Custom Suspended Chroma Installation

Desert Rain

Phoenix Sky Harbor
International Airport
North Concourse
Renovation of Terminal 3

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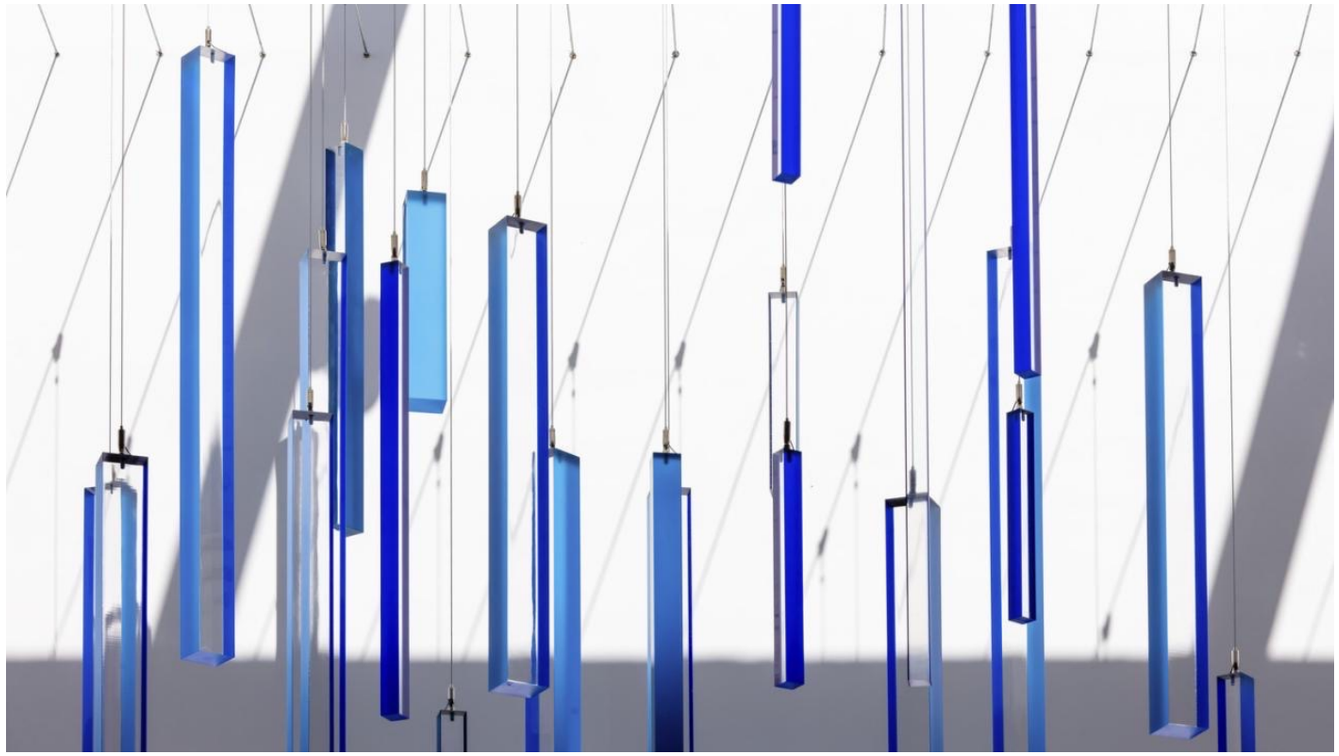
Desert Rain



Project: Phoenix Sky Harbor International Airport, North Concourse, Renovation of Terminal 3

Completed: 2020

Location: Phoenix, Arizona

Specifier: Corgan Associates *(Final Photos Credit: Bill Timmerman)*

Project Overview

My Role - Project Manager

With the modernization of Phoenix Sky Harbor International Airport, I worked with specifier Corgan on sculptural suspended ceiling installations in both the south concourse (a new build) and in the north concourse (renovation), phase 2 - the Desert Rain project.

