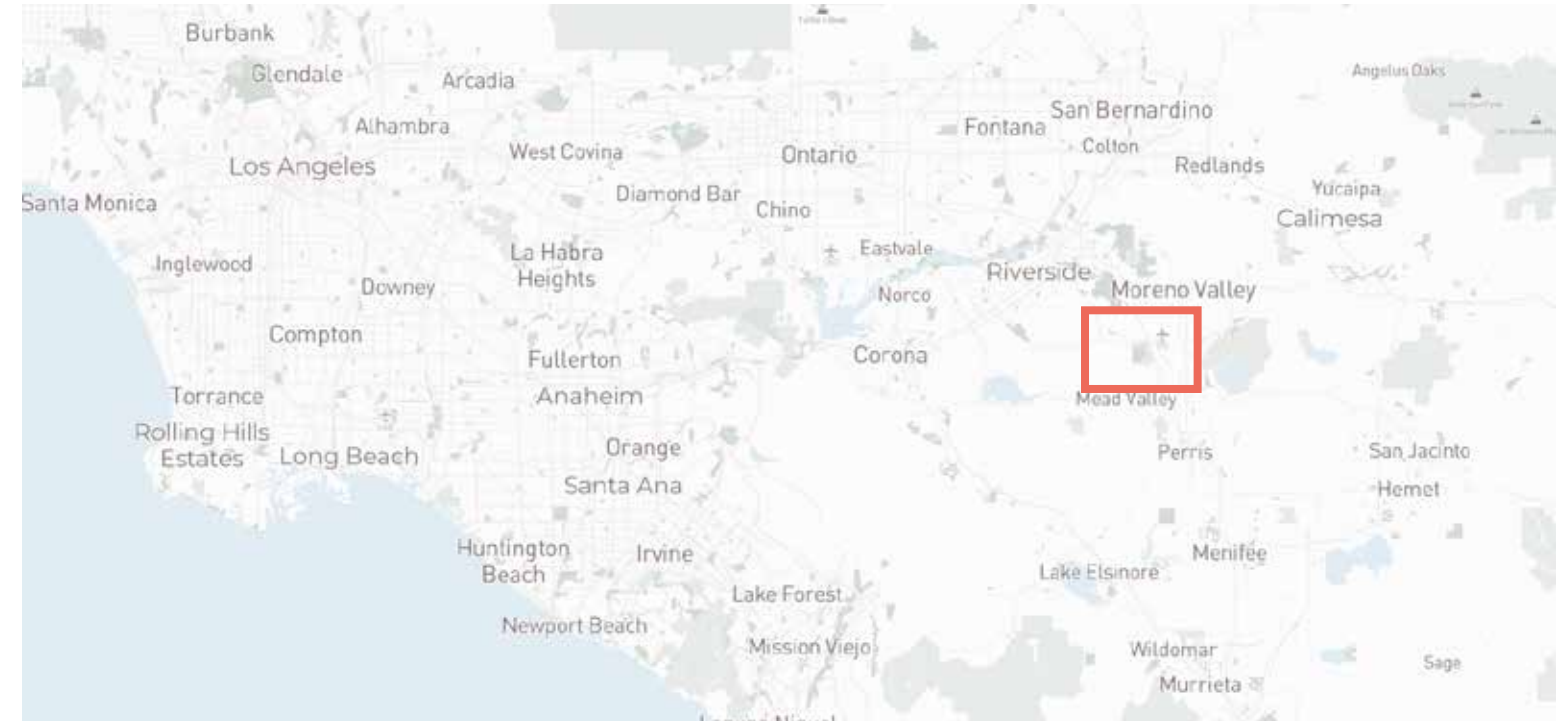
L o c a t i o n

Location

RIVERSIDE, CA



California



Los Angeles, California



Riverside, California Photos



Riverside, California

Site location



Location

RIVERSIDE, CA

22550 Van Buren Blvd.
Riverside, CA 92518



Van Buren Blvd.

RIVERSIDE NATIONAL CEMETERY

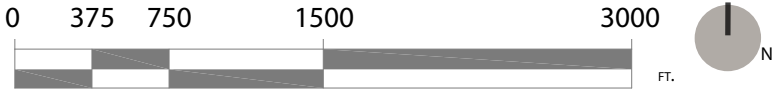
MARCH AIR RESERVE BASE

215 Freeway

AFB Runway

Site location

Sunset Zone
Zone 18 - Interior Climate
Size
34 Acres



FS 432



H I S T O R Y A N D P L A N E I N V E N T O R Y

History

PROGRESS TOWARDS THE PRESENT



1918 March Field Base was built in regarding German efforts to build a fleet of aircraft



1960 Home to 16 B-52 bombers and new KC-135 Stratotankers. These were nuclear deterrent force, and the 22nd Bombardment Wing also deployed planes to Southeast Asia.



1980 Outdoor aircraft park was created and museum moved to the base's former commissary building



1999 March Air Force base changed status to Air Reserve Base. Museum changes name to March Air Field Museum

1947 March became an Air Force Base when the Air Force became a separate branch of the armed forces



1979 Air Museum created and housed inside the Air Base's theater building



1993 Museum moved to its current location on the west side of the runway.



Airplane Inventory

Aero Commander U-9A 52-6218[8]
Bell AH-1F Cobra 69-16416[9]
Bell P-39Q Airacobra – Composite[10]
Bell P-59 Airacomet 44-22614[11]
Bell UH-1B Iroquois 62-12537[12]
Bell UH-1F Iroquois 63-13143[13]
Bensen B-8M[14]
Boeing B-17G Flying Fortress 44-6393
Boeing B-29A Superfortress 44-61669 “
Boeing B-47E Stratojet 53-2275[17]
Boeing B-52D Stratofortress 55-0679]
Boeing KC-97L Stratofreighter 53-0363[19]
Boeing KC-135A Stratotanker 55-3130 “Old Granddad”[20]
Cessna A-37 Dragonfly 71-0790[21]
Cessna T-37B Tweet 57-2316[22]
Cessna O-2A Skymaster 68-11067[23][24]
Cessna O-2B Skymaster 67-21465[25]
Consolidated PT-6A 30-385[26]
Convair C-131D Samaritan 54-2808[27]
Convair F-102A Delta Dagger 56-1114[28]
Douglas TA-4J Skyhawk[29]
Douglas A-26C Invader 44-35224[30]
Douglas EA-1E Skyraider 132789[31]
Douglas C-54Q Skymaster 56514[32]
Fairchild PT-19B[33]
Fairchild C-123K Provider 54-0612[34]
Folland Gnat E1076[35]
General Atomics MQ-1B Predator[36]
General Dynamics FB-111A Aardvark 68-0245[37]
Grumman YF-14A Tomcat 157990
Grumman HU-16E Albatross 1293[39]
Hughes OH-6A Cayuse 68-17252[40]
Lockheed C-141B Starlifter 65-0257[41]
Lockheed D-21B[42]
Lockheed P-38L Lightning – Replica[43]
Lockheed R50-5 Lodestar 12473[44]
Lockheed SR-71A Blackbird 61-7975[45]

Lockheed T-33A Shooting Star 58-0513[46]
LTV A-7D Corsair II 69-6188[47]
Martin EB-57B Canberra 52-1519[48]
McDonnell F-101B Voodoo 59-0418[49]
McDonnell Douglas F-4C Phantom II 63-7693[50]
McDonnell Douglas F-4E Phantom II 68-0382[51]
McDonnell Douglas RF-4C Phantom II 63-7746[52]
McDonnell Douglas F-15 Eagle 76-0008[53]
Mikoyan-Gurevich MiG-15[54]
Mikoyan-Gurevich MiG-17[55]
Mikoyan-Gurevich MiG-19[56]
Mikoyan-Gurevich MiG-21[57]
Mikoyan-Gurevich MiG-23 0393215744[58][59]
MMIST CQ-10A Snowgoose[60]
Nieuport 11 – Scale replica[61]
Nieuport 11 – Scale replica[62]
North American TB-25J Mitchell 44-31032[63]
North American F-86H Sabre 53-1304[64]
North American F-86L Sabre 50-0560[65]
North American F-100C Super Sabre 54-1786[66]
North American SNJ-4 Texan 51360[67]
Northrop F-89J Scorpion 52-1949[68]
Northrop T-38A Talon 60-0593[69]
Northrop YA-9A 71-1368[70]
Piasecki H-21 Workhorse 53-4326[71]
Republic F-84C Thunderjet 47-1595[72]
Republic F-84F Thunderstreak 51-9432[73]
Republic F-105B Thunderchief 57-5803[74]
Republic F-105D Thunderchief 62-4383[75]
Sausser P6E – Replica[76]
Schweizer TG-2[77]
Sikorsky HH-34J Choctaw 148943[78]
Stearman PT-13D Kaydet 42-16388[79]
Stinson L-5 Sentinel[80]
Vultee BT-13A Valiant 41-21487[81]
Vultee BT-13A Valiant N54865 –82]
Wright Flyer – Replica[83]



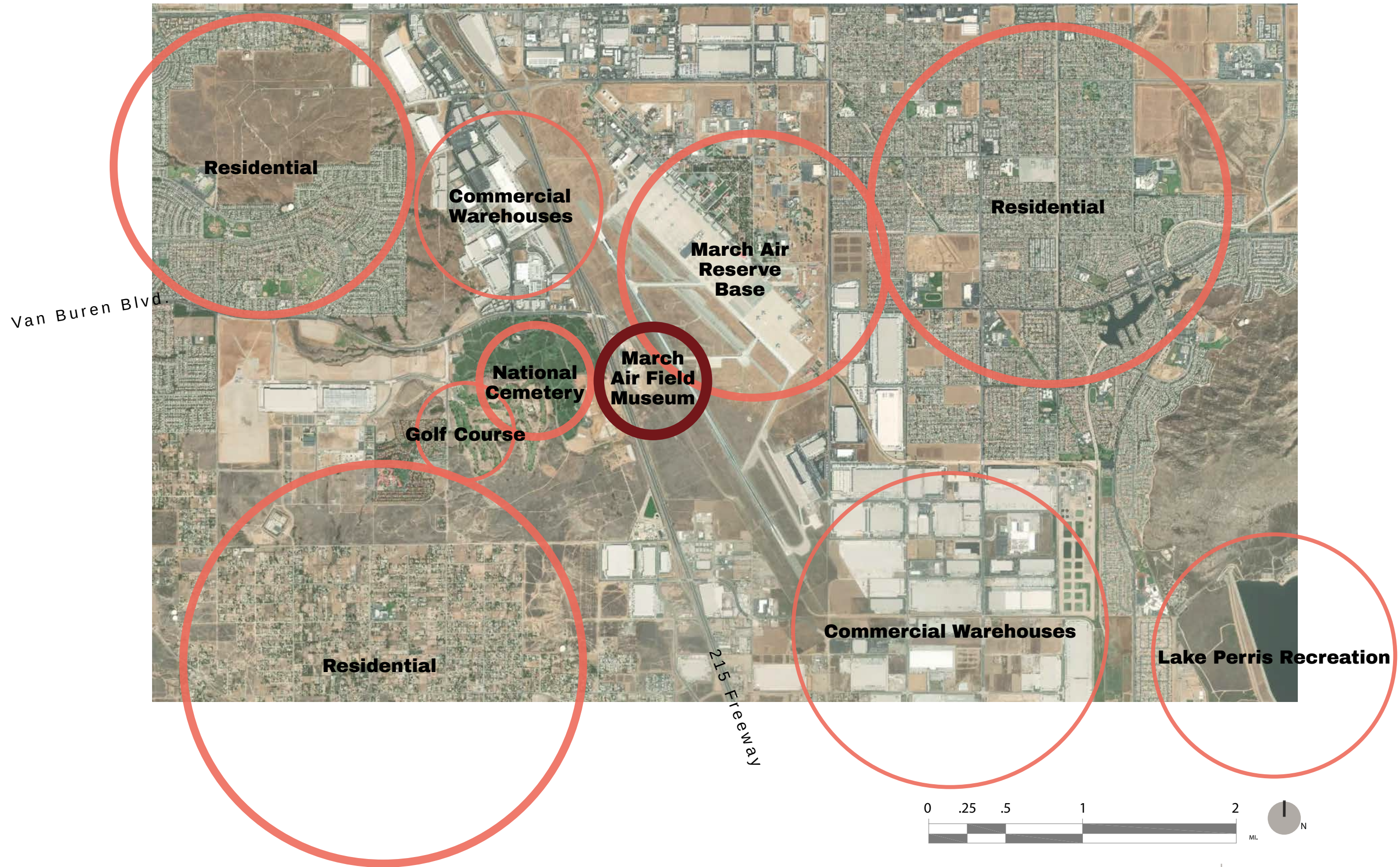


S I T E A N A L Y S I S

Context Diagram

March Field Air Museum

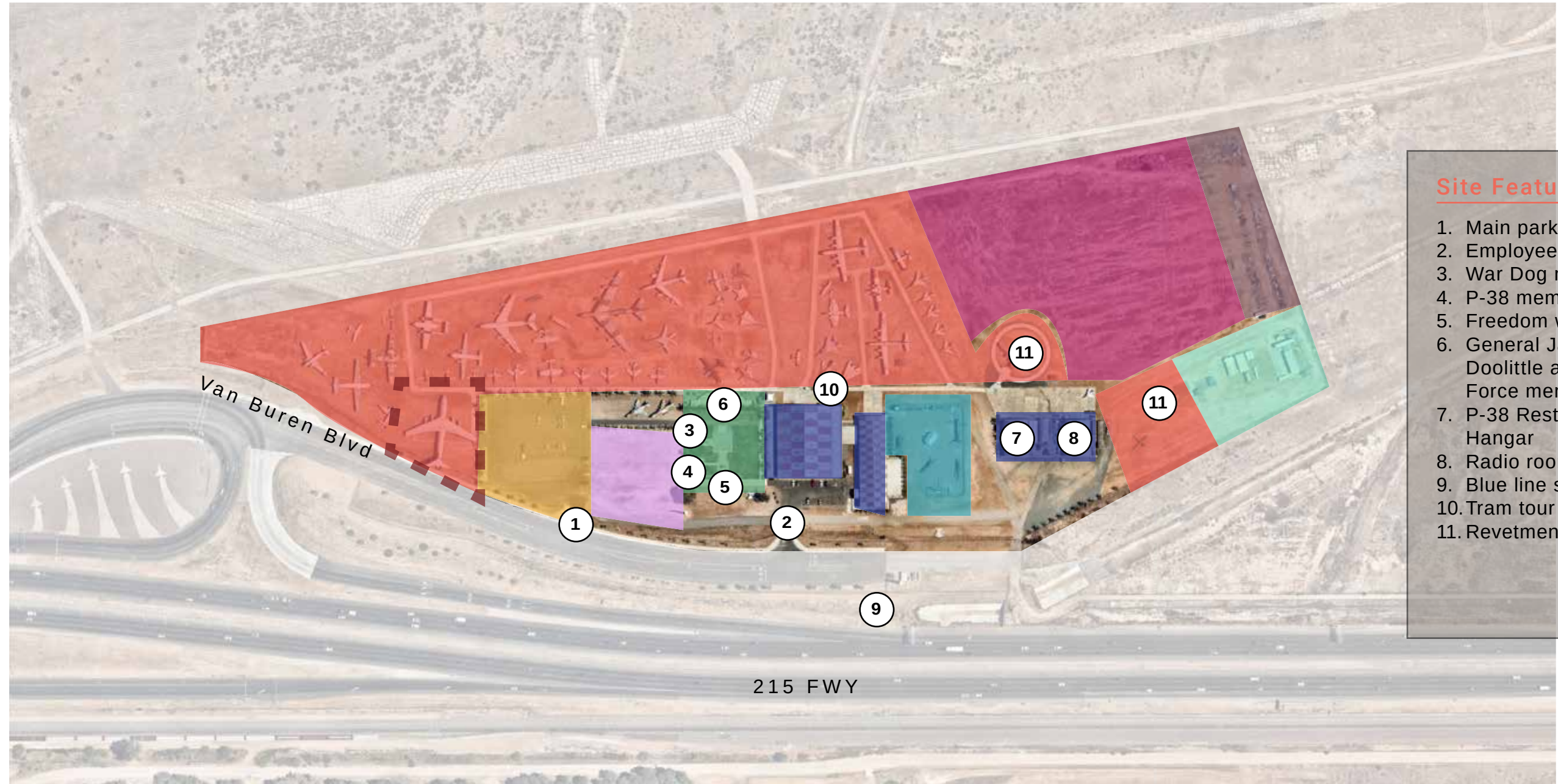
VICINITY



Site Analysis

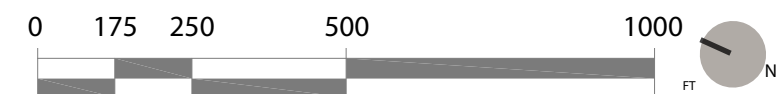
On-site program

AREA USE



- Site Features**
1. Main parking entrance
 2. Employee parking
 3. War Dog memorial
 4. P-38 memorial
 5. Freedom wall
 6. General James Doolittle and 15th Air Force memorial
 7. P-38 Restoration Hangar
 8. Radio room
 9. Blue line stream
 10. Tram tour parking
 11. Revetments

