# Project: New Orleans Building Arts Institute

600 Esplanade Photo: Tsubaki ©

*I ply with all the cunning of my art*
*This little thing, and with consummate care*
*I fashion it - so that when I depart,*
*Those who come after me*
*shall find it fair*
*And beautiful. It must be free of flaws -*
*Pointing to no laborings of weary hands;*
*And there must be no flaunting of the laws*
*Of beauty - as the artist understands.*

*Through passion, yearnings infinite*
*yet dumb -*
*I lift you from the depth of my own mind*
*And gild you with my soul's white heat to plumb*
*The soul of future men. I leave behind*
*This thing that in return this solace gives:*
*"He who creates true beauty*
*ever lives"*
*The Craftsman / Marcus Christian*

**Premise**

To **build** is to **assemble**. A building is an intentional assembly of various material components. The materials and methods employed are the physical reality. They reflect the technical, cultural, historical and economic context the building is built under. It is an integral aspect of the design solution.

*Building* on the knowledge and skills you have previously acquired, you will begin this semester by jumping into the design of the New Orleans Building Arts Institute.

Nestled within the design exercise, you will be introduced to one of the most fundamental construction methods: brick masonry. Empirical exploration with the actual materials as well as theoretical exploration of precedents (from the material assemblage perspective) are paramount to the innate understanding of materiality and the logic of construction.

As an emerging architecture practice, you are asked to design a community building for local building artisans in New Orleans. The scope of your architectural services includes predesign assistance in **siting strategies** and a **programming** effort as well as a building design proposal, explicit with **material articulations** and **assemblage details**.

**The Institution:**

New Orleans Building Arts Institute is an artist community and a research institution dedicated to the study of the **living traditions of building arts**. It's mission; to ensure that the public understanding of the building trades as an art form continues to evolve over time.

The institute accomplishes this mission through:

a. serving as a gathering place for local artisans to congregate, fostering camaraderie and the exchange of ideas.

b. documentation, interpretation of the past and present state of the building arts and their respective cultural implication.

c. research on the latest construction techniques and and their future cultural and economical implication exploring ways to make the valuable knowledge from the past relevant in the contemporary world

d. dissemination of information to the public through outreach; demonstrations, exhibitions and publications.

e. fostering new generations of building artisans through mentoring and educational programs.

Still in its infancy, the Institute is sponsored under the the Greater New Orleans Regional Folklife Program, a non-profit advisory service provided by the Louisiana Division of the Arts and currently located on the University of New Orleans campus. The Institute recently received a ten million dollar donation from a prominent Louisiana family with strong ties to the brick masonry industry towards the acquisition of a site and construction of a dedicated building.

**The Site:**

The Institute is considering several sites in the City of New Orleans appropriate for its mission. One of your primary tasks is to research, analyze and compare the sites to determine the best possible choice for the institute in conjunction with the proposed program.

Site 1: partial adjacent park block to St. Roch Cemetery

Site 2: partial adjacent block to Lafayette Cemetery No.2

Site 3: partial adjacent block to Valance Cemetery

Link to Google Map:
https://mapsengine.google.com/map/edit?mid=zx9uttyEMwYs.ksIxrkUL9QvY

*Note the site proximity to the cemeteries. You must consider the organizational and material implication of “city of the dead” in relation to your design and programing proposal.

**The Program:**

The main program components of the institute are;

a. research demonstration / documentation workshop

b. exhibition galleries (permanent and temporary)

c. auditorium

d. meeting rooms

e. research library / archive

f. (8) sponsored artist residences

g. constructed outdoor garden landscape

h. an additional program component enhancing the institutional mission.

The institute is run by a director, a director’s assistant, (4) research staff, (3) research support staff. The building is managed by a building manager and (1) maintenance staff. The Institute expects an average of (30) visitors daily. The majority come for the exhibitions, demonstrations in progress and lecture programs. A few visits for a research in the library archive.

One of the most vibrant functions of the Institute is the educational outreach. An average of (10) students from the neighboring communities enroll in the two week training program once a month to construct an artifact within the institute permitters or to restore and maintain the artifacts in the surrounding community. Artists in residence and local artisans are invited as instructors and mentors to the students and to demonstrate their techniques to the public. The Institute is also considering an additional program to enhance its mission and looking for your input.