In an effort to accommodate the views, provide travelers with a more open, daylight filled space, skylights were added to the existing building structure along the main walkway. The goal of the specifier was to celebrate the surrounding Sonoran Desert landscape, by bringing artistic representations of these natural elements into the airport interior.

I was able to successfully manage both concourse LightArt installations on time and within budget. Additionally, from the knowledge I gained from diving deep into material and manufacturing details on this project, I was able to create an educational presentation (slides + video) that helped inform both the internal LightArt studio employees and external nationwide sale reps, so together we could be more successful in future projects and in communication of Chroma capabilities and pricing.

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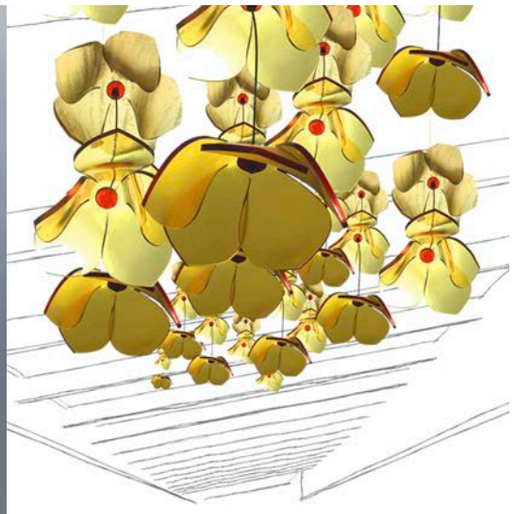
Project Process Details

Prior to the Desert Rain project, I had worked with Corgan and the Arizona LightArt sales rep to successfully managed a sculptural, suspended ceiling installation of (980) Palo Verde blossoms, installed in the renovated South Concourse of the airport.

My ability to deliver on time, within budget - having provided a VE alternative to the literal flower shaped mobile sample we created initially (photo below) - and providing excellent customer support to the installer, led to Corgan coming back to LightArt for the North Concourse Desert Rain installation.

During the Palo Verde project, while in the field the installer realized the standard ceiling attachment hardware that was approved by the GC would not function with the metal slat ceiling. I quickly found a hardware solution, approved it internally with the studio and with the GC/ installer, ordered and expedite shipped the hardware to the installer (TP Acoustics). They were extremely grateful for the solution and quick turn around time, enabling them to finish the installation on schedule.



