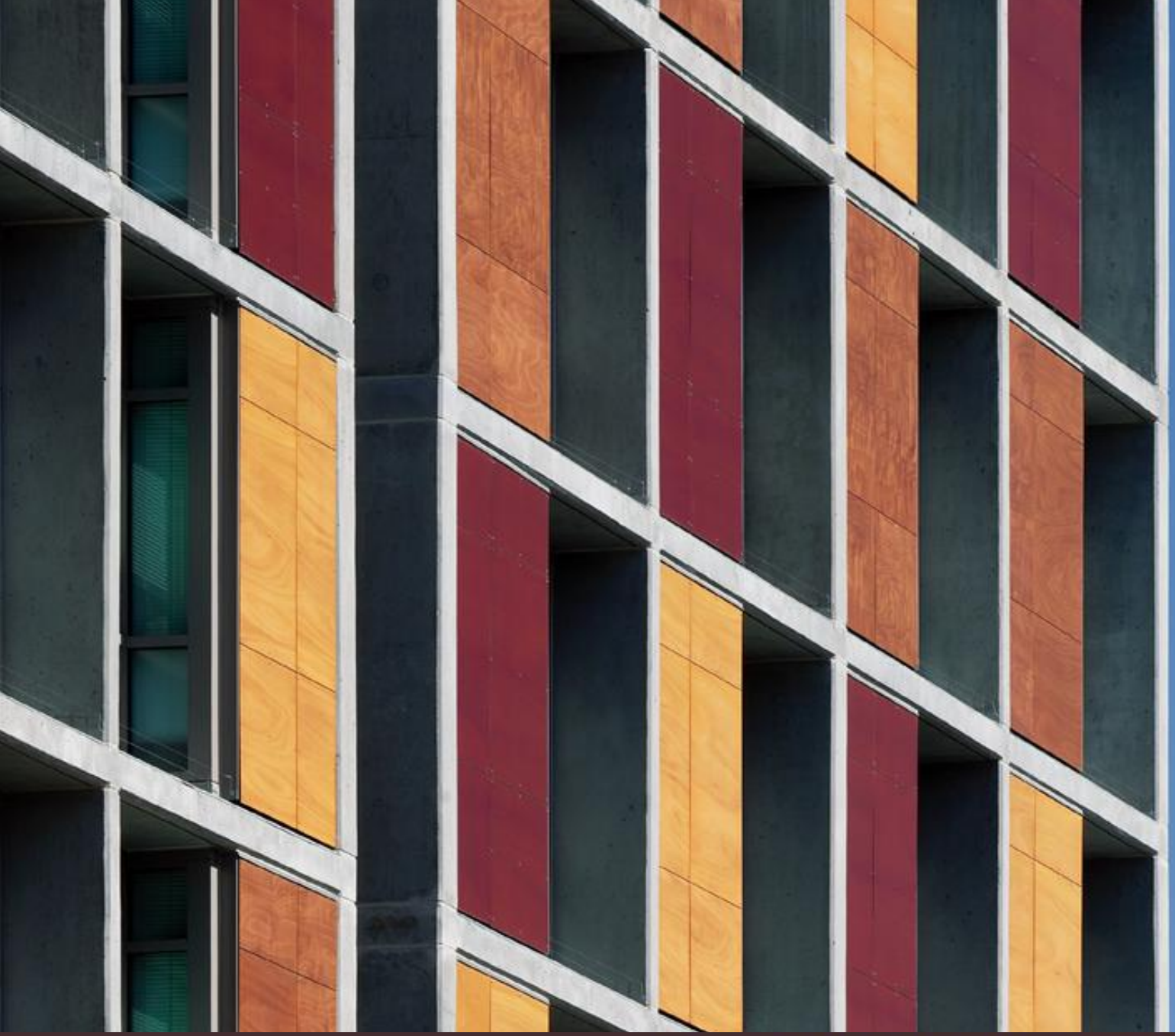
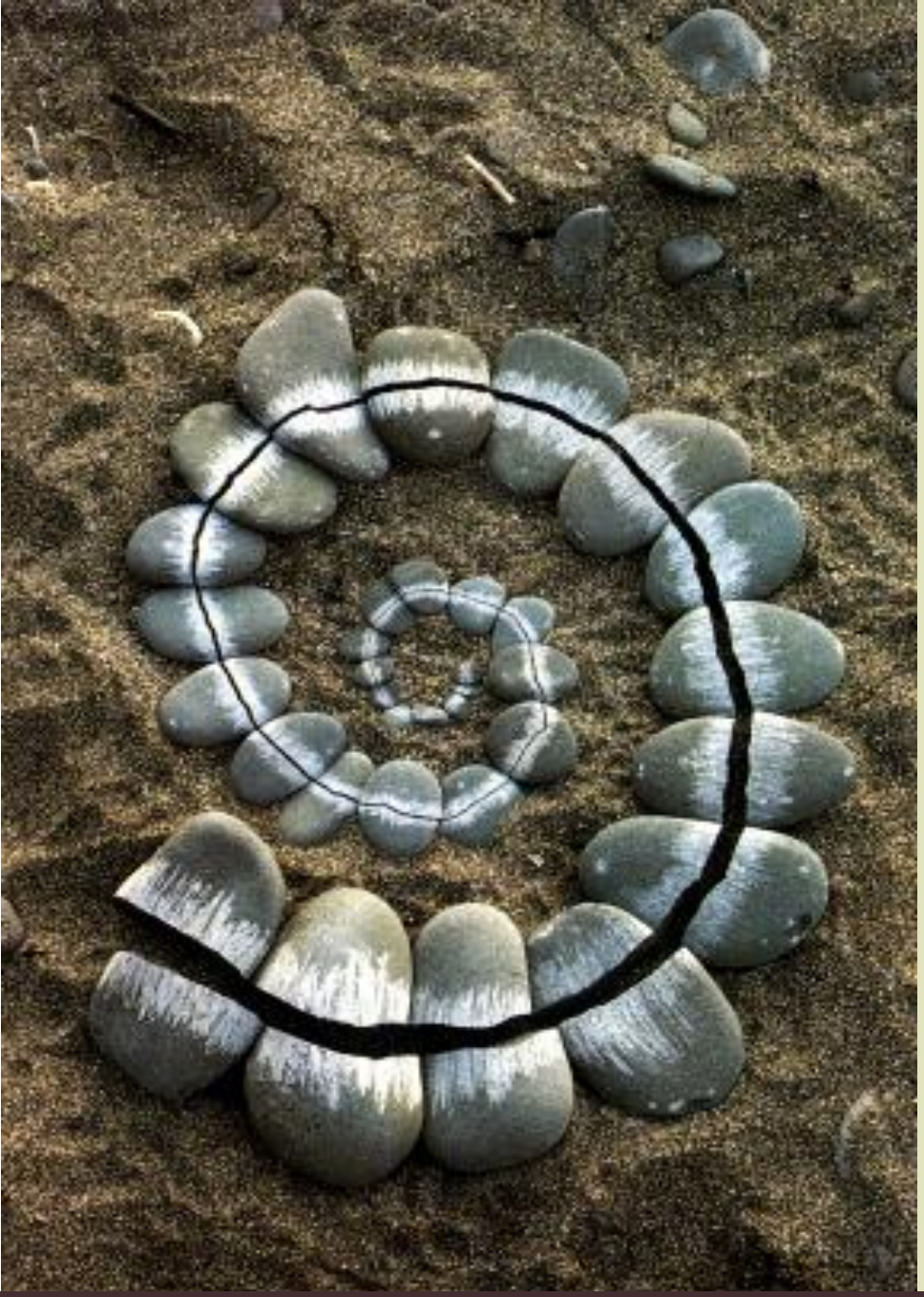
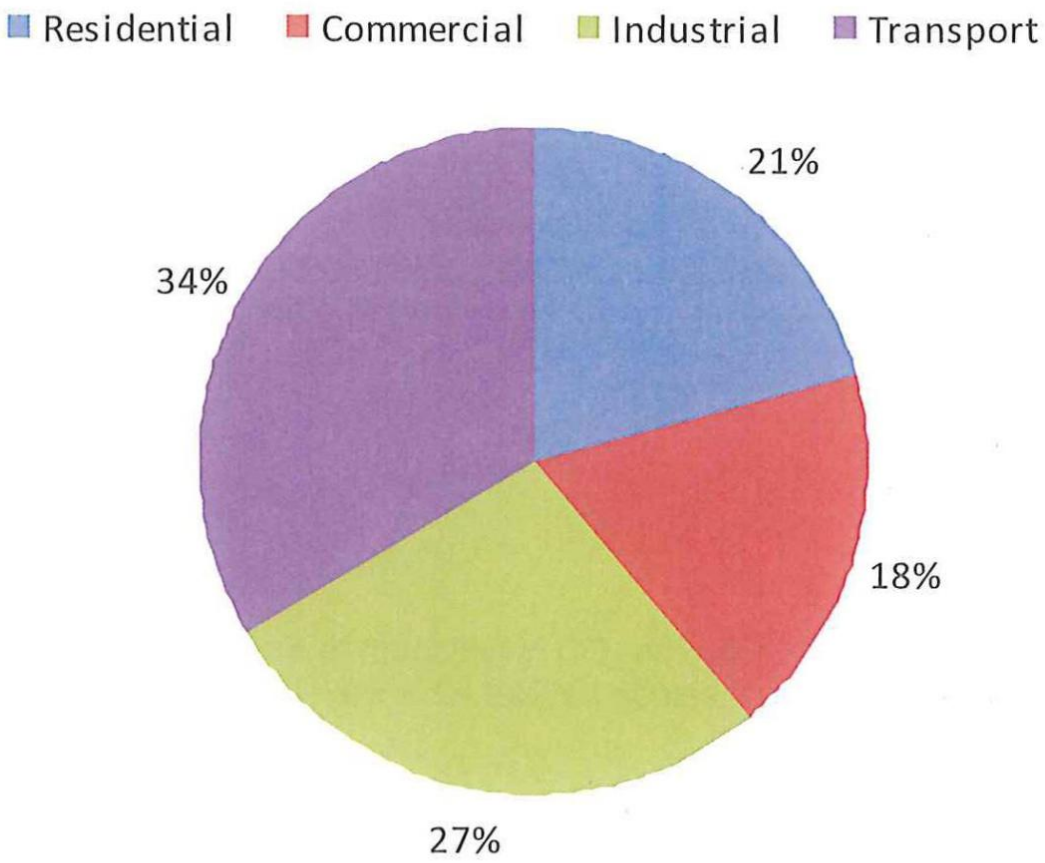


