

Project Overview

The proposed Boeing Fabrication Center, located at the northeast corner of Greenfield Road and McDowell Road and adjacent to the existing Boeing Fabrication Center, will be a 1-story 263,386 square foot building for fabrication of highly specialized carbon military parts. The proposed building is to be located within the western portion of the existing Boeing campus, just west of the existing flight line.

The site is currently vacant land owned by The Boeing Company. The site is bordered by The Boeing Company Campus to the north, east, and south, and Greenfield Road to the west. The site is located in an area designated for Light Industrial (Zone LI) with limited manufacturing as a permitted use within the existing zoning. The overall development (portions of APN 141-37-009K, 141-37-004N, 141-37-004P, 141-37-009M and 141-37-053) net lot area is 37.70 acres.

The building is setbacks from Greenfield Road within a Boeing secure area, with a parking lot located outside of the secure perimeter along Greenfield Road. The site provides enhanced landscape areas along Greenfield Road, screen walls framing the driveway entrances, and the pedestrian pathways with dedicated open space and patios. The building is surrounded by open space with a detached central utility plant to the southwest. The proposed building will utilize the loading areas along the east and south side of the existing Boeing Fabrication Center building, keeping them screened from the public view. The existing truck inspection security booth with vehicle access located along the south side of the existing building will be used by the proposed building as well for deliveries to and from the Fabrication Facility.

The Boeing Fabrication building is designed to highlight an architectural design that compliments the surrounding developments. All building facades will be designed in a similar architectural style that respects the surrounding facilities of the existing Boeing Mesa Campus. Exterior walls of the building will utilize onsite cast tilt-up concrete wall panels that extend from building floor to top of parapet and will have colors that range in tonal values of light to dark gray. The design will use changes in color of the panels and varying horizontal and vertical recesses (reveals) to break up the wall plane of the concrete façade as well as vertical articulation of the roofline.

A main building entry is highlighted using storefront that spans across a double height lobby area. To aid in sun control at the entry vertical aluminum shade control have been applied to help reduce western sun into the lobby and employee break area. The configuration of the vertical fins have been placed such that their pattern will differentiate from the recessed patterns on the faces of the concrete. Additional horizontal 'eyebrow' awnings will also help to reduce direct sunlight during the early afternoon when the sun is still near peak elevation. By differentiating the pattern and the use of two separate materials (storefront glazing and aluminum) a contrast will create a visual aspect not shown anywhere else on the building, helping draw personnel and visitors to the entry.

The second component of the design will be the expansion of the existing Central Utility Plant, or 'CUP' building that is directly west of the existing manufacturing building. The footprint will double in size and extend westward towards the parking lot. The same material expression used on the existing building will be present on the expansion, extending the existing pattern of tri-part gray tones, divided with horizontal and vertical reveals, and marked with inverse 'L' shapes at each corner. The CUP expansion will also utilize form-liner patterns stamped into the concrete to visually harken back to the predominant buildings on the site.

To reach the roof of this new expansion, we have added a stair tower directly in the middle of the two segments, in which it will be clad in the same stamped and painted concrete panels. The existing cooling tower farm will also expand westward, growing with it the perforated metal panel screens to alleviate

the view of the equipment. The drainage for the new building roof will be internalized to continue the free-faced façade to the west, with a scupper and downspout on the east face of the stair tower, hidden from view, and painted to match the concrete panel behind it. This will also match the use of scuppers and downspouts on the existing eastern façade of the CUP.

2050 Mesa General Plan

The site and building elements described above, align with the 2050 Mesa General Plan Local Employment Urban Characteristics related to enhancing entrances to site, decorative walls, buildings with functional visual focus for the building, screening of loading docks, trash enclosures from the public right of way, building variety on materials and vertical undulation, and shade and enhancement of open amenity spaces.

