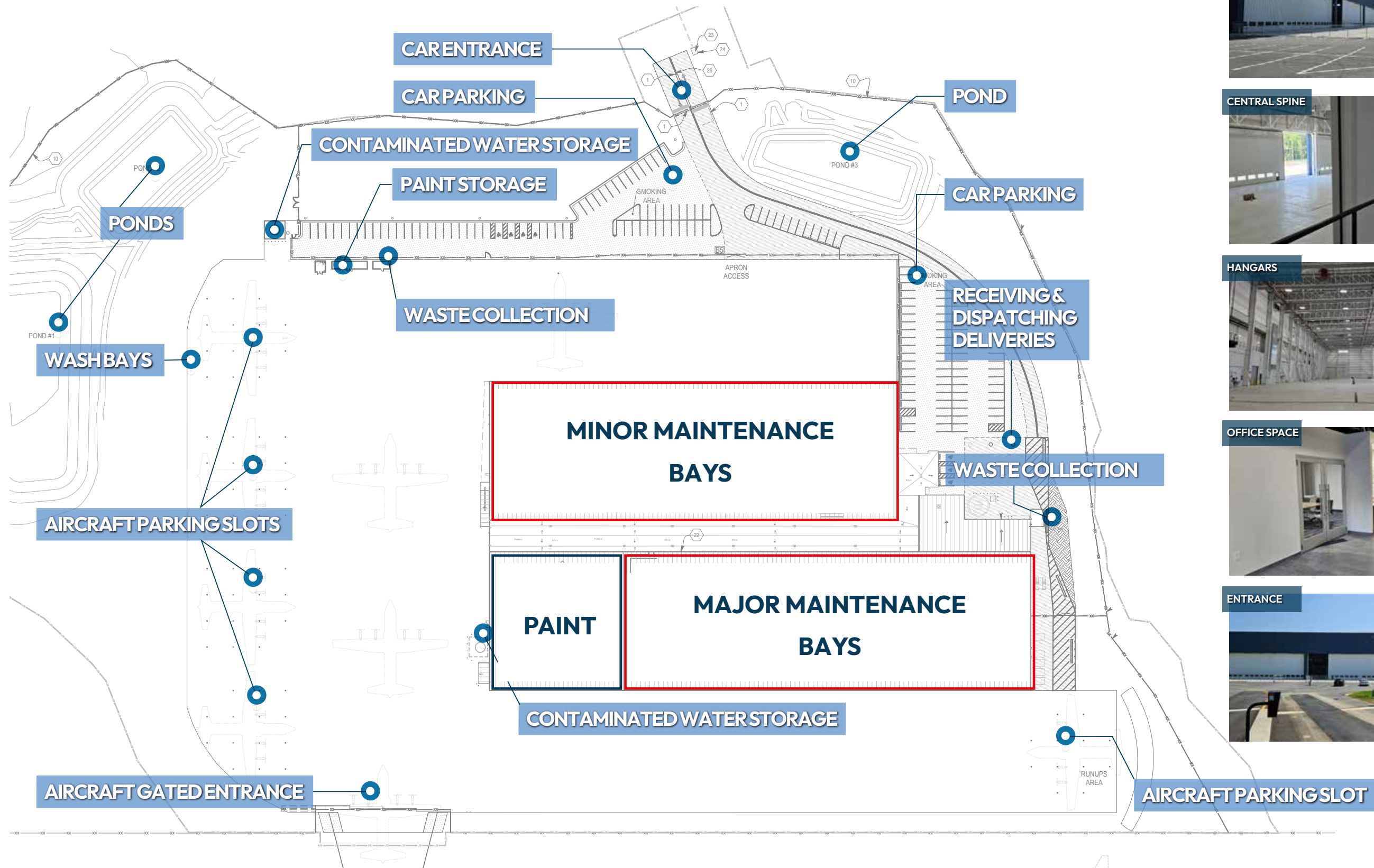


Overview of Marshall USA Facility purpose built for the C-130

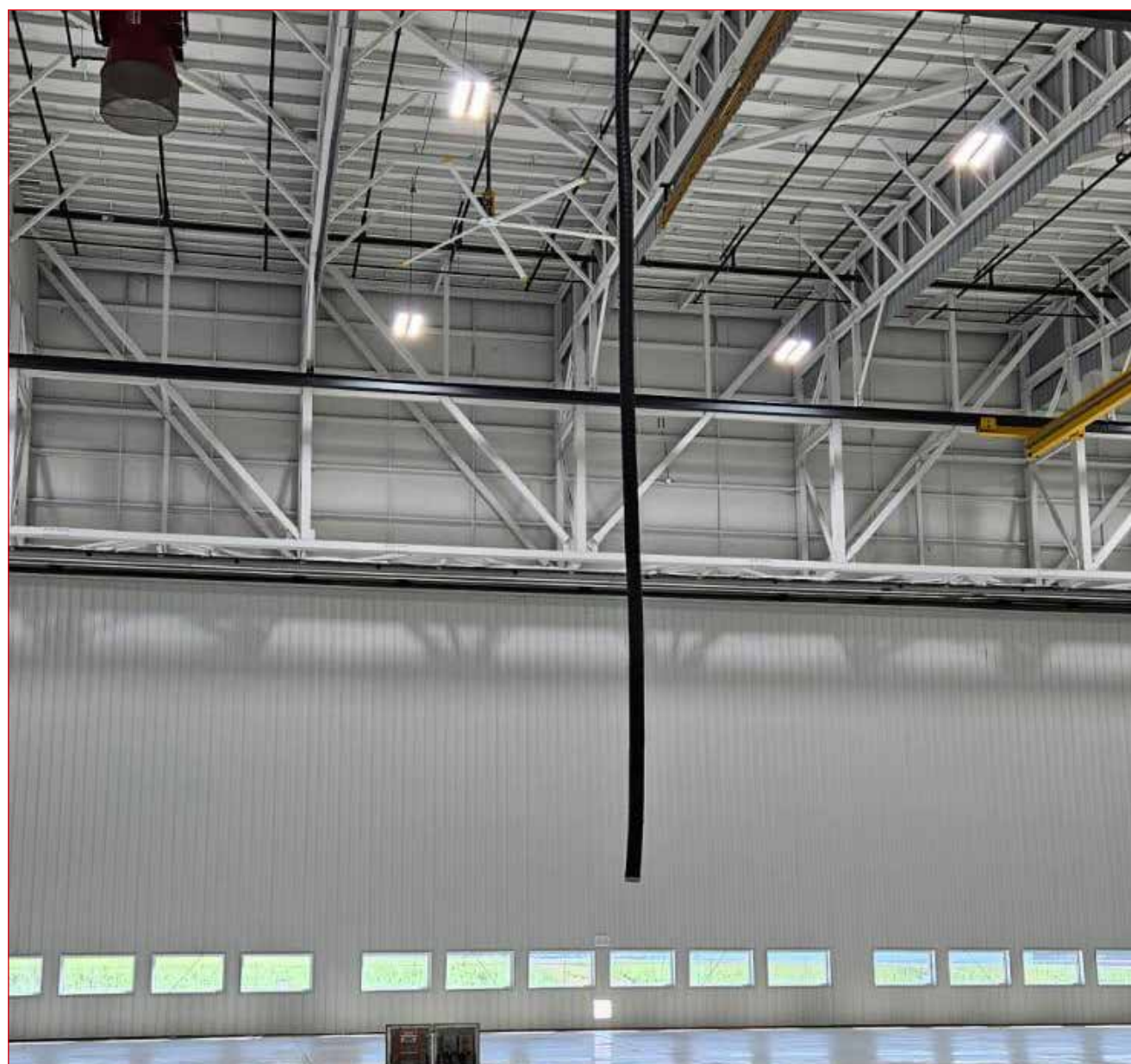
The overall design comprises of two banks of three open span maintenance bays separated by a central spine area containing back shop support areas. Whilst three bays have been designated as Minor Maintenance bays and three have been designated as Heavy Maintenance bays, all bays can be utilised for any C-130 input.

