

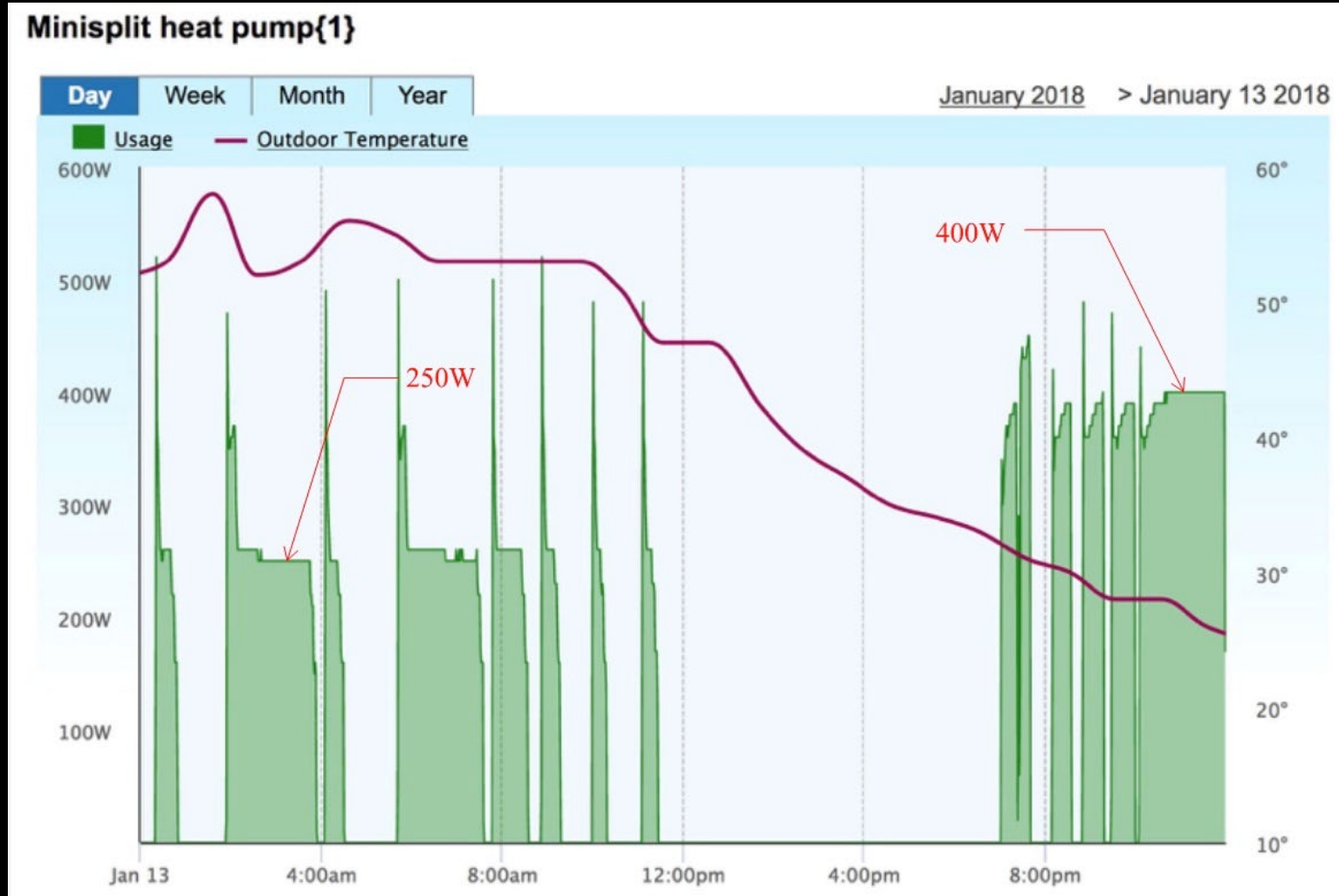
Performance Data

Project	Heating Wh/sf/HDD65	Area, sf	Design Heat Loss, BTU/hr	Capacity @ 5°F, BTU/hr	Oversize Factor
EFG (as designed)	0.37	2,863	33,900	50,000	47%
EFG (2019 changes)	0.24	2,863	19,000	59,700	214%
SMC Office	0.48	4,315	68,000	95,000	40%
Guest house MV	0.32	1,778	21,000	33,000	57%
House DER MV 55°F	0.36	2,800	35,000	54,000	54%
Metro Boston PH	0.20	3,600	34,000	48,000	41%
Marc's DER MV	0.17	1,334	14,000	15,000	7%
Project	ASHP Equipment				
SMC Office	(2) PUMY-60; (5) wall cassettes, (3) floor units				
Guest house MV	(1) PUMY-48; (4) ducted units				
House DER MV	(1) MXZ-8C48 H2i; (2) ducted units, (1) wall cassette				
Metro Boston PH	(1) MXZ-5C42 H2i; (4) ducted units, (1) wall cassette				
My house DER MV	(1) AOU9RLFC; (1) ducted unit				

Fujitsu Single Zone Ducted




- Fujitsu AOU/ARU9
- Data point at -7°F :
- Input of 2.09 kW; 368 CFM at 39.8°F rise across the air handler is 15,750 BTU/hr, or 4.62 kW; COP = 2.21
- Fujitsu claims 13,500 BTU/hr at -5°F , with an input of 1.92 kW; COP of 2.09

Fujitsu Turndown



Multi-zone Turndown

- 10,000 sf early childhood center in design
- Eleven zones –
 - 222,000 BTU/hr cooling, 131,000 BTU/hr heating
- Evaluated three City Multi configurations:
 - Five S series (single phase, 3 – 5 tons each)
 - Two Y series, 10 tons each
 - One Y series, 20 tons (twinned 10 ton units)