LEDDY MAYTUM STACY ARCHITECTS



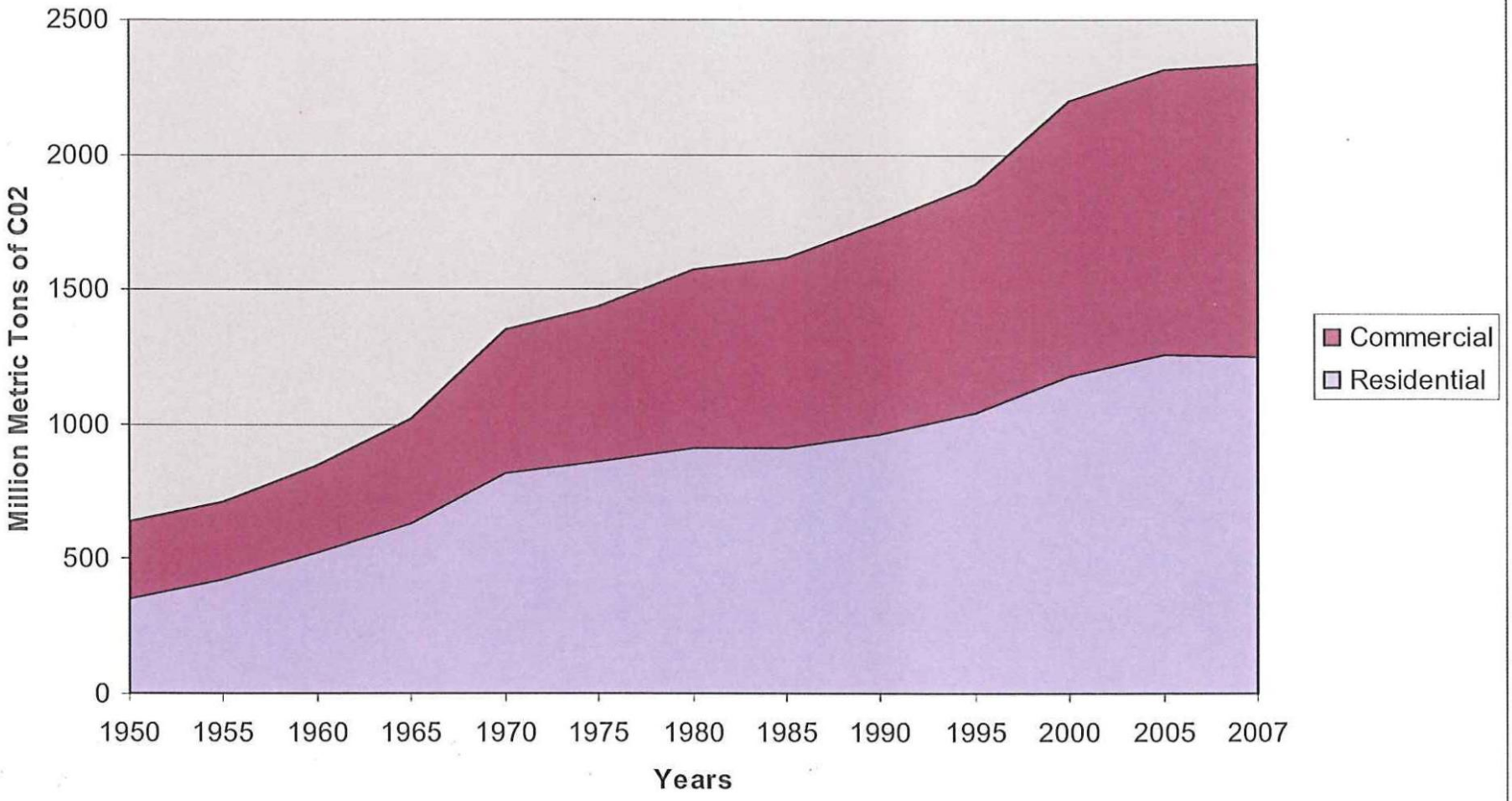
BUILDING TOWARD
A POST-CARBON FUTURE

Figure 1: Total US CO2 Emissions (2007 energy related)



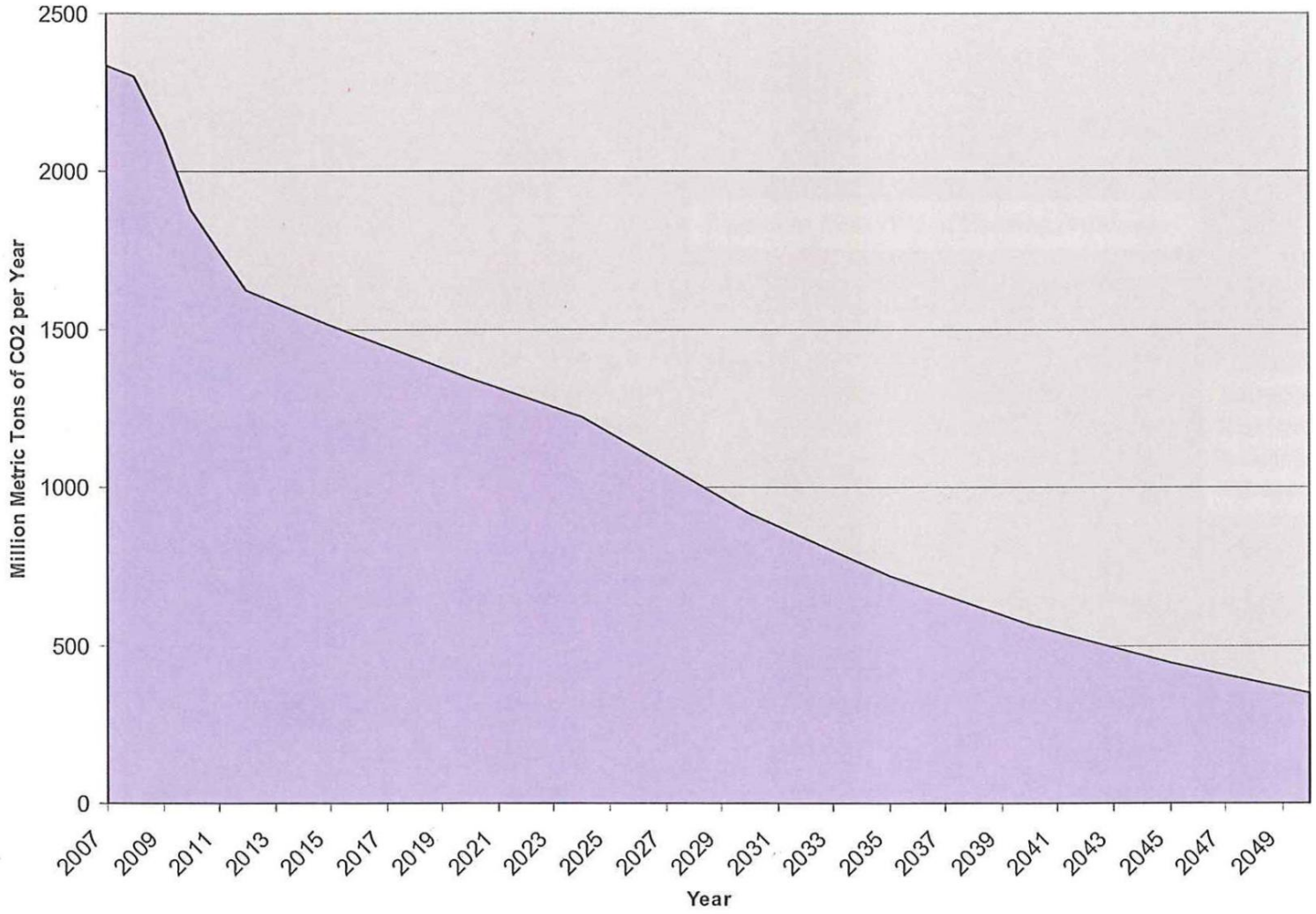
Source Data: Energy Information Administration (www.eia.doe.gov)

Figure 2: Trends in US Buildings Related Emissions



Source Data: Energy Information Administration (www.eia.doe.gov)

Figure 3: Required Reduction in Emissions from US Commercial and Residential Buildings (to meet Seattle targets)

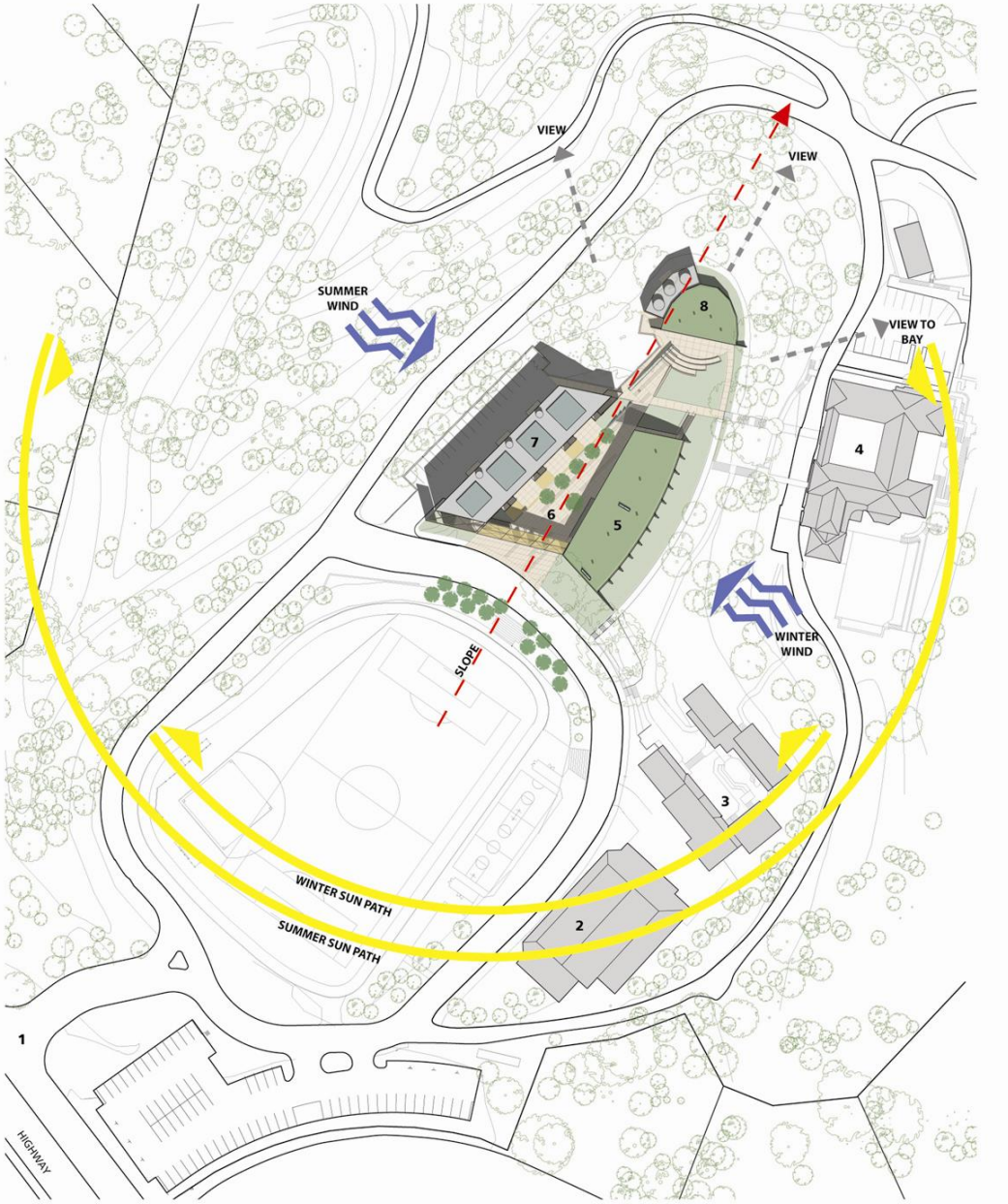


Some solutions….

