

APPENDIX A

FIGURES

NASA-ELLINGTON FIELD

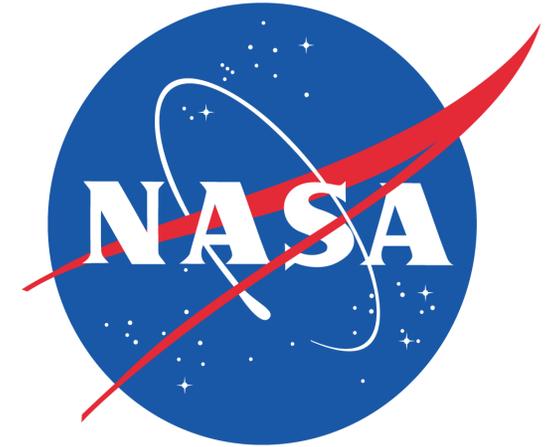
EXECUTIVE SUMMARY

Ellington Field (EFD) is the home of Johnson Space Center's Aircraft Operations Division (AOD) which operates and maintains 25 aircraft conducting approximately 50% of NASA's overall aircraft operations each year. It is the human spaceflight center at JSC and does aircraft better than any other organization in terms of efficiency, flight crew designations, and more. The Ellington Field Area Development Plan (ADP) provides analysis and planning for future growth capacity to accommodate current and future mission capabilities and needs that align with the Ellington Field Planning Vision (below). Stakeholders attended a planning charrette from May 4-7, 2015 where they identified program requirements, analyzed the site, and developed a plan that provides flexibility, addresses needs, identifies attributes, and outlines a substantial development carrying capacity of the land. The at capacity Illustrative Plan identifies a total of 297,532sf total, including existing buildings that remain and newly proposed buildings.

Capacity Calculations

Existing Building Area: 302,960sf
Recommended Construction: 129,000sf
Demolished Building Area: 84,419sf
Total Build-out Capacity: 297,532sf

Total New Parking Required: 543 spaces
Existing Parking Spaces: 478
New Car Park Spaces: 159 spaces
Demolished Parking Spaces: 244 spaces
Divested Parking Spaces: 116 spaces
Total Parking Spaces Provided: 277 spaces



ELLINGTON FIELD FACILITY PLANNING VISION GOAL:

In support of the mission, Ellington Field will be one campus for a **collocated workforce with energy efficient administrative buildings, and consolidated hangars that provide space and flexibility for future missions.**

From this planning vision, four planning goals emerged to guide the development process:

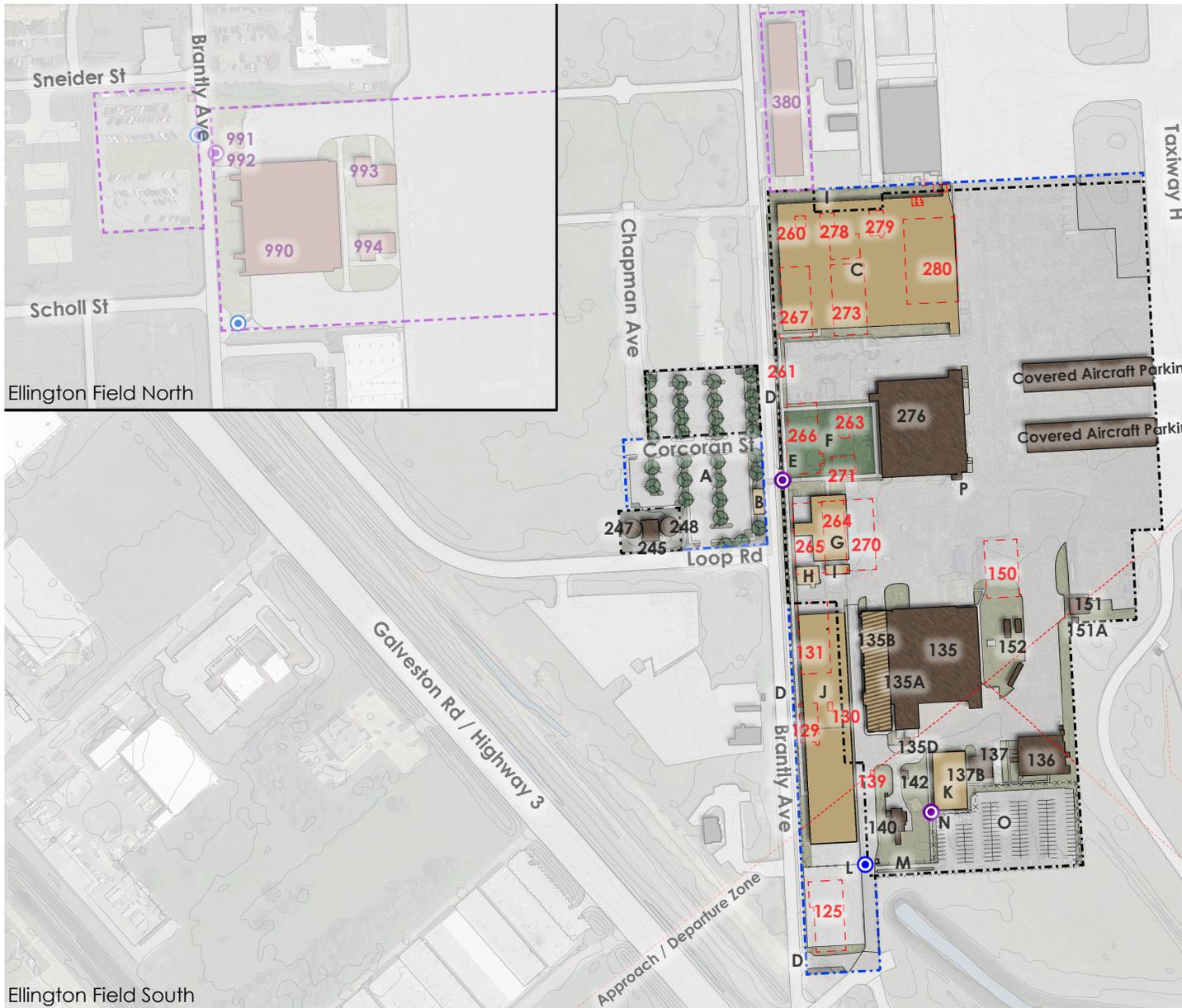
Goal 1: One Campus: Ellington Field will become more unified with a 5 to 10 minute walk across campus and stronger perimeter security. Furthermore, this campus will be safe and accessible with integrated pedestrian paths and an increased number of ADA accessible routes.

