Phase III: Balanced Building Extension

Phase III is the synthesis of the previous two phases. Program is ***a boat making school*** as an extention to Lake Pontchartrain Basin Maritime Museum on the banks of the scenic Tchefuncte River in Madisonville Louisiana.

The Institution:

Lake Pontchartrain Basin Maritime Museum is an education and research center to collect, interpret, and preserve the maritime and cultural history and artifacts of the Lower Mississippi River Basin for public benefit. “Bringing Louisiana’s Maritime History to Life,” is the driving mission. The museum brings Louisiana’s maritime history to life through unique interpretive programs, exhibits, and publications. It is also known for the Wooden Boat Festival, the premier annual event on the Tchefuncte River featuring over 100 wooden and classic boats in October.

The museum is also exploring ways to make the valuable knowledge from the past relevant to the contemporary world. One of the most ambitious proposal being considered is to establish a wooden boat making school, offering three-semester (one year) full-time program on contemporary wooden boatbuilding. It intends to focus on the research and development the technology of modern wooden boat construction. This emerging area of technology melds the traditional techniques and aesthetics of wooden boat-making with the advantages of high-performance adhesives and sheathing materials and are beginning to be employed by many cutting-edge yacht manufacturers and wooden boatbuilders. At the completion of the program students will receive an Associated Degree of Occupational Studies and are prepared for advanced level employment in boat shops and vessel manufacturing industry utilizing laminating, strip-planking, cold-molding and other composite boatbuilding techniques.

The Site:

The museum sits on the site of the Jahncke Shipyard, which built 300 foot long wooden ships for the United States Navy during World War I. Its main building design by Perez, APC in 2000, has over twelve thousand square feet of interior exhibit space plus a four thousand covered exterior area that houses the Museum's wooden boat building activities. Proposed boat making school will be located in the adjacent lot with a direct access to the river for boat launch. The Museum also includes the Tchefuncte River Lighthouse Station (built in 1837) at the mouth of the river, the 1880s era lighthouse keeper's cottage, which has recently been moved to the Museum grounds for renovation and a modern concrete dock on the river.

The Program:

The number of students enrolled for the course is approximately (24). The school employes (3) full-time, (6) part-time faculty and an administrator and an receptionist. The core curriculum of the boat making school is craft based. Students will begin with studying and building of traditional shallow and rectangular bayou boats (10 to 15 feet in length) in a groups of two to three. Although modern electrically powered tools will be used in production operations (scale similar to our woodshop), the construction of the boats will begin with traditional methods. As the course advances, students moves onto construction of mid scale (30 to 40 feet) in conjunction with the introduction of latest techniques. The facility must accommodate the simultaneous construction of 9 boats in various stages constructed over relatively long periods at different rates of production.

In addition, the school must accommodate the regular visitor traffic of the museum. The visitors must be able to view and be educated about the boat making activities associated with the traditional productive practices of Lower Mississippi River Basin. It is important to to consider the functional separation between the visitors and the operations of the school.

Site requirements include space for unloading of materials (primarily various wood planks) and large equipments as well as loading of completed boats onto vehicle trailers. Boat access to the water should also be maintained. An outdoor space for visitors is desired.

The Construction:

The phase III is the synthesis of the focused investigations conducted in the previous two phases. The building materials, methods and cultures surrounding the physical reality of the building are integral part of the design expression. Thus, consideration to the method of material assemblage in 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.

Sectional investigation is critical in this project, due both to the conditions of the site and the size of program relative to this site. A generative concept that addresses the retainage of earth and accommodates program at more than one level is an essential ingredient of the successful project.

Program Requirements (final program sf to be within 10% of the prescribed program)

Space	sf.	qt.	subtotal sf.	Remark
Building Entry				
entry / lobby	300	1	300	considered connection/path to the museum
Visitors Area				
spaces/paths to view operation	as req.	LS	2,000	consider the sequence and relation to the boat making operations as well as to outside/boat launching space
restrooms	350	LS	350	
Boat-making Area				(non-airconditioned well ventilated space)
boat stations (20' LOA max)	800	6	4,800	two boats completed every year
boat stations (40' LOA max)	1,600	3	4,800	a boat completed every 3 years
equipment/tool storage	200	1	200	security/access
woodshop	2,000	1	2,000	security/access
finishing shop	2,000	1	2,000	ventilation/access for up to mid-size vessels
scrap/sawdust + staging storage	200	1	200	sawdust vacuuming system
dry material storage	500	1	500	stacking/security/access
general storage	800	1	800	
loading area w/ truck access	200	1	200	loading access for 30' boat trailer w/ truck + material unloading
Classrooms				
studio	1,500	1	1,500	drafting table + computer stations
studio storage	100	1	100	
lecture room	650	1	650	
lecture room storage	50	1	50	
library	1,000	1	1,000	
Offices				
administration office suite	300	1	300	
faculty offices	120	4	480	
Support Area				
restroom(s)	200	LS	200	
lockers/shower	400	LS	400	
lounge/pantry	200	1	200	
janitorial	80	1	80	
storage	100	LS	100	
trash/hazardous wast/recycling	200	1	200	
			23,410	net programed sf.
structure / circulation / stairs			4,682	(20% of net programed sf)
mech			1,171	(5% of net programed sf)
			29,263	gross sf.
Exterior Space				
boat-launching station / covered outdoor space	3,000	1	3,000	access to water for boat launch (up to 40 foot vessel) / accommodate ceremonial event w/ spectator

Property Zoning: D - Institutional
Setbacks: Front (along the street) 5’ / Side 10’ / Riverfront 40’

Design Focus:

Strategy of **connection/extension** at various scales (from site organizational strategies to design detailing strategy).

Relationship between material and assembly methods (technical) of **wooden boat construction** and **building construction** - its idealization/manifestation as a building design.

Cultural and **historical** implication of boat making in the region.

Sectional spatial and material transition from **water - earth retainage - earth - building foundation - building assembly - sky**.

The Outcome:

Following **MINIMUM** documentations (indicated in the order or importance) will be required to evaluated the outcome of your design investigation during the final review and in your digital folio.

Physical Models

(1 for the studio) Group Site Model @ 1/16" = 1'-0" scale. Existing buildings to include façade details.

(1) Building model @ 1/16" = 1'-0" scale w/ group context model.

(1) Partial sectional model @ 1/2" = 1'-0" scale articulating sectional spatial and material transition and representation (as an option to 1/2" = 1'-0" wall section detail drawings)*

Orthographic Drawings

Site plan @ appropriate scale

(All levels) Plans @ 1/16" = 1'-0" scale

(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 (as an option to 1/2" = 1'-0" partial sectional model)*

Diagrams:

(1) Exploded axonometric drawings of the building systems @ appropriate scale

(1 min.) Concept Diagram(s) @ appropriate scale

(1 min.) Program Allocation Diagram(s) @ appropriate scale

context, site, program, circulation etc. relevant to aid in explaining the ideas.

(if applicable) Miscellaneous Diagram(s) @ appropriate scale to aid in explaining the ideas

Process Materials:

Sketches, study models, iterative drawings etc.

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.