**The Construction:**

The building materials, methods and cultures surrounding the physical reality of the building are an integral part of the design expression. Thus, consideration for the method of material assemblage at various scales must be a significant part of the design concept. Architectural design is not simply about justifying forms based on the programatic function (use) of the space. Neither is the act of construction merely an implementation of form and space in service of function. Decisions made as per logic of construction are inherently spatial. It is an incredibly rich source for the design inquiry and has generative implications.

**Design Focus:**

- Strategy for **extending organizational principals** at small, medium and large; from detail scale material assembly to the city scale urban fabric.
- **Gravitational** implication (perceived or actual) of materials and assemblage; its impact on building organization and design.
- Relationship between material and their assembly method (technical) to **the contextual artifacts**; i.e. aboveground cemetery tombs
- **Cultural and historical** implication of building arts in the region.
- Sectional (spatial and material) transition: **stereotomic** vs **tectonic.**
- Implication of **the site selection** in relation to the overall design
- **Program** implication in relation to overall design
- Implication of **accessibility requirements** in the building organization and design.

**The Outcome:**

Following **MINIMUM** documentation will be required to evaluate the outcome of your design investigation during the final review and in your digital folio.

**i. Physical Models**

- Site Model with building proposal @ 1/32” = 1’-0” scale. Context buildings to include façade details.
- (1) building model with partial site (well crafted basswood model) @ 1/16” = 1’-0” scale

**ii. Orthographic Drawings**

- Site plan @ appropriate scale
- (All levels) Plans @ 1/16” = 1’-0” scale. Include dimensional information indicating the compliance to ADA requirement (door swing / approach clearance etc)
- Partial plans of restroom layouts @ 1/4” = 1’-0” scale. Include dimensional information indicating the compliance to ADA requirement.
- (3 min.) Critical Sections (longitudinal and transverse) @ scale of 1/16” = 1’- 0”. Include adjacent streets and buildings (as solid cuts) to indicate scale and spatial conditions of the context. include scaled figures, trees and landscape elements if applicable.
- (All sides) Building Elevations @ 1/16” = 1’-0” scale

- Lightly render w/ shade and shadow. Include adjacent streets and buildings (as solid cuts) to indicate scale and spatial conditions of the context. include scaled figures, trees and landscape elements if applicable.
- (1) Wall section detail drawings @ 1/2” = 1’-0 scale or 1/2” = 1’-0” partial basswood sectional model or rendered digital model axo @ 1/2” =1’-0”

**iii. Diagrams**

- (1) Comparative site analysis (including zoning) and selection diagrams
- (1) Site organization diagrams
- (1) Circulation diagrams; axonometric drawings of the building circulation system @ appropriate scale clearly indicating the compliance to the ADA requirement (ramps and rails, stairs, etc)
- (1) Program analysis and proposal diagrams / charts
- (1) Program allocation diagram(s) @ appropriate scale
- (if applicable) Miscellaneous diagram(s) @ appropriate scale to aid in explaining the ideas

**iv. Process Materials**

- Sketches, study models, iterative drawings  etc.

**v. Renderings**

- (3 total) Perspectives: (exterior and interior)

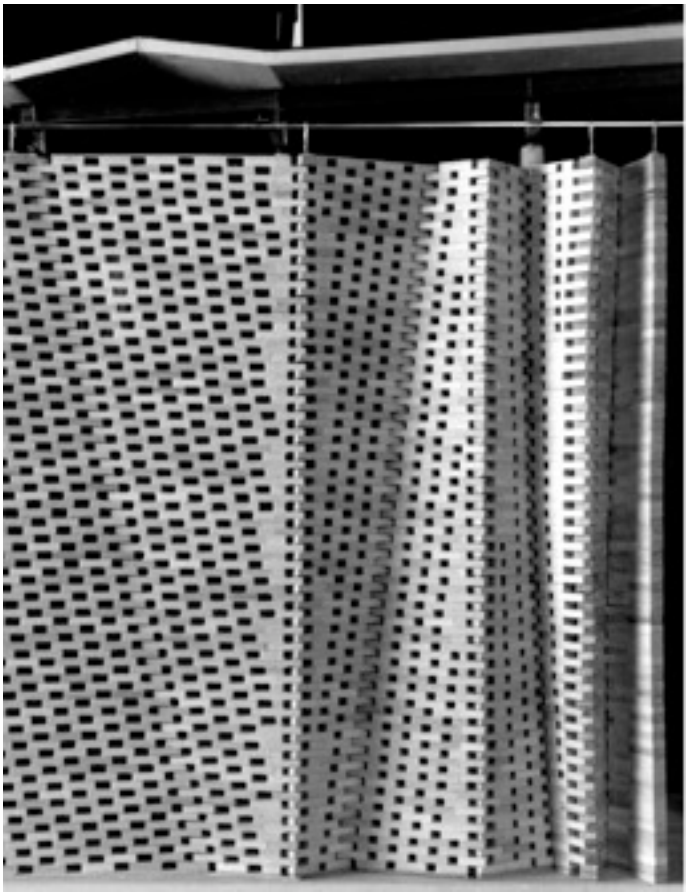
**Exterior view of the proposed building showing the relationship between the building and its context. Interior views highlighting the most compelling interior spaces of the building. Include evidence of function/use of space as well as information about materials and natural light.

