2018 TEXAS STUDENT BIENNIAL

presented by

ARCH
ARCHITECTURE CENTER HOUSTON
Totalization studio—Instructor: Troy Schaum; students: Xiaoyun Ni and Yixin Zhou

2018 TEXAS STUDENT BIENNIAL / RICE UNIVERSITY
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Senior studio—instructor: Ajay Manthripragada; student: Ethan Chan

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Senior studio—Instructor: Ajay Manthripragada; Student: Ethan Chan
Option studio—instructor: Ron Witte; student: James Carr
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Prairie View A&M University
SCHOOL OF ARCHITECTURE
DESIGN YOUR FUTURE AT PV·SOA
SPACE COMPLEX PROJECT
ORDERING PRINCIPLES, ORGANIZATION AND SPACE

WILVA. ROSA, S. RODRIGUEZ
PVAMU SOA

2018 TEXAS STUDENT BIENNIAL / PRAIRIE VIEW A&M UNIVERSITY
JOVANY SANTOS
PVAMU - DESIGN III
AFRO AMERICAN MUSEUM
PROFESSOR – OKELLO J.A.O
DEBORAH CAMPOS
PVAMU - DESIGN III
AFRO AMERICAN MUSEUM
PROFESSOR – OKELLO J.A.O
Bulleted Train Passenger Station
Brazos Valley
Texas Southern University

This proposal for a passenger station in the Brazos Valley has two alternative locations: the city of Waller and Roan’s Prairie. Texas has a long history of being a safe haven for many cultures, creating a melting pot and making it home to many. It also heals strong and independent ties of people. The design binds the rice culture of the station with the rural area. The station is designed to follow an agricultural development pattern, to provide experience that is uniquely Texas. This sustainable station will be a wide and safe haven to all who visit and become available for running an emergency evacuation. The building can withstand hurricanes with wind resistant windows, main equipment and Apocalypse resilient on the upper levels (above any floods), along with off grid renewable energy back-ups. The station sustainably goals and metrics are designed to meet the Living Building Challenge’s guidelines. These guidelines include the incorporation of native Texas materials, glass-embedded wood framing structure, water and energy efficient features. The station design was driven by ideas of Biomimicry. In the same way that the white Quand tree keeps reflecting the heat while still absorbing energy. From the sun, the station will use a white roof with a full solar panel array that absorbs the sun energy while reflecting away the heat. The station will have four levels: a parking and hotel (south wing), Passenger (north wing) or depot, a commercial area, and an office. The station level contains a concourse with access to the roof deck. The first level serves parking, car rental, main lobby, souvenir shop and farmers market.

Materials
- Glue Laminated Oak
- Cherry Wood
- Maple Wood
- Hem
- Corrugated Steel
- Reinforced Concrete
- Glass

Biomimicry
The Quand Tree

Sustainability Diagram

Bullet Train Route

Roan’s Prairie
Waller

Floor Plans

First Floor
Second Floor
Third Floor
Fourth Floor

Ledell Thomas + Kaylah Wesley
1st Place Winner
PVAMU - Design VI
Train Station Competition
Professor – April Ward

2018 Texas Student Biennial / Prairie View A&M University
1ST PLACE WINNER - DEPARTMENT OF ENERGY RACE TO ZERO COMPETITION 2018
PVAMU - DESIGN VIII

PROFESSORS – SHELLEY. POTTORF, APRIL WARD (students below)
SHANNEN MARTIN, KRISTEN CLARK, AARON FARRAY, KENNIA LOPEZ, NOAH PERKINS, CYNTHIA SUAREZ-HARRIS, SHELBY SKINNER, LEDELL THOMAS, KAYLAH WESLEY.

