ARTISTS' CORE COLLAGE: BEARDEN PLACE INFILL HOUSING PROPOSAL, WILLARD HAY, CITY OF MINNEAPOLIS

AN URBANISM OF LOOSE ASSOCIATION

The project for the Artists' Core infill housing demands light touch and urban finesse. Because of the strong sense of community animating the neighborhood, the proposed intervention aspires to carefully relate to the existing context and its architectural traditions, while at the same time providing a compatible vision of its possible near future.

Inspired by the lively urban collage visions of Romare Bearden (and to be quite frank, also by the intellectual acrobatics of Colin Rowe's Collage City), we propose an urban assembly compatible with a loose grouping of INDIVIDUALS who might nonetheless be bent on the creation of a more perfect community.

In that sense, as our proposed detached single-family units sit on the site, they do not quite align, either with each other or with the existing context, and yet deviations seem minimal. Considering it carefully we come to realize that they actually contribute to the "place-making" of the shared outdoor space, defining it into relatively discrete "green rooms" and allowing it to pulsate with experiential expansion and contraction. This dynamic element is essentially new to an otherwise perfectly orthogonally arranged neighborhood, compelling us to investigate and inhabit the space between the houses while not unreasonably disrupting the familiar qualities of the existing context on which its livability depends. If we can be successful, building up on those qualities with imaginative new approaches, it will help attract more people back to live in the city.

HOPING FOR THE BEST AND...

...preparing for the worst, our proposal does not automatically assume the granting of a setback easement on Sheridan Avenue North, and consequently proposes the inclusion of only five individual single-family units which would leave sufficient space within existing setbacks for an array of shared common spaces. If an easement were to become a happy reality, the project could easily be expanded to six units.

Each proposed unit is 1,450 sf with 2.5 levels. The footprint is 20 feet by 30 feet totaling 600 sf in the first and second floors and 250 sf on the attic mezzanine. This upper area serves as a flexible space possibly becoming an extra bedroom, a painting studio, a home office, or a media or playroom. The first and second floor are organized similarly, with one bedroom, one bathroom and one daytime space: the dining room and kitchen on the first and the living room on the second. Such an arrangement allows an organic inhabitation of the entire house, which is not stratified in horizontal layers of use (daytime on first floor and nighttime on second floor, for example), but rather allows itself to be lived-in totally and fully on every level.

The hope is, of course, a basic tenet of good design in architecture: that enriched architectural space translates into enriched lives, or, put differently, that an articulate and meaningful assembly of rooms propitiates similarly profound relationships between people.

The inclusion of the living room on the second floor proposes the advantages of better views, and more abundant natural light and ventilation, while inclusion of one of the bedrooms on the ground floor secures the eventual universal accessibility to physically handicapped members of a family. The basic equivalence between the first and second floors also permits a flexibility of choice, with some families preferring to spend most time on the first floor while others perhaps favoring the second.

All rooms are linked through an "X" shaped stair that connects the levels so that bedrooms have 8'-0" high ceilings, while the dining room ceiling is 10'-8" high and the ceiling of the living room slopes from 6'-4" to 20'-2". The "X" shape of the stair grants a diagonal experience of entry to every room, dramatizing the beauty of the cubical interiors with consequential converging perspectives, an architectural luxury that costs nothing.

SIMPLE CONSTRUCTION

To ensure a low cost per square foot of between $110 and $120, the house is constructed with simple, commonly available materials while pursuing an economy of scale propitiated by the fact that all units are identical. While they are all equally laid out, some of them are mirrored, a device we call "palindromic" planning, which provides variety of experience while preserving repetitiveness of construction.

The interiors are finished in painted sheetrock, floors are engineered wood and stair rails are a painted standard steel mesh. Molding, trimming or any other form of applied ornamentation that would unnecessarily increase the cost of the finishes should be largely absent.