Goal 2: Energy Efficient Administration: To increase the energy efficiency of Ellington Field that contains a large number of energy inefficient structures, many over 75 years old, will be demolished or vacated and replaced with new construction. The new buildings will have narrow wings, to encourage natural ventilation, an adequate window to wall ratio, to provide natural daylighting, and deep overhangs, to prevent unnecessary heat gain from the windows.

Goal 3: Consolidated Hangars: By consolidating the hangars at Ellington Field, more land becomes available for future development. This increase of open space also provides the opportunity for outdoor gathering spaces and interconnected green spaces. Additionally the hangars will have visible entries, a maintenance backbone with administration above, and a flightline frontage.

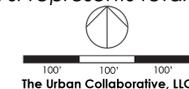
Goal 4: Space and Flexibility: Ellington Field should maintain as much open space to account for unknown future expansion. Existing historical buildings should be maintained and parking should move to the periphery of the campus.

ELLINGTON FIELD ILLUSTRATIVE

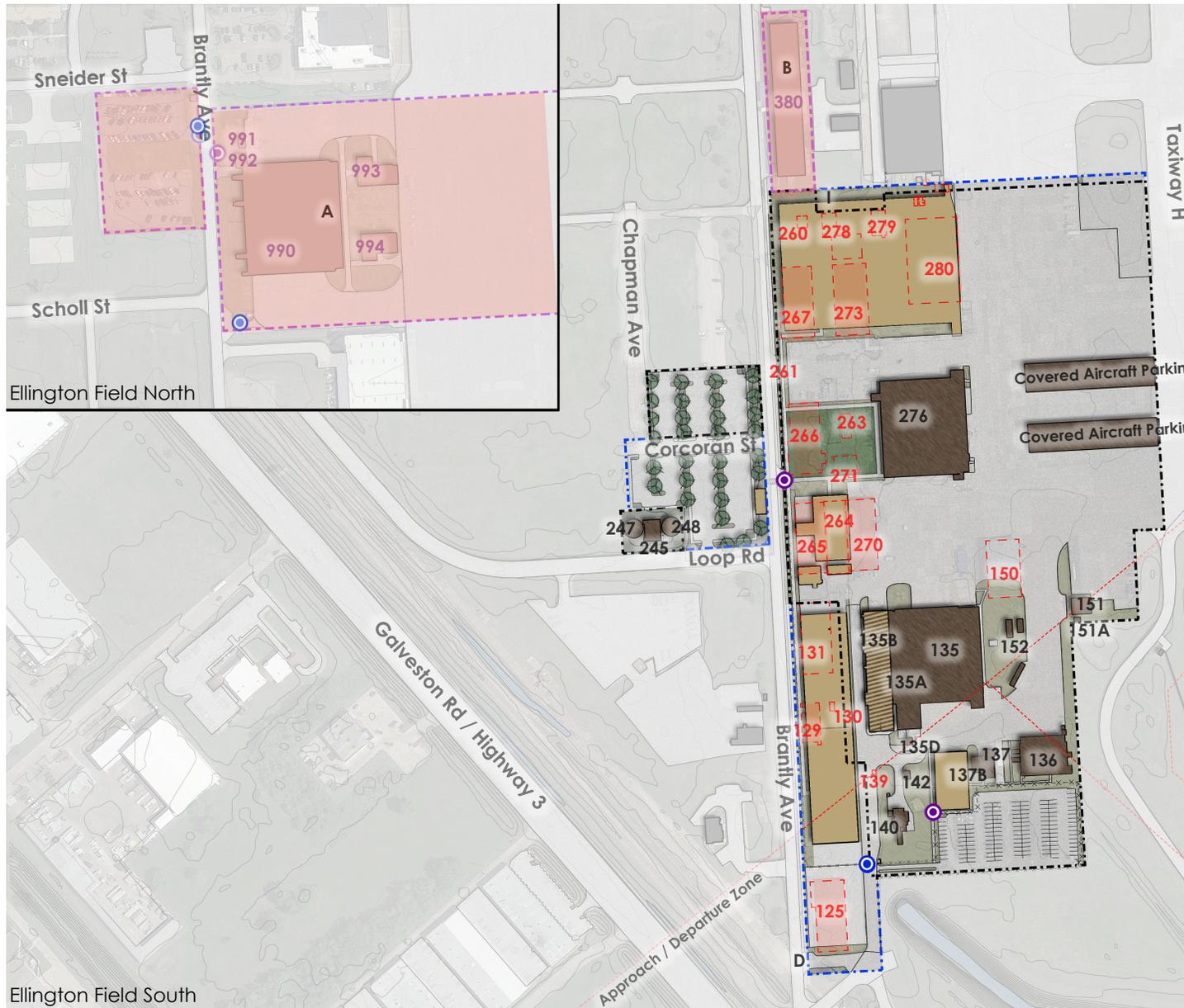


JSC Ellington Field Illustrative

- Existing Property Boundary
 - - - Proposed Property Boundary
 - x-x-x Proposed Fenceline
 - - - Demolished Building
 - - - Divested Building
 - Topography 1'
 - Proposed Pedestrian Entry
 - Proposed Vehicle Entry
 - Existing Building
 - Renovated Building
 - Proposed Building
 - Quad
 - Pavement
 - Proposed Tree
 - A Car Park Expansion: 159 Spaces
 - B Notional Vendor Space: 1,200sf (1 flr)
