



San Francisco International Terminal 3/Boarding Area E

Civic Design Review Concept Design Package
March 19, 2012

© All rights reserved, Andrew Choi



Overview

Project Overview	04
Project Scope	05
Project Design Concept	06
Preliminary Schedule	07
Conceptual System Design	08
Basis of Design	09

Site and Existing Building Photographs

Site Photography	12
Building Photography	15

Terminal 3 Building Design

Perspective Views	17
Elevations	21
Floor Plans	22
Roof Plan	24
Building Sections	25



Project Overview

It took over 80 years for 150 acres of cow pasture to transform itself from a quaint municipal airport to one of the world's twenty busiest airports.

In 1955, with Pan Am's new Clipper service, the airport achieved "international" status, making it the gateway for cosmopolitan travel. Today, San Francisco International Airport handles over 35 million passengers a year and the airport, despite massive expansion and restructuring, is still in need of space.

Despite a topsy-turvy airline business, air travel is still the most convenient way of getting from point A to point B. While airlines duke it out over fares and passengers, airports continue to work twice as hard to accommodate those planes and passengers.

A new paradigm in air terminal design calls

for not only heightened functionality, but also an evolution in the integrity of its environmental design.

While there have been many qualitative changes in air travel since 9/11, passenger expectations for how an airport terminal should perform continues to rise. From Wi-Fi service to luxury lounges and amenities, airports have become intensely charged environments of activity.

SFIA has set the tone for the capitalization of a captive audience's needs and wants. Here, passengers can find art exhibitions, luxury shopping, fine dining, and elegant public spaces, all with a distinct "Bay Area" flavor.

Project Scope

The Scope of this Project is a major renovation of Terminal 3 Boarding Area E. The structure was completed in 1979.

The current number of existing gates is nine (9). This project will move one (1) gate from Terminal 3 on to Boarding Area E to provide a total of ten (10) aircraft parking positions. The Aircraft mix programming was provided to the Design Team by the SFO Planning Department.

The Project will completely upgrade the Concourse and Apron Level of Boarding Area E. The scope includes complete demolition of the existing interior architecture, exterior cladding, complete infrastructure and one (1) elevator that will travel between the apron and departure levels.

The anticipated minimum construction value including Baggage System and Passenger Loading Bridges will be in the range of \$62,000,000 - 71,000,000.

Completion of this project is scheduled for Fall 2013.

Boarding Area E will be a Gold LEED project.

Project Concept

The renovation of Terminal 3, Boarding Area E includes only air-side improvements. The architectural design impacts the North, East, and West elevations of the boarding pier as well as the roof. Addressing air-side appearance and performance, the project seeks to establish a clean, modern expression which communicates a sense of lightness and efficiency while framing dynamic views to the airfield and sky.

The East and West elevations are articulated as a series of frames which loosely correspond to the paired passenger hold rooms. These frames help to rationalize and organize the building's air-side appearance with its array of passenger boarding bridges and exit vestibules.

Angled, vertical fins on the east and west elevations help to reduce heat gain by controlling low morning and afternoon light while at the same time framing views to the airfield to the North. The North elevation which receives only diffuse light is instead treated as a taut, glassy façade with no vertical or horizontal projections.

The roof of the pier is expressed as one large planar element with tapered edges overhanging clerestory glazing. This roof element is structured with lightweight, long-span trusses concealed within

a finished architectural ceiling. This approach allows us to remove the existing middle two rows of structural columns creating an open and flexible plan at the concourse level.

A series of unitized skylights are arranged in a rational but dynamic pattern across the roof. This enables a high degree of day lighting tunability in the way of light pattern, intensity, and effect as it enters the space. This in turn allows us to establish a high degree of parity between natural day lighting and the organic array of public zones and functions within the space.

