

Preliminary Airport Development Alternatives

Introduction

AIRSIDE IMPROVEMENTS

The preliminary airside and landside development alternatives presented below are intentionally conceptual. These concepts are intended to facilitate discussions that will guide the City of McMinnville on how best to meet the facility requirements for McMinnville Municipal Airport identified in Chapter 4.

The proposed airside improvements focus on runway and taxiway refinements intended to address conformance with FAA design standards.

The ongoing ODOT Highway 18 Three-Mile Lane project will eliminate the Cruickshank Road connection to the highway as part of the corridor improvements. This project will allow the small section of Cruickshank Road located directly beyond the end of Runway 22, to be vacated. The road closure and the relocation of a section of airport fence outside the Runway 4/22 object free area (OFA) and runway safety area (RSA) will allow the runway to fully meet future (RDC C-II) OFA and RSA standards.

The proposed taxiway improvements are consistent with current FAA design guidance on taxiway geometry and the operational function interface between runways and taxiways.

LANDSIDE ALTERNATIVES

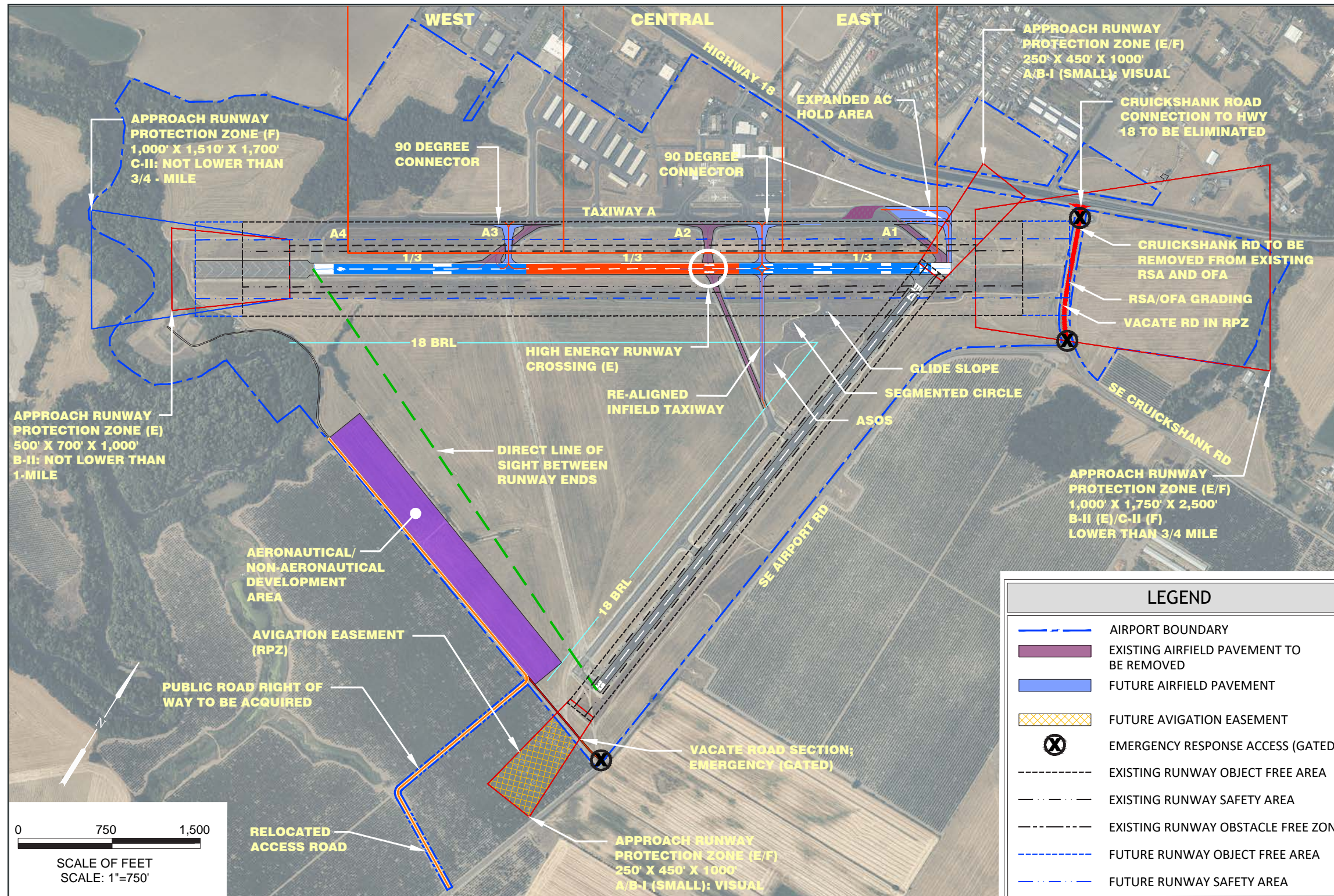
The landside development alternatives concepts presented below depict proposed improvements capable of meeting the facility requirements identified in Chapter 4.

As noted earlier in the master plan, all existing landside facilities are located on the north side of Runway 4/22. The landside alternatives will focus on this area, with proposed expansion east and west of the central terminal area.

The focus of the landside evaluation is to identify the most efficient use of available space, with aeronautical uses considered the highest and best use. This analysis will guide the City of McMinnville on the development of landside facilities during the current 20-year planning period, or until additional evaluations may be required.

The concepts are meant to be modular in nature. A selected preferred alternative may be as presented below, it may be a combination of components from different concepts, or it may be an entirely different concept identified in discussions stemming from these concepts. The best concepts from each of the three landside areas identified will be combined into a single preferred alternative.

Figure 5-1: Proposed Airside Improvements



Proposed Airside Improvements

Runway 4/22:

- Runway Safety Improvements:
 - » Planned closure of Cruickshank Road, which currently travels through the east end of the Runway Safety Area (RSA) and Object Free Area (OFA), beyond the end of Runway 22
 - » Relocate airport fence outside RSA and OFA, regrade the surfaces to meet FAA standards
 - » The ODOT road closure will re-reroute local traffic to Highway 18 further east of MMV

Runway 17/35:

- RPZ Compatibility:
 - » Runway 35 RPZ: Relocate existing access road outside the RPZ. Acquire of Right-of-Way (ROW) for new road

RPZ Control:

- » Portions of the RPZs for all runway ends at MMV extend beyond airport owned property. The City of McMinnville has previously acquired aviation (air) easements for a portion of the Runway 22 RPZ. Acquiring easements for all remaining sections of existing/future RPZs that extend beyond airport property is recommended to control activities in the RPZ and to protect the inner approach surface for the runways.

