

SAN DIEGO

International Airport



AIRPORT MASTER PLAN
SAN DIEGO INTERNATIONAL AIRPORT

CHAPTER 10

Implementation of the Preferred Alternative Program

10. IMPLEMENTATION OF THE PREFERRED ALTERNATIVE PROGRAM

10.1 Program Objectives

The Terminal 2 West development program presented in this section refines and summarizes preliminary conclusions and recommendations identified in technical analyses and studies developed by the consultant team and refined through comments received by the Authority.

Program implementation was defined through a series of Airport Master Plan Technical Committee meetings which sought to further specify the parameters of development for the preferred Master Plan Alternative - the Build Out of Terminal 2 West.

Key program objectives include maximizing the use of the available site, expanding the current terminal building to ensure high levels of passenger service, and maintaining functional components of the Terminal 2 West facility. In addition, the development program must integrate a new in-line baggage screening system, which will screen all bags in both the existing and expanded facilities. The requirements of this system will comply with the Transportation Security Administration (TSA) security requirements and guidelines.

The information contained within this chapter has been updated since the previous release of the Master Plan dated May 2006. Since that time, the master plan program definition has evolved allowing the master plan team to further refine the characteristics of the proposed project.

Of special note is that since the previous release of the master plan, two key events have impacted the team's development of the proposed Terminal 2 West expansion. First, in November 2006, the voters of San Diego County rejected a ballot measure that would have continued to explore opportunities to relocate the region's primary commercial service airport. This means that for the foreseeable future the region's primary airport will remain at its current location. As stated throughout this document, the master plan was developed with the potential for this outcome. Thus, the analysis and recommendations remain valid. Secondly, Boeing has officially launched the 787 aircraft program and the new aircraft is expected to begin commercial service in 2008. The aircraft has become the best selling pre-launch aircraft in history, with more than 710 aircraft ordered by 48 airlines worldwide through September 2007. The Boeing 787's success relates to the San Diego Master Plan because the aircraft is designed to replace the Boeing 767, the only widebody passenger aircraft presently operated at SDIA, and because its efficiency allows it to connect medium sized international markets. Central to this efficiency is the aircraft's wing, which is much larger than the Boeing 767 it is intended to replace. The efficient dynamics of the aircraft have resulted in its having a 50 foot greater wingspan than the 767. Thus, even though it has roughly the same number of seats, it has a wingspan nearly as large as a Boeing 747. The implication of this fact on the proposed facility is that the aircraft gates and apron areas must be designed to accommodate this larger aircraft.

During 2006 the master plan team engaged stakeholders and further refined the proposed facility. In addition to accommodating larger aircraft, the facility will also be better positioned to operate in a common-use configuration, and accommodate forecast growth in international service in the future. The remainder of Chapter 10 reflects the refined facility description as of September 2007.

The following table summarizes the most recent facility requirement components, which are addressed in the implementation of the Terminal 2 West development program.

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Table 10-1

2015 Terminal 2 West Expansion Program

Facility	Units	Notes
Terminal		
Contact Jet Gates	10	Airport Master Plan Gate Requirements
Area	430,100 SF	Airport Master Plan and Implementation Plan
Ground Transportation		
Terminal Area Parking Spaces	4,300	Provided at the Terminal 2 Parking Structure
Ground Transit Curb	340 LF	Airport Master Plan and Implementation Plan
Private Vehicle Departure Curb	530 LF	Airport Master Plan and Implementation Plan
Private Vehicle Arrival Curb	360 LF	Airport Master Plan and Implementation Plan
Airfield		
Taxilane Access to Gates/RON Parking	Group V	Single loop taxilane
Remain Over-Night (RON) Positions	10	4 Widebody / 6 Narrowbody
Taxiways	Dual T/W B	New parallel taxiway provided north of T2W

Source: HNTB Analysis, 2004 - 2007

10.1.1 Planning Assumptions

Alternative terminal configurations were evaluated through the Technical Committee meetings between staff and the consultant team. The following programmatic decisions are the result of a consensus of opinion generated during the technical committee meetings and include rationale for the configuration of the proposed terminal expansion. As previously mentioned, the rationale for expansion confirms previous analyses and includes the following guidelines:

1. The terminal expansion should provide ticketing and baggage claim facilities on two levels. Although a single-level processor and dual level concourse beyond is feasible, it would place ticketing facilities on different levels and complicate passenger way-finding.
2. Security screening should be located in the center of the facility on the upper level to minimize walking distances and provide logical passenger way finding for departing passengers.
3. The lower level of the facility should contain an Explosive Detection System (EDS) room centrally located to the complex to minimize distances covered by outbound baggage conveyor belts. The EDS room will provide 100% in-line screening for all outbound bags in Terminal 2 West.
4. A below grade baggage screening room is not necessary because there is sufficient area at grade to accommodate the facility at the apron level.
5. Two to three additional baggage carousels will be required to accommodate peak hour arrival passenger demand. A common-use baggage management system will help balance carousel utilization between arriving flights.
6. The baggage claim area could provide concession opportunities for arriving passengers and meter greeter traffic.
7. Opportunities to expand the terminal curbside and develop a second-level curb should be explored. The consultant team and staff developed a concept which allows the use of a portion of the proposed parking structure as a private vehicle departure curb. The second level departure curb provides additional curb length to support the new gates and allows passengers being dropped off on the curb to enter the terminal on the ticketing level. This was considered to be a higher level of service than

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what exists today and reduces curbside congestion at Terminal 2 by segregating arrival and departure curbside functions. The second level departure curb would serve both Terminal 2 West and Terminal 2 East.

8. Concessions opportunities should be considered an important part of the overall program. The development of a central concession core after the security checkpoint to capture the greatest amount of passenger traffic should be considered a priority.
9. The use of new technologies to improve gate utilization efficiency should be considered. Common Use Terminal Equipment (CUTE) and Common User Self-Service (CUSS) kiosks should be planned for and included in the program where possible.
10. The Implementation Plan would maximize the investment in the ten year old Terminal 2 West building and the former Navel Training Center (NTC) property. The Implementation Plan also assures prudent use of available land and preserves other airport property to meet future demand.

10.1.2 Terminal 2 West Description

The Terminal 2 West development program is based on expansion of the current facility. The arrival and departure levels of the current facility are shown in **Figures 10-1** and **10-2**, respectively. The primary terminal functions are shown in color.

The current Terminal 2 West roadway and access plan is shown in **Figure 10-3**, which illustrates vehicle flows throughout the terminal area.

10.1.3 Terminal Planning Guidelines

The layout of the terminal expansion is primarily based on accepted airport industry standards* and dimensions as described below. Peak-hour passenger flow volumes and analysis of overall facility way finding were conducted in 2006 to validate the program requirements.

Level Of Service (LOS) criteria are a measure of how well the passenger demand is served and are defined as the quality or conditions of service that passengers experience at a facility. LOS criteria are normally expressed as a measure of either (1) passenger inconvenience (e.g., waiting times or missed flights); or (2) the space, size, or number of facilities available for processing passengers (e.g., the terminal building area in square feet per passenger, the ticket counter length in linear feet per passenger, baggage claim area and belt length, Federal Inspection Services (FIS) facilities, holdrooms, concessions, etc.).

Generally, an airport facility is sized for a particular useful service life. Therefore, when it first opens, the LOS provided at the facility is typically (and desirably) better than the adopted criterion. By the end of the facility's service life, the LOS provided is typically worse than the criterion due to the fact that facilities are not typically improved or replaced until after their intended peak throughput is exceeded. Thus, LOS changes as traffic increases and, at some point, additional or expanded facilities may be needed to again provide a high LOS.

Below are planning guidelines used in the program development for primary public terminal components of the Preferred Alternative.

Ticket Lobby - The overall dimension from front of ticket counter to curtain wall should match or exceed the current lobby dimension. Vertical circulation cores located within this footprint reduce the overall queue depth by approximately ten feet. It is anticipated that the use of CUTE and new electronic check-in technologies may reduce the overall need for ticket lobby queue space. Further coordination with staff and stakeholders will define the final dimension for this space and over-all length of ticket counter.

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Passenger Security Screening - By evaluating the 2015 flight schedule as well as time distributions for both domestic and international passengers arriving at the security check,¹³ passenger demand at the security check was calculated in a sensitivity analysis for processing rates. Between 130-140 passengers per hour, per lane was assumed to be the processing rate for passengers at SAN.

As a result, 10 fully operational security check lanes are required to meet passenger demand through 2015. Two security check lanes are recommended to provide both redundancy and a dedicated lane for crew members and staff.

Holdrooms - The concourse holdroom width is typically thirty feet wide. The facility should accommodate a mix of narrow-body and wide-body aircraft with a minimum of five parking positions for Group IV, or larger, aircraft. The overall holdroom square footage will need to accommodate larger aircraft and higher load factors in future years, including the potential for international flights. Further analysis determined load factor criteria. Additional analysis and stakeholder input will determine:

- Carrier scenarios and gate utilization
- Passenger Profiles (Sitting/Standing and Arrival Distribution at Holdroom)

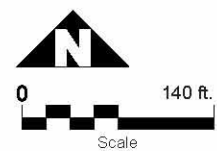
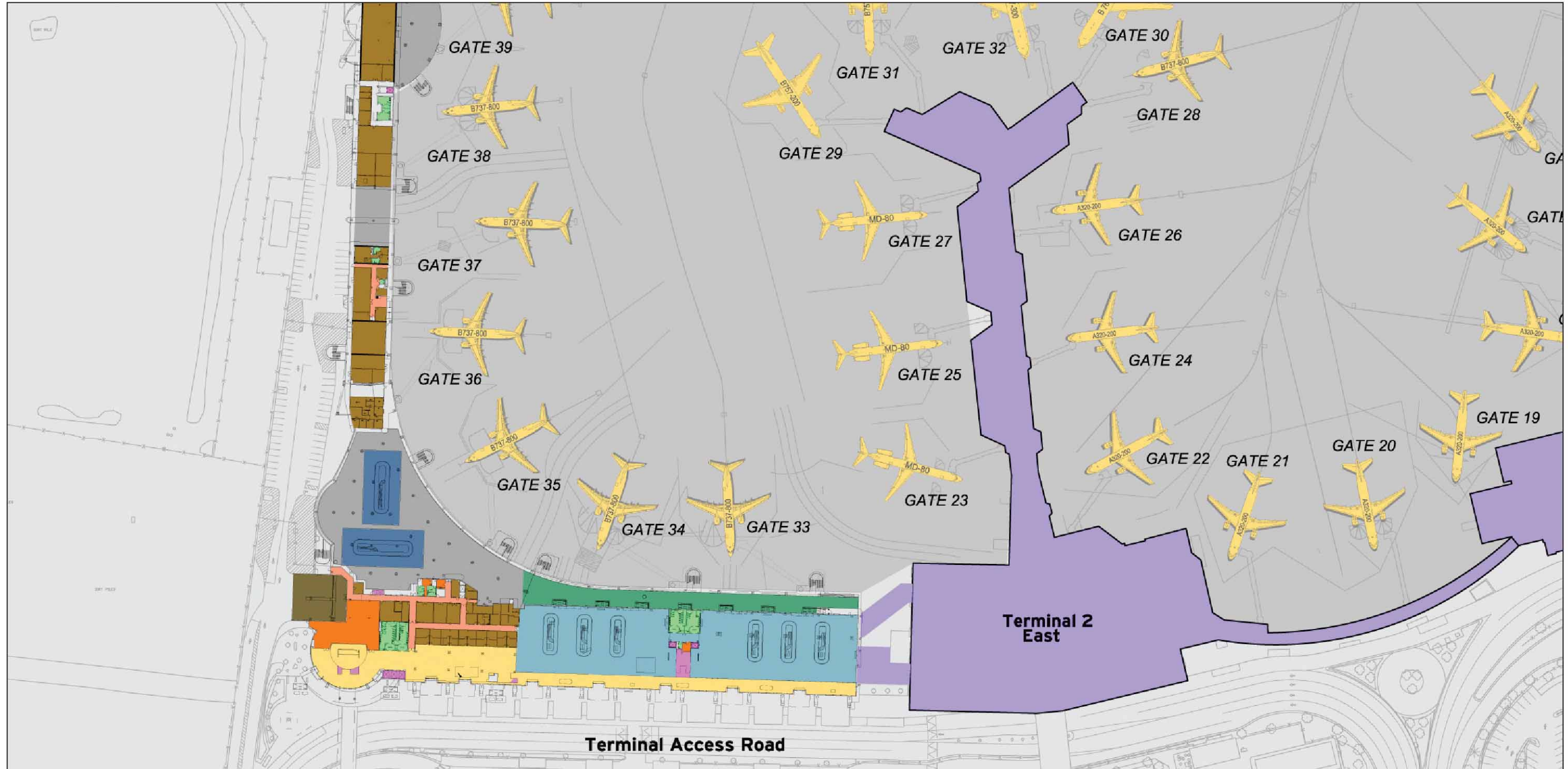
Although these criteria may affect the overall holdroom size, and there is flexibility to provide a deeper holdroom, the consultant team does not recommend increasing the depth of the hold rooms at this time. Further analysis will determine the economy of shared holdroom space depending on specific carrier scenarios and likely flight schedules.

