

GOALS

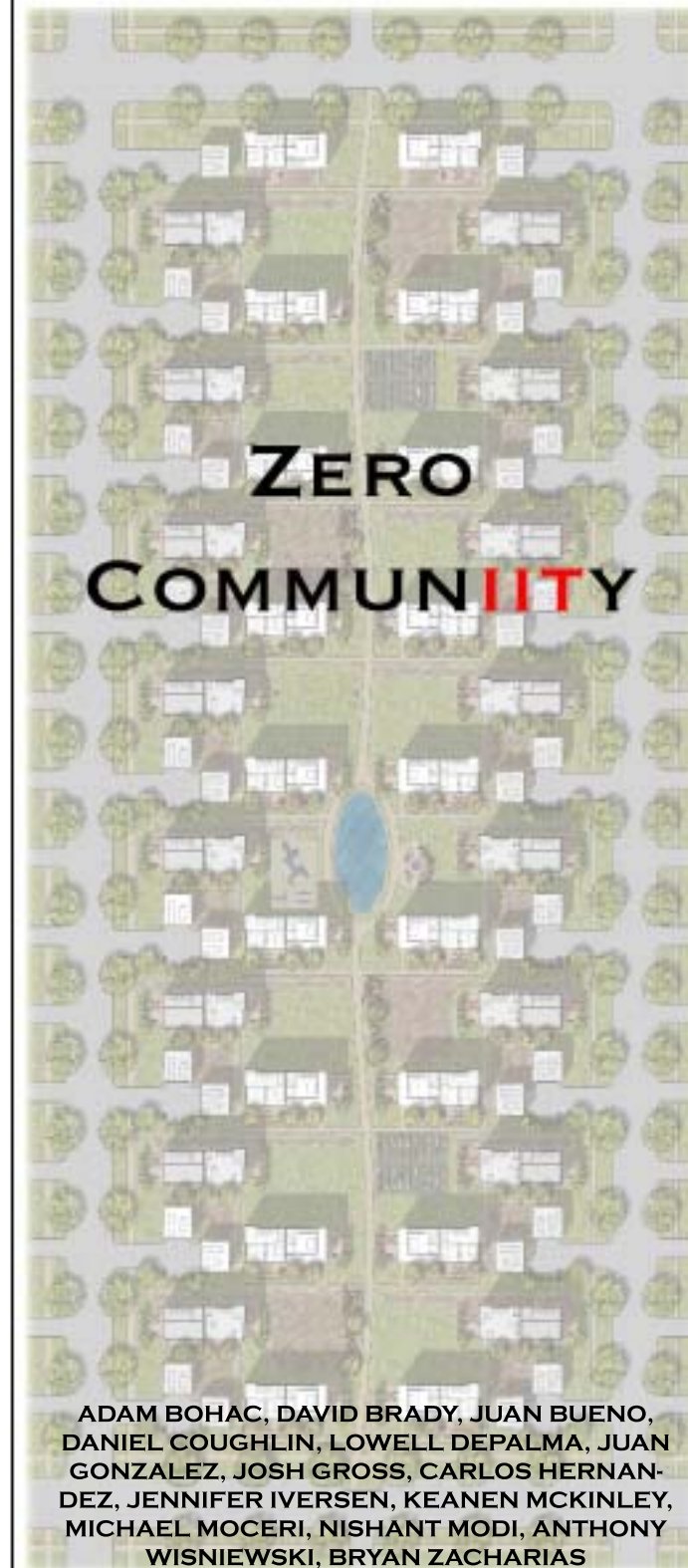
OUR GOAL IS TO CREATE A COMMUNITY WITH A HIGHER DENSITY THAN THE TYPICAL BLOCK OF CHICAGO AREA SUBURBS, AND CREATE A COMMUNITY WHICH REQUIRES LESS ENERGY. WE WILL REDUCE THE AMOUNT OF ENERGY NEEDED TO SUSTAIN THE PROTOTYPE BUILDINGS BY INCORPORATING GOOD PLANNING AND DESIGN AS WELL AS PASSIVE SYSTEMS. USING ACTIVE SYSTEMS, SUCH AS SOLAR ENERGY, WE WILL ACCOUNT FOR THE REMAINDER OF THE NEEDED ENERGY TO CREATE A DWELLING WITH A ZERO NET CONSUMPTION OF ENERGY.