LMS[A]

Nueva School Hillside Learning Complex, Hillsborough LEED Gold

LMSA



CONTEXT PLAN

50 0 50 100′

1 CAMPUS ENTRY **2** EXISTING GYMNASIUM **3** EXISTING MIDDLE SCHOOL **4** HISTORIC MANSION/ LOWER SCHOOL **5** LIBRARY WITH LIVING ROOF
6 PLAZA **7** CLASSROOM BUILDING WITH PV ARRAY **8** STUDENT CENTER WITH LIVING ROOF

SUN

24% SOLAR POWERED

RAIN

CELEBRATE STORMS/ MANAGE STORM WATER

WIND

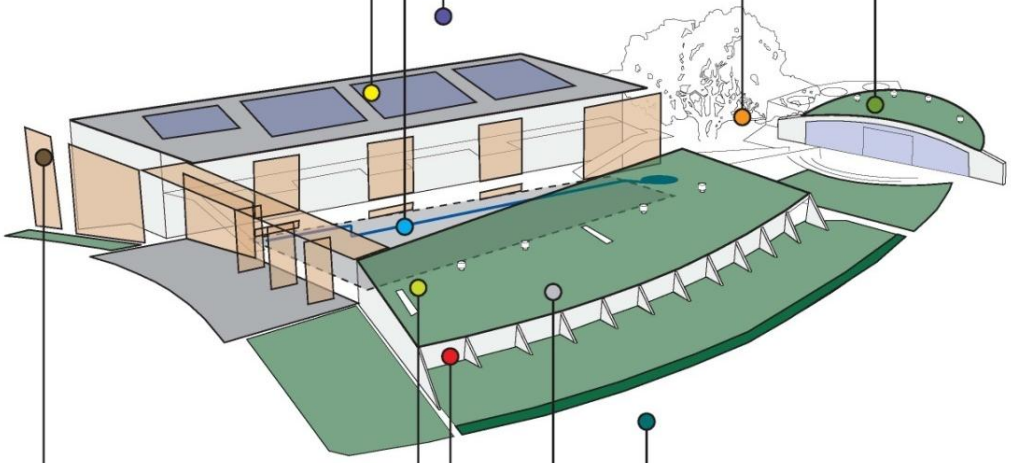
NATURAL VENTILATION

LAND

CONNECTIONS TO SITE

FLORA

CALIFORNIA GRASSLAND HABITAT



REUSE

HARVEST TREES REMOVED FROM SITE

FAUNA

BIRD/ BEE/ BUTTERFLY HABITAT

ENERGY

>69% BELOW TYPICAL U.S. SCHOOL

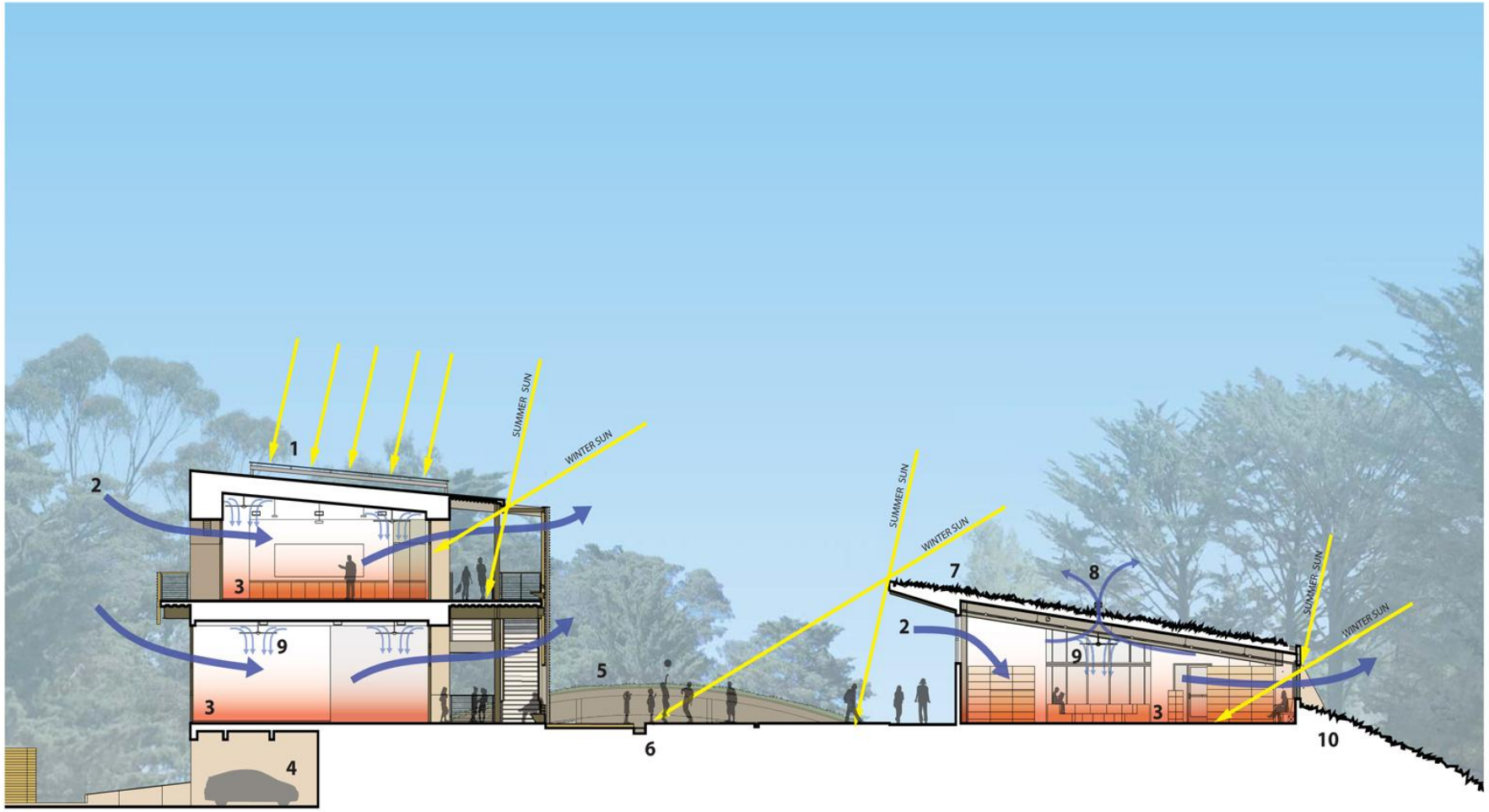
RECYCLE

25% RECYCLED CONTENT

WATER

50% REDUCTION IN WATER USE


FIRE LANE - NO PARKING



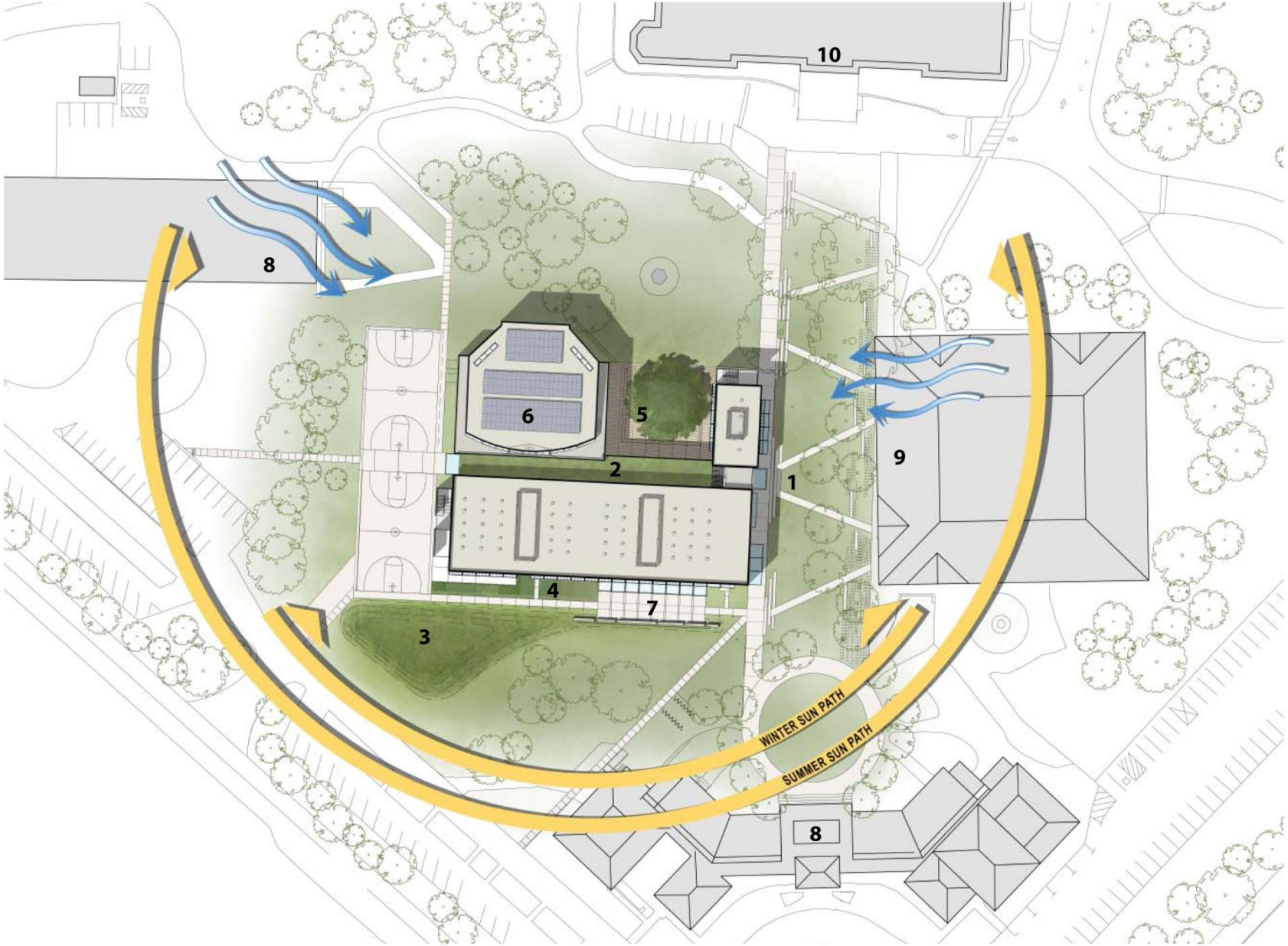
CROSS SECTION

5 0 5 10

1 PHOTO VOLTAIC PANELS **2** NATURAL VENTILATION **3** RADIANT HEATING **4** SHELTERED PARKING **5** STUDENT CENTER BEYOND **6** ARROYO **7** LIVING ROOF **8** TURBINE VENT. **9** CEILING FAN **10** BERM

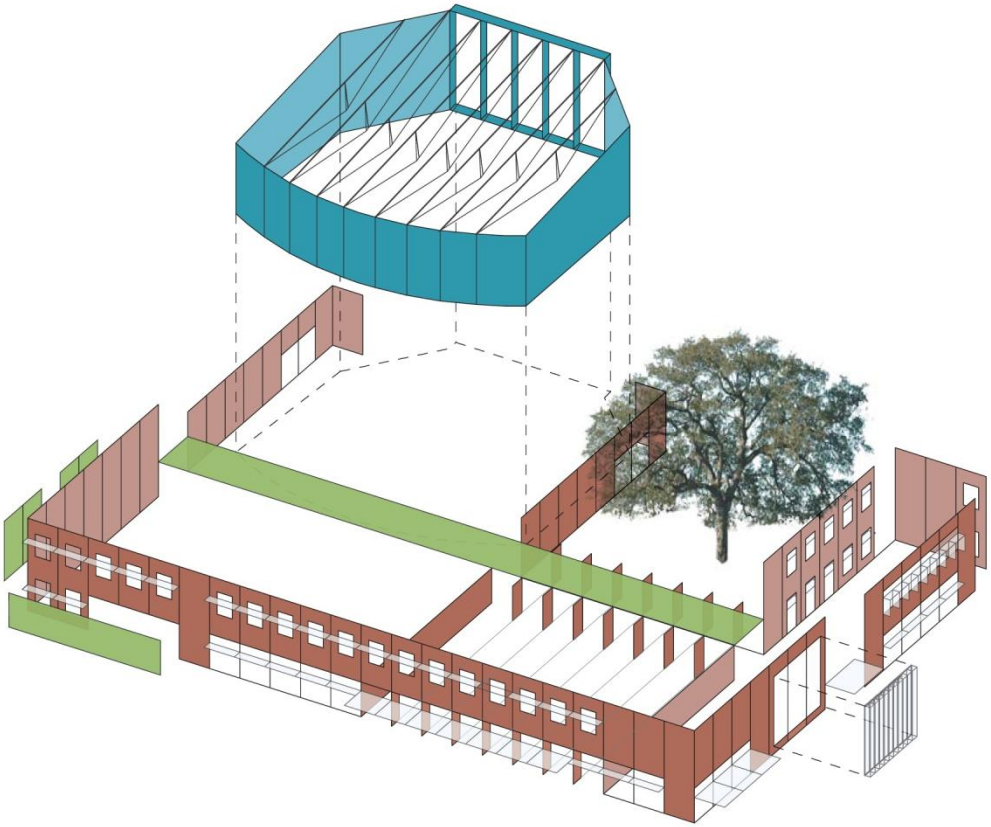
Homer Science and Student Life Center, Sacred Heart Prep, Atherton LEED Platinum