Lot Configuration

A lot line adjustment is proposed for the new Boeing Fabrication Center, so it is located on the same parcel as the existing Boeing Fabrication Center. The other parcels located behind and around the proposed parcel will be reconfigured to meet the minimum lot area, lot width and lot length.

Special Use Permit request

Due to the location of the proposed Boeing Fabrication Center within the Airfield Overlay District, a special use permit is requested to allow the building to exceed the specified LI Zoning max height of 40' and to permit a building height of 60'. The request to exceed the zoning height is related to the various manufacturing processes associated with the classified fabrication planned for this facility. In addition, the site positioning and location within the Boeing campus provides for increased setbacks from the adjacent Greenfield Road and neighboring industrial properties minimizing the impacts of the height of the 1-story fabrication component of the facility from the adjacent Greenfield Road, Falcon Field, and the adjacent industrial properties to the east.

The approval of Special Use Permit will help advance the goal of the Mesa Zoning Ordinance as it is consistent with the specialty manufacturing on the Boeing Campus as well as the surrounding industrial. In addition, due to the location of the building because of the campus security requirements, the increased height will not impact the surrounding industrial development's view corridors or be restrictive to other developments. Lastly the increased building height does not increase the demand for the public services surrounding the property as the increase is due to the height needed for the cranes associated with the manufacturing process.

Architectural Alternative Compliance

See separate architectural narrative. (Attached)

Alternative Landscape Plan

Due to the unique site characteristics of the proposed Boeing Fabrication Center within the Airfield Overlay District, an alternative landscape plan is requested by exceeding minimum requirements of Mesa Zoning Ordinance Section 11-33-7. The proposed Boeing Fabrication Center will incorporate a 100-meter secure perimeter around the building to comply with the Government's Intelligence Community Directive (ICD) 705 relating to physical and technical security standards for the site. Within this secure area, vegetation surrounding the building will be limited to select trees for walkway shading, limited ground covers, and limited shrubs to allow for inspectable space for security and safety of the building. Foundation base zones have been provided but will be without vegetation due to the inspectable space requirements next to the buildings. In addition, due to the proximity of the Boeing Flight area and safety concerns for Foreign Object Damage (FOD) that can occur to the helicopters, the landscaping has been limited as well. The alternative landscape plan meets six (6) of the design principles as set within

Mesa Zoning Ordinance Section 11-33-7(A). The proposed streetscape is 60' set back from the proposed right-of-way dedication, exceeding the required 15' landscape setback, allowing for an enhanced streetscape buffer. The enhanced streetscape buffer featuring large organic shapes berming and basins lush with **native vegetation** including specimen cacti, creates a **naturalistic design** in the topography and plantings with an excess of **plant variety**. The basins in this area as well as behind the secure perimeter provide exceptional **storm water management** by retaining all captured storm water above ground allowing it to be cleaned by native vegetation before percolating into the ground. The site has **compatibility with surrounding uses** both with the existing phase 1 of the Boeing Fabrication Center and the overall Boeing campus. In studying the existing landscape of the existing phase 1, the plant palette selected for the proposed center have proven **plant viability and longevity** while still complying with the Governments Intelligence Community Directive (ICD) 705. The proposed landscape exceeds requirements for perimeter landscape, foundation base, and parking islands and is only requesting alternative landscape plan for the secure area landscaping.

Administrative Use Permit Request

Due to the operations performed within the proposed Boeing Fabrication Center, an administrative use permit for shared parking is requested to reduce the amount of required parking stalls. The proposed square footage of the building is due to the equipment required instead of personal. The existing Boeing manufacturing facility is 158,528 square feet and currently has a maximum of 120 employees per shift. The proposed Boeing manufacturing facility is approximately 267,761 square feet and is expected to have a maximum of 130 employees per shift. Both buildings will operate two shifts a day totaling a maximum of 500 employees throughout the day. A third shift, if operating, will only be a total of 30 employees for both buildings. The existing parking area provides 274 parking spaces, and the proposed site plan will provide an additional 278 parking spaces. The total parking provided between the existing and proposed is 552 parking spaces, which exceeds the total number of employees in a single day through the three shifts.