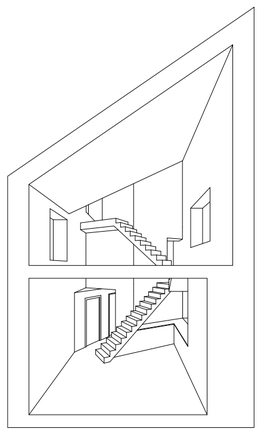
The exterior walls will be 20" thick to accommodate the insulation value required by the sustainable design proposed (please see below sustainability concept description). Such insulation will be cellulose-based for good environmental protection qualities of its manufacturing process. Likewise, the envisioned balloon-frame structure constructed with douglas fir dimensional lumber, the exterior finish in cedar siding and the roof as standing seam pre-painted anodized aluminum certified recycled, ensure the use of only renewable materials.

GREEN ROOMS

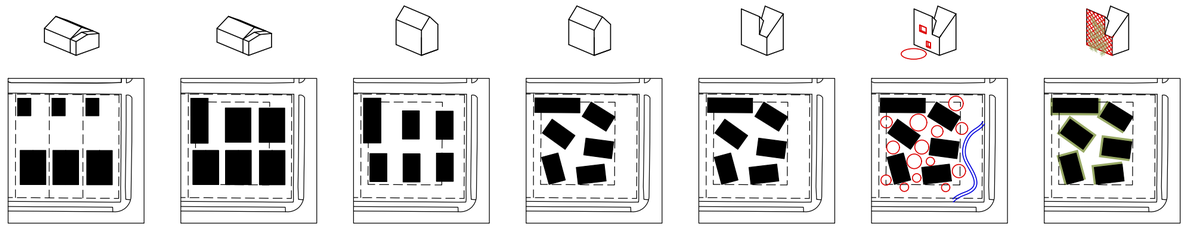
The houses loosely align to define a recognizable urban edge for Plymouth Avenue North and Sheridan Avenue North. To emphasize the shared importance of that edge, the walls in question are finished in simple clear tongue-and-groove vertical cedar siding, probably 4 or 5 inches wide.

The exterior walls facing away from the streets and into the described "green rooms" are faced with a clear cedar trellis superimposed over an open cavity 3 1/2" deep (the width of a 2x4 piece of lumber) and attached on a nailable rain-screen membrane painted red. As vines grow during summer, their leaves will throw shade on the house's walls, protecting them from excessive radiation. During winter, the vines will hibernate and allow the sun to hit the walls and warm the house. Due to the simplicity of this system and the nobility of these inexpensive materials (the trellis referred to is true cedar and available at Home Depot), this scheme should be able to be inexpensively realized and easily maintained over many years.

During summer, these walls will be noted by the sensuous deep contrast between shiny dark green ivy leaves and red color of the walls, a violently complementary pair and consequently a fitting celebration of the mating season. During winter, because the walls of each house present a unique set of angles to the sun, the shifting shadows of the trellis will throw recognizable



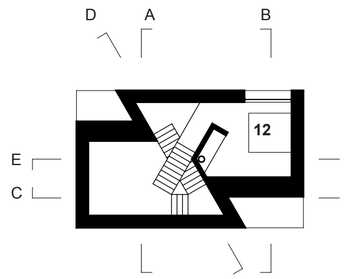
DIAGONAL ENHANCES THE PLEASURE OF INHABITING THE HOUSE'S BOXY INTERIOR



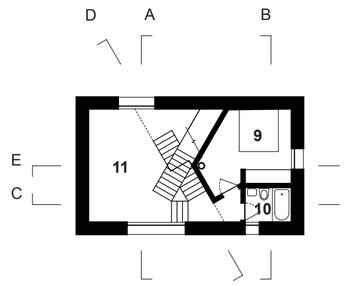
SUBURBAN HOUSING | MAXIMIZED DENSITY | MAXIMIZED HEIGHT AND REDUCED FOOTPRINT | FIT WITHIN SETBACKS | SPLIT VOLUME FOR BETTER SUN EXPOSURE | OUTDOOR "ROOMS" ARTICULATED BY LAYOUT | GREEN WALLS