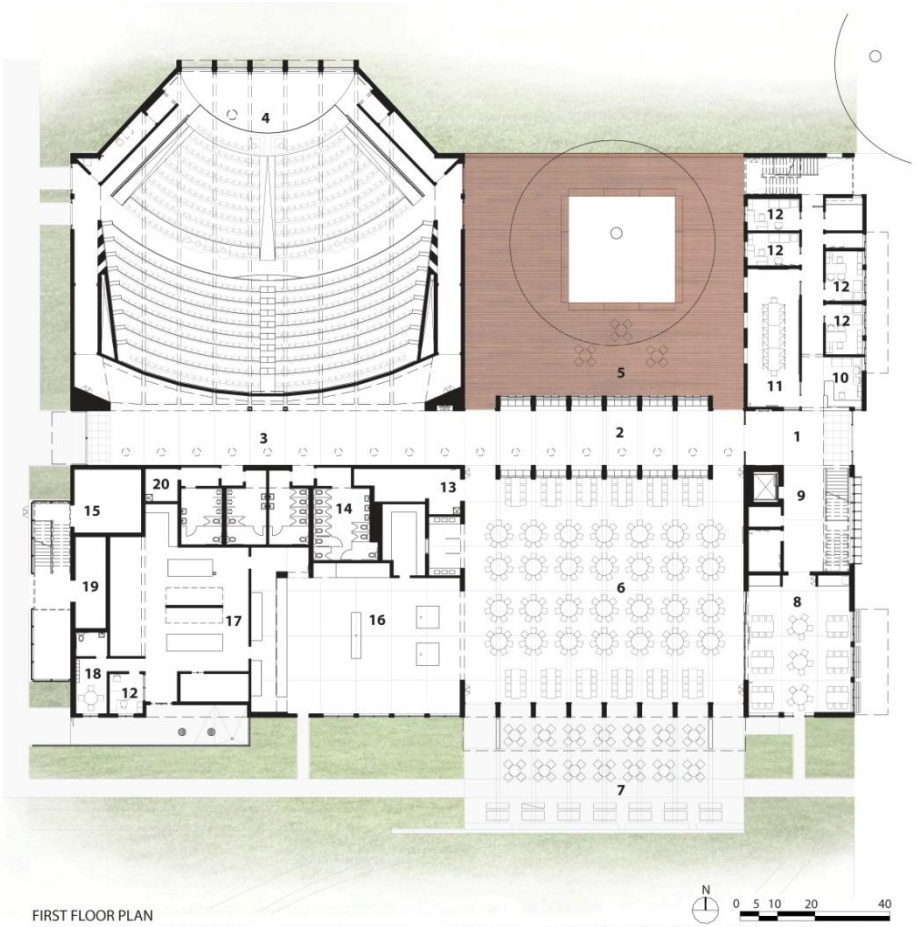
LMS[A]



SITE PLAN

1 ENTRY QUADRANGLE **2** LIVING ROOF **3** RAIN GARDEN/ BIOSWALE **4** TEACHING GARDEN **5** OAK COURT **6** 40 KW PHOTOVOLTAIC ARRAY **7** PATIO
8 CLASSROOM BUILDING **9** GYMNASIUM **10** HISTORIC MAIN BUILDING

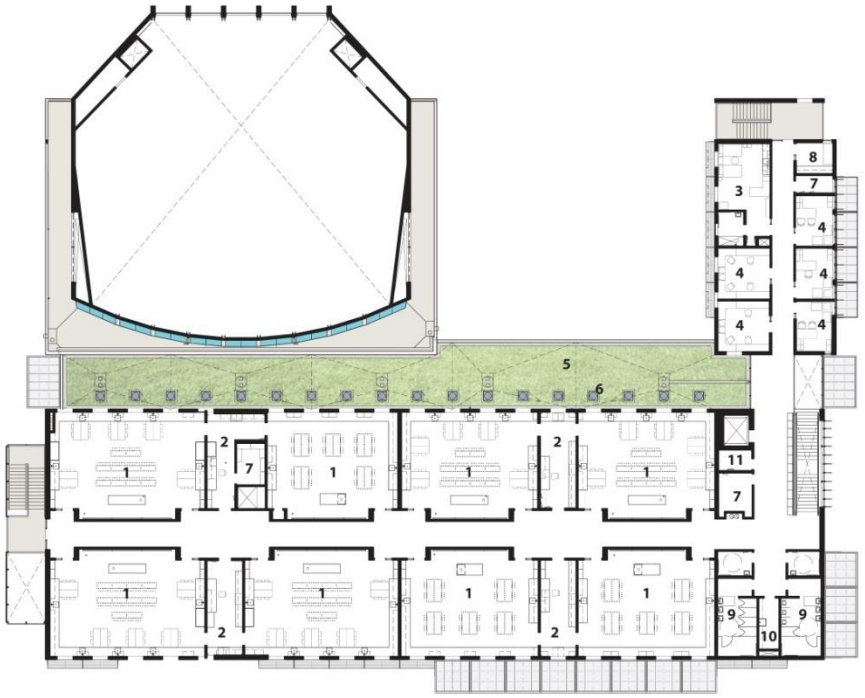




FIRST FLOOR PLAN

1 ENTRY LOBBY **2** GREAT HALL **3** ASSEMBLY LOBBY **4** ASSEMBLY **5** OLD OAK COURTYARD **6** CAFETERIA **7** PATIO
8 FACULTY DINING 9 ELEVATOR LOBBY **10** RECEPTION **11** STUDENT CONFERENCE ROOM **12** OFFICE **13** STORAGE
14 RESTROOM **15** MECH. ROOM **16** SERVERY **17** KITCHEN **18** BREAK ROOM **19** ELEC. ROOM **20** JANITOR'S CLOSET

N 0 5 10 20 40



SECOND FLOOR PLAN

1 SCIENCE CLASSROOM **2** PREPERATION ROOM **3** HEALTH ROOM **4** OFFICE **5** GREEN ROOF **6** TYPICAL SKYLIGHT
7 STORAGE **8** COPY 9 RESTROOM **10** JANITOR'S CLOSET **11** MECHANICAL ROOM