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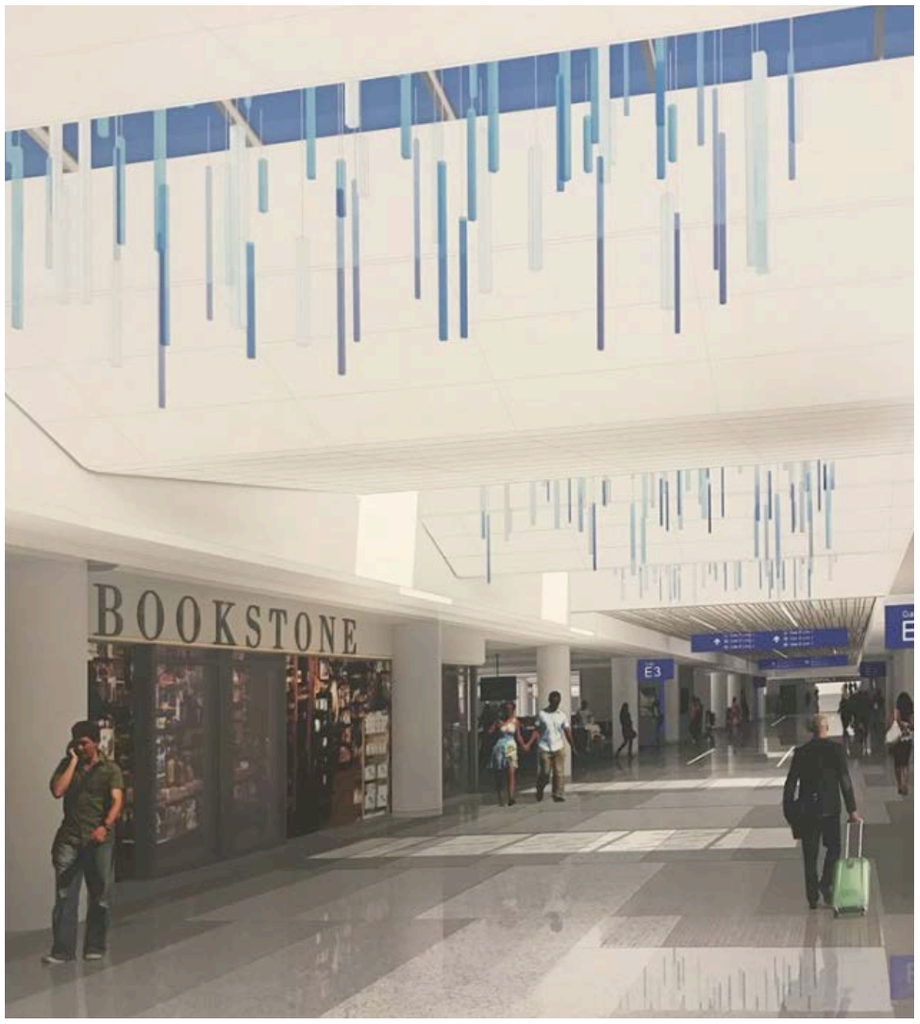