Patrick F. Taylor Library  Photo: Tsubaki ©

**Program Requirements** (final program sf to be fine tuned along with the design development)

| Space | sf. | qt. | subtotal sf. | Remark |
|---|---|---|---|---|
| **Building Entry** | | | | |
| entry / lobby | 300 | 1 | 300 | |
| **Demonstration Space** | | | | |
| wood shop | 1,200 | 1 | 1,200 | |
| metal shop | 800 | 1 | 800 | |
| plaster shop | 800 | 1 | 800 | |
| masonry shop | 800 | 1 | 800 | |
| kiln | 1,200 | 1 | 1,200 | |
| common work space | 2,400 | 1 | 2,400 | |
| equipment/tool storage | 200 | 1 | 200 | |
| maintenance shop | 600 | 1 | 600 | |
| **Exhibition Gallery** | | | | |
| permanent exhibition | 1,600 | 1 | 1,600 | |
| temporary exhibition | 800 | 1 | 800 | |
| storage | 400 | 1 | 400 | |
| **Auditorium** | | | | |
| auditorium | 1,200 | 1 | 1,200 | |
| **Library / Archive** | | | | |
| library | 800 | 1 | 800 | |
| archive | 200 | 1 | 200 | |
| office | 200 | 1 | 200 | |
| storage | 80 | 1 | 80 | |
| **Classrooms** | | | | |
| classroom / meeting room | 650 | 2 | 1,300 | |
| storage | 200 | 1 | 200 | |
| **Offices** | | | | |
| administration office suite | 300 | 1 | 300 | |
| individual offices | 120 | 4 | 480 | |
| **Artists Residences** | | | | |
| residence studio | 800 | 8 | 6,400 | open space configuration with bathroom and kitchenette |
| **Support Area** | | | | |
| restroom(s) | 200 | 2 | 400 | |
| lockers/shower | 300 | 2 | 600 | |
| lounge/pantry | 600 | 1 | 600 | |
| janitorial | 100 | 1 | 100 | |
| storage | 200 | LS | 200 | |
| loading area w/ truck access | 200 | LS | 200 | |
| trash/hazardous wast/recycling | 200 | 1 | 200 | |
| subtotal | | | 24,560 | net programed sf. |
| **Additional Program(s)** | | | | |
| determined by student based on individual research | | | 2,000 | *approximate - no more than 4000 sf |
| **Others** | | | | |
| structure / circulation / stairs | | | 5,312 | (20% of net programed sf) |
| mech | | | 1,328 | (5% of net programed sf) |
| | | | **33,200** | gross sf. |
| **Exterior Space** | | | | |
| covered outdoor work space | 2,400 | 1 | 2,400 | minimum |
| constructed outdoor garden landscape | | | | artifact constructed as per educational outreach training program |
| parking | | | | as per zoning requirement |
| | | | | |

# Supplemental Exercise: Modular Masonry Units



Casa La Roca (Masonry Facade Detail) / Office dA

**1.1 Process of analysis/synthesis: extrapolating the material assembly**

**Analysis**: research and gather the information /documentation of the precedent building you have chosen from the list. Take apart and identify the precedent building into the following design components; exterior finish (floor, wall & ceiling), back-up wall, interior finishes (floor, wall & ceiling), windows/doors, structural slab, structural framing, foundation. Methodically draw each component individually with regulating lines and as an assembly.

