

NATIONAL WINNER KINGSBURY ON THE PARK

This 25-story Chicago building features an efficient steel structure, with six steel mega frames, rising above a cast-in-place concrete base. Three-story high chevron steel braces in the upper tower were designed around a central elevator core, and span the width of the building to meet lateral drift limits. Eighteen residential floors of composite steel framing house 125 condominium units, with eight vertical self-supporting balconies of varying widths. Floor seven serves as a transition between the residential units and the split-level parking garage on floors two through six. The steel frame afforded several other design advantages, including:

- greater opportunities for building transparency
- raised ceiling heights and mechanical flexibility, which enhanced efficiency
- reduced construction costs and a shortened project schedule.

DEVELOPER

Smithfield Properties, Chicago

ARCHITECT

Lucien Lagrange Architects,
Chicago

STRUCTURAL ENGINEER

Thornton-Tomasetti Group,
Chicago

ENGINEERING SOFTWARE

ETABS
RAM Structural System

FABRICATOR & DETAILER

Zalk Josephs Fabricators, LLC,
Stoughton, WI, AISC member

GENERAL CONTRACTOR

Wooton Construction, Chicago



Photo by Nathan Kiriman

MERIT AWARD TERMINAL CANOPY AND ROADWAY EXPANSION, DENVER



Photo courtesy Ooms Studios.

OWNER

Denver International Airport, Denver

ARCHITECT AND STRUCTURAL ENGINEER

Leo A. Daly, Los Angeles

ASSOCIATE ARCHITECT

KT Architecture, PC, Aurora, CA

ENGINEERING SOFTWARE

STAAD 3

GENERAL CONTRACTOR

PCL Construction Services, Inc., Glendale, CA

The canopy addition of the Denver International Airport creates covered outdoor waiting areas for passenger pick up and drop off. The project encompasses two 800'-long canopies, directly adjacent to the east and west main fronts of the two-sided central terminal. The height of the structure was restricted by the requirement that views remain open over the canopy from the upper level to the Rocky Mountains.

The canopies were located on top of the existing structure of the roadways, requiring a lightweight solution and restricting column support locations to 60' spacing. Emergency vehicle clearance required a minimum clear height of 15', and a central opening for natural ventilation of smoke and exhaust fumes. Potential heavy snow loading, snow shed, and snow melt and rain diversion had to be accommodated.

The design solution created a lightweight tensile fabric structure of Teflon-coated fiberglass stretched over a white painted steel truss structure. The shallow curved 90'-wide main steel members rest on a "tree" cluster of four steel columns at each support point, creating a stable base for the long-span trusses and providing a concealed zone for the location of drainage, electrical, and sprinkler lines. The raised column bases shield the transition of these service lines to the level below.