There is also a self-contained C-130 paint bay for strip and re-paint activities. Hangar doors have been designed to enable two bays to be open on the same side at the same time, enabling unencumbered movement between bays when required.



Key points of the hangar design to aid safety, productivity and OneTeam working

- **Tow-in/Tow-out bays, one aircraft deep** – The biggest design change from the Marshall hangar layout was making the hangar bays one aircraft deep. This ensures that no aircraft is blocked into its slot by another aircraft becoming immobile during its maintenance input. It also hugely reduces the amount of Ground Support Equipment that needs to be repositioned in order to carry out aircraft moves. This reduces our highest overhead booking to an absolute minimum.
- **Overhead Local Exhaust Ventilation** – Three of the maintenance bays have been allocated as heavy maintenance slots and have overhead local exhaust ventilation hoses on powered reels that drop down from the hangar ceiling. This removes the need to have hoses trailing on the hangar floor during fuel tank maintenance and adds to a cleaner maintenance environment.

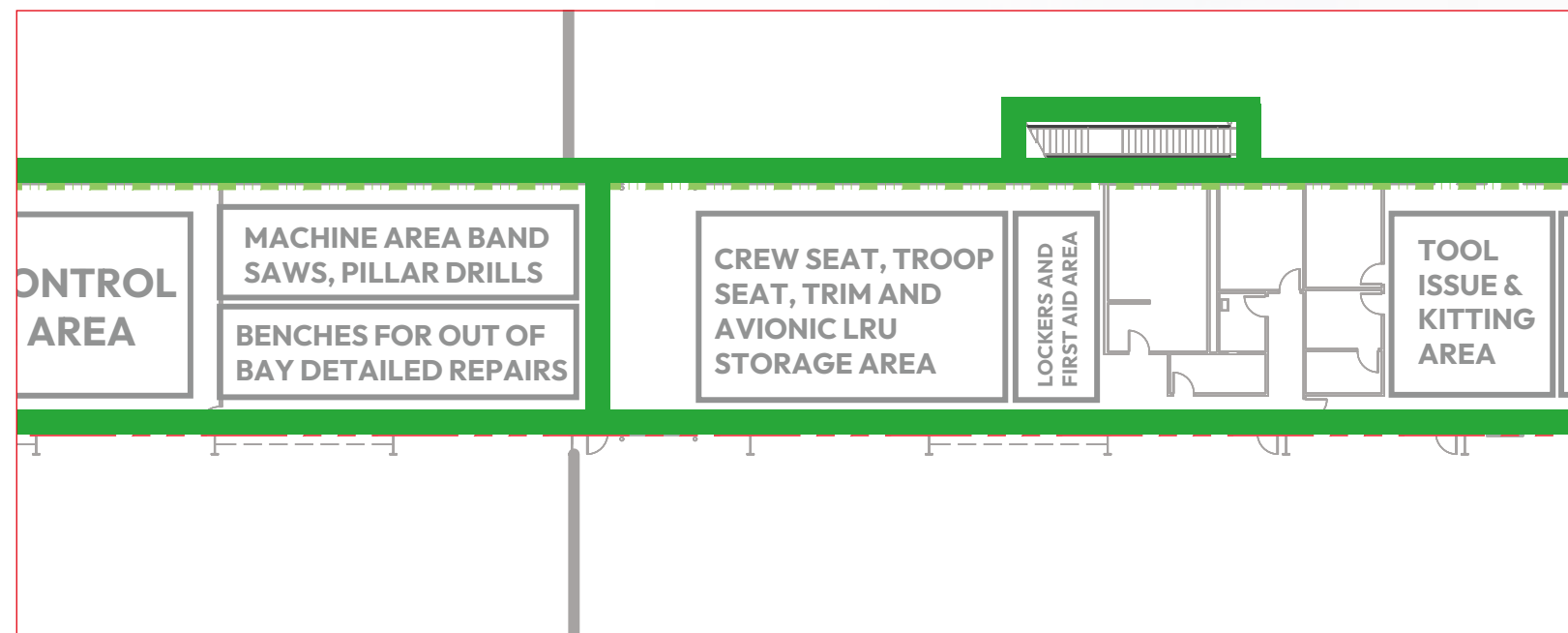


- **Power Pits** – Located at the nose of each aircraft in the heavy maintenance side and nose and tail in the minor maintenance side, these have been added to reduce the amount of cable reels and trailing hoses in the maintenance bay. It also enables every bay with 400Hz power and reduces the need for multiple ground power sets in the facility. It also removes the need to transport these around the facility increasing maintenance efficiencies.