SITE PLAN 1/16"=1'-0"

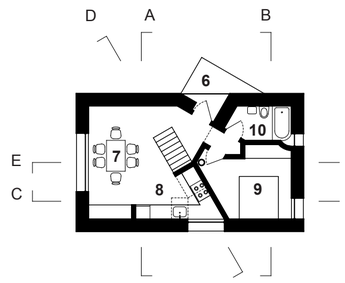
1. PARKING
2. BICYCLE PARKING
3. GRAVEL PATH
4. OUTDOOR "ROOMS"
5. PUBLIC ART / COMMUNITY GREEN SPACE
6. ENTRANCE
7. DINING ROOM
8. KITCHEN
9. BEDROOM
10. BATHROOM
11. LIVING ROOM
12. FLEXIBLE SPACE / EXTRA BEDROOM



MEZZANINE FLOOR PLAN
1/16"=1'-0"



2ND FLOOR PLAN
1/16"=1'-0"

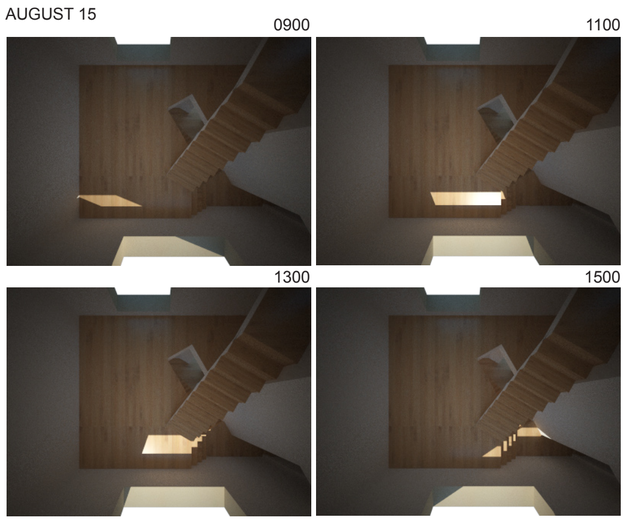


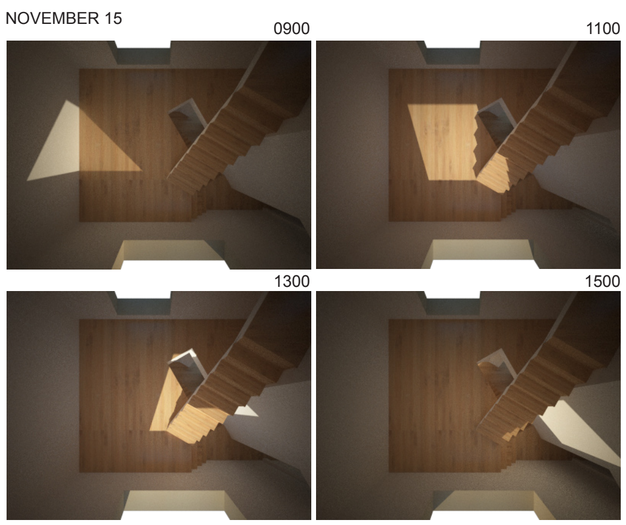
GROUND FLOOR PLAN
1/16"=1'-0"

SIMPLE SUSTAINABLE YET AFFORDABLE:

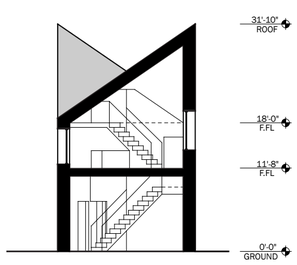
Unit area: 1450 sf
Construction cost per sf: $110 - $120/sf
Unit cost: $159,500 – 174,000
Size of units could be slightly reduced to accommodate budget.

