

The La' mella House

Small Efforts: Big Impacts

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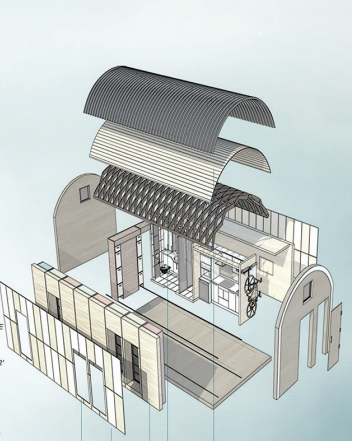
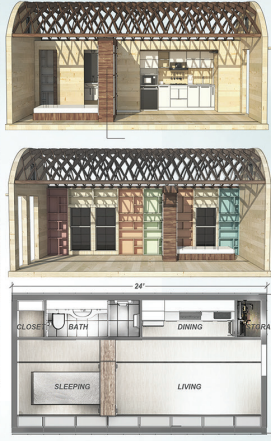
"I remembered him, with a thick gray beard and several layers of clothes standing by the bus stop when it was freezing outside. I used to stop and pick him up in my toasty car, open up the trunk with a push of a button so he could shove his heavy duffle bag, he often sit in the back seat saying basically ... nothing. I tried several times to initiate conversations with him. But when he talked - hardly ever - he said jewels of wisdom. Library workers knew him as an avid reader who spent time at the library nearly every day. Teddy Henderson or Abdul-Shahid passed away on October 6, 2008; he was 62. He was born in Brooklyn, N.Y., in 1946. He graduated from high school and attended Hampton University in Virginia. In 1968, he enlisted in the U.S. Air Force and was stationed in Washington, D.C. The story of Abdul-Shahid is not much different than the story of thousands of homeless Americans who left us perplexed with mystery.

The interior space of the 145 years old Menomonee Street house in old town, Chicago always captivated us. Daylight beautifully penetrated the interior space through

windows that were carefully inserted in-between the gable roof trusses. How such a tiny footprint came to be so charming and inviting? The exposed roof structure and its play with light inspired our design. The La' mella House is approximately 290 square feet, is tiny in its footprint area but significant in its upward aspiration. We used the vaulted roof to increase the perception of the interior space and to free the end walls for high operable windows to allow for cross ventilation. The lamella roof structure acts as a reminder for us to the role of the individual in the society and the power of joining small efforts to create big impacts. The roof structure receives its rigidity from a tension steel tie and a tongue and groove pine boards below layers of insulation topped with a corrugated metal roof. The roof sits on Cross Laminated Timber (CLT) wall panels sized 3'X8' that are quickly erected and anchored to a concrete floor slab. The concrete slab performs as a heat mass to store heat drawn from a thermal well and through a circuit of copper pipes impeded in the slab, suggesting the floor to perform as a livable surface. The CLT walls need no interior finishes

and bring warm feeling to the interior. The house articulates Semper's Four Elements of Architecture: The Hearth, The roof, The Walls and The Floor by simply paying careful attention to the making of its elements and finding a balance between its structure, construction, and tectonic expressions.

The overall site plan creates a sense of community by including three small courtyards that are carefully inserted in-between the houses. The small courtyards give a sense of belonging and intimacy rather than one big courtyard for all. The communal space is composed of the same construction module of the house and carports utilized the lamella roof module. The layout can be easily adapted for various configurations to meet other sites conditions. By limiting windows to only one side of the house, expansion and attaching other modules are possible. All elements of the house meet both the construction and energy requirements.



The La'Mella House: small efforts | big impacts

la-mel-la: "a fine, plate-like structure, usually in a group"

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"This project is dedicated to the memory of Teddy Henderson (Abdul-Shahid)"

The interior space of the 145 years old Monomac Street house in old town, Chicago always captivated us. Daylight beautifully permeated the interior space through windows that were carefully inserted in-between the gable roof trusses. How such a tiny footprint came to be so charming and inviting? The exposed roof structure and its play with light inspired our design. The La'Mella House is approximately 290 square feet, is tiny in its footprint area but significant in its upward aspiration.

We used the vaulted roof to increase the perception of the interior space and to free the end walls for high operable windows to allow for cross ventilation. The La'Mella roof structure acts as a reminder for us to the role of the individual in the society and the power of joining small efforts to create big impacts. The roof structure resolves its rigidity from a tension steel tie and a tongue-and-groove pine boards below layers of insulation topped with a corrugated metal roof. The roof sits on Cross Laminated Timber (CLT) wall panels sized 3'x8' that are quickly erected and anchored to a concrete floor slab.

The concrete slab performs as a heat mass to store heat drawn from a thermal well and through a circuit of copper pipes imbedded in the slab, suggesting the floor to perform as a viable surface. The CLT walls need no interior finishes and bring warm feeling to the interior. The house articulates Gensler's Four Elements of Architecture: The Hearth, The roof, The Walls and The Floor by simply paying careful attention to the making of its elements and finding a balance between its structure, construction, and tectonic expressions.

The overall site plan creates a sense of community by including three small courtyards that are carefully inserted in-between the houses. The small courtyards give a sense of belonging and intimacy rather than one big courtyard for all. The communal space is composed of the same construction module of the house and carports utilize the lamella roof module. The layout can be easily adapted for various configurations to meet other sites conditions. By limiting windows to only one side of the house, expansion and attaching other modules are possible. All elements of the house meet both the construction and energy requirements. The total cost of the house module materials comes under 30K, and we propose engaging the homeless youth in the learning and making of their homes. Huge labor cost savings could be achieved as well as income-earning opportunity and life-changing paradigm for the homeless youth of Detroit.

Estimated Cost of Materials

List of Materials	Cost per Unit	Count	Size	Price	Cost
Lamella Roof with hardware	1100 LF of 2x6 @ \$0.60/LF -400 SF of Metal Roofing -400 SF of 1/4" OSB G Layers -450 SF Ice and water shield Connectors	1	12X24'	\$1,770	\$660 \$440 \$220 \$150
Roof Insulation	3/4" Foam (2 layers)	1		\$350	\$350
CLT Exterior Walls 3 ply	700 SF at \$11/SF	1	3x8'	\$7,700	\$7,700
Exterior Siding with Insulation	700 SF at \$2/SF	1		\$1,400	\$1,400
Concrete floor slab with Radiant heating	Concrete Slab Earthwork Reinforced flooring	1	12X24'	\$4,040	\$1,440 \$680 \$2,920
Windows	3 @ \$500	3		\$1,500	\$1,500
Entrance Door		1		\$300.00	\$300.00
Interior Millwork		1		\$1,500.00	\$1,500.00
Kitchen Cabinets		1		\$700.00	\$700.00
Refrigerator		1		\$450.00	\$450.00
Stove/Top		1		\$300.00	\$300.00
Microwave		1		\$200.00	\$200.00
Kitchen Sink		1		\$1,700.00	\$1,700.00
Shower Enclosure		1		\$1,500.00	\$1,500.00
Sink		1		\$150.00	\$150.00
Van Bed		1		\$450.00	\$450.00
Water Heater		1		\$120.00	\$120.00
Water pump		1		\$1,800.00	\$1,800.00
Plumbing/Electrical Systems		1		\$500.00	\$500.00
Lighting and Light Fixtures		1		\$100.00	\$100.00
Project bank		1		\$500.00	\$500.00
Ac-Curt		1		\$500.00	\$500.00
Misc.		N/A		\$1,000.00	\$1,000.00
Estimated Materials TOTAL					\$28,590.00

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