

SAN DIEGO

International Airport



AIRPORT MASTER PLAN
SAN DIEGO INTERNATIONAL AIRPORT

CHAPTER 8

Preliminary Concept Development

8. PRELIMINARY CONCEPT DEVELOPMENT

The Master Plan concepts described within this chapter evolved out of a charrette process that considered the most appropriate and feasible solutions to meet the forecast facility requirements and deficiencies addressed in Chapter 7, Facility Requirements Analysis, of this Master Plan.

The increased passenger traffic forecast for San Diego International Airport (SDIA) will place additional strains on already overcrowded facilities and further erode the airport's levels of service for airline passengers, and airport tenants. In particular, the existing terminal facilities, roadways and parking, and air cargo facilities are deficient in size and building standards.

The Authority has completed an Airport Master Plan to assess the existing facilities and identify necessary facility improvements required to accommodate forecast growth in demand for air service. The Master Plan goals and objectives are presented in Chapter 2, Goals and Objectives.

The Airport Site Selection Program (ASSP) was still in progress while the preliminary development concepts were generated. Thus, at the time, the future of the existing airport site was unknown beyond approximately 2015. The planning process addressed this uncertainty by presenting concepts for facility development that are:

1. Financially feasible (significant, if not all, costs can be recouped prior to 2015); and
2. Sensitive of Medium Term Facility Requirements (these are safety, capacity and other necessary improvements that will need to be made prior to the earliest feasible opening date of a new airport facility at a different site)

The planning horizon utilized for developing facility requirements is a period of 25 years, extending to 2030. The planning horizon is determined by the aviation activity forecast prepared by the Authority in 2004, which forecast aviation activity through the year 2030. The 2015 interim year was chosen as a midpoint of development for facilities because it occurs roughly midway between the development of the concepts, 2005, and the horizon year, 2030. Furthermore, the interim year is determined to be the earliest feasible point at which the Authority would be able to identify, procure, develop, and open a new airport at another location in the San Diego region. Because of this, it was determined that regardless of the results of the ASSP, the existing airport and facilities will continue to serve the aviation demand in San Diego through at least 2015. Based on this schedule, the forecast for aviation demand for the Master Plan and associated gate requirements for the terminal facilities were developed into two planning design levels (2015 and 2030).

Because the existing airfield has sufficient runway capacity to meet the forecast demand levels through 2015, the requirements for terminal gates are the most demanding physical component to be addressed at SDIA between now and the interim year 2015.

The Master Plan forecast and associated design day schedule determined the need for ten new contact gates by 2015 and 20 new gates by 2030.

The following summaries describe each preliminary concept for facility development at SDIA. Each concept presents a potential plan for the Authority to consider implementing. Each plan addresses the facility requirements set forth in the Master Plan in differing ways.

A total of four (4) concepts are presented herein:

1. Concept A
2. Concept B
3. Concept C
4. Concept F

8. Preliminary Concept Development

Concepts A, B, and C were developed by the HNTB team specifically to address the facility requirements identified in the Master Plan. Concept F was developed during the previous Master Plan while the airport was operated by the Port of San Diego. Because Concept F was the preferred alternative from the previous Master Plan, it is presented again because it still presents a feasible alternative for development of future facilities at Lindbergh Field, provided certain conditions are met. Concept F is also the only concept that considers the development of terminal facilities on the North Side of the airport site. The Minimum Build Concept was developed to address the possibility that a new location would be identified by the ASSP for relocation of the region's primary commercial service Airport.

Because the Authority was facing a unique situation in which flexibility and foresight was necessary while the ASSP was on-going, each of the concepts presented shares a flexible first phase of development referred to as "Minimal Build." Thus, a sub-concept was developed that would allow the Authority to move forward with development to meet the immediate facility requirements without negating the ability of the Authority to implement any one of the concepts in a future year.

In order to plan overall phased and incremental improvements to SDIA, the preliminary concepts focus on efficient utilization of all land envelopes available to the airport for development.

8.1 Concepts A, B, and C

Concepts A, B and C present concepts for developing additional terminal and concourse gate facilities on the south side of the existing airport property along Harbor Drive. This differentiates Concepts A, B, and C from Concept F, which was carried over from the previous Master Plan and proposes constructing new terminal facilities on the north side of the airport property. Concepts A, B, and C would develop the available land on the north side of the airport property for airport support facilities including air cargo and general aviation, and ground transportation facilities such as a rental car facility, long-term parking and other transit services. Though Concepts A, B, and C share the commonality of developing terminal and concourse gate facilities on the south side of the airport, they present three unique approaches to the construction of additional terminal facilities.

8.1.1 Concept A

Phase One

Concept A, Phase One would develop the available land on the former Naval Training Center (NTC) property and expand existing Terminal 2 West to add ten new gates at the western end of the existing airport terminal area. As depicted in **Figure 8-1**, Concept A 2015 consists of the following major components:

- Completion of ten additional contact gates on Terminal Two West by 2015. This addition would include a new two-story processor with additional ticketing, new security screening, concessions, and outbound baggage areas.
- Reconfiguration of the existing landside to extend additional curbside along the expanded Terminal Two West processor.
- Completion of the apron at the NTC site to allow for additional RON Parking.
- Development of a new structured parking facility adjacent to Terminal Two West.
- Expansion of surface parking facilities.
- Expansion of rental car facilities.
- Expansion of and improvement to air cargo facilities.
- Potential expansion of general aviation facilities.
- Development of possible hydrant fueling areas.

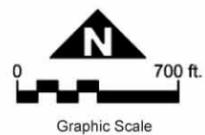
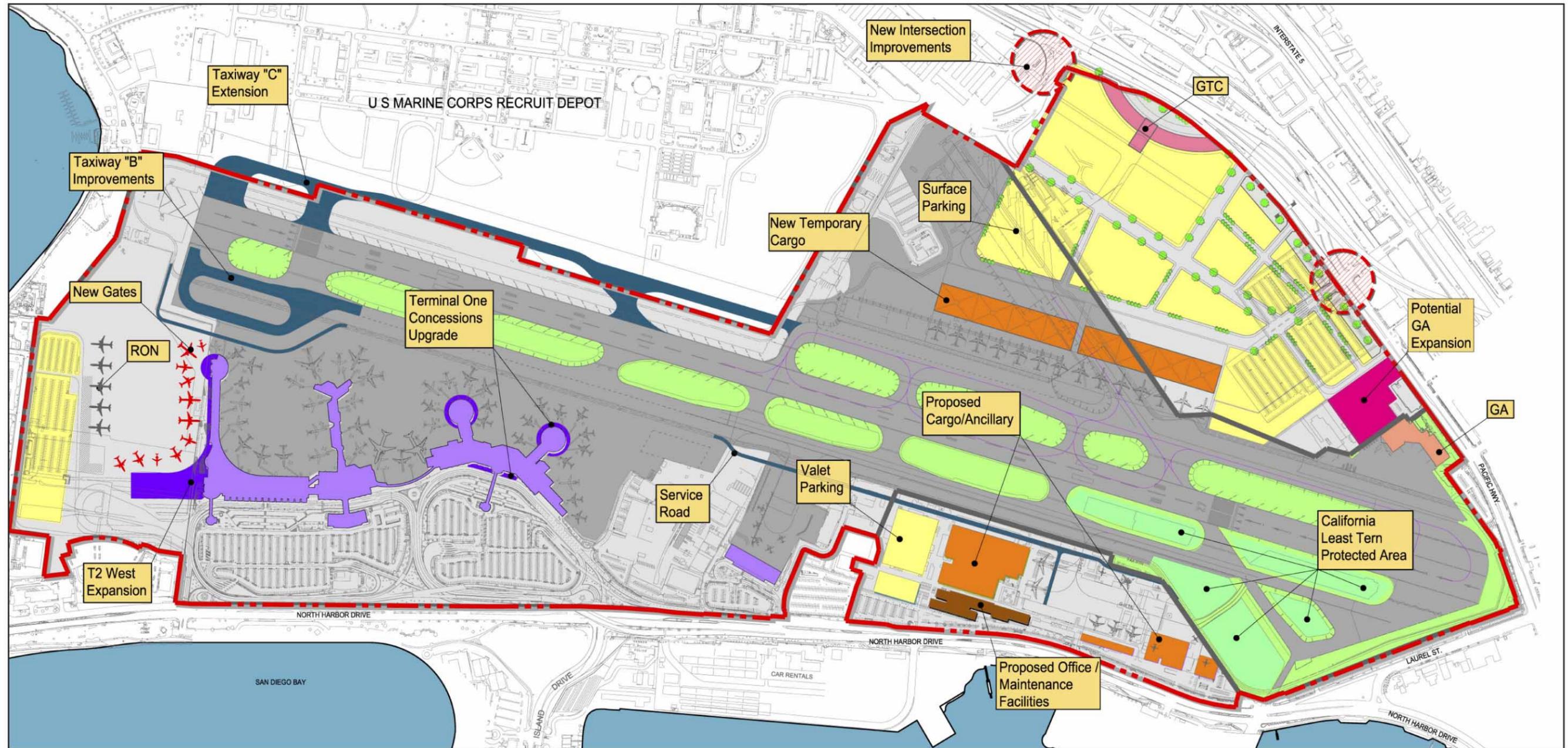


