

# Case Study

## DesignFlo®

### Project & Location

McCarran International Airport, Terminal 3  
Las Vegas, NV

### Designed By

Architect: PGAL LLC.  
Engineer: PGAL Architecture  
Mechanical Engineer: JBA  
Mechanical Contractor:  
Desert Plumbing and Heating

### Krueger Representative

LONG Building Environments  
www.LONG.com

### Krueger Product Used

DesignFlo® Linear Slot Diffuser (DFL)



*Photo courtesy of library.nevada.edu*

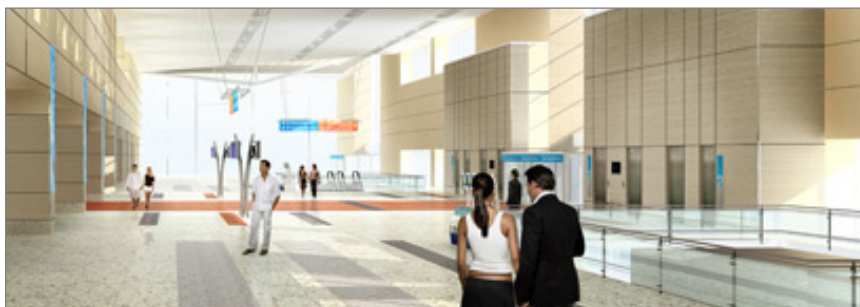
## About the Project

Currently ranked 15th in the world for passenger traffic, McCarran International Airport in Las Vegas, NV is about to handle even more passengers with the addition of Terminal 3. The project covers 1.87 million sq. ft. of space including 14 additional gates, an immigration processing center, baggage claim, ticketing, and parking facilities. What's even more amazing is upon completion, it will allow the airport to serve over 53 million people a year!

Situated within a desert landscape, the structure was inspired by the surrounding geography and features long, open spaces where small areas of light accentuate the calming, canyon-like walls. What better way to complement this architecture while meeting the air distribution requirements than through Krueger's architectural linear slot diffuser, DesignFlo® (DFL).

## Architectural Considerations

DesignFlo is inherently flexible, offering different fastening types along with a variety of slots and slot widths. For Terminal 3, they used a majority of straight pieces, but they also included a few curved DesignFlo's to accentuate specific architectural spaces.



*Model DFL,  
DesignFlo®*

## Case Study :: Linear Diffuser, Model DFL, DesignFlo®

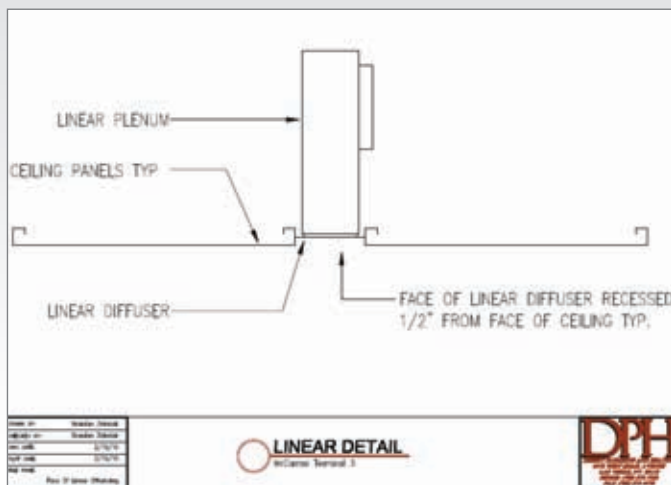
McCarran International Airport

### Product Solution

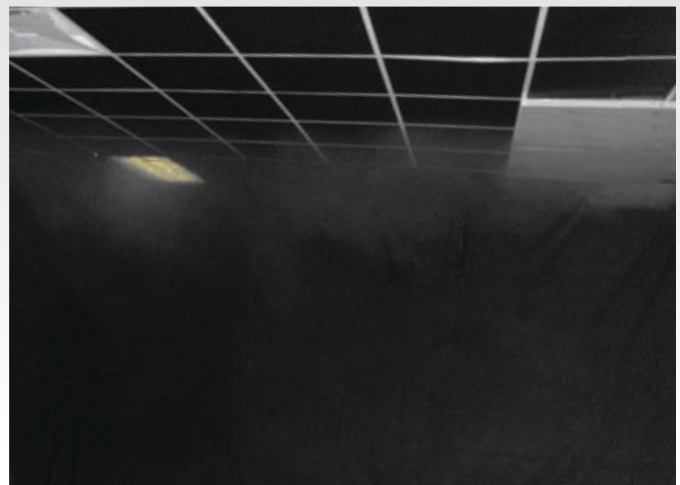
In addition to meeting the architectural needs of Desert Plumbing & Heating (DPH) of Las Vegas, Krueger was faced with the issue of a non standard 1/2" recessed installation. With a commitment to world-class service, Krueger Engineering provided a mock-up to show both Jerry Kechter of LONG Building Environments and the Project Manager, Bill Bird, how the installation plays a part in the DesignFlo's performance.

Based off the sketch (below, left) provided by DPH, our clients were able to experience first-hand the flexibility of DesignFlo by witnessing a successful smoke test (below, right).

To perform the smoke test, the units were installed in the Krueger lab to simulate the installation conditions where smoke was injected into the airstream. At a design criteria of ~325 CFM, the DesignFlo displayed excellent throw patterns, at both isothermal and +15°F delta. The main jet coming from the units had ceiling velocities of 120 FPM at 10' and 45 FPM at 20' from the unit.



Non-standard, recessed installation drawing.



Successful smoke test.

### Product Installation

Satisfied with the solution and performance of the product, Krueger was faced with a demanding order schedule amounting to **OVER 6 MILES** of DesignFlo.

Over the course of one year Tammy McCabe at LONG Building Environments expertly planned the logistics and release schedule of DesignFlo to Krueger. Tammy ensured all the products were correctly submitted on time to meet the stringent delivery schedule.

We want to give special thanks to Tammy for her involvement and communication, which no doubt helped make this a success.

Now, the project is nearing its final stages and we are all looking forward to seeing the engineering vision come to life with travellers making their way through Terminal 3 at McCarran International Airport!



Installed curved DesignFlo.



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[WWW.KRUEGER-HVAC.COM](http://WWW.KRUEGER-HVAC.COM)

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Perforated  
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Security  
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### Engineering Information

Krueger continues to lead the industry in the development of innovative products and air distribution solutions. To learn more about what we can do for you, contact your local Krueger representative or visit us on the web at [www.krueger-hvac.com](http://www.krueger-hvac.com).



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