

# Time for Timber

University of Texas at Austin, School of Architecture  
Advanced Studio, Spring 2023



Flathead National Forest, Drinking Horse Reservoir Timber Sale. 2021.

## 00-Talking Timber: Studio Description

Wood is a unique material. It is a renewable resource with a cellular structure that offers a variety of abilities to swell, shrink, bend and absorb in a responsive manner. Further, its ability to sequester carbon, regrow in cycles, flex for adaption and reuse, and provide unique warm aesthetics sets it apart from other architectural materials. However, as a standardized and mass produced tool for construction, the uniqueness and variety of wood as an architectural material and a building resource is underused and underdeveloped. In dialogue with the timber industry of East Texas and existing material research, this studio will decouple wood as a tool from the expected production and construction methods of contemporary architecture. Rather than conforming to conventional timber construction, students in the studio will develop new formal and performative designs that emphasize the unique material characteristics of wood and speculate on new timber construction standards.

The studio is broken into 03 chapters that engage different scales of timber: techniques, territories and tectonics.

## 01-Timber Technique: Current Timber Technologies

The domestication of wood, from production sites to built spaces, has constrained the way we engage with wood as an architectural tool and therefore what we make. This chapter of the studio will focus on both understanding, interpreting and evolving current timber research within architecture, specifically cross laminated timber (CLT), variable laminated timber (VLT) and other lamination strategies. Students will modify and develop rigorous, experimental design methodology for exploring and evaluating the possibilities of wood construction. Using computation and fabrication tools, students will work between digital and physical models to simulate and/or stimulate innovative wooden construction methods, and then speculate on the implications or changes the results may have on architecture and architectural spaces as a generative design exercise. The outcome is a fundamental understanding of the material characteristics and prototypes that exploit and enforce these characteristics.

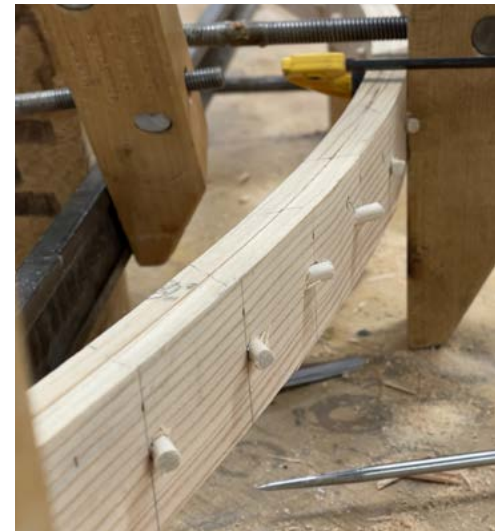
- PC.5 Research and Innovation – How the program prepares students to engage and participate in architectural research to test and evaluate innovations in the field.

*Sample Readings and References (research papers not included)*

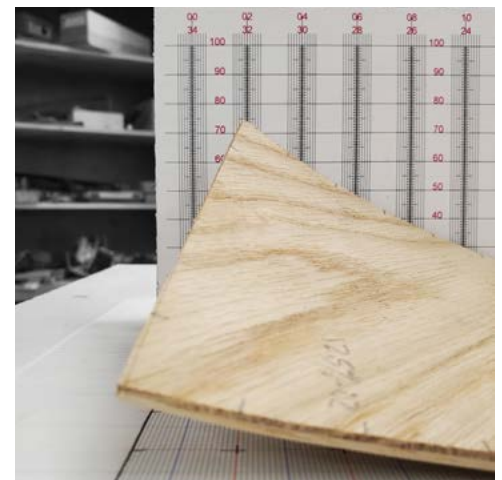
- Crawley, N., 2021. Cross Laminated Timber: A Design-stage Primer. RIBA Publishing.
- Dangel, Uli. 2017. Centerline 14: Time for Timber. Center for American Architecture and Design

Guest Lectures and Workshops:

- Uli Dangel, UT SoA
- James Michael Tate, Texas A&M



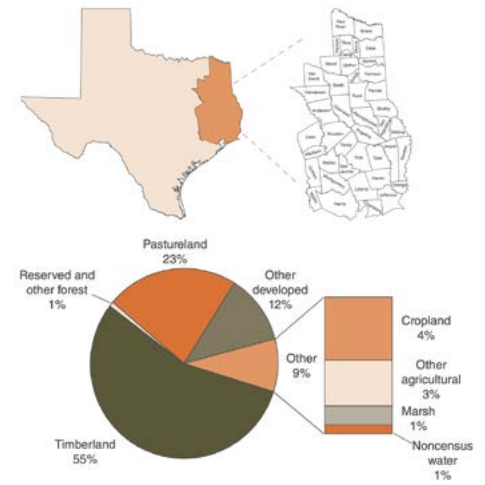
Michael Behm, Time for Timber, DLT, MSU, 2021.