- | | | |
|--|---|---|
| Outdoor Exhibit | Indoor Exhibit Areas | Event Parking |
| General Parking | Vietnam Fire base | Special Event Space |
| Overflow Parking | Afghan Fire base | |
| Memorial Garden/Entrance | Graveyard/ Scrap Area | |



Site Analysis

CIRCULATION

Movement through the site



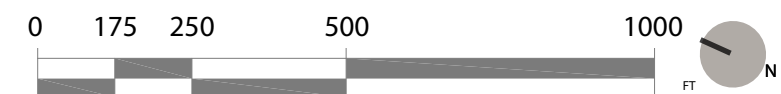
— Vehicular

* Access Points

— Pedestrian

▨ Tour shuttle

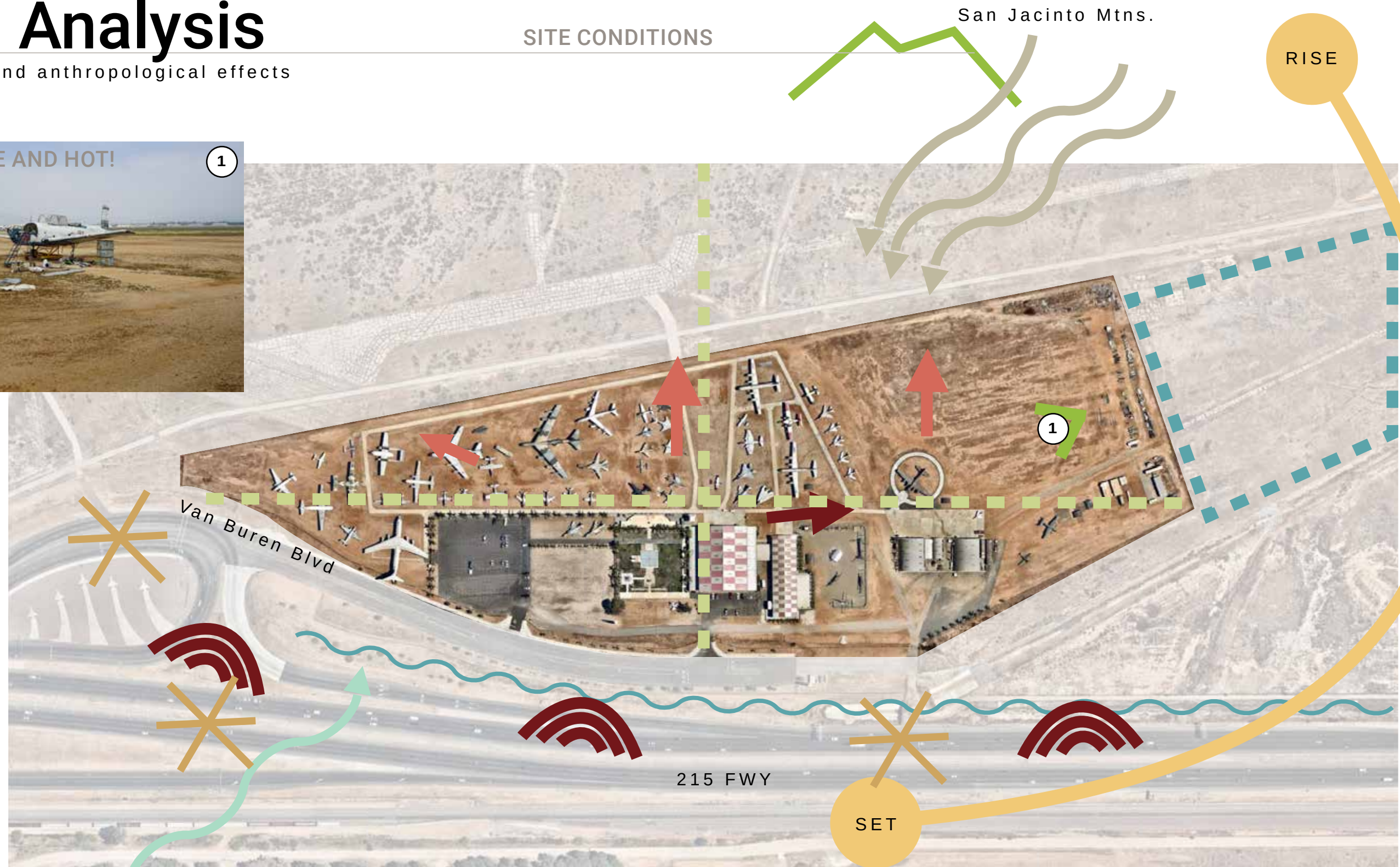
▨ Overflow and event parking



Site Analysis

Natural and anthropological effects

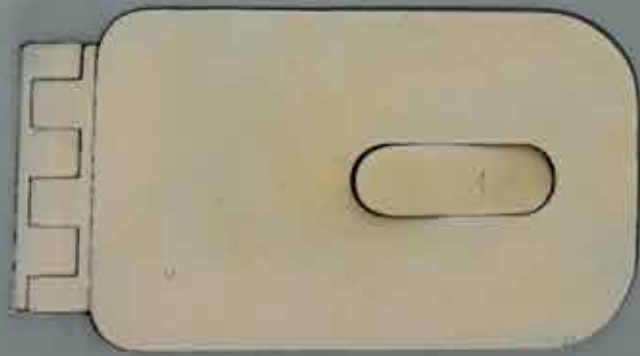
SITE CONDITIONS



- ➔ Views- Mtns., AFB
- ➔ Views- Target warehouse
- — — Main Axis
- ■ ■ New Target Distribution
- ✳ Vehicular viewpoints
- ~ ~ ~ Blue Line Stream
- ⤿ ⤿ ⤿ Overflow Parking
- ➔ Santa Ana Winds
- ➔ Prevailing Winds



TO JETTISON
CANOPIES
PULL HANDLE



O P P O R T U N I T I E S A N D C O N S T R A I N T S

Site Analysis

Opportunities

GRAVEYARD INCORPORATE INTO SITE



RESTAURANT

MAIN AXIS

FWY VIEWS INWARD

215 FWY

EVENT SPACES

FIRE BASES TO DEVELOP FURTHER

- Opportunities**
1. Freeway views into site
 2. Restaurant / Brewery
 3. Two major cross axis of site/ Connect Inside of hangar
 4. Graveyard space near large gathering area
 5. Large event, flexible use space
 6. Fire Bases allow for further development
 7. Memorial sculptures
 8. Grand entrance needs improvement
 9. Runway and mountain views
 10. Open areas for shade
 11. California Native plant garden



Site Analysis

Constraints

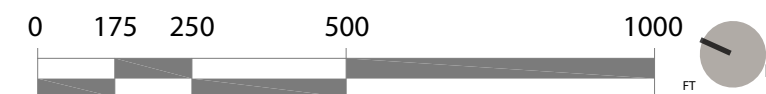


- Constraints**
1. Air Reserve Base runway clearance
 2. 25' fence clearance inside site
 3. Large site with no shade
 4. Some aircraft can not be moved
 5. Fire bases must remain in place
 6. Memorial sites to remain in place
 7. Main Entrance path must remain
 8. Cannot disturb native shrimp blue line stream
 9. Noise from freeway disturbing especially in memorial area
 10. Compacted soil and little water for vegetation
 11. High winds can whip through the site

MEMORIAL TO STAY IN PLACE

AIRPLANE CANNOT BE MOVED

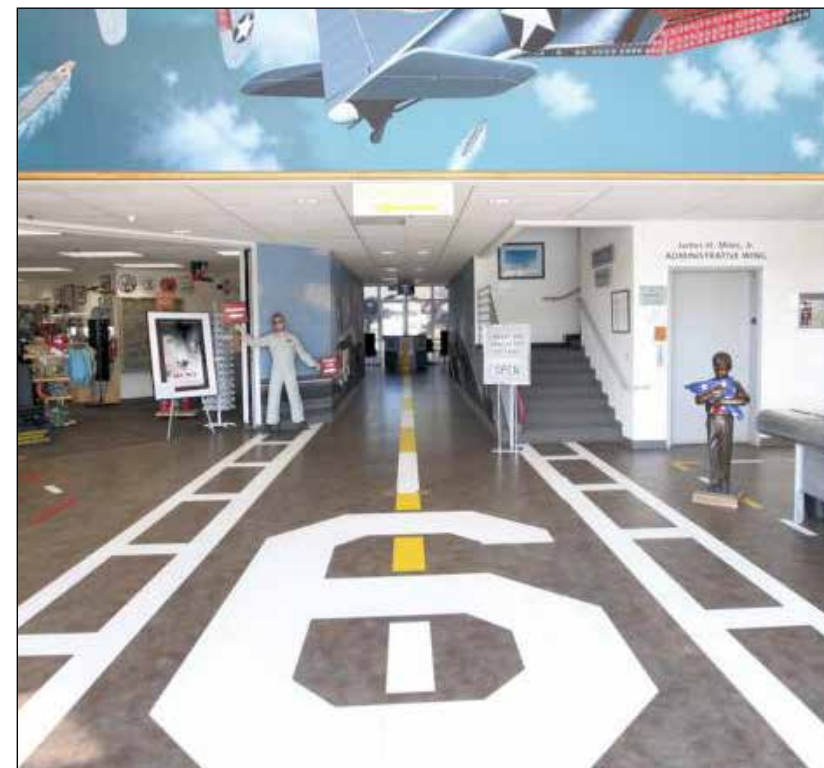
FIRE BASES STAY IN PLACE



U.S. ARMY - MODEL B-17G 50-DL
AIR FORCES SERIAL NO. 44-6393
CREW WEIGHT 1200 LBS.

R E S E A R C H P R E C E D E N T S

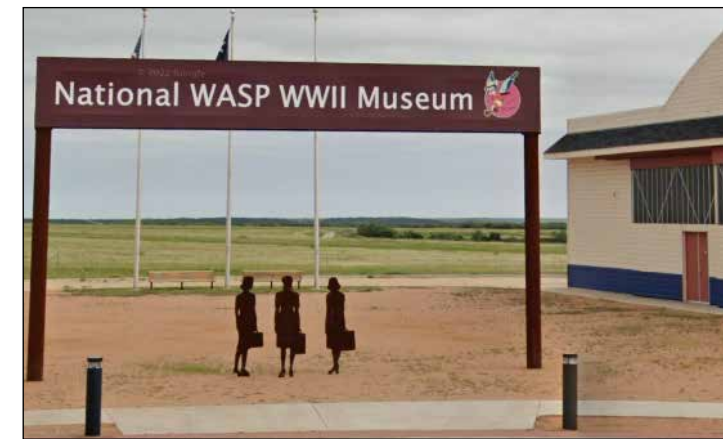
Palm Springs Air Museum



745 N Gene Autry Trail, Palm Springs, CA 92262
Founded in 1996

- Named in 2014 as one of the top 14 aviation museums in the world by CNN Travel
- Over 70 flyable and static aircraft are on display inside and outside the
- four climate-controlled hangars totaling 86,000 square feet, with an additional 40,000 square feet outside on the tarmac.
- Today over 100,000 visitors annually tour the 85,000 square foot non-profit entity
- Redesign by LPA Design Firm (bottom left)

National WASP WWII Museum

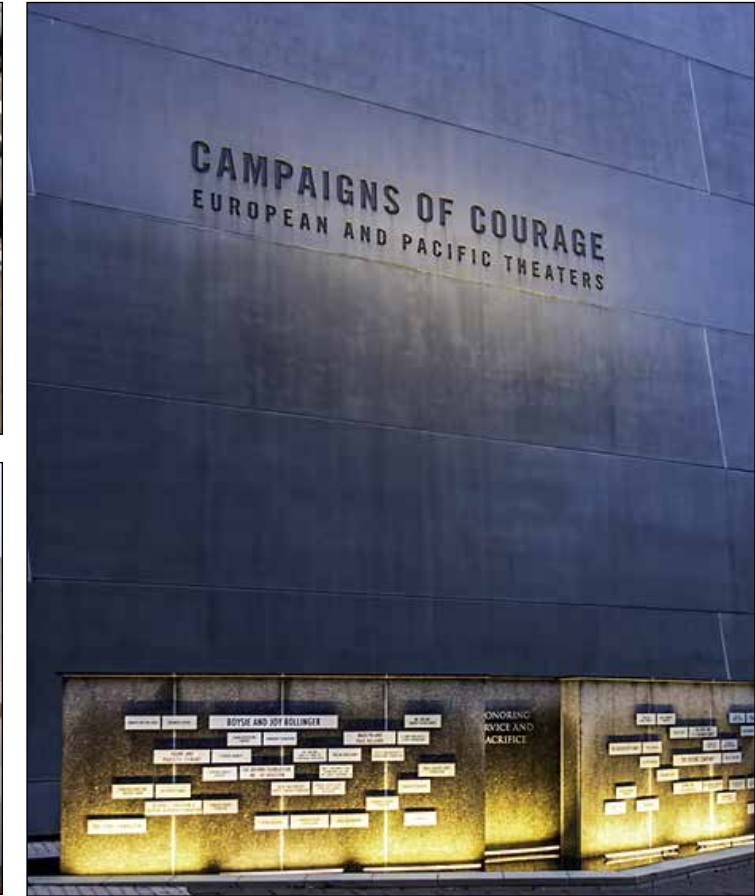



210 Avenger Field Rd, Sweetwater, TX 79556

Founded in 2002

- In 1942, the Army was in desperate need for pilots to deliver newly built trainer aircraft to the flight schools in the South. Twenty-eight experienced civilian women pilots volunteered to take those ferrying jobs. They formed the country's first female squadron late summer 1942. Women Airforce Service Pilots (WASP).
- Goal to recognize the WASP as the first women to fly for America's military and their role in opening doors for Legacy Pilots. To inspire people, young and old, to embrace the stories of the WASP that speak to their honor, loyalty, patriotism, and service. Involvement in WWII with an emphasis on women's roles in aviation technology.

National WWII Museum




Sheri Lucas
 Local Guide · 254 reviews

★★★★★ 2 months ago
 This was an incredible museum with so much to see. Lots of great hands on exhibits and videos. You can get lost in that ship!!!!

We spent a few hours going through and still didn't have enough time! There are kennels by the parking lot with fans if you need to have a cool spot to place your pooch!

Definitely worth going to see!

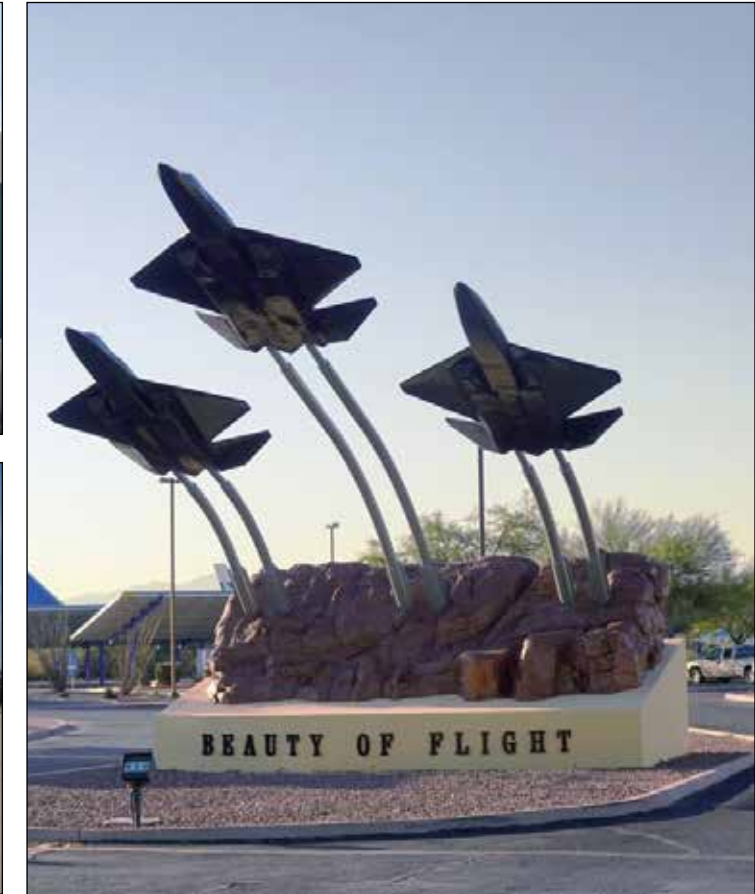
Thank you to everyone who has served!!

