

2018-2019 International Student Design Competition

BSLC Binational Softwood Lumber Council PARSONS ACSA

INTRODUCTION

The Association of Collegiate Schools of Architecture (ACSA) is pleased to announce TIMBER IN THE CITY 3: Urban Habitats Competition for the 2018-2019 academic year. The competition is a partnership between the Binational Softwood Lumber Council (BSLC), the Association of Collegiate Schools of Architecture (ACSA) and the School of Constructed Environments (SCE) at Parsons School of Design. **THE PROGRAM IS INTENDED TO ENGAGE STUDENTS TO IMAGINE THE TRANSFORMATION OF OUR EXISTING CITIES THROUGH SUSTAINABLE BUILDINGS FROM RENEWABLE RESOURCES, OFFERING EXPEDIENT, AFFORDABLE CONSTRUCTION, INNOVATING WITH NEW AND TRADITIONAL WOODEN MATERIALS, AND DESIGNING HEALTHY LIVING AND WORKING ENVIRONMENTS.** This is the third competition in this TIMBER IN THE CITY series, and focuses this year on the interrelationship between housing, healthy, early childhood education and climate change.



THE CHALLENGE

The competition challenges participants to re-imagine a vacant waterfront site in Queens, New York as a vibrant and vanguard model of healthy, biophilic living for the future of the city.

Embracing new structural and ecological possibilities of wood construction, entrants will design a midrise, mixed-use complex that includes affordable housing, a large community wellness facility, and an early childhood education center, all interlaced with a new exterior public waterfront space. Entrants are challenged to propose construction systems in scenarios that draw optimally on the performance characteristics of not one but a variety of wood technologies, and are encouraged to think about the site as a testing ground for socially, materially, and environmentally progressive and innovative models of sustainable urban living.

The programs for this mixed-use development are composed to challenge students and educators to think creatively and critically about the way in which choices about building materials, and the interrelationship of interior space and the exterior environments frame long-term consequences for the health of urban environments. Housing is the largest component of the competition program and presents an opportunity to look closely at the way timber construction can be used effectively in creating buildings based on smaller cellular units. A community wellness and sports facility complements the housing, and offers larger community and collective spaces that will require larger structural spans. An early childhood education center, for children from 6 weeks to 5 years old, calls attention to the critical role these institutions play in the long-term vitality and development of a community.

This third edition of the TIMBER IN THE CITY considers a site in Queens, just south of the Queensborough/ Ed Koch Bridge. Overlooking the east river, with views to Roosevelt Island and Manhattan, the vacant site can be understood as a segment within a larger chain of mixed-use waterfront development in the Borough, including the Hunters Point and Annabel Basin projects underway to the south, and stretching south to Brooklyn and north to the Bronx. These new approaches to affordable housing stand in contrast to the NYCHA Queensbridge Housing development to the north. Constructed in 1939, it is one of the largest public housing complexes in North America. Along with the adjacent Queensbridge Park, it reflects nearly century-old ideals of living, construction, affordable housing, and landscape which will be reconsidered and re-imagined in this competition. This site has a unique mixed-use zoning designation and an ample allowable FAR. The competition program does not maximize this FAR. Instead, it is to be considered the first of a phased development of this significant site. Competitors are required to anticipate the future phased build-out of this site to utilize the full FAR as a condition of the competition design.

TIMBER

The competition challenges participants to interpret, invent, and deploy numerous methods of building systems, with a focus on innovations in wood design on a real site. For thousands of years, solid wood has been used as a building material. Modern timber products and systems have greatly expanded the potential uses of this historic material. Timber is an ideal green building material: it is well suited for a broad range of structural and aesthetic applications, it offers economical construction and high performance characteristics in strength and energy efficiency; and wood is an economic driver to maintain forests and protect jobs in rural communities.



CRITERIA FOR JUDGING

Criteria for the judging of submissions will include: timber/wood as the primary structural material, creative and innovative use of timber/wood in the design solution, successful response of the design to its surrounding context, the creative and clear approaches to designing a healthy urban mixed use environment with timber as a central material, and successful response to basic architectural concepts such as human activity needs, structural integrity, and coherence of architectural vocabulary.