 - C Construct Consolidated Hangar: 107,000sf
 - D Upgrade Brantly Ave
 - E Relocate Fenceline With Turnstyle Pedestrian Gate
 - F Quad
 - G Construct Aircraft Washrack: 12,000sf
 - H Construct Egress Shop: 2,000sf
 - I Construct Supplies/Equipment Shed: 1,000sf
 - J Consolidated Highbay Warehouse With 2nd Story Admin: 75,000sf
 - K Construct Fuel Cell Support Facility: 9,000sf
 - L Vehicle Entry Gate
 - M New Parking Entry
 - N Relocate Fenceline With Turnstyle Pedestrian Gate
 - O Upgrade Car Park: 132 Spaces
 - P Divest Weather Radar Dome Antenna
 - Renovated Facilities (Energy Efficiency):** 135B
 - Divested Facilities:** 380, 990, 991, 992, 993, 994
 - Weather Radar Dome Antenna**
 - Demolished Facilities:** 139, 150, 260, 261, 263, 264, 265, 266, 267, 270, 271, 273, 278, 279, 280,
 - Demolished Facilities Currently Not Owned By NASA:** 125, 129, 130, 131
- Note: sf represents total building square feet



DIVESTMENT OVERVIEW



JSC Ellington Field Divestment

- Existing Property Boundary
- - - Proposed Property Boundary
- - - Divested Property Boundary
- - - Approach / Departure Zone
- x-x-x Proposed Fenceline
- - - Demolished Building
- - - Divested Building
- Topography 1'
- ⊙ Proposed Pedestrian Entry
- ⊙ Proposed Vehicle Entry
- Existing Building
- Renovated Building
- Proposed Building
- Quad
- Pavement
- Proposed Tree
- Divested Areas

Divested Buildings & Adjacent Area: 83,604sf

A	900 Hangar & Support Buildings	65,859 sf
B	380 Warehouse	20,848 sf

As per the master planning effort to consolidate land use, the following underused areas were chosen for divestment.