2018 TEXAS STUDENT BIENNIAL / PRAIRIE VIEW A&M UNIVERSITY
CIRCLE SQUARE CIRCLE
THIS PLACE FOR CONTEMPLATION AND COUNSELING IS SITUATED WITHIN A FIELD OF
PINE IN GRAND PRAIRIE, TEXAS. IT PROVIDES SPACE FOR THE EVER GROWING NUMBER
OF PERSONS WHO HAVE OR KNOW OF SOMEONE WITH CANCER. THE BUILDING USES DI-
CHOTOMOUS LOGICS SUCH AS: CIRCLE-SQUARE, SOFT-HARD, SMOOTH-ROUGH, IN-OUT,
GARDEN-LANDSCAPE TO ASSIST IN ORGANIZING THE BASIC CONDITIONS OF ARCHITEC-
TURE. PRIMARY FOCUS WAS ON THE TECTONIC AND ITS RELATION TO VOLUME, ASSEM-
BLY AND COMPONENT. THE ARCHITECTURE OF SURFACE WAS EXPLORED THROUGH
CASTING CONCRETE SAMPLES. THE ACQUIRING OF THE ROUGH AND ITS POTENTIAL TO
DIALOGUE WITH THE BARK OF THE PINE TREES SITED WITHIN THE COURTYARD WAS OF
PARTICULAR INTEREST.

GRAND OASIS "INSIDE OUTSIDE" - THE LEGACY OF MARGARET KESWICK JENCKS, A LANDSCAPE ARCHITECT WHO BECAME TERMINALLY ILL FROM
CANCER, WAS THE INSPIRATION OF THIS PROJECT. WITH THE NOTION THAT CANCER TREATMENT ENVIRONMENTS AND THEIR RESULTS CO
BE DRastically IMPROVED THROUGH GOOD DESIGN, THE CONCEPT WANTED TO FOCUS ON THE CONCEPT OF CHOICE AND WHERE YOU "COPE".
HAVING CANCER CAN BE A LIFE CHANGING EXPERIENCE, WITH THAT, THE IDEA OF HOW YOU WANT TO HANDLE COPING WITH IT IS PROMOTED
WITHIN THE DESIGN AND YOU.
DIVERSITY

The Museum for Diversity is sited between a prairie and a grove of pin oak. The buildings scattered volumes differ in height and width to accommodate artistic difference. Exterior courtyards emerge as the volumes collide and bind space between each other, offering another space for artistic intervention.
VALLEY AND HIP
SITED IN JAPAN, SEKISETSU HOSTEL - RISES AND FALLS LIKE THE MOUNTAINS SURROUNDING IT. THE ROOF PROVIDES AMPLE COVER FROM THE HARSH WINTERS WHILE ALSO PROVIDING A SENSE OF SCALE APPROPRIATE TO THE SETTING AND THE VARIOUS SPATIAL REQUIREMENTS OF MUSICIANS, SCULPTORS, PAINTERS AND POETS. THE BUILDINGS IS CLAD IN ZINC AND A LOCAL WOOD THAT HAS BEEN CHARRED.

2018 TEXAS STUDENT BIENNIAL / UNIVERSITY OF HOUSTON
Student: Tanmay Thakker Professor: Rafael Longoria Studio: ARCH 7600, FALL 2017
Student: Astrid Sukur  Professors: Gail Borden, FAIA and Peter Zweig, FAIA  Studio: ARCH 7600, FALL 2017

2018 TEXAS STUDENT BIENNIAL / UNIVERSITY OF HOUSTON
Student: Wes Carlson  Professor: Marcus Martinez  Studio: ARCH 6604, Spring 2018
Student: Gabriela Degetau  Professor: William Truitt  Studio: ARCH 5500

2018 TEXAS STUDENT BIENNIAL / UNIVERSITY OF HOUSTON
Students: Michael Lawrence Dillon, Stephan Gomez, Juan Diego Gomez Professor: Jeff Feng Studio: INDS 3500 Fall 2017
UN CONVENTIONAL SOPHISTICATION

Students: Michael Lawrence Dillon, Stephan Gomez, Juan Diego Gomez
Professor: Jeff Feng
Studio: INDS 3500 Fall 2017

2018 TEXAS STUDENT BIENNIAL / UNIVERSITY OF HOUSTON
The aim of the project was to design a new, technologically advanced cemetery consisting of a crematorium, columbarium, and a mausoleum. The mausoleum represents the origin of the tree life cycle and can only be seen from inside the cemetery. Its purpose is to connect the visitors with the history, culture, and nature of the site.

The main idea is to guide the visitors through a set of sequences where the mausoleum would be the focal point of all levels. The objective is to evoke their curiosity while they discover fragments of the sacred space before slowly disconnecting from the outside world.