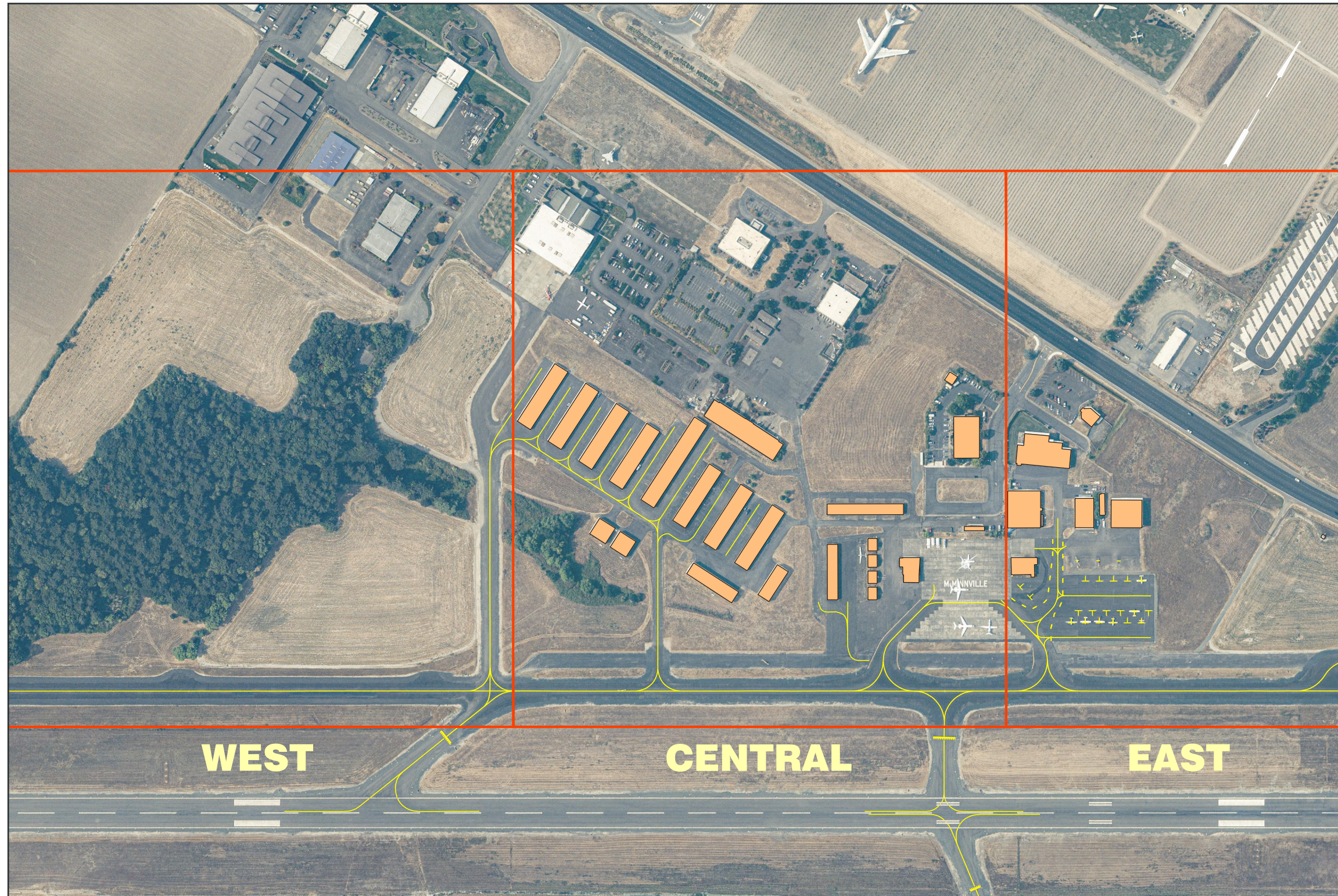
Taxiways:

- Taxiway A2 & D Intersection:
 - » Eliminate High Energy Runway Crossing. Relocate the Taxiway A2 and Taxiway D connection (runway crossing) 460 feet to the east, outside the middle third of Runway 4/22, reducing the risk of runway incursions and enhancing pilot situational awareness
- Geometry Improvements:
 - » Reconfigure Taxiway A1 and A3 from acute angle geometry to conventional 90-degree connections to improve safety and efficiency
 - » Relocate the aircraft hold area adjacent to Taxiway A1 as part of the taxiway reconfiguration

Mixed-Use Aeronautical and Non-Aeronautical Areas:

- » Proposed mixed use (aeronautical/non-aeronautical) development in the south infield limited to south end of the Airport to protect direct line of sight between the ends of Runway 4 and Runway 35. Long term development challenges include access to utilities.