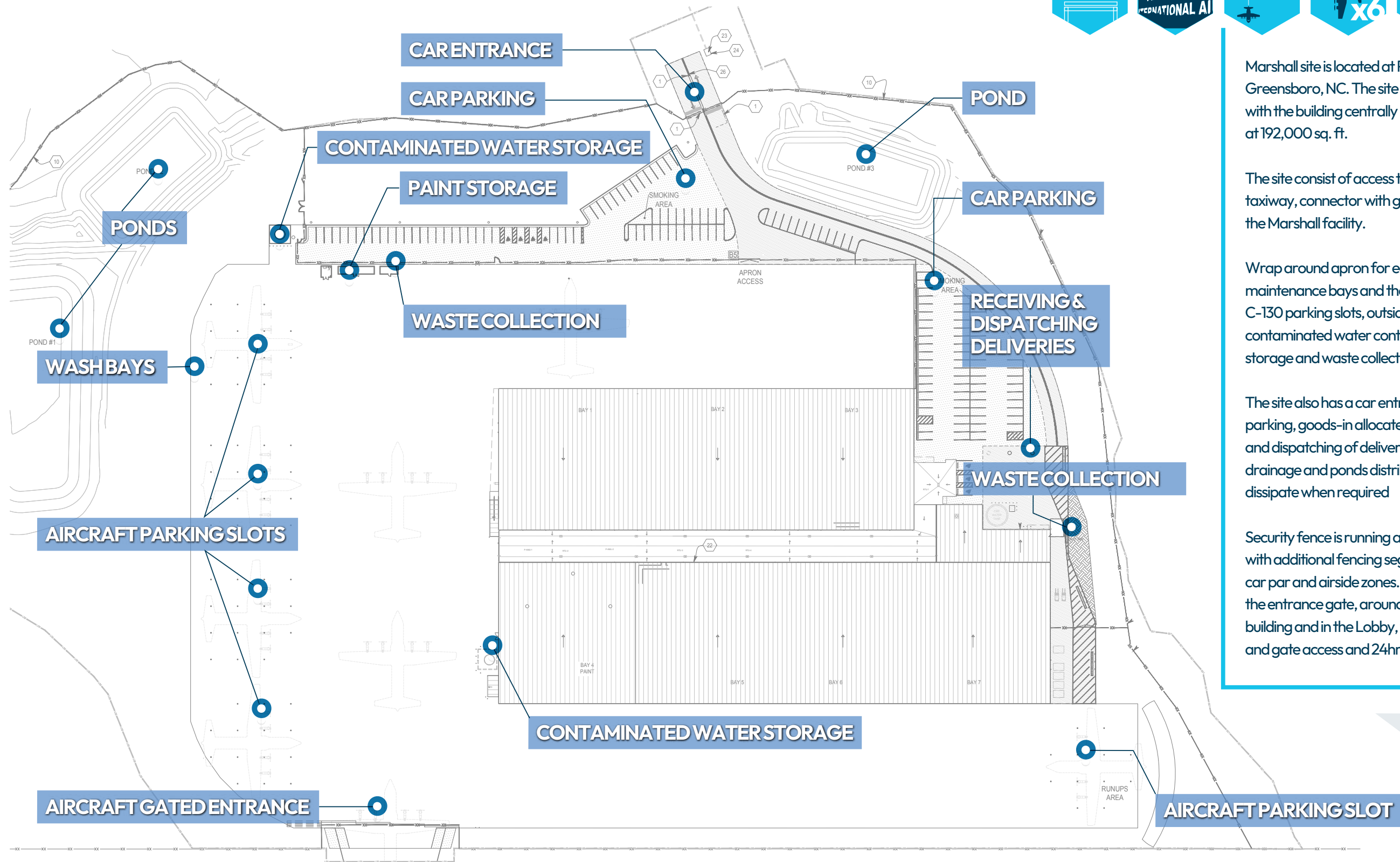
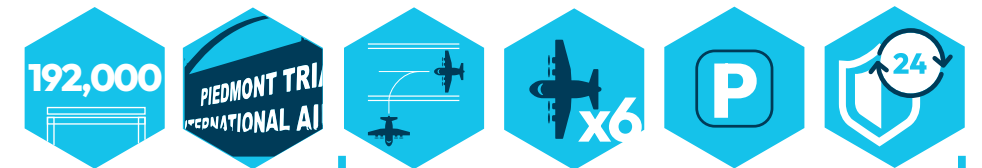
- **Overhead Cranes** – Both banks of hangar bays have full span overhead cranes to enable seamless movement to components though each side of the facility. The minor maintenance hangar bay structure has been uprated to facilitate retrofit of a higher capacity overhead crane if required in the future.
- **Support Shops centrally located in 'spine' of hangar** – All support areas required for hangar maintenance activities have been located centrally in the facility to enable easy and efficient access from all bays. Stores areas for parts and tools have been co-located at one end enable unobstructed delivery's to the facility and to maximise staff efficiency when moving MRO parts and tooling to maintenance bays. It also acts a single point for waste products to be removed from site. The sheet metal repair area and team level machine area are placed in the middle section to reduce distance that the maintenance teams have to travel to use these areas. Ground Support Equipment has an allocated area at the opposite end to stores, this places GSE at the end of the hangar closest to the wash pans and parking slots where a lot of this equipment will be used. The first floor of the spine houses office space for all the Integrated Project Team and all other support functions that the teams require. Again this has been designed to minimise travel time from bays and help connect the back shop staff to the hangar teams and ultimately to the product in the maintenance bay.