Figure 8-1

Concept A - 2015

Phase Two

The second phase of Concept A would develop additional gates on the south side of the airport in a linear concourse extending east, as depicted in **Figure 8-2**. The facility would require the replacement of Terminal One in its entirety. This expansion would result in the addition of 11 additional jet gates from the 2015 time period to increase the overall gate counts to +/- 62 contact gates. As shown in the exhibit, the major components of Concept A 2030 include the following:

- Reconstruction of the entire Terminal One complex into a linear flight line and passenger processor.
- Creation and implementation of a new ground transportation access off of North Harbor Drive.
- Construction of additional surface/structured parking facilities in front of the new Terminal One.
- Completion of ground transportation, air cargo, and airport support facilities improvements on the former General Dynamics sties.

8.1.2 Concept B

Phase One

Concept B splits the construction of ten new gates between two locations. Four new gates would be constructed on the west side of Terminal Two West and six additional gates would be constructed at a new terminal processor located east of Terminal One.

Concept B improves the passenger-processing deficiencies at Terminal One by creating new ticketing and baggage claim areas for a single carrier. The additional curbside in front of the processor would help alleviate congestion that currently occurs at peak hours in front of Terminal One. A passenger connector to Terminal One will allow the transfer of passengers from the existing terminal to the new processor on an interim basis or until the time it is deemed necessary to begin the process of replacing Terminal One. Concept B differs from A in that it allows the gate expansion to be more balanced along the flight line with consideration of needs beyond additional gates that should be addressed at Terminal One.

As depicted in **Figure 8-3**, Concept B 2015 consists of the following major components:

- Completion of four additional contact gates on Terminal Two West. This addition would include a new two-story processor with additional ticketing, new security screening, concessions, and outbound baggage areas. The processor could be phased in to allow for incremental expansion.
- Reconfiguration of the existing landside to extend additional curbside along the expanded Terminal Two West processor.
- Completion of the apron at the NTC site to allow for additional RON Parking.
- Development of a new structured parking facility adjacent to Terminal Two West.
- Expansion of surface parking facilities.
- Expansion of rental car facilities.
- Completion of expanded and improved air cargo facilities.
- Potential expansion of general aviation facilities.
- Development of possible hydrant fueling areas.

Phase Two

The continued development of Concept B to meet the needs of the airport through 2030 is depicted in **Figure 8-4**. The most important aspect of the 2030 development is 11 additional jet gates from the Phase One time period to increase the overall gate counts to approximately 61 contact gates. As depicted in the exhibit, Concept B 2030 includes the following major components:

8. Preliminary Concept Development

- Reconstruction of the entire Terminal One complex into a linear flightline and passenger processor.
- Creation and implementation of a new ground transportation access off of North Harbor Drive.
- Construction of surface/structured parking facilities in front of the new Terminal One.
- Construction of ground transportation, air cargo, and airport support facilities improvements on the former General Dynamics site.

8.1.3 Concept C

Phase One

Implementation of Concept C would result in the construction of up to 17 new narrow-body jet gates along a linear concourse extending east from the mid-point of existing Terminal One. As depicted in **Figure 8-5**, this concept replaces the East Rotunda of Terminal One with a new linear flight line consisting of 11 replacement gates, two new gates, and a re-configuration of the commuter positions. The depth of the apron for the new linear terminal will allow commuters to operate in apron areas that can also be used for full jet contact gate positions as the demand for gates increases. The first phase of Concept C development would include reconfiguration of the Commuter Terminal to allow passengers to connect between the expanded and existing facilities.

Concept C would improve significantly the passenger-processing deficiencies at Terminal One by creating a new ticketing and baggage claim area. The existing ticketing for carriers at the Terminal One West Rotunda could be replaced with additional concessions, and all ticketing and baggage claim could potentially occur in the new processor. New curbside in front of the processor would help alleviate congestion that currently occurs at peak hours in front of Terminal One. The secure concourse to the remaining portions of Terminal One will allow the transfer of passengers from the existing terminal to the new processor on an interim basis or until it is deemed necessary to begin the full replacement of Terminal One. Concept C differs from B in that it would permanently solve substantial deficiencies in processing, security screening, and concessions at Terminal One in an incremental manner, allowing the terminal to be phased out as demand warrants. As depicted in **Figure 8-5**, Concept C 2015 consists of the following major components:

- Replacement of the East Rotunda of Terminal One, utilizing the existing landside access into Commuter Terminal area as the new access to the facility.
- Completion of two additional gates along with 11 replacement gates at Terminal One.
- Addition of eight new gates at Terminal Two West and full build-out of the terminal processor at Terminal Two West.
- Reconfiguration of the existing landside to extend additional curbside along the expanded Terminal Two West processor.
- Completion of the apron at the NTC site to allow for additional RON Parking.
- Development of a new structured parking facility adjacent to Terminal Two West.
- Expansion of surface parking facilities, including the area in front of the new Terminal One.
- Expansion of rental car facilities in possible structures.