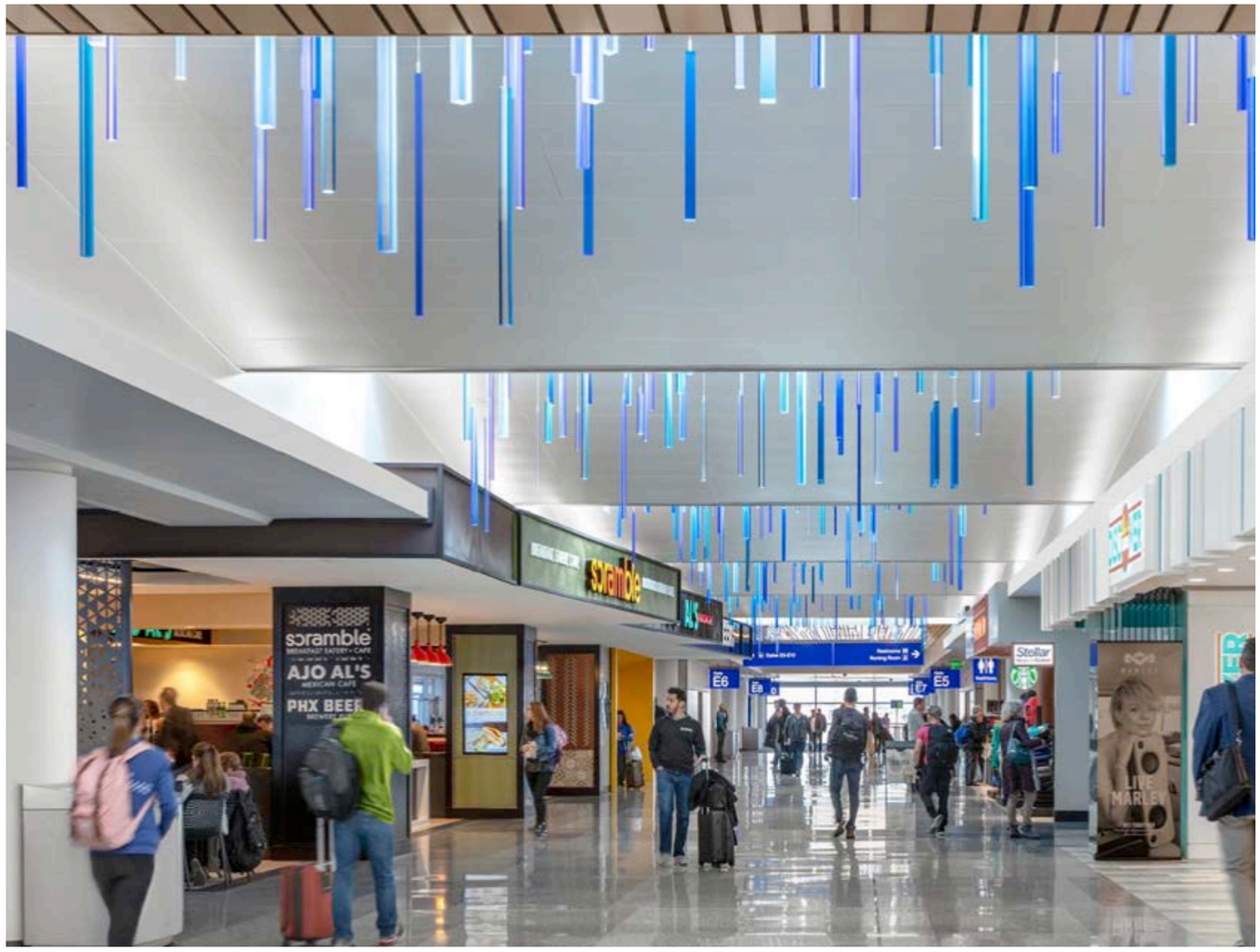
Below Images - Concept vs Reality