1.0 Narrative:

1.1 Primary Building Expansion:

The primary component of the design will focus on expanding the existing 50-570 building to the North. All façades of the new expansion will articulate this extension and continuity set forth by the existing building design by utilizing site-cast, concrete tilt-up panels as the primary exterior cladding. The panels will be roughly 30-foot wide with vertical segmentations, establishing a rhythm of variations by three gradients of gray colors. The panels will continue the existing crenellation pattern at the tops of the parapets along the façade, assisting in breaking up the horizontal massing. Projections in footprint from the high-manufacturing bay structure will be a lower tower on both the West and East sides, housing interior programs and adding depth to the rectilinear building.

Like the existing building, the west tower will contain a primary entrance, located at the northwest corner. The entry will be defined by utilizing stamped form-liner patterns into the concrete panels. The heavy weight concrete panels will then be broken up by several components including storefront glazing, metal sun “eyebrow” shading canopies, and solar shading fins. These elements are intended to reduce direct sunlight from the West during the early afternoon at the most intense point of the day. These varying materials will stand out in comparison to the surrounding stark concrete panels residing at the end of the walkway from the parking lot and serve as a collector to those approaching the building. All facades, except for the east tower, will be free of scuppers and downspouts, with east tower extending from the original building and will match the existing structure’s patterns. These leaders will only be visible from the Boeing site and will be painted to match the concrete walls behind them.

1.2 Central Utility Plant Expansion:

The second component of the design will be the expansion of the existing Central Utility Plant, or ‘CUP’ building that is directly west of the existing Building 570. The existing CUP footprint will double in size and extend westward towards the parking lot. The same material expression used on the existing building will be present on the expansion, extending the existing pattern of tri-part gray tones, divided with horizontal and vertical reveals, and marked with inverse ‘L’ shapes at each corner with the changes in paint colors (see elevation drawings). The CUP expansion will also utilize form-liner patterns cast into the concrete to visually harken back to the predominant buildings on the site.

To reach the roof of this new expansion, we have added a stair tower in the middle of the two segments, which it will be clad in the same cast and painted concrete panels. The existing cooling tower farm will also expand westward, with additional perforated metal panel screens to alleviate the view of the equipment. The primary drainage for the new building roof will be internalized continuing a free-faced façade to the west, with a pair of scuppers and downspouts on the east face of the stair tower, hidden from view, and painted to match the concrete panel behind it. This approach matches the use of scuppers and downspouts on the existing eastern façade of the CUP.

1.3 Special Use and Alternative Compliance Request:

Due to the location of the proposed Boeing Fabrication Center within the Airfield Overlay District, a special use permit is requested to allow the building to exceed the specified LI Zoning max height of 40' and to permit a building height of 60'. The request to exceed the zoning height is based upon the special conditions created by the specific manufacturing processes associated within the classified fabrication planned for this facility, lending to the large volumes. By positioning the building deep within the Boeing campus it provides for increased setbacks from the adjacent Greenfield Road and neighboring industrial properties, thus minimizing the impacts of the height of the 1-story fabrication component of the facility from properties on Greenfield Road, Falcon Field, and properties to the east.

Additionally, we are requesting Alternative Compliance evaluation for the following Mesa Zoning Ordinance (MZO) sections and have provided our goals and strategies for addressing the approval criteria.