SCHEDULE

Competition Announced Conference on Building Timber Cities Registration Deadline Submission Deadline Jury Winners Announced May 2018 October 4 and 5, 2018 April 3, 2019 May 22, 2019 June-July 2019 Summer 2019

AWARDS

Winning students and their faculty sponsors will receive cash prizes totaling **\$40,000**. The design jury will meet in the summer of 2019 to select winning projects and honorable mentions. Winners and their faculty sponsors will be notified of the competition results directly. A list of winning projects will be posted on the ACSA website (https://www.acsa-arch.org).

1 st Prize	Student \$10,000
2nd Prize	Student \$8,000
3rd Prize	Student \$6,000

Faculty Sponsor **\$7,000** Faculty Sponsor **\$5,000** Faculty Sponsor **\$4,000**

PROGRAM

The diversified program proposes several spatial conditions, span distances, use and environmental criteria in order to elicit a diverse group of architectural compositions and technological solutions that incorporate the use of differing structural, framing, and detail oriented components. Such conditions may be:

- Vertical mid-rise framing (i.e. mass timber systems such as nail laminated timber, dowel laminated timber and cross laminated timber)
- Interior partitioning (stud framing or modular panelized systems)
- Exterior cladding (modular assemblies)
- Long-span structure (glu-lam beams, mechanically laminated timber, and other composite members)

Community Wellness Center

The community wellness center will serve both residents of the on-site housing and also residents and workers from nearby neighborhoods. Drawing on the historic role of the gymnasium as a center for physical and also mental and emotional health, the center will include a range of spaces for individual and group exercise, as well as multifunctional large-span spaces for pools and and indoor team sports that are envisioned to be able to serve community-wide events. The intersection between the pool and the adjacent East River, and the fitness area and the riverfront park, are key site conditions to consider in the organization and design of this component of the project.

Early Childhood Education Center

Complementing the residential portion of this project is the integration of an early childhood education center for 135 children between the ages of 6 weeks and 5 years (infants through pre-kindergarten). With changes in family structures and the increasing requirement that both parents work to meet the challenges of living in cities, the role performed by early childhood education centers in the long-term development of children is increasing in importance. Unfortunately, a significant number of such facilities are limited by tight budgets and compromised facilities. This competition asks students to carefully consider the spatial, material and organizational needs of this key educational facility in the development of young children from scratch. Careful attention needs to be placed on the choice of materials to support the growth of infants and young children whose bodies are highly susceptible to the influence of their environment, and the interrelationship between interior learning space and exterior playscapes in a city where children have limited access to outdoor learning environments.

The early childhood education center will provide 10 individual classrooms broken down by age, from infant continuity rooms, to preschool and then pre-kindergarten. Children attending this facility are to be drawn from the new housing on the site and the surrounding neighborhood. These classrooms are complemented by gross motor rooms (playrooms), indoor and exterior play/inquiry area, and staff and administrative support spaces. With classrooms dedicated to pre-kindergarten aged children, this program intentionally dovetails into the New York City Universal Pre-K (UPK) program launched in 2014. The program enables students in the country's largest public school district to begin school a year before kindergarten – this year, over 70,000 4-year-olds were enrolled in the program across the five boroughs.

Living

The program challenges entrants to imagine new possibilities for the future of urban living. What is the relationship between the individual dwelling unit and the collective aggregation of units? How does a large housing development inculcate a strong sense of community through its programming, organization, and form? What is the relationship between interior and exterior spaces, uses, and views and how is daylighting incorporated into each unit? What are the health issues related to the choice of materials and how can the use of timber and wood be leveraged to create living spaces that are connected to natural systems and biophilic responses to constructed environments. Residences in this project are a mix of small units for single or double occupancy and larger, family-based units with more than one bedroom. All apartments must have exposure to natural light and air, as well as rooms that meet minimum size requirements of the New York City Department of Housing Preservation and Development (HPD), see Resources (page 11).