The architectural rendering *(below left, provided by the specifier)* of the conceptualized concourse re-design. Versus reality in the photograph *(below right)* of the finished installation. Along the busy concourse travelers can enjoy the magic of natural light as it interacts with the varied blue hues and refracts through the Chroma pegs matte and polished finished faces. At night, spot lighting above the Chroma pegs, brings even more attention and drama to the sculptural light art.





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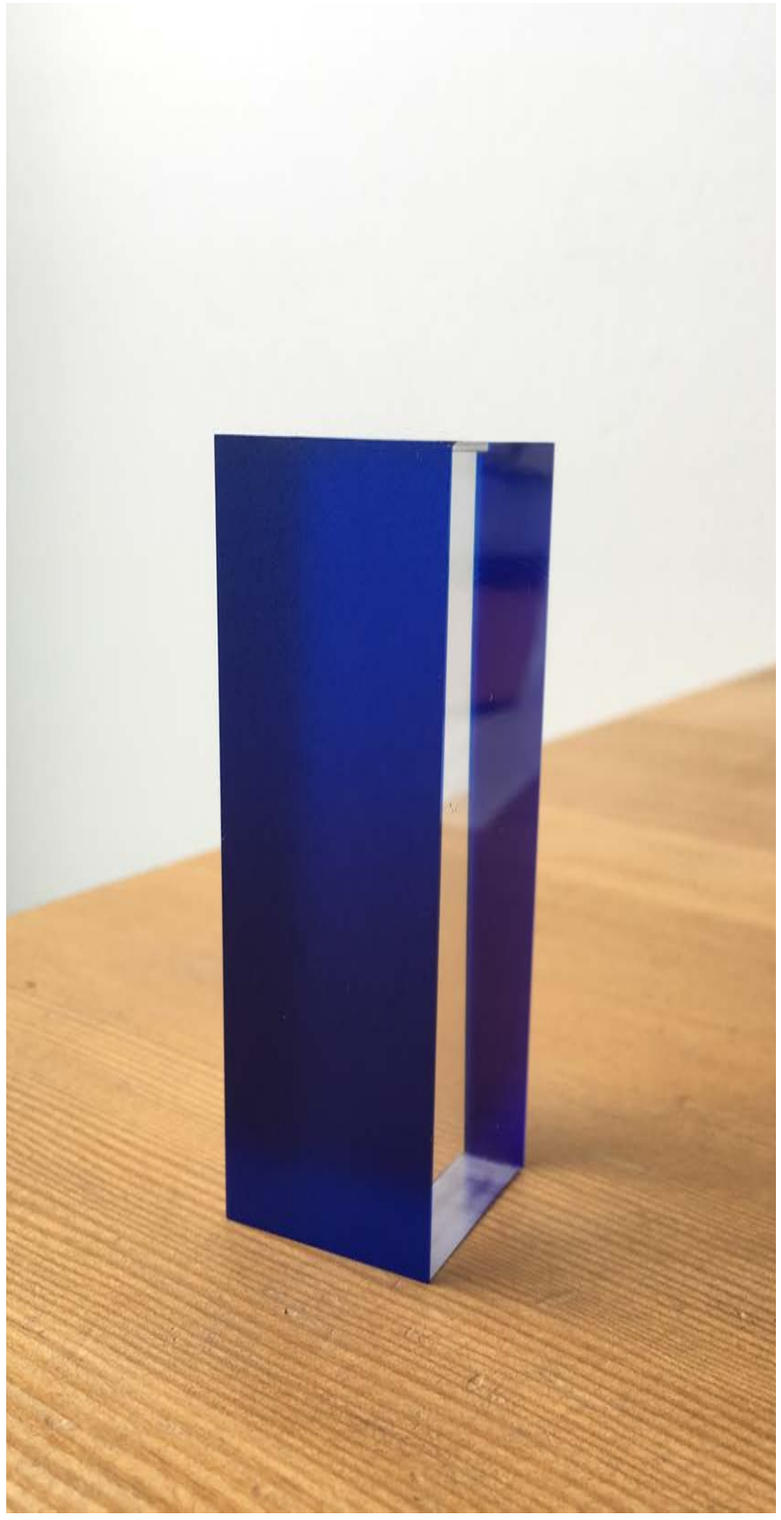
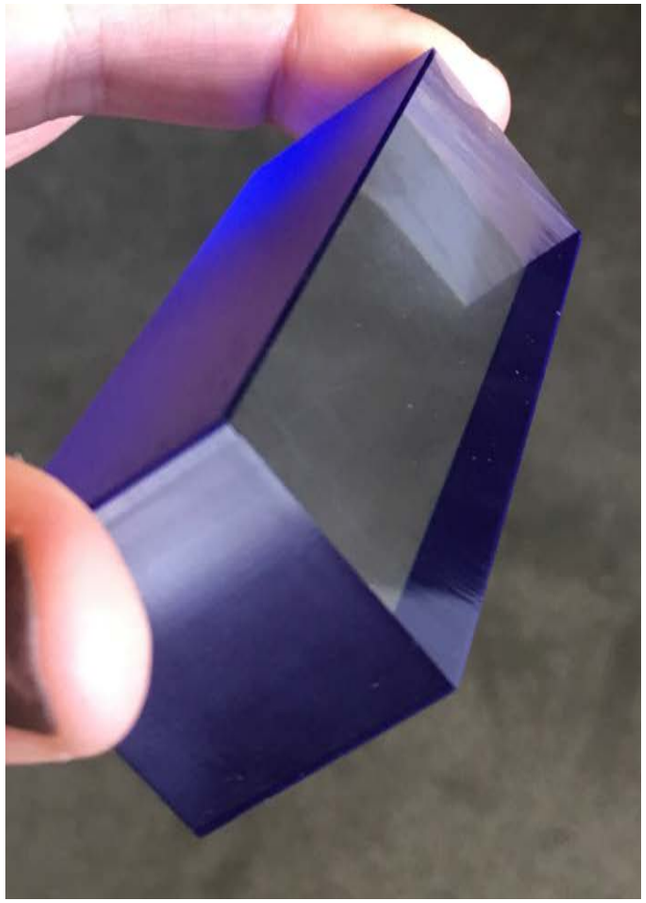
Obstacles

