



PAE CONSULTING ENGINEERS

<https://www.pae-engineers.com/>



ALPER ERTLEN

Regenerative Design Group

alper.erten@pae-engineers.com



About PAE

CULTURE AND PRESENCE



350

STAFF

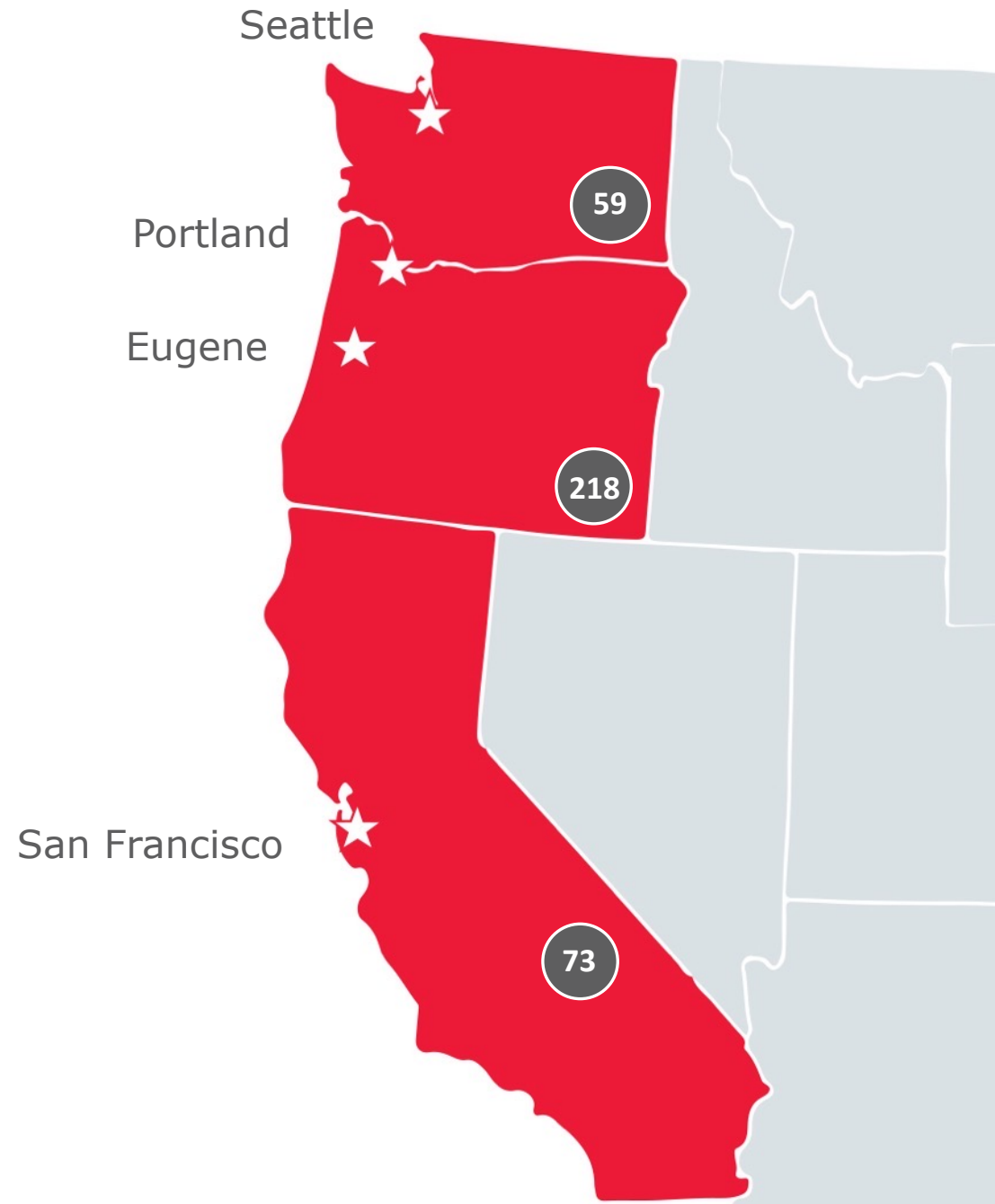
4

OFFICES

54

YEARS

(11 years in CA)



PAE Vision

WHO WE STRIVE TO BE

Why

ARE WE IN BUSINESS AT PAE?