N 0 5 10 20 40

RAIN GARDEN

97% STORMWATER MANAGED

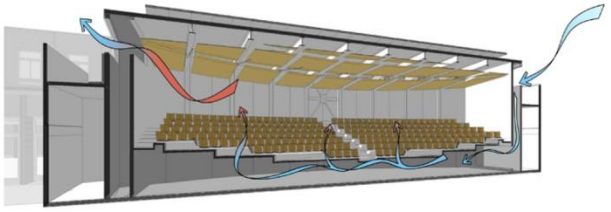
LIVING ROOF

FOSTER BIODIVERSITY

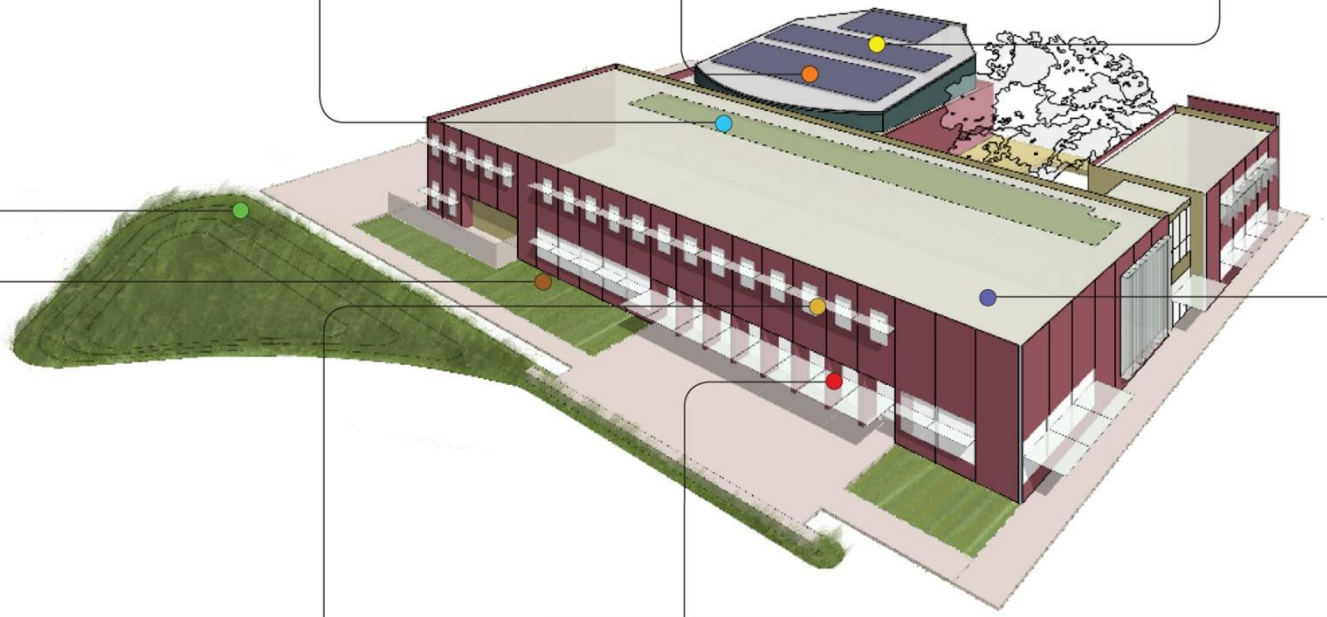
SOLAR POWER

24% RENEWABLE ENERGY

NATURAL VENTILATION



HARNESSING PREVAILING WINDS FOR NATURAL VENTILATION



GARDEN

STUDENT TEACHING GARDEN

DAY LIGHTING

100% OF CLASSROOMS DAYLIT

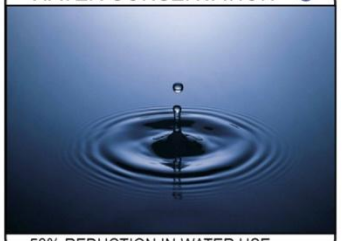
ENERGY REDUCTION

69% ENERGY SAVINGS

RECYCLED CONTENT

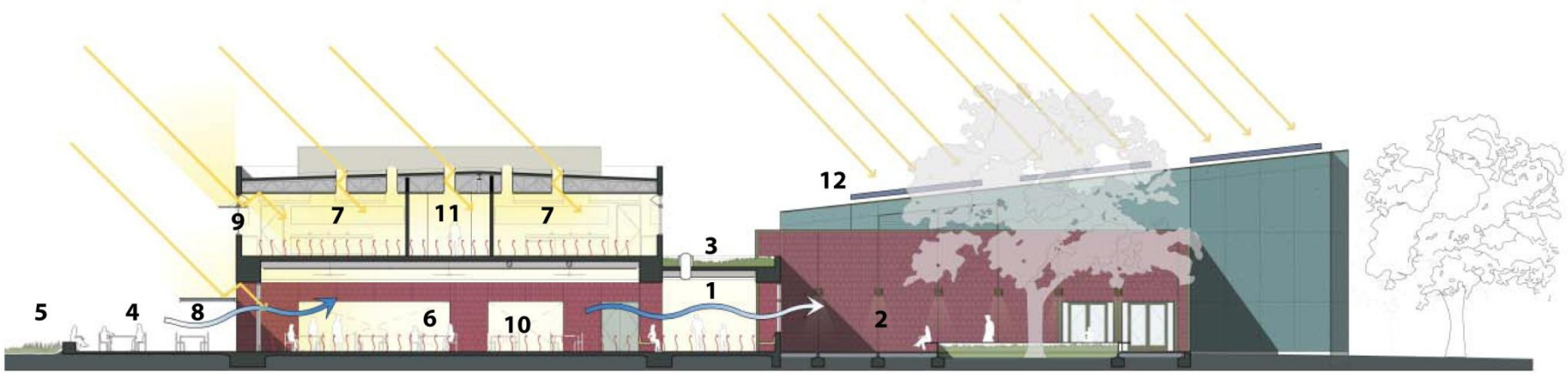
30% RECYCLED CONTENT

WATER CONSERVATION



50% REDUCTION IN WATER USE

INTEGRATED SUSTAINABLE STRATEGIES



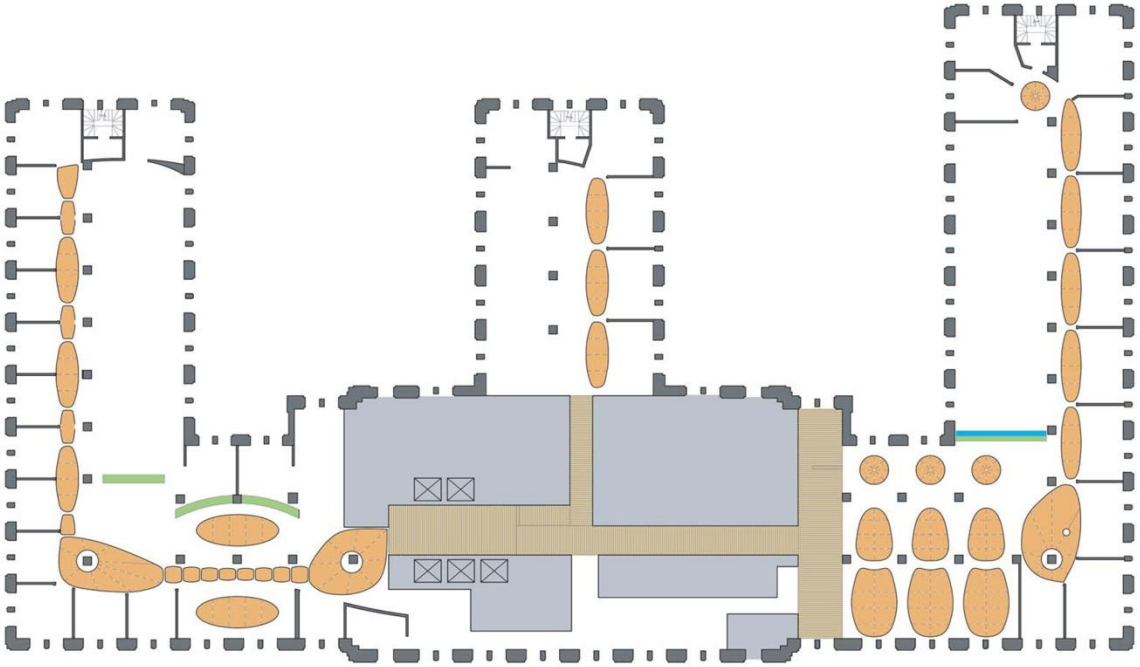
BUILDING SECTION

0 8 16 32

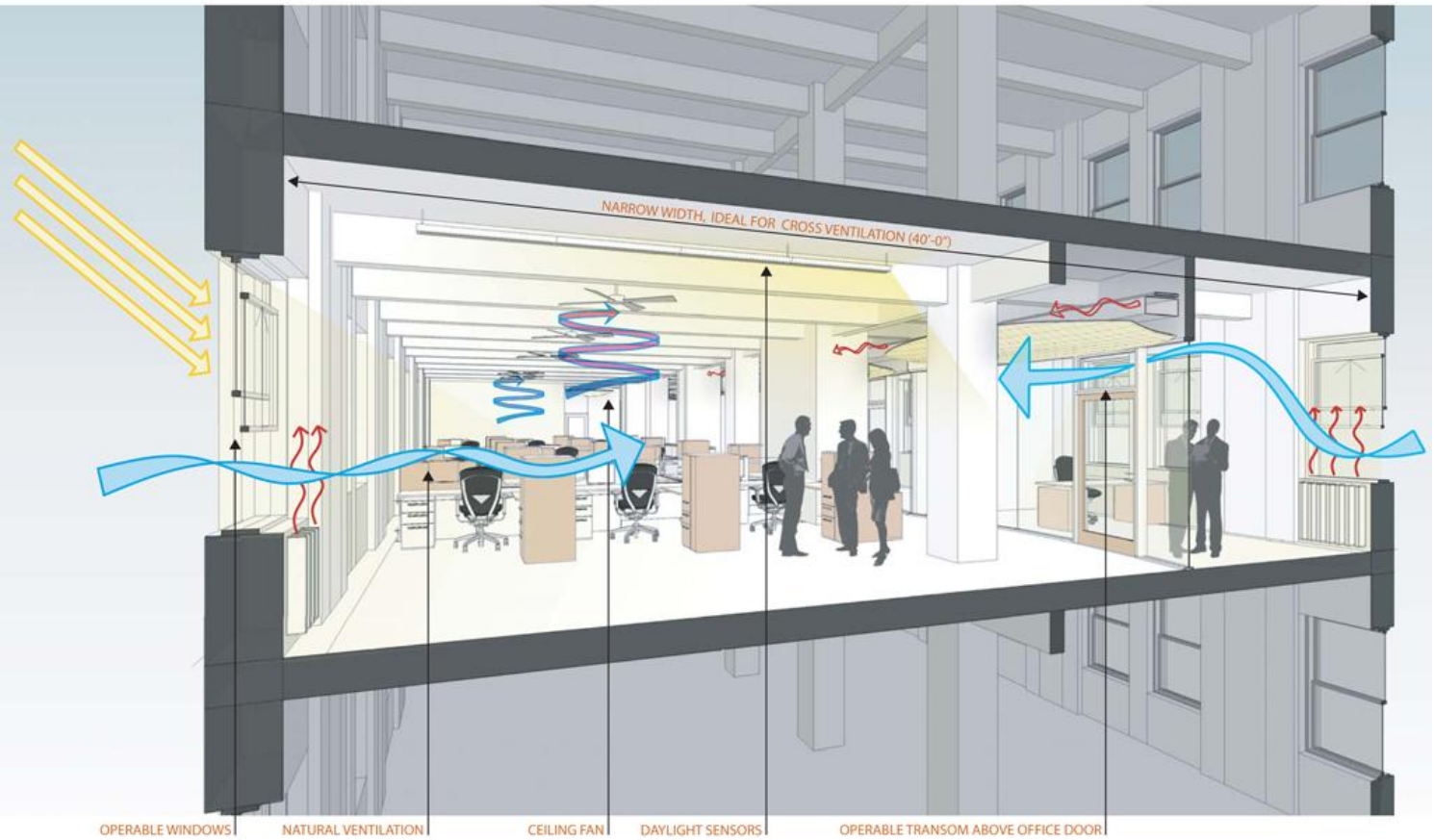
1 GREAT HALL **2** OAK COURTYARD **3** LIVING ROOF **4** PATIO **5** RAIN GARDEN **6** DINING HALL **7** SCIENCE LAB **8** NATURAL VENTILATION **9** LIGHT SHELF **10** RADIANT HEATING **11** SOLAR TUBES **12** PHOTOVOLTAIC ARRAY

ClimateWorks Foundation Offices, San Francisco LEED Platinum

LMS[A]



BIOPHILLIC DESIGN: Making visceral connections to the natural world.


NARROW WIDTH, IDEAL FOR CROSS VENTILATION (40'-0")
OPERABLE WINDOWS
NATURAL VENTILATION
CEILING FAN
DAYLIGHT SENSORS
OPERABLE TRANSOM ABOVE OFFICE DOOR


Plaza Apartments, San Francisco LEED Silver

LMSA


FOR
LEASE

SUSTAINABLE STRATEGIES

1. LIVING SPACE FLOORING:
   CARPET (45% POST-CONSUMER RECYCLED CONTENT)

2. KITCHEN FLOORING:
   LINOLEUM (NATURAL AND RECYCLED MATERIAL)

3. BATH FLOORING:
   RUBBER (NATURAL AND RENEWABLE MATERIAL)

4. WALLS / CEILING PAINT:
   NO VOLATILE ORGANIC COMPOUNDS (INDOOR AIR QUALITY)

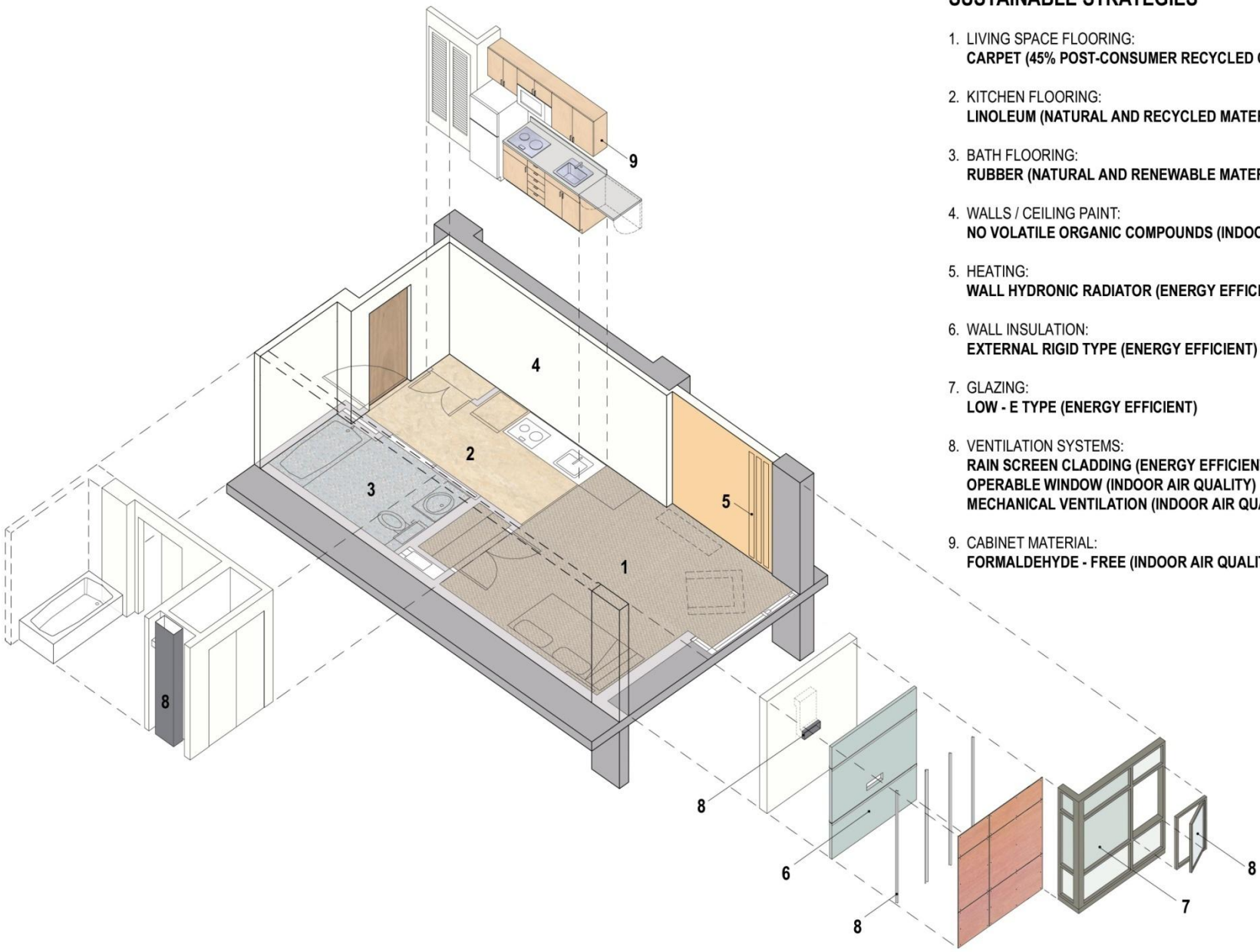
5. HEATING:
   WALL HYDRONIC RADIATOR (ENERGY EFFICIENT)

6. WALL INSULATION:
   EXTERNAL RIGID TYPE (ENERGY EFFICIENT)

7. GLAZING:
   LOW - E TYPE (ENERGY EFFICIENT)

8. VENTILATION SYSTEMS:
   RAIN SCREEN CLADDING (ENERGY EFFICIENT)
   OPERABLE WINDOW (INDOOR AIR QUALITY)
   MECHANICAL VENTILATION (INDOOR AIR QUALITY)

