Stantec

DESIGN

VOLUME 2


PUBLIC
O/P ZONE
MAIN ENT
CHOI on SJH Campus
Option 1A : Upper Levels
o connell mahon + aldo architects
Study 7B

WHAT'S INSIDE

FORWARD THINKING

We are proud to present Stantec Design Volume 2.

Culture and Design Excellence

Design is the value we create for our clients and communities.

Innovation occurs at the convergence of many disciplines: Architecture, Engineering, Landscape Architecture, Interior Design, Environmental Design and Graphic Design, Psychology, Sociology, Ecology, Sustainability and more. We strive to create value through a client centered, responsive process, a process that is collaborative and focused on meeting our client's business objectives.

Our design culture is built on a shared belief of the value of design, trust, client engagement, and engaged leadership. Collectively we share a commitment to excellence in all aspects of our practice.

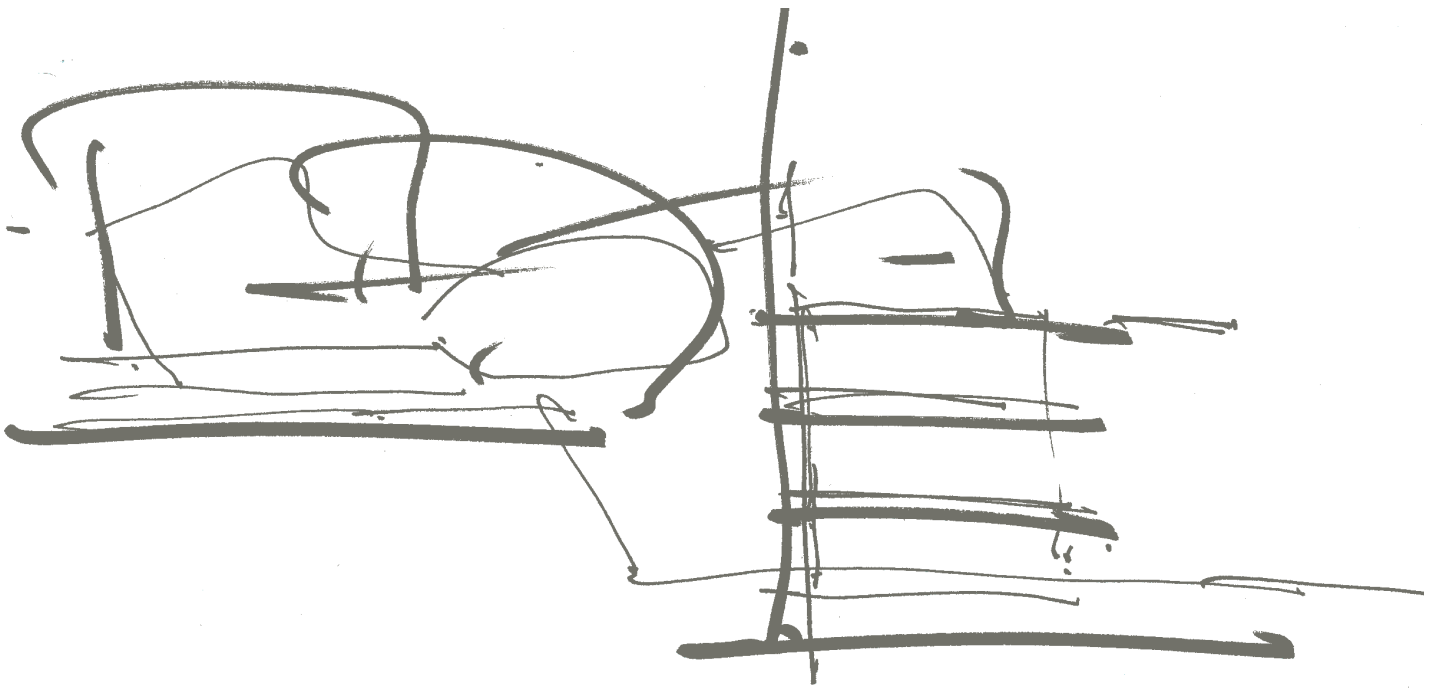
The Process of Selection

Our studios worldwide submitted twenty-five projects. Members of the Council on Design reviewed the submissions and ranked the projects by their achievement of the Five Parameters of Design – our collective definition of design excellence. Consideration was given to innovation driven by design, the degree of design integration between disciplines and how well the solutions met client needs.
Ten projects achieved the highest rankings by the Council, designated here as Exemplary, by definition, they embrace the Five Parameters and demonstrate leadership in design. Three projects were also designated Notable by achieving a strong design vision and contextual response.