Prelim. Schedule

- January 3, 2012: Design started with NTP issuance
- June 11, 2012: Construction is due to start with demolition scopes
- November 2, 2013: Opening, per contract requirements
- October 1, 2013: Partnering Goal for Substantial Completion

Sustainability + System Design

San Francisco International Airport has an extensive program in place to reduce ground vehicle carbon emissions and encourage alternative transportation. The project is fully accessible by all means of alternative ground transportation including AirTrain and BART; public and private bus services; “green” car rentals provided through SFO’s incentive program; and alternative-fuel taxis and shuttle buses meeting SFO’s standards for airport users. Bike parking will be provided at the courtyard adjacent to BAE (some employees at SFO do in fact prefer to arrive by bicycle), and showers will be available for these bike commuters as well.

Water use is a significant concern, primarily in the area of plumbing fixtures as there is no landscaping associated with the BAE project. SFO is increasing the efficiency of its restroom plumbing fixtures to between 35-38% below the International Plumbing Code maximum allowed amounts, depending on the final fixture selections. This project will improve on the new standard that was already set at SFO’s Terminal 2 project.

Energy efficiency is a top priority. Most of the energy used to heat and cool the building is consumed at the terminal complex Central Plant, which provides hot water and chilled water to all the terminal

buildings including BAE. While this project cannot impact the Central Plant, SFO is engaged in a multi-year efficiency improvement to the Central Plant that will result in energy savings within BAE as well. The main energy uses within the building are expected to be fan power for ventilation and interior lighting; fans will use the energy-saving displacement ventilation system deployed successfully in Terminal 2; interior lighting will aim to be at least 15% more efficient than the maximum allowed by California Energy Code. The project will install solar photovoltaic panels to offset some of its electrical load as well. In addition, the project is committed to aggressively managing future energy use through an in-depth commissioning process, to ensure equipment is functioning optimally at start-up, and through the extensive use of energy monitoring equipment to track future energy efficiency.

The project will incorporate recycled-content materials such as a large area of terrazzo flooring, regionally-produced materials where feasible, and will purchase certified sustainably harvested woods where wood is used. The Terminal 2 project recycled 93% of the waste it produced and BAE aims to surpass that target. Lastly, the project will provide a healthy and pleasant indoor environment through the use of low-emitting interior finish materials, an air filtration and purification system that exceeds LEED standards, and strict control of construction phase air quality.

Basis of Design

DESIGN CHARETTES

Following the visioning session, Design Charettes were held with the Project Team to analyze the information provided by Stakeholders and develop the organizing concepts and inspirations for the Project.

DESIGN CHARETTE GOAL: ENHANCE CUSTOMER EXPERIENCE

Increase revenue opportunities and expand the footprint by increasing concession space to approximately 12,000 square feet to accommodate 1.5 million passengers. In addition provide Customers with Local Foods, Vendors, Technologies, and Unique Eating Experience.

DESIGN CHARETTE GOAL: LET THE LIGHT IN

Let the daylight in by enhancing the space through height and light in a meaningful way. Take away the bleak with simple methods to bring in nature and daylight. Celebrate air travel by highlighting the view of airfield operations. Furthermore, provide productive waiting experiences that remind us why we love to fly.

DESIGN CHARETTE GOAL: FOCUS ON SUSTAINABILITY

Celebrate green by concentrating on a people-focused indoor environment. Optimize for an airport-specific high performance system.

Make green overt and transparent as a learning environment. In addition, bring local to the boarding area.

DESIGN CHARETTE GOAL: INCREASE AMENITY SPACE

Increase space for amenities through a series of journey points by adding approximately 4,000 square feet of customer-oriented amenity space. Create unique, unexpected, purposeful oases for passengers.

CONCEPTUAL DESIGN

Ideas, concepts, inspirations, themes, and objectives identified during the Visioning Session and the Design Charettes were used as the basis of the conceptual design.



