

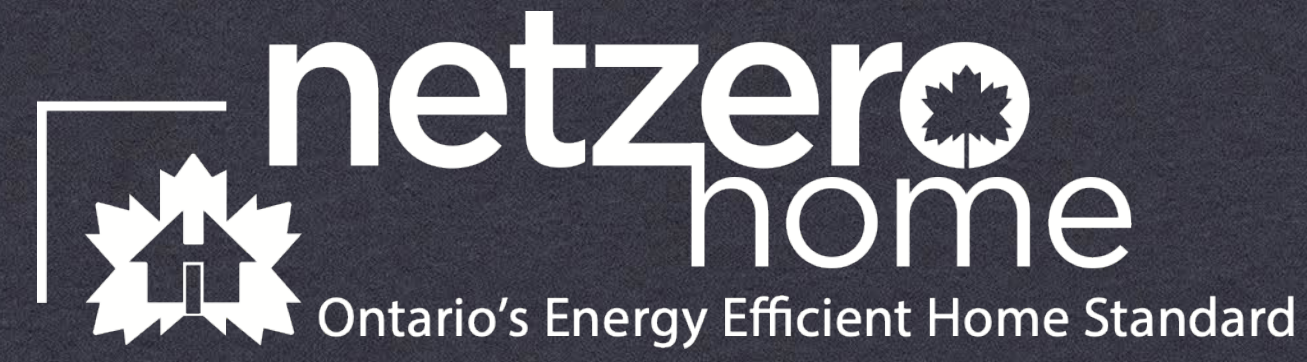


# THE GARDEN

PROJECT

# HOUSE

## NET POSITIVE SUSTAINABLE HOME



DATE

2020 - 2023

CLIENT

KRIS & ROBERT



# Net-Zero Building

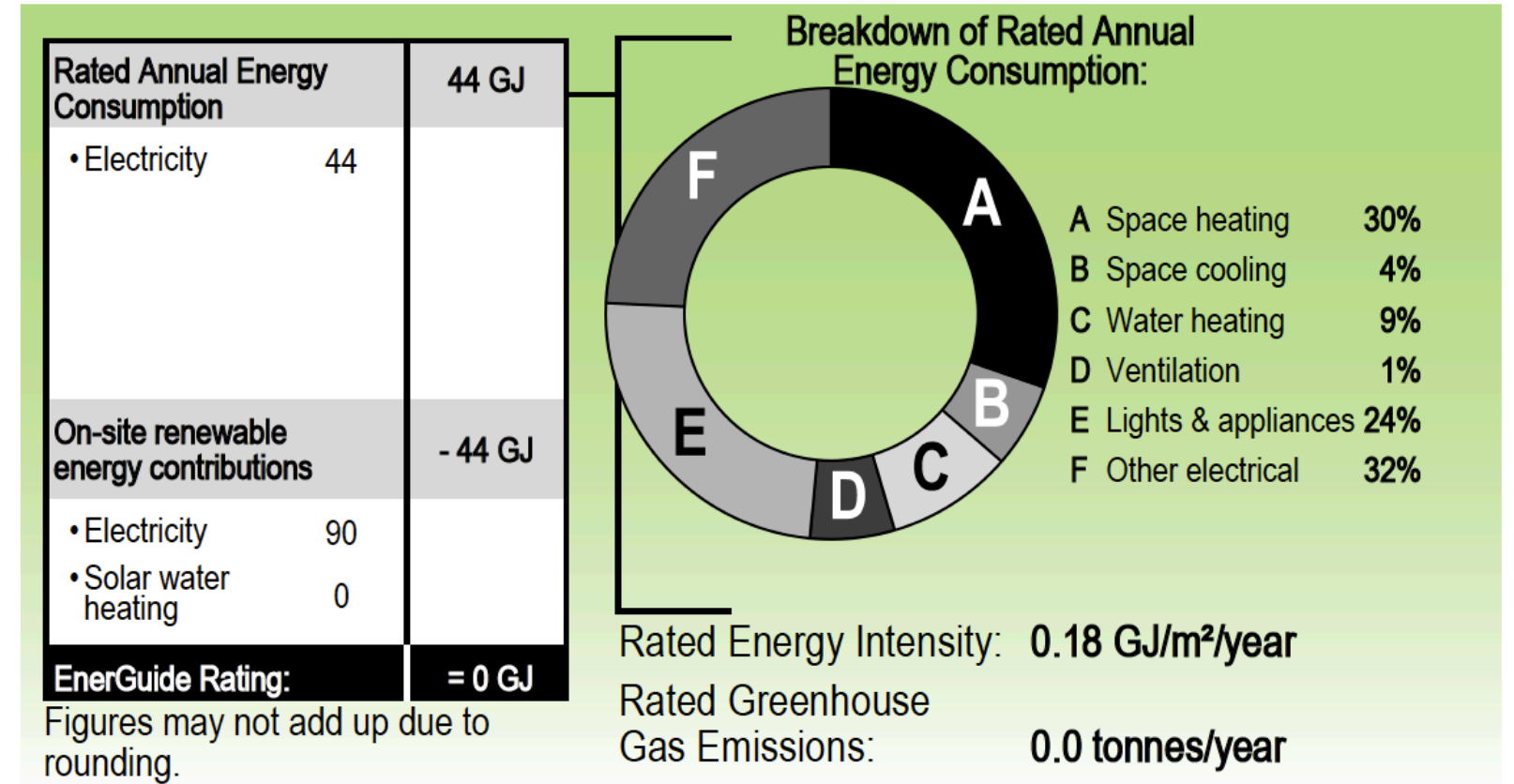
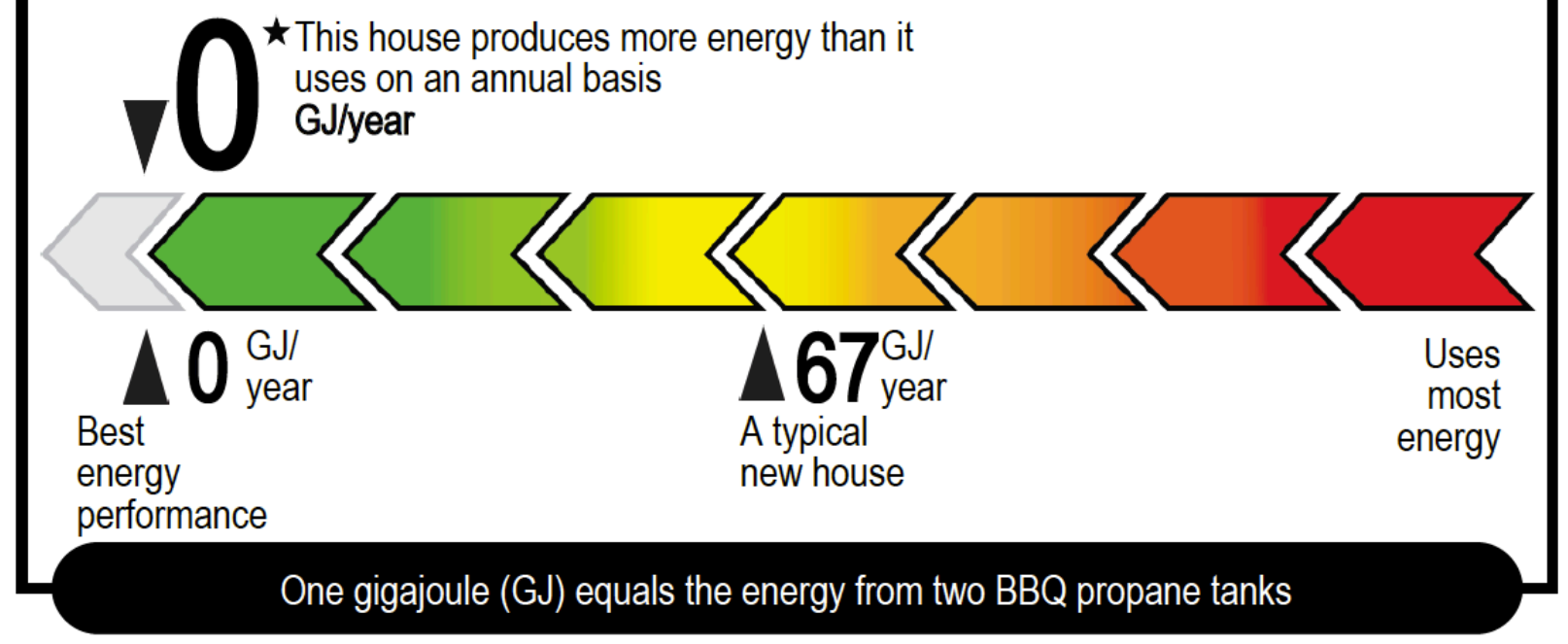
- \* Passive house building practices (ACH-50 of 0.65)
- \* Solar PV generation 22kW
- \* Battery backup 6kW
- \* Efficient electric household (heat pump hot water, heat pump clothes dryer, induction stove, smart lighting)
- \* Passive solar heating
- \* Passive and active ventilation (ERV/HRV)
- \* Live green roof
- \* Rain water harvesting
- \* Grey water recycling
- \* Designed for age-in-place
- \* Materials with low carbon footprint or carbon sequestering properties



