

# Dorothy Shepard

dorothyshepard@rocketmail.com

571.384.8490

www.dorothyshepard.com

## EDUCATION

Master of Architecture | *Tulane University* | New Orleans, LA (Aug 2012-May 2014)  
AIA Henry Adams Medal and Certificate of Merit

Bachelor of Science in Architecture | *University of Virginia* | Charlottesville, VA (Aug 2005-May 2009)  
Minor in Spanish

Public Interest Design Summer Studio | *University of Texas* | Austin, TX (May-July 2012)

Three Cities Studio Study Abroad | *Syracuse University* | Italy, England, the Netherlands (May-Aug 2008)

Semester at Sea | *University of Virginia* | Eight Central and South American countries (May-Aug 2007)

## EXPERIENCE

Public Interest Design Fellow | *Tulane City Center* | New Orleans, LA (Jan-Oct 2013)

- Developed the Hollygrove Greenline Master Plan with other design professionals and community stakeholders through schematic design and design development phases.
- Managed the schedule, budget, material orders, and staff and volunteer labor for installation of five rain gardens on the properties of five Hollygrove Neighborhood families, according to the designs of a landscape architect. The project was completed at budget and on schedule.
- Conducted a workshop for Hollygrove residents concerning low impact development education and implementation, including a demonstration of simple, at-home site surveying and soil percolation testing.

AmeriCorps CapacityCorps Member | *Rebuilding Together* | Alexandria, VA (Jan-Dec 2011)  
Community Engagement Coordinator

Program Coordinator (full-time staff) | *Rebuilding Together* | Alexandria, VA (Jan-May 2012)

- Gained experience in skills-based volunteer management, grant writing and fund-raising, and home rehabilitation prioritizing on critical repairs and energy efficiency.
- Created a sustainable outreach system that categorized presentations, workshops, and communications conducted by staff members, thereby expanding the client base and community partnerships.
- Participated in collaborative meetings, educational seminars, and conferences focusing on housing issues and related services.

CAD/CNC Technician | *OEC Engineering Corp* | Chantilly, VA (Mar-Dec 2010)

- Analyzed construction documents to prepare bids for a range of scopes and scales in architectural and engineering fabrication, from \$100 to multi-million dollar projects.
- Collaborated in design and detailing of custom fabrication projects, such as a stone "carpet", medical equipment, signage and logos, and furniture.
- Programmed code and configuration settings for water jet cutting an array of materials, including glass, metal, plastic, and stone.

Design Consultant | *Blinds To Go* | Springfield, VA (Sept 2009-Mar 2010)

- Guided customers in selecting the window covering that best represented their desired function, decor, and budget using product knowledge and quality comparison.
- Addressed customer service issues and performed repairs on blinds and shades.

## MEMBERSHIP

USGBC Member (Dec 2013-Present)  
SEED Network Member (Mar 2012-Present)  
Tulane Richardson Memorial Hall Working Group  
(Fall 2013-Spr 2014)  
Tulane Architecture Graduate Admissions  
Committee (Spr 2014)

## ACCRED:

LEED Green Associate (Mar 2014)  
SEED Accredited (Mar 2012)  
Lead Safe Renovation Accredited (Jan 2011)

## SKILLS

### Design:

Project Management (on the job)  
Schematic Design  
Design Development  
Cost Estimation/Budgeting  
3D and Physical Modeling  
Drafting and Sketching

### Construction and Fabrication:

Project Management (on the job)  
Cost Estimation/Budgeting  
Labor and Resource Management (on the job)  
CNC Fabrication (3D Printer, Laser Cutter,  
Water Jet Cutter, 3 Point Router)  
Wood and Metal Working

### Software:

Revit 2013  
AutoCAD 2013  
Rhino 5 and V-Ray  
Adobe CS6  
Sketchup 8  
ESRI ArcMap (GIS)

## EXPANDING AND DIVERSIFYING NETWORKS

### Connecting Architecture and Landscape to Infrastructure

#### Adding Layers to Existing Systems

Network inter points between buildings  
Increase capacity on conceptual municipal energy source  
Establish a backup energy system

#### Creating Multiple Levels of Functionality

Resilient water energy system serves multiple blocks, maximizing system efficiency  
If network fails, each building retains own backup energy source

#### Improving the Block Structure

Stormwater runoff directed to low areas in the middle of the block  
Reduce, retain, and reuse stormwater for use  
Decrease street flooding

#### Expanding and Diversifying Existing Network

Water directed to all other possible uses before entering municipal drainage system