This old house to WOW
 Eat, shop, work, play
 Local
 A Journey Experience
 Hybrid
 Accessible luxury
 Classic
 Durable
 T2-esque
 Understated
 Memorable
 Unique
 Sustainable

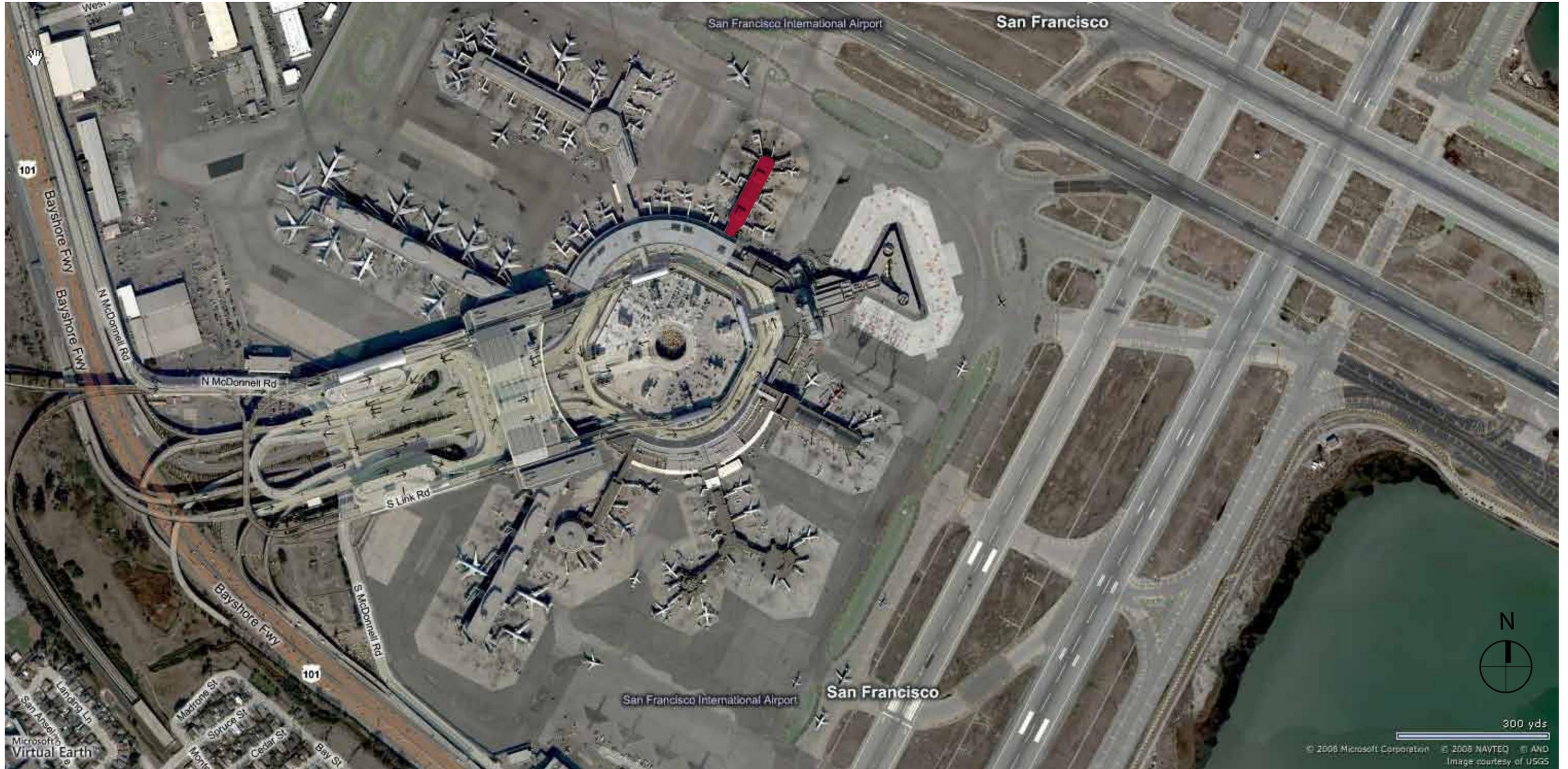
THEMES

Incorporate **views of the airfield** – observation deck and martini bar on a second floor?
 Provide **museum** and interactive learning space.
 Open up the ceiling or create a second floor to enhance the views and let in more natural light
 Incorporate a 'Pop-Up Park' at curbside
 Focus on **local** concession offerings
 Relocate the club to let in more natural light
 Create one good destination/ **"WOW"** experience.
 Bring the airfield inside with *interactive* air-themed experiences
 Highlight the Bay Area's **Tech** industry
 Include *Recompose* space