Concessions - The consultant team with staff input determined that the terminal expansion should contain a centralized concession core. The facility requirements developed as part of the Airport Master Plan indicated the need for a minimum of 68,000 additional square feet of concession space airport-wide to meet demand levels in 2015. This represents approximately double the amount which exists within the terminal areas today. Typical concession provisions per enplaned passengers in domestic terminals are often inadequate. The need for space at the lower level to house baggage screening creates an opportunity to capture a large enclosed space at the upper level post security for this function, thus addressing a large part of the projected concession area deficiencies. In addition, planning for access to the concession core from the apron, for delivery of goods, will require further coordination with stakeholders. Currently a dock-master system is planned as a means to limit airside vehicle congestion.

Baggage Claim - The existing baggage claim lobby was originally planned to accommodate additional devices to support an expansion of Terminal 2 West. Currently, the existing six claim devices, which support all aircraft gate positions for Terminal 2, have a slight surplus of capacity to handle and present baggage to arriving passengers.

Through the use of management techniques, such as demand driven claim utilization, and the addition of two to three additional claim devices, passenger baggage demand can be accommodated through 2015. Further analysis of the baggage system determined that in-bound baggage can be routed to the existing claim area without increasing congestion airside along the existing tug lanes.

¹³ IATA Airport Development Reference Manual, 8th Edition, April 1995; and FAA Advisory Circulars 150/5300-13, March 1997; FAA Report No. FAA-RD-75-191 "The Apron and Terminal Building Planning Manual."

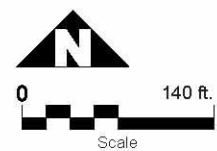
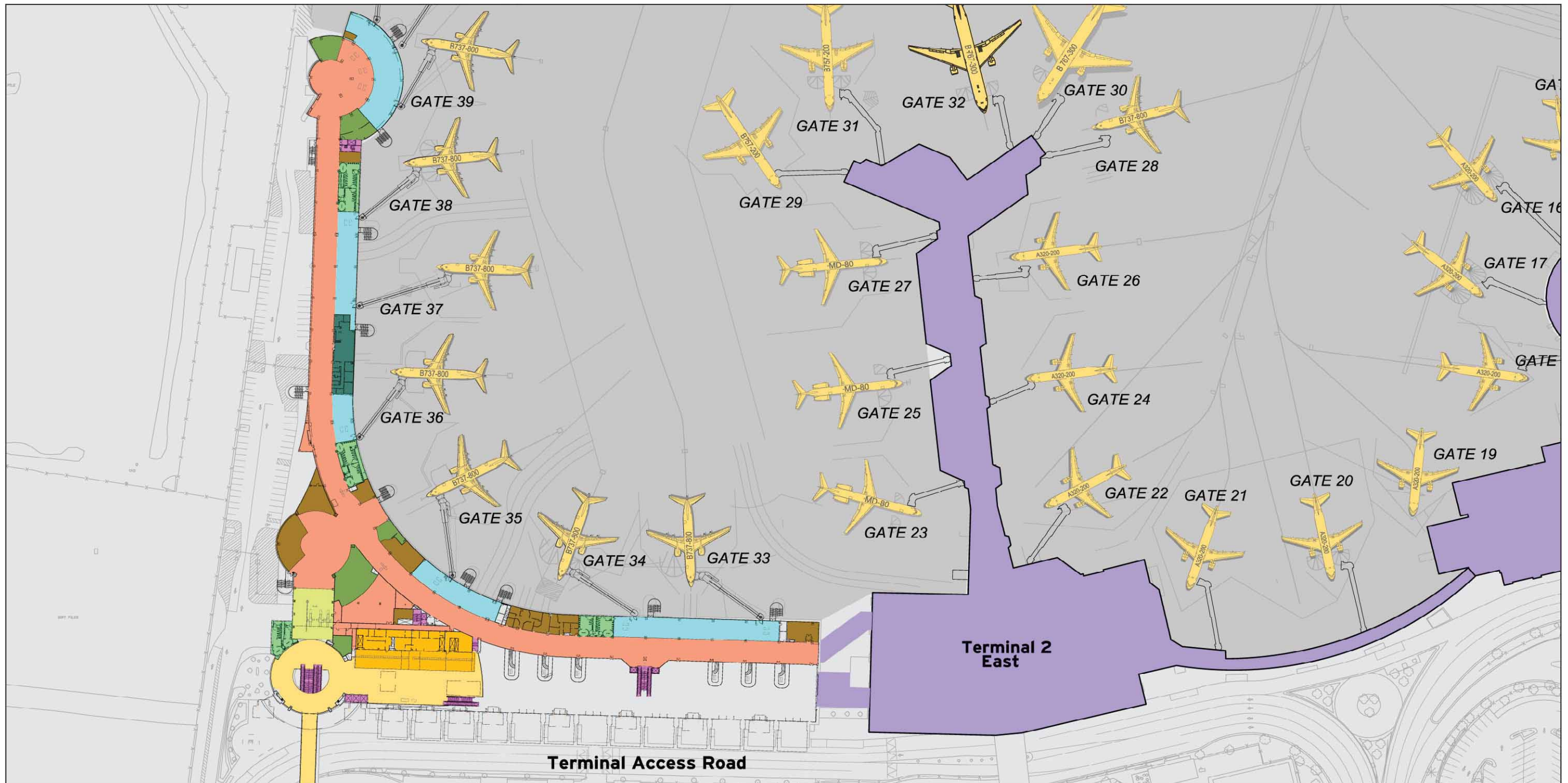


Legend

- | | | | | | |
|----------------------|------------------------|--------------------------|--------------------|------------|----------------|
| Vertical Circulation | Baggage Claim | Mechanical / Maintenance | Restrooms | Operations | Security / TSA |
| Inbound Baggage | Loading Dock / Storage | Sheltered Space | Public Circulation | Ticketing | Airline Club |
| Outbound Baggage | Offices | Existing Terminal | Secure Circulation | Holdrooms | Concessions |

Figure 10-1

Terminal 2 West Level 1



Legend

- | | | | | |
|---|---|---|---|---|
| Vertical Circulation | Baggage Claim | Mechanical / Maintenance | Restrooms | Operations |
| Inbound Baggage | Loading Dock / Storage | Sheltered Space | Public Circulation | Ticketing |
| Outbound Baggage | Offices | Existing Terminal | Secure Circulation | Holdrooms |

Figure 10-2

Terminal 2 West Level 2

10.2 Preferred Alternative Overview

The organization and layout of the terminal expansion concept is based on ten strategic programmatic guidelines. These guidelines were developed to ensure compatibility between terminal, landside, and airside development and include:

- Expanding and double loading the Terminal 2 West concourse with the addition of ten new aircraft parking positions. These ten new positions meet the forecast demand for gated jet aircraft positions as determined by the Airport Master Plan by 2015.
- A minimum of five widebody aircraft should be accommodated simultaneously.
- Group V taxi lane access is provided to serve all gates and RON positions.
- The existing widebody gates (40 and 41) at the north end of the Terminal 2 West concourse can be reconfigured to accommodate an additional taxiway parallel to Taxiway B.
- The Terminal 2 West expansion should develop new ticketing and baggage handling functions within a two-level terminal expansion to the west.
- Provide two new baggage claim devices within an expanded Terminal 2 baggage claim lobby.
- Reconfigure and expand terminal roadways, parking facilities, and curbsides to accommodate and support the terminal expansion.
- Provide a new parking structure adjacent to expanded Terminal Two.
- Incorporate a transit plaza and second level departure curb within the parking structure.
- Provide ten Remain Over Night (RON) positions at the west apron area.

10.3 Preferred Alternative Program Development

This section describes the configuration of the terminal site for the Terminal 2 West expansion concept. The sequence of passenger flows through the terminal building and site highlight landside and airside programmatic functions and processes related to passenger circulation and terminal operations. The Terminal 2 West expansion includes approximately 175,000 SF of area on the baggage-claim level and approximately 170,000 SF of area on the ticketing and hold-room level. An additional 60,000 SF of space is provided on the third level to accommodate airline club rooms, support facilities, and circulation. A fourth, mechanical level would total 21,000 SF. The total increase in terminal and concourse area is approximately 430,100 SF of area including all conditioned and non-conditioned space.

A Preliminary Terminal 2 West Area Summary appears in **Table 10-2** of this report.

10.3.1 Roadway Access Plan

As shown in **Figures 10-4** and **10-5**, the Terminal 2 West roadway access plan reconfigures the Terminal 2 access roadways to separate vehicular traffic into separate arrival and departure curbsides. The plan also includes a new multi-level public parking structure that incorporates a transit plaza for commercial vehicles on the ground level and a private vehicle departure curbside on the second level.

10.3.1.1 Roadways

As vehicles approach Terminal 2 from North Harbor Drive (see **Figure 10-5**), the entrance roadway splits, providing access to the arrivals curbside adjacent to the terminal and the private vehicle departures curbside and public parking located in and behind the proposed parking structure. Vehicles parking in the parking structure will enter from the back (south) side, and vehicles dropping-off passengers on the departures curbside will stay to the east of the parking structure and enter at the second level. The

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separation of vehicle flows and arriving and departing curbside operations will help reduce congestion on the terminal roadways during peak periods to meet the forecast demand.

West of the terminal, vehicles exiting the private vehicle departures curbside merge with vehicles exiting the arrivals curbside. Vehicles can either exit at a connection to McCain Road which provides access to westbound and eastbound North Harbor Drive, this connection also provides access to SAN Park NTC, or circle around the Terminal 2 parking area to return to the terminal or connect with the existing terminal exit roadway providing access to eastbound North Harbor Drive.

10.3.1.2 Curbsides

As shown in **Figures 10-4** and **10-5**, three primary curbsides are provided for both Terminal 2 East and West. The curbsides will accommodate passenger demand through 2015 and are described below.

Private Vehicle Departures - The Terminal 2 private vehicle departure curbside, shown in **Figure 10-5** is located on the second level of the parking structure. The departures roadway provides space for dropping off departing passengers and direct pedestrian access to the ticketing level of Terminal 2 East and West provided by elevated pedestrian walkways connecting the second level of the parking structure with the upper level of the terminal building where ticketing and passenger security screening areas are located.

Private Vehicle Arrivals - The Terminal 2 private vehicle arrivals curbside, shown in **Figure 10-4**, is located at a grade adjacent to the terminal baggage claim areas. The existing ground level arrivals and departures curbside located adjacent to baggage claim facilities will be extended along the front of Terminal 2 West and will be utilized for arriving passenger pick-up.

Commercial Vehicles - A transit plaza, shown in **Figure 10-4**, will be provided on the ground level of the proposed parking structure. The transit plaza will accommodate all commercial vehicles including taxis, scheduled and on-demand vans, and parking, rental car and hotel/motel courtesy buses. Vehicle access will be provided from the arrivals curbside roadway at Terminal. The transit plaza has two linear curbsides: one along the north face of the parking structure and a second at an island within the transit plaza.