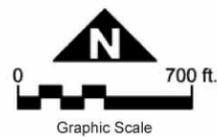
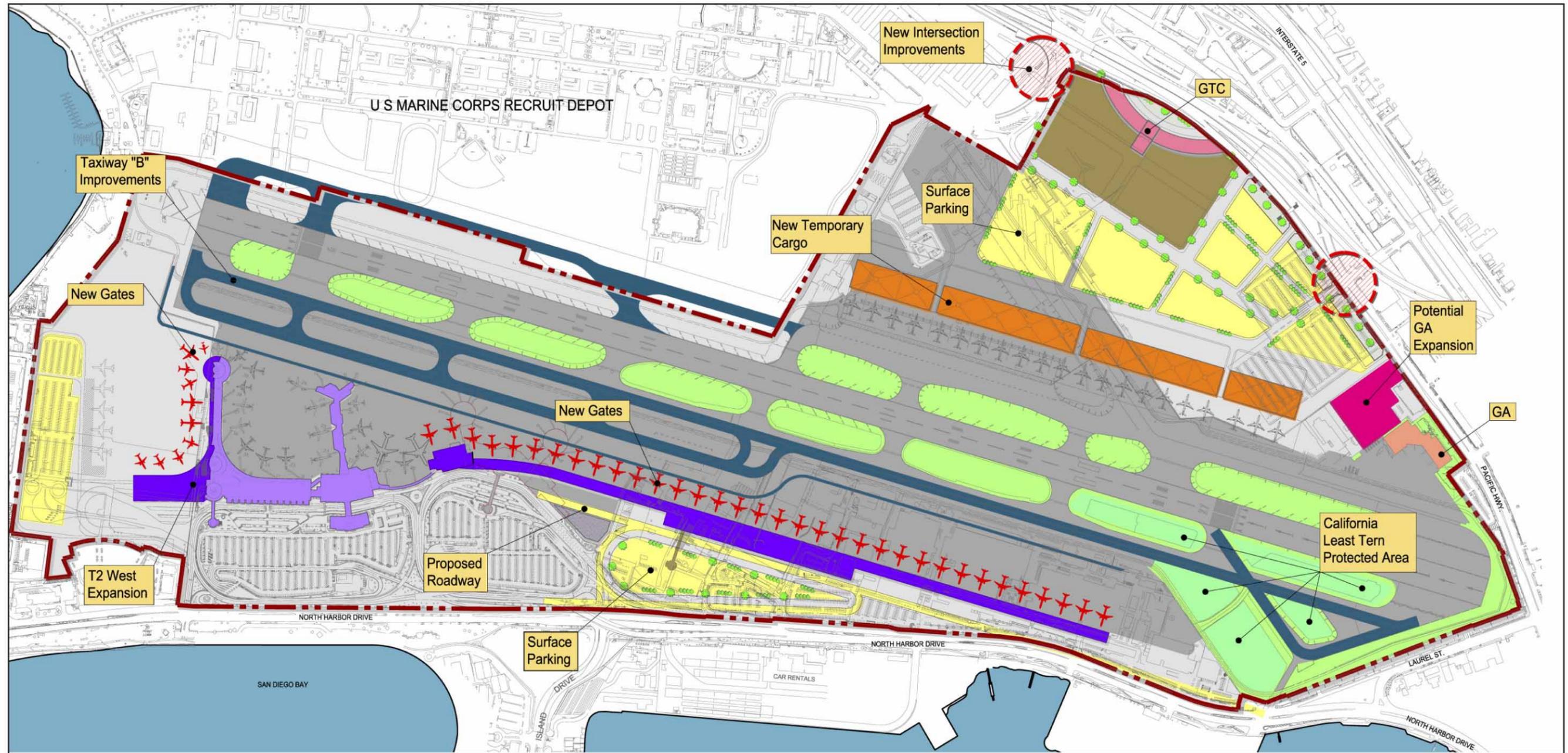


Figure 8-2

Concept A - 2030

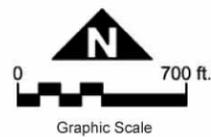
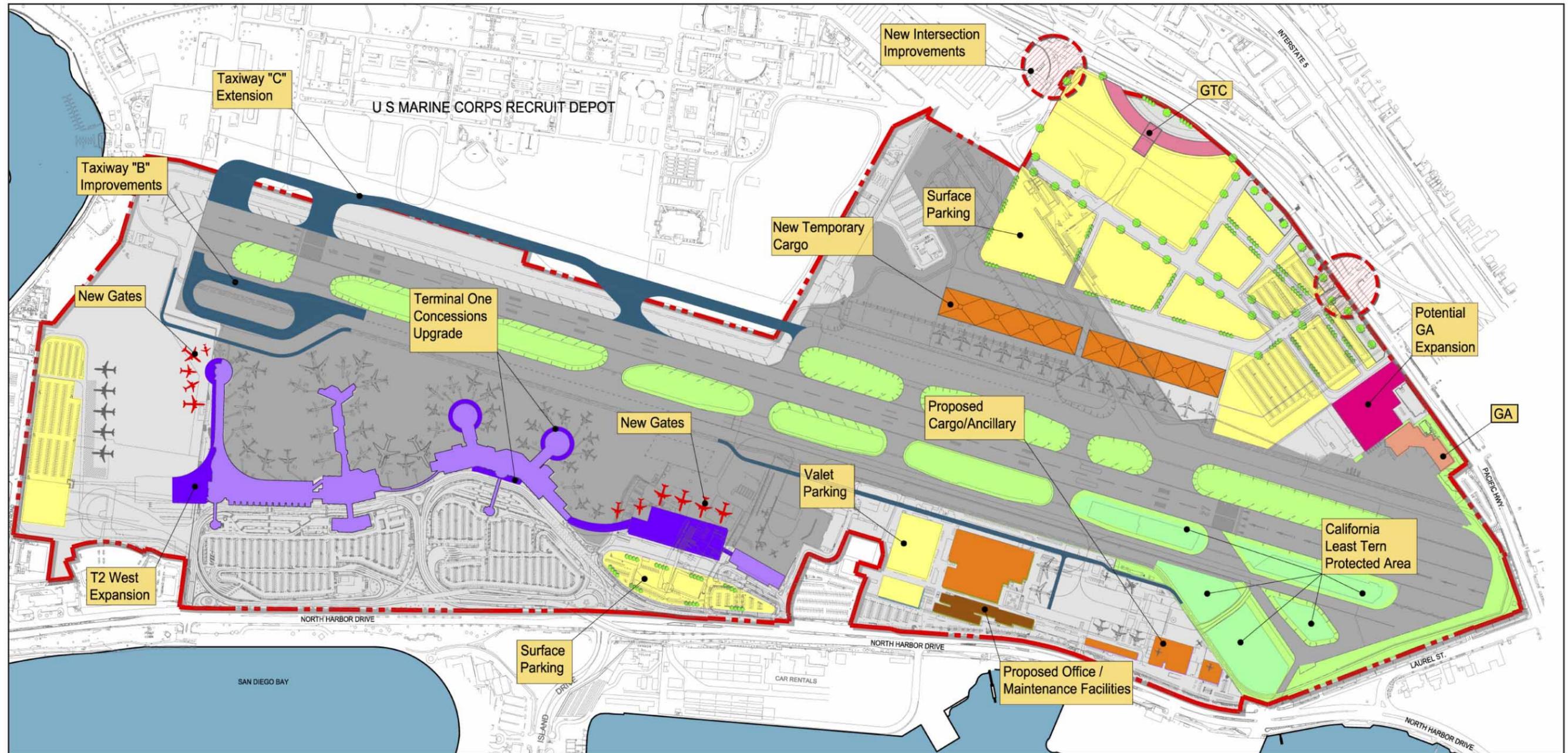