We help solve the planet's energy and water challenges

What

DO WE DO?

We work with clients to design the nation's highest performing built environments

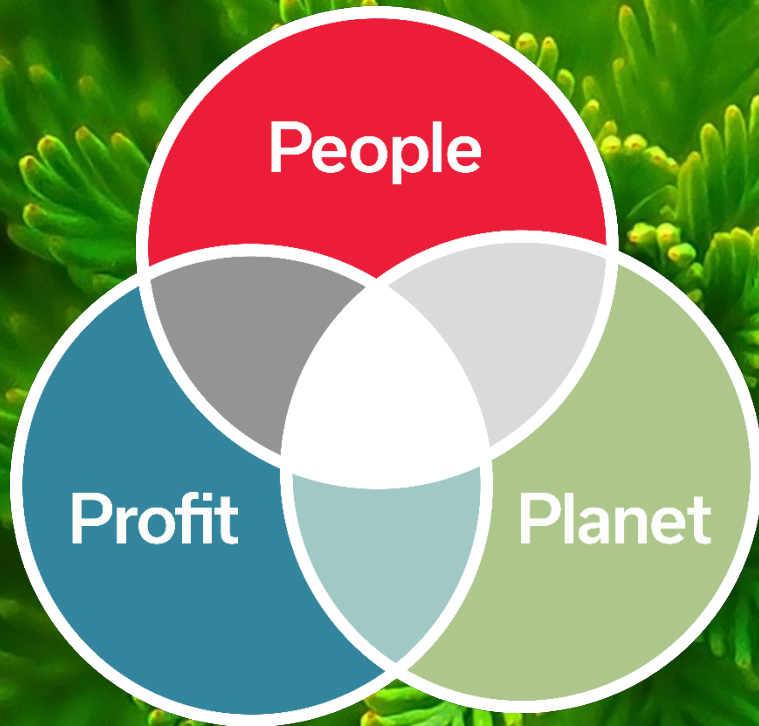
How

DO WE DO IT?

We listen to our clients

We hire and retain the best staff

We provide innovative solutions that work



Our Services

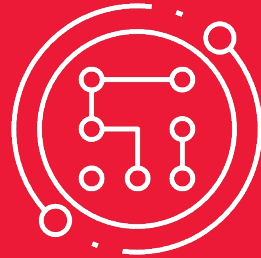
We guide buildings from the idea stage through construction—and beyond



**MECHANICAL
ENGINEERING**



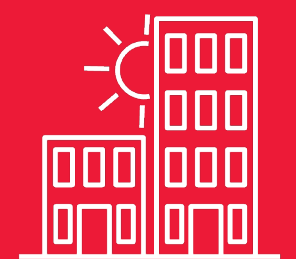
**ELECTRICAL
ENGINEERING**



**TECHNOLOGY
DESIGN**



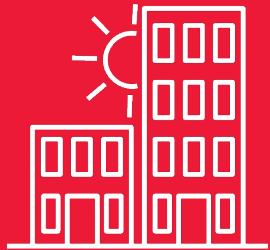
**ARCHITECTURAL
LIGHTING
DESIGN (LUMA)**



**BUILDING
PERFORMANCE
ANALYSIS**

Our Services

Regenerative Design Group



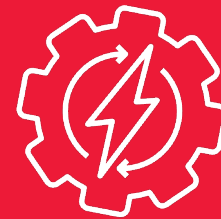
**BUILDING
PERFORMANCE
ANALYSIS**



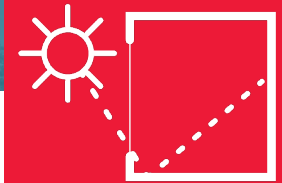
**SUSTAINABLE
DISTRICT
PLANNING**



**GREENHOUSE GAS
CONSULTING**



**RENEWABLE
ENERGY SYSTEMS**



**DAYLIGHTING
DESIGN**



LEADERS IN SUSTAINABLE DESIGN

11

Living Buildings

65+

LEED Platinum

09

Passive House

30+

Net Zero

Markets

We solve problems in diverse markets and for diverse clients giving us a unique edge