PROGRAM DISTRIBUTION

Community Wellness Center			
Program	Individual Sq. Ft.	Quantity	Total
Entry/lobby	500	1	500
Large open indoor track/court sports	7,500	1	7,500
Group fitness class rooms	750		2,250
Weight/cardio machine room	3,000	1	3,000
Olympic lap pool	3,500	1	3,500
Family pool	1,500	1	1,500
Locker rooms	500	2	1,000
Staff and administration	500	1	500
Community Wellness Center Subtotal			19,750
Gross (Mechanical / Circulation)	15% SF		2,963
	Community Wellness	Center Total	22,713

Early Childhood Education Center			
Program	Individual Sq. Ft.	Quantity	Total
Security/lobby	500	1	500
Classrooms age 0-2 (8 kids each)	800	4	3,200
Must include: one single-occupant child	I's WC, one small laundry room, one	changing table	
Classrooms age 2-3 (15 kids each)	900	2	1,800
Must include: two single-occupant child	's WCs, one small laundry room		
Classrooms Pre-K (18 kids)	1,000	4	4,000
Must include: two single-occupant child	's WCs, one small laundry room		
Indoor inquiry/play rooms	1,500	2	3,000
Art classroom	1,500	1	1,500
Music/dance classroom	1,500	1	1,500
Secure outdoor inquiry/play area	4,000 (minimum)	1	4,000
Auditorium (300)	4,000	1	4,000
Administration	250	1	250
Principal's office	200	1	200
Adult bathrooms	50	2	100
Early Childhood Education Center Subtotal			24,050
Gross (Mechanical / Circulation)	30% SF		7,215
	Early Childhood Educa	tion Center Total	31,265

Residential	Tunaa	Individual Co. Et	Quantitu	Tatal
Apartment	Types	individual Sq. Ft.	Quantity	Iotai
	Micro Units	325	20	6,500
	1 Bedroom	650	20	13,000
	2 Bedroom	850	25	21,250
	3 Bedroom	1,000	35	35,000
Laundry		750	1	750
Lobby/mail		1,500	1	1,500
Restrooms		300	1	300
Bike parking		1,500	1	1,500
Bike maintenance/storage		400	1	400
Residential S	Subtotal			80,200
Gross (Mechanical / Circulation)		14% Residential GSF	•	11,228
		Residential Total		91,428
Program To	otal			145,406
Public Exterior Public Space (minimum)				25,000

SITE INFORMATION

The site for the competition is located at 42-02 and 42-16 Vernon Boulevard in Queens, New York, immediately south of the Ed Koch Queensboro Bridge and to the west of the East River overlooking Roosevelt Island. These two parcels are to be considered together as the boundary for the project. An existing historic structure is located on 42-16 Vernon Boulevard and this building is to be kept and integrated into the design of the project. The site is a total of 106,200 square feet and measures 219' by 510'.

The site was the former home of the New York Architectural Terra-Cotta Works, with the front office building remaining from the original factory complex. The site currently has a flexible and expansive zoning designation that allows for mixed-use development to encourage waterfront development. This zoning allows for an FAR of 10, and includes residential along with commercial designations.

The waterfront of Queens has undergone significant transformation over the last two decades, shifting from industrial and warehouse facilities to increasingly mixed-use and public space designations. The competition anticipates that a public waterfront for pedestrians and cyclists will run north-south, connecting Hunter's Point developments in the south up to Rainey Park and Socrates Sculpture Park in the north.

CODE AND ZONING INFORMATION

As a basis of design, competitors are to use the 2021 IBC code for mass timber construction. The proposed 2021 code changes to Construction Type IV to allow for additional height with reduced percentages of exposed timber. NYC Building Code is in the process of adopting a new timber code for incorporation into the cities building code and this competition anticipates a future adoption of aspects of the IBC model code. Please note that in reference to timber construction, one of the goals of this competition is to explore new construction opportunities enabled by contemporary timber technology that may not yet be anticipated or fully embraced by the current NYC code. Each entry is encouraged to understand the potential of contemporary timber systems, drawing from available resources and comparable code reviews from other jurisdictions and governmental agencies, as they pertain to new timber and wood systems, to inform the submitted design. Accessibility guidelines need to be followed; refer to the Americans with Disabilities Act, along with the principals of Universal Design. Refer to NYC Zoning Resolution for building setbacks, heights and massing for the M1-5 site.