Total Divested Land: 12.5acres

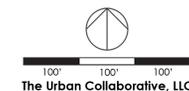
Airfield Ramp:	4.3 acres
990 Complex (non ramp)	5.4 acres
990 Complex Parking	1.8 acres
380 Warehouse Area	1.0 acres

WWII Warehouse Divestment Buildings:

125, 129, 131, 265, 266, 267, 270, 273,

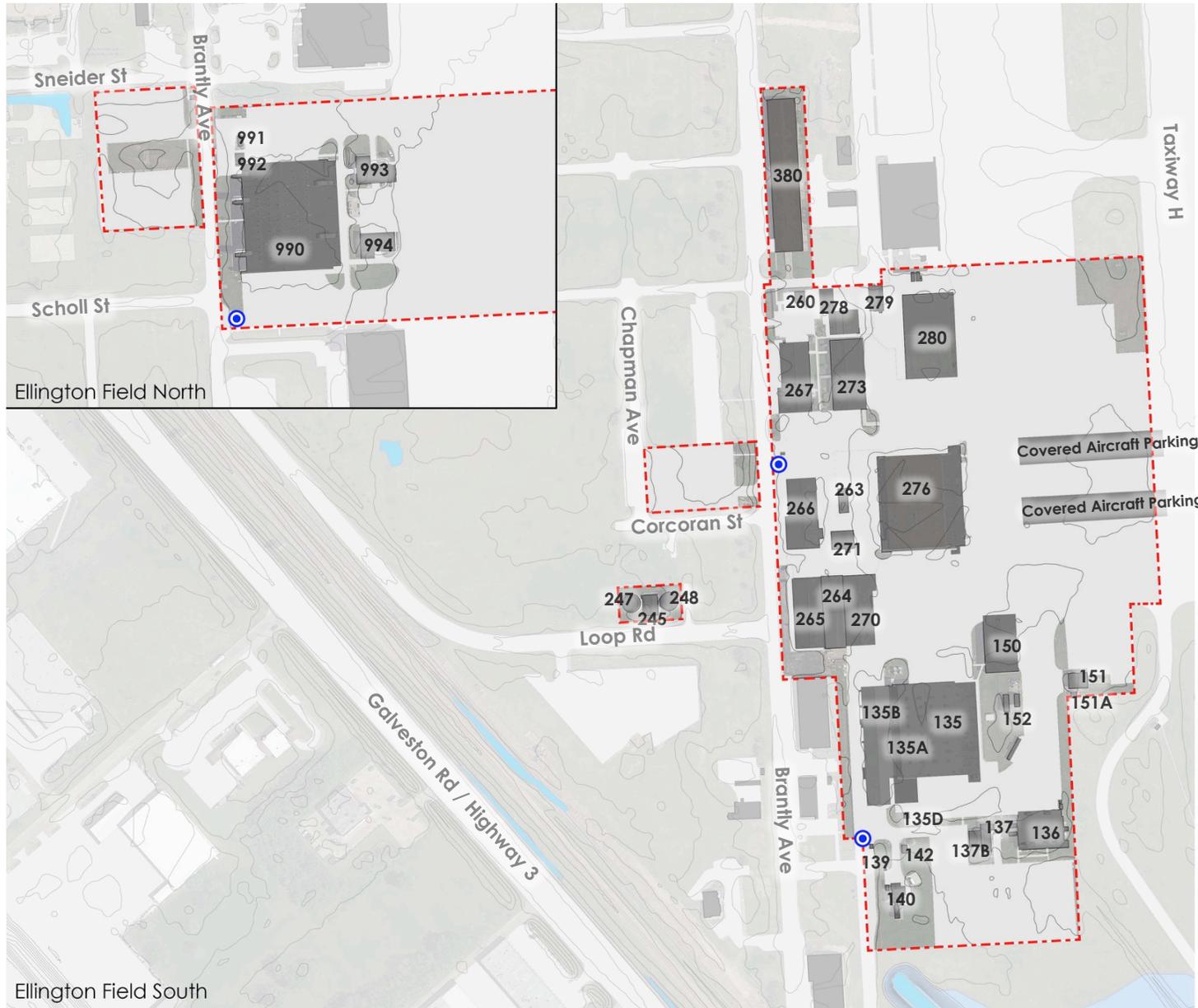
Note:

First option would be to divest of Historic WWII facilities in order to acquire the land for needed warehouse operations.