945 Magazine St, New Orleans, LA 70130

June 6, 2000

- The National WWII Museum features immersive exhibits, multimedia experiences, and an expansive collection of artifacts and first-person oral histories, taking visitors inside the story of the war that changed the world.
- The museum opened on June 6, 2000, the 56th anniversary of D-Day

Pima Air & Space Museum



6000 E Valencia Rd, Tucson, AZ 85756

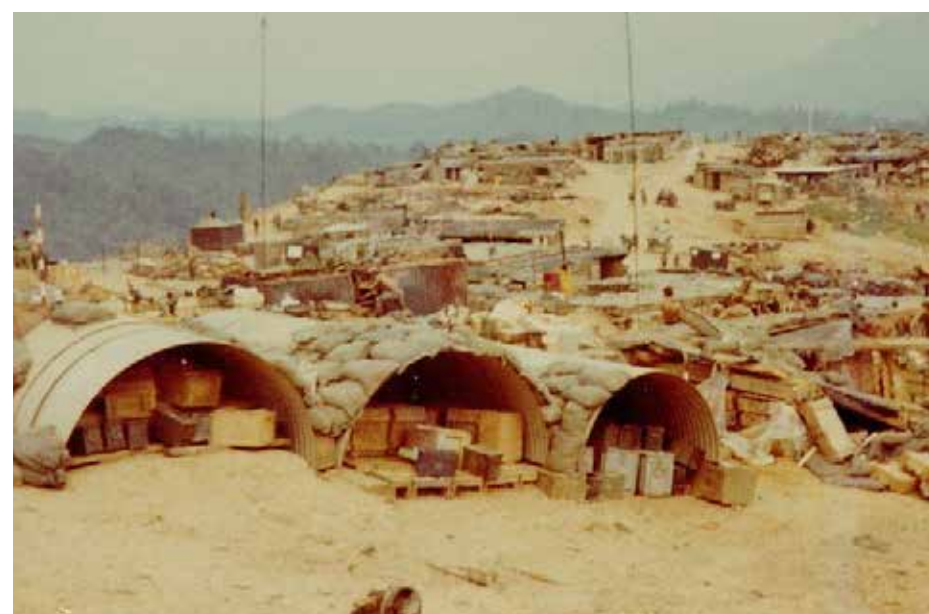
Founded 1976

- The museum has five hangars dedicated to different indoor exhibits, and a very large outdoor area
- The main hangar hosts a wide selection of aircraft and has a few different themes
- The outdoor exhibits would take about a mile to walk around them all, however you don't have to do all the walking. There is also a tram tour you can take on the outdoor exhibit.

U.S.A.

01445889

C O N C E P T A N A L Y S I S



Design Inspiration

KIDS BASE



Design Programs Just for Kids!

- Kid's base located close to restaurant/ brewery area
- Museum could host science fair events, weekend camp outs, summer/ spring break camps for younger children.
- This can be a great revenue generator for specific activities but also inviting more visitors with children to visit more frequently.
- Plane passport system with stamps at each aircraft to improve education and make kids and all age groups more excited to see each plane. A way to bring people back if they didn't "collect" all stamps.

Design Inspiration

HANGAR GATEWAYS AND RESPITE



Arches used for focal points and gateways through the site

- Quonset huts used throughout the site with benches and picnic tables.
- Arched gateways through the site will help create different focal points and views with ingress and egress through.
- Quonset huts can help create shelter from strong winds and heat.

Design Inspiration

MEMORIAL

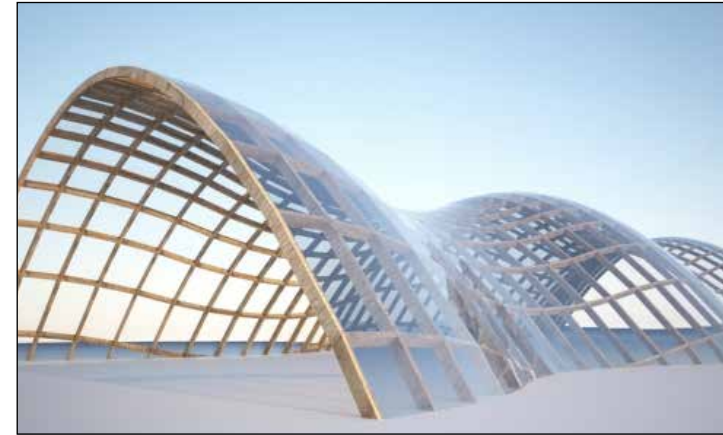


Arches and domes to create focal points and intense memorial feeling.

- Creating a dome memorial for Hap Arnold will increase the intensity and show his importance in more depth.
- Shadows within the dome inspired by the De Young Art Museum in San Francisco as pictured in the top right photo.
- Aircraft lifted on pedestals to show plane movement and create more visibility from the surrounding streets.

Design Inspiration

HANGAR EXTENSION AND GLASS FACADE

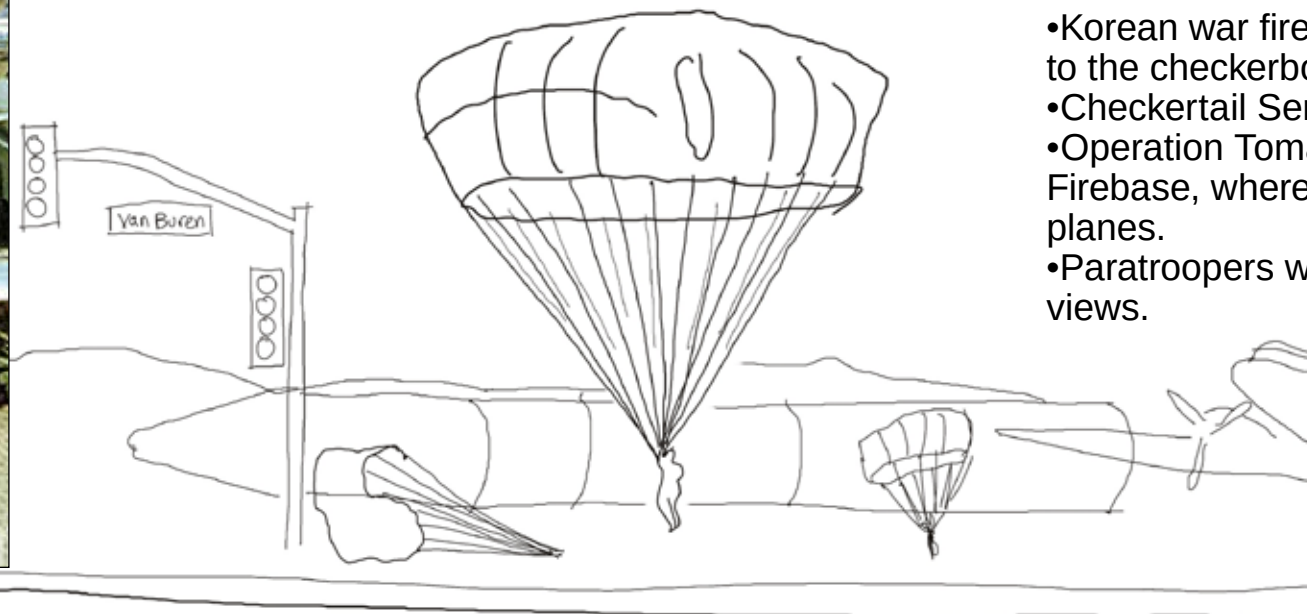


Bringing the outside in and providing protection!

- Glass will allow the hangar to incorporate the outside.
- Night events will be more successful

Design Inspiration

FIREBASE



Firebase inspiration

- Korean war firebase will contain F-86 Sabre plane to add connection to the checkerboard rooftop.
- Checkertail Service club will be one section of the Korean War.
- Operation Tomahawk will be another section of the Korean War Firebase, where 3500 paratroopers were dropped by 120 C-119 planes.
- Paratroopers will add increased visual effect from the exterior street views.

Design Inspiration

RESTAURANT/ BREWERY



Restaurant/ Brewery inspiration

- Redlands Hangar 24 brewery
 - Outdoor and indoor seating and viewing area of the adjacent Air Force Base runway
- Great revenue building opportunity while supporting a local inland empire business.

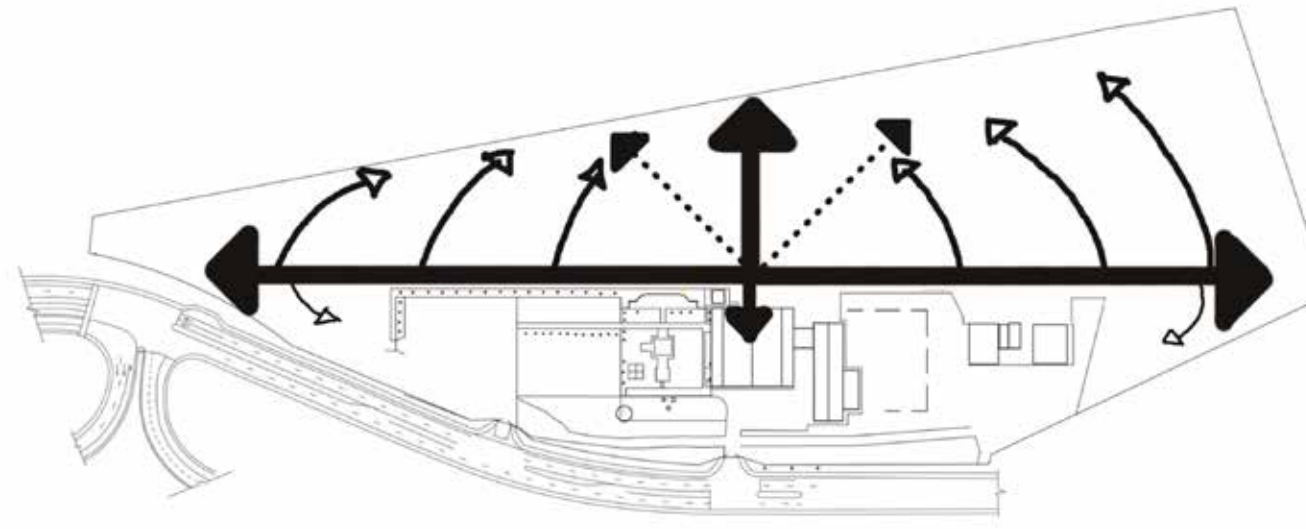
Concept Analysis

FLOW

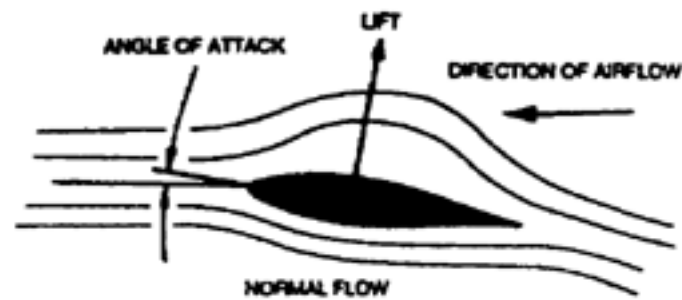
Propeller and airflow inspiration



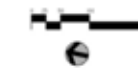
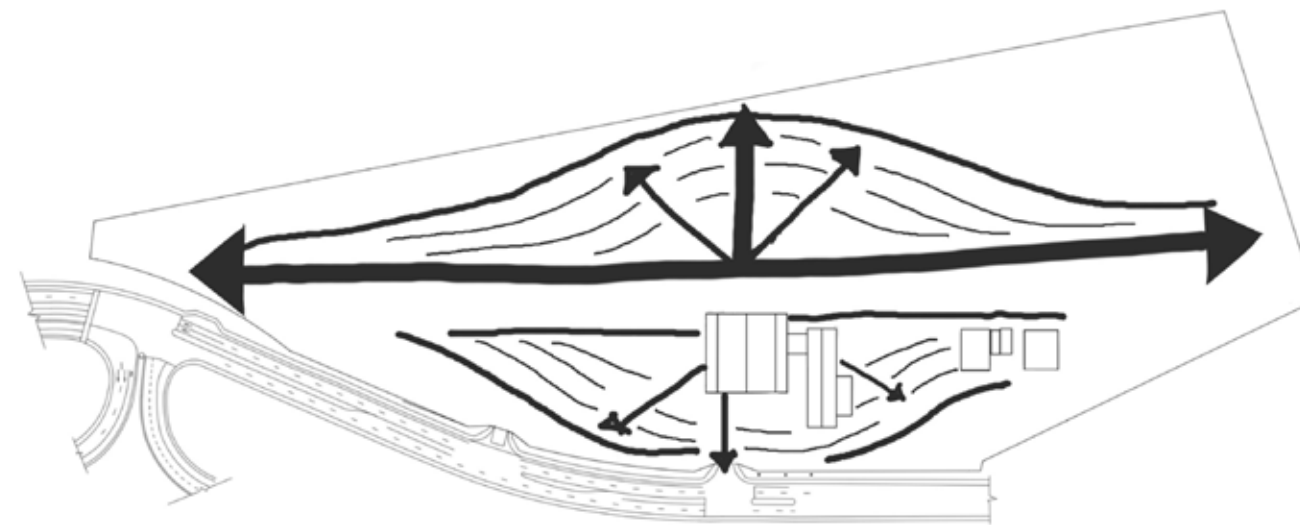
Propeller plane



Simple concepts:



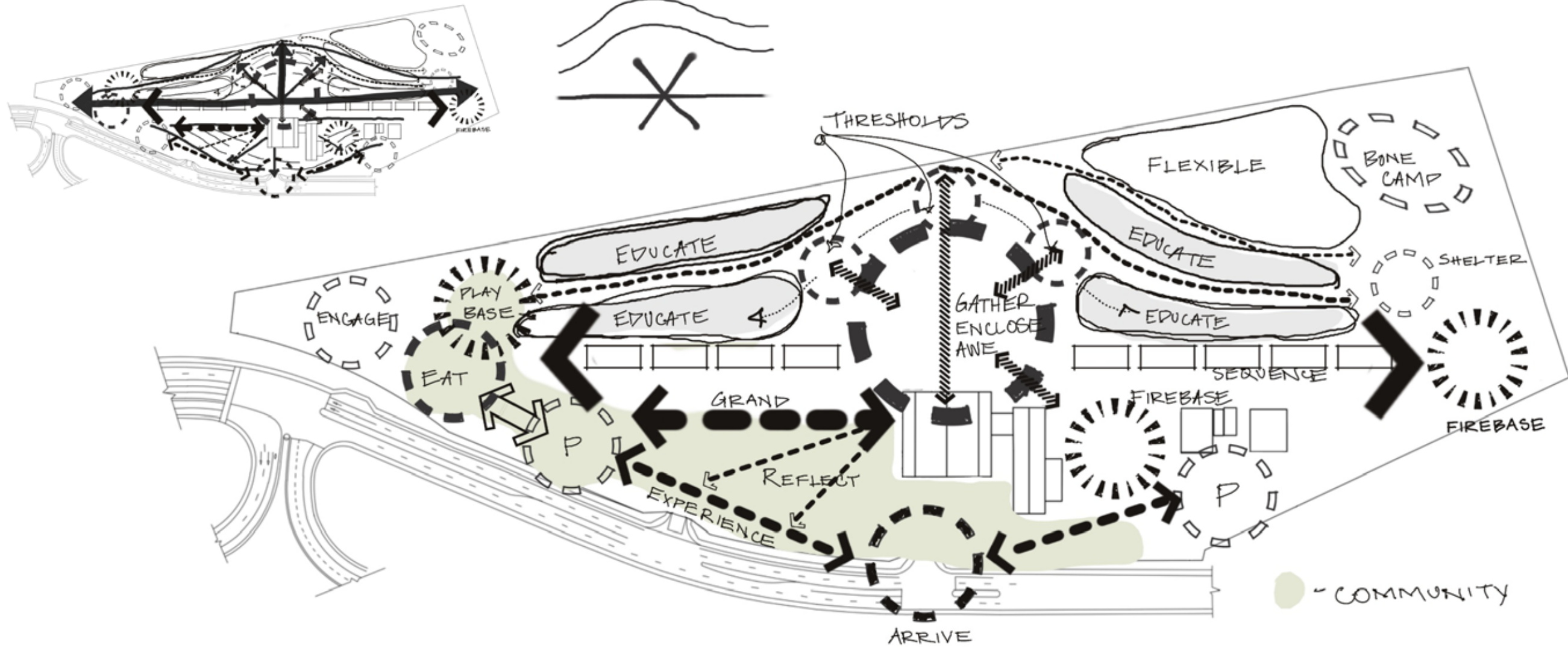
Air flow pattern over wing



Concept Analysis

FLOW

Propeller and airflow inspiration



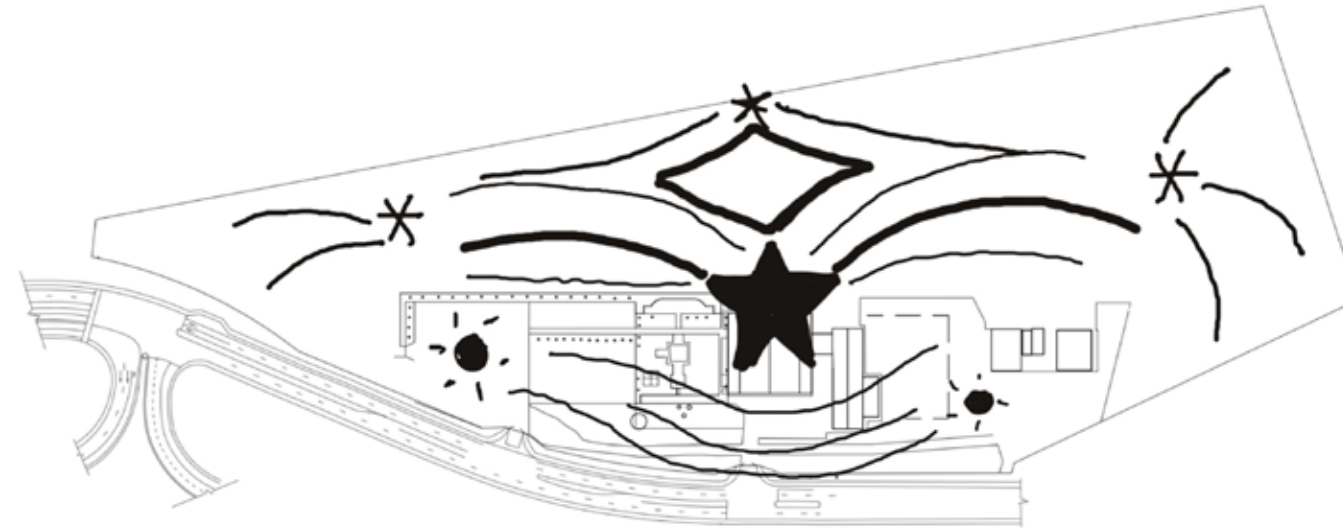
Concept Analysis

PATCH VORTEX

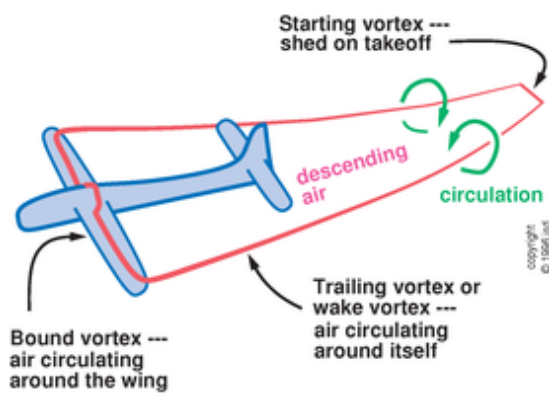
Air Force Symbol



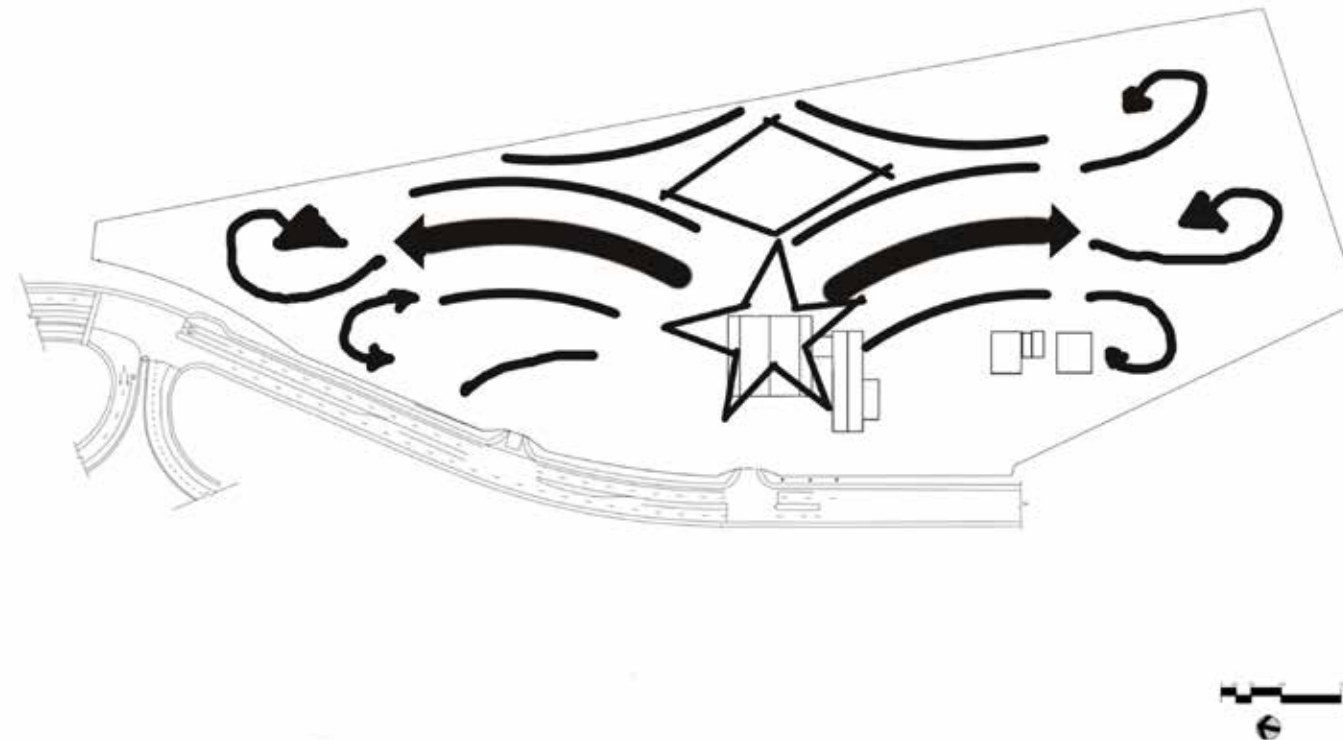
Air Force Patch



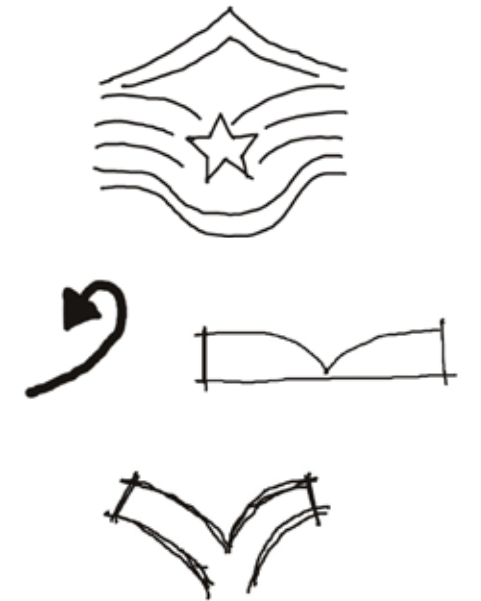
Patch hierarchy



Air pattern circulation



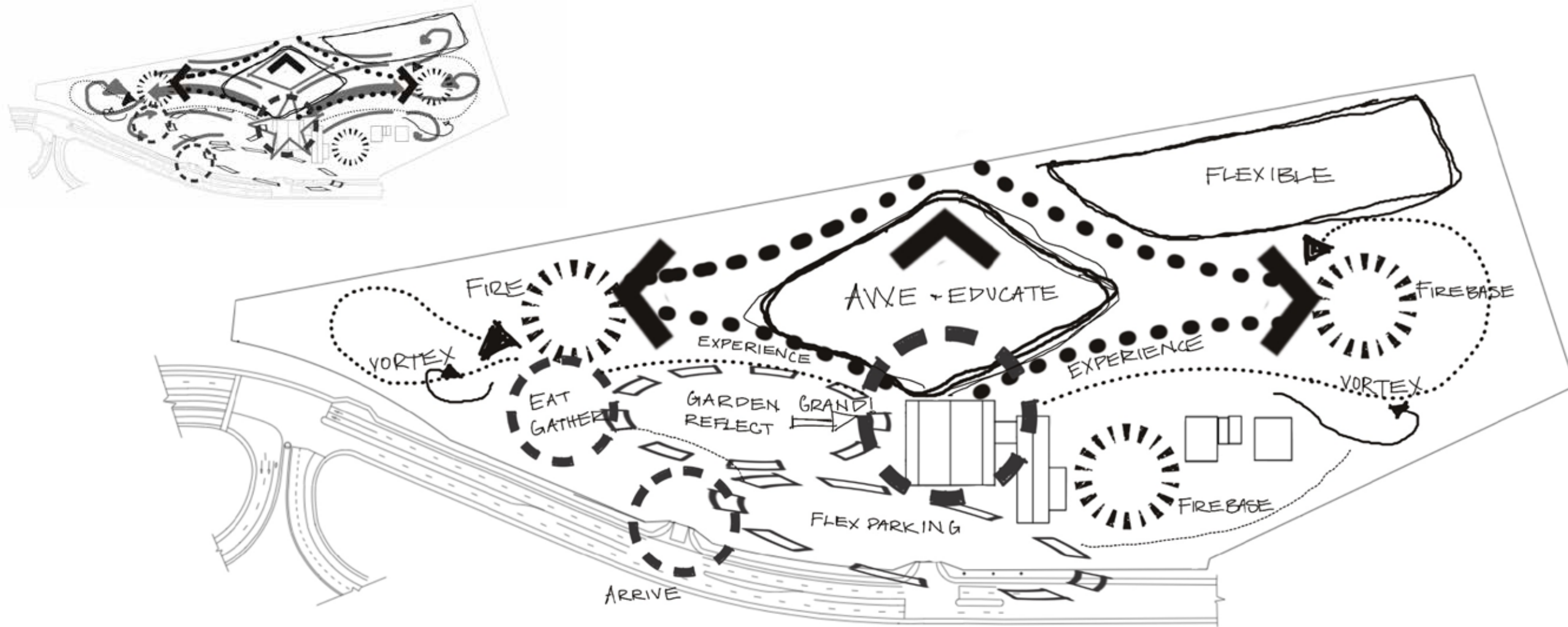
Simple concepts



Concept Analysis

Air Force Symbol

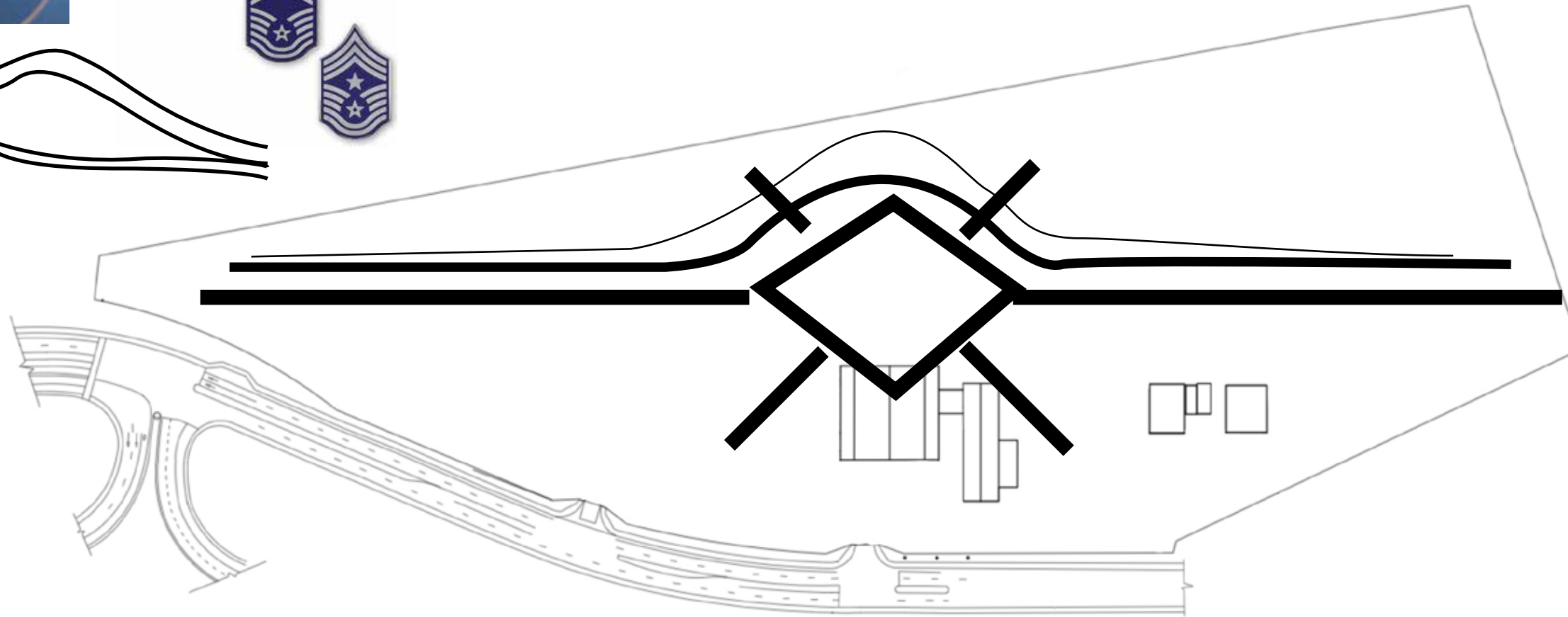
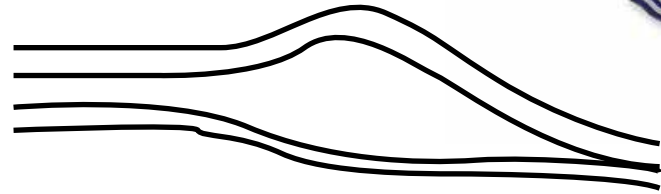
PATCH VORTEX



Concept Analysis

FINAL CONCEPT

Combined inspiration

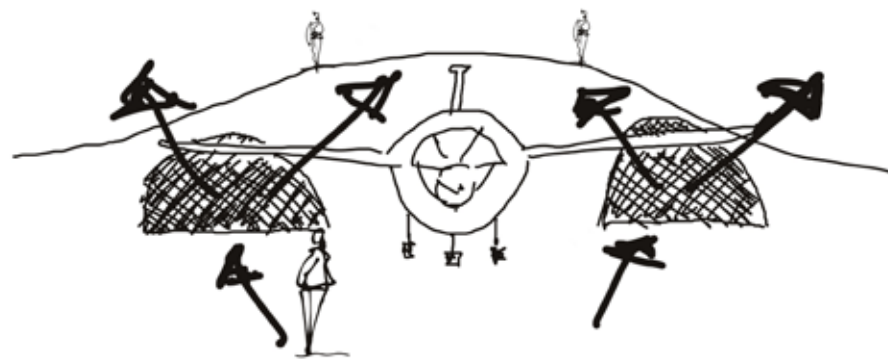
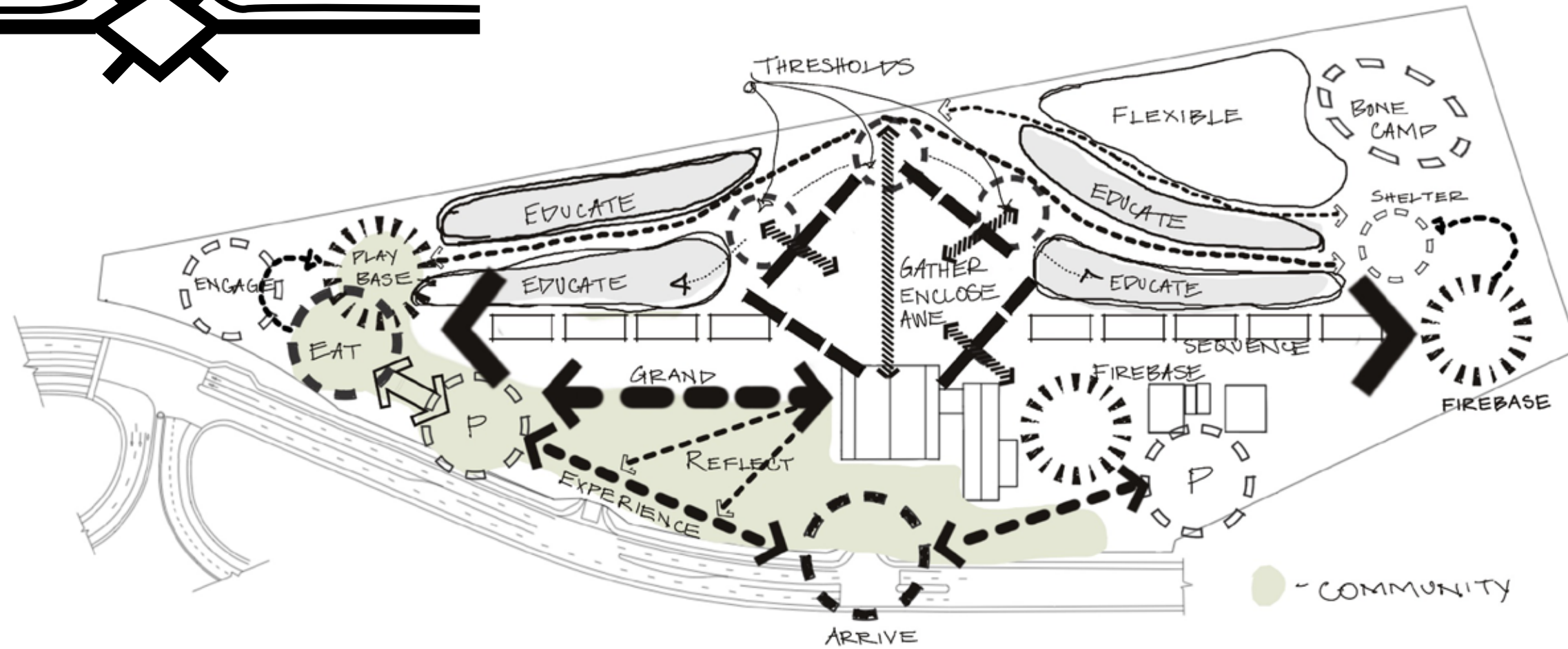
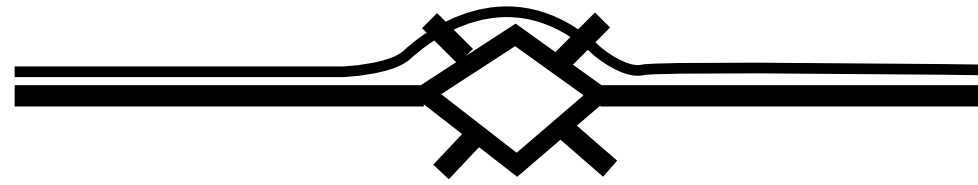