OPPORTUNITIES



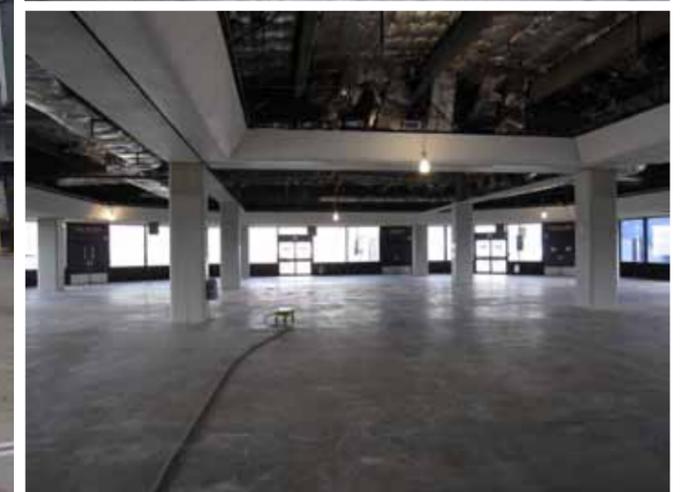
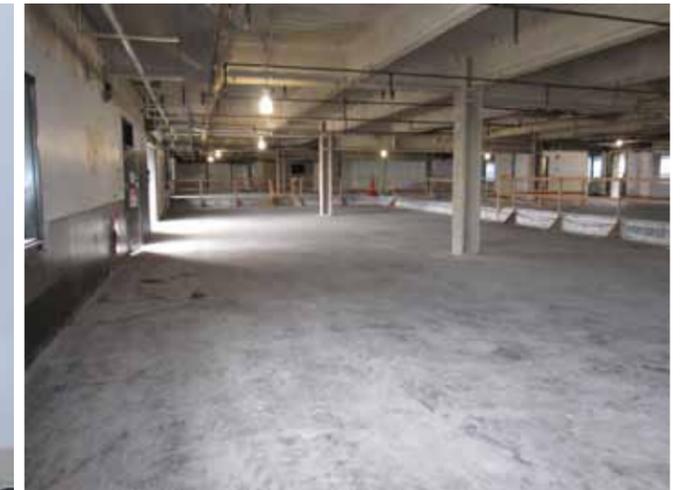