HEALTHCARE



**HIGHER
EDUCATION**



AVIATION



GOVERNMENT

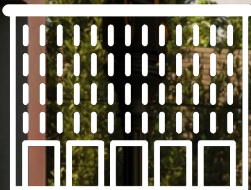


**COMMERCIAL
OFFICE**



LABORATORIES

PAE Living Building



STATISTICS

58,000 ft²

Full ILFI 3.1 Certification

500 Year Life

Developer Driven



The Team



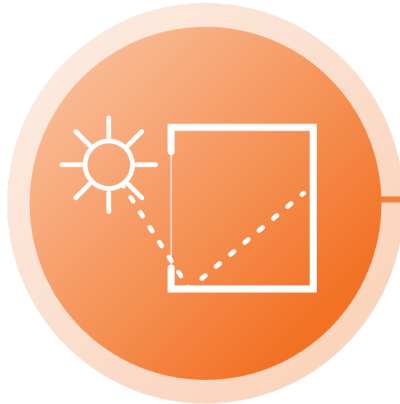


NO TALLER THAN
75'

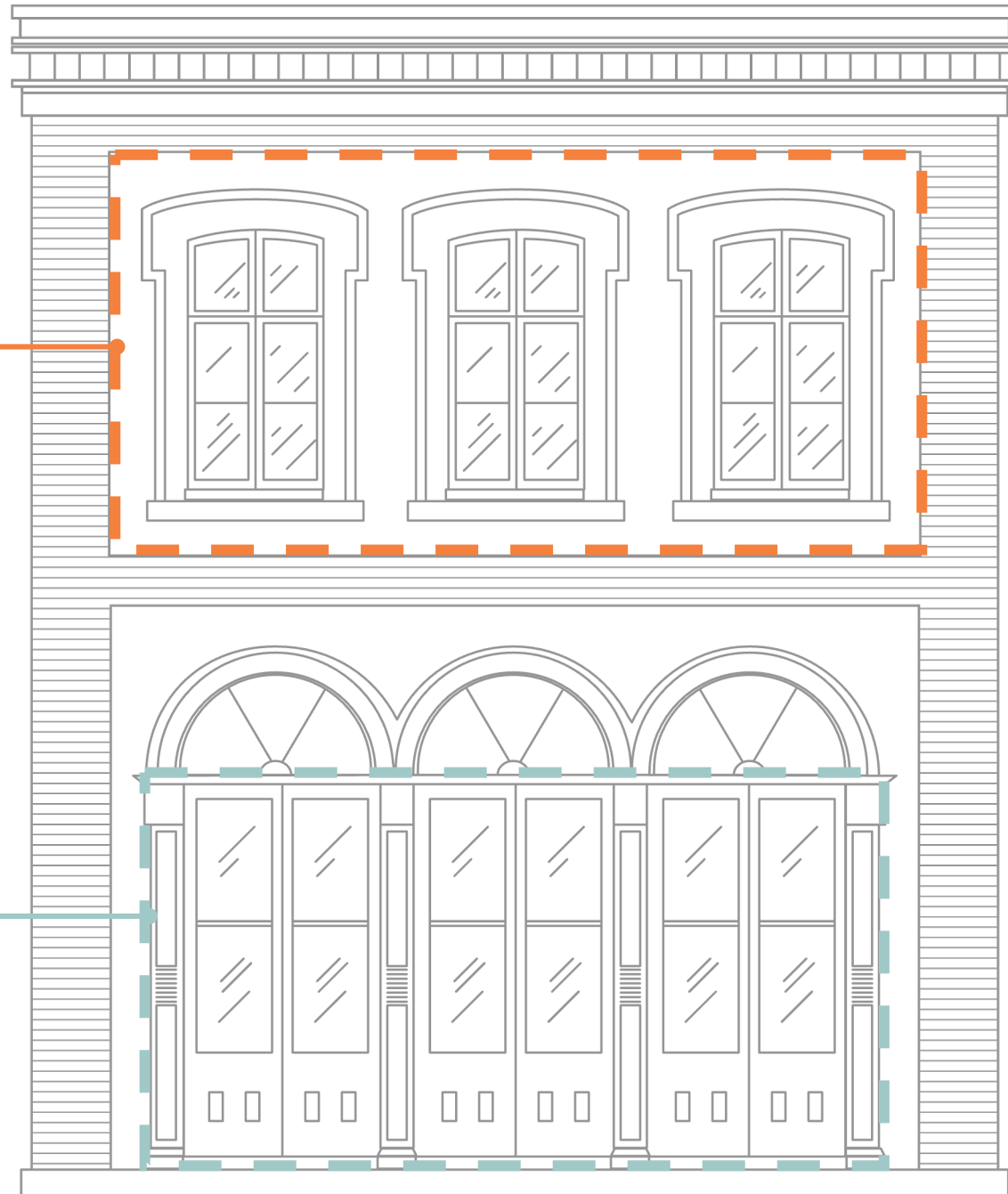
DOWNTOWN | PORTLAND, OR