112 Fairglen Ave,  
Scarborough, ONTARIO, M1W1A7

## ENERGUIDE

Data collected: January 20, 2023  
File number: **5578NH7195**  
Evaluated by: Jack Zhou



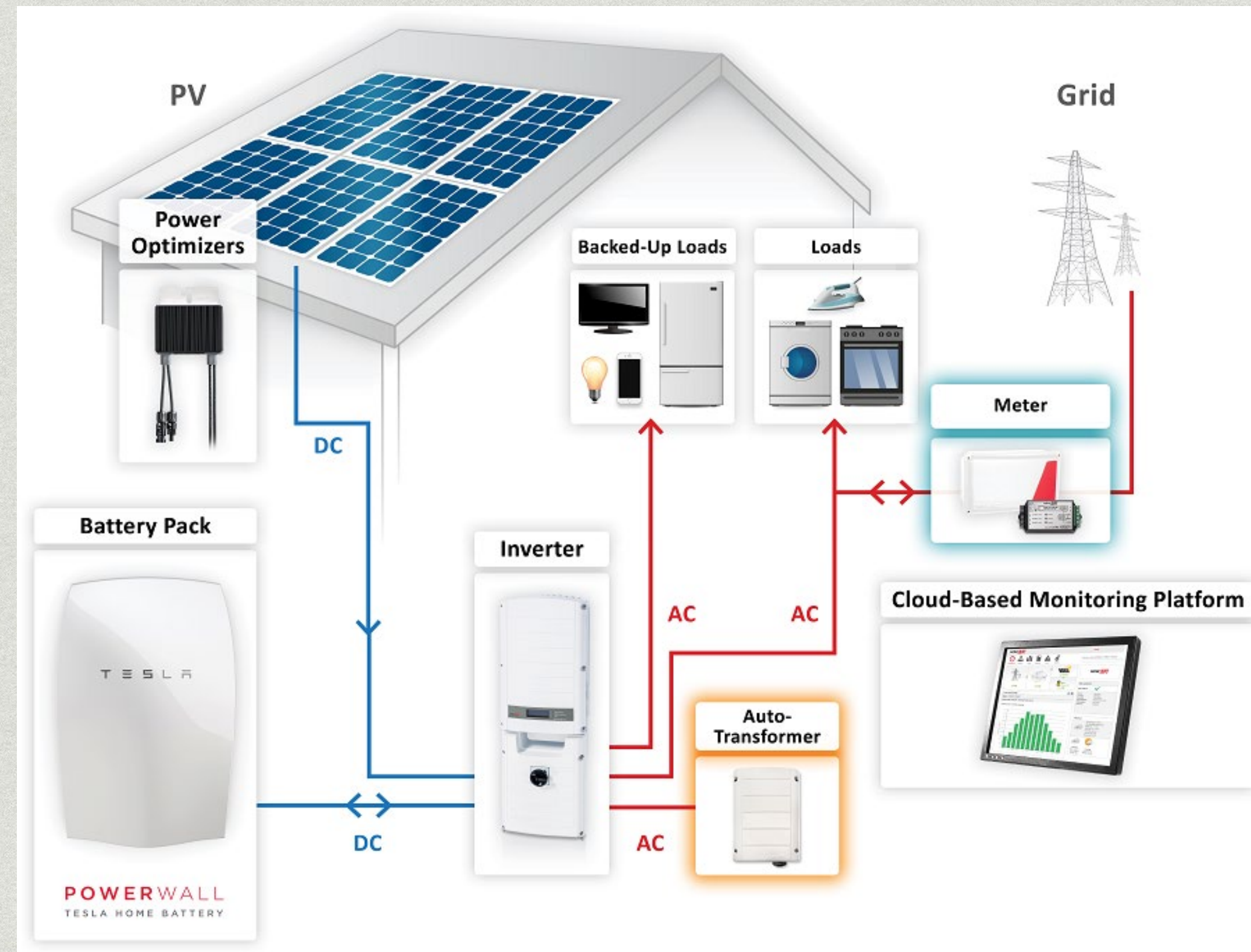
# Energy Conservation Systems



# Energy Generation Systems

10kW grid-tied and 10kW self-use