- **Outside lay out** – Aircraft parking slots, wash pans and engine run-up areas have been designated at design phase and have tie down fittings, grounding points and bunded drains as required at applicable locations. This enables aircraft to be scheduled into the correct outside areas for the phase of the input. It also allows point of use tooling to be stored in the area it is used minimising inefficiencies caused by moving equipment. The external layout enables unhindered movement from maintenance bays to EGR slots, wash pans and fuel operation areas.





1.2 OVERVIEW OF MARSHALL SITE



Marshall site is located at PTI Airport, Greensboro, NC. The site is 680,000 Sq. ft. with the building centrally located on the site at 192,000 sq. ft.

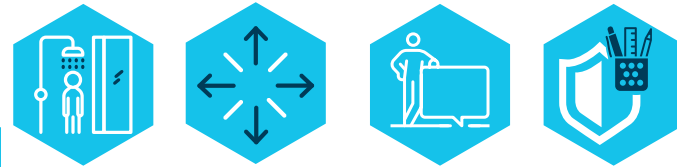
The site consist of access to the runway via a taxiway, connector with gated entrance onto the Marshall facility.

Wrap around apron for ease of aircraft access to maintenance bays and the paint bay. 5 allocated C-130 parking slots, outside wash bays, contaminated water containment units, paint storage and waste collection dedicated zones.