#### Directing and Collecting Water

Roof planes shed water to gutter network  
Capture water in water vaulting  
Direct water for various uses through different

#### Architecture Serves Multifunctional Purpose

Roof planes provide alternative energy source and stage stormwater designed for  
movement in resilient building block, increase value of property and structure  
Design of facade provides increased permeability of walls for permeability, energy  
use of regional materials increases sustainability and supports local economy  
Program is a fun place to play and serves as a retention pond

#### Landscape Serves Multifunctional Purpose

Parking area is permeable and high streets to allow water infiltration and decrease urban heat island effect  
Permeable surface in public space and retention pond used to reuse stormwater  
Urban farm used to teach residents about food and water recycled stormwater  
Distributed vertical space stormwater area serves as a habitat  
Program is a fun place to play and serves as a retention pond



Energy Network

Water Network

Building Network

## UNDERSTANDING THE FLOW OF RESOURCES



### Translation of resilient infrastructure network into residential scale

#### Existing Conditions



#### Resilient Conditions



## CHANGING THE TYPICAL BLOCK STRUCTURE

Increasing porosity and water retention within the block  
1/4" x 10"



## LAYERED AND RECIPROCAL SYSTEMS

### Components of a Resilient and Didactic Architecture

#### Stack Ventilation

Creates airflow through natural convection  
Stacks are highly visible and contain protrusions that display air movement

#### Double Roof

Allows for ventilation across primary insulating roof, decreasing interior temperatures

#### 4" Gabion Wall

Provides entrance before building, pre-casts are used in ventilation stacks

#### Facade Louvers

Control solar radiation, vertical on NE and NW, horizontal on SE and SW

#### Panelized Wall and Floor System

Reduce maintenance costs by allowing individual repair and replacement

#### Nanowall

On temperate days and when mechanical system fails, allows for maximum exposure to outdoor air

#### Exposed Timber Structure

Uses regional materials and supports local economy  
Seen helps local climate and supports local economy  
Metal pins in foundation system allow for adjustment due to subsidence

#### Connecting Building to Landscape

Reused above floor elevation for safety  
Multiple points of access to street level via ramp, stair, elevation, and door

#### Connecting Building to Building

Mechanical and utility lines link through modular connection  
Beams are aligned for increased structural stability

#### Reciprocal Spaces

Layering of spaces allows for increased solar and thermal control  
Distributed outdoor spaces serve as a spatial backup for reconstructing entire rooms

#### Decentralized Mechanical Systems

#### Modular Structure and Facade Systems

#### Layered Spatial Systems



## LEARNING ENVIRONMENTALLY CONSCIOUS HABITS



### Translation of resilient and adaptive new habits into residential scale

#### Existing Conditions



#### Resilient Conditions



# Teaching Resilience in Changing Climates



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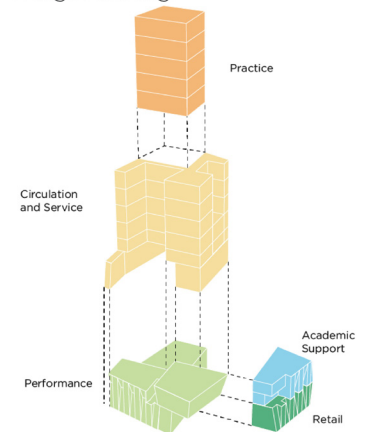
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30,047 sf interior  
4,349 sf exterior