We are incredibly proud of our design ethos at Stantec. This compilation of work gives you an insight of the diversity and vibrancy of our design community.

Sincerely,

Anton Germishuizen + Michael Moxam
Co-Chairs Design Excellence Council



THE 5 PARAMETERS

VISION Every project must be driven by a clear idea

The Idea captures the essence of the response to site, context, program and client aspirations. This is captured in a concept diagram that serves as the driver of the project development. Supporting the diagram is the project narrative or "story" that ties the various aspects of the idea together and embodies the meaningfulness of the project.

RESPONSIVE DESIGN The human experience

Projects must be responsive at multiple levels including site characteristics, community context, cultural context, impact on public realm and environmental impact. Human experience must guide our thinking relative to intuitive wayfinding, spacial experience, connectedness to landscape, access to natural light, scale and materiality.

INNOVATION Challenge pre-conceptions

A complete and intimate understanding of the unique characteristics of the client, the site, the program and the context will drive solutions that are specific and unique to these influences. This naturally germinated Innovation is firmly rooted through research and exploration and avoids any pre-conceived approaches.

PERFORMANCE Define meaningful objectives

Performance determines how well the project meets the needs of our client's and our communities. Criteria include planning efficiency, functionality, energy and environmental response, community connectivity and fulfillment of client objectives. Performance is highly measurable and serves as a barometer of success in the design process.

CRAFT The craft of communication

Vision, Responsiveness, innovation and performance are only as good as our ability to communicate the ideas clearly and concisely. All of our communication tools; our writing, our drawings and models must be executed with skill and care focusing on the essence of the idea.

CRAFT The craft of expression

The material interpretation of the ideas that drive the design process forms the essential expression of the project. The care with which we consider the building mass, the landscape, connection to site, material selection and assembly provide the language through which the idea is clear and legible.

EXEMPLARY PROJECTS

University of Massachusetts Integrative Learning Center

Queen's University Belfast Centre for Experimental Medicine

The Grey Coat Hospital Church of England Comprehensive School

Nasik Airport Passenger Terminal

Habitat for Humanity Net-Zero Prototype

River Valley Authority (RVA) Pedestrian Bridge Concepts

Toronto Police Services 11 Division

Santa Clara Valley Medical Center Patient Tower & Rehabilitation Center

Centrepoint Development

South West Acute Hospital


NASIK AIRPORT

NASIK AIRPORT PASSENGER TERMINAL

Location: Nasik, India

Project Duration: 2011 - 2014

Size: 89,000 SF / 7,000 SM

Construction Cost: $12.65 million USD

Stantec Services: Architecture, Interior Design, Mechanical and Electrical Engineering and Landscape Architecture

Design Team: Stantec Architecture, C.M. Belekar Architects, P G Patki Architects Pvt. Ltd., Infrastructure Development and Consultants India Pvt. Ltd. – Jayesh Hariyani, Christopher Laack, Jeevan Mundiwale, Arpan Dalal, Ronak Patel, Gopinath Akalkotkar, Bhargav Dave, Mehernosh Fanibanda, Mayur Gor, Saumil Mevada, Ramkrishna Rao, Nikul Shah, Shubra Tarkar, Ashraf Vadia, Zakir Hussain Kazi, Sanjay Mistry, Sachin Jani, Niyanta Pathak, Jonathan Novak, Parshav Kansara, Hardik Bhatt, Judy Novak

India is the seventh largest country by area and the second-most populous country in the world with more than 1.2 billion people. The state of Maharashtra is the second-most populous state in India with over 112 million people. Located within the Nasik District of the state, this project will be the first commercial airport for the region. The airport will be located at the Hindustan Aeronautical Limited campus where the manufacturing and development of military aircraft such as the MIG and the Sukhoi occur.