Image: Students: Greg Stacy, Benjamin Wright, Alex Kendle, and Michael Meer, University of Oregon / Faculty Sponsors: Judith Sheine & Mark Donofrio University of Oregon; Mikhail Gershfeld, Cal Poly Pomona / Project: Hybrid Domains / 2016 Timber in the City Competition: 2nd Place Winner



ELIGIBILITY

The Timber in the City 3: Urban Habitats Competition is open to students from all ACSA member schools around the world. All student entrants are required to work under the direction of a faculty sponsor from an ACSA member school. Entries will be accepted for individual as well as team solutions. Teams must be limited to a maximum of five individuals.

REGISTRATION

An online registration form must be completed for an entire team or for each individual participant. There is no registration fee to participate in the challenge. Each registered participant will receive a confirmation email that will include information for final online submission. Please add the email address competitions@acsa-arch.org to your address book to ensure that you receive all emails regarding your submission. The competition is open for currently enrolled students only and will require a faculty sponsor from an ACSA member school to enroll students by completing an online registration form (available at www.acsa-arch.org) by April 3, 2019. Faculty sponsors must complete a form for the entire studio or for each individual student or team of students participating. Each student will receive a confirmation email that will include personal login information for final online submission. Students or teams wishing to enter the challenge on their own must have a faculty sponsor, who should complete the form.

During registration the faculty will have the ability to add students, add teams, assign students to teams, and add additional faculty. Registration is required by April 3, 2019, after which edits and additions can be made until a student starts a final submission, then the registration is not editable. Faculty may assign a "Faculty Representative" to a registered student, who will have access to change, edit, and make additions to the registration.

FACULTY RESPONSIBILITY

The administration of the competition at each institution is left to the discretion of the faculty within the guidelines set forth in this document. Research and design work on the competition should be structured over the course one or more semesters of the 2018-2019 academic year.

COMPETITION GUIDELINES



EVALUATION CRITERIA

Each faculty sponsor is expected to develop a system to evaluate the students' work using the criteria set forth in this program. The evaluation process should be an integral part of the design process, encouraging students to scrutinize their work in a manner similar to that of the jury. The final result of the design process will be a submission of four presentation boards describing the design solution. In addressing the specific issues of the design challenge, submissions must clearly demonstrate the design solution's response to the following requirements:

- An elegant, expressive understanding of timber
- A strength of the argument and the proposal's ability to support the concept for the design
- An articulate mastery of formal concepts and aesthetic values
- A mature awareness and innovative approach to environmental issues, including energy consumption
- A thorough appreciation of human needs and social responsibilities
- A capability to integrate functional aspects of the problem in an architectural manner
- A capacity to derive a design, using wood, with the maximum innovation and possibility
- A clearly defined approach to materials, with a premium placed on design using healthy and affordable materials



Image: Students: Everardo Lopez, Lauren McWhorter, & Jesce Walz, University of Washington / Faculty Sponsors: Richard Mohler & Elizabeth Golden, University of Washington / Project: Grid + Grain / 2016 Timber in the City Competition: 3rd Place



DRAWINGS

Each presentation must directly address the criteria outlined in the Design Challenge and Criteria for Judging and must include (but are not limited to) the following required drawings. All drawings should be presented at a scale appropriate to the design solution and include a graphic scale and north arrow.

- SITE PLAN showing the surrounding buildings, topography, and circulation patterns, and indicating phased use of site over time
- DETAILED RENDERINGS of the building, clearly showing the timber structural system
- FLOOR PLANS
- VERTICAL SECTION of the whole building/site sufficient to show site context and major program elements
- LARGE SCALE DRAWING(S), either orthographic or three dimensional, illustrating the innovative use of timber and associated components, at 1" 1'-0"
- THREE-DIMENSIONAL REPRESENTATION(S), either in the form of an axonometrics, perspectives, and/or model photographs one of which should illustrate the overall character of the project. At least one of these views must be of a significant interior space, and one view must be of the building shown within the neighborhood context
- MATERIAL IMAGE SELECTION BOARD that demonstrates the primary exterior and interior materials of the project, with clear declarations of the content of all primary materials to show what each is made from and how it contributes to human health
- THREE-DIMENSIONAL PHASING DIAGRAM, clearly indicating a (minimum) two phase build-out of the site, including an initial phase encompassing of the competition current program, and a second phase maximizing the available site FAR. Diagrams should include dimensions and calculations for both phases

DESIGN ESSAY OR ABSTRACT

A brief essay, 300 words maximum, in English, is required as part of the submission describing the most important concepts of the design project. Keep in mind that the presentation should graphically convey the design solution and context as much as possible, and not rely on the design essay to convey a basic undersatanding of the project. The names of student participants, their schools or faculty sponsors, must NOT appear in the design essay. This abstract is included in the final online submission, completed by the student(s) in a simple copy/paste text box.