❖ MZO §11-7-4(C) – Massing and Scale:

- Due to the nature of the work and program within the primary structure, and the size and scale of the footprint required, the building is shaped such that the primary façade is rectilinear and structured with concrete tilt-wall panels to provide an economic means of construction, as well as maintaining security for the building, similar to the existing building. Our design strategy to address the alternative compliance approval criteria is as follows per each sub-section:
 - The exterior walls are currently monolithic in the primary use of concrete, however per *MZO §11-7-4(C)(1)(a) – Façade Articulation*, street facing and publicly visible facades, our design will utilize the projection of the office tower from the primary high bay shell, providing depth and setback from the parking lot to the larger structure. The lower and smaller office tower also houses the primary entrance to this building, providing more proportional access to the approach to the building, and will incorporate more materials such as storefront glazing, metal sun shading fins, and metal panel awnings, matching the existing building's main entry. Additionally, to visually reduce the longer runs of the façade in proportion, the natural vertical grids created by the edges of the individual tilt panels every ~30 feet, with a heavy 3-inch horizontal reveal at just above the mid-height of the panel create a subdivided grid system, breaking up the tall and heavy panels into smaller hierarchical sections, bringing the proportional mass of the single panel and bringing the building closer to the human scale at the ground and as seen from the public rights-of-way. The façade design continuous to non-publicly visible areas, particularly the Boeing campus and utilizes the same rhythm and grid characteristics to maintain consistency.

❖ **MZO §11-7-4(C)(3) – Roof Articulation:**

- The design of proposed building includes three different roof heights – the primary height of the high bay factory shell, a lower height to the west for the office tower, and a third height for the east tower, hidden to the public by the new construction and existing. This is in line with §11-7-4(C)(3)(a) for “*Varied Roof Form Or Height*”. See the overall building roof plan for specific heights.
- Additionally, to address section §11-7-4(C)(3)(b) – *Flat Roofs*, we are matching the pattern set forth by the existing building we are expanding from in modulating the parapet heights by two feet in height, further extending the crenulations of the existing building, every second or third panel. This will further the intent of the wall articulation massing by further removing the singular start quality of the solid tilt-up concrete panel and give the wall additional rhythm.
- The parapets will have a metal trim coping that will match the change in color at the tops of the panel (see next section on materials and colors).
- Lastly, the tallest roof of the primary high bay shell is set back behind the existing and expanded CUP building, as well as the new and existing office towers, stepping in height away from the public right-of-way of North Greenfield Rd.

❖ **MZO §11-7-4(D)(1)(b), §11-7-4 (D)(4) & §11-7-4(F) - Materials and Colors:**

- We are requesting Alternative Compliance for these sections which require that change in color and texture of the concrete will not be considered separate materials. Our design as proposed utilizes the pattern and architectural language established by the existing building to which we are expanding. Additionally, due to the nature of the program within the building, a change to a different exterior material would not suffice. Our intent is to utilize the grid system of chamfers and reveals with three distinct changes in color - from a light gray, medium gray, and heavy dark gray - at the grid lines to reduce the massing of the structure and provide visual interest with changes in color pattern as well as texture in the concrete via the use of form-liners. We will utilize two different form-liner textures to denote prominent corners of the primary expansion and the CUP building, as well as the office tower which denotes the importance of the main entry at this portion of the building. As indicated on the elevation sheets provided, with the separation of distinct colors and textures there is no material type that exceeds 50% of the total exterior façade composition. Lastly, we will include metal panel “eyebrow” sun shading with metal solar fins set over glazing to further highlight the main office entry, which will relate back to the existing entry of the previous building. Because of the large spatial buffer from North Greenfield Rd, we believe that these changes in color and patterns create visual interest along the horizon as one would drive past the site without the overall mass of the primary building overwhelm onlookers either on foot at the street, or while driving past.

We also request to use our line-of-sight diagrams illustrating our building's ability to hide the large mechanical equipment on its roof. Due to the building height and scale, at a distance set to the far side of North Greenfield Road - drawing a radius of distance to the northwest and southwest approaches, we have been able to determine that the equipment on the high roof is not visible to a citizen on the ground at a view line of 6 feet. Equipment located on the office tower will be screened with finished louvered panels, matching the existing screens on the previous building.