Ellington Field South

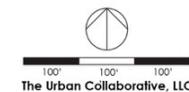
ENVIRONMENTAL CONSTRAINTS



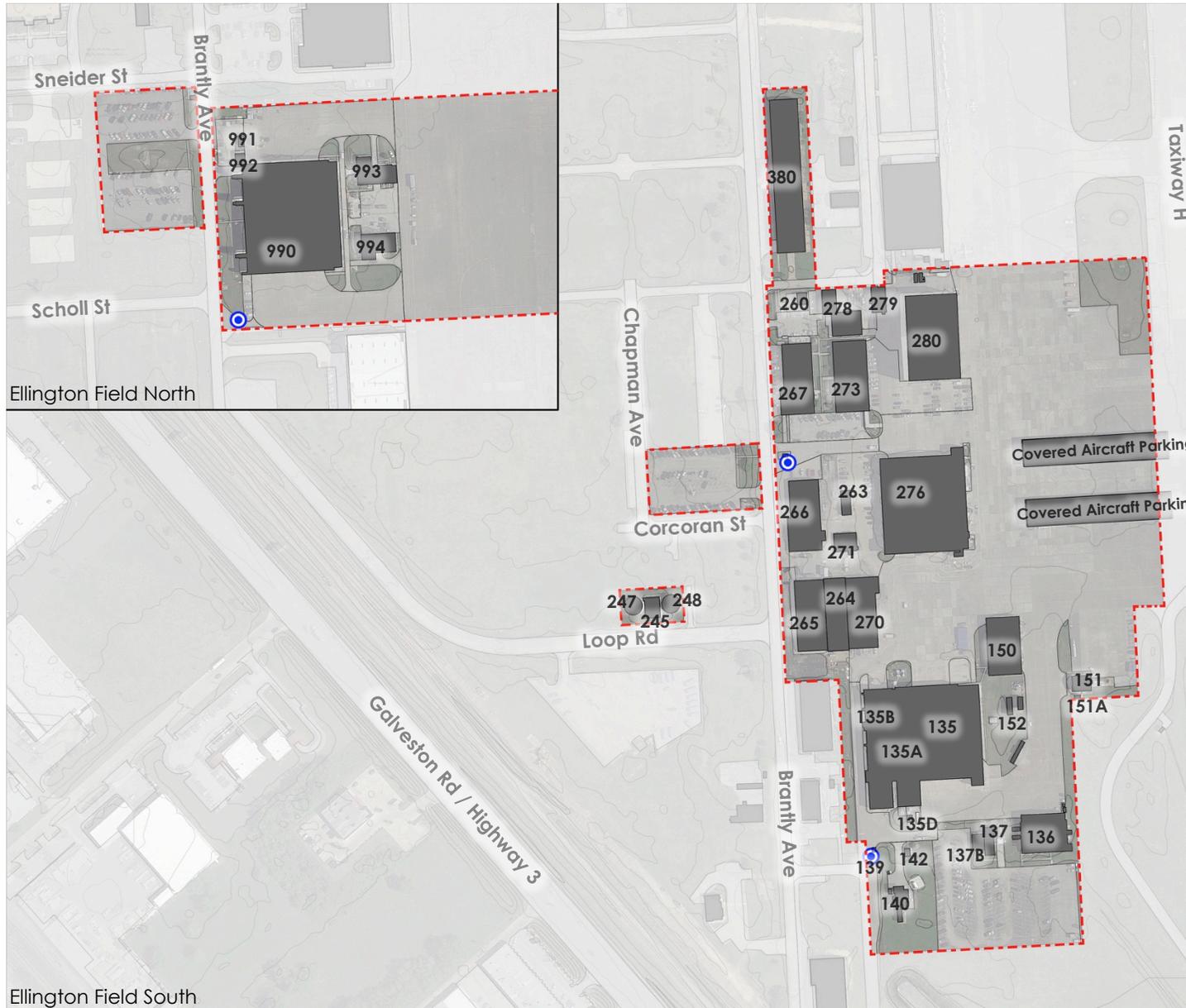
JSC Ellington Field Environmental Constraints

- - - Ellington Field Boundary
- NASA Property Boundary
- Topography 1'
- Existing Buildings
- Existing Pavement
- Floodplain 100 year
- Floodplain 500 year
- Existing Entry Point

Ellington Field faces natural and built constraints due to its location. Primary environmental constraints include the 100 and 500 year floodplain and numerous mature trees, which are clearly assets to be preserved.



EXISTING CONDITIONS



JSC Ellington Field Existing Constraints

- - - Property Boundary
- Topography 1'
- Existing Buildings
- Existing Pavement
- ⊙ Existing Entry Point

Plan of the existing conditions at Ellington Field.