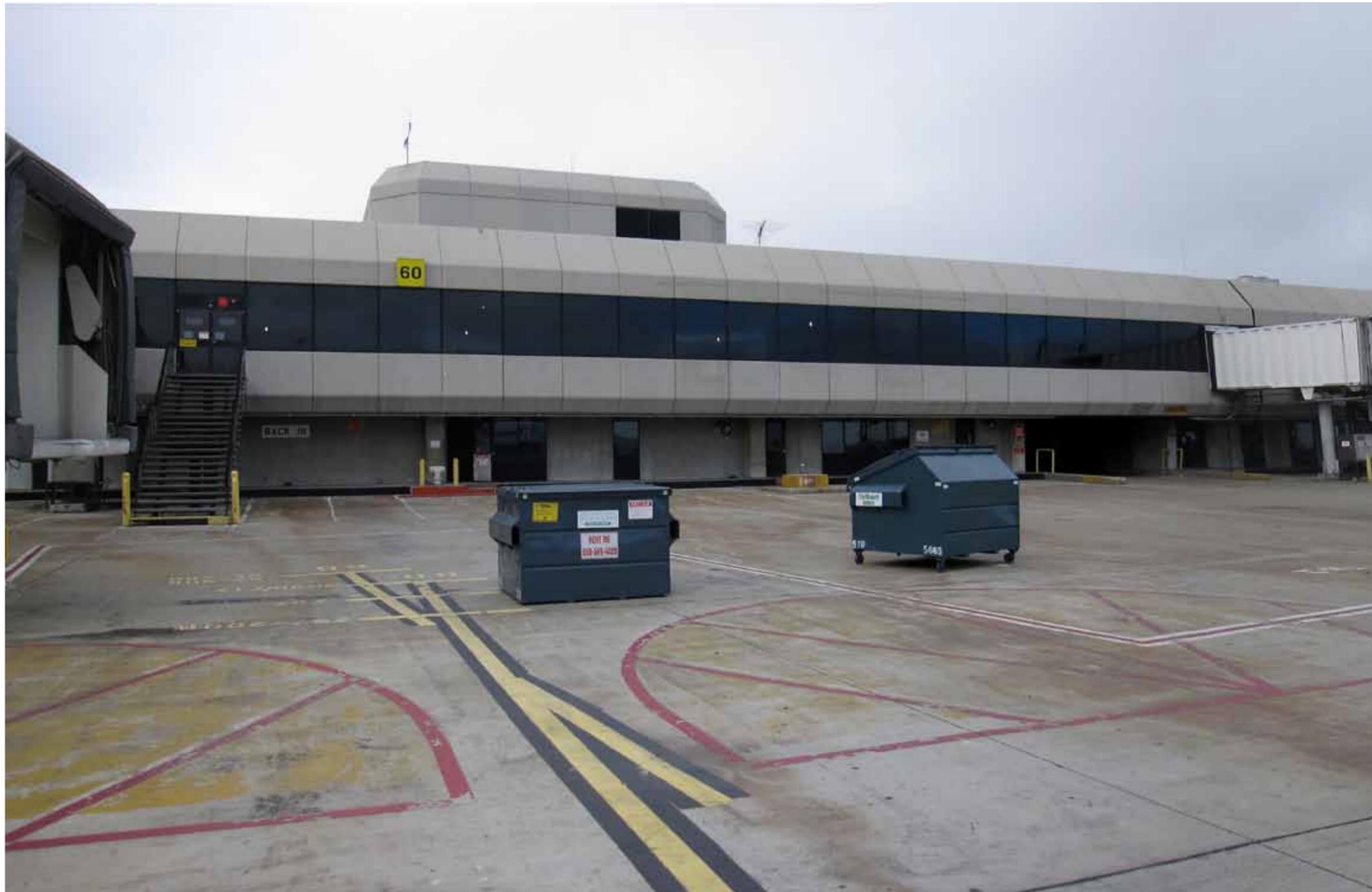
■ Terminal 3, Boarding Area E