Historical Context





NATURAL DAYLIGHT



NATURAL VENTILATION



HEIGHT

Fenestration Scale & Proportion

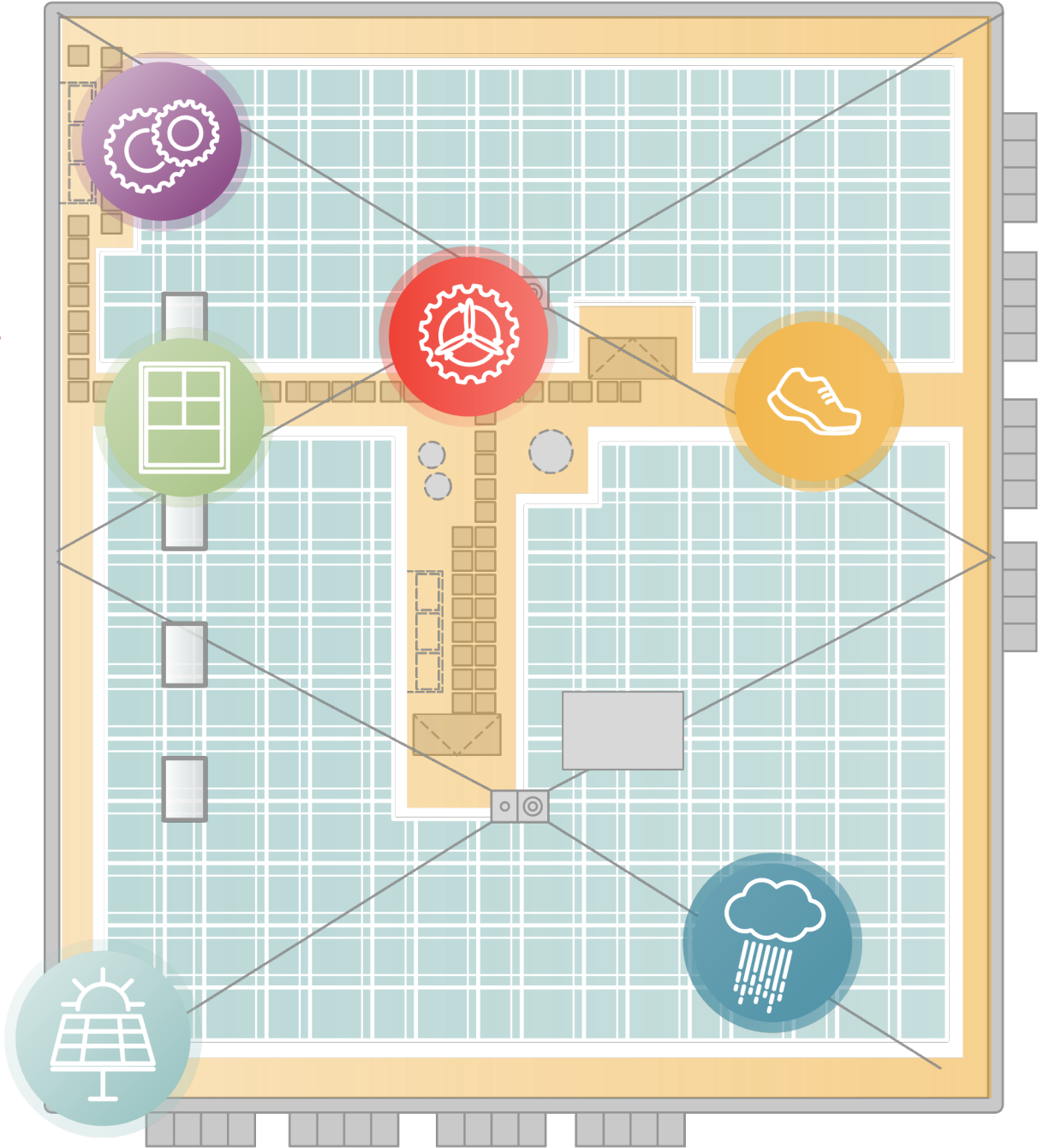
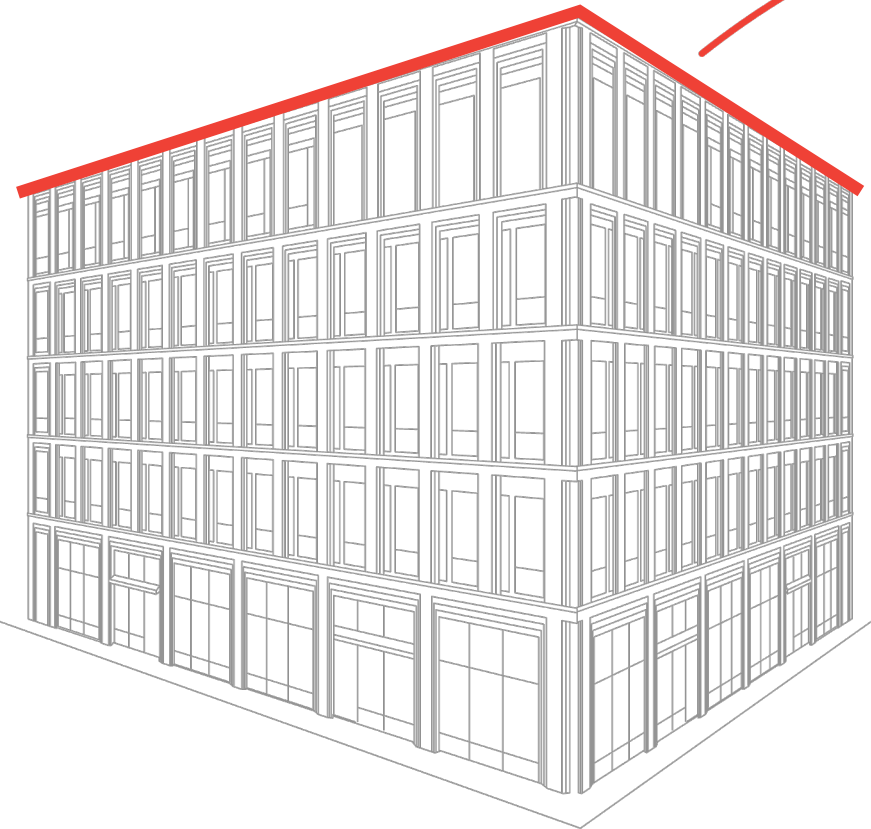