THROUGH SUSTAINABLE DESIGN WE AIM TO CREATE A MODULE WHICH CAN BE REPLICATED TO CREATE A LARGER COMMUNITY; THE PLANNING OF WHICH WILL CREATE MORE COMMUNAL SPACE. THE INCREASE OF DENSITY AND PROMOTION OF COMMUNITY WILL ENCOURAGE A MORE COMFORTABLE AND SUSTAINABLE WAY OF LIFE.

WE HOPE THAT THE SOLUTIONS WE DISCOVER WILL CREATE A GUIDELINE FOR CHICAGO AREA SUBURBS TO REASSESS THEIR BUILDING AND ZONING REGULATIONS FOR THE PLANNING OF MORE SUSTAINABLE COMMUNITIES.

PURPOSE

OUR PURPOSE WAS TO SEEK A UNION BETWEEN LIVING COMFORTABLY AND LIVING SUSTAINABLY. WE DESIGNED FOR A FUTURE CHICAGO-AREA COMMUNITY WHICH MINIMIZES ITS ENERGY CONSUMPTION AND USES THE MOST SUSTAINABLE METHODS TO FULFILL THE REMAINING NEEDS OF THE INHABITANTS. OUR OBJECTIVE WAS TO DEVELOP A PROTOTYPE COMMUNITY WHICH CHALLENGES CONVENTIONS WITHIN THE FIELDS OF SUSTAINABLE DESIGN, PLANNING, ENGINEERING, AND EVERYDAY LIVING. THIS PROTOTYPE ALSO SERVES AS AN EXAMPLE TO CHICAGO-AREA MUNICIPALITIES ABOUT THE BENEFITS OF SUSTAINABLE PLANNING, DESIGN, AND LIVING.



ADAM BOHAC, DAVID BRADY, JUAN BUENO, DANIEL COUGHLIN, LOWELL DEPALMA, JUAN GONZALEZ, JOSH GROSS, CARLOS HERNANDEZ, JENNIFER IVERSEN, KEANEN MCKINLEY, MICHAEL MOCERI, NISHANT MODI, ANTHONY WISNIEWSKI, BRYAN ZACHARIAS

CREATE A ZERO ENERGY COMMUNITY

ENCOURAGE CHICAGO SUBURBS TO REASSESS STANDARDS

INFLUENCE PLANNING OF FUTURE COMMUNITIES

SITE PLANNING

AVERAGE

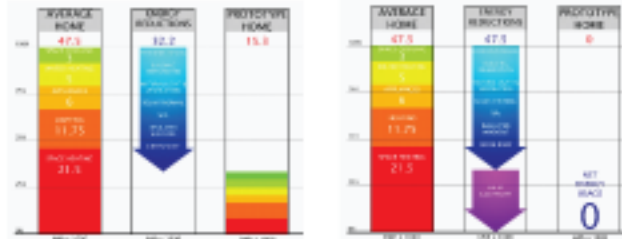
PROTOTYPE



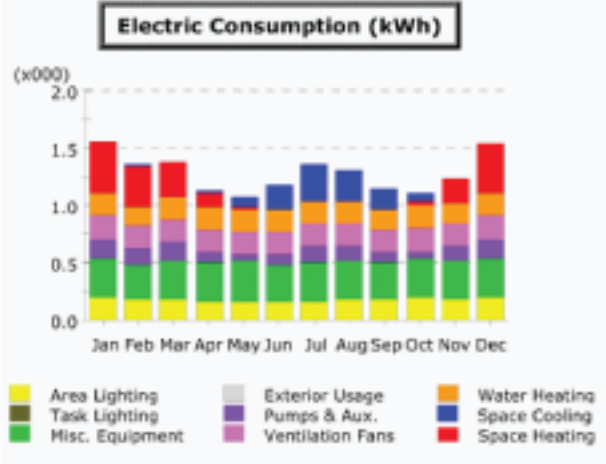
THE CHECKERBOARD DESIGN ALLOWS FOR MAXIMUM SOLAR ACCESS



ENERGY REDUCTIONS



COST REDUCTIONS



AVERAGE VS. PROTOTYPE
AVERAGE ANNUAL USAGE

47,600 kWh

PROTOTYPE ANNUAL USAGE

15,300 kWh

SAVINGS

32,300 kWh

@ \$0.107

\$3,456/year

OVER A 30 YEAR MORTGAGE

\$183,680

BUILDING SYSTEMS

ACTIVE

- PHOTOVOLTAIC
- SOLAR THERMAL
- GEOTHERMAL
- GREY WATER HARVESTING

PASSIVE

- CROSS VENTILATION
- PASSIVE SOLAR
- DAYLIGHT CONTROLS
- GREEN ROOF
- SIPS
- TRIPLE GLAZED ARGON WINDOWS

