LAS FIELDMECH



Residential System Assessment — Furnace + AC

The Miller Residence · DEMO ASSESSMENT

HOME SIZE	TOTAL REQUIRED SUPPLY AIRFLOW	COOLING EQUIVALENT	HEATING REQUIREMENT
1,426 SQ FT	1,163.4 CFM	2.91 TONS	49,910 BTU/h

System & Ductwork Comparison

	REQUIRED	EXISTING	DIFFERENCE
Cooling Capacity (tons)	2.91	4	+1.09 (38%) !
Heating Capacity (BTU/h)	49,910	80,000	+30,090 (60%) !
Total Supply Airflow (CFM)	1,163	EXISTING EST. 930	−233 (20%) !

Summary

Equipment Size

Installed AC cooling capacity is above the estimated cooling equivalent. Installed furnace output is above estimated demand.

Supply Ductwork

Estimated supply capacity is 20% below target. Review room-level restrictions and distribution.

Comfort Impact

Restricted or uneven supply airflow may cause temperature differences between rooms.

Room-by-Room Supply Recommendations

ROOM / AREA	AREA (SQ FT)	CFM (REQUIRED)	SUPPLY DUCTS	NEW	DAMPER (%)	ROOM RECOMMENDATION
Master	175	140	2 × 6″	0	0%	Keep existing
Master closet	55	44	1 × 6″	0	40%	Keep existing
Master bath	80	64	1 × 6″	0	0%	Keep existing
Nursery	103	82.4	1 × 8″	0	20%	Enlarge 1
Main bath	46	36.8	1 × 6″	0	40%	Keep existing
Guest room	137	109.6	1 × 8″	0	20%	Enlarge 1
Living room	272	217.6	1 × 6″ + 1 × 8″	1	0%	Add 1
Kitchen/dining	332	265.6	2 × 8″	0	20%	Enlarge 2
Family room	226	203.4	1 × 6″ + 1 × 8″	Waived	0%	Open floor plan/shared airflow
TOTAL	1,426	1,163.4	13 runs	1	—	—

Return Air Recommendations

• ADEQUATE

Existing return grille: 24 × 24″ · **Return duct sizing target:** 20″

Existing grille area meets preliminary target; keep existing if airflow and static pressure verify.

Additional Recommendations

- Proposed supply changes: 4 existing supply ducts to enlarge; 1 new supply run to cut in.
- 1 room technician-reviewed; waived duct changes excluded from work totals.