Figure 8-3

Concept B - 2015

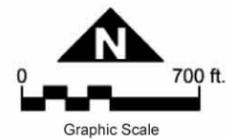
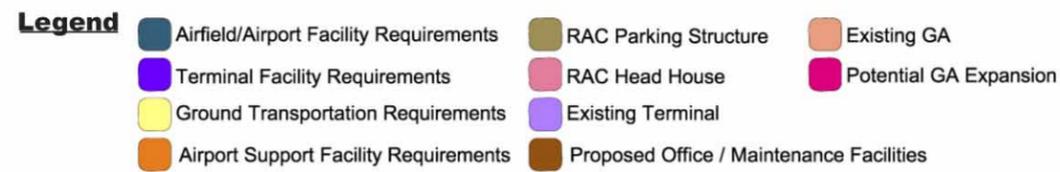
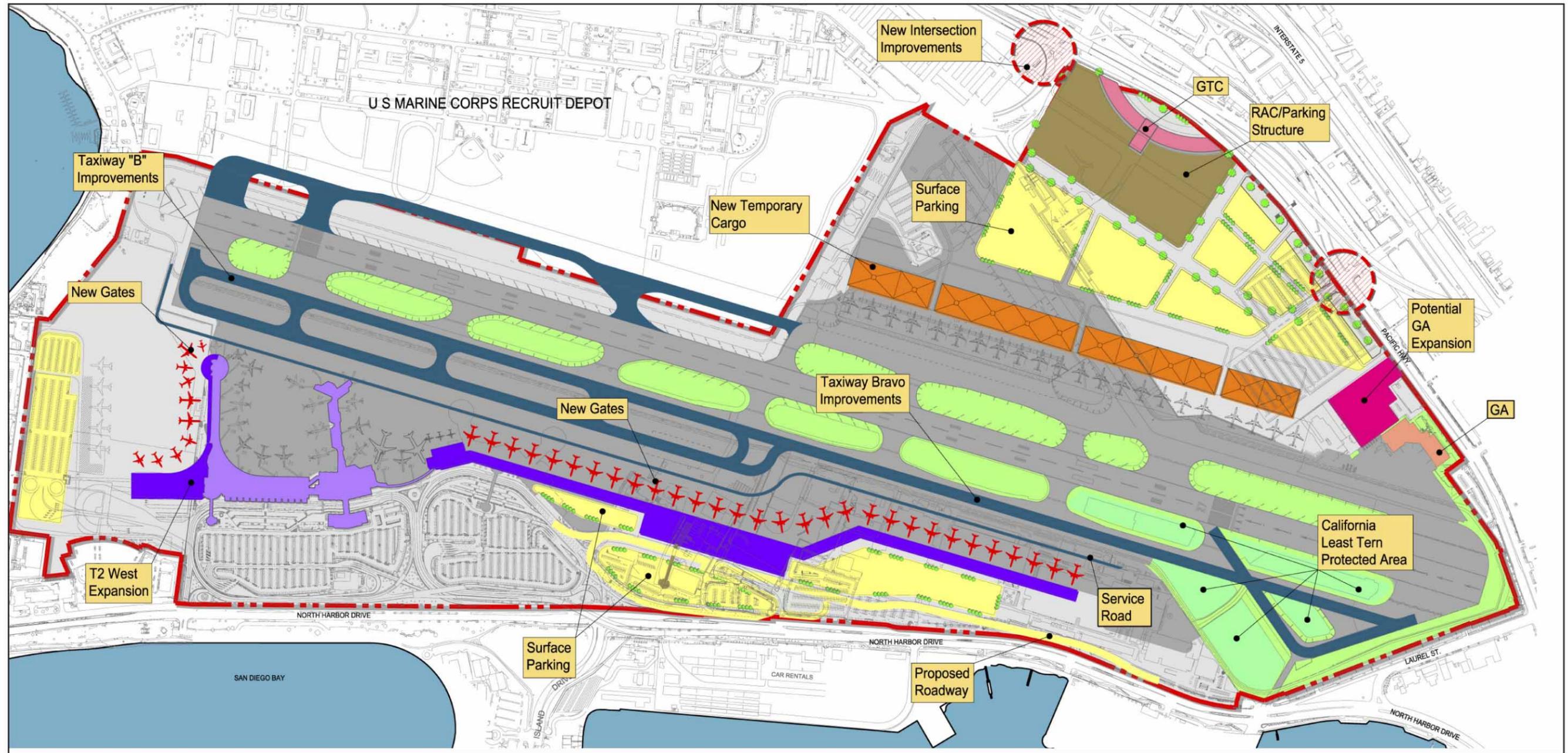
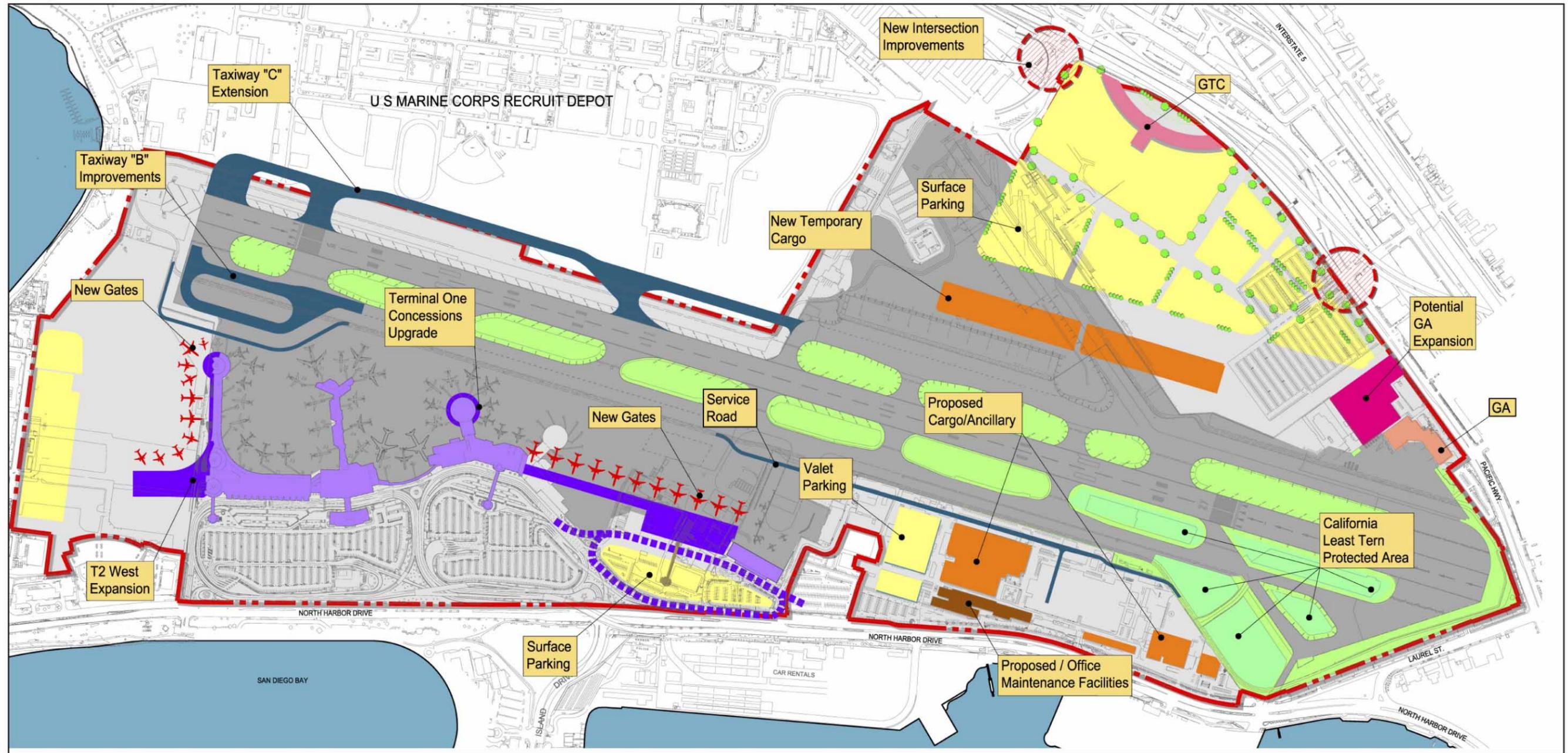


Figure 8-4

Concept B - 2030



Legend

- | | | |
|--|--|------------------------|
| Airfield/Airport Facility Requirements | RAC Parking Structure | Existing GA |
| Terminal Facility Requirements | RAC Head House | Potential GA Expansion |
| Ground Transportation Requirements | Existing Terminal | |
| Airport Support Facility Requirements | Proposed Office / Maintenance Facilities | |



Figure 8-5

Concept C - 2015

- Expansion of and improvement to air cargo facilities.
- Potential expansion of general aviation facilities.
- Development of possible hydrant fueling areas.