9. CABINET MATERIAL:
   FORMALDEHYDE - FREE (INDOOR AIR QUALITY)

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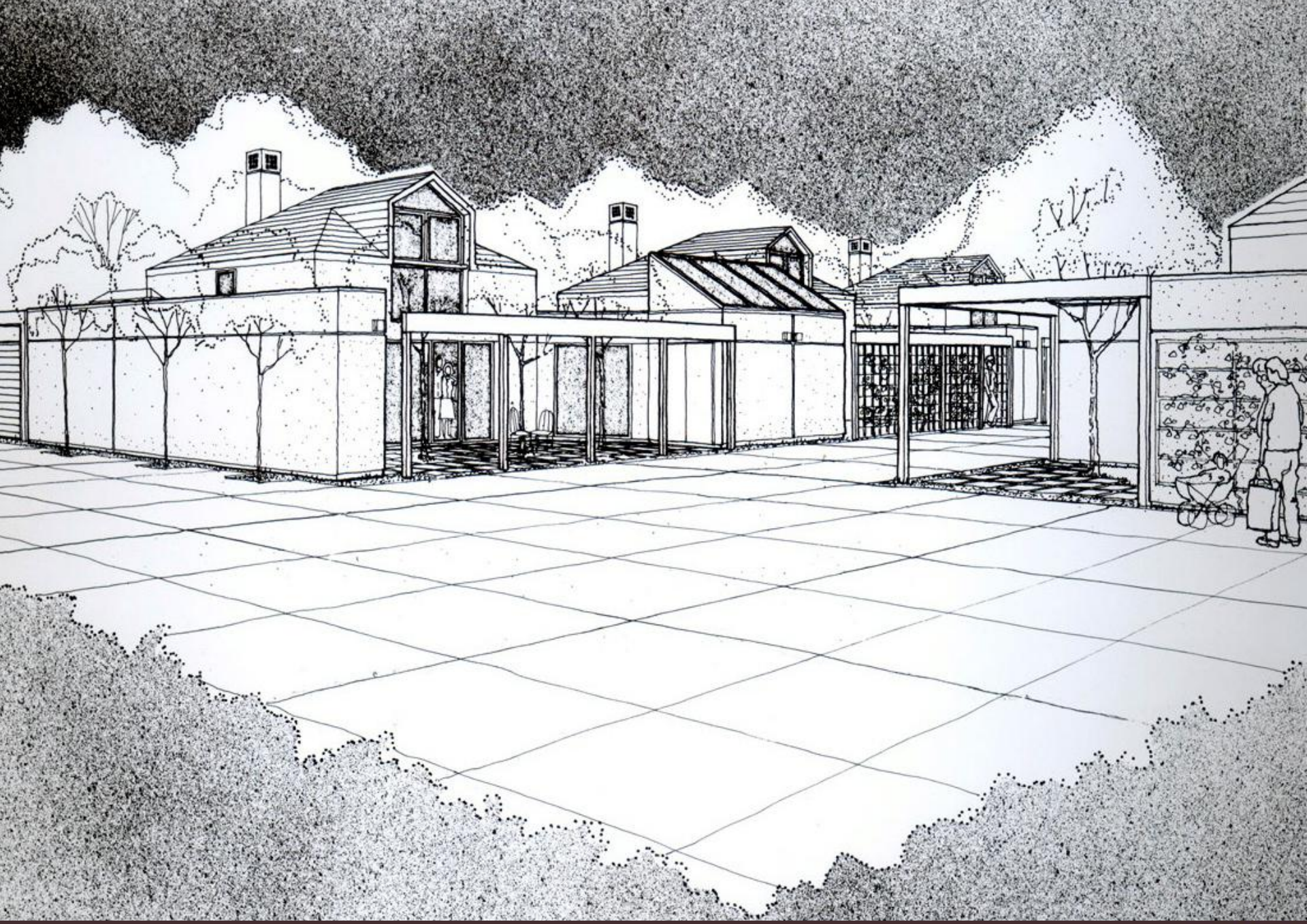
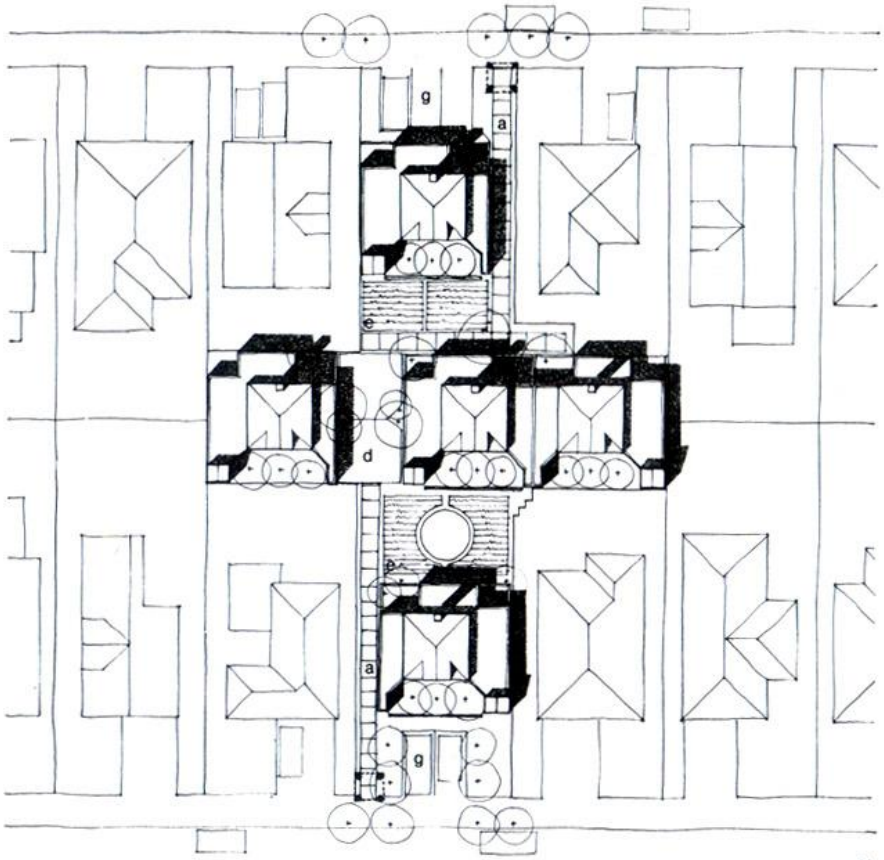


Affordable Solar House Prototype - 1983

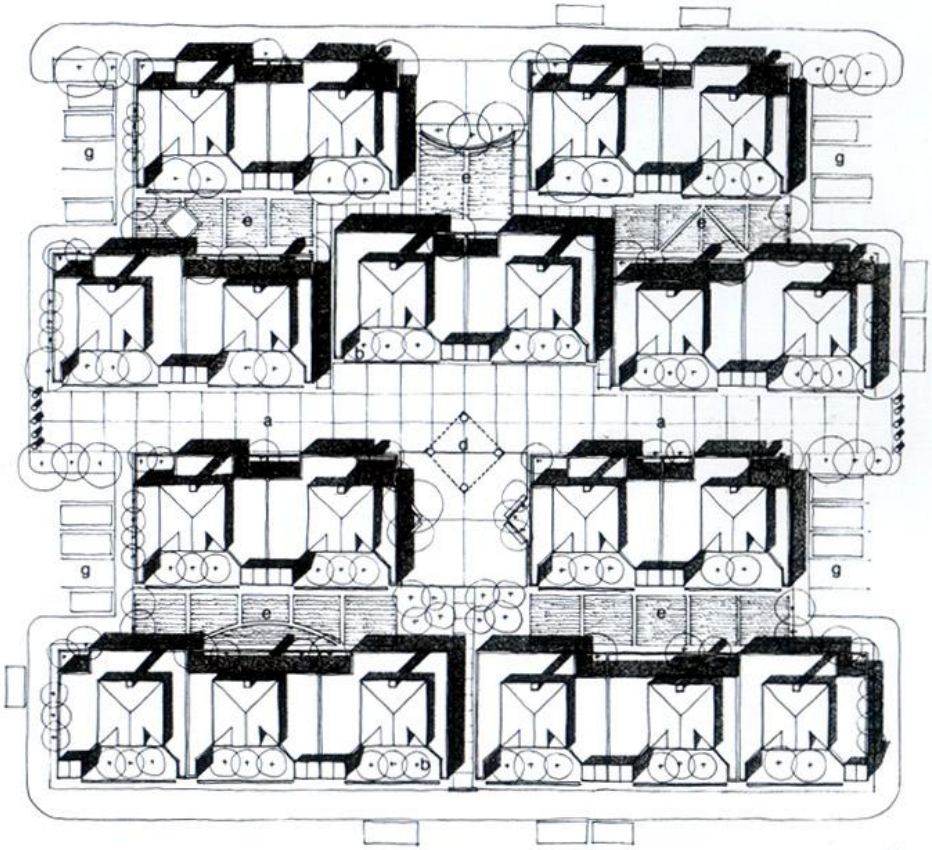
LMSA



N

0 10 20 50

SITE PLAN OPTION – INFILL



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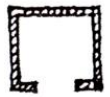
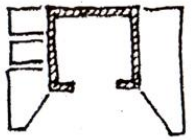
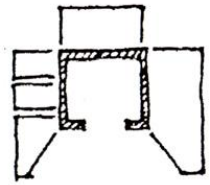
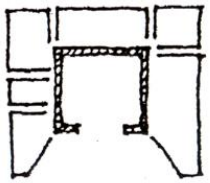
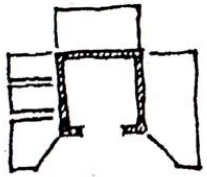
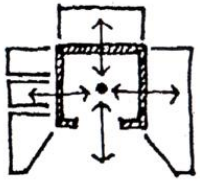
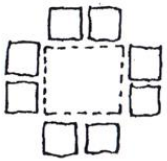
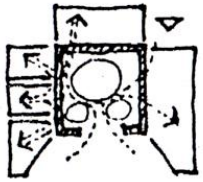
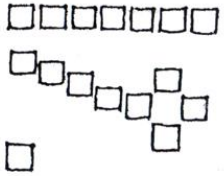
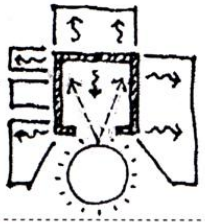
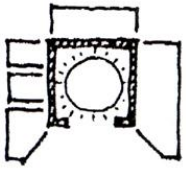
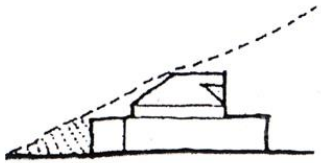
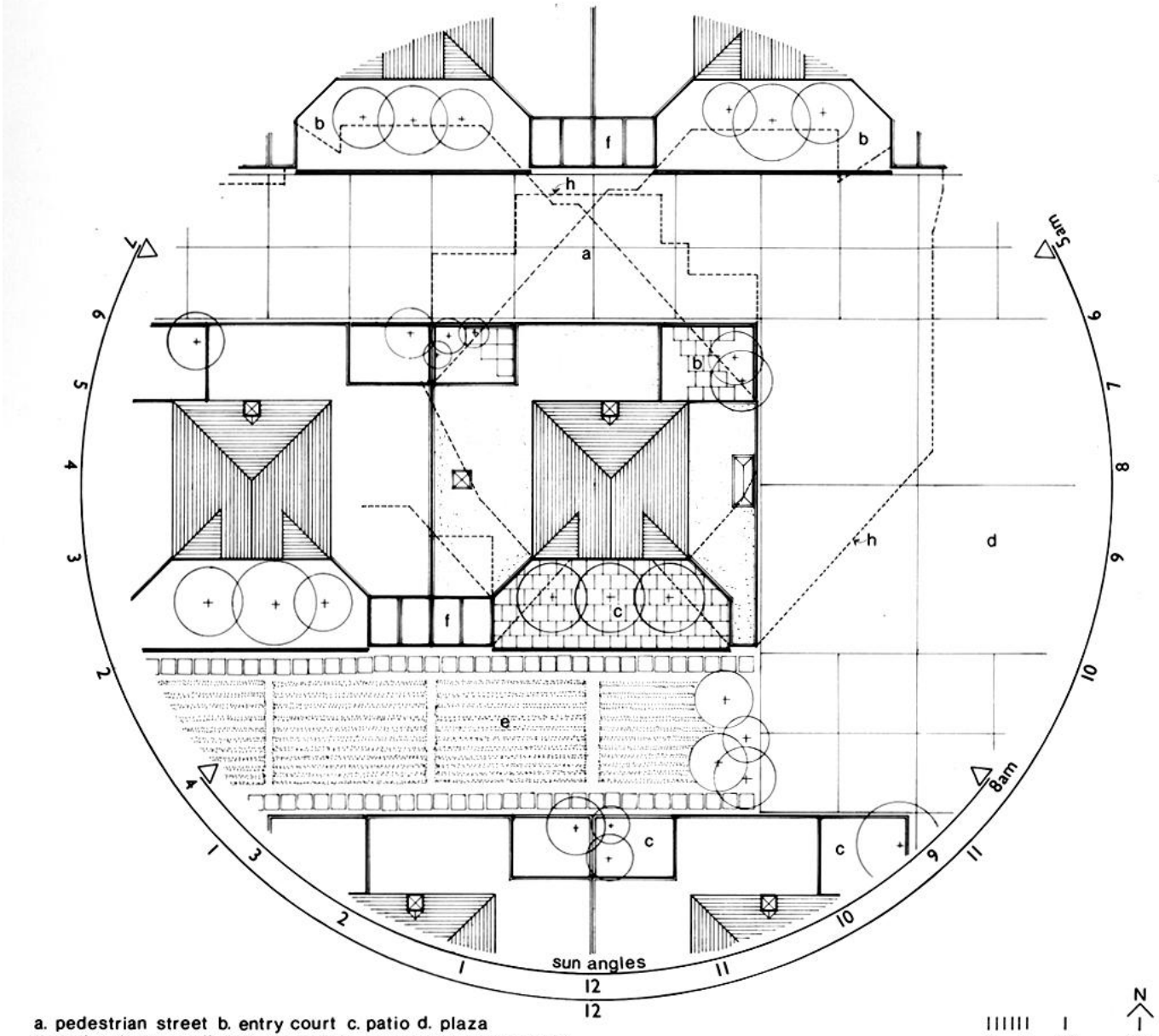
0 10 20 50

SITE PLAN OPTION – P.U.D.