The building arrangements made through two axes axes.

The first creates an opposition between the chapel and the crematorium, which are seemingly translated as a mirror of each other at different scales; the crematorium is bound below grade and lies within the building volume, while the chapel, situated above the ground, becomes a part of the landscape.

The second axis is defined by the mausoleum gardens, along which the trees would be moved as they grow.
The void space is the liminal space between public and private.

The theater nestles itself into the landscape, grounding the void space in the neighborhood.

The secondary building is a backdrop on which the public life of the void space can unfold.
KATHERINE SISTEK – BARS AND BEACONS : WEAVING AND BUTCHERY
ADVANCED STUDIO – KEVIN ALTER

2018 TEXAS STUDENT BIENNIAL / UNIVERSITY OF TEXAS AT AUSTIN
Galveston Bay is one of the most ecologically diverse regions in North America, and an invaluable well of resources for the United States. This project aims to establish an orientation center on Galveston Island that educates on the importance of coastal edge conservation. It is apparent that bay, wetland, and upland ecology have an intimately symbiotic relationship, and to educate well on their conservation the entire transect must be considered. The Galveston Orientation Center is situated bay-side in Caranahua Cove in Galveston Island State Park, and floats on an industrial barge. Large wooden louvers ripple as if the prevailing south-eastern breeze is touching the facade. The building ushers visitors up a series of terraces that informs on Galveston's most prominent transect features; bay ecology, oyster reefs, sea grasses, wetlands, and uplands. The terraces graduate upwards, offering interactive tanks where children and adults can learn how to plant sea grasses, build oyster reefs, etc. As this change in elevation occurs, one finds a panoramic view of Galveston's beautiful West Bay, asking visitors to reflect on the importance of conserving such a biologically unique area, and the implications if this is not done.
Frame is a pedagogical tool, which recognizes that the value in ordering parts is to achieve a greater appreciation for the harmony of the whole.
In response to increasingly innovative building practices, we as students at the University of Texas at Austin School of Architecture are designing and digitally fabricating a permanent wall installation in our school named ONDA. ONDA is a digitally fabricated installation centered around the new era of technology at the School of Architecture, and will showcase inventive design and building techniques. The design of ONDA comes from a semester long architecture studio run by Kory Bieg, and culminates as a permanent fixture in the West Mall Building on campus.
Set into the mountains of West Texas, the Monastery of Refuge is designed to register the landscape. The project’s two bar scheme is pierced by the tower’s shadow and sewn together by a patchwork landscape of fields and gardens.
The design proposal consists of a continuous circular roof with curved glass around the building with mullions different in depth to protect from the west and east sunlight. The circulation consists of hallways and staircases to travel through the programmatic elements of the building. The materials of the building are glass with mullions made out of laminated veneer lumber for the vertical elements and polished concrete for the horizontal elements. The range of colors used for the interior finished are neutral, as pure greys, to frame and maximize the art works. Furthermore, the structure consists of column and beams throughout the building and structural walls with a large number in columns in the exterior to hold the cantilevered slab out to the river.

The exhibition building design aims at producing a sustainable and green space to create art. To achieve this, the design includes a wide selection of plants, shrubs, flowers and grasses creating a garden inspired by Alphand Paris Park. The building integrates into the natural surroundings with its continuous curved form terminating at the river. The purpose for this is to invite people to interact and appreciate nature while circulating all around the building.

Exhibitions are located in the river level. Students will be able to showcase their work to people from Lessan and other visitors. There will be a permanent exhibition facing the river.

The lounge has games and sitting areas for students to take a break from their workshop activities. There is a reception for guests to check-in and get their program and materials for the weekly workshop. There is also a lounge area for people to meet each other prior to the classes.

Below 5 feet from ground, there is a terrace looking at the river where students will take their canvas and paint the landscape. There is also an area at the green roof where people plant vegetables and plants.

There is also an area on the green roof where people plant vegetables and places.
exhibition of works in graphic design
4 - 10 December 2018
Monterey Building

open Q&A + discussion

in the gallery + 3pm

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Design is both a verb and a noun. It is the beginning as well as the end, the process and product of imagination.