Air pattern circulation

Concept Analysis

Combined inspiration

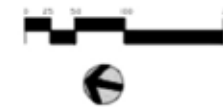
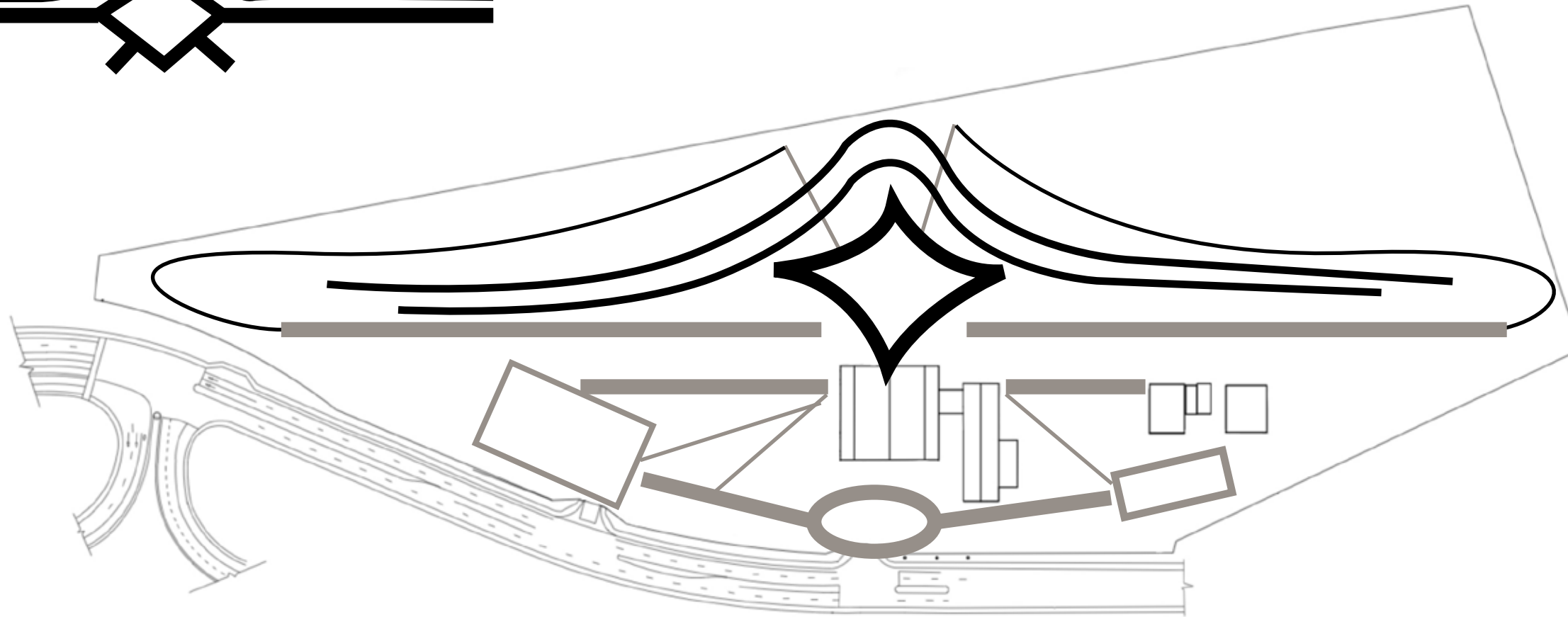
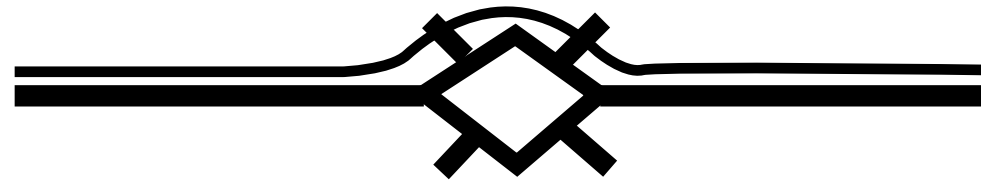
FINAL CONCEPT



Concept Analysis

Combined inspiration

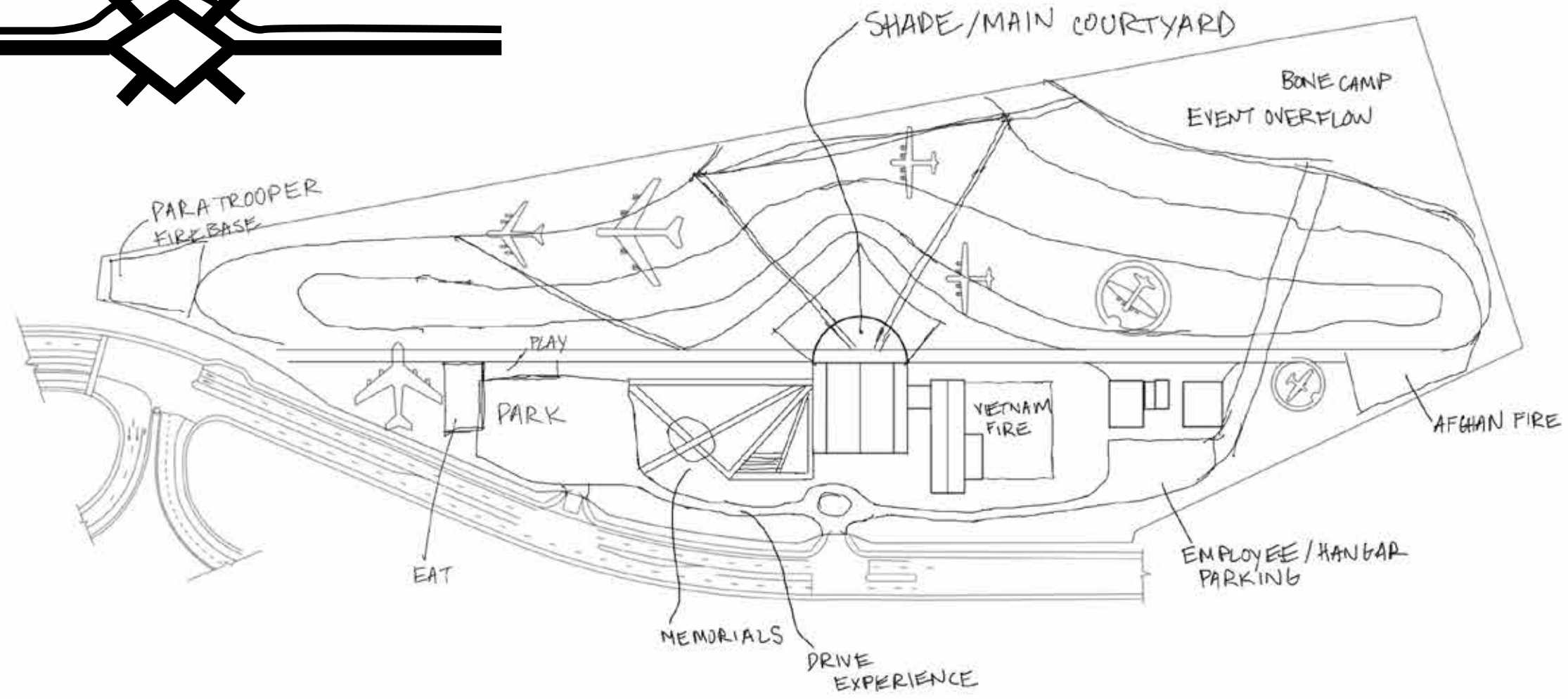
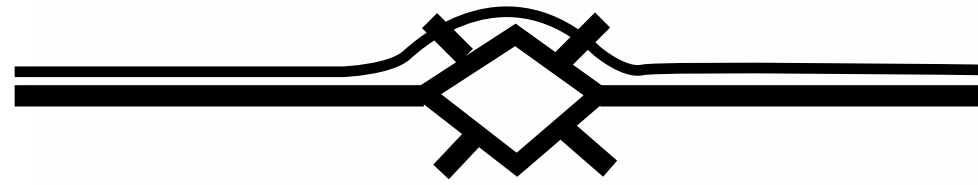
FINAL CONCEPT



Concept Analysis

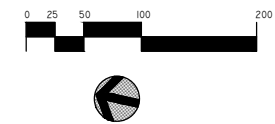
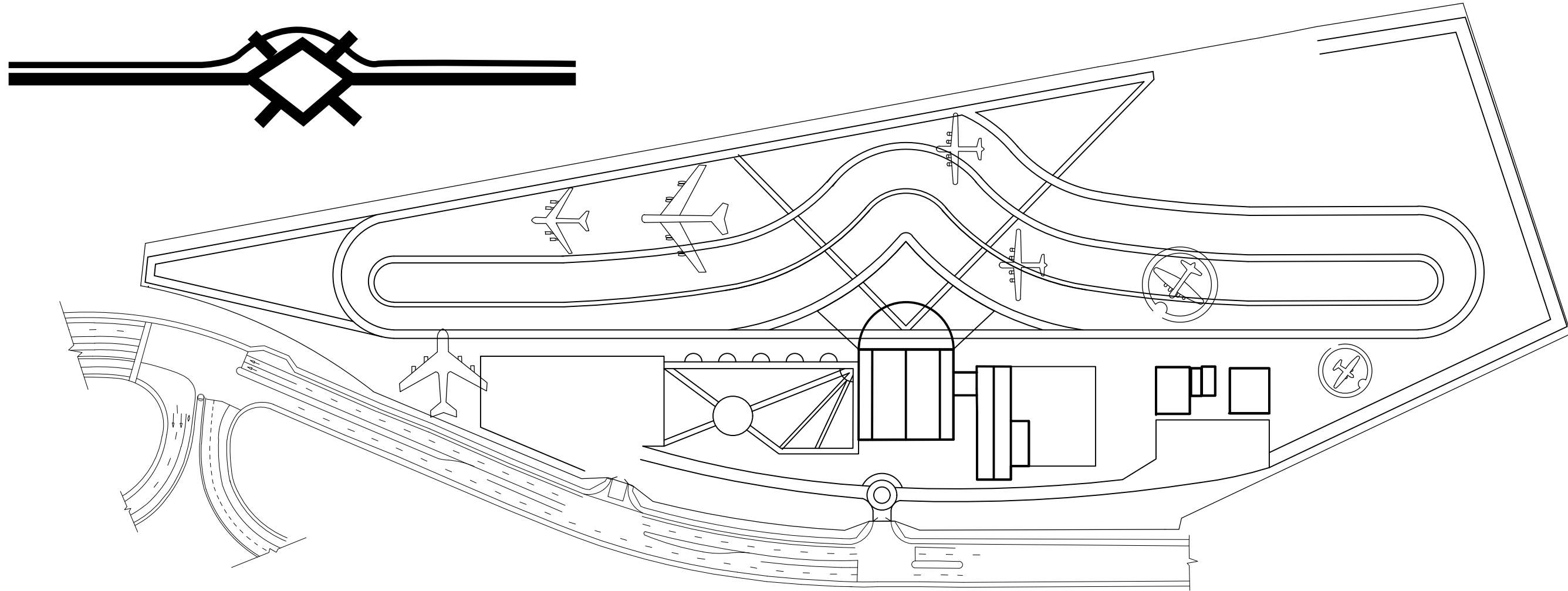
Combined inspiration

SCHEMATIC



Concept Analysis

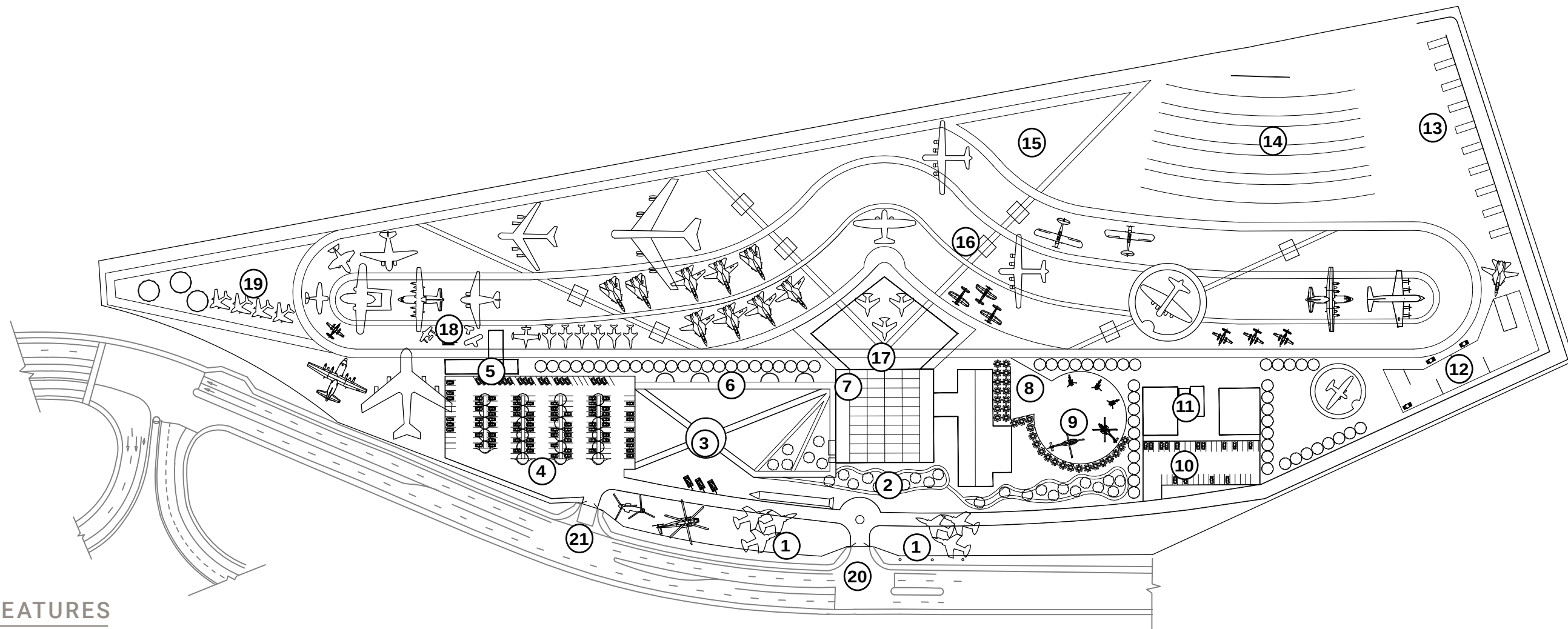
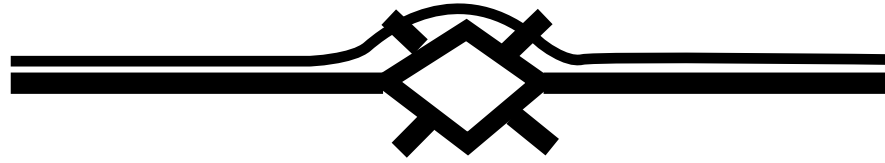
SCHEMATIC