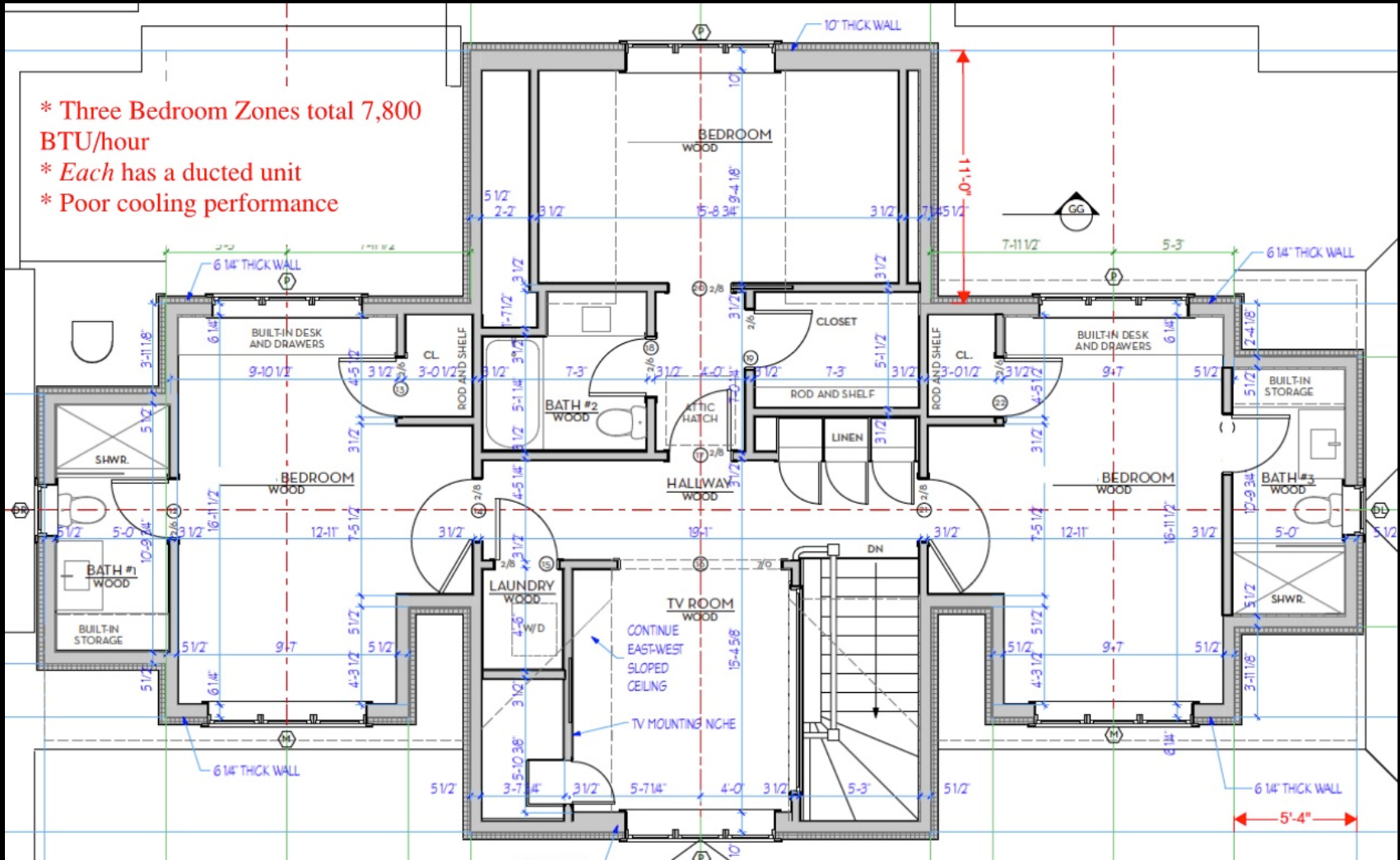
CITY MULTI® Outdoor Unit: 20-TON PURY-P240TSJMU-A		MITSUBISHI ELECTRIC
(Consists of Two PURY-P120TJMU-A and One CMY-R100XLVBK Twinning Kit)		
Job Name: _____	Location: _____	
Drawing Reference: _____	Schedule No. _____	
System No.: _____	Date: _____	
OUTDOOR VRFZ HEAT RECOVERY SYSTEM FEATURES		
<ul style="list-style-type: none">• 3-phase, 208/230V• Modular variable refrigerant flow zoning (VRFZ) systems; smaller capacity units can be piped together to form a single, large-capacity two-pipe system• Required Twinning Kit allows for easy field piping connection• Selectable fan static, 0.12 or 0.24"WG external static pressure; factory set to 0"WG• Max. Total Refrigerant Piping Length: 1,804' (P72,96), 1,969' (P120,144,168), 2,461' (P192), 2,625' (P216,240), 3,280' (P264,288); Max. Refrigerant Line Length: 541'; Max. Control		
		
		
OPTIONAL PARTS		
<input type="checkbox"/> Twinning Kit*.....CMY-R100XLVBK		

Multi-zone Turndown

# of units	System A:	Cooling minimum	Heating minimum
2	P36	21	20
1	P48	11	12
2	P60	43	29
	Total	75	61
	System B:		
2	P120	36	41
	System C:		
1	P240	17	19

Too Many Zones

- * Three Bedroom Zones total 7,800 BTU/hour
- * Each has a ducted unit
- * Poor cooling performance



Details, details

- Indoor units that run hard may have condensation on the lineset insulation and may need additional insulation wrapped over the lineset insulation
- Remotely located wall controllers provide better room temperature control than the temperature sensor built into the indoor unit (including ducted units in cool basements)

Lineset Entry Detail

