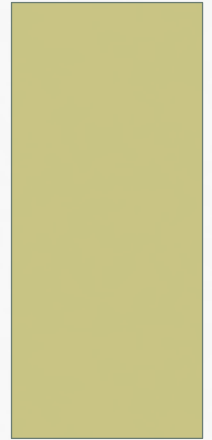


RICHARD REILLY, LEED AP, HES ASSESSOR,
BPI BA, EP & HHE
ENERGY PROGRAMS MANAGER
(AND PART OF A TEAM)



MISSOURI
BOTANICAL
GARDEN





- coordinating the greening of businesses
- educating students, training teachers and working with educational institutions
- offering adult and youth classes and summer camps
- increasing the number of buildings built and operated sustainably
- informing landowners and landscaping professionals of rainscaping best practices for storm water management and best practices for sustainable design
- providing a green resources answer service
- connecting people to funding and financing options
- facilitating projects and efforts for individuals, homeowners, landscaping and building professionals, municipalities, institutions, colleges and universities, K-12 schools and businesses to become more sustainable

ENERGY



If all our electricity came from

LABADIE

Statistics on coal use

- Coal arrives by train. Each train has 139 cars.
- There are 117 tons of coal per car and 16,300 tons per train.
- At peak load, Labadie burns 23 tons per minute, or 33,000 tons per day.

33,000 tons per day / 16,300 tons per train =

2 trains per day

A 2,000-kWh-per-month house would consume
as much energy in one day as is contained in

70 pounds of coal

One month for the same house:

2,100 pounds of coal

WATER

- The average household's leaks can account for more than 10,000 gallons of water wasted every year
- Total households in STL MSA: 1,096,200
- $1,096,200 \times 10,000 = 10,962,000,000$
- Potable water costs about a penny/gallon. We waste about 100 bucks/year or 8.33/month – so not many would notice
- That is over 100 million bucks/year in our region down the drain – not to mention the carbon footprint associated with this!

WHAT IS THE SUNFLOWER+ PROJECT?

- 20k vacant lots in St. Louis
- An outdoor classroom for folks of all ages
- A reduction in the carbon footprint of vacant land maintenance
- A biodiversity project
- A pollinator project
- A community place-making project
- An example of possibilities
- A relatively low cost, low labor, neighborhood engagement opportunity









SF+ CAM BUS MURAL

Old North
Delmar
Dutchtown
Ames VPA
Columbia, MO
and beyond!