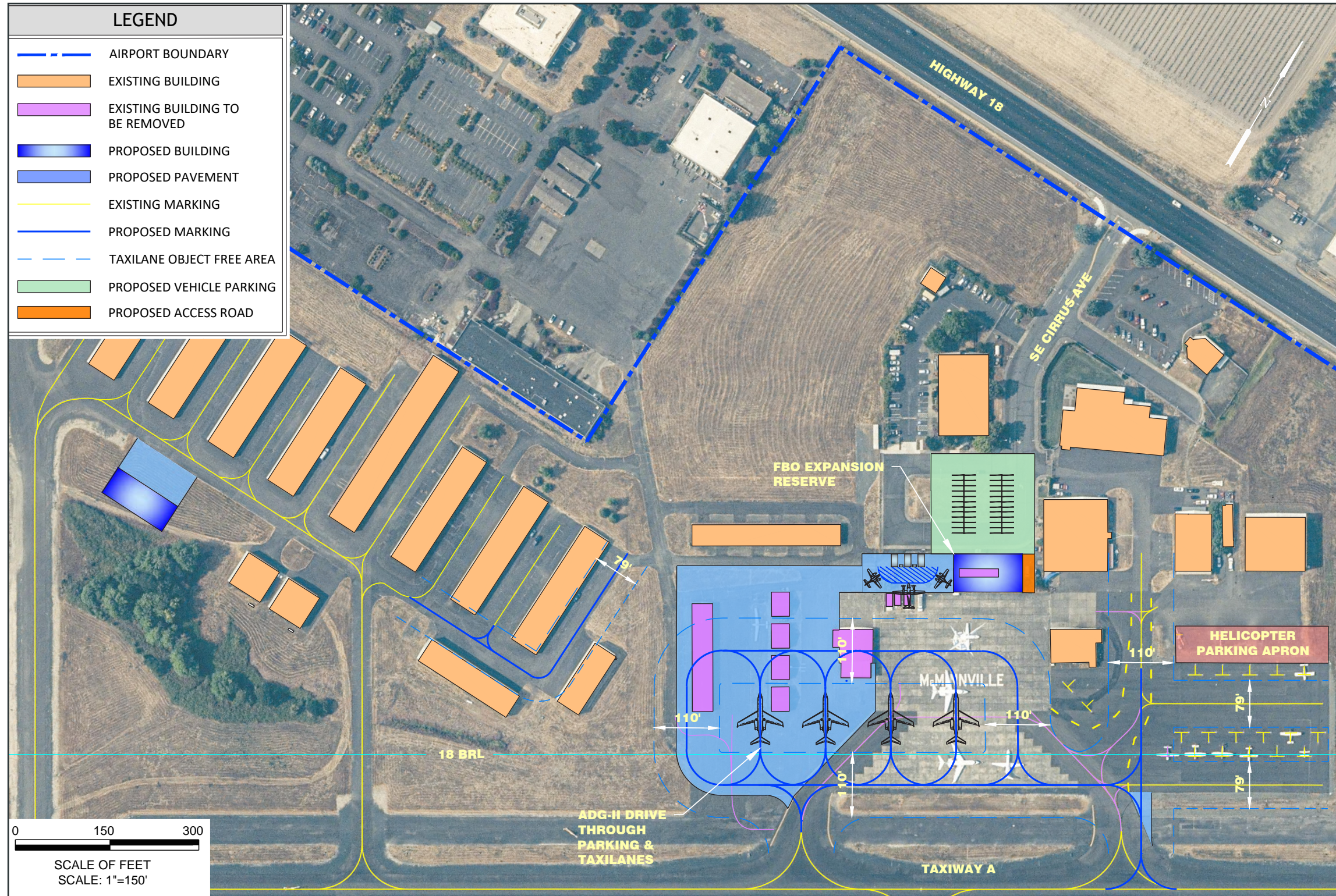
Figure 5-2: Landside Development Areas



- The north landside area is divided into three groups (options for these areas follow)
 - » West Area (west of Galen McBee Airport Park)
 - » Central Area (the main terminal area and west hangar area)
 - » East Area (hangars and aircraft parking areas east of the main apron)

Landside Development Areas

Figure 5-3: Central Terminal Area – Alternative 1 & 2 - Phase 1



Central Terminal Area - Alternative 1 & 2 - Phase 1

This concept provides incremental expansion of the main apron, which can be incorporated with the long-term development alternatives concepts that follow.

Main Apron:

- West expansion of the main apron to provide additional large aircraft parking and improve efficiency and operating conditions
- Four (4) – Large aircraft (ADG II) drive-through aircraft parking positions with ADG II access taxilane loop
- Reconfigured apron taxilane connections to Taxiways B and C, and Taxiway A
- Site redevelopment. Remove existing hangars (older, city owned buildings) to accommodate additional large aircraft parking.
 - » West Quonset Hangar
 - » Four (4) Open Front Conventional Hangars
 - » One (1) 6-unit T-hangar
 - » Replacement hangar options are presented for the east landside area

FBO/GA Terminal Building:

- FBO building (existing site) reserve to address near term expansion of FBO building /terminal

Aircraft Fuel Tanks and Fueling Area:

- Relocate fuel tanks and construct new fueling apron to improve small aircraft access to the fueling area and optimize use of the main apron by large aircraft

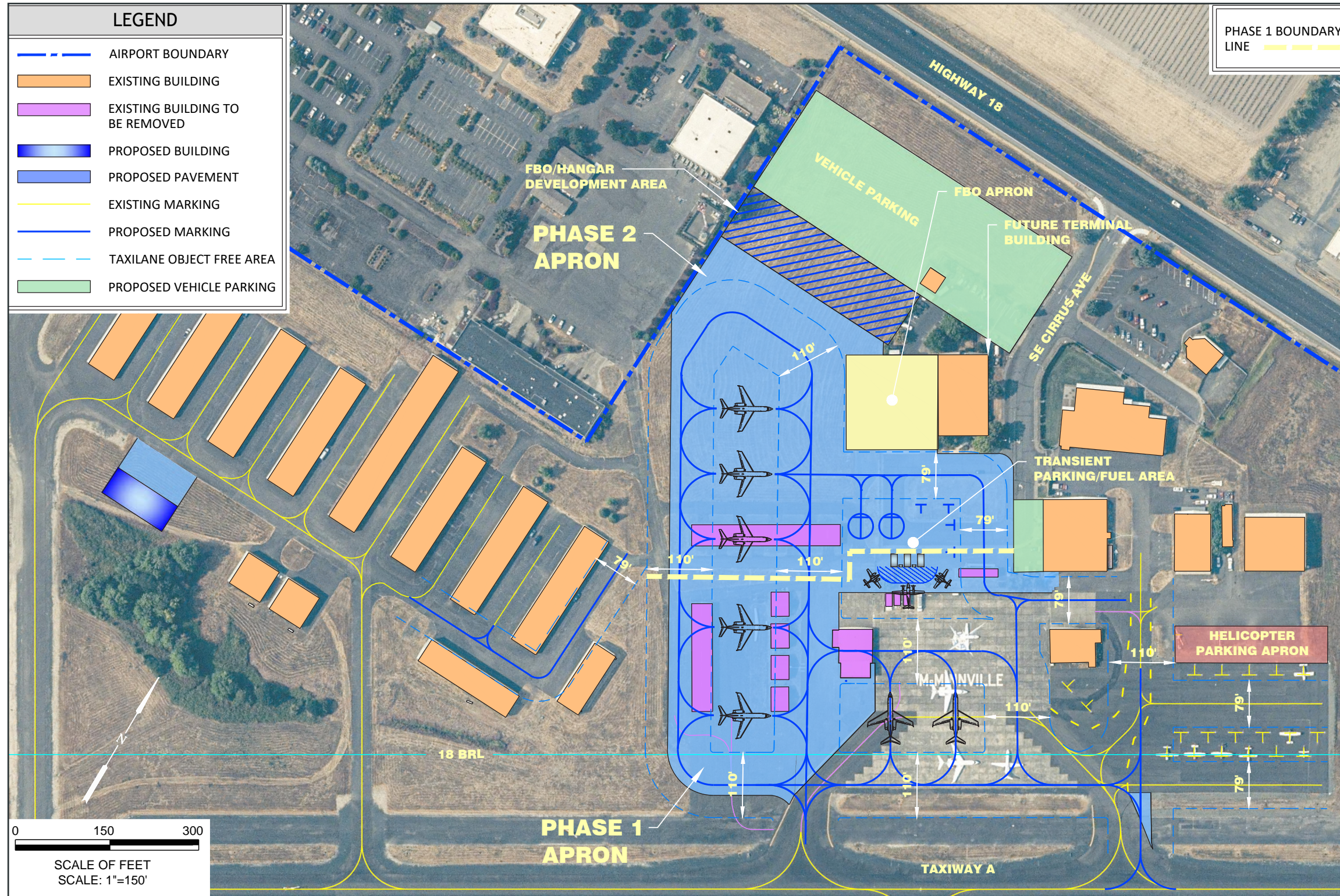
Parking and Access:

- Vehicle parking and access improvements for airport users and tenants

Security and Access Control:

- Relocated and upgraded (electronic) vehicle and pedestrian gates and fencing to improve security and access control

Figure 5-4: Central Terminal Area – Alternative 1



Central Terminal Area – Alternative 1

This concept expands on the Phase 1 option by continuing the main apron expansion to the north and reorienting the large aircraft parking row north-south, with full taxilane access provided to the aircraft parking and new FBO/terminal.