Phase Two

The continued development of Concept C to meet the needs of the Airport through 2030 is depicted in **Figure 8-6**. The most important aspect of the 2030 development is the addition of new 11 jet gates from the 2015 time period to increase the overall gate counts to +/- 62 contact gates. Concept C would also complete the replacement of Terminal One and would create new ground transportation access directly off of North Harbor Drive. As depicted in the exhibit, Concept C 2030 consists of the following major components:

- Reconstruction of the entire Terminal One complex into a linear flightline and passenger processor.
- Creation and implementation of a new ground transportation access off of North Harbor Drive.
- Construction of additional surface/structured parking facilities in front of the new Terminal One.
- Completion of expanded and improved air cargo facilities.
- Potential expansion of general aviation facilities.
- Development of possible hydrant fueling area.

8.2 Concept F

Concept F is carried over from the previous Master Plan for SDIA. This concept was also known as "Concept F" in the previous Master Plan; hence, there is no Concept D or E in this update. The previous Master Plan concepts were developed without the consideration that Lindbergh Field may be replaced in the future and also assumed that the Marine Corps Recruit Depot (MCRD) property, located adjacent to Lindbergh Field, would be available for acquisition. Thus, the previous Master Plan considered several concepts that added a second runway. **Figure 8-7** illustrates the first phase of Concept F in 2015 and **Figure 8-8** illustrates the final phase of Concept F in 2030. The second runway would utilize the MCRD property and would be aligned north of existing Runway 9-27. The runways would not be parallel and would not operate independent from one another.

This Master Plan does not consider that the acquisition of the MCRD property is a feasible proposition at this time. However, because it was considered previously, it is important to illustrate how development of additional airside and landside facilities were contemplated previously through presentation of the previously preferred concept.

According to the previous Master Plan study, the most appropriate use of the MCRD site would be the addition of a second dependent runway which would reduce congestion and allow an increase in airport capacity.

Though, Concept F does present a feasible long-term alternative for development of additional runway capacity, it is entirely contingent on the successful acquisition of the entire MCRD property by the Authority and the ability to utilize it for aviation related development, such as a runway and airport facilities (terminals, cargo, etc.).

8.3 Minimal Build Concept

A Minimal Build Concept was developed to address the possibility that a new location would be identified by the ASSP for relocation of the region's primary commercial service airport. As stated in the introduction, 2015 is assumed to be the earliest possible date for relocation given that a potential site

8. Preliminary Concept Development

would need to be identified, acquired, and developed prior to commencement of operations. The Minimal Build concept employs a two-staged development approach to meet the needs for gates, airfield improvements, and ground transportation improvements in a conservative manner, thus limiting capital expenditures at Lindbergh Field. Further, the Minimal Build Concept is compatible with Concepts A, B, C, and F in that implementation of the Minimal Build Concept would still allow the Authority to develop the other concepts with minimal disruption. The Minimal Build Concept is presented last in this chapter because it was developed to accommodate the reality of the uncertainty the Authority currently faces about the future of Lindbergh Field, yet it remains compatible with the long-range vision presented in the preceding concepts.

Phase One

Phase One, as depicted in **Figure 8-9**, shows the following improvements to meet the needs of the Airport by 2008.

- Completion of an apron at the Naval Training Center (NTC) site to allow for additional remain overnight (RON) aircraft parking positions.
- Implementation of surface parking west of the new apron area for employees as well as passengers.
- Addition of four gates at the end of the rotunda on Terminal Two West; new holdrooms and concession area.
- Completion of Taxiway B improvements at west end of the airfield (dual B) and fully extended and Group V-capable Taxiway B along the northern edge of the former Teledyne-Ryan property.
- Relocation of Air-Lane Cargo Complex facilities to former Teledyne-Ryan or General Dynamics sites.
- Completion of new surface parking adjacent to Commuter Terminal.
- Completion of an additional hardstand at Terminal One.
- Improvements to ground transportation and airport support facilities on the former General Dynamics site.

Phase Two

Phase Two, as depicted in **Figure 8-10**, illustrates that the following improvements are necessary to meet the needs of the Airport by 2015. It is assumed at this phase that no further developments would occur at SDIA since the region would be ready to open a new airport on the selected site.

- Continue build out of Terminal Two West for the addition of eight gates including new holdrooms and concessions areas. It is intended that additional passenger processing capabilities (e.g., ticketing) would be added to Terminal Two West; however, it would occur in a ground-level, temporary facility constructed to serve the airlines through the interim period. This facility would contain e-ticket kiosks, a traditional linear counter for airlines and additional outbound baggage carousels for rotation. The existing baggage claim at Terminal Two West has a sufficient capacity with two additional planned carousels to handle peak passenger arrivals for all of Terminal Two West and Terminal Two East.
- Begin construction of an additional temporary holdroom and concession areas at Terminal One to provide two additional positions east of the existing Gates 1 and 2. Terminal One would also be improved through the Retail Enhancement Program, creating additional space for secure concessions and holdrooms on both the East and West Rotundas.
- Continue ground transportation improvements including expanded rental car facilities either on the former Teledyne-Ryan or General Dynamics sites.
- Expand and improve air cargo facilities on the former Teledyne-Ryan and General Dynamics sites.
- Potential expansion of general aviation facilities.