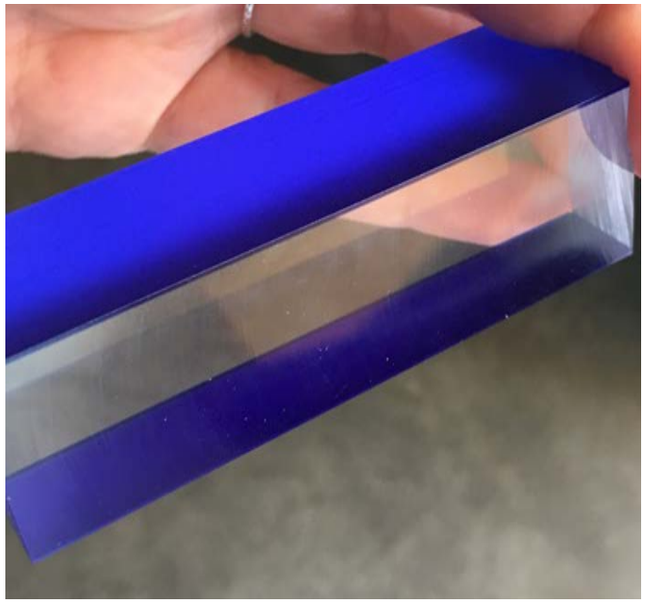
At the start, this project seemed pretty straight forward, as I had designed and created suspended Chroma peg projects in the past *(see Tishman Speyer in Portfolio for reference)*. However, to achieve the "Desert Rain" aesthetic, the specifier was hoping for a polished "wet rainy" appearance on some of the Chroma peg faces. In past projects, LightArt had only ever created Chroma pegs with all 4-faces in a matte sanded finish, as it was easiest to sand out routing or fabrication scratches.

I later discovered that while I could sample the Chroma material in small 8"x8" blocks with a cast patent polished finish. The manufacturer did not fabricate full 4'x8' sheets in the patent finish, due to the weight of a full sheet (200-400 lbs) when palletized to ship to LightArt to manufacture, the material would likely incur scratches. As a result, the standard material finish was matte - *only*.

This oversight, led me to work more closely with the Chroma material manufacturer and our internal fabrication team to realize a solution for a polished face finish. A machine, unused collecting dust in the shop, was the first test as it could function as a resurfacing and polishing tool. It worked successfully on the 1"x1" Chroma pegs, however on the larger pegs rotation machining marks were more visible, which led to flame polishing by hand as the only alternative solution.







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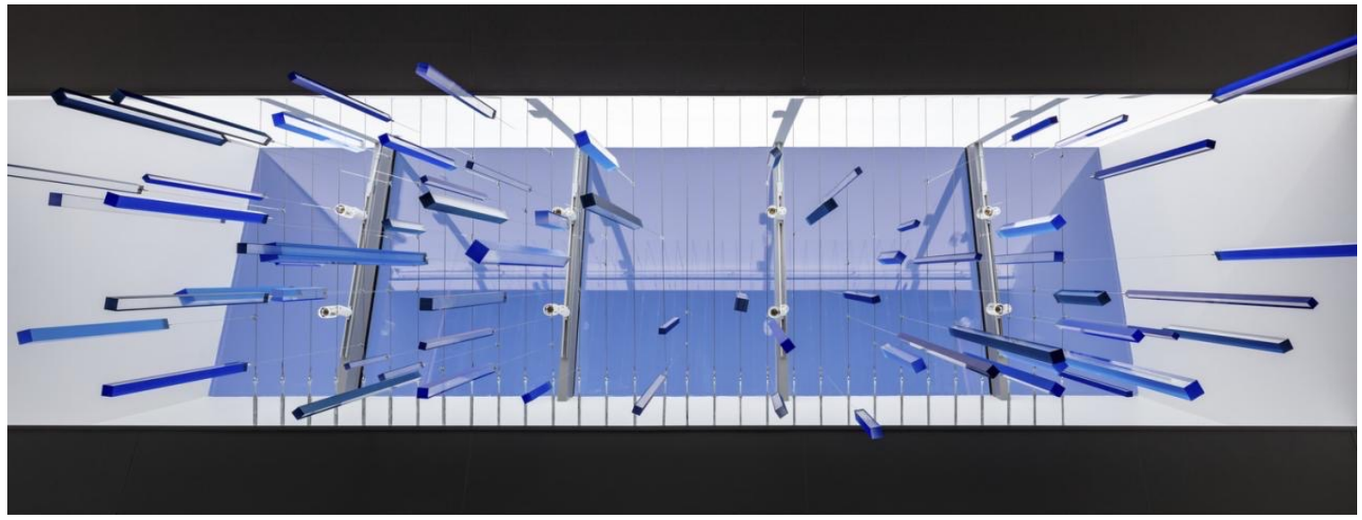
Obstacles