FBO/Terminal Building:

- Phase 1 FBO building reserve maintained to facilitate transition to new FBO/Terminal
- Redevelopment of existing building (OSP – current lease) into the new FBO/terminal building
- Designated apron space for FBO activities adjacent to (south) the new building
- Vehicle parking expansion area north of proposed building

Apron Reconfiguration:

- Expand and reconfigure large aircraft parking to accommodate increased demand. Maintain a portion of the Phase 1 large aircraft parking (7+ large aircraft parking positions)
- New transient parking apron for small, fixed wing aircraft and helicopters adjacent to FBO
- Improved aircraft movement (taxilanes)

Aircraft Fuel Tanks and Fueling Area:

- Fuel tank relocation and apron (Phase 1 project)

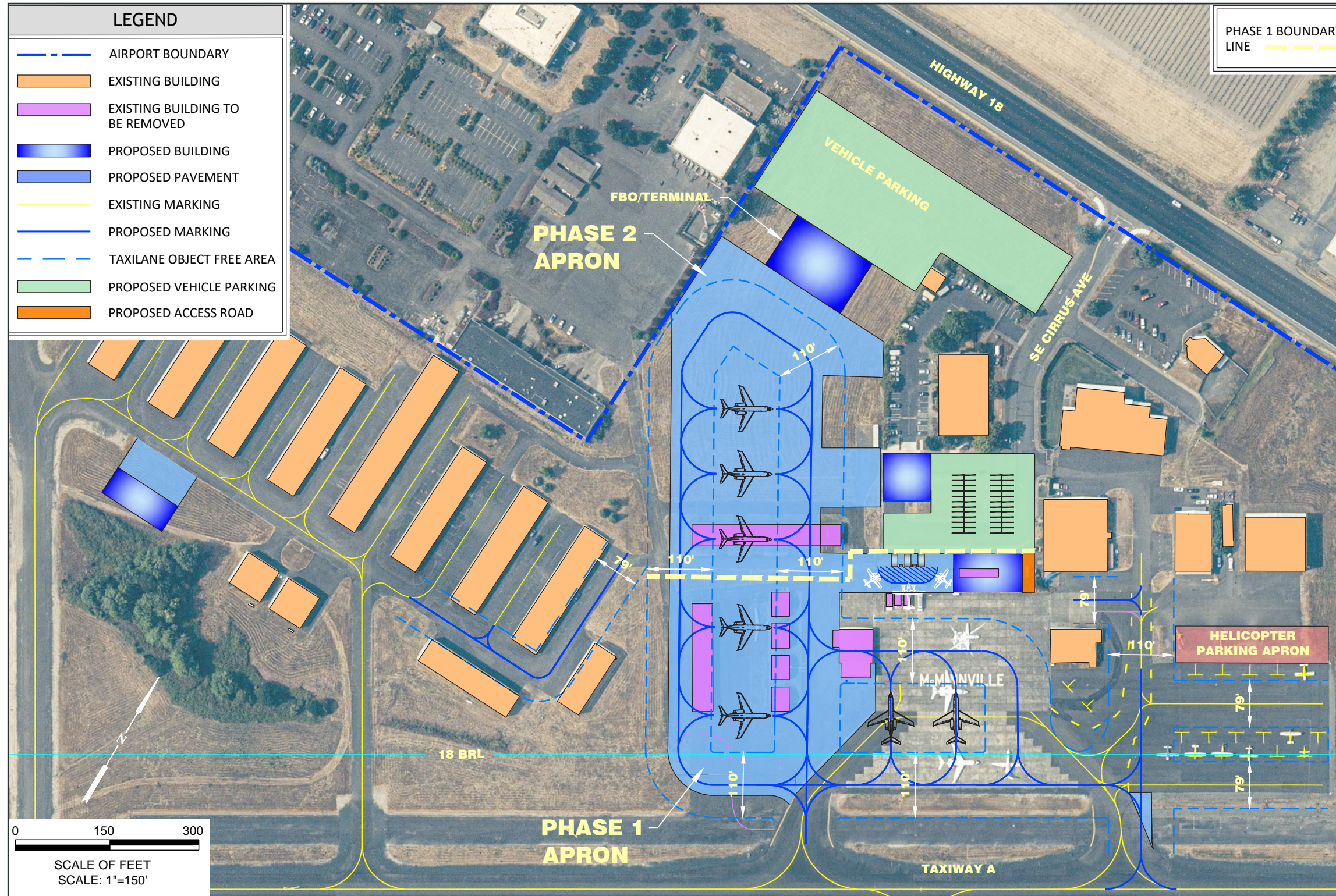
Security and Access Control:

- Relocated and upgraded (electronic) vehicle and pedestrian gates and fencing to improve security and access control

Parking and Access:

- Development of new parking areas and vehicle access improvements
- Long Term Reserve - Vehicle Parking and FBO/Terminal Building

Figure 5-5: Central Terminal Area – Alternative 2



Central Terminal Area – Alternative 2

This concept expands on the Phase 1 option by continuing the main apron expansion to the north and reorienting the large aircraft parking row north-south, with full taxilane access provided to the aircraft parking and new FBO/terminal.

FBO/Terminal Building:

- Phase 1 FBO building reserve maintained to facilitate transition to new FBO/terminal
- New FBO/terminal building (north end of main apron expansion)
- Vehicle parking expansion area north of proposed building

Apron Reconfiguration:

- Similar apron reconfiguration for large aircraft parking. Maintain a portion of the Phase 1 large aircraft parking (7+ large aircraft parking positions), phased northern expansion of main apron

Aircraft Fuel Tanks and Fueling Area:

- Fuel tank relocation and apron (Phase 1 project)

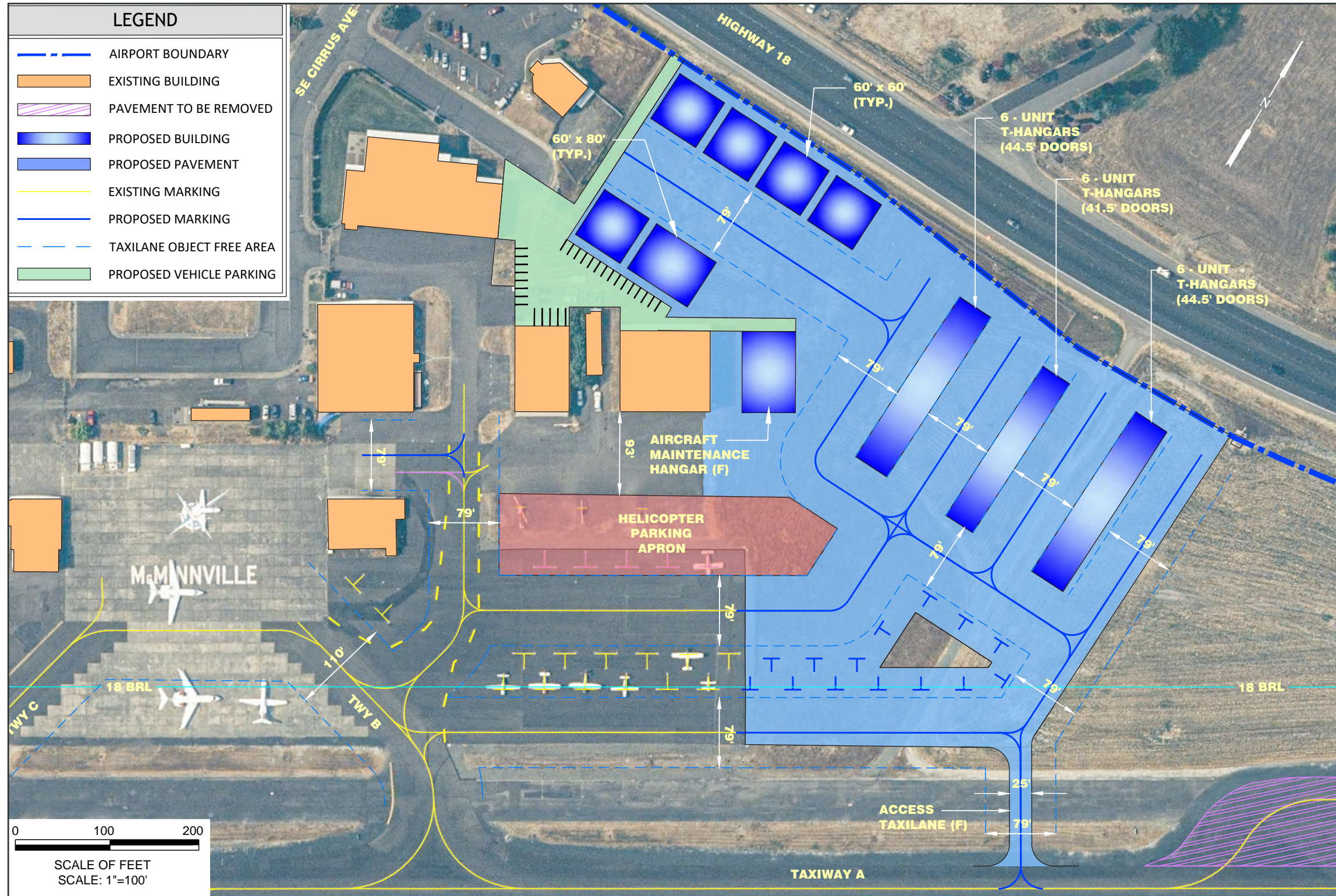
Security and Access Control:

- Relocated and upgraded (electronic) vehicle and pedestrian gates and fencing to improve security and access control

Parking and Access:

- Development of new parking areas and vehicle access improvements
- Long Term Reserve - Vehicle Parking and FBO/terminal Building

Figure 5-6: East Landside Area – Alternative 1



East Landside Area – Alternative 1

This concept provides incremental expansion of aircraft parking and hangars in the east landside area.

Hangar Development:

- New hangar sites with varying sizes and door widths to accommodate aircraft storage demand:
 - » Conventional Hangar (Aircraft Maintenance)
 - » Three (3) 6-unit T-hangars (18 units)
 - » Six (6) Conventional Hangars (60'x60' , 60'x80' typ.)

Apron Taxilane/Access:

- Expanded Helicopter Parking Apron (-5 fixed wing tiedowns - redeveloped for helicopters)
- East Tiedown Apron Expansion/Reserve (+14 tiedowns)
- ADG-I taxilane access to new hangar sites and aircraft parking
- Second taxilane connection to Taxiway A to improve aircraft access and traffic flow

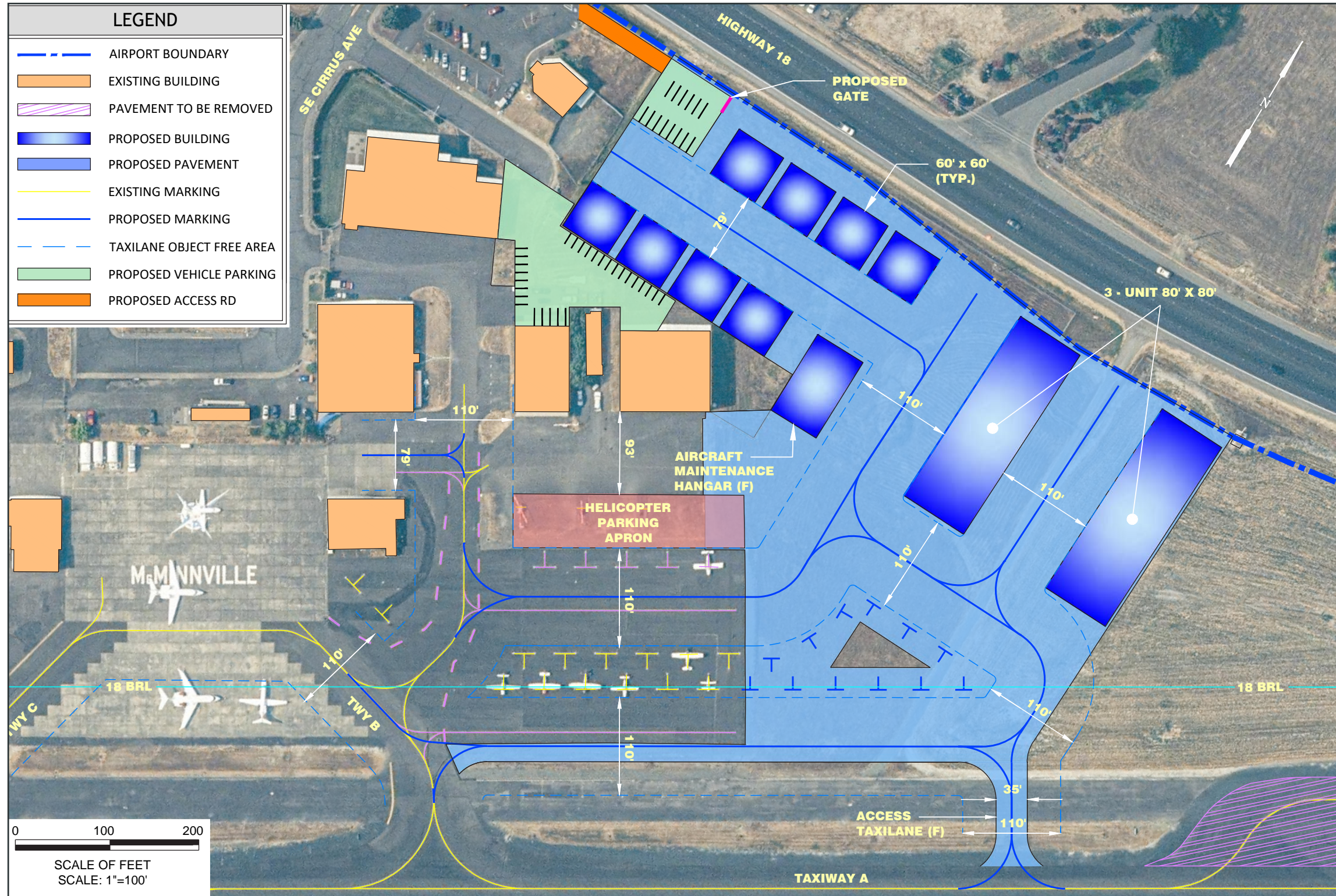
Security and Access Control:

- Upgraded (electronic) vehicle and pedestrian gates and fencing to improve security and access control

Parking and Access:

- Development of new parking areas and vehicle access improvements

Figure 5-7: East Landside Area – Alternative 2



East Landside Area – Alternative 2

This concept provides incremental expansion of aircraft parking and hangars in the east landside area.