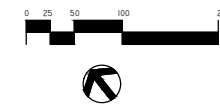
F I N A L D E S I G N

Master Plan

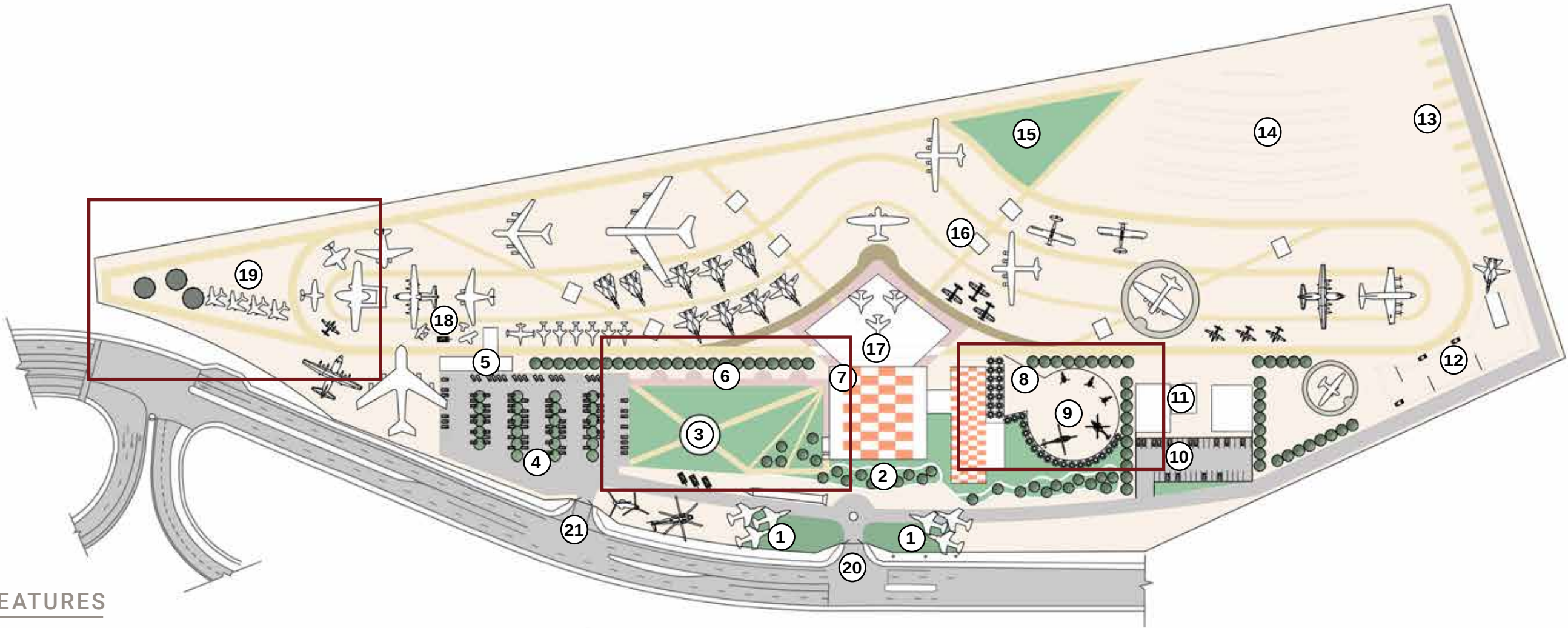
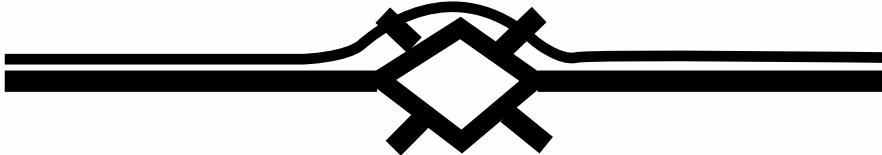


SITE FEATURES

- | | |
|--|---|
| 1. Raised fly-by entry fighter jets | 13. Boneyard campground |
| 2. Native garden paths | 14. Overflow parking and drive-in movie theater |
| 3. Hap Arnold remembrance dome | 15. Garden meadow |
| 4. Visitor parking with permeable paving | 16. Shade tunnels |
| 5. Restaurant | 17. Museum atrium |
| 6. Memorial walk | 18. Children's play base |
| 7. Museum entrance | 19. Korean War checker-tails/ paratrooper
firebase |
| 8. Bamboo amphitheater | 20. Vehicular entrance |
| 9. Vietnam firebase | 21. Vehicular exit |
| 10. Staff parking | |
| 11. Repair hangars | |
| 12. Afghan firebase | |



Master Plan



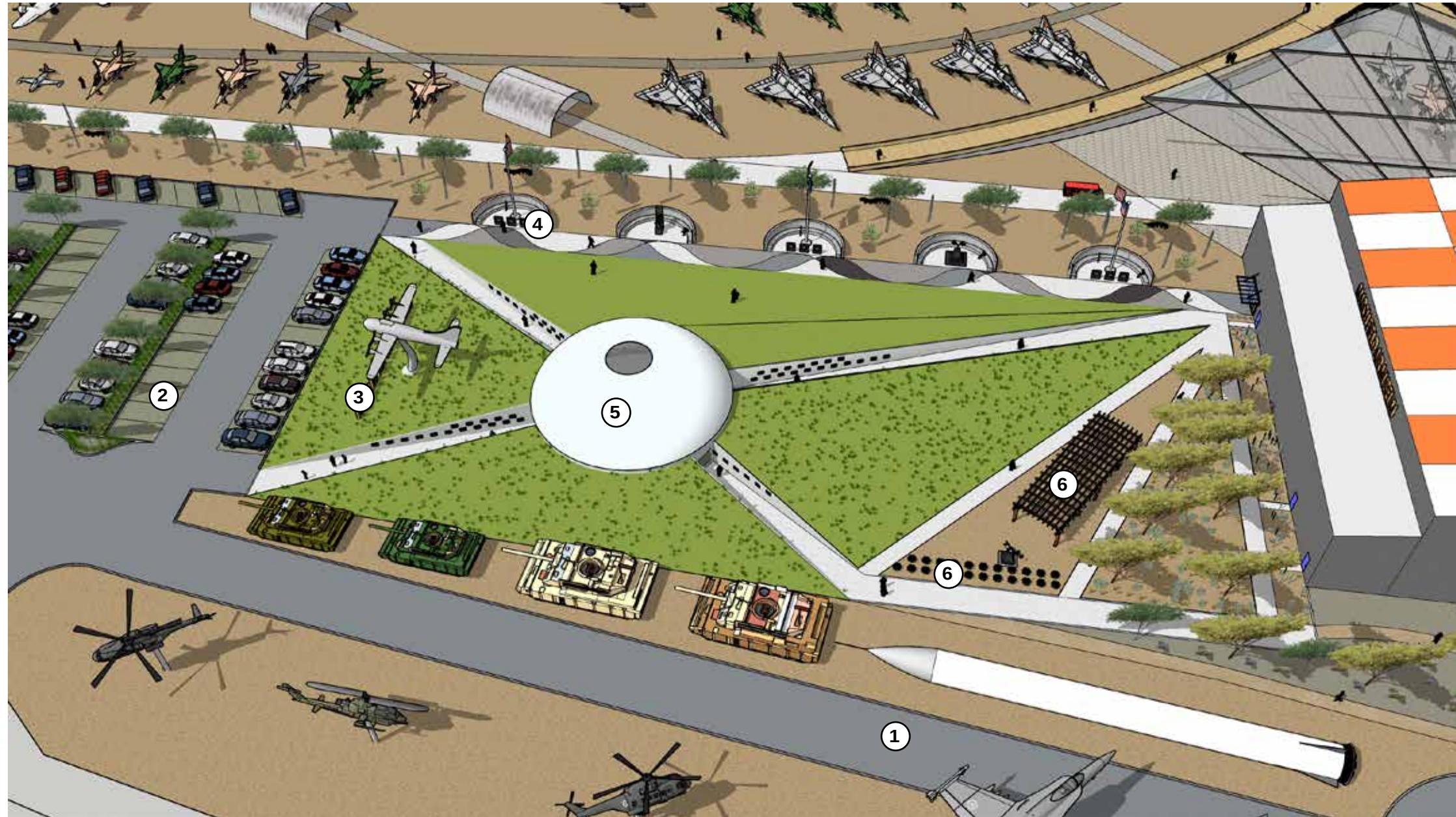
SITE FEATURES

- 1. Raised fly-by entry fighter jets
- 2. Native garden paths
- 3. Hap Arnold remembrance dome
- 4. Visitor parking with permeable paving
- 5. Restaurant
- 6. Memorial walk
- 7. Museum entrance
- 8. Bamboo amphitheater
- 9. Vietnam firebase
- 10. Staff parking
- 11. Repair hangars
- 12. Afghan firebase
- 13. Boneyard campground
- 14. Overflow parking and drive-in movie theater
- 15. Garden meadow
- 16. Shade tunnels
- 17. Museum atrium
- 18. Children's play base
- 19. Korean War checker-tails/ paratrooper firebase
- 20. Vehicular entrance
- 21. Vehicular exit



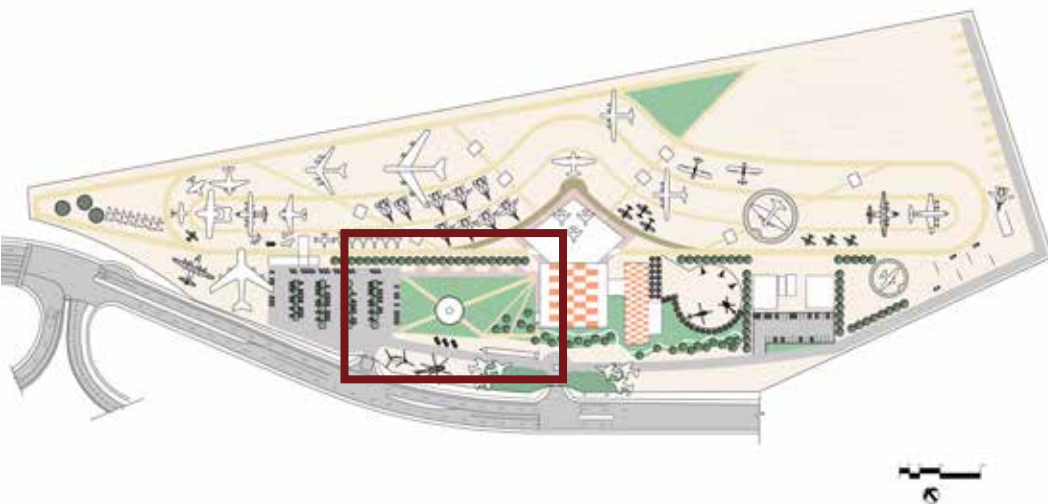
Memorial Garden

Hap Arnold Pavilion



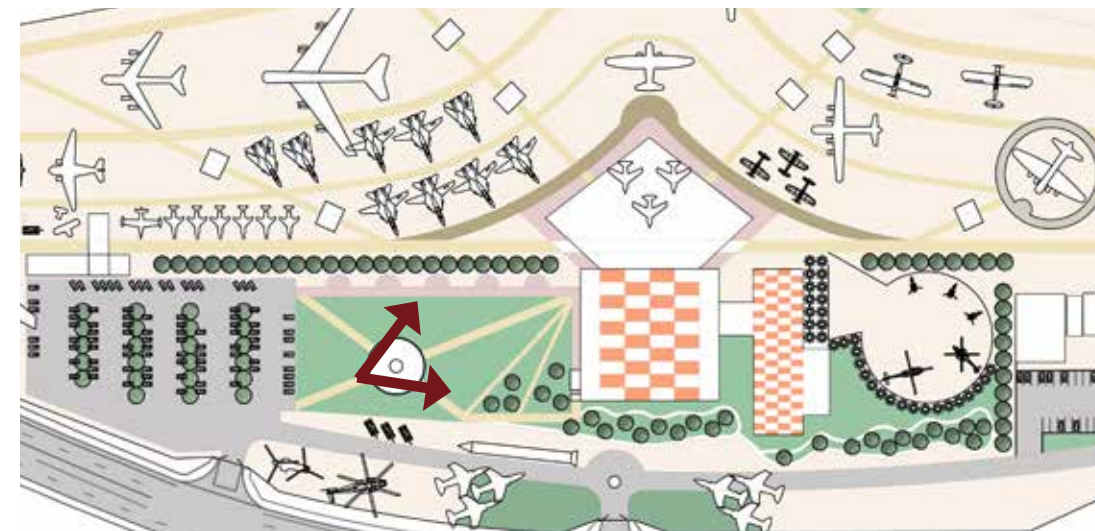
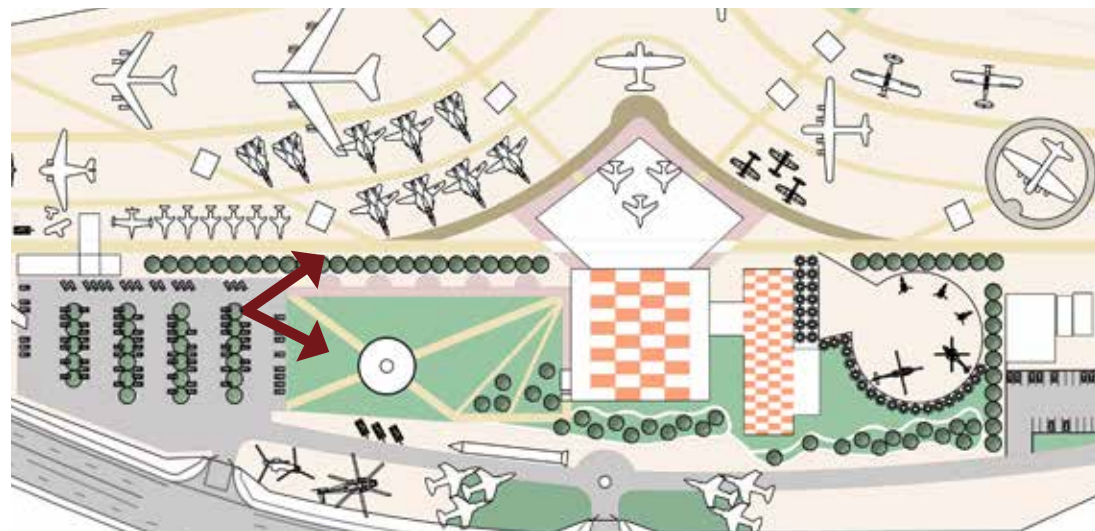
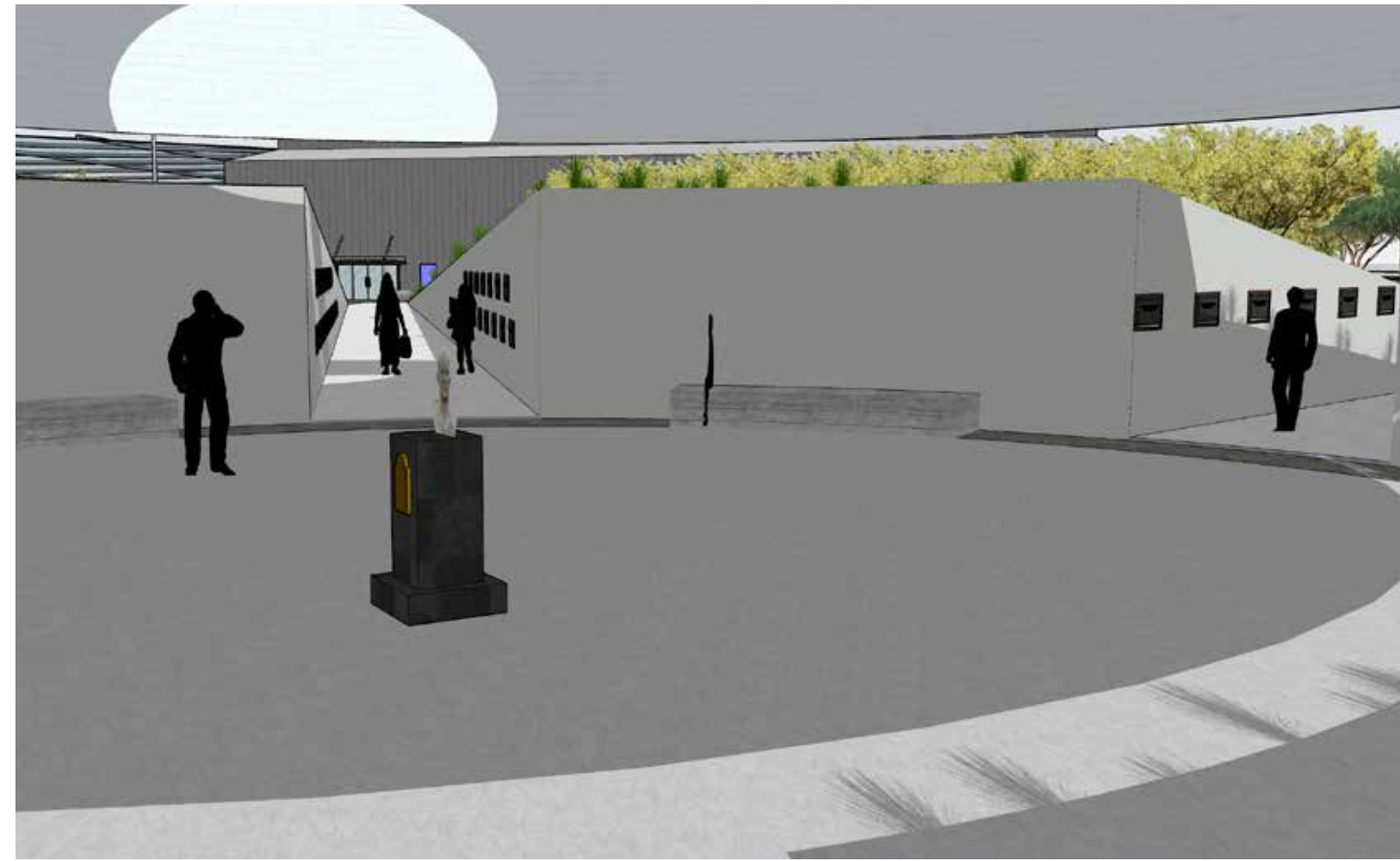
SITE FEATURES