An additional challenge to the project was the fact that the Chroma pegs were to be suspended just below skylights. This meant that we could not use our standard ceiling attachment hardware to suspend from. As a result, I was able to configure a cross suspension system to work with our standard hardware solution.

Each of the six skylight bays required a grid layout system, full scale template for installation and a corresponding installation key to note which size/color/ suspension length each peg needed to be. By packaging the Chroma pegs in an organized and labeled manner, this allowed the installers to easily grab from each uniformly stacked, designated size/style/color Chroma pile.

A testament to my diligence to search for creative solutions, utilize the knowledge of my teammates as a valuable resource, and keep cross communication clear and frequent - the specifier, installer, and GC were appreciative of our ability to deliver on time, on budget, and provide many helpful tools for an efficient and beautiful end result.



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Project Process Details

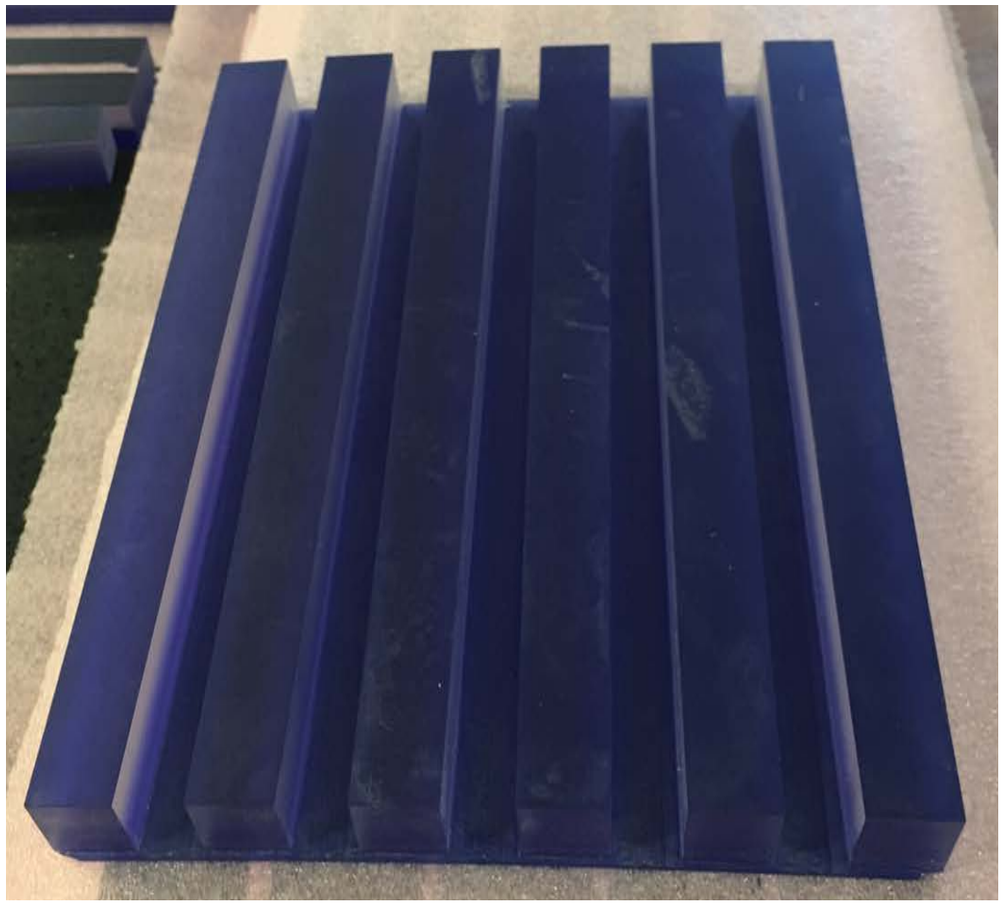
Photo 1. The Chroma pegs are cut using a router, which leaves tooling route marks on the sides that traditionally with a matte finish we would sand. To keep the pegs from falling into the bed of the routing machine, a small portion of material is left and then each piece is cut off of the whole, on a table saw.