The undulating roof of Nasik's new passenger terminal, inspired by birds in flight, creates an iconic building employing innovation and modularity to achieve an exciting civic icon.

CONCEPT

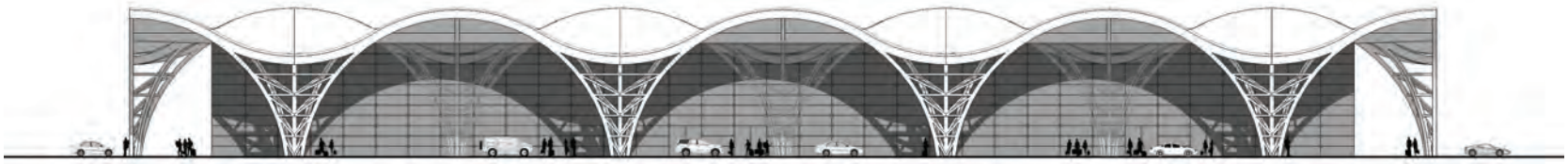
Man has always endeavored to fly. Over time there have been many flying machines conceived by humans such as the Greek scholar Archytas and Leonardo Di Vinci. Their main source of inspiration was that of the bird's wings. Drawing upon the visual of a bird's wings in flight, the building's modular façade seeks to capture that same spirit. The undulating shape of the module seeks to outline the form of the bird's wing while trying to achieve greater momentum and power for take-off and increased air speed.