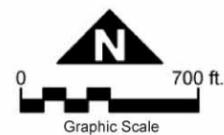
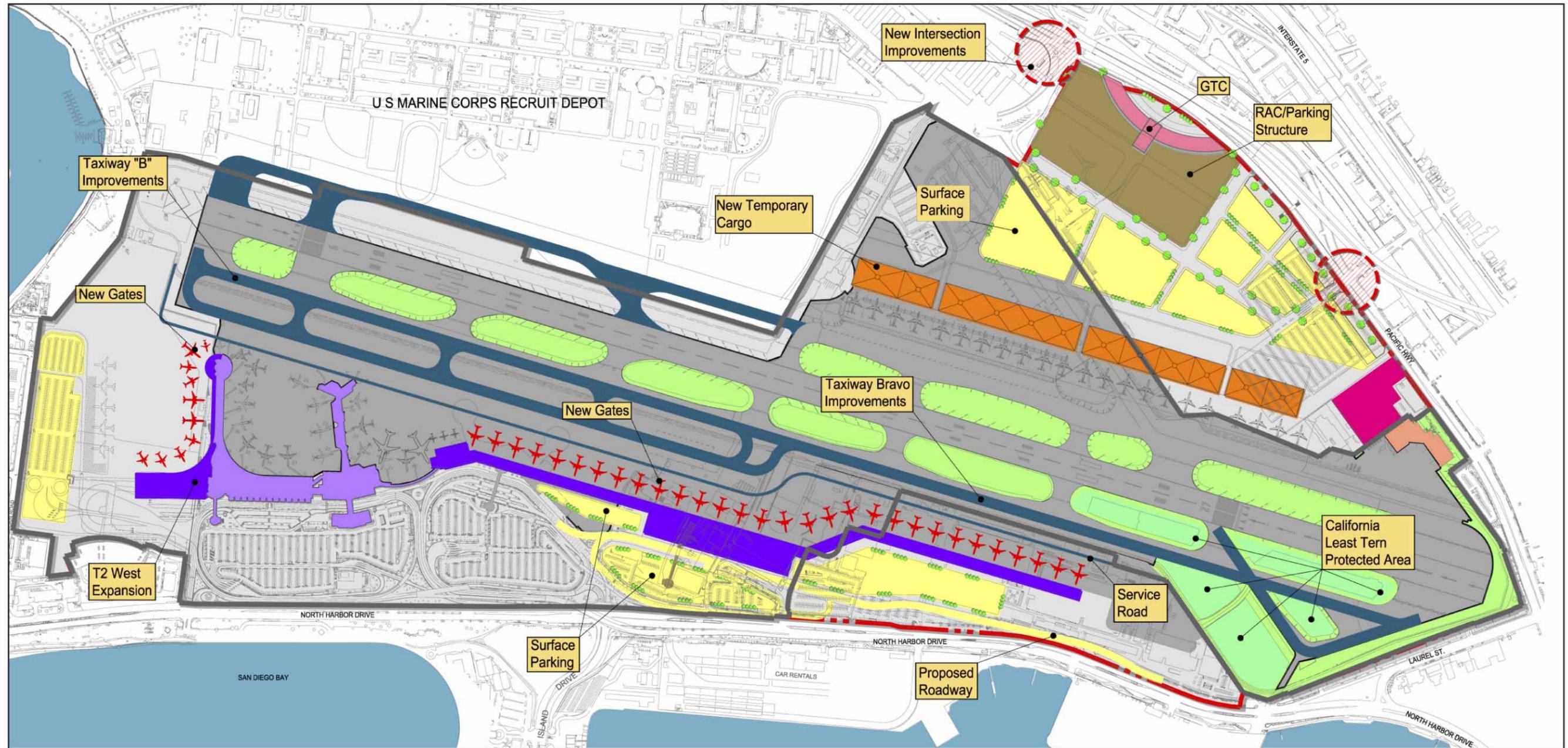


Figure 8-6

Concept C - 2030

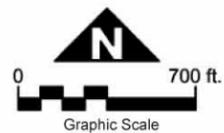
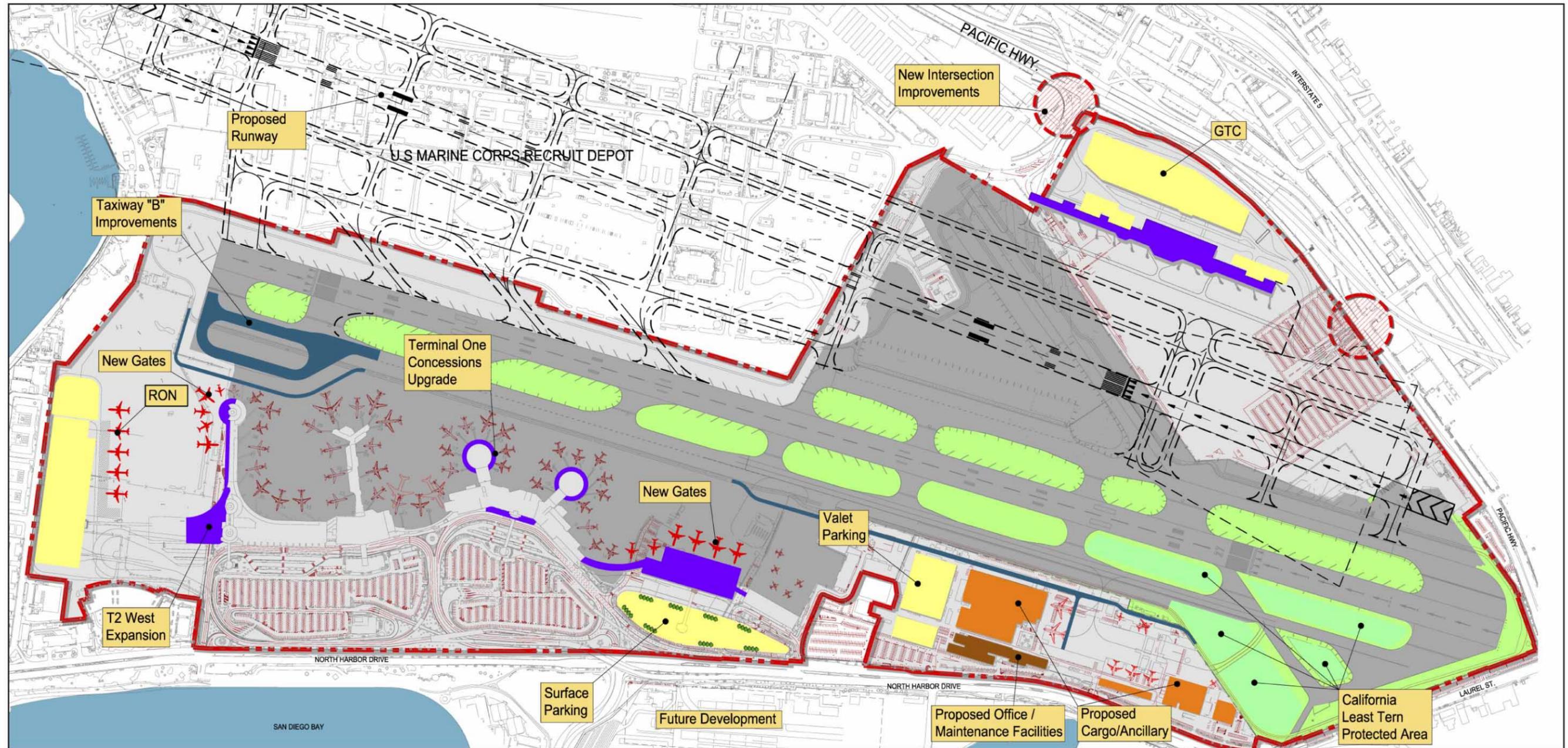
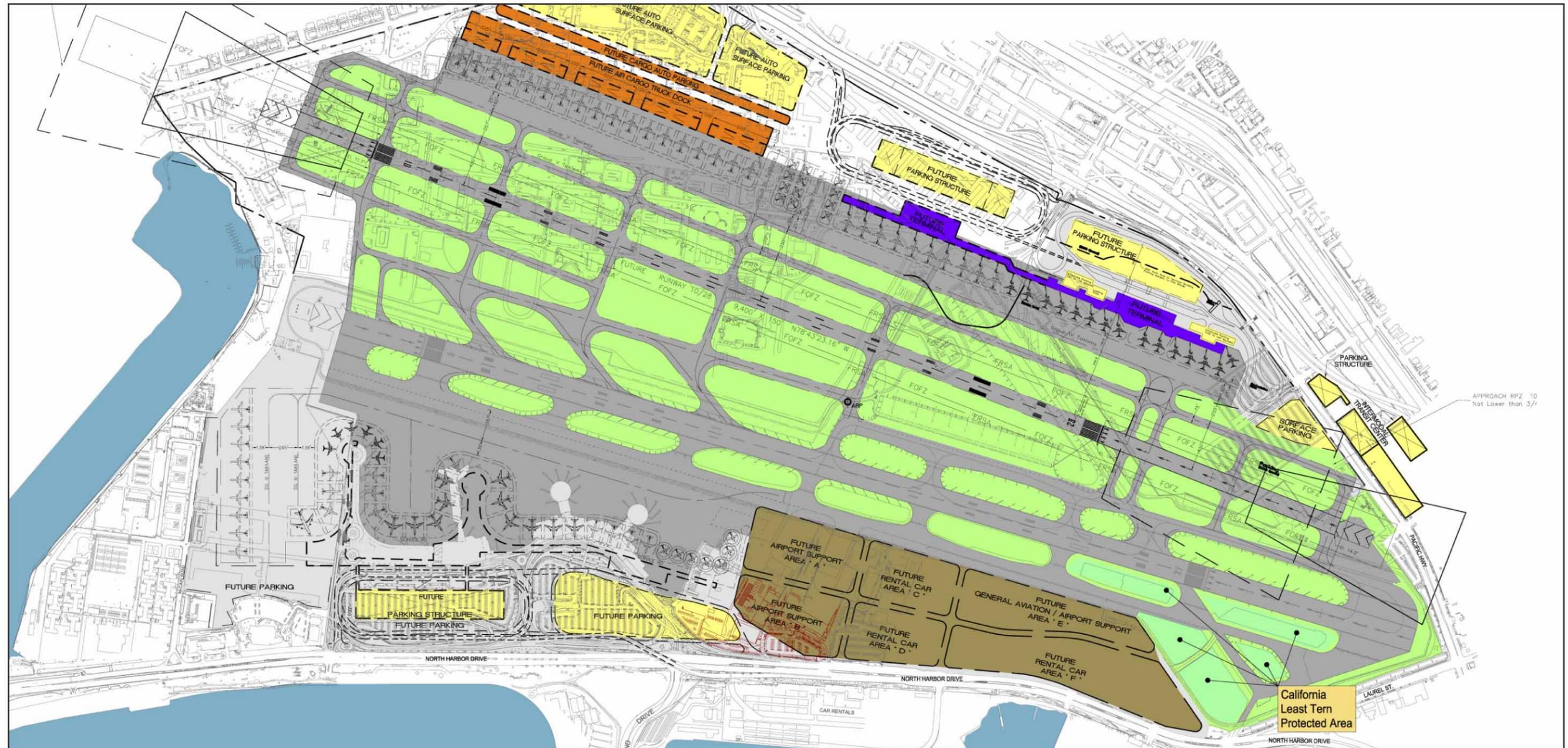