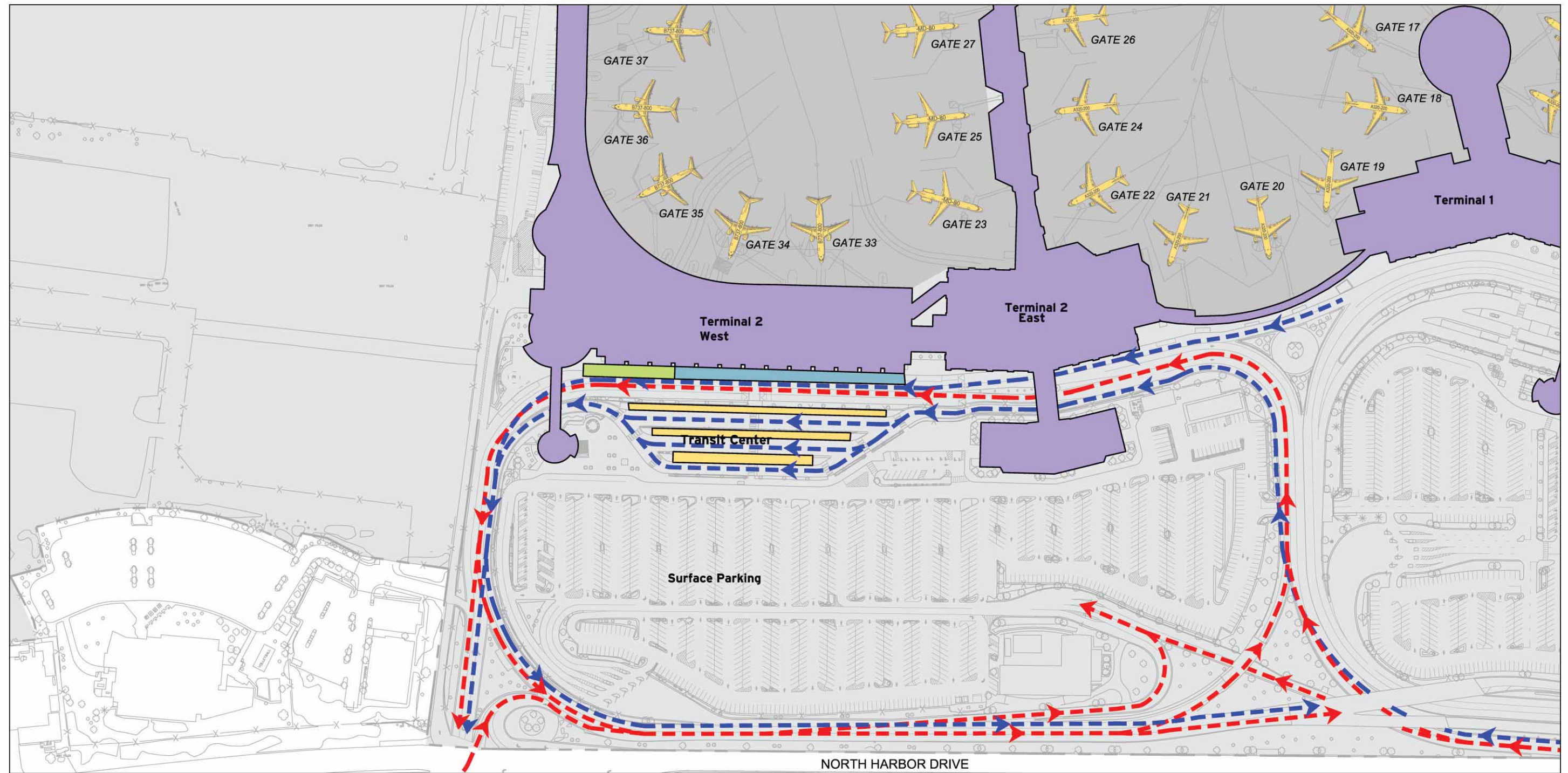
Curbside Check-in Facilities - Curbside ticketing and baggage check-in facilities will be provided on the second level vehicle curbside to serve passengers dropped off at the departures curb or transit plaza and passengers parking in the parking structure. This facility will supplement the ticketing and baggage check-in facilities within Terminal 2. It is anticipated that baggage conveyors will be accommodated beneath the existing pedestrian bridge to transport baggage across the roadway to outbound baggage processing facilities in the terminal.

10.3.1.3 Parking and Commercial Vehicle Staging

As shown in **Figure 10-4**, public parking for Terminal 2 East and West will be provided in a proposed parking structure adjacent to Terminal 2. Currently there are 1,355 parking spaces located in the surface lot adjacent to Terminal 2 East and West and approximately 1,300 parking spaces are located adjacent to Terminal 2 West at SAN Park NTC.

The facility requirements as part of the Airport Master Plan indicated a deficit of 4,326 terminal short and long term public parking spaces by 2015.

Allocation of carriers and peak hour passenger flows will determine the exact distribution of demand between all terminals. A cross section of the proposed parking structure is shown in **Figure 10-6**.



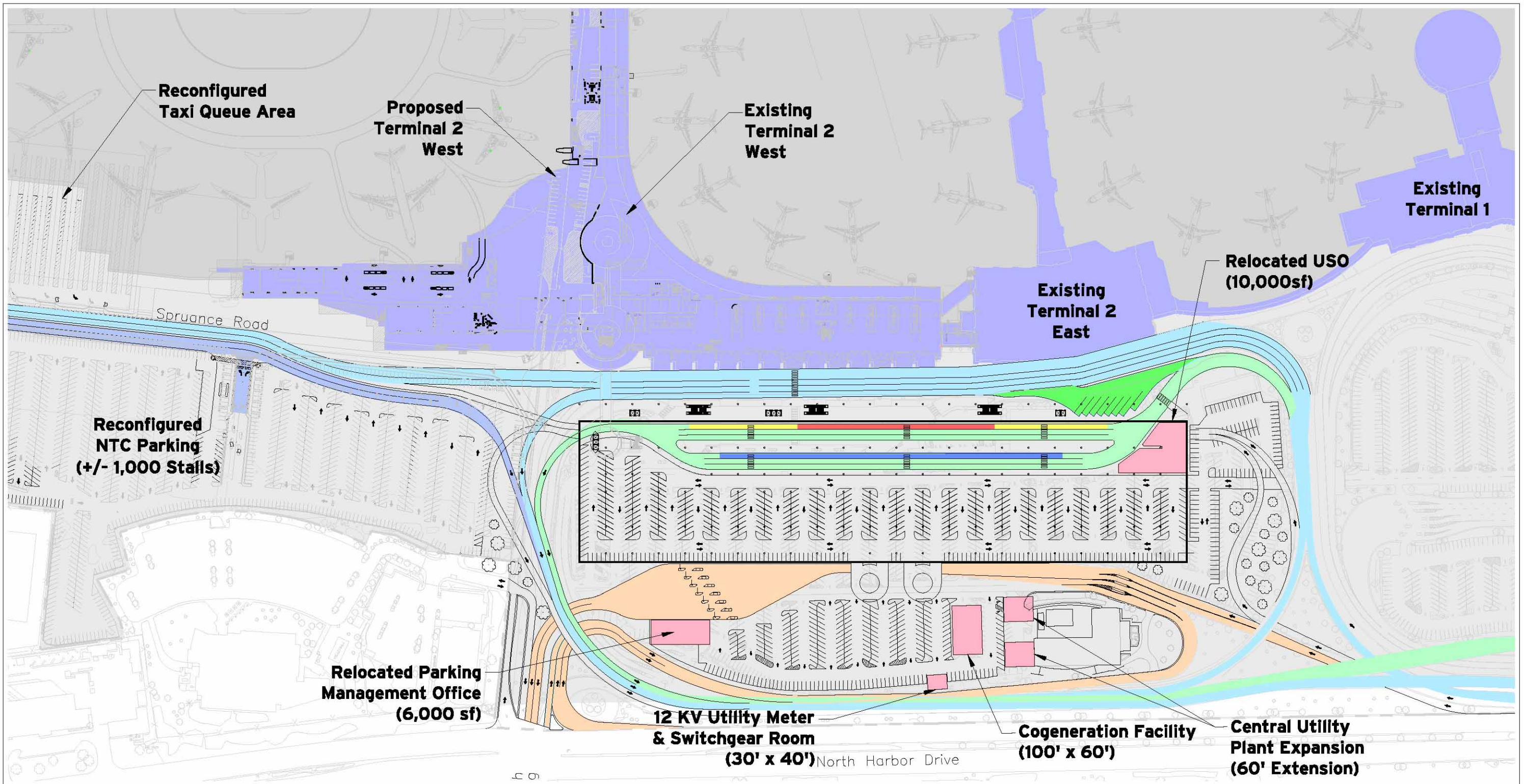
Legend

- - - - Existing Private Vehicle Traffic Flow
- - - - Existing Commercial Vehicle Traffic Flow
- Private Vehicle Arrivals Curb
- Private Vehicle Departures Curb
- Commercial Vehicle Curb



Figure 10-3

Existing Terminal 2 West Roadway and Access Plan

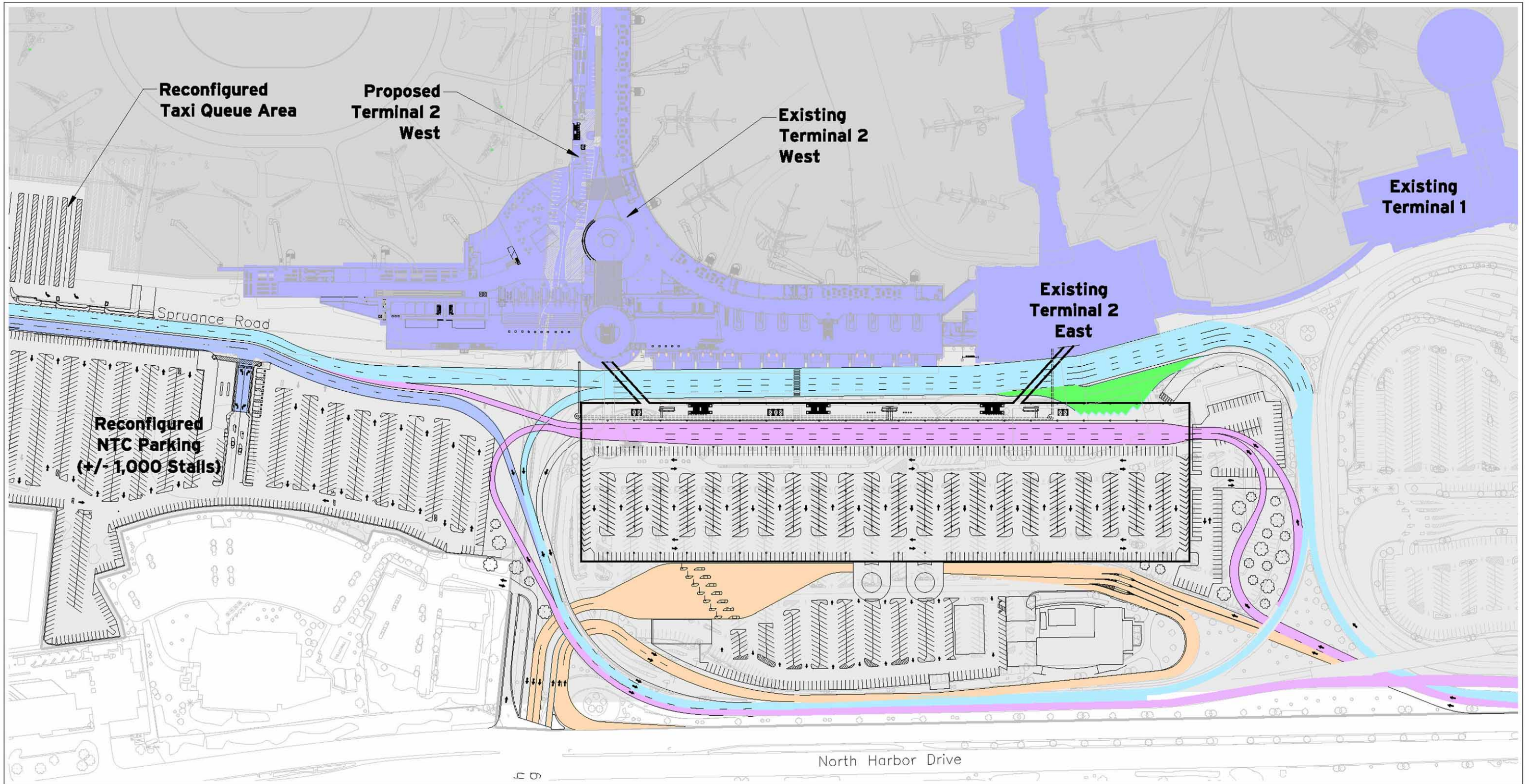


- | | | | | | |
|--|------------------------|--|---------------------------|--|-------------------|
| | Arrival Curb Flow | | Entrance from McCain Road | | Taxi |
| | Departure Curb Flow | | Parking Access | | Shuttles |
| | Transit Center Traffic | | USO Bus Parking | | Courtesy Vehicles |