— New Building Footprint





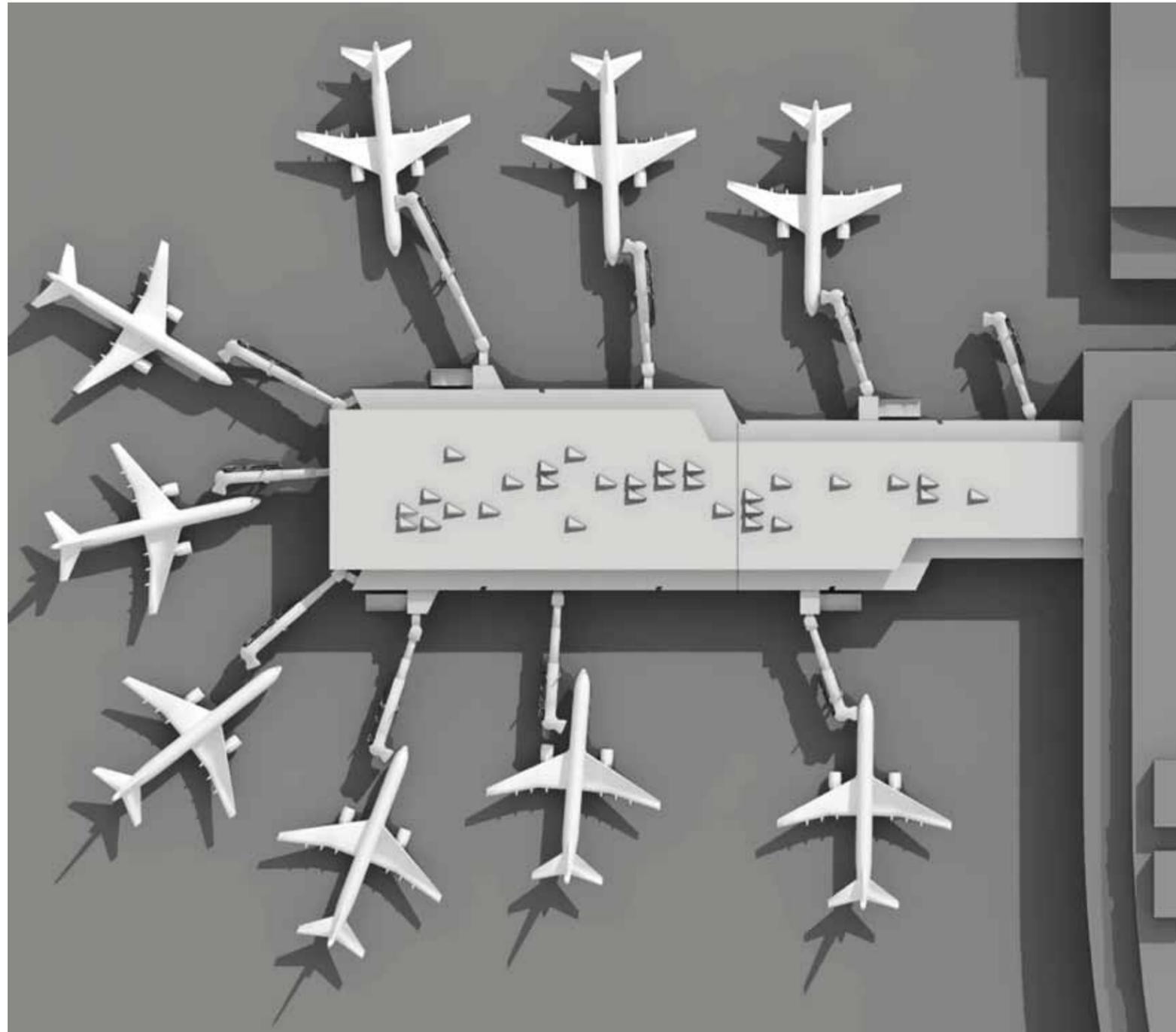
Above: existing ramp interior, and existing concourse interior

Left: existing East elevation, Gate 60



Above: existing details; emergency exit staircase, and VSR through apron

Left: existing East elevation, VSR, Gate 62-63



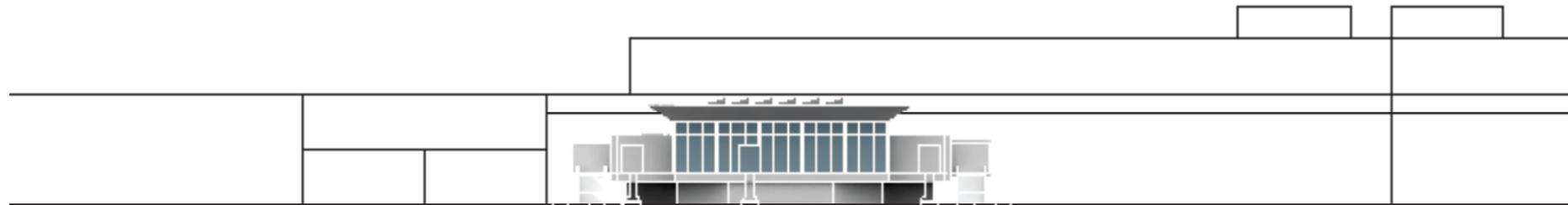
Roof: skylight openings
and surface area for
photovoltaic panels











Elevation: North



Elevation: East



Elevation: West