DIGITAL PRESENTATION FORMAT

Submissions must be designed on no more than four 20" x 30" (portrait format) digital boards. The names of student participants, their schools, or faculty sponsors, must NOT appear on the boards.

All boards are required to be uploaded through the ACSA website in Portable Document Format (PDF) or image (JPEG) files. Participants should keep in mind that, due to the large number of entries, preliminary review does not allow for the hanging end-to-end display of presentation boards. Accordingly, participants should not use text or graphics that cross over from board to board.

ONLINE PROJECT SUBMISSION

The student is required to submit the final project. It must be uploaded through the ACSA Competition website at www.acsa-arch.org by 11:59 pm, Pacific Time, on May 22, 2019. If the submission is from a team, all team members will have the ability to upload the digital files. Once the final submit button is pressed, no additional edits, uploads, or changes can be made. Once the final submission is uploaded and submitted, each student will receive a confirmation email notification. You may save your submission and return to complete. Please note: the submission is not complete until the "complete this submission" button has been clicked.

A final submission upload must contain the following:

- Completed online registration including all team members and faculty sponsors
- Four 20" x 30" (portrait format) boards uploaded individually as a high resolution Portable Document Format (PDF) or image (JPEG) files
- A design essay or abstract, 300 words maximum (copy/pasted into the text box during submission)

Incomplete or undocumented entries will be disqualified. Winning projects will be required to submit high resolution original files/images for use in competition publications and exhibit materials.

* By uploading your files, you agree ACSA has the rights to use your winning submission, images and materials in a summary publication, online and in promotional and exhibition resources. ACSA will attribute authorship of the winning design to you, your team, faculty and affiliation. Additionally, you hereby warrant that the submission is original and that you are the author(s) of the submission.

RESOURCES

Entrants are encouraged to research references that are related to both the topic of the competition and precedent projects that demonstrate innovative use of timber such as those listed below. An intention of all ACSA competitions is to make students aware that research is a fundamental element of any design solution.

JEBAN HABITAT COMPENINGL TIMBER IN THE CITY

Site

• Site ID: see pages 14-21

Wood Technology

- Think Wood Research Library
- <u>Wood Products Council</u>
- US Forest Products Laboratory Product & Building Systems Research
- FPInnovations Product & Building Systems Research
- <u>American Wood Council Codes & Standards Support</u>
- <u>naturally:wood</u>
- <u>CLT Handbook</u>
- <u>Timber in the City Andrew Bernheimer</u>
- Mass Timber: Design & Research Susan Jones
- The Case For Tall Wood Buildings: Second Edition Michael Green

New York City Housing

- <u>New York City Housing Authority</u>
- <u>Citizens Housing & Planning Council NYC</u>
- <u>New York City Department of City Planning</u>
- <u>New York City Department of Housing, Preservation, & Development</u>
- HPD Design Guidelines for New Construction

Early Childhood Education

- National Association for the Education of Young Children
- <u>New York City Department of Education</u>
- <u>New York City School Construction Authority</u>

Healthy Building Materials

- <u>The Healthy Materials Lab at Parsons School of Design</u>
- <u>The Six Classes Approach to Reducing Chemical Harm</u>
- The Healthy Building Network

Biophilic Design

- International Living Future Institute
- Biophilic Design: The Architecture of Life
- <u>14 Patterns of Biophilic Design</u>

Active Design Guidelines

- <u>Center for Active Design</u>
- <u>NYC Department of Design & Construction Active Design</u>

New York City General Info

- <u>New York City Open Accessible Space Information System (OASIS)</u>
- <u>New York City Zoning</u>

COMPETITION ORGANIZERS

Administrative Organization

The Association of Collegiate Schools of Architecture (ACSA) is a nonprofit, membership association founded in 1912 to advance the quality of architectural education. The school membership in ACSA has grown from 10 charter members to over 250 schools in several membership categories. These include full membership for all accredited programs in the United States and government-sanctioned schools in Canada, candidate membership for schools seeking accreditation, and affiliate membership for schools for two-year and international programs. Through these schools, over 5,000 architecture faculty members are represented. In addition, over 500 supporting members composed of architecture firms, product associations and individuals add to the breadth of interest and support of ACSA goals. ACSA provides a major forum for ideas on the leading edge of architectural thought. Issues that will affect the architectural profession in the future are being examined today in ACSA member schools.