NIGHT VIEW

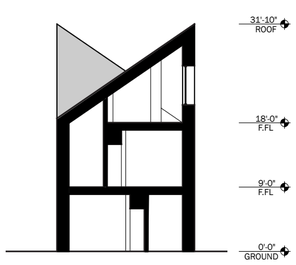




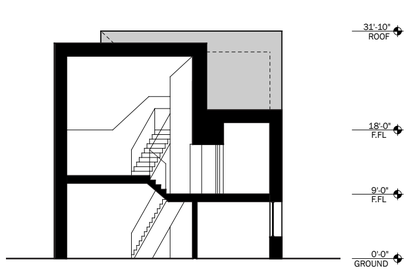
SOLAR PATH DIAGRAM IN THE INTERIOR



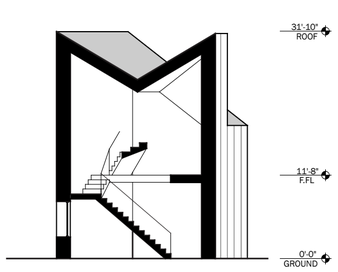
SECTION A 1/16"=1'-0"



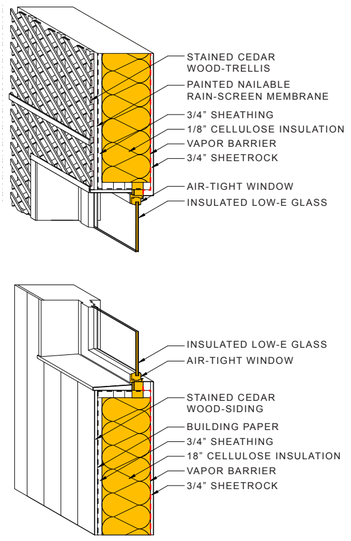
SECTION B 1/16"=1'-0"



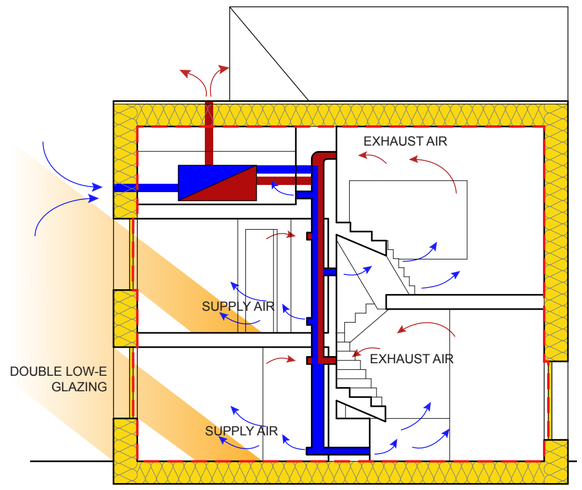
SECTION C 1/16"=1'-0"



SECTION D 1/16"=1'-0"



WALL DETAIL



SECTION E 1/8"=1'-0"
PASSIVHAUS SYSTEM: VENTILATION SYSTEM W/ HEAT RECOVERY

and changing patterns on the red walls behind. Considering this or that house, visitors might have difficulty recognizing the varied patterns, but for people that live there, the unique spirit of trellis shadows on their own house might be as recognizable as the brief smiles sometimes crossing the faces of people they love.