1. Main Entrance driving experience
2. Parking Lot
3. Entrance Museum Signage
4. Memorial and flags
5. Hap Arnold memorial dome
6. Pergola seating area
7. Rose Garden



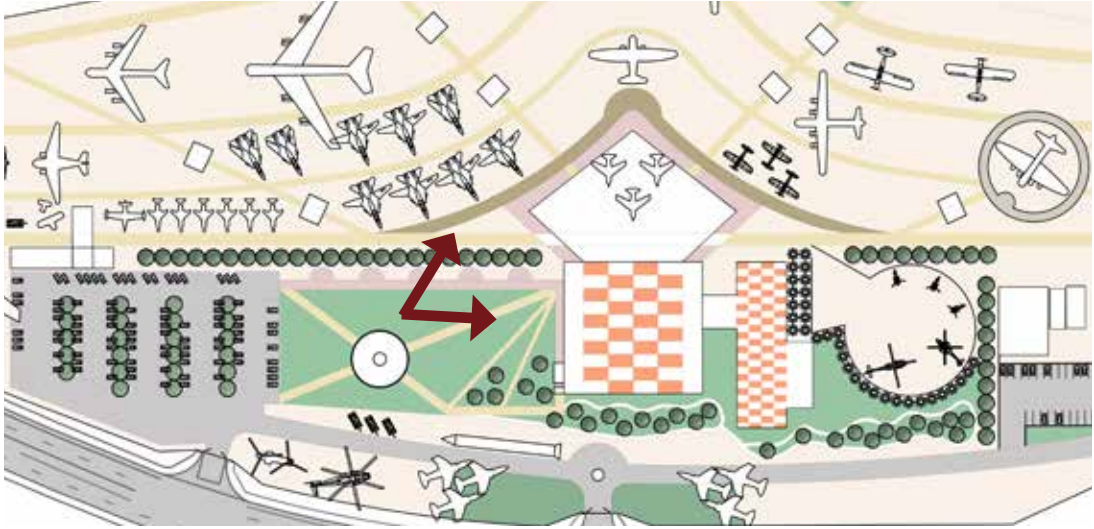
Memorial Garden

Hap Arnold Pavilion



Memorial Garden

Hap Arnold Pavilion



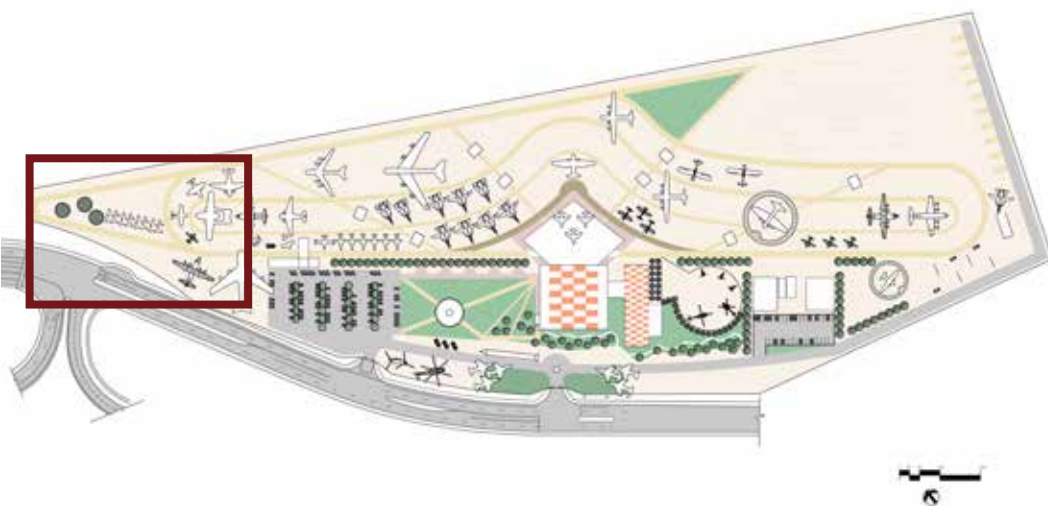
Korean War Firebase

Operation Tomahawk/ Checkertail Service Club



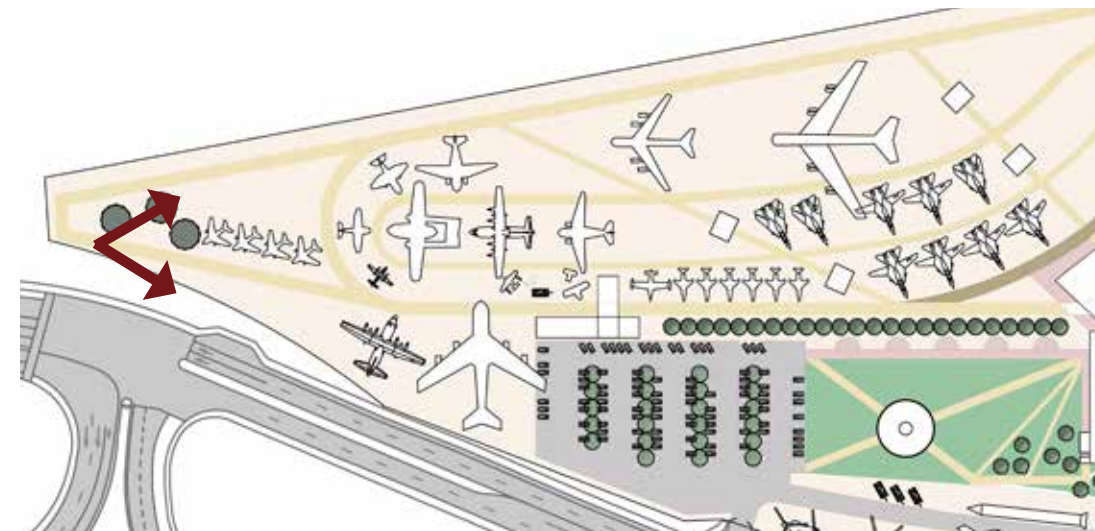
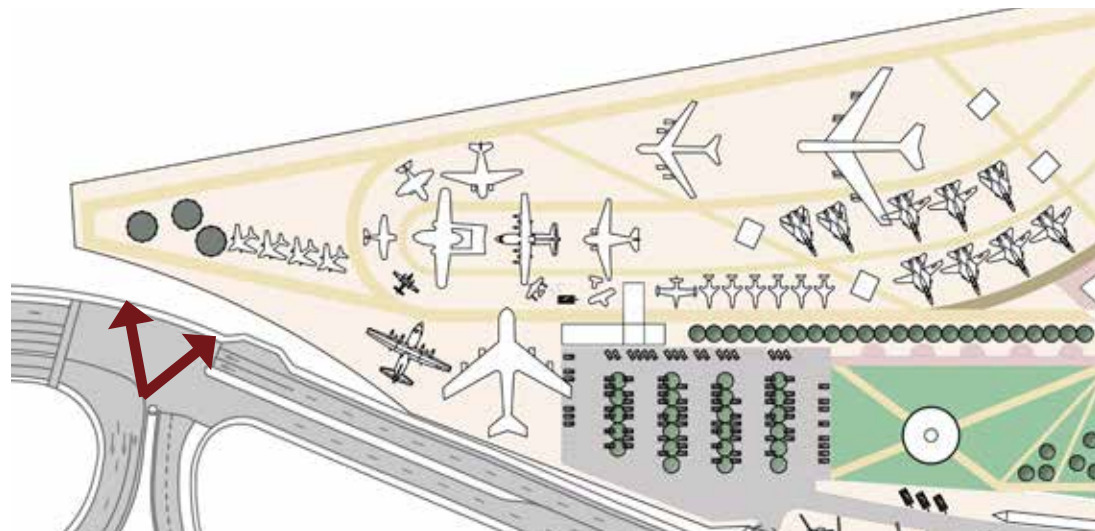
SITE FEATURES

1. Firebase Entrance in quonset hut
2. Raised C-119 Aircraft
3. Paratrooper statues
4. Command center and sleeping quarters
5. F-86 Checkertail service center
6. Fueling trucks
7. Buried earth plane hangar



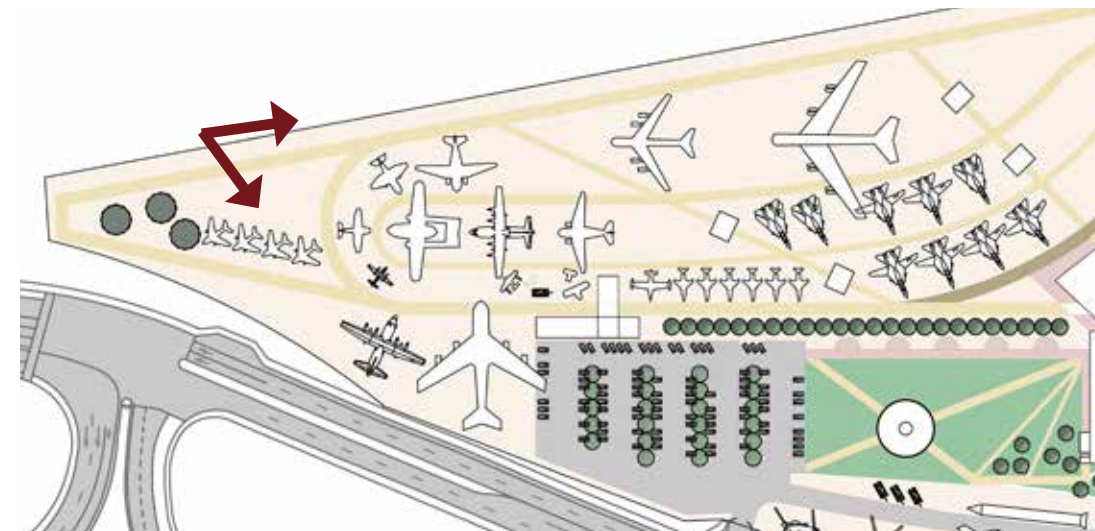
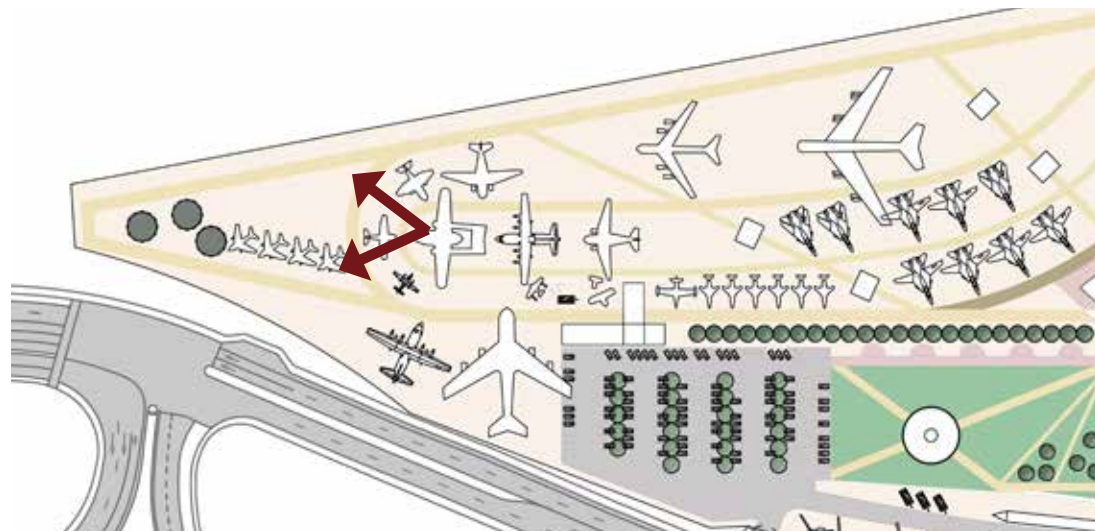
Korean War Firebase