Figure 10-4

Proposed Terminal 2 West Level 1 Roadway and Access Plan

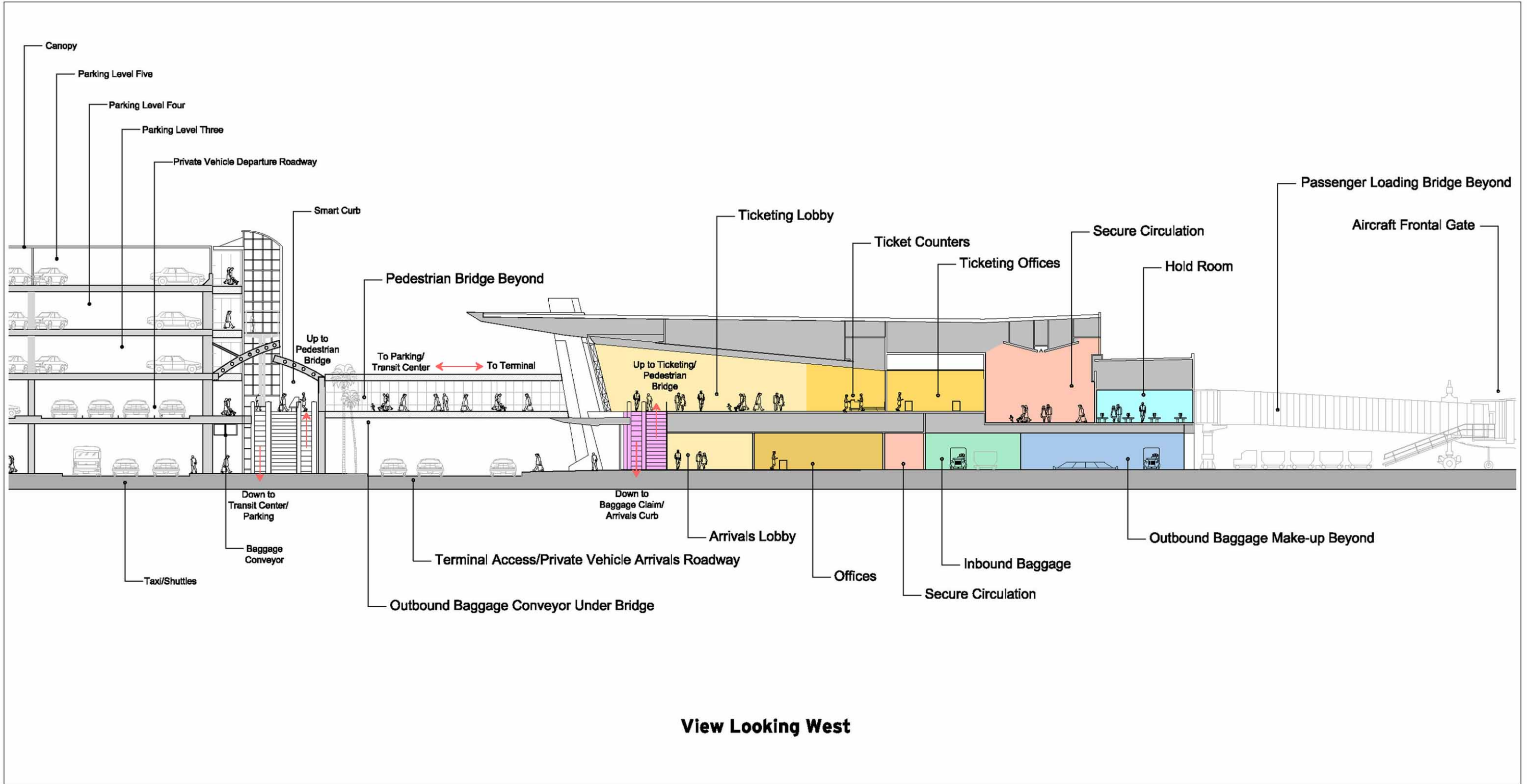




- Arrival Curb Flow
- Departure Curb Flow
- Transit Center Traffic
- Entrance from McCain Road
- Parking Access

Figure 10-5

Proposed Terminal 2 West Level 2 Roadway and Access Plan



- | | | | | | |
|----------------------|------------------------|--------------------------|--------------------|------------|----------------|
| Vertical Circulation | Baggage Claim | Mechanical / Maintenance | Restrooms | Operations | Security / TSA |
| Inbound Baggage | Loading Dock / Storage | Sheltered Space | Public Circulation | Ticketing | Airline Club |
| Outbound Baggage | Offices | Existing Terminal | Secure Circulation | Holdrooms | Concessions |

Figure 10-8

Illustrative Terminal 2 and Garage Section

10. Implementation of the Preferred Alternative Program

The following criteria were considered in determining the exact number of spaces provided as part of the development program:

- **Parking Structure Height/View Impact** - A preliminary study conducted as part of the Airport Master Plan indicated little impact to overall quality of views from the existing terminal with a five-level parking structure. Additionally, views of the terminal complex from North Harbor Drive are not substantially impacted.
- **Cost Benefit Study** - Additional parking added as part of an overall parking structure program reduces the overall cost per stall and increases revenue for the airport.
- A commercial vehicle staging area will be provided west of the Terminal 2 expansion as described below.

Parking structure - A five-level parking structure will be located within the terminal area roadway loop to accommodate short- and long-term public parking. Elevated pedestrian walkways will connect the second level of the parking structure with the upper, ticketing, level of Terminal 2 East and West.

Public Surface - A surface parking lot adjacent to the south side of the parking structure provides space for overflow parking.

Staging Areas - A commercial vehicle staging area is provided west of the Terminal 2 expansion and south of the employee lot. This area provides space for taxis and shuttles to queue in a nose-to-tail configuration while waiting to be dispatched to the terminals for passenger pick-up. Access to the staging area is provided from Spruance Road.

10.3.1.4 Service Vehicles

A loading dock is provided on the west end of the Terminal 2 West terminal building, shown in **Figure 10-7**. Service vehicles will access the loading dock from the employee parking and commercial vehicle staging area entrance along McCain Road and proceed between these lots to the loading dock.

10.3.2 Terminal Development

Departing passengers arriving at the upper level terminal curbside proceed across the pedestrian bridges and into the ticketing lobby. As shown in **Figure 10-7**, departing passengers on the lower level curbside utilize escalators and elevators located in a central lobby vertical circulation core between the ticketing lobbies to circulate up to ticketing. The ticket lobby expansion includes public circulation areas, ticket counters and offices, and baggage handling.

Passengers with boarding passes proceed to an expanded centralized security area adjacent to the ticket lobby for screening, as shown in **Figure 10-8**. The security checkpoint accommodates up to ten individual screening lanes and associated queuing and processing areas. The checkpoint also includes an area for passengers to recompose and gather belongings after screening is complete. Upon clearing security, passengers circulate through a major central concession area and into the concourse. Passenger hold rooms and various passenger amenities are positioned along the concourse length. An upper level bridge connects the secure areas of the east and west concourses providing convenient access for connecting passengers and employees.

An illustrative building section is shown in **Figure 10-6**. This section cuts through the Terminal 2 West ticket lobby and faces west. The section shows the connection between the proposed parking structure, including transit plaza and private vehicle departure roadway, and the existing terminal building and highlights the main passenger flows between the two. The main functional areas of the terminal are also depicted.

Arriving passengers transit the concourse on Level 2 and circulate down secure arrival escalators to baggage claim and terminal curbside. One escalator bank is centrally located at the base of the

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concourse, enabling passengers without baggage to by-pass baggage claim and proceed directly to the terminal curbside and ground transportation. Passenger with bags will be directed to the existing escalator bank with direct access to baggage claim. The baggage claim lobby consists of eight baggage carousel claim devices grouped in two banks of four located on either side of the arrival escalator. The lobby also includes areas for rental car counters, telephones, and visitor information, though further refinement of the location of these spaces will need to occur.

The lower level of the terminal and concourse expansion accommodates airline operations areas, expanded TSA baggage screening area and offices, Airport offices, and FAA areas.

Currently there is a desire among peer airports to introduce concession opportunities adjacent to or within baggage claim areas to support the needs of meters and greeters. Coordination with stakeholders and the Authority will help define the specific needs and ability to accommodate this type of revenue-generating opportunity.

10.3.3 Terminal Area Summary

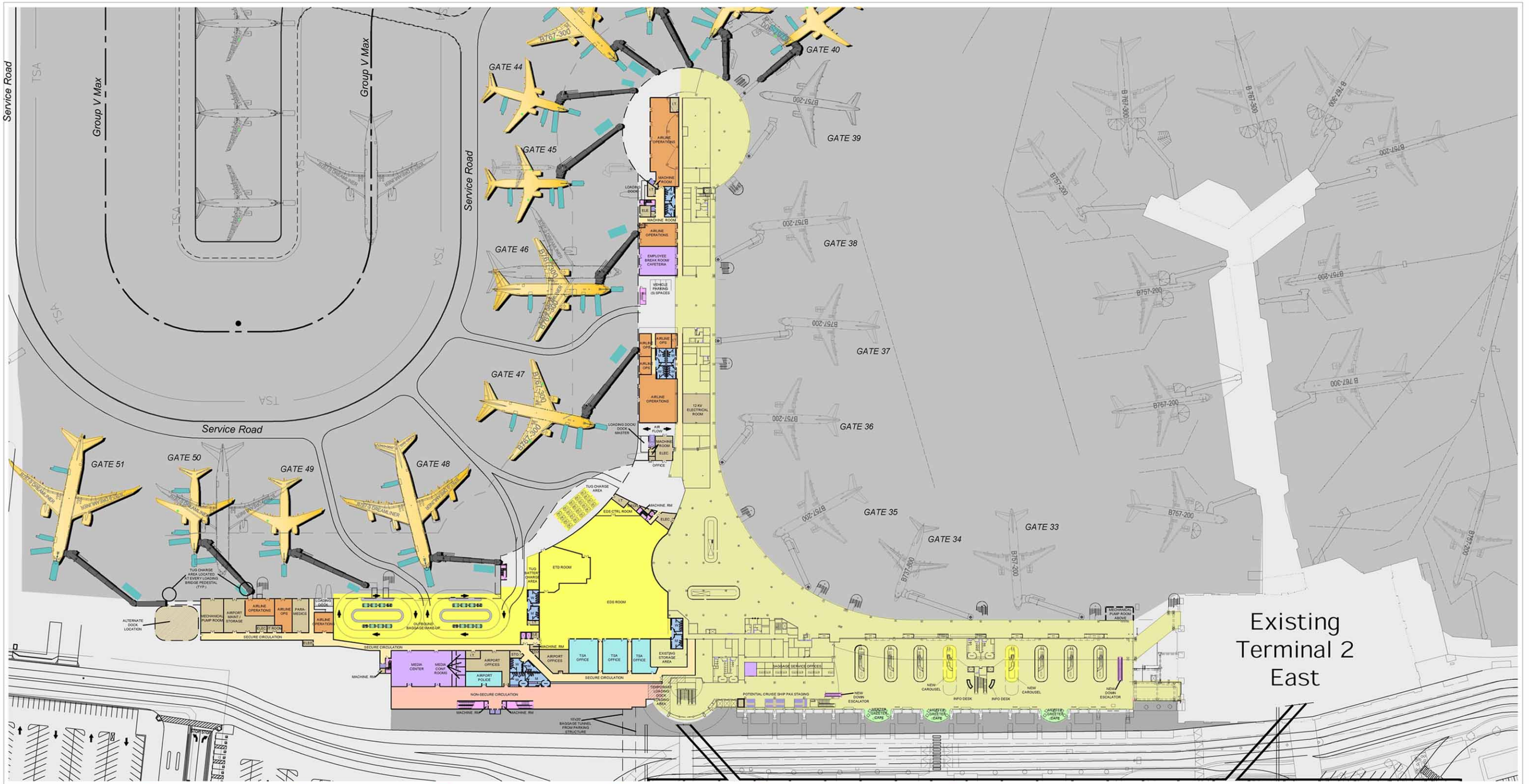
Figures 10-9 and **10-10** illustrate the full build out of the proposed facility with functional areas shown in color.