Figure 8-7

Concept F - 2015



- Legend**
- Airfield/Airport Facility Requirements
 - RAC Parking Structure
 - Existing GA
 - Terminal Facility Requirements
 - RAC Head House
 - Potential GA Expansion
 - Ground Transportation Requirements
 - Existing Terminal
 - Airport Support Facility Requirements
 - Proposed Office / Maintenance Facilities

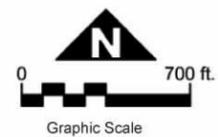


Figure 8-8

Concept F - 2030

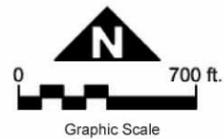
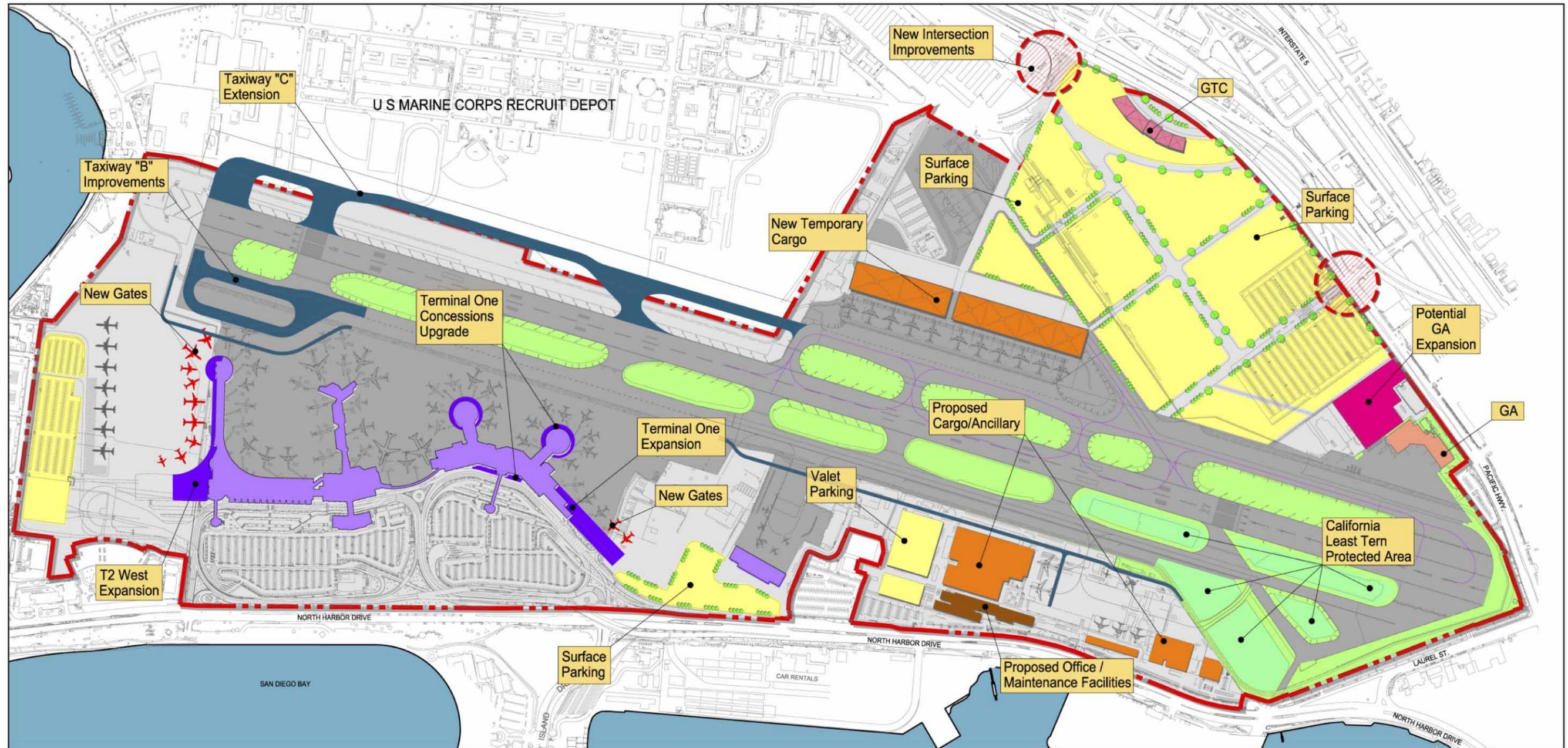