Operation Tomahawk

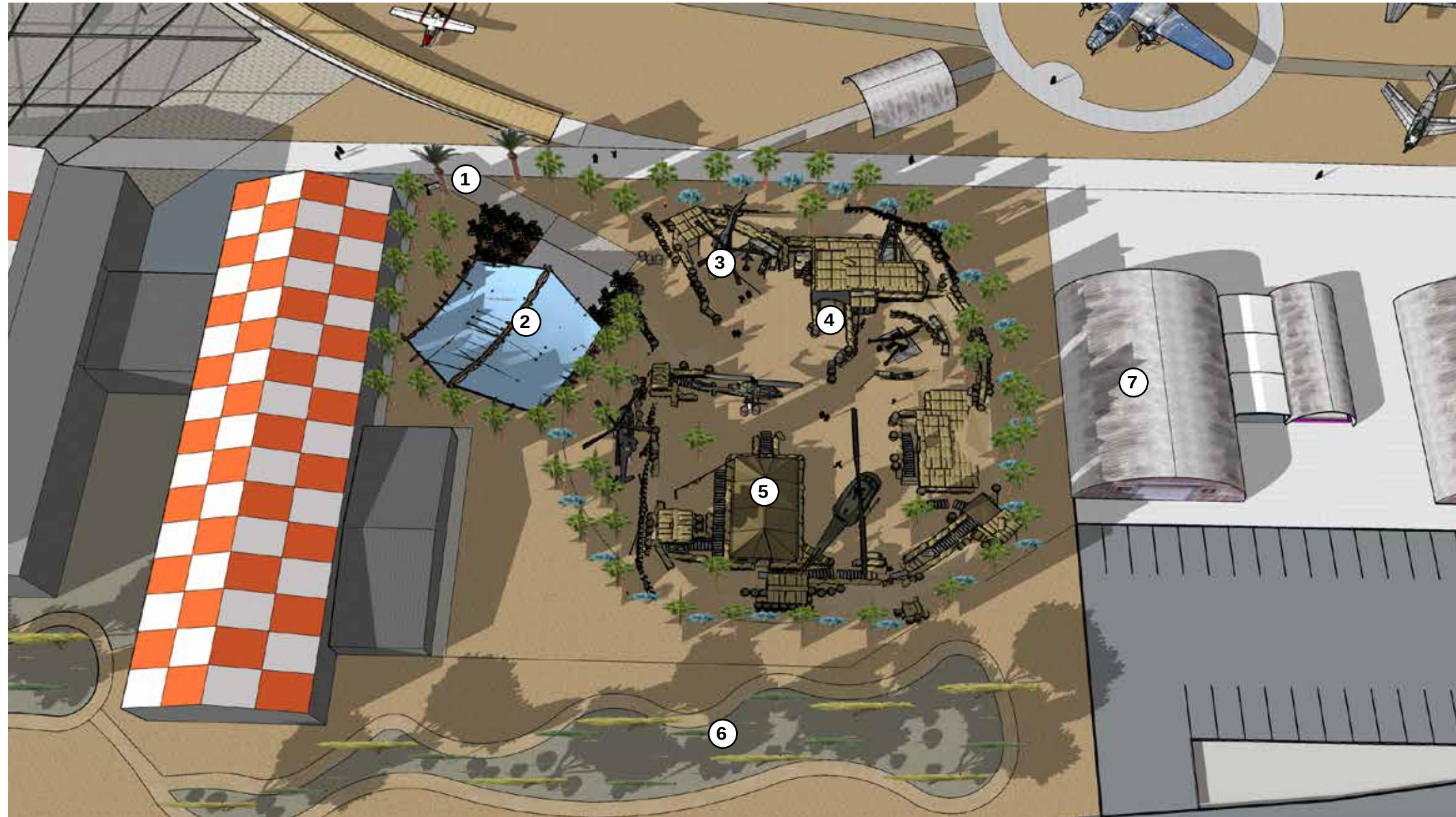


Korean War Firebase

Checkertail Service Club

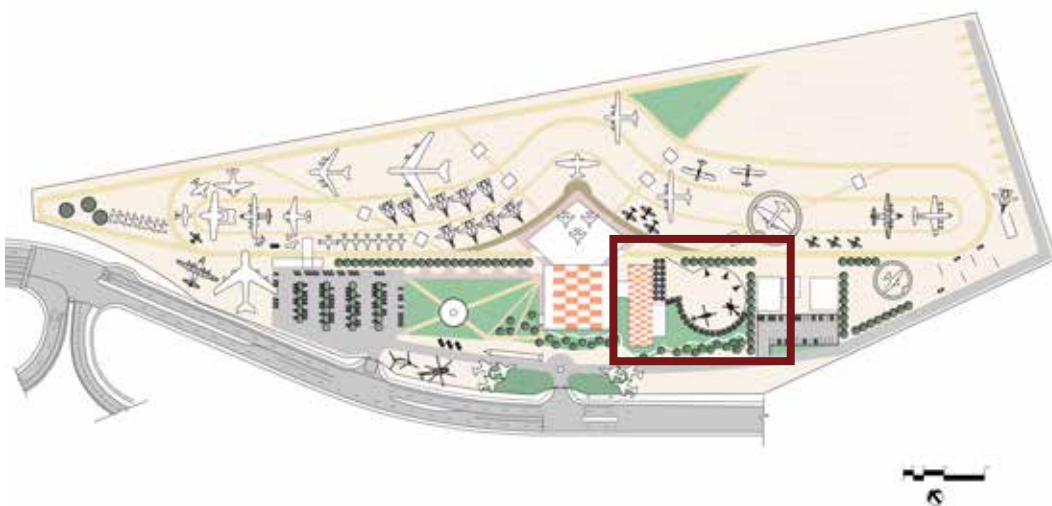


Vietnam War Firebase Charlie Bravo



SITE FEATURES

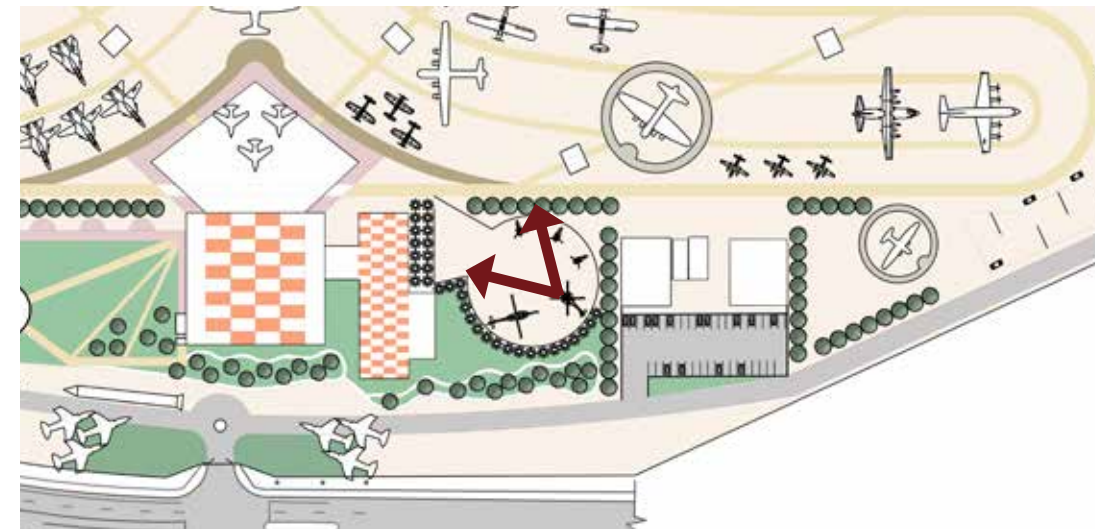
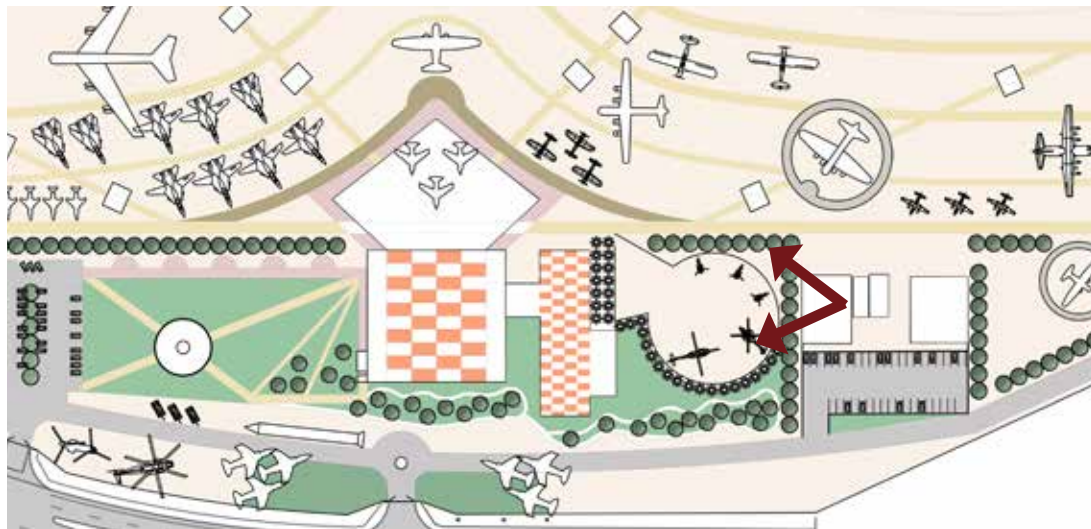
1. Firebase Entrance
2. Bamboo amphitheater
3. Raised helicopters
4. Bunker
5. Command center
6. Native garden paths
7. P-38 Hangar



Vietnam War Firebase Charlie Bravo



Vietnam War Firebase Charlie Bravo



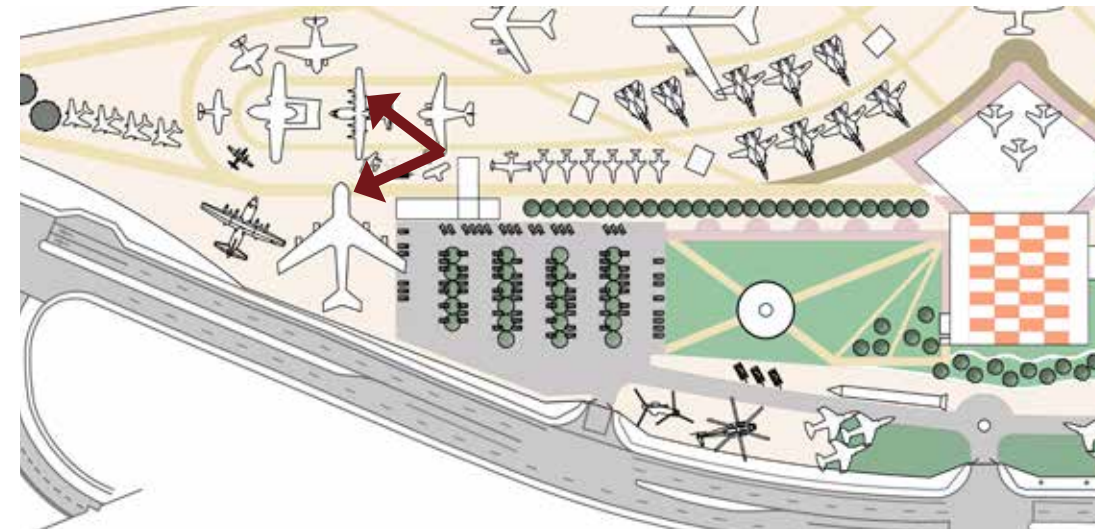
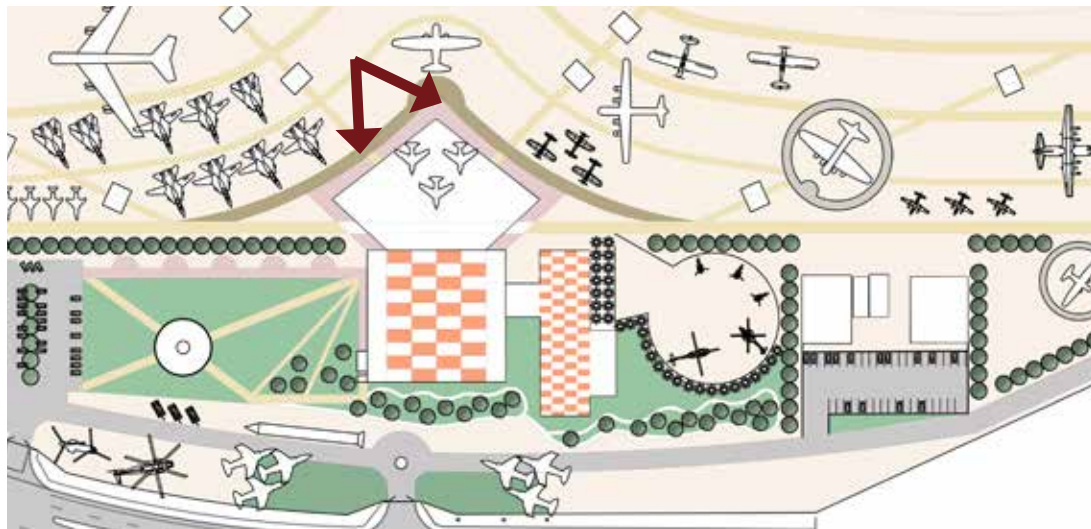
Additional Vignettes



Raised viewing deck



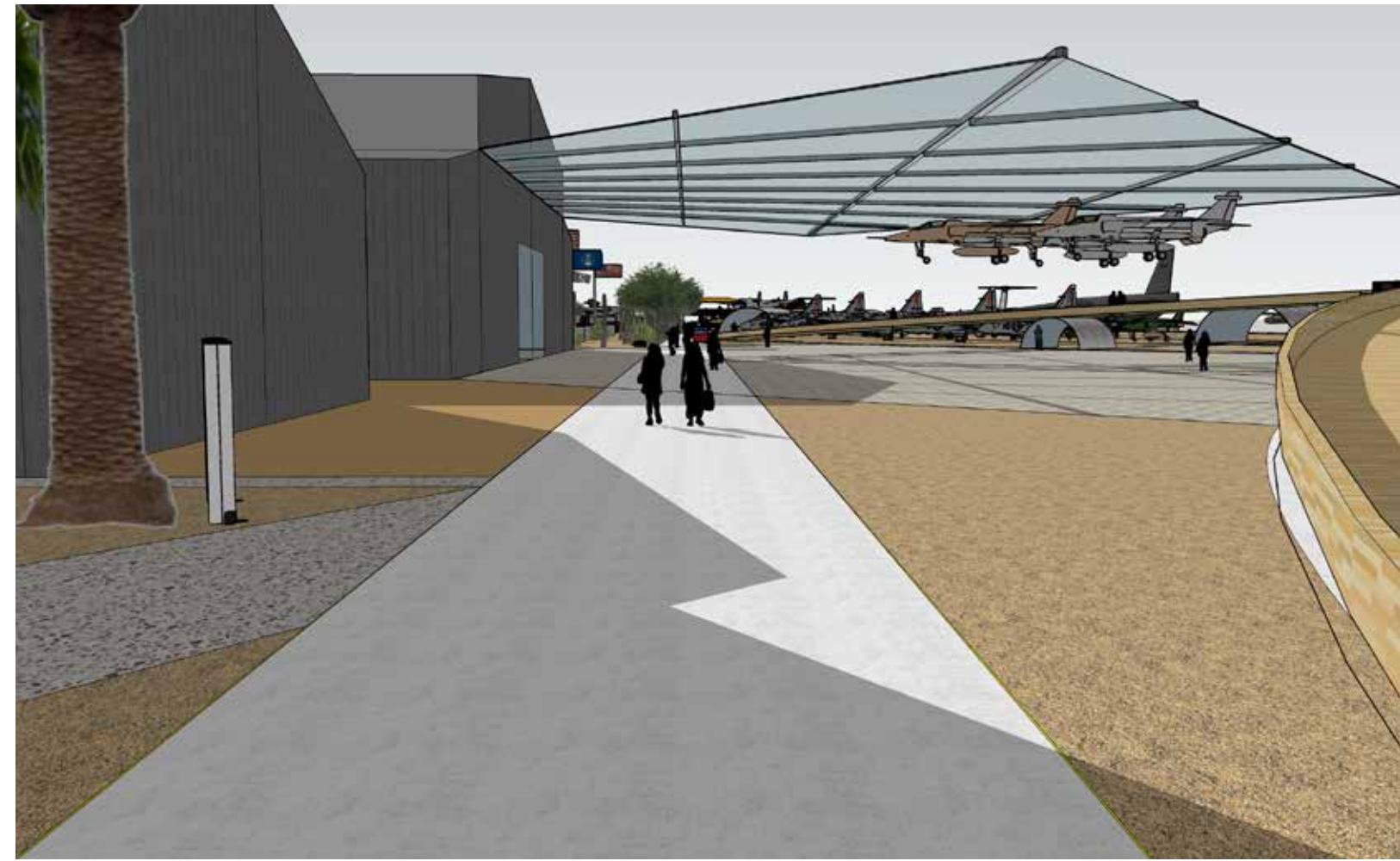
Play base and buried hangar



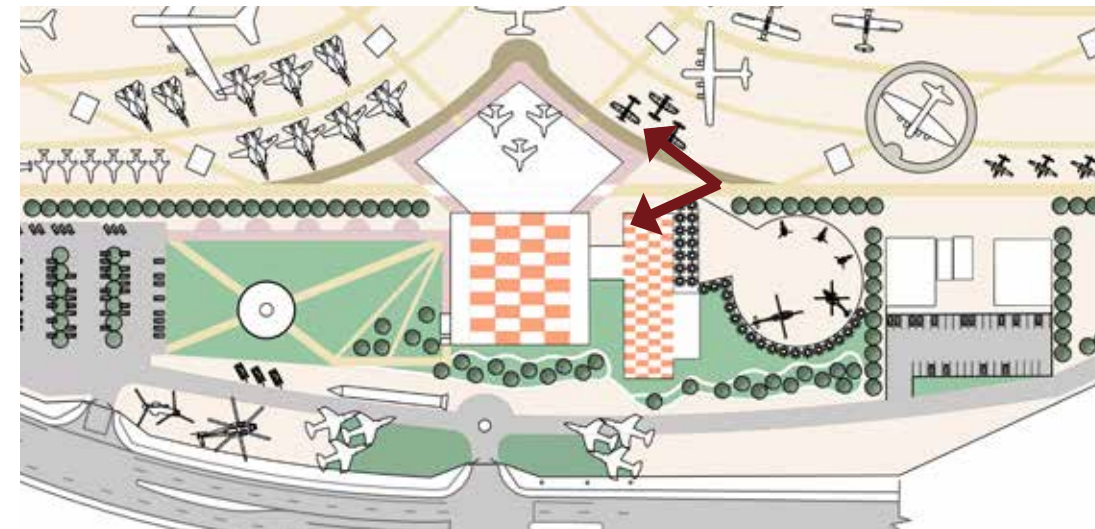
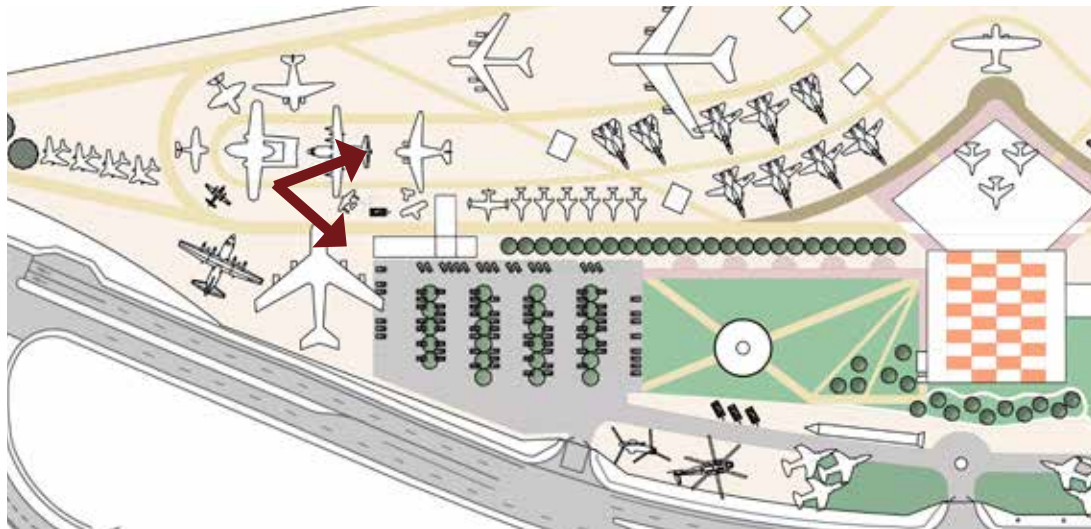
Additional Vignettes



Play base and restaurant



Hangar glass atrium



THANK YOU