Preliminary building areas and processing functions of the preferred alternative expansion have been determined using established planning standards and the identification of the proposed future aircraft fleet. The facility would be designed to accommodate a range of aircraft combinations. However, the primary fleet mix includes positions for five Boeing 737-800 aircraft with blended winglets, three Boeing 767-300ER aircraft and two Boeing 787-8 aircraft. Existing Gates 40 and 41 are reconfigured to provide room for an additional taxiway. The reconfigured gates will be limited to one widebody aircraft, as opposed to the two that can currently be accommodated at Gates 40 and 41 simultaneously.

The information presented herein reflects the continued refinement of the Master Plan development concept through 2007. The continued refinements better reflect the potential for this facility to be utilized in a common use scenario, for future international flights, and for the accommodation of newly developed aircraft with larger wingspans. This refinement reflects the involvement of stakeholders and policymakers to establish the desired passenger LOS and was accomplished through a detailed program definition study between 2004 and 2007.

In addition, the existing Terminal 2 West layout dictates a certain level of consistency and compatibility with the existing facility in the overall layout of the expansion. The new terminal should work efficiently and logically with the existing special organization.

Table 10-2 summarizes the areas of the current terminal and proposed terminal expansion. These areas were further refined during a program definition study, and incorporate stakeholders' and policymakers' assumptions of desired LOS.



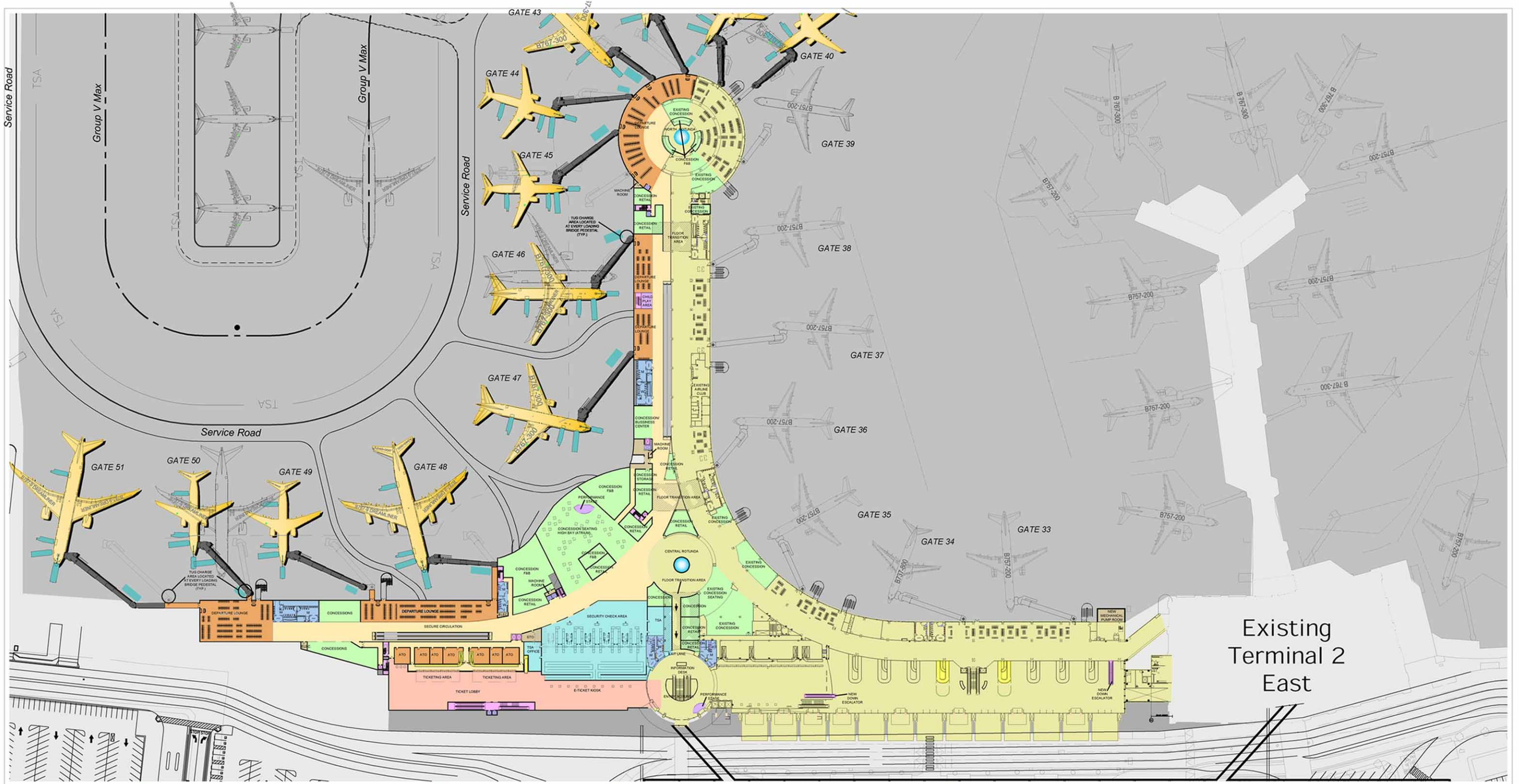
Existing Terminal 2 East

- AIRLINE FUNCTION**
DEPARTURE LOUNGES
AIRLINE OPERATIONS
AIRLINE TICKETING STORAGE
AIRLINE TICKETING OFFICE
- AIRPORT FUNCTIONS**
AIRPORT AUTHORITY OFFICES
AIRPORT STORAGE
RAMP CONTROL TOWER
LOADING DOCK
- SECURITY FUNCTIONS**
TSA CHECK POINT AREA/ TSA OFFICES
HARBOR POLICE/EMERGENCY
SECURITY OPERATIONS CENTER
- BAGGAGE FUNCTIONS**
EDS AREA
OUTBOUND BAGGAGE
TICKETING BAG AREA
BAGGAGE TUG CHARGE AREA
CRUISE SHIP BAGGAGE AREA
- CONCESSIONS**
FOOD - BEVERAGE / NEWS - GIFT - RETAIL
STORAGE
- SPECIALTY SPACE**
CHAPEL
PERFORMANCE STAGE
CHILD PLAY AREA
EMPLOYEE BREAKROOM - CAFETERIA
- RESTROOMS**
- VERTICAL CIRCULATION**
- SECURE CIRCULATION**
- NON-SECURE CIRCULATION**
- NEW TERMINAL/COVERED SPACE**



Figure 10-7

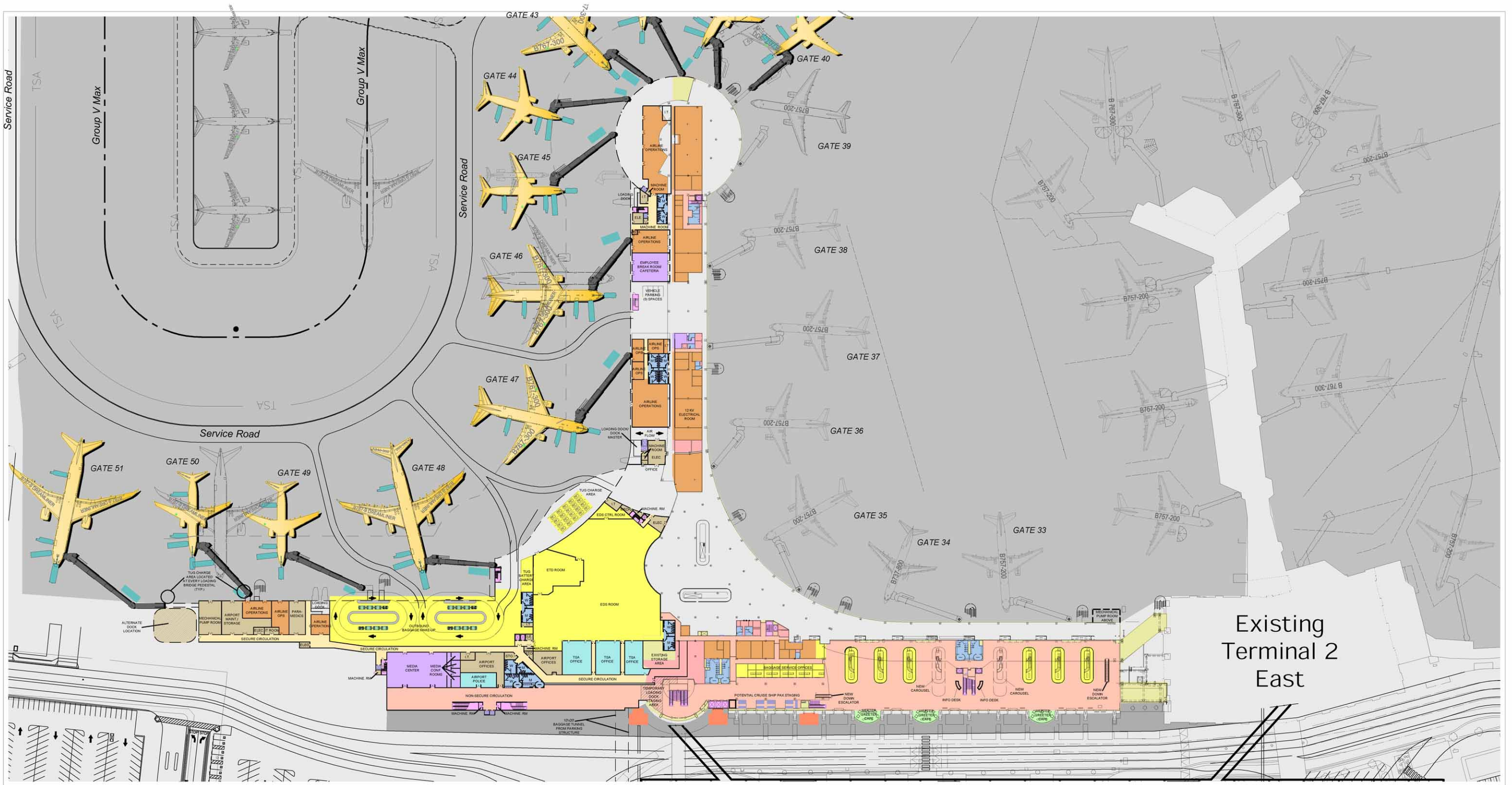
Proposed Terminal 2 West Level 1 Area Expansion



- | | | | | | |
|--|--|--|---|--|--|
| <p>AIRLINE FUNCTION</p> <ul style="list-style-type: none"> DEPARTURE LOUNGE AIRLINE OPERATIONS AIRLINE TICKETING STORAGE AIRLINE TICKETING OFFICE | <p>AIRPORT FUNCTIONS</p> <ul style="list-style-type: none"> AIRPORT AUTHORITY OFFICES AIRPORT STORAGE RAMP CONTROL TOWER LOADING DOCK | <p>SECURITY FUNCTIONS</p> <ul style="list-style-type: none"> TSA CHECK POINT AREA / TSA OFFICES HARBOR POLICE/EMERGENCY SECURITY OPERATIONS CENTER | <p>BAGGAGE FUNCTIONS</p> <ul style="list-style-type: none"> EDS AREA OUTBOUND BAGGAGE TICKETING BAG AREA BAGGAGE TUG CHARGE AREA CRUISE SHIP BAGGAGE AREA | <p>CONCESSIONS</p> <ul style="list-style-type: none"> FOOD - BEVERAGE / NEWS - GIFT - RETAIL STORAGE <p>SPECIALTY SPACE</p> <ul style="list-style-type: none"> CHapel PERFORMANCE STAGE CHILD PLAY AREA EMPLOYEE BREAKROOM - CAFETERIA | <p>RESTROOMS</p> <ul style="list-style-type: none"> VERTICAL CIRCULATION SECURE CIRCULATION NON-SECURE CIRCULATION NEW TERMINAL/COVERED SPACE |
|--|--|--|---|--|--|