BULLITT CENTER | PV OVERHANG

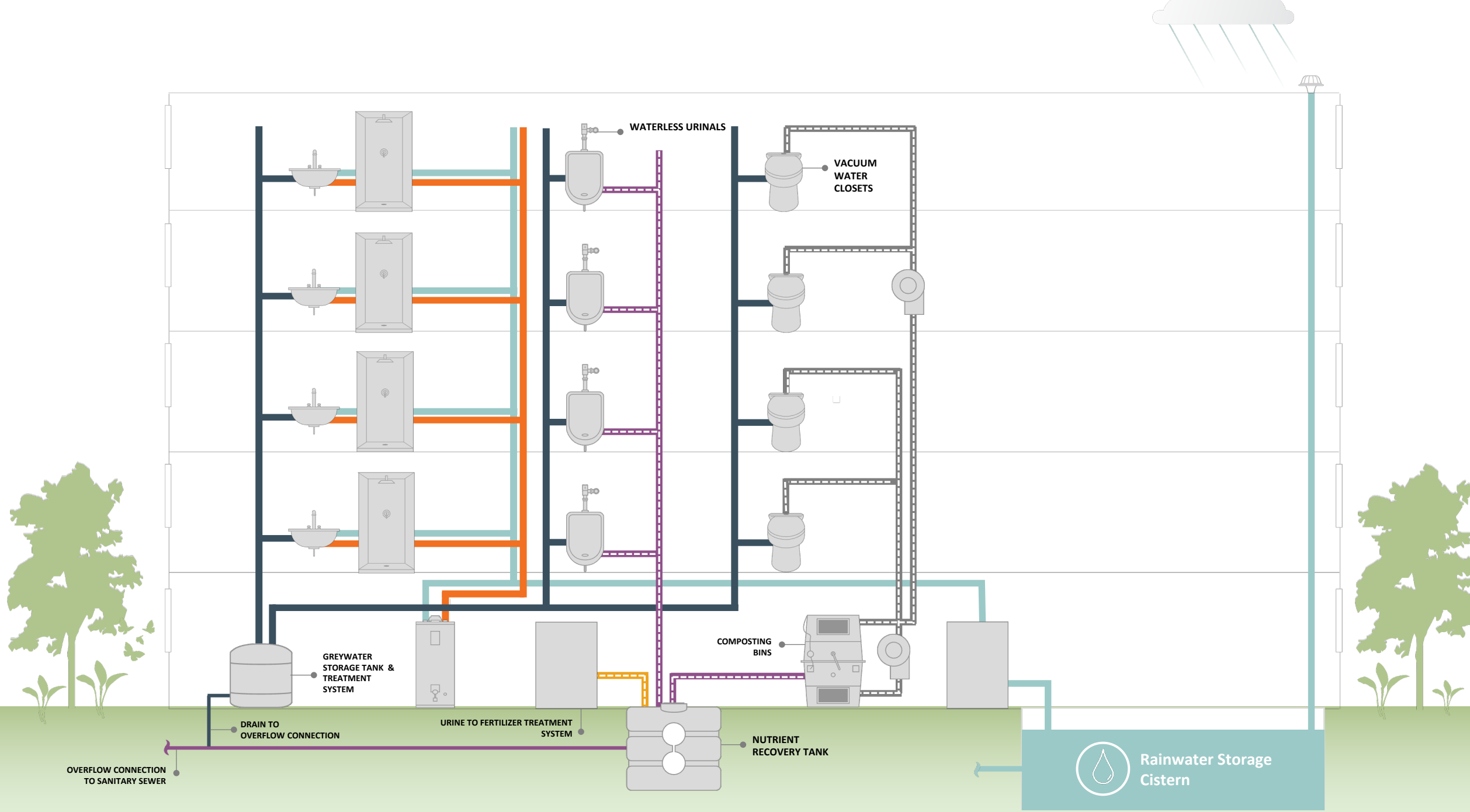
Impacts on Power Generation

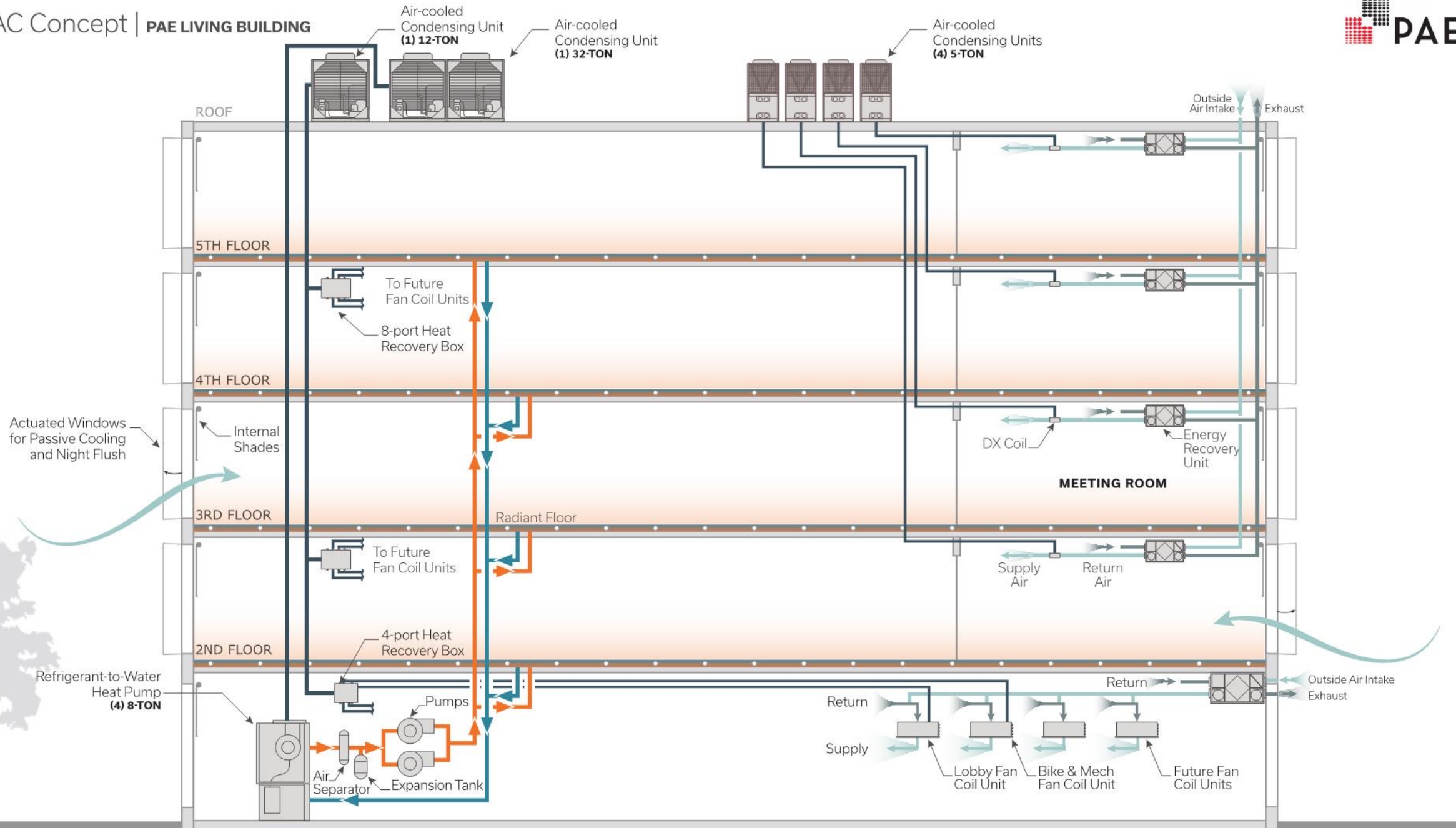
