

Graduation Plan for AE students

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Studio

Architectural Engineering
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The architecture and methodology taught in the Studio is deeply linked to the constructive, material result, obtained after theoretical and, most importantly, practical research done in the field.

Title

Project - Temporary: Architecture that Responds to Change
Research - Increasing Durability of Luminarie Construction System

Graduation Project

Problem Statement

City-making and urban redevelopment of small and big parts of towns may have happened all at once at the desk of master planner like Jan Gehl, Daniel Burnham, and many others.

Intervening in centuries old towns of Europe, pregnant of history and culture, is not nearly comparable to doing so in newly born ones e.g. in the US or Saudi Arabia.

Political and societal pressures as well as historical and cultural ones, slowness and intricateness of bureaucracy are few of the many causes, which undermine the responsiveness of definitive architectural and urban projects in this particular environment.

No single master plan can anticipate the evolving and varied needs of an increasingly diverse population or achieve the resiliency, responsiveness and flexibility that shorter term, experimental endeavors can.

Objective

Starting from the premises that all buildings shouldn't aspire to permanence, the objective is set to propose a temporary architectural solution for Marineterrein area in Amsterdam, to create a valuable and appealing space, in order to give new life to this area.

I believe that reusable, recyclable and sustainable temporary architecture could better solve seemingly unsolvable problems and succeed in creating a *genius loci*, adapting to unpredictable demands, encouraging innovation and helping facilitate emerging micro economies: in a sentence “apt response to a civilization in flux”.

The Project’s goal is to propose a temporary architectural solution for the unused outdoor space of the Marineterrein Area in Amsterdam, which recent events had made property of both government and city hall, previously of the Dutch Navy. The aim is to define a new temporary identity for the Area, mindful of its historical and social role, providing indoor and outdoor spaces for the public, as well as sheltered and pleasant walkways through it.

The project will be making use of the knowledge embedded in a 19th century temporary architecture construction system using wood, iron wire and lights (invented in Baroque Italy for celebrating change in politics, society, religious festivities, and regal guests visits by transforming for a brief period the urban environment’s architectural appearance) of which durability and resistance have been improved by the findings of the technical research done. Moreover this system, which by its inherent nature does not provide shelter, will be adapted to do so.

Overall design question

How can temporary architecture determine the direction and character of change in Marineterrein Area by providing indoor, outdoor and transitional flexible spaces for the public?

Thematic Research Question

What are the most efficient, resilient, weatherproof devices, for improving the use of a wood temporary construction system with no foundations, when exposed to prolonged and/or harsh weather stresses?

Subquestions:

What are the protection techniques and best practices for building with wood outdoors?

What kind of above ground joint is the best option for a temporary construction system using structural members with the same profile and different lengths?

What is the best way to connect temporary wooden structures to the ground without foundations?

How can wooden structures with no foundation resist to upwind forces using their urban surroundings?

Methodologies

Literature study:

- Research case studies of temporary and reusable architecture
- Research of the main features of luminarie construction system
- Research of the best practices for improving durability of wood outdoors
- Research by design and prototyping

Planning

Msc 3		FEB							MAR						APR						MAY						JUN					
Time	Month	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26									
	Calendar Week	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26									
	Course Week	Break	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	3.10	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	4.10	4.11									
Writing	graduation plan									P1													P2									
	research paper																															
Research	literature																															
	case study																															
	research by design																															
	site																															
Design	concept																															
	sketch																															

Relevance

The relevance of this research and its results is to be found in the direct application of the findings in an ongoing business realizing these structures.

Moreover these improvements could facilitate the application of the inherent construction system principles for different uses than the current: emergency settlements, camping facilities, pop up structures, pavilions, of which temporariness calls for low (no) footprint, quick construction, dismantling and reusability.

Literature

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