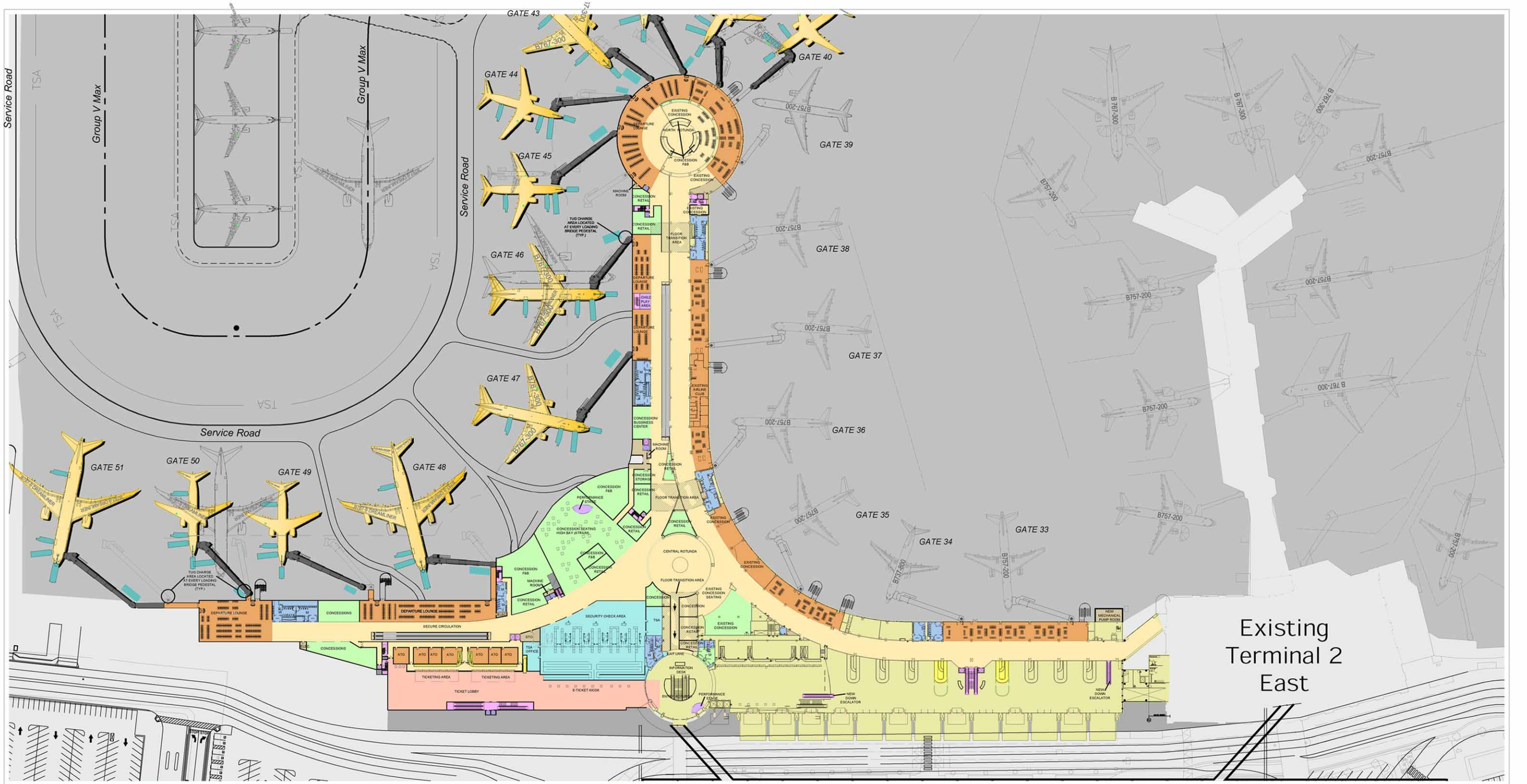
Figure 10-8
Proposed Terminal 2 West Level 2 Area Expansion



- | | | | | | |
|--|---|--|---|---|---|
| <ul style="list-style-type: none"> AIRLINE FUNCTION
DEPARTURE LOUNGES
AIRLINE OPERATIONS
AIRLINE TICKETING STORAGE
AIRLINE TICKETING OFFICE | <ul style="list-style-type: none"> AIRPORT FUNCTIONS
AIRPORT AUTHORITY OFFICES
AIRPORT STORAGE
RAMP CONTROL TOWER
LOADING DOCK | <ul style="list-style-type: none"> SECURITY FUNCTIONS
TSA CHECK POINT AREA / TSA OFFICES
HARBOR POLICE/EMERGENCY
SECURITY OPERATIONS CENTER | <ul style="list-style-type: none"> BAGGAGE FUNCTIONS
EDS AREA
OUTBOUND BAGGAGE
TICKETING BAG AREA
BAGGAGE TUG CHARGE AREA
CRUISE SHIP BAGGAGE AREA | <ul style="list-style-type: none"> CONCESSIONS
FOOD - BEVERAGE / NEWS - GIFT - RETAIL
STORAGE SPECIALTY SPACE
CHAPEL
PERFORMANCE STAGE
CHILD PLAY AREA
EMPLOYEE BREAKROOM - CAFETERIA | <ul style="list-style-type: none"> RESTROOMS VERTICAL CIRCULATION SECURE CIRCULATION NON-SECURE CIRCULATION NEW TERMINAL/COVERED SPACE |
|--|---|--|---|---|---|

Figure 10-9

Proposed Terminal 2 West Level 1 Layout Plan



Existing Terminal 2 East

- | | | | | | | |
|--|--|---|--|---|--|--|
| <ul style="list-style-type: none"> AIRLINE FUNCTION DEPARTURE LOUNGES AIRLINE OPERATIONS AIRLINE TICKETING STORAGE AIRLINE TICKETING OFFICE | <ul style="list-style-type: none"> AIRPORT FUNCTIONS AIRPORT AUTHORITY OFFICES AIRPORT STORAGE RAMP CONTROL TOWER LOADING DOCK | <ul style="list-style-type: none"> SECURITY FUNCTIONS TSA CHECK POINT AREA/ TSA OFFICES HARBOR POLICE/EMERGENCY SECURITY OPERATIONS CENTER | <ul style="list-style-type: none"> BAGGAGE FUNCTIONS EDS AREA OUTBOUND BAGGAGE TICKETING BAG AREA BAGGAGE TUG CHARGE AREA CRUISE SHIP BAGGAGE AREA | <ul style="list-style-type: none"> CONCESSIONS FOOD - BEVERAGE / NEWS - GIFT - RETAIL STORAGE | <ul style="list-style-type: none"> SPECIALTY SPACE CHAPEL PERFORMANCE STAGE CHILD PLAY AREA EMPLOYEE BREAKROOM - CAFETERIA | <ul style="list-style-type: none"> RESTROOMS VERTICAL CIRCULATION SECURE CIRCULATION NON-SECURE CIRCULATION NEW TERMINAL/COVERED SPACE |
|--|--|---|--|---|--|--|