Tyler Swingle and Cal Tompkins, VLT, 2021.

## 02-Timber Territory: East Texas Timber

This chapter of the studio will trace timber as it is transformed from forest to forest product, and interrogate the possibilities of continuing, fostering and growing this renewable transformation. As a studio, we will travel to the rolling hills, lakes, wetlands, and floodplains of Davy Crockett National Forest, Angelina National Forest, Sabine National Forest in Eastern Texas. Although the landscapes between these areas function as one ecosystem, it is divided into distinct territories with opposing uses and programs: some forests are chosen to be saved and preserved, while other forests are planned and produced for extraction. After meeting with authorities from the National Forest Service and local industries, students will reflect and think critically of how and what defines the environmentally virtuous building material of timber and the landscapes and environments that produce it. This includes investigating and mapping the actor-networks of the Eastern Texas ecosystem to develop a holistic understanding between the forest, forest construction products and the resulting built environment. From interrogating the different design scales and design factors within these productive and ecological forests, the aim of this chapter and trip is to understand and communicate the complexities of timber, both as a local building material and as a strategy for future forests, to enable adaptive and resilient design principles.



East Texas Forests, 2003. Resource Bulletin SRS-137. United States Department of Agriculture Forest Service



Flathead National Forest, Drinking Horse Reservoir Timber Sale. 2021.

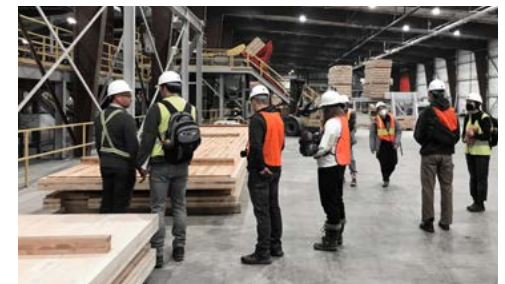
- PC.2 Design - How the program instills in students the role a design process in shaping the built environment and convey the methods by which design processes integrate multiple factors, in different settings and scales of development, from building to cities.

### Sample Readings and References:

- Architectural Review. 2021. The Architectural Review: tree.
- Haraway, Donna J. 1991. Simians, Cyborgs, and Women: The Reinvention of Nature. 149-181
- Ibañez, D., Hutton, J. and Moe, K. eds., 2019. Wood urbanism: From the molecular to the territorial. Actar Publishers.
- Latour, B. 1996. "On actor-network theory: A few clarifications." *Stoziale Welt*. 369-381

### Planned Industry Visits:

- USDA Forest Service, National Forests and Grasslands in Texas
- Lufkin Manufacturing Facility (CLT)
- Corrigan OSB, LLC
- Woodville Pellets LLC



SmartLAM factory tour, MSU, Columbia Falls, MT. 2021.

(left) Pyramid Lumber tour, MSU, Seeley Lake, MT. 2021.





Corbin Lyman, *Time for Timber, Simulated Snag*, MSU, 2021.

Cal Tompkins, *Time for Timber*, MSU, 2021.

### 03-Timber Tectonics: Timber Architecture

Architecture needs to shift from the “curative to the preventive in its relation to social ills,” (Grima 2021) economic values and material use. It can no longer remain idle or reactive to these demands and conventions, but rather anticipate and facilitate social, economic, ecological networks in a positive manner through material use, construction technique and resulting spaces. Building upon work done both at the technical and territorial scale, students will design an architectural project that engages local network entanglements and material processes in the National Forests of East Texas.

Students will synthesize site context and propose an architectural program that facilitates a working contradiction between forest conservation and extraction. As an anticipatory statement and critique of existing conventions, the designs will communicate a clear strategy in engaging the social, economic and ecological complexities of Eastern Texas. In the design process, students will explore how previous material investigations can meet and facilitate these strategies and propose a comprehensive design for the final chapter of the studio. Designs will have both a formal and social complexity informed by the unique properties of wood and be comprehensive by accounting for the sourcing, construction, habitation and even deconstruction of the project as the natural material returns into the ecosystem.



The final designs are simultaneously both speculative and proven architecture. They are informed by questions of lifespan, reuse and decomposition, and often combined with ideas of collectives and non-human occupants to produce a more holistic idea of an architectural program. They are tested timber construction techniques applied sensitively and strategically to specific forest ecosystems and economies. They are the possibility and productive anticipation of the need for a better understanding of both the forests and forest products within architecture.

#### Sample Readings and References:

- Bonner, Jennifer. 2022. *Blank: Speculations on CLT*. ORO Editions.
- Grima, J. 2021. *Non-extractive Architecture vol.01 On designing without depletion*. V-A-C and Sternberg Press

Izzy Echeverio, *Time for Timber*, MSU, 2021.

Michael Behm, *Time for Timber, Timber Tower*, MSU, 2021.