**solar**edge



TESLA  
**POWERWALL**  
TESLA HOME BATTERY



NORTH NORTH

PROP 42" HIGH GUARD RAIL, PER OBC 9.8.8

2x10 PT @ 24" O/C (TOP OF PERGOLA)

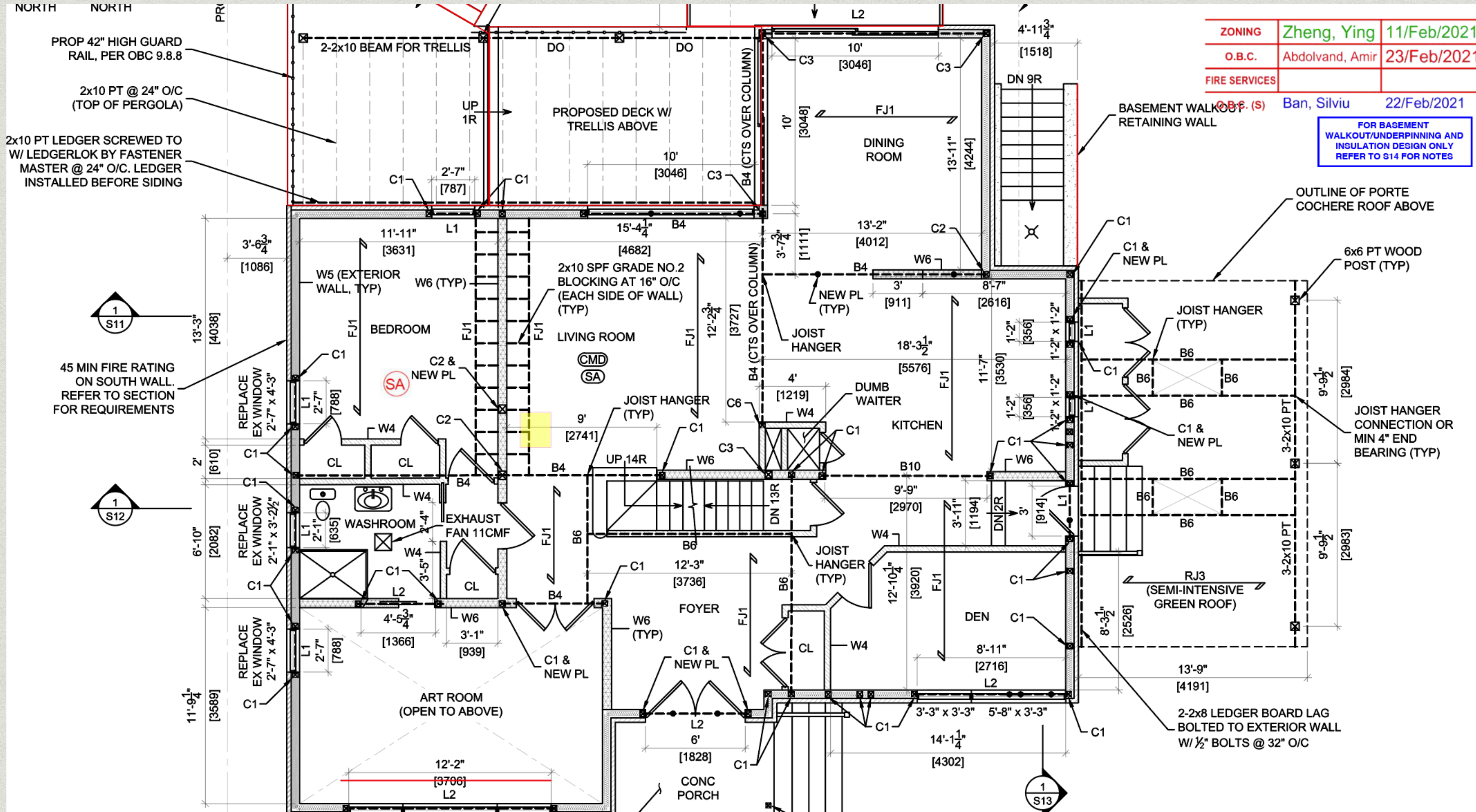
2x10 PT LEDGER SCREWED TO W/ LEDGERLOK BY FASTENER MASTER @ 24" O/C. LEDGER INSTALLED BEFORE SIDING