LIMITED ROOF AREA





AFFORDABLE HOUSING PROJECT

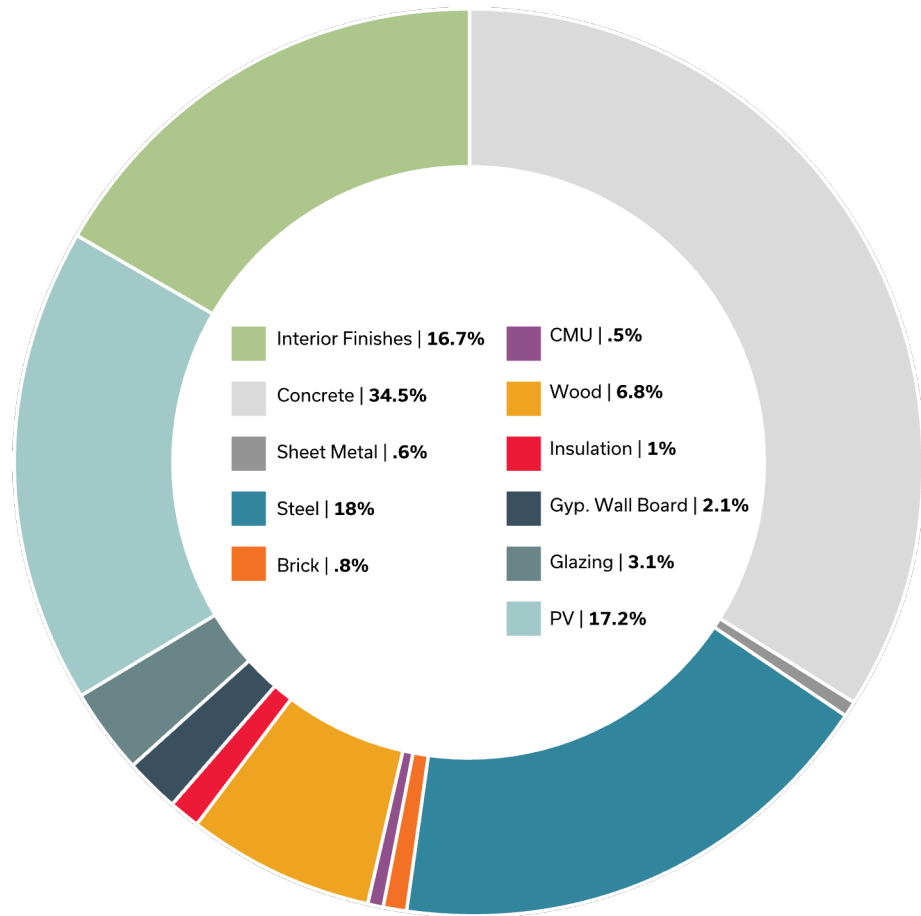