Hangar Development:

- New hangar sites with varying sizes and door widths to accommodate aircraft storage demand:
 - » Conventional Hangar (Aircraft Maintenance)
 - » Two (2) 3-unit Conventional Hangars (80'x80' units) (6 units)
 - » Eight (8) Conventional Hangars (60'x60' typ.)

Apron Taxilane/Access:

- ADG-II taxilane access to new hangar sites and aircraft parking (-5 tiedowns to clear TLOFA)
- Helicopter Apron Improvement/Expansion
- East Tiedown Apron Expansion/Reserve (+13 tiedowns)
- Second (ADG II) taxilane connection to Taxiway A to improve aircraft access and traffic flow

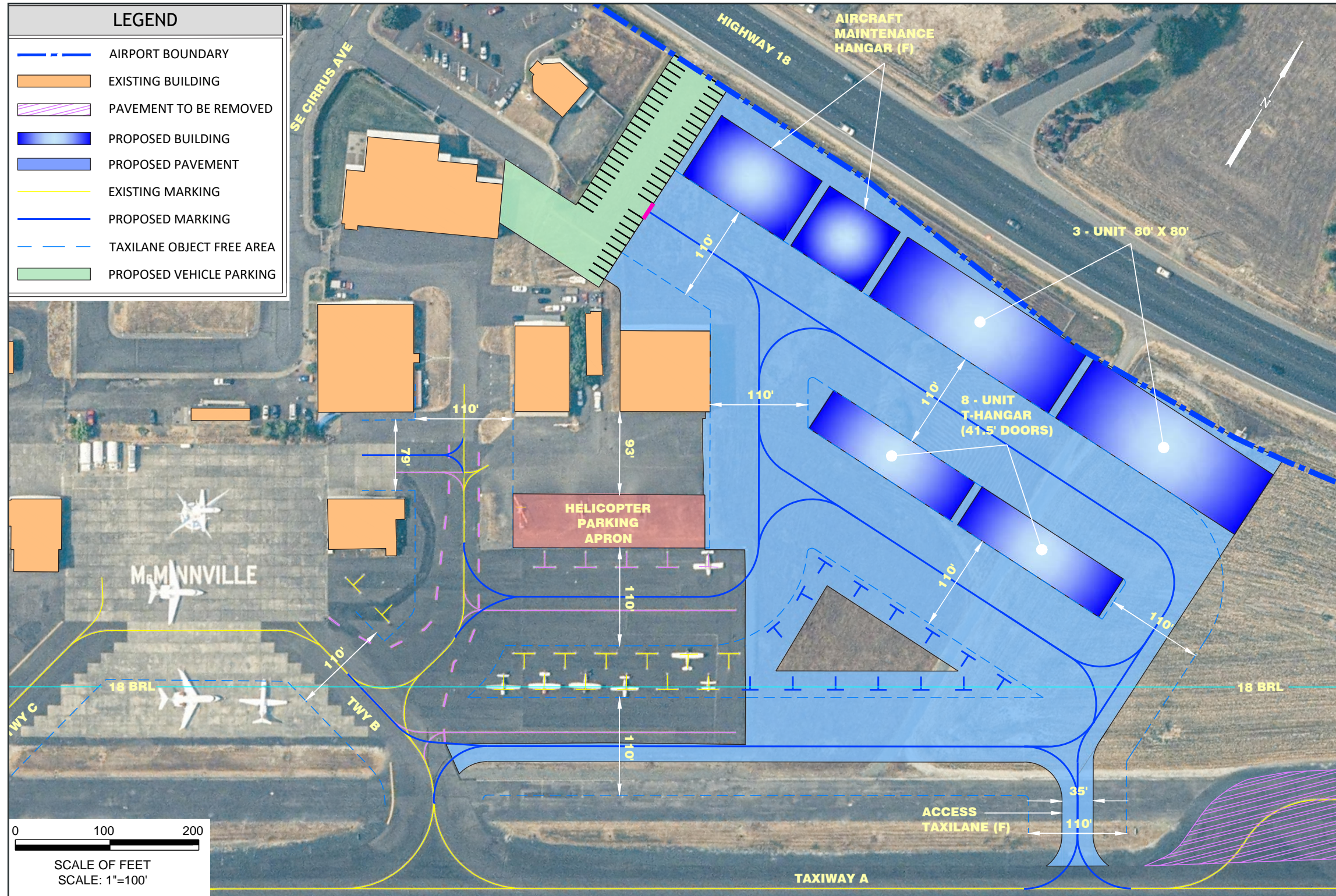
Security and Access Control:

- Upgraded (electronic) vehicle and pedestrian gates and fencing to improve security and access control

Parking and Access:

- Development of new parking areas and vehicle access improvements

Figure 5-8: East Landside Area – Alternative 3



East Landside Area – Alternative 3

This concept provides incremental expansion of aircraft parking and hangars in the east landside area.

Hangar Development:

- New hangar sites with varying sizes and door widths to accommodate aircraft storage demand:
 - » Two (2) 8-unit T-hangars (w/ 41.5' doors) (16 units)
 - » Two (2) Conventional Hangars (Aircraft Maintenance)
 - » Two (2) 3-unit Conventional Hangars (80'x80' units) (6 units)

Apron Taxilane/Access:

- ADG-II taxilane access to new hangar sites and aircraft parking (-5 tiedowns to clear TLOFA)
- Helicopter Apron Improvement
- East Tiedown Apron Expansion/Reserve (+14 tiedowns)
- Second (ADG II) taxilane connection to Taxiway A to improve aircraft access and traffic flow