HOUSE AS MACHINE		HOUSE AS SYMBOL		HOUSES AS COMMUNITY
Organization 		Room 		Community 
Space use 		Roof 		Density 
Energy use 		Nature 		Solar access 

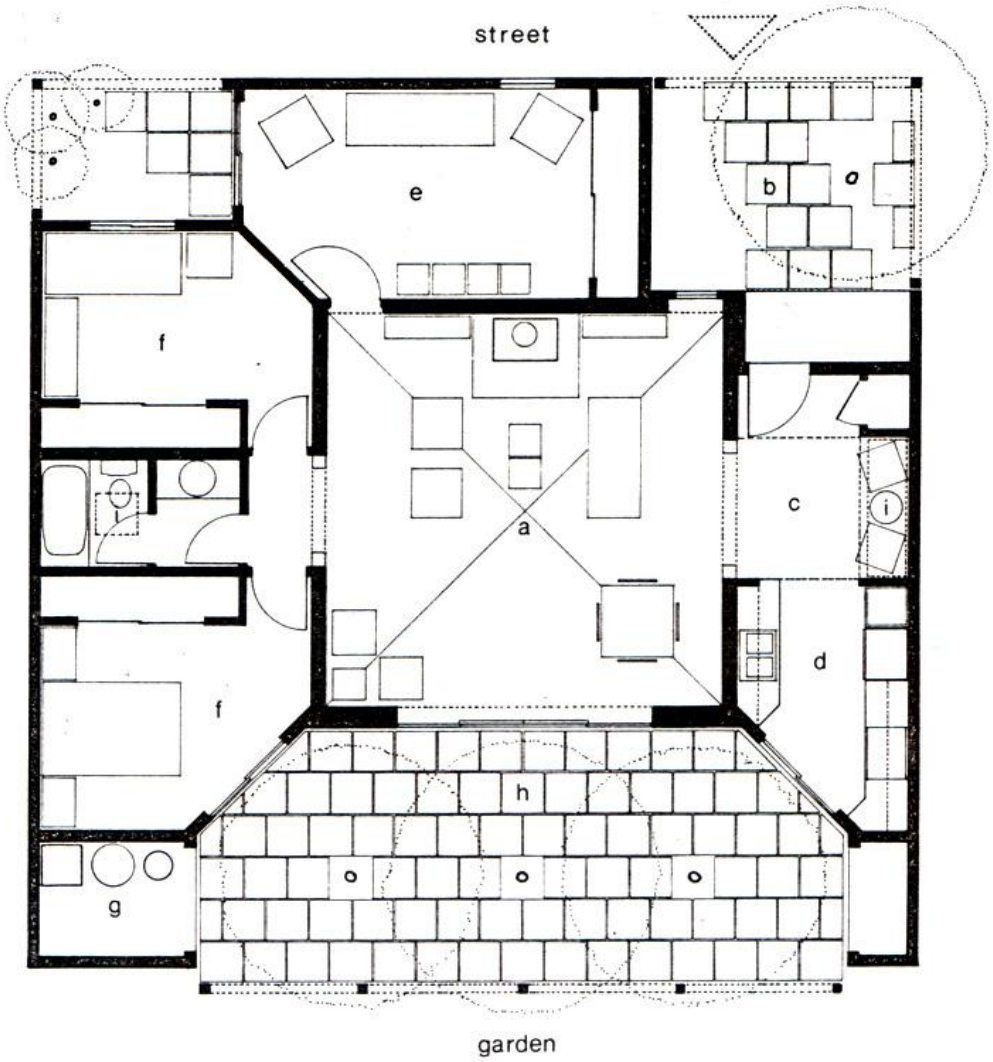


a. pedestrian street b. entry court c. patio d. plaza
e. garden f. solar collectors g. parking h. max. shadow Dec.22

N

0 5 10 20

SITE PLAN

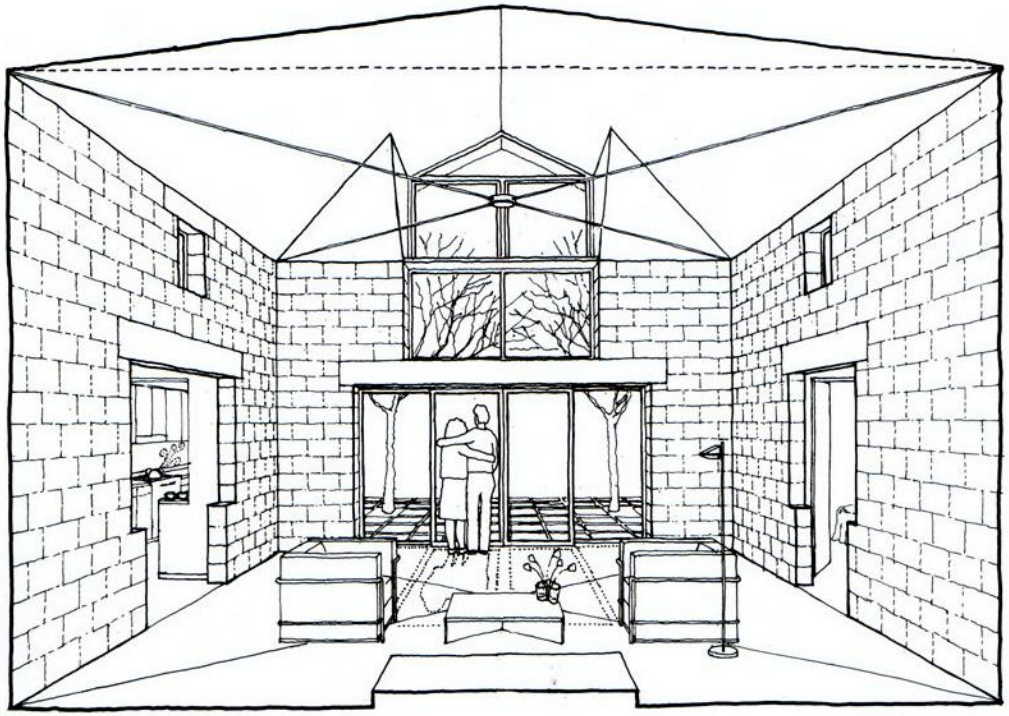


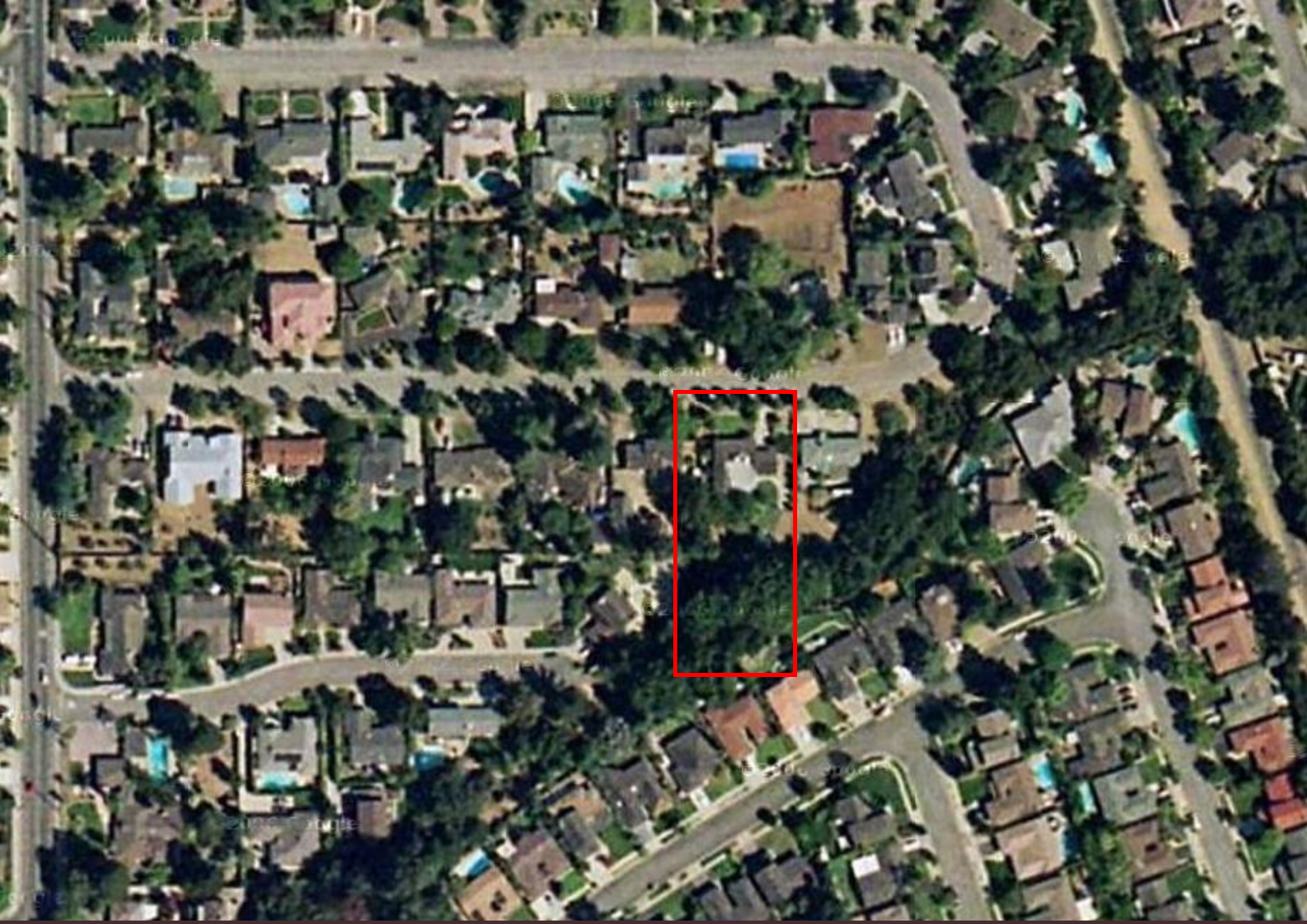
a. main room b. entry court c. foyer d. kitchen e. study (bedroom)
f. bedroom g. mechanical h. patio i. skylight above