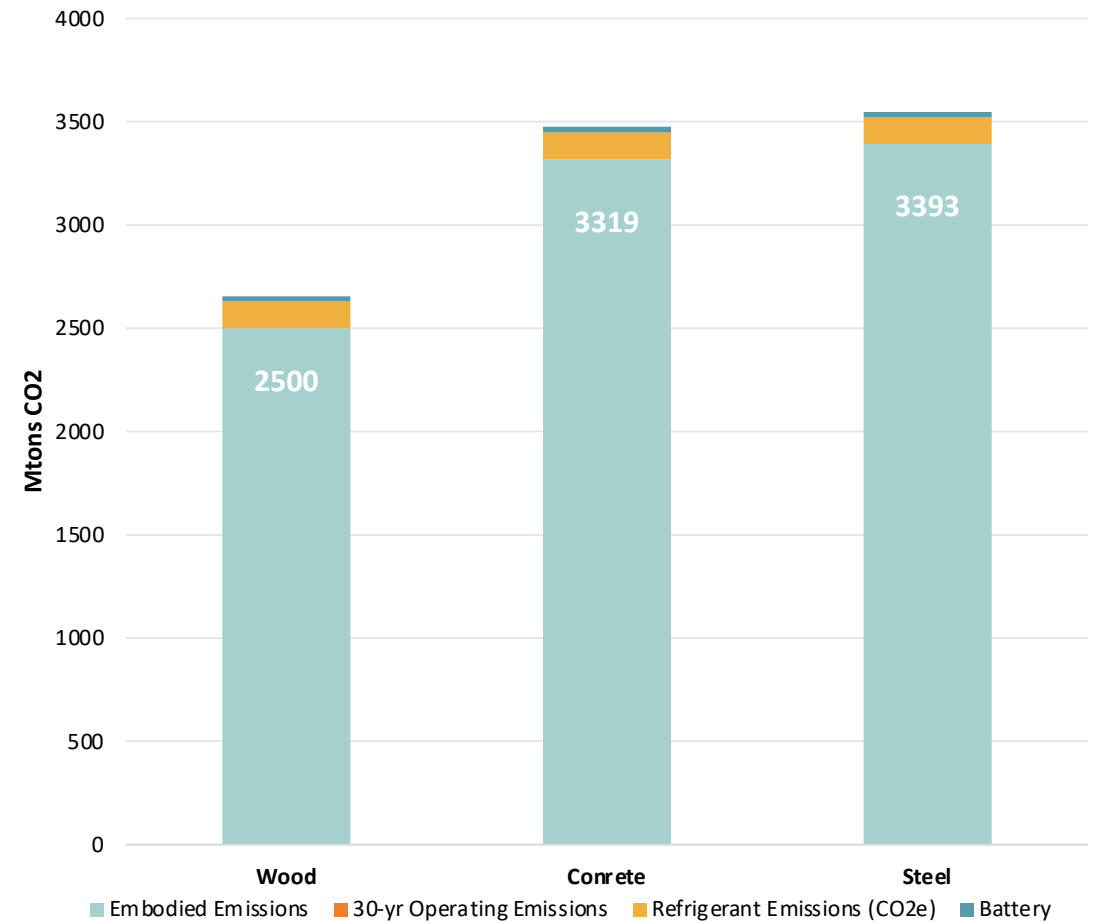


WOOD FRAMEWORK

Embodied Emissions Cradle through Construction



30 Year Emissions



THANK YOU