HABITAT FOR HUMANITY



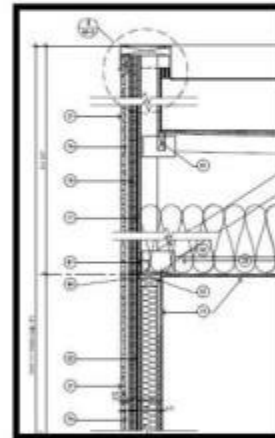




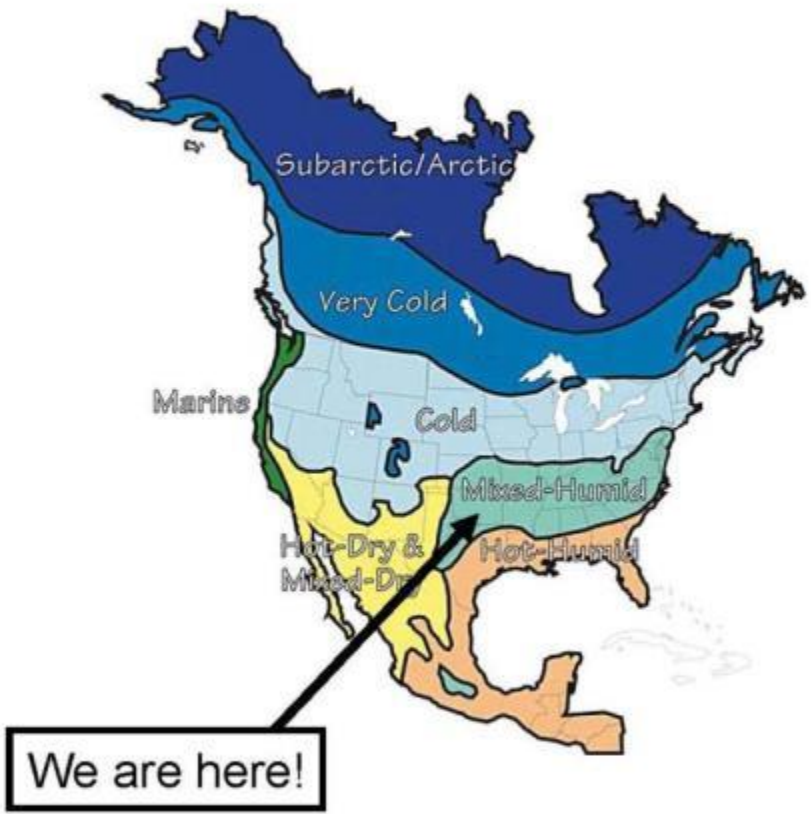
Process



Durability is in the Details



Durability is in the Details

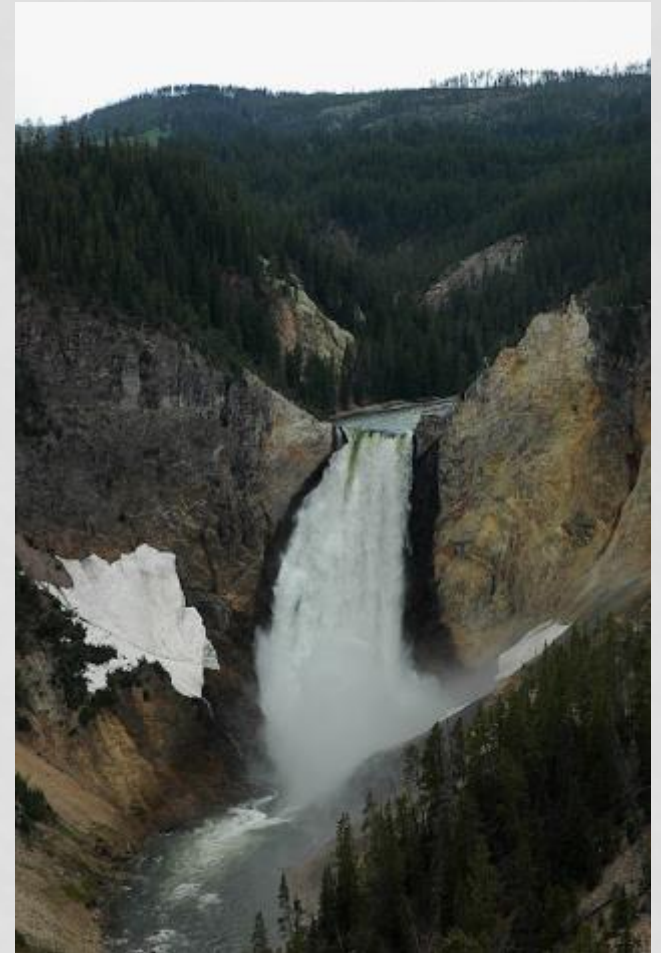


Engineered Systems



ENVELOPE INSPECTION

- Ventilation:
roof/plumbing/bath
- Durability/Source Control
- Be the water
 - Where does it land?
 - What does it touch?
 - How does it travel?
 - Where does it end up?
 - In the existing building what issues has this caused?
 - In the deep energy retrofit how will these issues be addressed?



VENTILATION

- ERV and a tight envelope
- ASHRAE 62.2
 - WHAT IS ASHRAE 62.2?
 - ASHRAE Standard 62.2-2012 - Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings, is the national ventilation standard of design for all homes and up to three story multifamily buildings. 62.2 allows exhaust, supply, or balanced ventilation, meaning that a simple exhaust fan or supply fan can be used, or these flows can be balanced with both a supply fan and an exhaust fan, with or without heat recovery



THE END

- Small things on a small scale are relatively inexpensive
- Small actions we take can add up
- Do it. Share it. Learn it. Promote it.
- This is taking it 'to scale!'