N

0 5 10

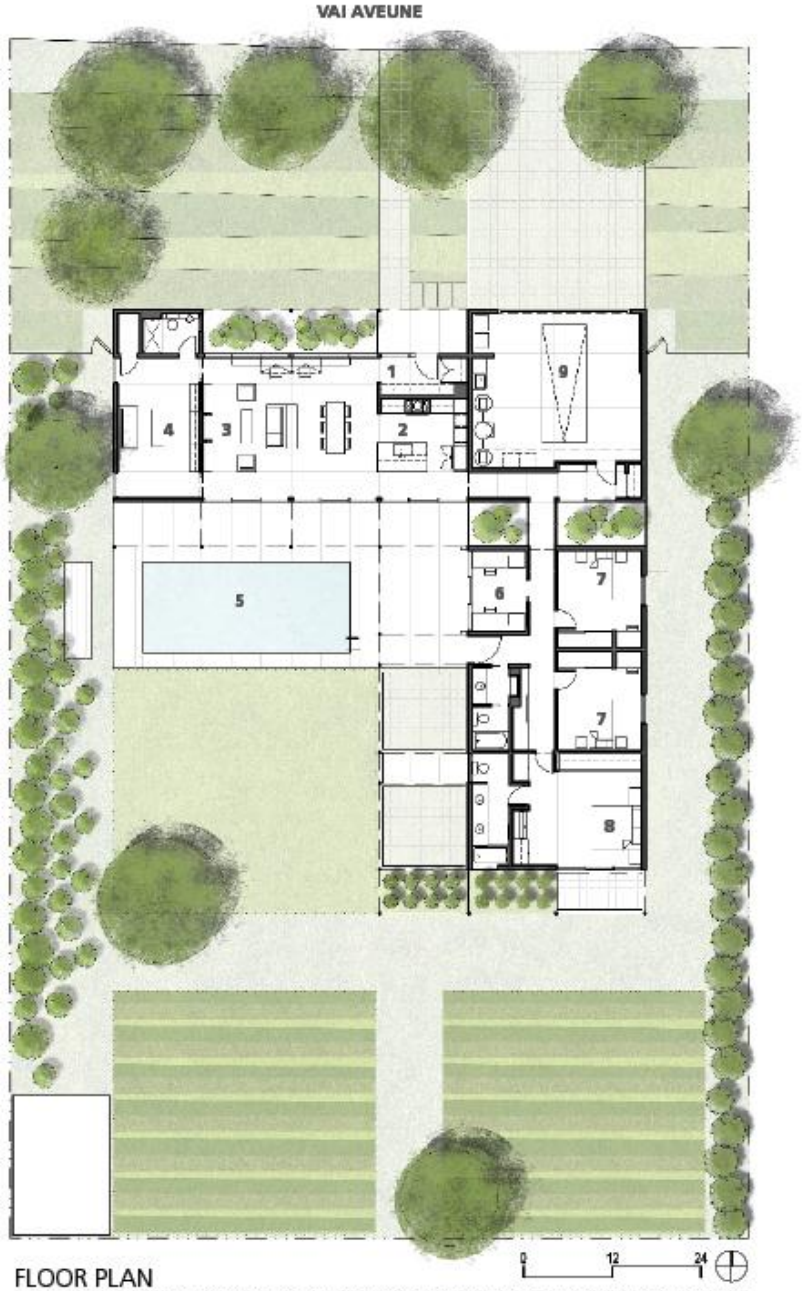
PLAN





SITE PLAN/ ROOF PLAN

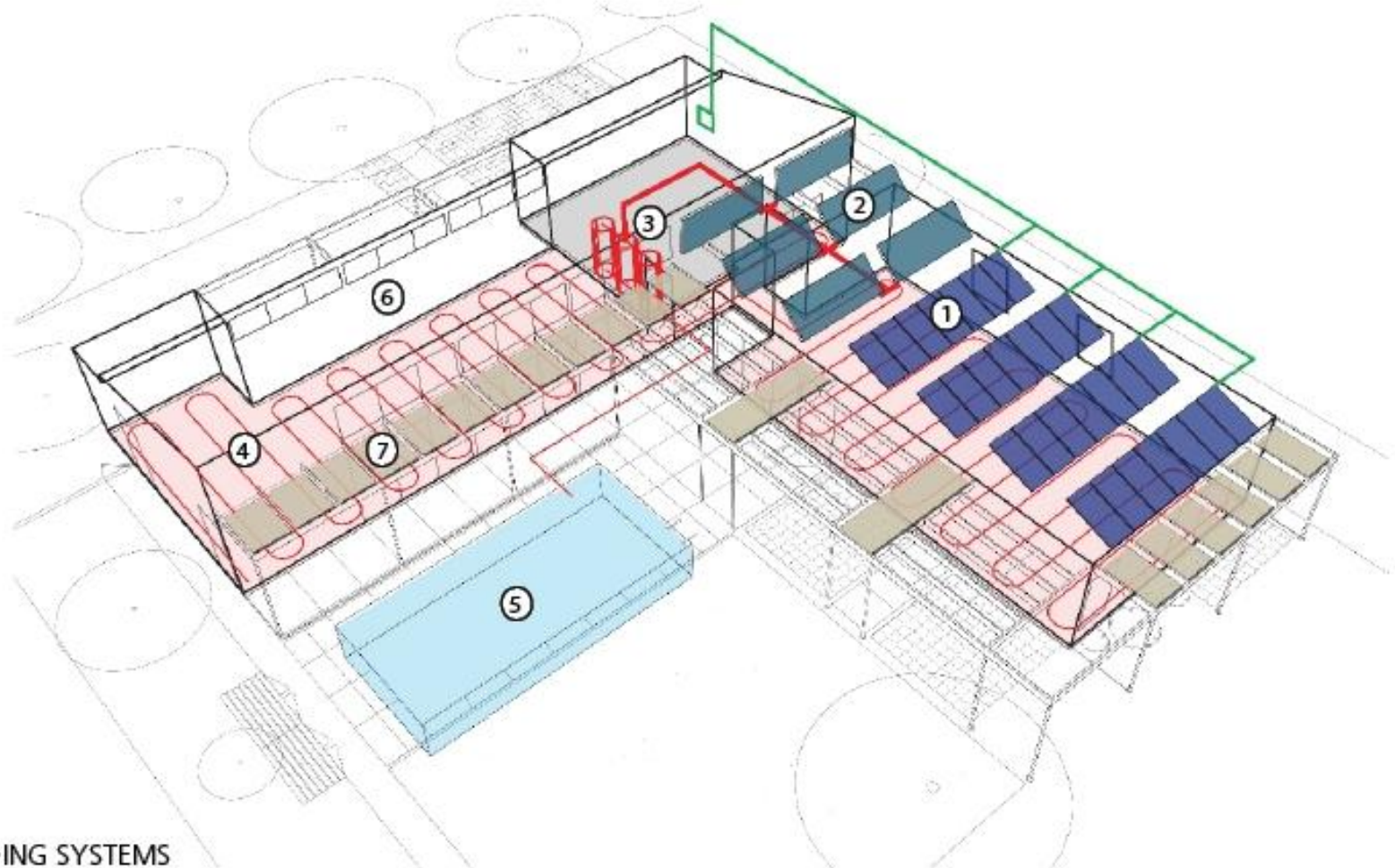
1. PERVIOUS DRIVEWAY 2. NATIVE LANDSCAPE 3. ENERGY STAR ROOF
4. OPERABLE SUNSHADES 5. SOLAR HEATED POOL 6. 6.4 KW PV ARRAY
7. SOLAR THERMAL COLLECTOR 8. VEGETABLE GARDEN 9. EXISTING STRUCTURE



FLOOR PLAN

1. ENTRY 2. KITCHEN 3. LIVING ROOM 4. GUEST ROOM 5. POOL 6. OFFICE 7. BEDROOM 8. MASTER BEDROOM 9. GARAGE


2150

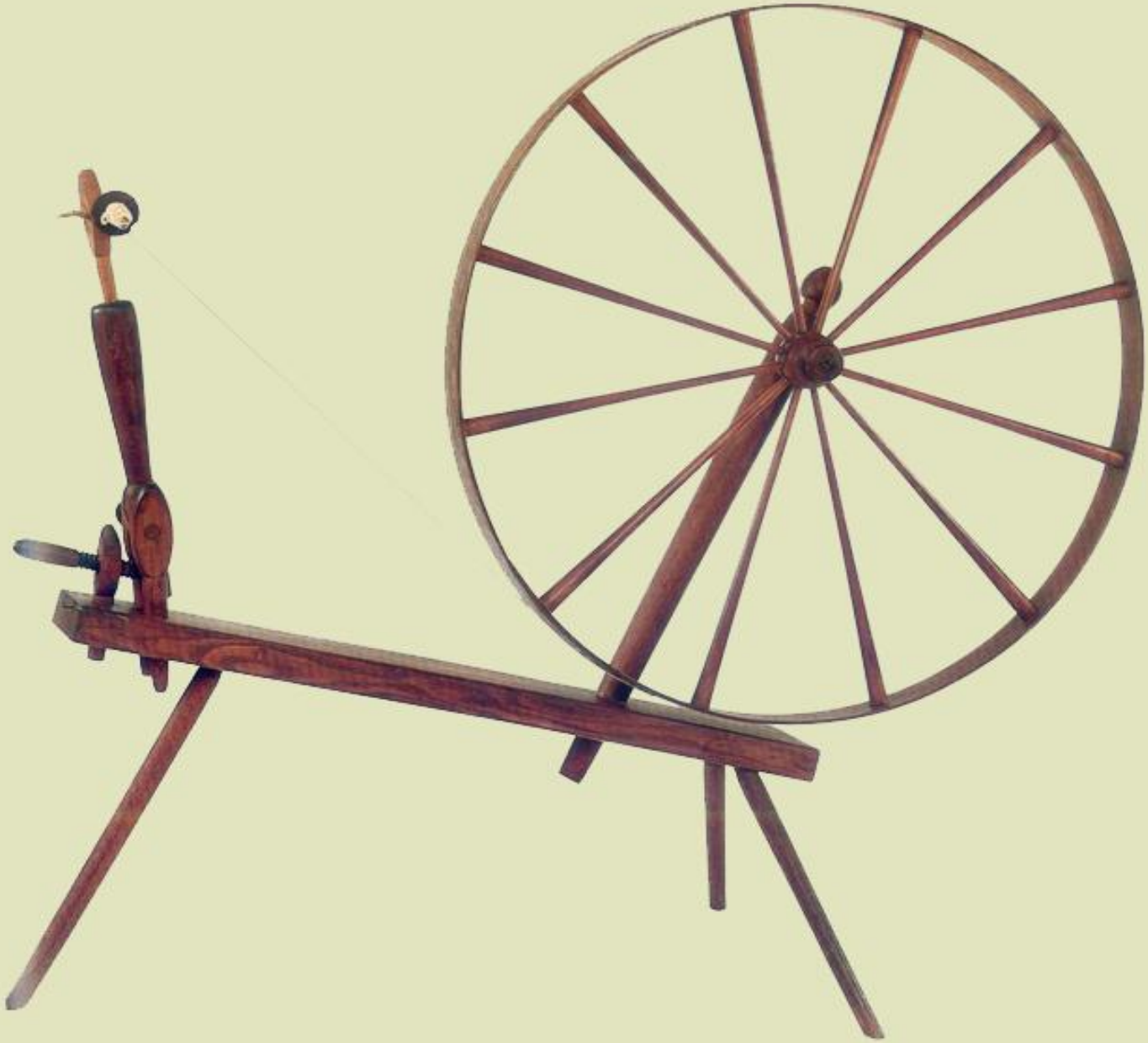


BUILDING SYSTEMS

1. PHOTOVOLTAIC ARRAY 2. SOLAR THERMAL COLLECTOR 3. SOLAR THERMAL STORAGE TANK 4. RADIANT FLOOR 5. SOLAR HEATED POOL
6. HIGH PERFORMANCE ENVELOPE 7. EXTERIOR SUNSHADES

Building Envelope

- Design exceeds T24 by >40%
- Fully insulated slab on grade
- > 50% slag in concrete
- 100% FSC-certified framing lumber
- Resource-efficient structural design
- Simple forms / simple spans
- Sprayed soy-based foam insulation
- Low infiltration / high IAQ
- High performance glazing
- Energy Star roofing
- Fire-proof cement board siding
- Operable exterior sun shades



Living in the 21st century = making the most with the least

LMSA

Questions?

LMS^A