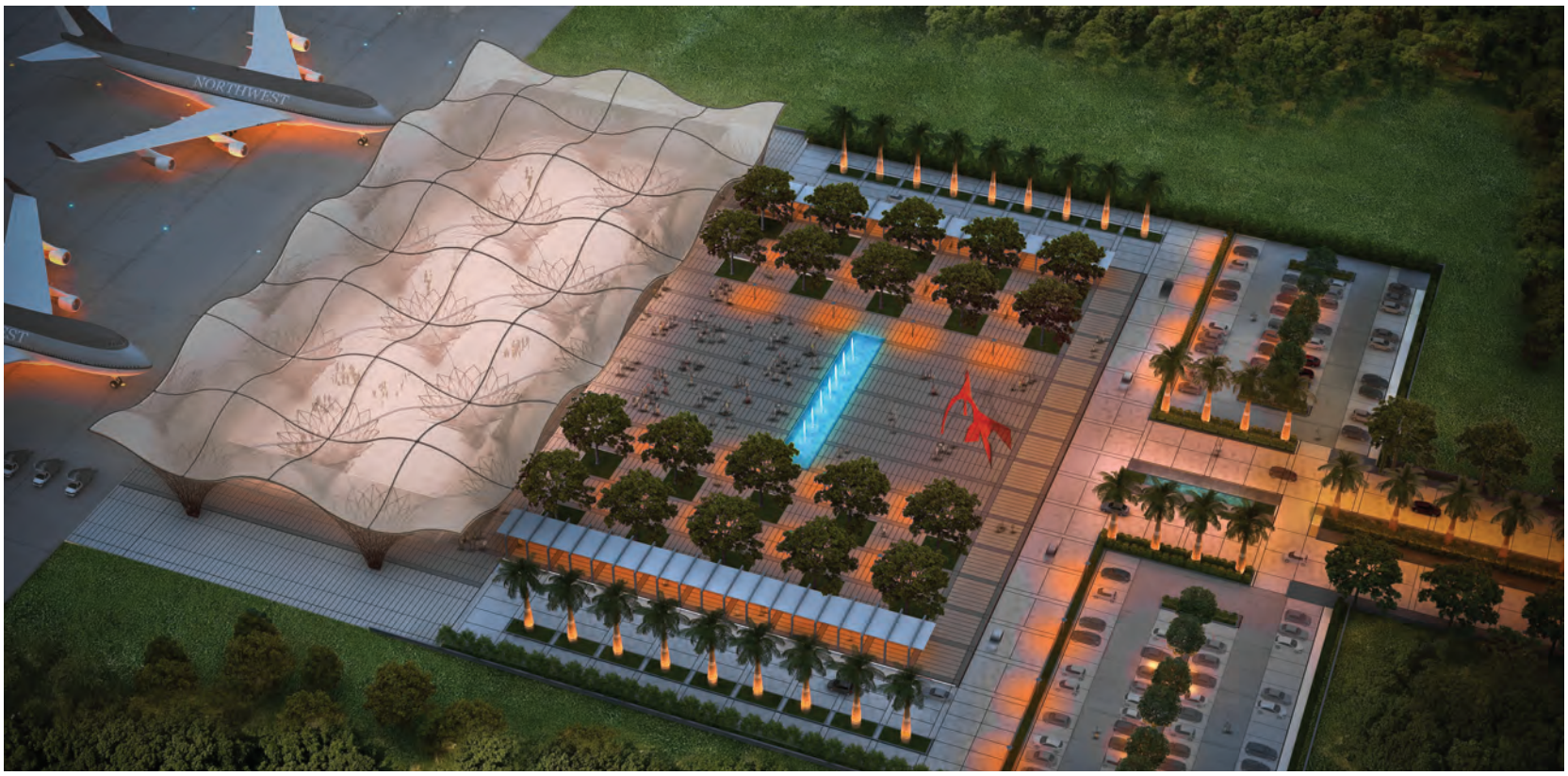
TYPICAL MODULE

Structural steel arches, linked together, allow for an impressive 32 meter span between bays for each module. Furthermore, the gap between the arches is structurally and visually linked together with a complimentary convex bowing beam. This approach brings continuity to the structure and roof to create the iconic undulating form of a double curved roof. The form of the roof's double curvature evokes the idea of clouds floating above the building.

PROJECT BRIEF

Currently there are no commercial flights servicing the Nasik region and if one needs to travel by air then they must travel four hours by car to Mumbai which is the closest airport. The Government of Maharashtra decided that a 7,000 SM airport should be realized in the region's capital city, Nasik. Furthermore, the new airport could also act as an emergency diversion location for air traffic heading into Mumbai. Due to limited land availability and a modest budget, the new passenger terminal building is to be located on the 10,000 acre campus of Hindustan Aeronautical Limited (HAL) which already has an active runway of 3 km and the necessary support infrastructure such as maintenance buildings, fire stations, control tower, etc. Due to the military nature of the HAL campus and desire to maintain national security, the building location was pre-selected by the HAL officials. The passenger terminal building is planned to handle 300 peak hour passengers in the first phase and in later phases the terminal will be expanded for increased passenger capacity. In the first phase, there will be no aero-bridges so the passengers will be transported to the aircraft via buses.