- Paul Rand

Design can be art. Design can be aesthetics. Design is so simple, that’s why it is so complicated.

- Paul Rand

SAMANTHA BENAVIDES | PROF. MARK BLIZARD

IVAN GONZALEZ | PROF. MARK BLIZARD

2018 Texas Student Biennial / University of Texas at San Antonio
Present day:

- United States: $612 billion for defense
- Russia: $76.6 billion for defense
- China: $126 billion for defense
- India: $46 billion for defense
- United Kingdom: $54 billion for defense
- Germany: $45 billion for defense
- France: $43 billion for defense
- Turkey: $18.2 billion for defense
- South Korea: $34 billion for defense
- Japan: $49.1 billion for defense
- Israel: $15 billion for defense

The next 300 years:

- United States: $1.7 trillion for defense
- Brazil: $45 trillion for defense

Prediction gathered from the following:
- Global warming
- Internal water resources
- Military
- Population

Water to the Future Citizen:

- 99% of direct access to water

Countries with the Most Corn Consumption:

- United States: 12,360 million bushels
- Brazil: 2,303 million bushels
- Egypt: 594 million bushels
- India: 921 million bushels
- Indonesia: 484 million bushels
- Japan: 594 million bushels
- Mexico: 1,476 million bushels
- China: 8,937 million bushels
- Canada: 524 million bushels

Water is a critical resource that will be needed for the future citizen. The lifestyles of average people in different countries will be affected by the availability and accessibility of water.

Monthly income and per meal costs:

- United States: $3,127 monthly income, $12 per meal
- Brazil: $25 monthly income, $3 per meal
- Germany: $2720 monthly income, $11 per meal
- Brazil: $1274 monthly income, $12 per meal

Weight and production:

- United States: 196 lbs weight, 6.4 million produced
- Brazil: 160 lbs weight, 8 million produced
- Germany: 181 lbs weight, 1,063 million bushels produced
- Brazil: 130 lbs weight, 6.4 million produced
- United States: 196 lbs weight, 27.9 metric tons produced
- Brazil: 160 lbs weight, 739.3 metric tons produced
- United States: 196 lbs weight, 15,148 million bushels produced
- Brazil: 160 lbs weight, 3,405 million bushels produced
My design's form was based on the twisted tower. Since the form is irregular and constantly changing along the facade, the area where the sun hit is minimized. I was not able to get my aSE below 10%, but I lowered it by playing with density of shading devices from 30% to 35%. Hotel rooms facing mainly North and South. By eliminating rooms on the east and west wing, I can save on cooling those places in the summer. Building protected by metal fabric screens (East and West) and by folding metal screens running on railing system built into the floor slabs (North and South). Garden on every other floor of the hotel and green walls in the lobby will create indoor green space. “Breathing” rain-check wall which allow free air movement through the lobby.

Final design:

- Vertical, south, and partial north shading
  - June 21 at 12pm
  - sDA = 70%
  - ASE = 35%
- Vertical, south, and partial north shading
  - December 21 at 12pm
  - sDA = 70%
  - ASE = 35%

Even though north facade does not experience the same amount of sunlight as all the other facades, experimenting with density of shading clearly shows that, with multilayered sunfilm, the north facade of the building does make difference in sDA and ASE. So following that conclusion about the performance, the northern shading was added.

Initial form: OPTIMIZING THE SHADING DEVICES

- 15%: Vertical shading
  - sDA = 76%
  - ASE = 39%
- 40%: Reduced density
  - sDA = 71%
  - ASE = 36%
- 65%: Vertical and South
  - sDA = 70%
  - ASE = 35%
- 75%: Vertical, South, and Partial North
  - sDA = 70%
  - ASE = 35%
Helix-shaped blades are welded to steel shafts to form an anchor that looks a bit like a giant screw. Holes are cut into the quarry wall to accommodate the blade diameter, then hydraulic potry equipment is used to drive the anchor through the wall and deep into the bank of rock behind. The cables are then attached back to these anchors to hold the building back against the quarry wall.

The cable elements of the building are tensioned against the steel tubing that runs top to bottom boundary structure. The horizontal cables make controlling the system deflections easier, requiring lessened pre-stress loads in the cable elements.