The site also has a car entrance and suitable parking, goods-in allocated zone for receiving and dispatching of deliveries and suitable drainage and ponds distribution to allow water to dissipate when required

Security fence is running around the perimeter with additional fencing segregation between the car par and airside zones. CCTV positioned at the entrance gate, around the outside of the building and in the Lobby, with card reader door and gate access and 24hr security patrols.

FIGURE 2 - MARSHALL FACILITY (GROUND FLOOR)



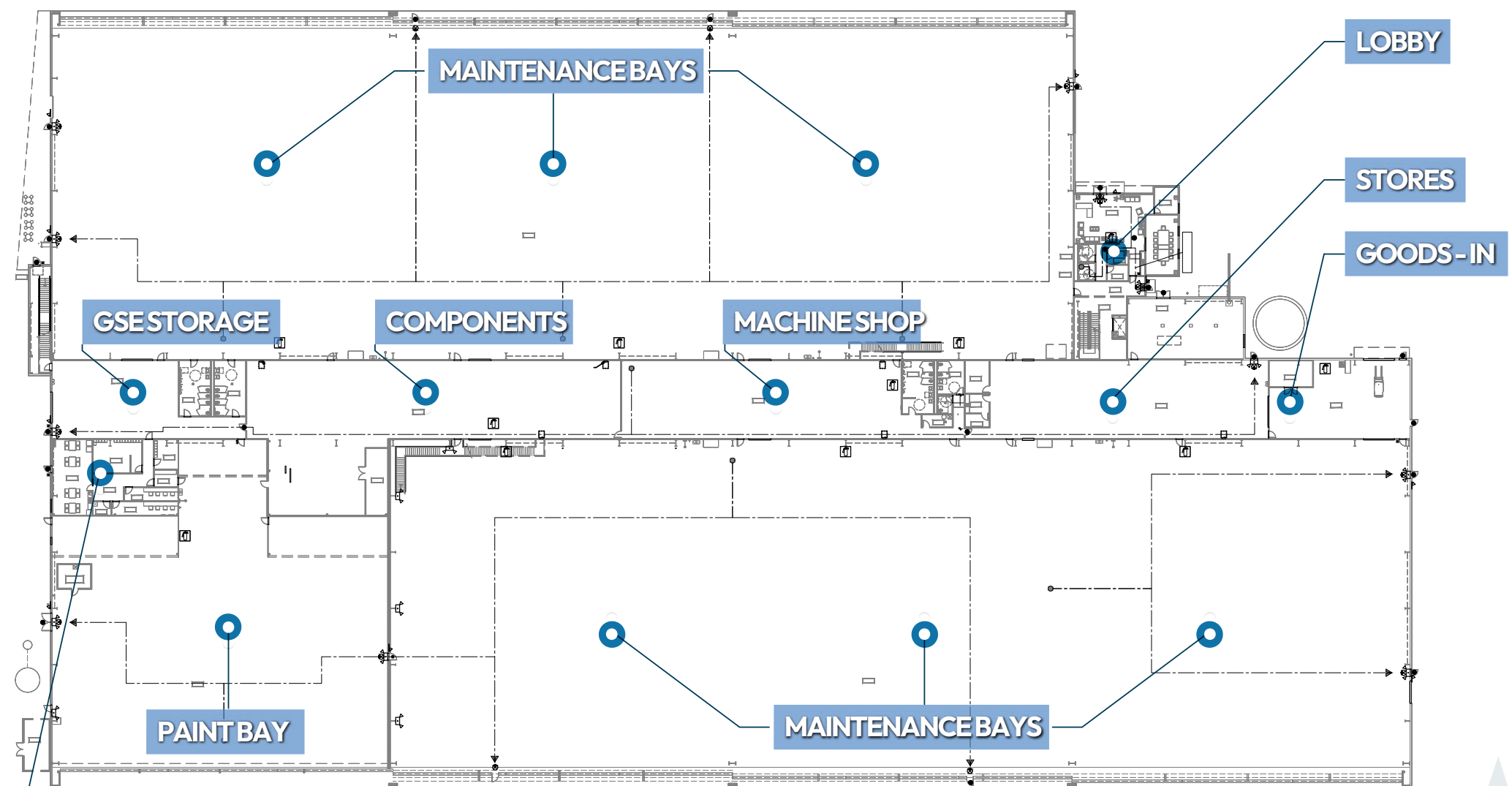
The ground floor of the Marshall facility consists of 6 maintenance bays (155 ft x 155 ft) and a dedicated paint bay (150 ft wide and 133 ft long) all with hangar roller doors access (42 ft high clearance).