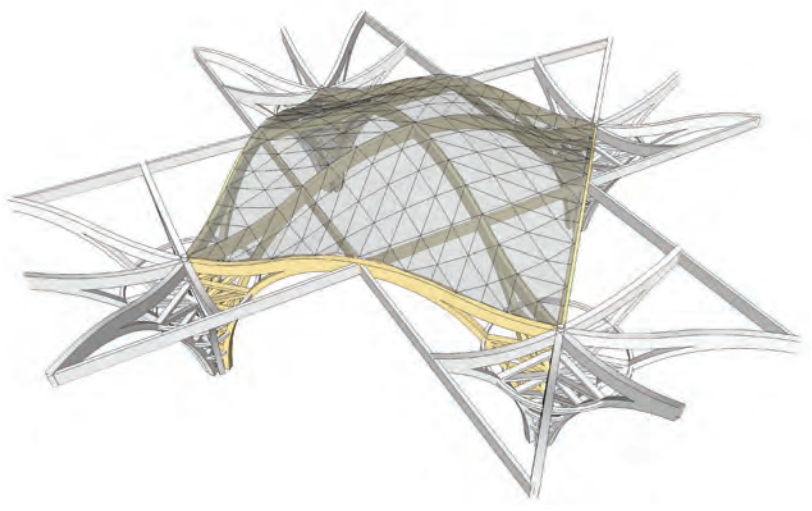


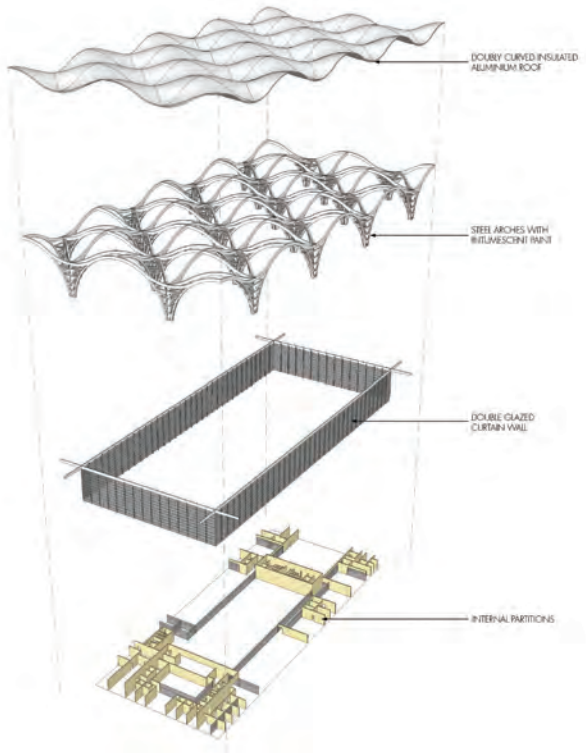
THE BUILDING DESIGN

The main design features of the building include an undulating roof being supported by a series of arches. The structure is comprised of large columns, spaced 32 meters apart and have 8 equally spaced arches radiating around the column at 45 degree intervals. As a result, each column becomes very sculptural in nature. Since the roof and supporting structural system are striking in form, the exterior envelope is rendered as a simple clear glass curtain wall. The terminal building sits prominently in front of a formal treed plaza that features a central water feature, sculptures and food kiosks. Since security protocols do not allow for non-passengers to enter the building, the plaza acts as a main send-off and receiving area for the passengers. The approach road leading to the air terminal building is a 500 meter long road leading from the main highway and is aligned with the midpoint of the building façade and plaza. As a result, all visitors have a tree-lined axial experience that terminates with the iconic passenger terminal building.

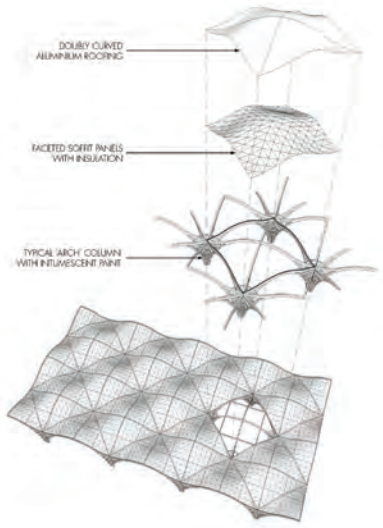
THE INTERIORS

Upon clearing the initial security measures, the passenger experiences a grand central hall which affords an uninterrupted view of the vaulted ceiling. The interior partition walls are kept to a minimum height so as to not engage the ceiling and therefore suggesting that the interior spaces are more like small buildings placed within a larger building. This was purposely done so as to reinforce the idea of grandeur, airiness and openness. Wherever possible, glass partition walls are used in lieu of solid walls to separate spaces to maintain visibility between the landside and airside portions of the airport.





CONSTRUCTIONAL STRATEGIES



Review Team
ANNIE COULL

How the Nasik Airport Terminal Building exemplifies the 5 Parameters

Vision The form and movement of a bird in flight inspires the articulation of structure and modularity throughout this simple but dramatic passenger aviation terminal.

Responsive Design Attention to passenger and visitor experience begins at arrival to the site with the building featured at the end of a long allee of trees and continues with transparency through the interiors for travelers using the terminal before and after flight.

Performance With entry to and use of the building restricted to travelers, the project features an elegant and well-appointed plaza for the significant human interactions that occur as loved ones or friends and colleagues are sent off on their journeys or welcomed home.

Innovation Taking advantage of the infrastructure on this site and bringing in new passenger services with a focus on strong conceptual and diagrammatic ideas to enhance their experience is an innovative design parti.

Craft The technical clarity of structure and modular pattern to evoke human infatuation with flight is expressed with strength and beauty.