Photo 2. After the routed sides are sanded, the peg is either polished on the machine (1"x1" only) or flame polished by hand, using the metal slats and clamps to keep the peg from warping when heated.

Photo 3. The polishing machine, has a sharp metal disc that spins removing a small portion of the face material, leaving a polished/patent finish.

Photo 4. Next each peg top is drilled to attach the threaded rod, which the adjustable articulating cable gripper attaches to for ceiling suspension.

Photo 5. Lastly the Chroma pegs are packaged in a custom ordered crate, labeled with the coordinating specifications of color/finish/size.



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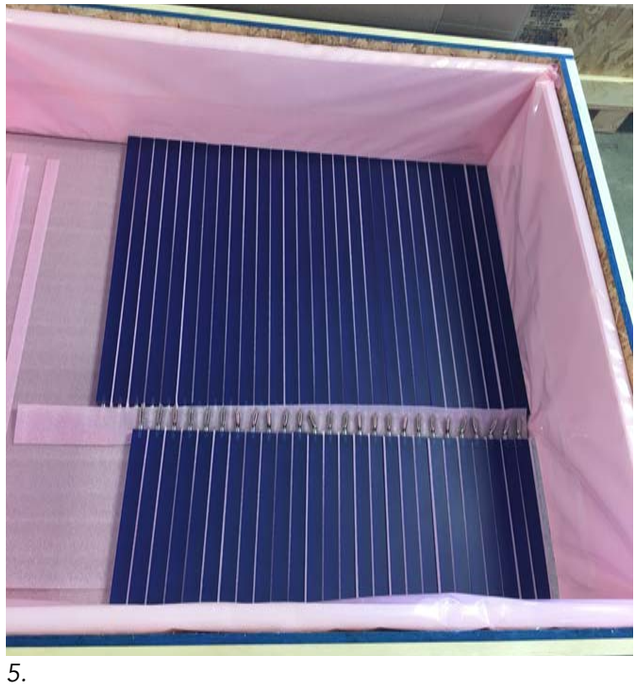

5.

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Project Takeaways

- There are solutions to any problem, do the research, learn something new, consult internal and external resources, and determine the best solution - make sure everyone is on board with that decision to move forward.

- Document learning to create a presentation and team reference tool, for ease in accessing information for future projects.

- Breaking down the manufacturing processes based on material and design intent, sometimes requires a second look at how project pricing is calculated and currently structured in the universal pricing tool. This can create a more accurate initial quote, clear understanding of go-to value engineering options, and less chance that a project margin outcome is very low due to oversight in manufacturing processes or misunderstanding of material capabilities.

- Delivering a beautiful product, on time, within budget, and providing excellent customer service creates a very good chance for additional opportunities for work. Relationship building is important no matter if the client is big or small.