45 MIN FIRE RATING ON SOUTH WALL. REFER TO SECTION FOR REQUIREMENTS

ZONING	Zheng, Ying	11/Feb/2021
O.B.C.	Abdolvand, Amir	23/Feb/2021
FIRE SERVICES		

O.B.C. (S) Ban, Silviu 22/Feb/2021

FOR BASEMENT WALKOUT/UNDERPINNING AND INSULATION DESIGN ONLY REFER TO S14 FOR NOTES



1. This be c with AMT

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3. The AMT empl princ liabil claim and/ law. agre proc any Engi stam their

SEAL:

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PROJEC

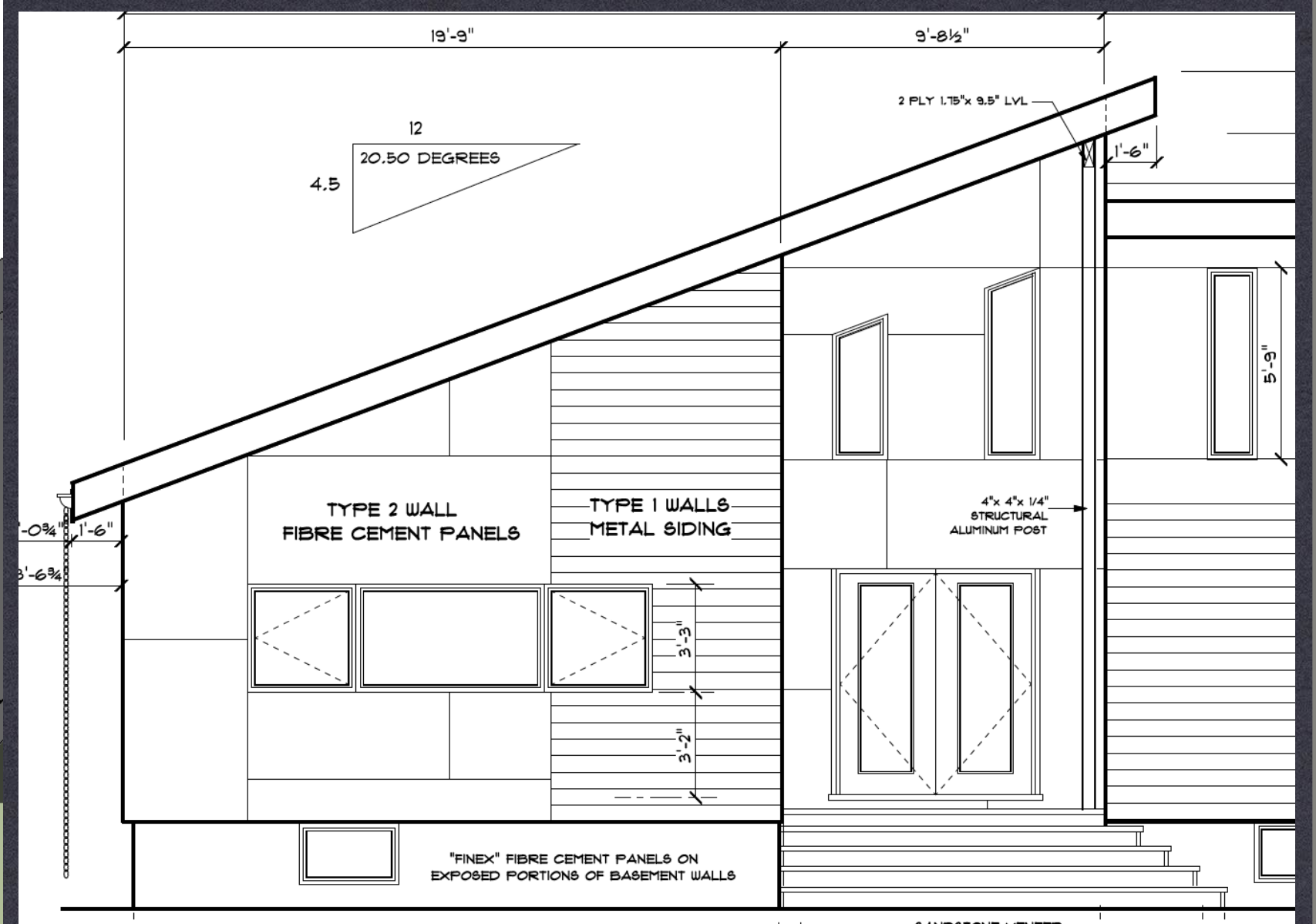
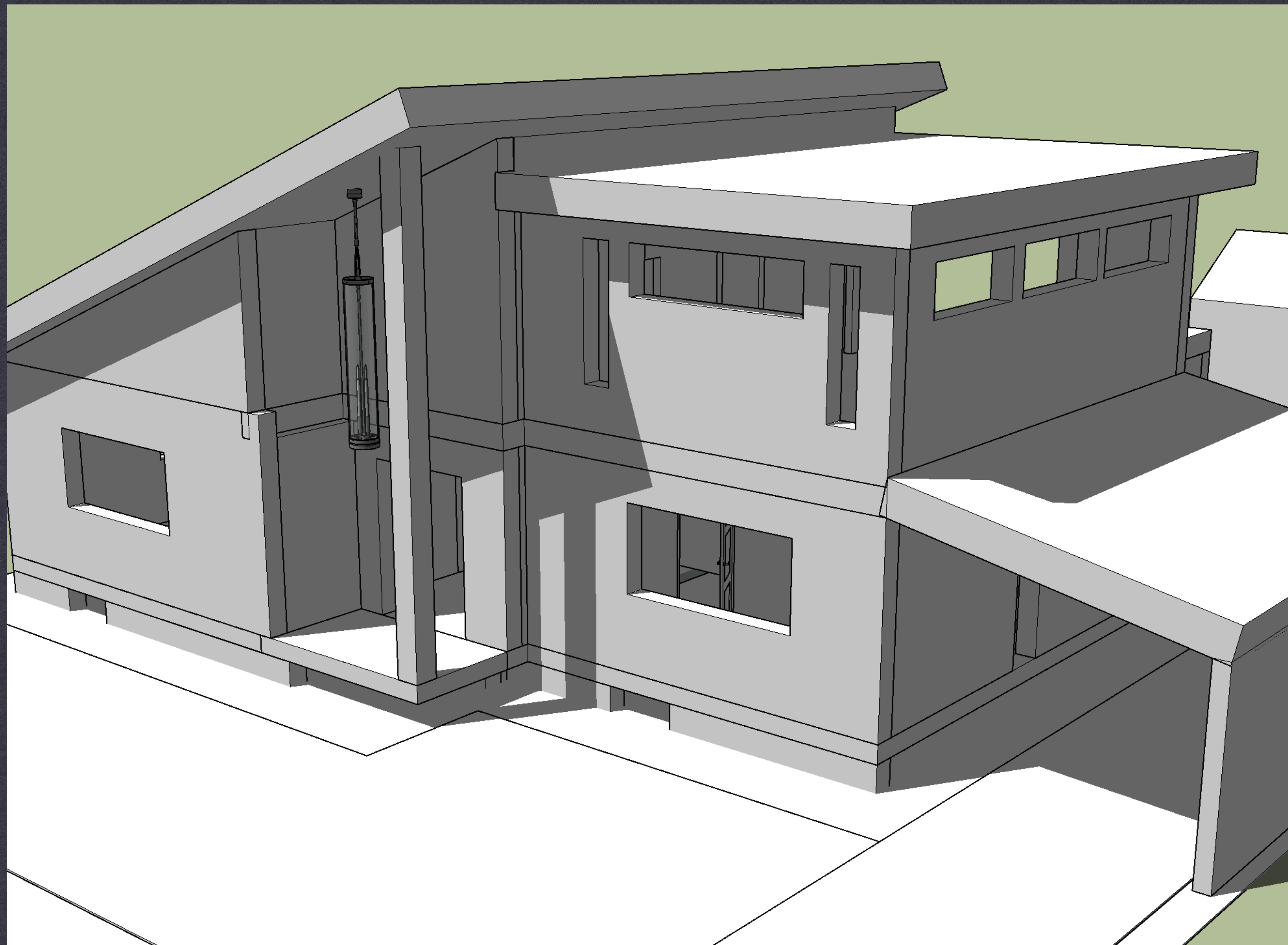
112 F