Support areas along the central spine of the building include goods-in, stores with separate hazardous material storeroom and two separated battery store rooms. Also in the spine of the building is a machine shop, components area and GSE storage area.

All central areas are of ample space and therefore can be flexible as what they are used for and dual purpose if the requirement dictates.

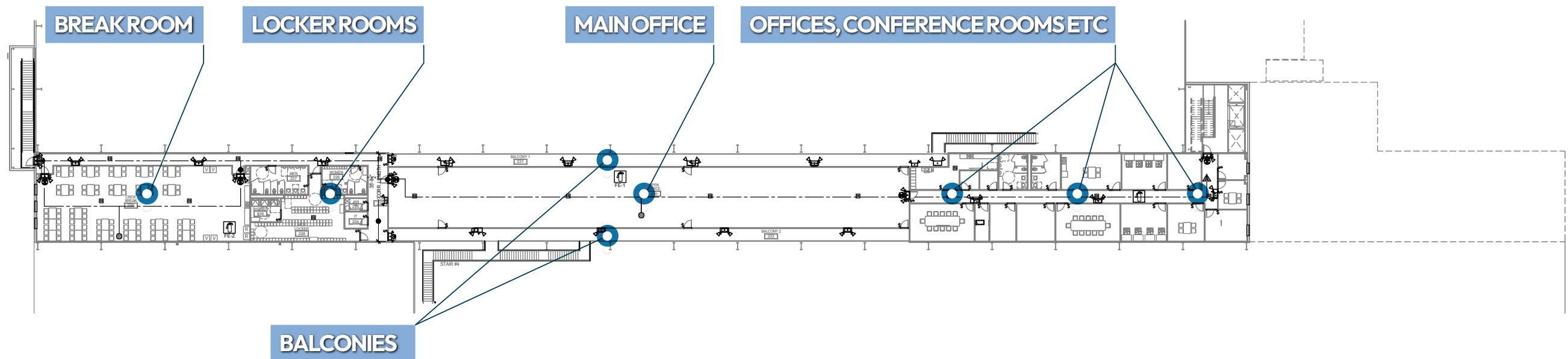
The paint bay has separate locker areas, control room, small office, break room, air lock and paint mixing area.

There is also a lobby area, which is the main entrance to the building for all visitors, which includes security office and large conference room.



Paint Bay Support – Lockers, Control Room, Office, Break Room, Air Lock, Paint Mixing Area

FIGURE 3 - MARSHALL FACILITY (UPPER FLOOR)



The upper floor has an extensive break room, locker rooms with showers, large open plan main office and then a series of smaller offices, conference rooms, print rooms etc. There are also balconies that look over the maintenance hangars and access directly to the hangar floor via stairwells.

The facility has an expansion foam fire suppression system for the 6 maintenance bays and a water sprinkler system throughout the building. Gas central heating throughout the building, electrical LED lighting inside and outside creating a well-lit environment to work safely day and night. Through the spine and in the maintenance bays there are large fans to circulate the air.

Well appointed, accessible restrooms spread through the building, upstairs and downstairs.

Running to the building is 2 internet data lines, a 1GB line and a 500Mb line, which distributes throughout the building to allow access to the internet. Also a well-designed wifi distribution which ensures no dead spots for internet access where ever you are within the building, taking into account for metal structures or fuselages which will furnish the space.