Figure 10-10

Proposed Terminal 2 West Level 2 Layout Plan

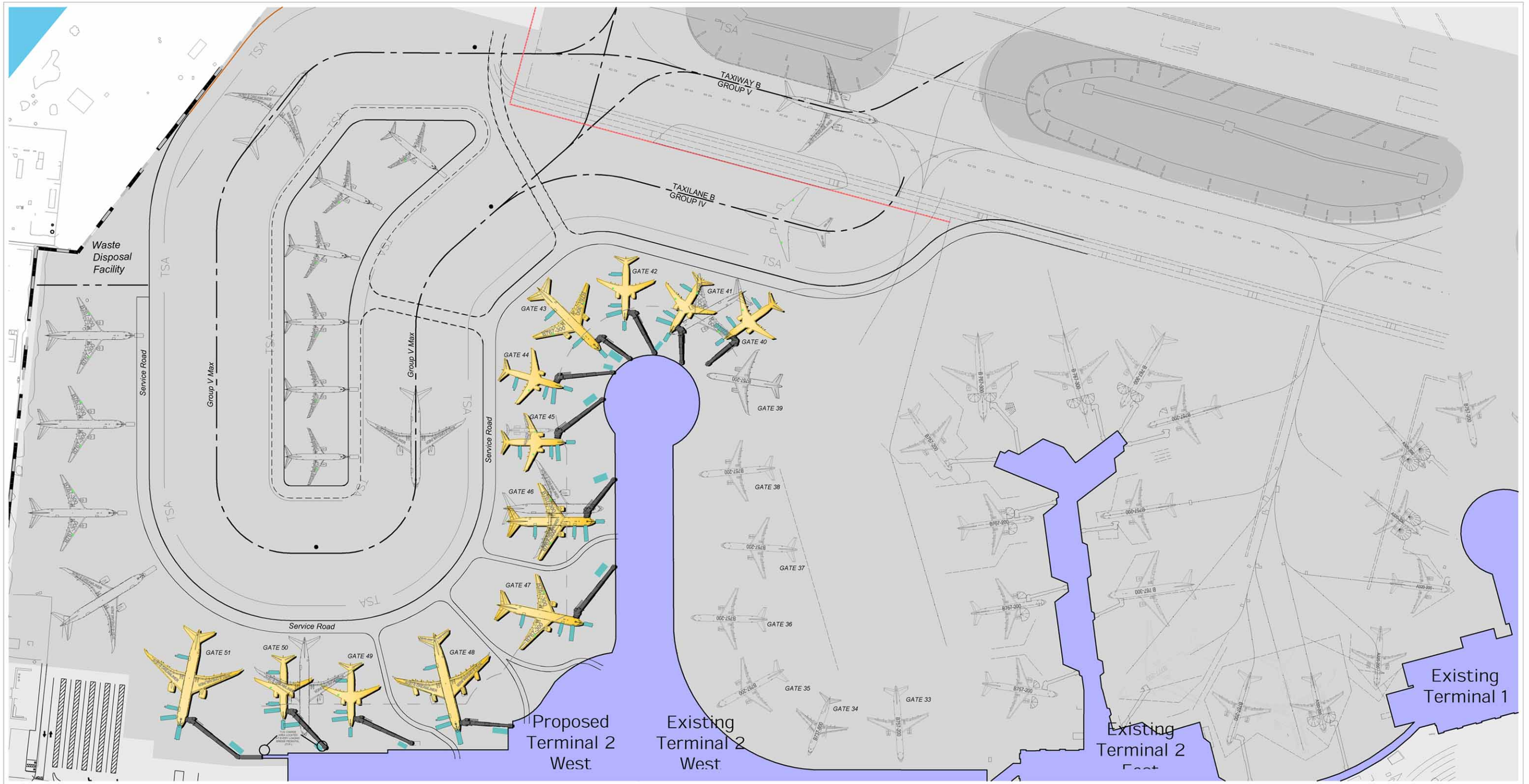


Figure 10-11



Proposed Airfield Modifications

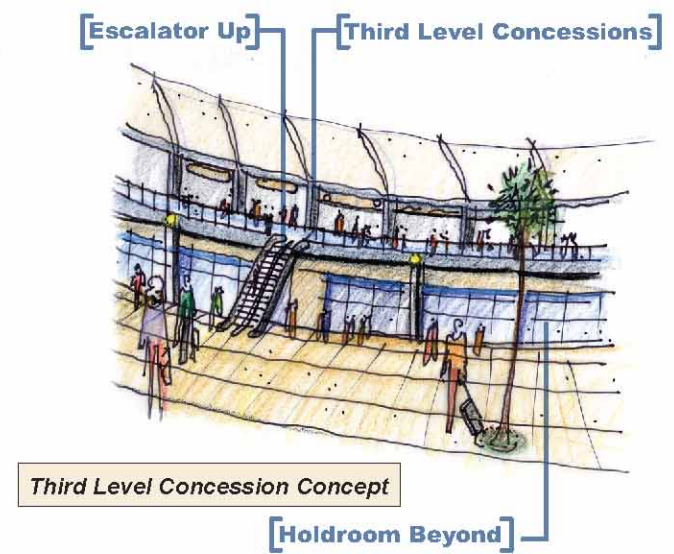
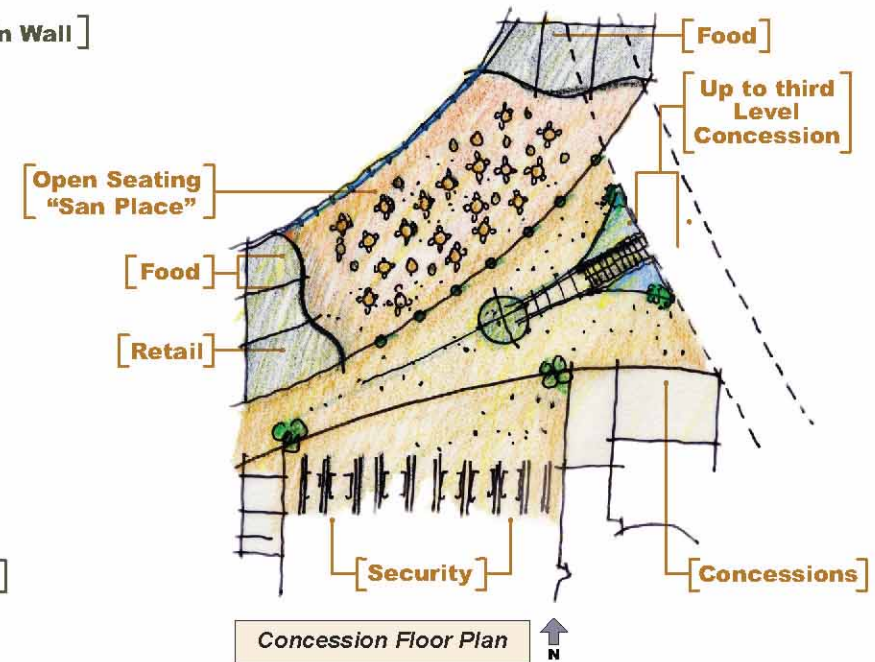
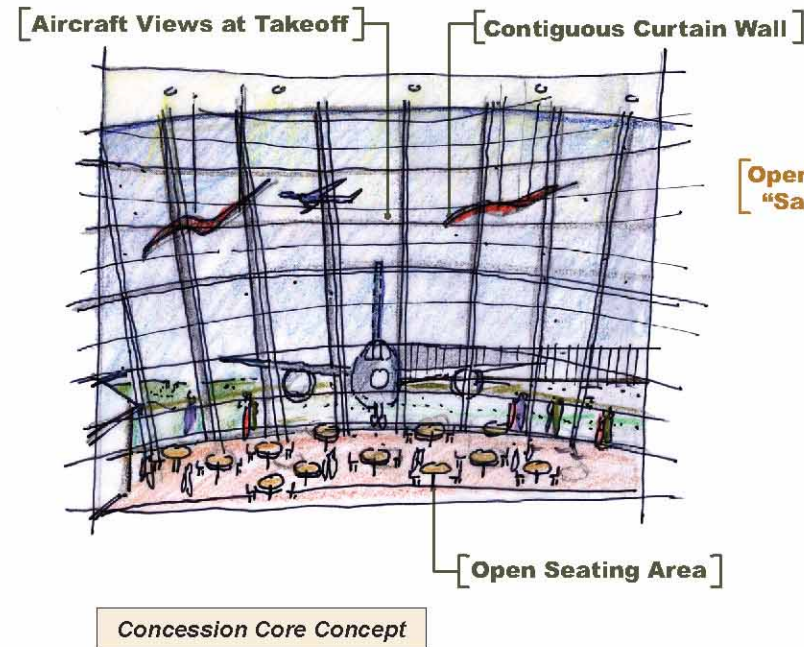
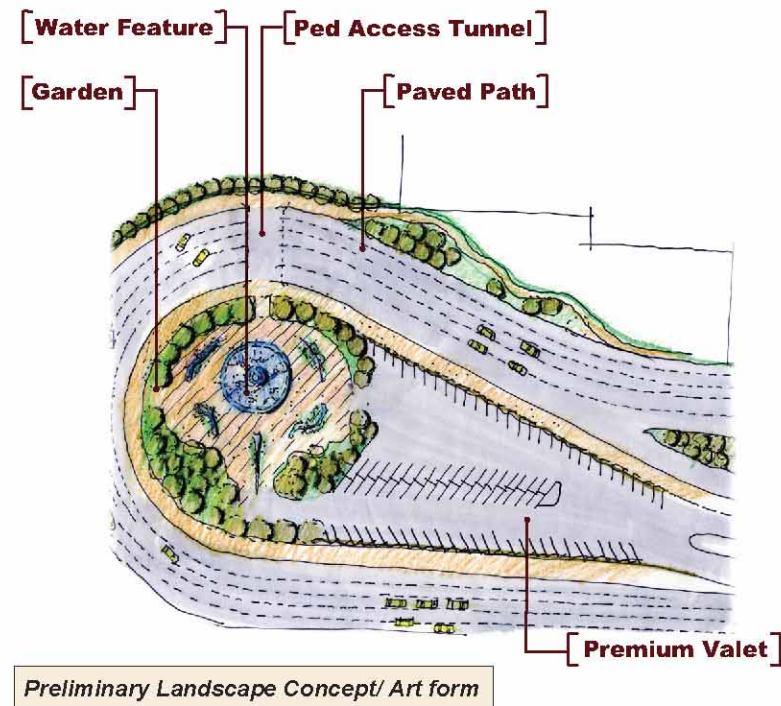


Figure 10-12

Concept Sketches and Diagrams

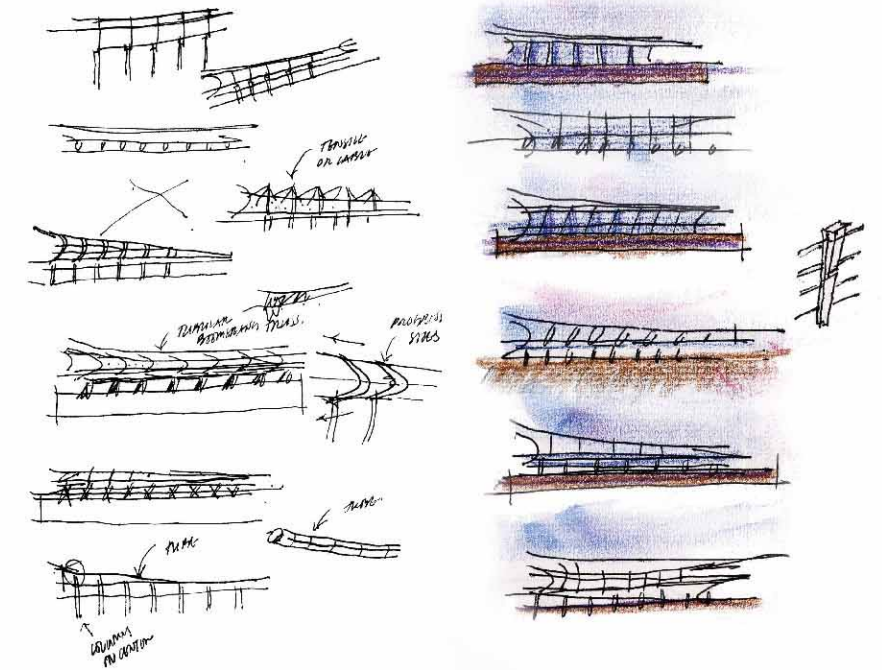
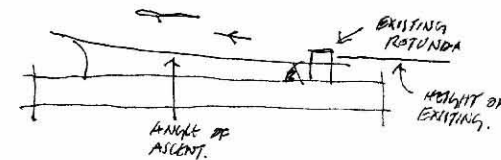
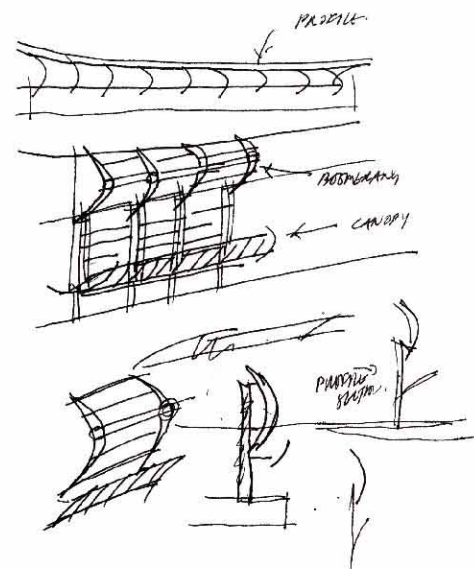
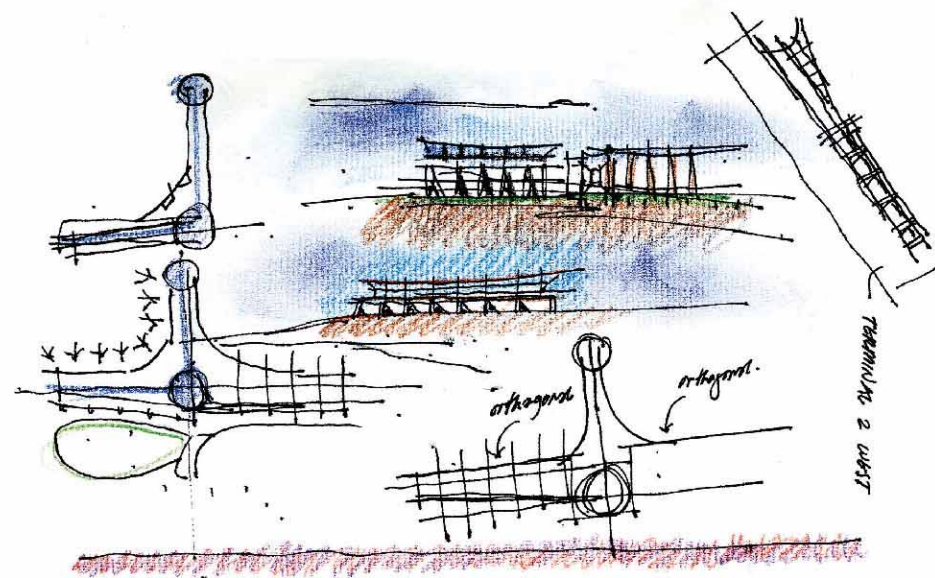
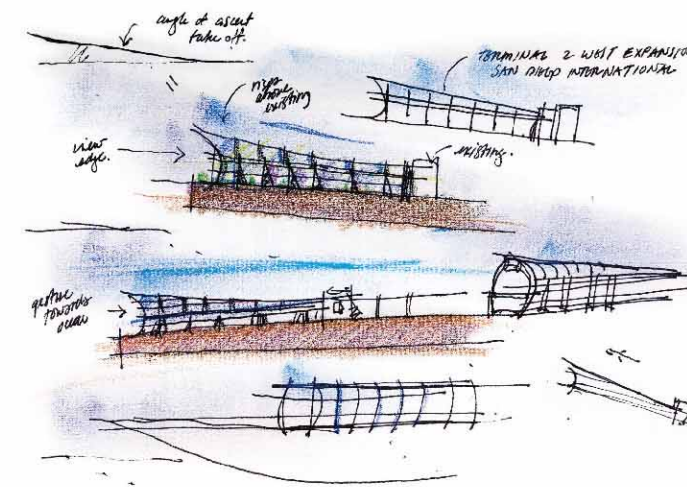
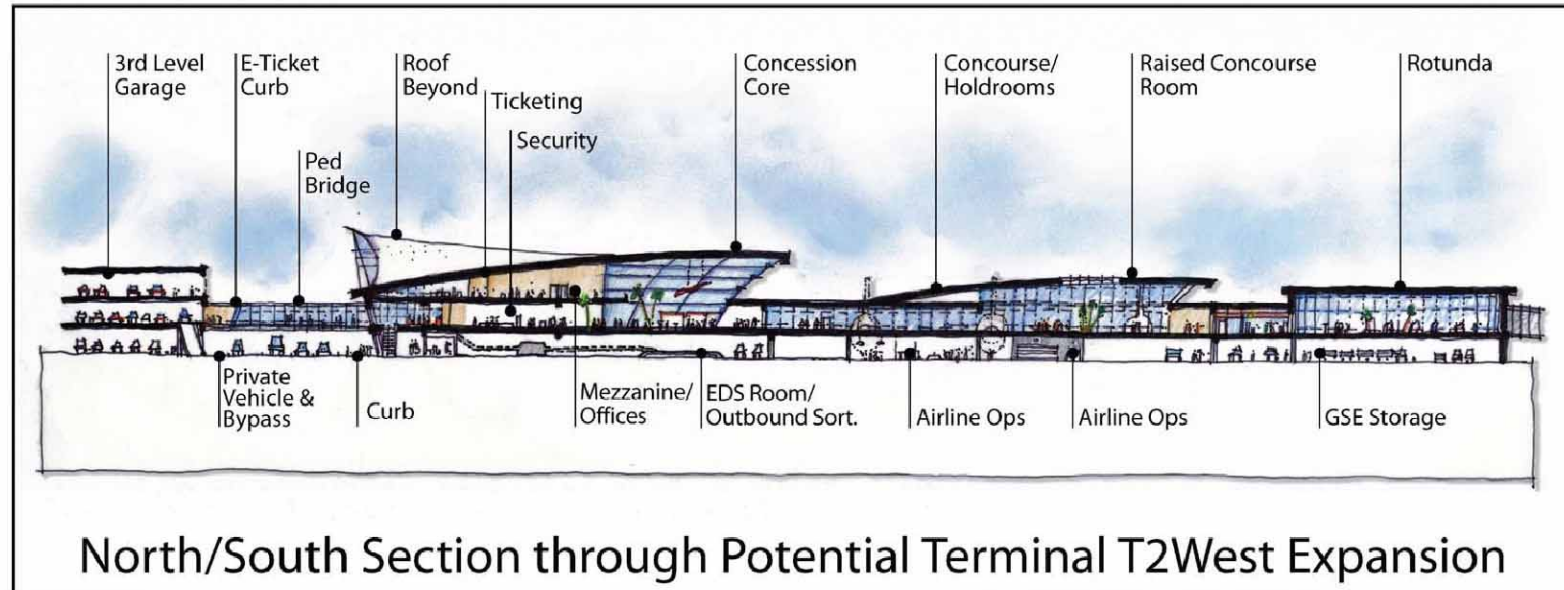