ON, M

DRAWING

# Planning

- \* Planning well ahead is essential.
- \* Design from the very beginning for energy conservation and lifestyle.
- \* Orientation, glazing, shading, wall construction are all equally important in conserving and generating energy.
- \* The choice of builder, energy consultant, HVAC professionals and trades can make the experience much smoother.
- \* Plan to spend a significant amount of time managing and supervising.
- \* Have materials bought and delivered, ready for use.
- \* Stick to your plan.



# GOALS AND PRIORITIES

YOUR REASONS FOR ENERGY CHOICES WILL IMPACT THE COMFORT AND PERFORMANCE OF YOUR NEW HOME

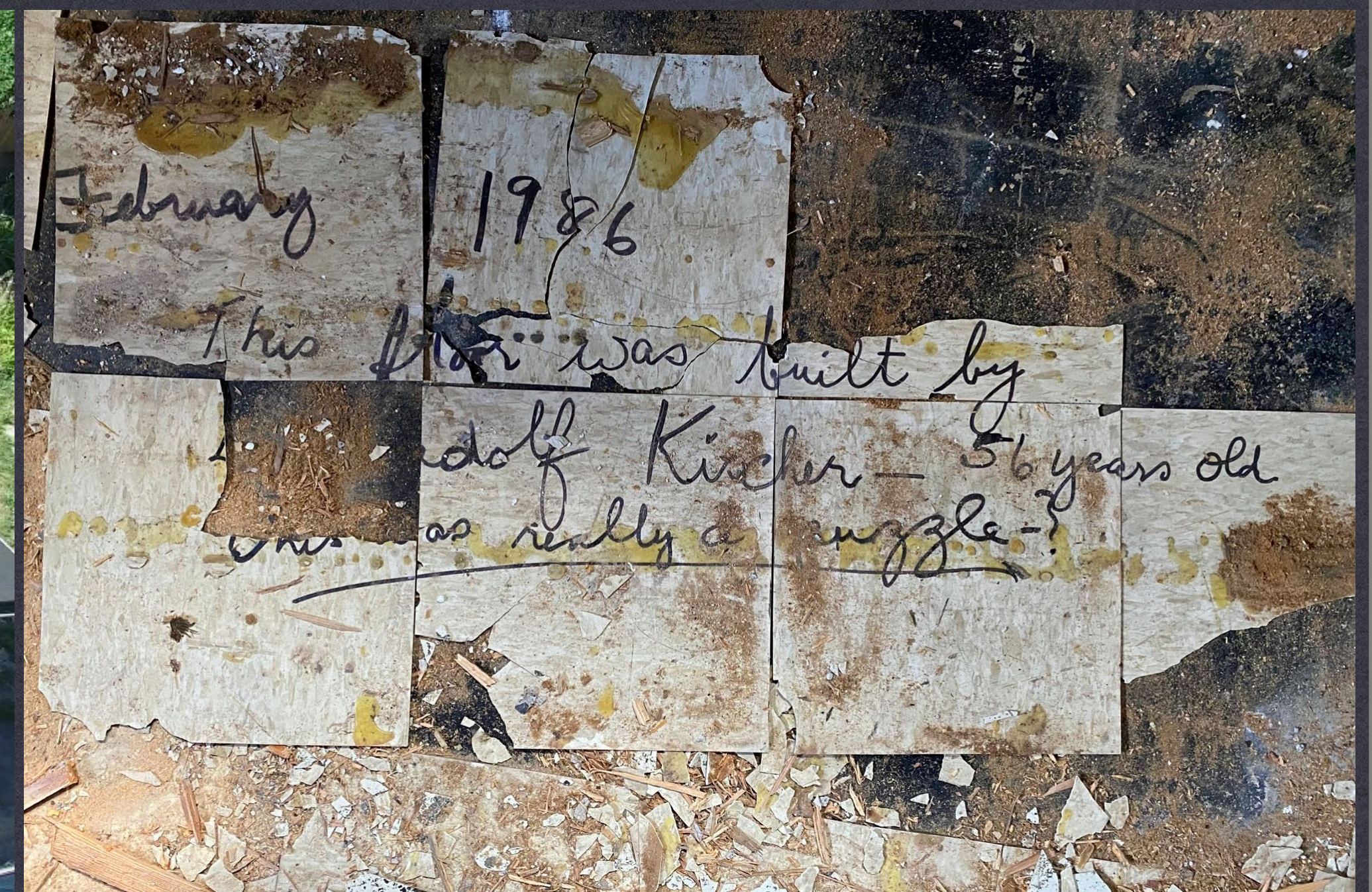


# Building

- \* Began demolition in August 2020
- \* December framing work stalled
- \* New plans and permits January 2021
- \* Framing finally finished in April
- \* Siga Air/water barrier installed in May
- \* Cold applied roof installed in June
- \* Magic windows installed in July
- \* Exterior insulation installed in July
- \* HVAC ducting roughed in August
- \* Slab and hydronic floor heat in September
- \* Plumbing rough -in September
- \* Electrical rough-in October
- \* Siding and cladding October - November
- \* Spray foam insulation January 2022
- \* Drywall installed in February
- \* Interior finishes March - December



BEGINS AUGUST



2020







# The homework

- \* Interview several builders and make sure they are CHBA NetZero certified builders and trades people willing to do what is necessary to achieve your goals.
- \* Have a good Energy Consultant who understands what your goals are.
- \* Triple check your HVAC installers' qualifications. Heat pumps systems are only good if they are properly designed and the installer understands the equipment and the homeowner's intended use. Experience with NetZero heating systems is a must.
- \* Be willing to spend a lot of time supervising the build, or hire someone who will do that for you.
- \* Allow yourself lots of time. Anticipate delays.

LOPEZ

ARCHITECTURAL DESIGN  
AND  
NETZERO BUILDING  
CONSULTANT

[ROBPEZ@ICLOUD.COM](mailto:ROBPEZ@ICLOUD.COM)