Host

The School of Constructed Environments (SCE) at Parsons School for Design, The New School, located in New York City, challenges students to grapple with forces shaping the world today: shifts in global and local ecological flows, changes in living patterns, growing economic disparities, excessive consumption, and increasing ethnic diversity. Architecture, interior, lighting, and product design students at both the undergraduate and graduate levels work with faculty and citizens of global communities to learn the skills of design engagement, integrated thinking, and material invention in a collective effort to reimagine the constructed environment. SCE offers a Bachelor of Fine Arts in Architectural Design and a Professional Master of Architecture Degree program, with opportunities for cross-disciplinary work and a dual degree with the Master of Fine Arts in Lighting Design. SCE draws on the vibrant design culture of New York City, bringing together over 200 engaged faculty and professionals to work with students in addressing the pressing questions of today, transforming them into design opportunities for a better future.

Sponsor

The Binational Softwood Lumber Council, a nonprofit organization, was established in 2006 by the Canadian and U.S. governments. The Council is leading the effort to increase the use of wood products as part of the shift to innovative, affordable and sustainable buildings. Sustainably harvest wood products from North America create jobs in rural communities, keep forests as forests and help reduce the overall environmental footprint of a home or building. The BSLC benefits from the leadership and expertise of its 12 member board which consists of Canadian and U.S. senior industry representatives and stakeholders. The construct of this board is unique within the industry and offers an influential and powerful vehicle to establish strategic direction for market development programs, direct broad industry initiatives, and facilitate collaboration among organizations serving the North American softwood lumber industry. Underpinning the BSLC's efforts is a firm belief that the relationship between the Canadian and American industries can only improve when the lumber market is sufficiently robust for both industries to first stabilize, and then to prosper. We also believe that this will only come about through increased demand for new and previous uses of lumber products. Since its inception, the BSLC has actively supported initiatives by a variety of industry organizations that meet the mandate. Funds have been directed into programs in which immediate opportunities can be quickly exploited for a fast turnaround in identifiable demand. Clear benefits have already been achieved for the North American softwood lumber industry as the result of some of these programs.

BSLC Binational Softwood Lumber Council

PARSONS

ACSA

FOR MORE INFORMATION

Program updates, including information on jury members as they are confirmed, may be found on the ACSA web site at www.acsa-arch.org.

Additional questions on the competition program and submissions should be addressed to:

Allison Smith ACSA, Programs Manager tel: 202-785-2324 email: asmith@acsa-arch.org **Eric W. Ellis** ACSA, Director of Operations and Programs tel: 202-785-2324 email: eellis@acsa-arch.org







Regional map of 42-02 Vernon Boulevard, Queens, NY 11101





Aerial view of the site from the east, looking towards Roosevelt Island and Manhattan

Site Info:

Block: 477 Lot: 15 Lot Area: 106,200 SQ FT (219' x 510') Primary Zoning: M1-5/R10 Maximum Allowable Residential FAR: 10 Maximum Allowable Commercial FAR: 5 Maximum Allowable Facility FAR: 10 Flood Zone: Zone A

SITE PLAN DIAGRAM





FEMA FLOOD HAZARD MAP





FEMA Flood Hazard Map | Region II Coastal Analysis and Mapping

* Competitors should anticipate that the impact of rising water levels on the site will escalate in the long-term future.



View of site from north



View from site looking north on Vernon Boulevard



View of site from waterfront, looking east



View of site from Roosevelt Island, looking east



View of site from waterfront edge, looking north



View of Roosevelt Island from site, looking west



View of site looking west towards Roosevelt Island and Manhattan



View of existing historic building adjacent to site



View of site from existing building



View of Queensbridge Housing to northeast of site