PASSIVE HOUSE SUSTAINABILITY

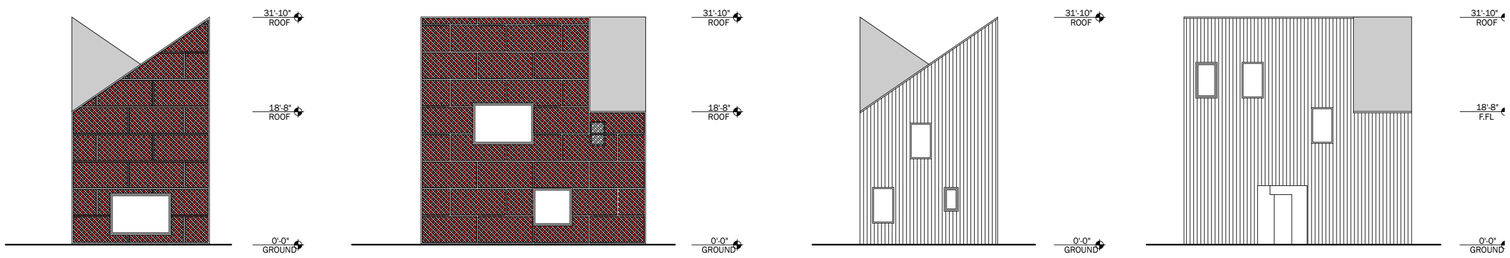
As envisioned at the moment, the proposed sustainability concept allows the project to meet Silver level MN GreenStar requirements, while also potentially placing it in the range of Gold. However, due to tight budget concerns, Silver is perhaps a more reasonable possibility. If further economizing is necessary, Bronze level could be the logical alternative for balancing sustainable performance and low cost.

The proposed project contemplates the use of "Passive House" standards, in order to achieve an ultra-low energy building that requires little energy for heating and cooling. The main components of the proposed system:

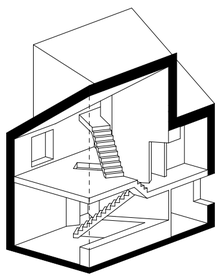
1) Passive solar design is achieved by the inclusion of south-facing windows to capture solar radiation in the winter.
2) Super-insulation needed to avoid heat transfer through walls with a target performance of 0.10 to 0.15 U-value and care to avoid cold bridging. For Minneapolis weather we have calculated the need for 20" thick walls.
3) High-performance windows are outfitted with argon-filled double or triple glass and proven to be absolutely leak-free. Due to budget constraints on our project, these might be one of the items where a compromise might have to be struck between performance and cost. Different options should be analyzed and considered during the development phase.
4) Overall air-tightness is essential. Vapor and air barriers should be used throughout and particular attention paid to joint design and execution. The more considered and careful attention given to the former, the more inexpensive the latter could be.
5) Mechanical ventilation is needed mostly during winter because of the air-tightness required to prevent loss of energy. During summer windows can be opened (given this is Minneapolis, they will have to be outfitted with good mosquito screens). The system should have a capacity to perform 0.4 air exchanges per hour. Additional desirable aspects to the system could be a heat-recovery system that passes energy between incoming and outgoing air, avoiding energy waste, and a possible earth-duct system to take advantage of the nearby soil's thermal inertia. These features will also have to be considered in the context of cost of construction and eventual project value-engineering.
6) Space-heating, is an essential feature of the ventilation system. Due to the excellent insulation and air-tighness performance of the enclosure, the entire house can be heated by a small heat pump, by direct solar energy or by a natural gas or oil burner. The size requirements should be minimal.

All of this will be in the end a factor of the available budget. In the worst case scenario a more conventional (less sustainable) system could be considered, but the savings in the short term will tend to become increases in the operational and maintenance cost, without mentioning the costs to the environment. With education and outreach in the Parade of Homes, to the community and future homeowners, a balanced yet enlightened economic position for sustainable building can be encouraged for those seeking more value and easier long-term maintenance in this time of economic recession and environmental realities.

Given that the project has the potential to also become an exemplary experience and point of reference for future urban developments in the Twin Cities and elsewhere, the importance of these considerations can hardly be underestimated. It is a common occurrence in architecture that aspiring projects such as this one aiming to improve life for all have a way to inspire people, gather momentum in the community and encourage commitment to long-lasting value and standard of living that will ultimately pay for itself. It will be an opportunity for future denizens to envision a "real connectedness" in the simple and buildable yet spatially rich experience of living in the ARTISTS' CORE COLLAGE.



ELEVATIONS 1/16"=1'-0"



DAYTIME SPACES

SECTION RENDERING LOOKING AT DINING AND LIVING ROOM

INTERIOR VIEW FROM LIVING ROOM

BIRDS' EYE VIEW FROM SE TO NW