Mode of investigation and outcome:

Orthographical drawings: partial wall sections, plans, elevations @ 1/2”=1’-0” or larger

Exploded axonometric drawing

Process physical and/or digital models

**Synthesis:** what did you discover through analysis? How do you read the design intent manifesting through them? Articulate your disposition towards the material assemblage of the precedent building and synthesize a diagram from the minimum number of components. Pay attention to the logic of spatial and material transition between inside and outside. Most successful diagrams are generative; abstracted to the point allowing multiple implied readings beyond the original.

Mode of investigation and outcome:

Representational drawings: wall sections / plans / elevations @ 1/2”=1’-0” or larger

Exploded axonometric drawing

Process physical and/or digital models

**1.2 Process of haptic experiments: understanding the materiality**

Individually procure (10-15) standard size bricks. Explore, define and document minimum of (3) substantially different ways to stack bricks.

Mode of investigation and outcome:

The physical material: bricks

Photos for documentation

Drawings extrapolating the quality of brick stackings

Axonometric drawings (considering mortar joint spacing)

Process physical and/or digital models

**1.3 Process of interpretation: translating the material assembly**

Design a gateway/threshold to your building site based on the interpretation of the previous exercises. Consider the spatial and functional nature of the wall as a threshold mitigating the interior and the exterior of the site and extending across to the artifacts across the road.

Mode of investigation and outcome:

1/2” = 1’-0” well crafted basswood sectional model articulating the logic of spatial and material threshold/transition. The model must consider / represent the immediate context i.e. paving materials, curb, road, traffic and the site/structure across the road.

Process models, drawings and diagrams drawn to scale as required.

The materials for the model shall be primarily achromatic. i.e. basswood, acrylic - clear or sandblasted, styrene, metal, etc. (no literal material simulations, i.e. flecked paint for concrete, green grass, etc.) Laser cut burn marks are not accepted.

**List of Precedents:**

*No more than two students on any one precedent.

Tongxian Gatehouse, Bejing, China / Office dA
Indian Institute of Management, Ahmedabad, India / Louis Kahn
Brick House, Jiangsu Province, China / AZL architects
Tongjiang Recycled Brick School, Jiangxi, China / Rufwork
Brick Pattern House, Tehran, Iran / Alireza Mashhadmirza
South Asian Human Rights Documentation Centre, New Delhi, India / Anagram Architects
MIT Chapel, Boston, Mass / Eero Saarinen
The Church of Christ Obrero, Atlanta, Uruguay / Eladio Dieste
Prairie View A&M Architecture and Art Building, Prairie View, Texas / ROTO Architecture
Kolumba Museum, Cologne, Germany / Peter Zumthor
Stone Museum, Tochigi, Japan / Kengo Kuma
Brick Weave House, Chicago, Ill / Studio Gang
Apartment No. 1, Mahallat, Iran / Architecture by Collective Terrain
Hervey Bay Farmhouse, Queensland, Australia / Owen and Vokes
290 Mulberry, New York, NY / SHoP Architects
Pike Loop 2009 Installation, New York, NY / Gramazio & Kohler
Muuratsalo Experimental House, Muuratsalo, Finland / Alvar Aalto

**References on Reserve:**

Deplazes. *Constructing Architecture.* TA403.6.C659 2005 REF

Ford. *The Details of Modern Architecture* v.1,2. NA2840.F67 1990

Killory and Davids. *Details in Contemporary Architecture.* NA2840.D454 2007

Staib, Dörrhöfer and Rosenthal. *Components and Systems.* TH1098.S6913 2008

Herzog, Krippner, Lang. *Facade Construction Manual.* TH2235.H475 2004

Balkow. *Glass Construction Manual.* TH1560 .G58 1999

Bell and Kim. *Engineered Transparency*. NA4140.E46 2009

Watts. *Modern Construction: Facades*. TH2235.W37 2005

Moussavi and Kubo. *The Function of Ornament.* NA2840.F86 2006

Borden. *Material precedent: the typology of modern tectonics.* TA403.B67 2010

Fireplace / Joseph Albers