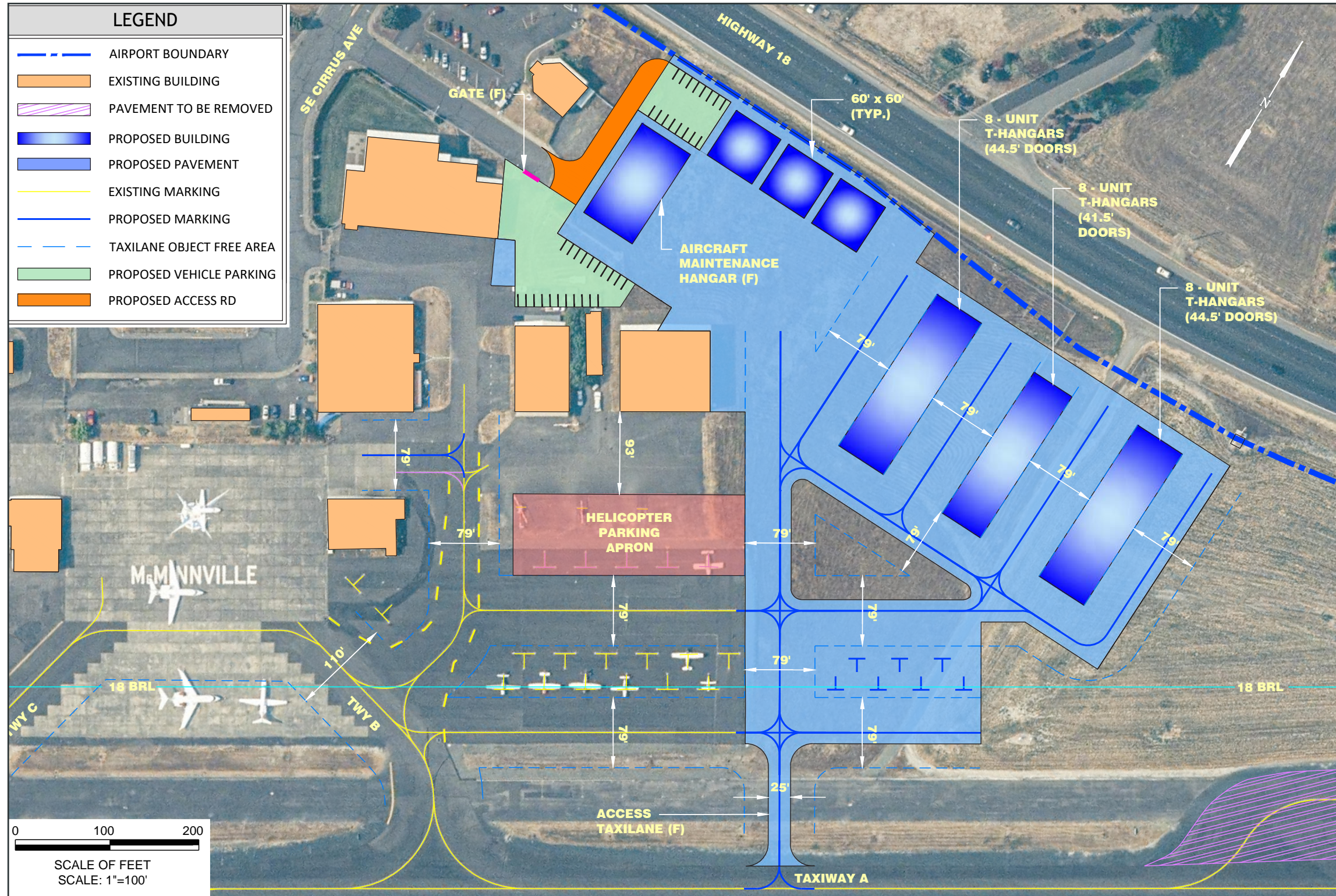
Security and Access Control:

- Upgraded (electronic) vehicle and pedestrian gates and fencing to improve security and access control

Parking and Access:

- Development of new parking areas and vehicle access improvements

Figure 5-9: East Landside Area – Alternative 4



This concept provides incremental expansion of aircraft parking and hangars in the east landside area.

Hangar Development:

- New hangar sites with varying sizes and door widths to accommodate aircraft storage demand:
 - » Three (3) 8-unit T-hangars (w/ 41.5' and 44.5' doors) (24 units)
 - » One (1) Large Conventional Hangar (Aircraft Maintenance)
 - » Three (3) Conventional Hangars (60'x60' typ.)

Apron Taxilane/Access:

- Expanded Helicopter Parking Apron (-5 fixed wing tiedowns - redeveloped for helicopters)
- ADG-I taxilane access to new hangar sites and aircraft parking
- East Tiedown Apron Expansion/Reserve (+7 tiedowns)
- Second (ADG I) taxilane connection to Taxiway A to improve aircraft access and traffic flow

Security and Access Control:

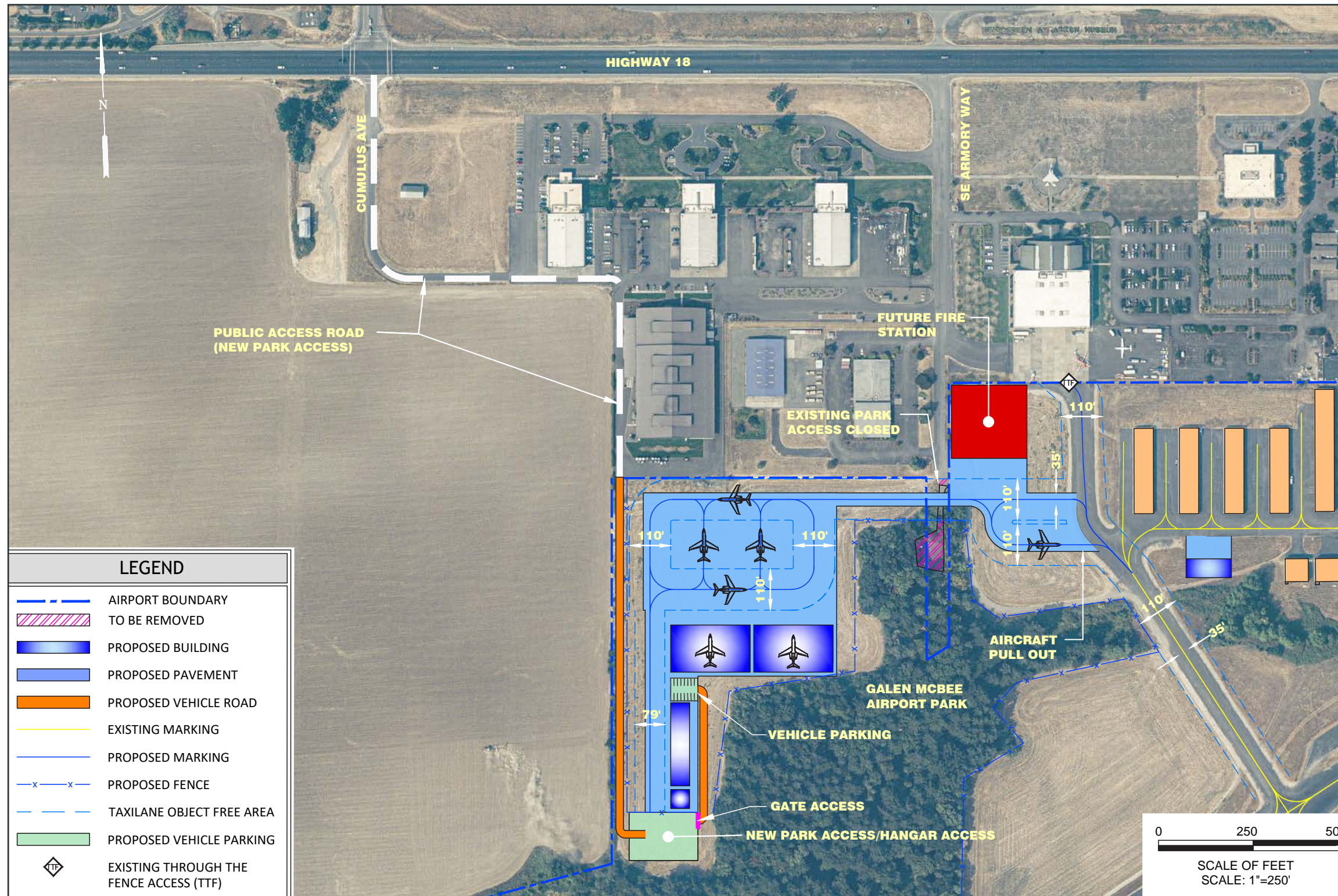
- Upgraded (electronic) vehicle and pedestrian gates and fencing to improve security and access control

Parking and Access:

- Development of new parking areas and vehicle access improvements

East Landside Area – Alternative 4

Figure 5-10: West Landside Area – Alternative 1



West Landside Area – Alternative 1

This concept provides incremental expansion of aircraft parking and hangars in the future west landside area.

