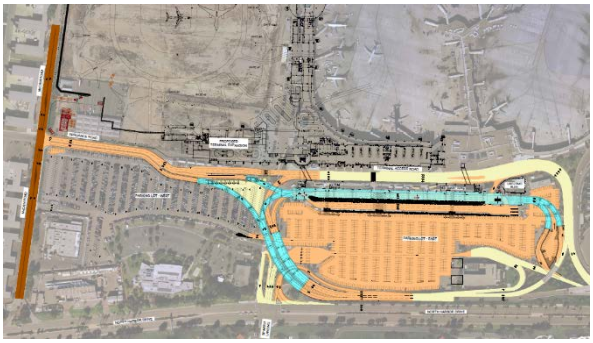
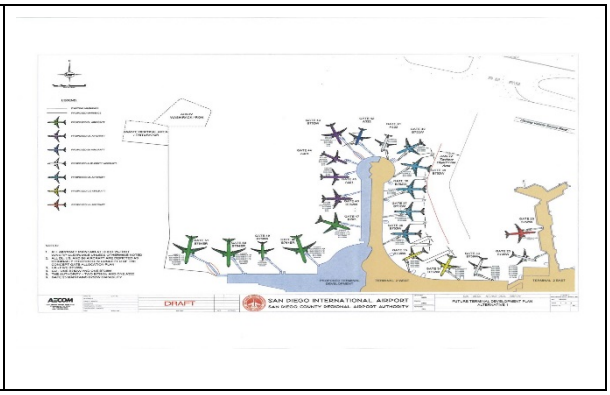
San Diego International Airport – Green Build Program





Proposed Terminal 2 West Expansion under the Green Build Program

Client Name: San Diego County Regional Airport Authority
Date Started: April 2010 **Date Completed:** September 2010

As part of the Green Build Program at San Diego International Airport (SAN), TransSolutions was retained to validate the design of the new Terminal 2 West roadway and its impact on the design for the new terminal under a 2015 Design Day flight schedule. The Green Build Program is the largest in the Airport's history and is using the progressive design-build approach which allows construction to start while the specialized design is still underway. The $1B expansion of Terminal 2 West includes adding 10 new gates which will double its current size, adding a dual-level roadway to minimize roadway congestion, adding curbside check-in kiosks which allow passengers to check-in for their flight moments after pulling up to the terminal, and doubling the size of the security screening checkpoint.

Using analyses and simulation modeling, TransSolutions validated space and operational requirements for the following areas:

- Check-in Lobby and Curbside Check-in (SmartCurb)
- Security Screening Checkpoint
- Vehicle Roadways and Curbsides
- Parking Lot Entrances and Exits

In the 2006/2007 Terminal Development Program, TransSolutions simulated these areas of the terminal and roadway under multiple forecasted flight schedules to look at various gating options being proposed by the Airport Authority. In 2010, as part of the Green Build Team, TransSolutions was asked to update these models with newly proposed designs and operations of the roadway and terminal and a new 2015 Opening Day flight schedule to help SAN ensure that the proposed systems were able to satisfactorily accommodate the forecasted passenger and vehicle demand to provide acceptable Levels of Service (LOS).

TransSolutions' simulation models integrated the entrance and exit roadways, arrivals curb, elevated departures roadway/curb, transit plaza, parking lot entrances and exits, passenger check-in on curbside and in check-in lobby, and security screening checkpoint, ensuring that the relationships between each functional area were taken into consideration.

Statistics were reported on passenger wait times, queue lengths, and associated level of service (LOS), vehicle delays and congestions, and curbside LOS. For areas that LOS was unacceptable, the required number of resources need to meet the performance criteria was determined. This detailed analysis had a significant impact in helping the project stakeholders assess the operational viability of the chosen design and gave them confidence that the terminal and roadway would provide passengers with the desired LOS.