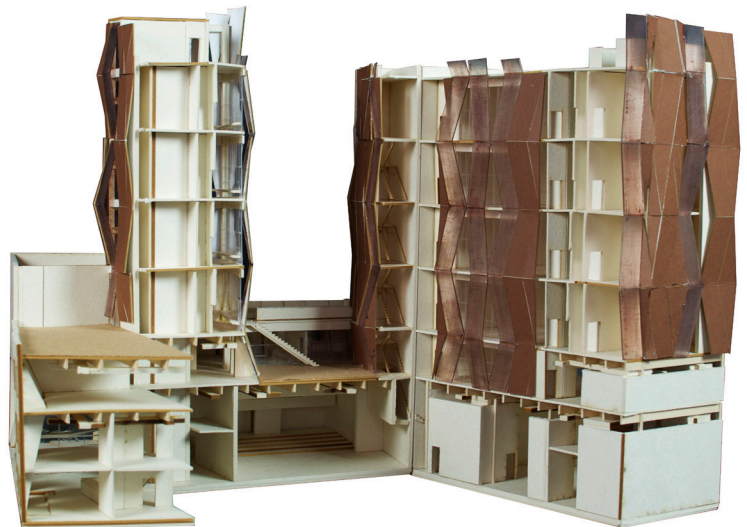
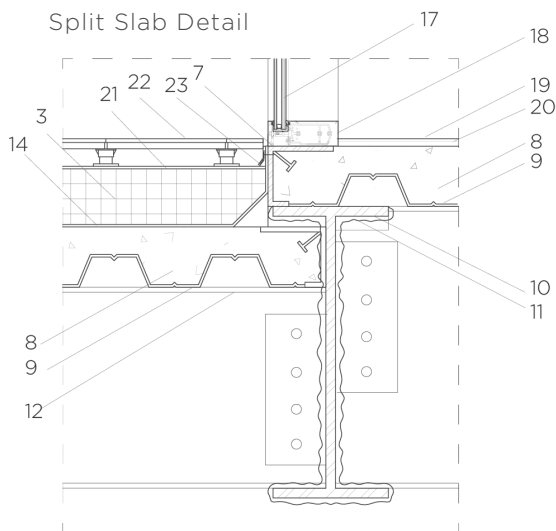
## Program Organization



## North-South Section 1/8" = 1'-0"



## Split Slab Detail



## Comprehensive Studio: New Orleans Dance Academy

Independent Academic Project

Tulane University

Spring 2013

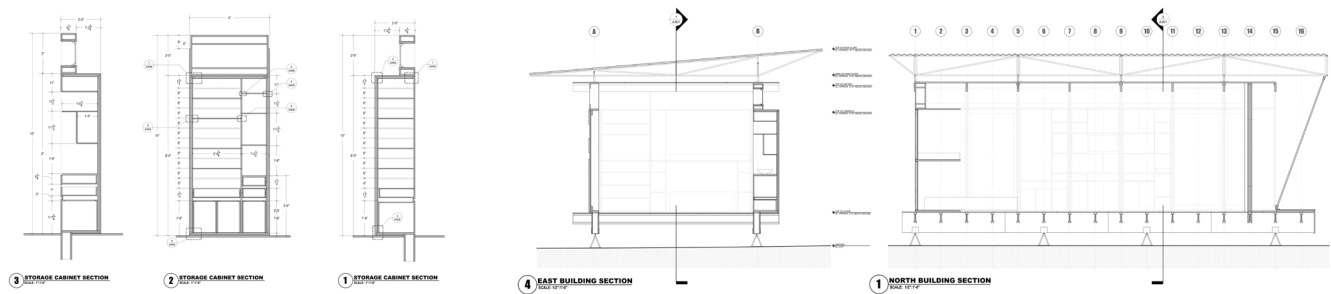
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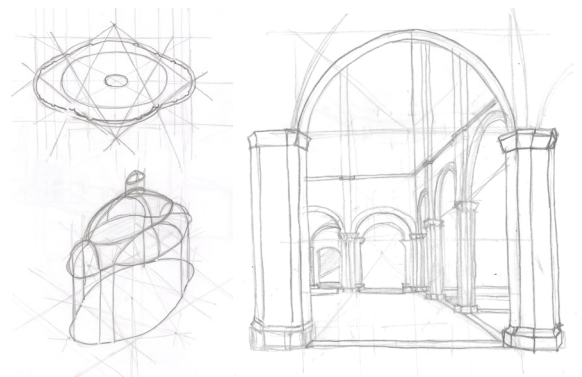
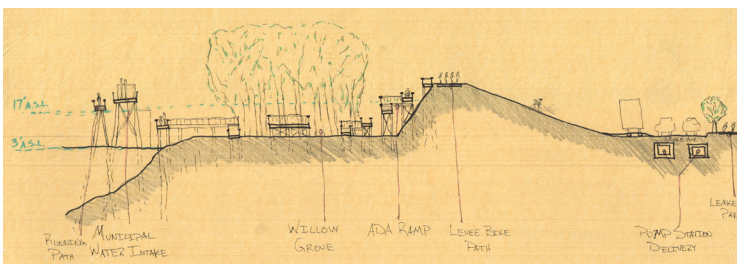
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## Studio reCOVER: Disaster Relief Shelter

Collaborative Academic Project | *University of Virginia* | Spring 2009 | Charlottesville, VA



## Hand Sketching

Independent Academic Project  
Independent Academic Project

*Tulane University*  
*Syracuse University*

Fall 2013  
Sum 2008

New Orleans, LA  
Northern Italy