Figure 8-10

Minimal Build Concept - 2010-2015

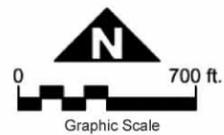
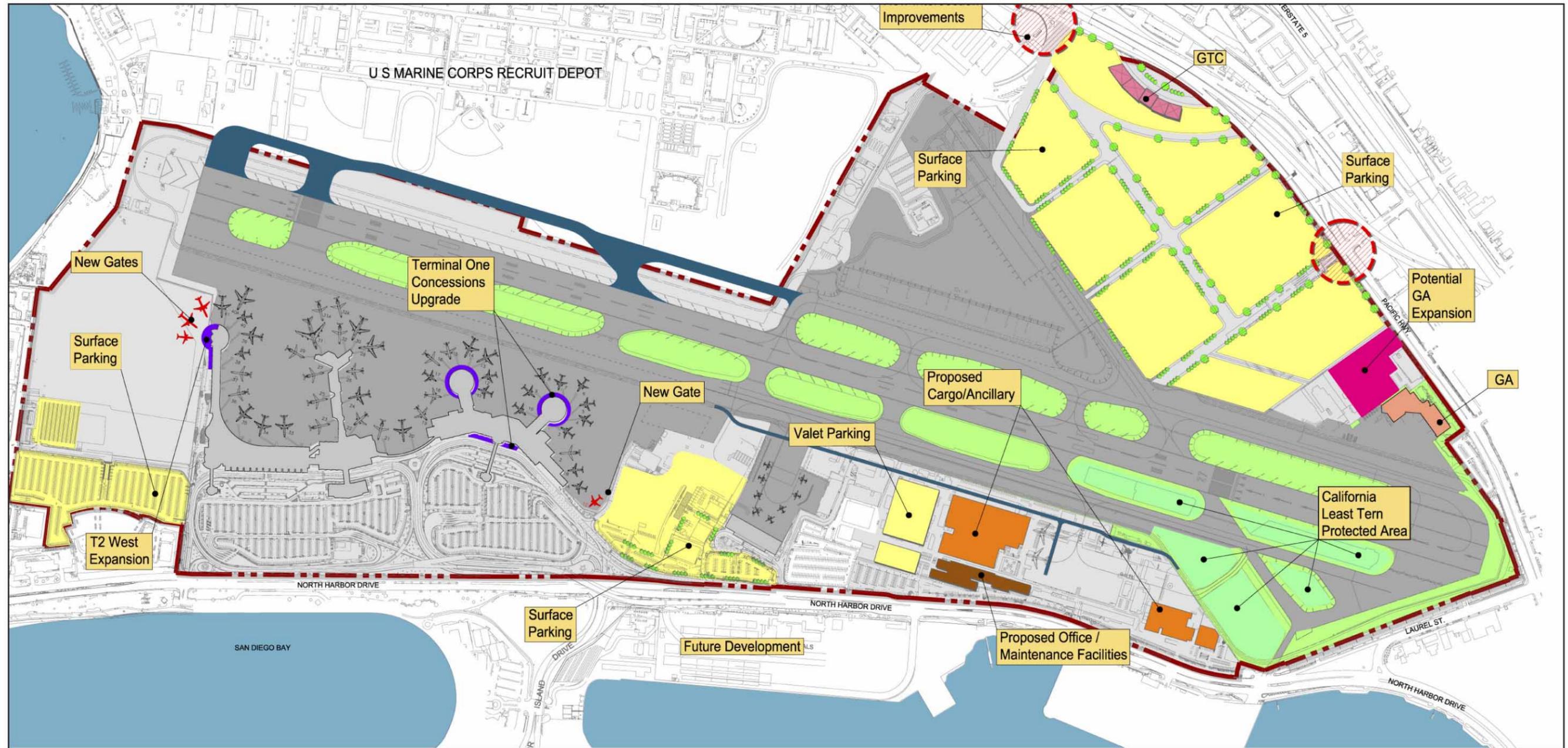


Figure 8-9

Minimal Build Concept - 2005-2010

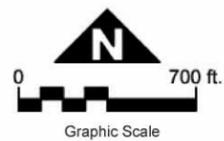
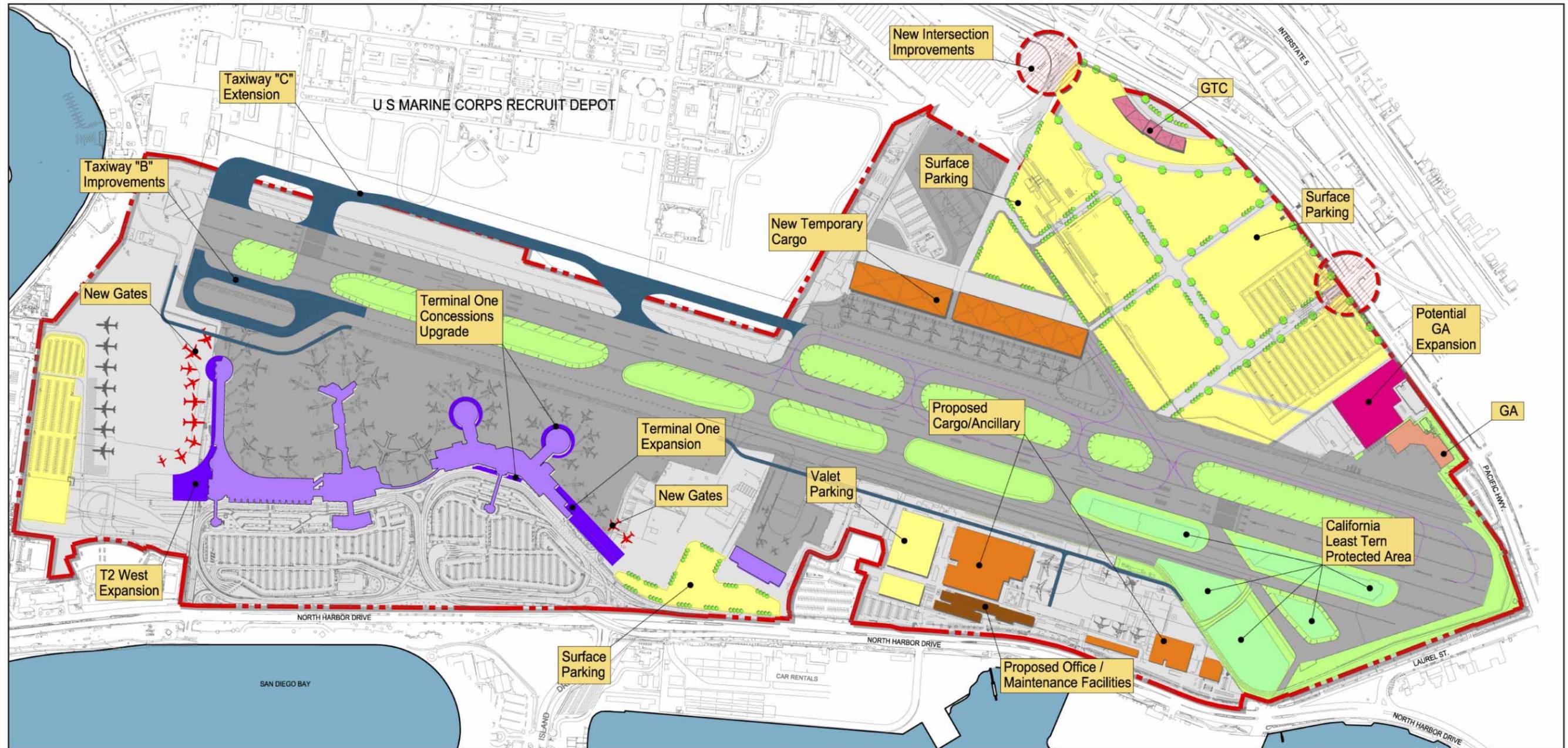


Figure 8-10

Minimal Build Concept - 2010-2015

