MITCH MUSEL

Architectural Designer — Aviation Architecture · Computational Design · Fabrication

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Architectural designer with 8 years of professional experience spanning aviation architecture, computational design, and fabrication. Progressed through five roles in six years at Corgan — from summer intern to project coordination on a $1B+ terminal program — before leading computational design initiatives in the firm's model shop. AXP experience hours complete in all six categories; ARE testing in progress. Combines traditional Revit-based practice with self-taught Grasshopper fluency and hands-on fabrication craft.

CORE COMPETENCIES

BIM + DOCUMENTATION
Revit (CD set production), AutoCAD, Bluebeam, SD/DD/CD workflows

COMPUTATIONAL DESIGN
Grasshopper, Rhino, parametric modeling, Rhino-to-Revit interoperability, generative script development and debugging, direct G-code workflows

PLANNING + COORDINATION
Airport programming and masterplanning, operational phasing, consultant coordination (structural, MEP, interiors), bid package documentation

VISUALIZATION + FABRICATION
Physical model-making, FDM/resin 3D printing, laser cutting, CNC, Adobe Creative Suite, client presentation packages

EXPERIENCE

Corgan — Dallas, TX

Shop Fabricator III — May 2023 – Present

Computational Design Lead — internal designation; selected by management to lead computational design initiatives within the shop

- Lead computational design initiatives across the shop, building Grasshopper tools that now sit inside day-to-day production — generative site-model vegetation, entourage populators, and large-nozzle FDM scripts that write G-code directly, no slicer in between.
- Led fabrication on technical, systems-driven builds including a data center pull-apart kit-of-parts model — folding design, structural, and MEP intent into one object a client can take apart with their hands.
- Bridge digital workflows and physical model-making daily, supporting design reviews and client presentations for studios across the firm.
- Coordinate consultants and internal staff through design charrette sprints and external client presentations.
- Promoted from Shop Fabricator to Shop Fabricator III (April 2025).

Aviation Architecture Studio — Project Coordinator I — Jun 2020 – May 2023

Progressed Intern → Project Specialist → Project Specialist II → Project Coordinator I. Previously Summer Architecture Intern, Aviation Studio, Jun–Aug 2019 (returned full-time upon graduation).

San Antonio International Airport — New Terminal, with Lake|Flato Architects (17 gates, 900,000 SF, $1B+)

- Served as project coordinator on the new terminal program — the largest capital project in San Antonio's history — as second-in-command under the aviation planning lead, directing work placement, task prioritization, and internal check-ins for a mixed-experience team including three junior members.
- Developed masterplan layouts, space programming requirements, and bid package documentation that gave the city and airport authority a real cost picture to plan against.
- Built physical massing and layout models used for internal coordination and carried into working SD sessions at Lake|Flato's Austin office — sketching, discussing, and iterating concepts alongside both firms' teams.
- Presented alongside firm leadership to the airport director and city council members, communicating the projected traffic, revenue, and economic impact of the terminal program.
- Conducted phasing and passenger circulation studies for Terminals A and B during construction — planning gate downtime against airline seat and flight capacity, with corresponding modifications to ticketing, security, and the Terminal A sterile corridor serving international arrivals, keeping the airport fully operational landside and airside for the duration of the build.

Houston Hobby Airport (HOU) — West Concourse Expansion for Southwest Airlines (7 gates, $470M)

- Produced Revit documentation, space programming, and client presentation materials for the concourse expansion and its modernized baggage handling system.

- Built physical presentation models of the feature clerestory skylight running the concourse spine and a curtain wall section study of the airfield-facing frit pattern.
- Advised on the computational scripting behind the published "starry sky" ceiling perforation pattern — debugging and restructuring the generative logic into a buildable, adjustable output.

ATL MARTA Airport Station — Canopy Replacement ($55M renovation; system's busiest station, ~11,000 daily riders)

- Developed schematic canopy alternatives through parametric massing studies in Rhino/Grasshopper, ported into Revit for visualization and structural consultant coordination — my first parametric work inside billable practice.
- Worked iteratively with structural engineers on steel member sizing, material performance, and PTFE tensile membrane feasibility across multiple client-facing presentation rounds.

Nashville International Airport (BNA) — Concourse D Extension, New Horizon program (6 to 11 gates, $1.5B+ program)

- Supported extension planning with airfield restriping studies and gate phasing strategies, sequencing construction and demolition against live airport operations.
- Validated restroom, hold room, concession, and support space adequacy within the extension footprint.

Nashville International Airport (BNA) — Delta Sky Club (13,500 SF)

- Produced the architectural package in Revit on a 3–5 person team — my first project at the firm — advancing through design development with MEP coordination (duct sizing, restroom and electrical locations) and interiors consultants before a COVID-driven pause.

Additional Studies + Research

- Co-led speculative typology research into commercial spaceport design during the 2020 aviation downturn, including vertical farming and aquaponics integration studies.
- Delivered focused design studies across active terminals: a ceiling redesign for the ATL ticketing lobby, core-and-shell design for a premium airline lounge at Washington Dulles (IAD), and a baggage claim accent wall study at HOU.

Legend Technical Services, Inc. — Fargo, ND

Architecture Drafting Intern — Jun 2018 – May 2020

- Turned field-survey sketches and walk-through notes into polished, professionally branded AutoCAD floor plans and PDF deliverables, documenting hazardous material mitigation zones required before demolition or construction could begin.
- Worked remotely through the final stretch of the role while completing graduate studies — self-managed, deadline-driven production before remote work was the norm.

Michael J. Burns Architects, Ltd. — Moorhead, MN

Architecture Intern (part-time) — Jan 2020 – Apr 2020

- Supported education and historic preservation projects with Revit pickups and Bluebeam redline revisions alongside full-time graduate coursework.

North Dakota State University — Fargo, ND

Graduate Teaching Assistant — Urban Design — Jan 2019 – May 2020

- Supported 45 Architecture and Landscape Architecture students; prepared course materials, led office hours, and managed grading for an urban design studio.

LICENSURE

NCARB Record active — AXP experience hours complete in all six categories. ARE testing in progress.

EDUCATION

Master of Architecture — North Dakota State University — Fargo, ND · 2020

- Class representative all four years; served on the advisory board for the College of Architecture.

INDEPENDENT PRACTICE — VECTOR + VINE

- Founder of a self-started parametric design and fabrication practice — a personal creative outlet producing 3D-printed generative vessels, lighting, and plant propagation systems through Grasshopper scripts that output print-ready G-code directly.
- Built as an online store to share original design work; pre-launch, pursued entirely outside firm hours, and already a hands-on education in running a design business end to end.