Figure 10-13

Concept Sketches and Diagrams

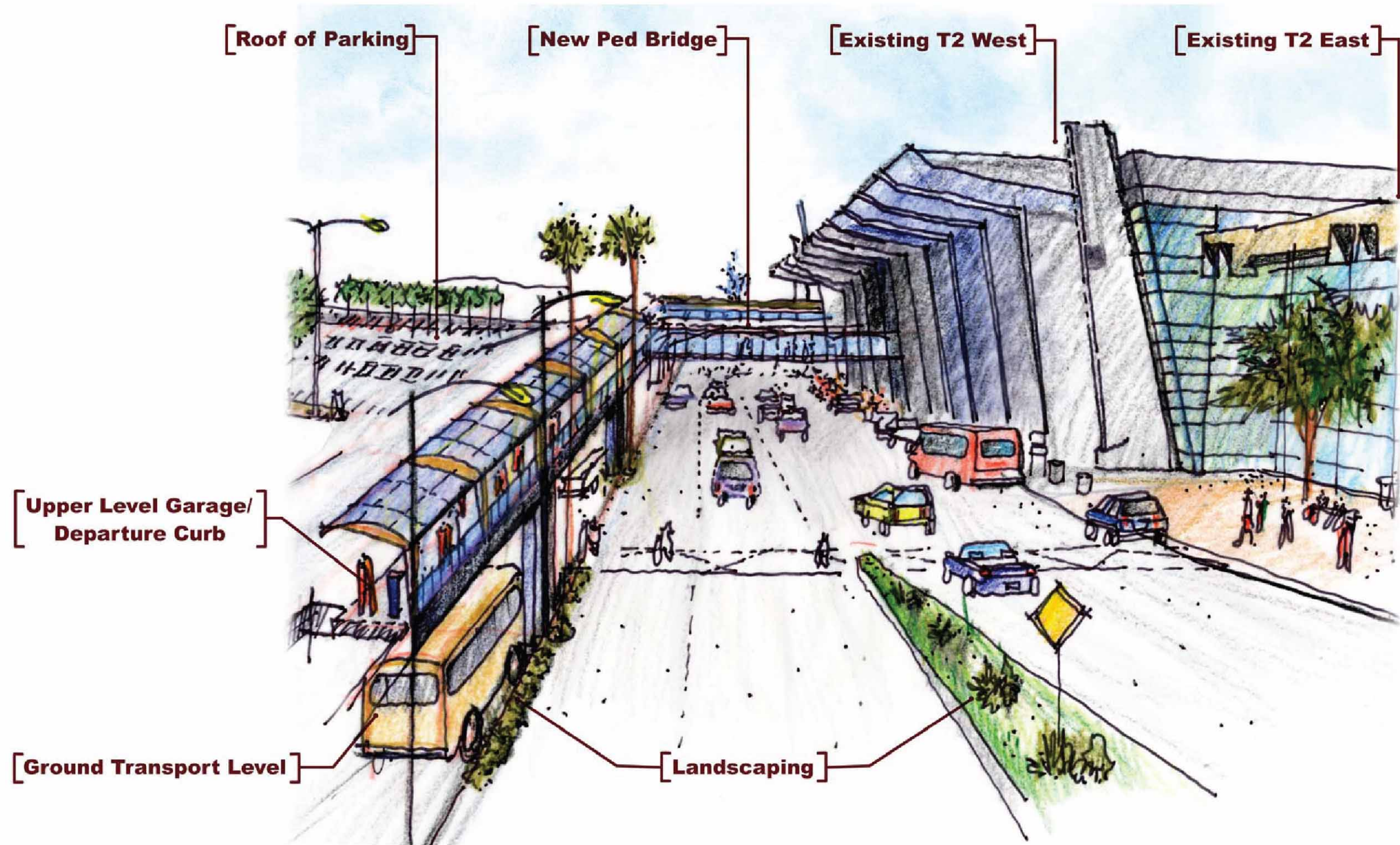
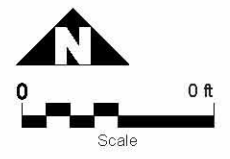


Figure 10-14

Concept Sketches and Diagrams



10. Implementation of the Preferred Alternative Program

Table 10-2

Preliminary Terminal 2 West Area Summary

Aircraft Frontage	Existing Frontage	Proposed Expansion		
Length in Feet	1,380	1,500		
Number of Aircraft	9	10		
Length per Aircraft	153.3	150.0		
Linear ratio	1.00	1.00		

Area Category	Existing Area (sq ft.)	Proposed Expansion	Total Area	Notes
Ticketing	8,700	25,860	34,560	Assumes use of off-site ticketing and self ticketing kiosks
Baggage Claim	38,500	0	38,500	Additional devices accommodated within the current baggage claim lobby
Holdrooms	22,550	31,335	53,885	Maintains existing holdroom depth
Concessions	7,000	46,332	53,332	Assumes a revenue-producing central concessions hall
Restrooms	10,300	10,983	21,283	Assumes current restrooms sized to accommodate a significant share of the build-out demand
Security / TSA	3,900	50,442	54,342	Accommodates new TSA requirements
Public Circulation	37,850	20,819	58,669	As required by building geometry
Secure Circulation	55,250	58,553	113,803	As required by building geometry
Vertical Circulation	4,650	8,753	13,403	As required by building geometry
Inbound Baggage	10,400	0	10,400	Accommodated within the current baggage claim building
Outbound Baggage	15,500	51,700	67,200	Accommodates In-Line Screening
Operations	21,550	34,859	56,409	Maintains current percentage of operations
Loading / Storage	4,450	3,755	8,205	Maintains current percentage of loading/storage
Offices	29,100	14,947	44,047	Assumes minimal increase in staff to operate facility
Sheltered Space	23,250	32,690	55,940	Maintains current percentage of sheltered space

Source: HNTB 2004-2007

10.3.4 Airside Development

There are three components to the proposed airside area for the Terminal 2 West development program illustrated in **Figure 10-11**:

1. A new apron and taxilane area west of the expanded Terminal 2 West concourse.
2. New apron area accommodating up to ten Remain-Over-Night (RON) aircraft parking positions for narrow-body aircraft.
3. A new taxilane parallel to existing Taxiway B at the north end of the expanded Terminal 2 West concourse.

The new apron and taxilane area west of the expanded Terminal 2 West concourse would accommodate aircraft parking positions for narrow or wide-body aircraft. A 25-foot wide service road would separate the proposed aircraft apron parking positions from the aircraft taxilane.

The Group V taxilane is organized in a loop configuration providing access to the ten proposed gates as well as the RON positions.

10. Implementation of the Preferred Alternative Program

The area enclosed by the loop taxilane would be paved to provide RON parking for six 737-800 aircraft. Larger aircraft would be able to utilize the RON apron to the west of the taxilane, adjacent to McCain road where a mix of up to four Group IV and V aircraft could park.

Lastly, existing aircraft gates 40 and 41 would be down-gauged to accommodate the construction of a new ADG IV taxilane parallel to existing Taxiway B. Gates 40 and 41 are currently capable of accommodating aircraft as large as the Boeing 767. The gates would be able to accommodate up to ADG III aircraft, such as the Boeing 737, simultaneously. The existing 25-foot service road would be relocated south. Down-gauging these gates and relocating the service road would allow sufficient clearance between the relocated service road and the centerline of existing Taxiway B to provide a new parallel taxilane capable of accommodating ADG IV aircraft. Developing the additional taxilane would provide access to the apron area for the ten proposed gates along two channels. Thus, aircraft would be able to depart the proposed gate area on the newly constructed taxilane while arriving aircraft access the apron area via existing Taxiway B. These operations would be able to occur simultaneously, improving the overall efficiency of the taxiway system in the vicinity of the proposed terminal area improvements.

*Aerial view looking
Northeast of proposed
T2W Parking Garage*



*Aerial view looking
Southeast of proposed
T2W Parking Garage*



*View of proposed T2W
Parking Garage from
Harbor Dr. looking North*



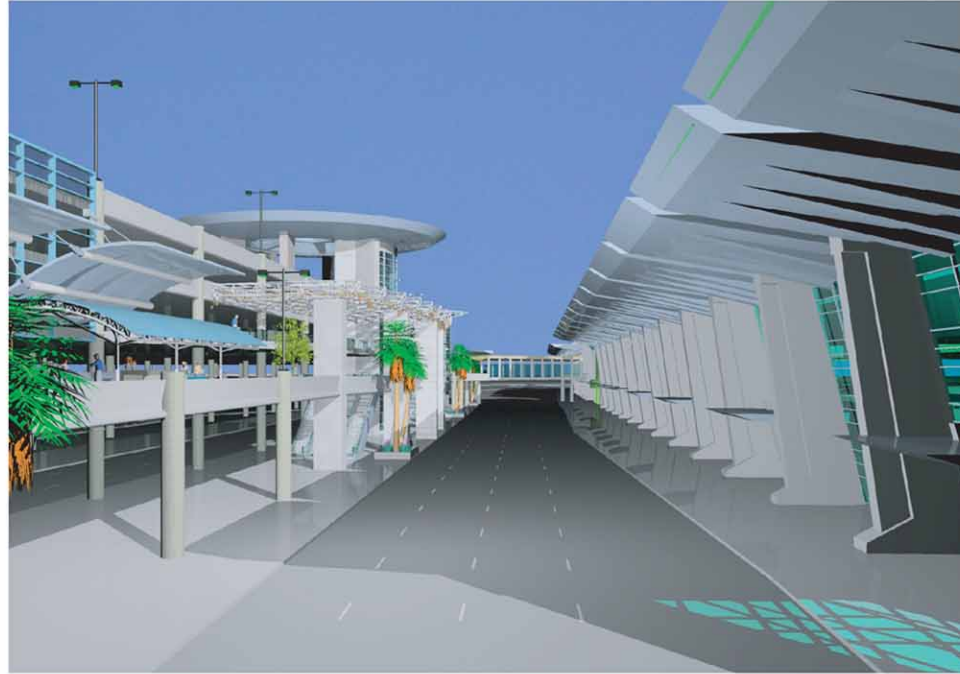
*Aerial view looking
Northwest of proposed
T2W Parking Garage*



Figure 10-15

Concept Renderings

*View looking West along
lower level roadway*



*View of upper level
curb-side check-in*



*Ground level view
of proposed T2W
parking garage facade*



*Elevated view looking
Southeast of proposed
T2W Parking Garage*



Figure 10-16

Concept Renderings

*Upper level
curb-side check-in*



*Upper level
curb-side check-in*



*Upper level
curb-side check-in*



*Cross-section of proposed
T2W parking garage and
upper level curb-side
check-in*



Figure 10-17

Concept Renderings

