Santa Ana Studio ADU (2022) CF1R & MF1R

2022 Single-Family Residential Mandatory Requirements Summary

§ 150.0(n)	**Energy Storage System (ESS) Ready.** All single-family residences must meet all of the following: Either ESS-ready interconnection equipment with backed up capacity of 60 amps or more and four or more ESS supplied branch circuits, or a dedicated raceway from the main service to a subpanel that supplies the branch circuits in § 150.0(o); at least four branch circuits must be identified and have their source collocated at a single panelboard suitable to be supplied by the ESS, with one circuit supplying the refrigerator, one lighting circuit near the primary exit, and one circuit supplying a sleeping room receptacle outlet; main panelboard must have a minimum busbar rating of 225 amps; sufficient space must be reserved to allow future installation of a system isolation equipment/transfer switch within 3' of the main panelboard, with raceways installed between the panelboard and the switch location to allow the connection of backup power source
§ 150.0(l)	**Heat Pump Space Heater Ready.** Systems using gas or propane furnaces to serve individual dwelling units must include: A dedicated undistributed 240V branch circuit wiring installed within 3' of the furnace with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
§ 150.0(o)	**Electric Cooktop Ready.** Systems using gas or propane cooktop to serve individual dwelling units must include: A dedicated undistributed 240V branch circuit wiring installed within 3' of the cooktop with circuit conductors rated at least 50 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
§ 150.0(v)	**Electric Clothes Dryer Ready.** Clothes dryer locations with gas or propane plumbing to serve individual dwelling units must include: A dedicated undistributed 240V branch circuit wiring installed within 3' of the dryer location with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."

*Exceptions may apply.

5/6/22

HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

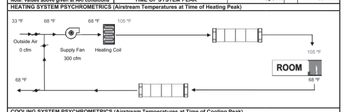
Project Name: Santa Ana ADU Studio (2022)
Date: 1/23/2023
System Name: Minisplit ADU- Studio
Floor Area: 399

ENGINEERING CHECKS	
Number of Systems	1
Heating System	
Output per System	12,800
Total Output (Btuh)	12,800
Output (Btu/hrsqft)	32.1
Cooling System	
Output per System	12,300
Total Output (Btuh)	12,300
Total Output (Tons)	1.0
Total Output (Btu/hrsqft)	30.8
Total Output (sqft/Ton)	389.3
Air System	
CFM per System	300
Airflow (cfm)	300
Airflow (cfm/sqft)	0.75
Airflow (cfm/Ton)	292.7
Outside Air (%)	0.0%
Outside Air (cfm/sqft)	0.00
Note: values above given at ARI conditions	

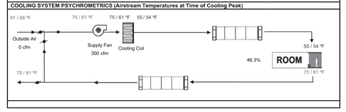
SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
	CFM	Sensible	Latent	CFM	Sensible
Total Room Loads	174	3,735	195	179	7,103
Return Vented Lighting		0			
Return Air Ducts		0			0
Return Fan		0			0
Ventilation	0	0	0	0	0
Supply Fan		0			0
Supply Air Ducts		0			0
TOTAL SYSTEM LOAD		3,735	195		7,103

HVAC EQUIPMENT SELECTION				
Fujitsu AOU12RG		9,826	1,645	9,563
Total Adjusted System Output (Adjusted for Peak Design conditions)		9,826	1,645	9,563
TIME OF SYSTEM PEAK		Aug 3 PM		Jan 1 AM

HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)



COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak)



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project
Santa Ana ADU

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revisions
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description
Energy Calculations Studio

date MAY 2023
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