Airport Park Public Access:

- Public access to Galen McBee Airport Park is relocated to the southwest corner of the park/trail system with a new trailhead and public parking lot. A new public roadway connection is proposed for Cumulus Avenue. Planned development of private property immediately west of this site may provide other options for public access to the park. The existing roadway access to the park and the trailhead will be closed to accommodate the access taxilane.

Main Access Taxilane:

- New ADG II taxilane connection to the west hangar taxilane to provide access to hangars and aircraft parking areas.
- Aircraft pull out on taxilane to reduce traffic conflicts (opposite direction taxiing)

Apron Taxilane:

- ADG II aircraft parking (2 to 4 drive-through parking positions)
- ADG-II taxilane loop to access aircraft parking row and large hangars
- ADG-I taxilane to small new hangars

Hangar Development:

- New hangar sites with varying sizes and door widths to accommodate aircraft storage demand:
 - » Two (2) large commercial hangars (ADG II access)
 - » One (1) multi-unit hangar (5 units, 50'x50' typ.) for small aircraft storage (ADG I access)

Security and Access Control:

- Upgraded (electronic) vehicle and pedestrian gates and fencing to improve security and access control

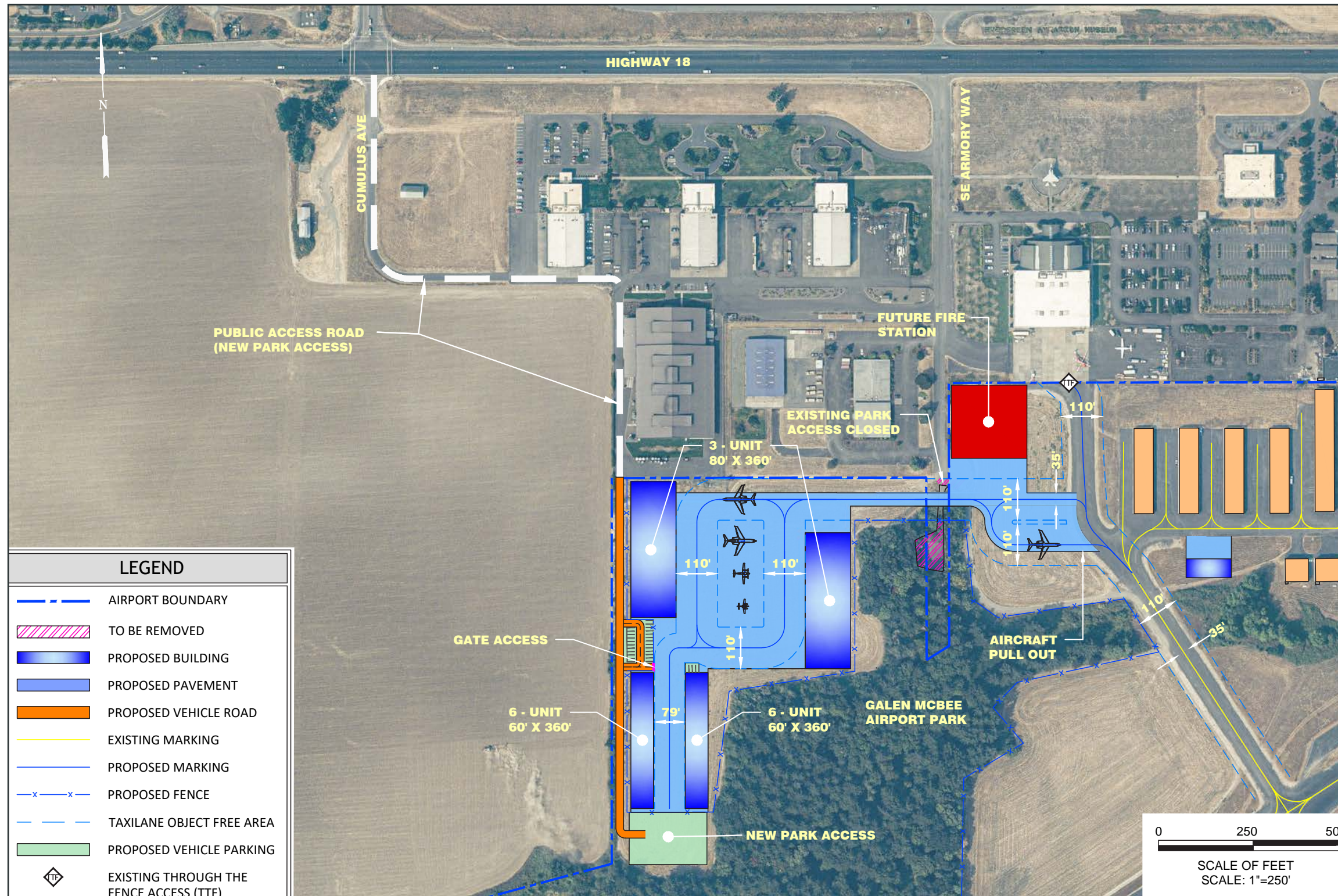
Parking and Access:

- Development of new parking areas and vehicle access improvements

Fire Station:

- A site for a new community/airport fire station is identified near the north end of the airport park with a direct connection to Highway 18 vis SE Armory Way

Figure 5-11: West Landside Area – Alternative 2



West Landside Area – Alternative 2

This concept provides incremental expansion of aircraft parking and hangars in the future west landside area.

Airport Park Public Access:

- Public access to Galen McBee Airport Park is relocated to the southwest corner of the park/trail system with a new trailhead and public parking lot. A new public roadway connection is proposed for Cumulus Avenue. Planned development of private property immediately west of this site may provide other options for public access to the park. The existing roadway access to the park and the trailhead will be closed to accommodate the access taxilane.

Main Access Taxilane:

- New ADG II taxilane connection to the west hangar taxilane to provide access to hangars and aircraft parking areas
- Aircraft pull out on taxilane to reduce traffic conflicts (opposite direction taxiing)

Apron Taxilane:

- ADG II aircraft parking (2 to 4 drive-through parking positions)
- ADG-II taxilane loop to access aircraft parking row and large hangars
- ADG-I taxilane to small new hangars

Hangar Development:

- New hangar sites with varying sizes and door widths to accommodate aircraft storage demand:
 - » Two (2) multi-unit hangars (3 units each, 80'x120' each unit, typ.) (ADG II access)
 - » Two (2) multi-unit hangars (6 units each, 60'x60' each unit, typ.) (ADG I access)

Security and Access Control:

- Upgraded (electronic) vehicle and pedestrian gates and fencing to improve security and access control

Parking and Access:

- Development of new parking areas and vehicle access improvements

Fire Station:

- A site for a new community/airport fire station is identified near the north end of the airport park with a direct connection to Highway 18 vis SE Armory Way