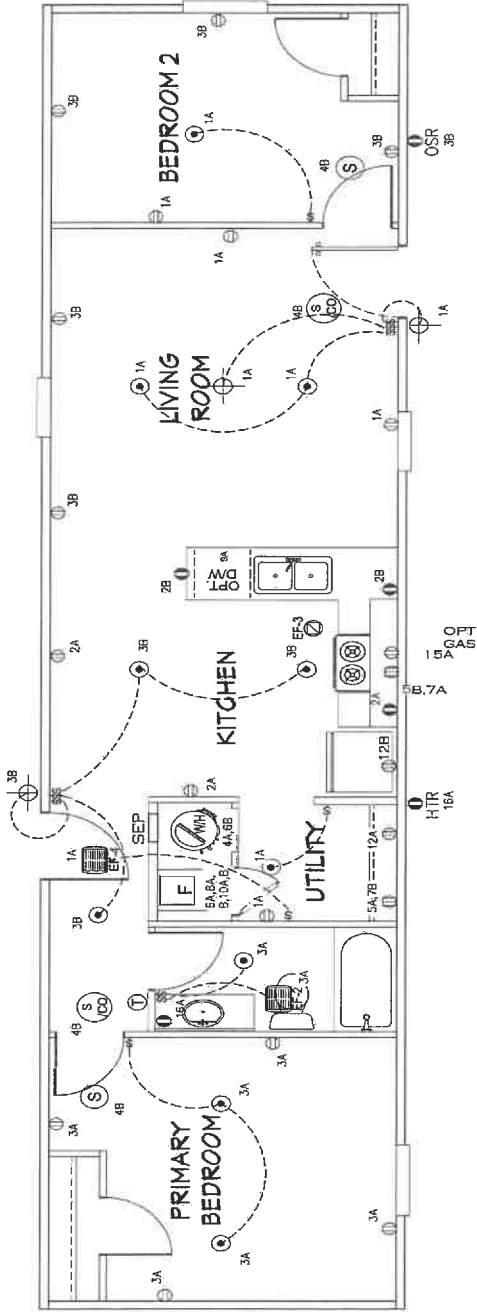


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- NOTES:
1. ALL CIRCUITS SHOWN ARE FOR REFERENCE AND MAY BE CHANGED BASED ON OPTIONAL COMPONENTS INSTALLED IN THE HOME.
 2. REFER TO DAPA MANUAL FOR SYMBOL CHART.
 3. EITHER LIGHT OR RECEPTACLE MUST CONNECT TO SWITCH.
 4. EF-1= 50 CFM EXHAUST FAN REQUIRED FOR THERMAL ZONE III THERMAL ZONES I & II MAY USE FAN OR WINDOW WITH 5 SQ. FT. OPENABLE GLASS.
 5. EF-2= 50 CFM EXHAUST FAN REQUIRED THERMAL ZONE I, II, AND III.
 6. EF-3= 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 7. EF-4= WHOLE HOUSE VENTILATION REQUIREMENTS PER DAPA MANUAL.
 8. REFER TO DAPA MANUAL OR THE MFG. INSTALLATION INSTRUCTIONS FOR PROPER WIRE SIZE AND BREAKER SIZE FOR SPECIFIC APPLIANCE AND MODEL BEING INSTALLED.
 9. ALL SMOKE ALARMS TO BE LOCATED ON THE CEILING.
 10. CARBON MONOXIDE ALARMS ARE ONLY REQUIRED WHEN HOME HAS EITHER FUEL BURNING APPLIANCES (IS GARAGE READY OR IS BASEMENT READY. REFERENCE DAPA MANUAL FOR ADDITIONAL INFORMATION.
 11. DIMENSIONS SHOWN ON PRINT ARE APPROXIMATE AND TO BE USED ONLY AS A GUIDELINE.

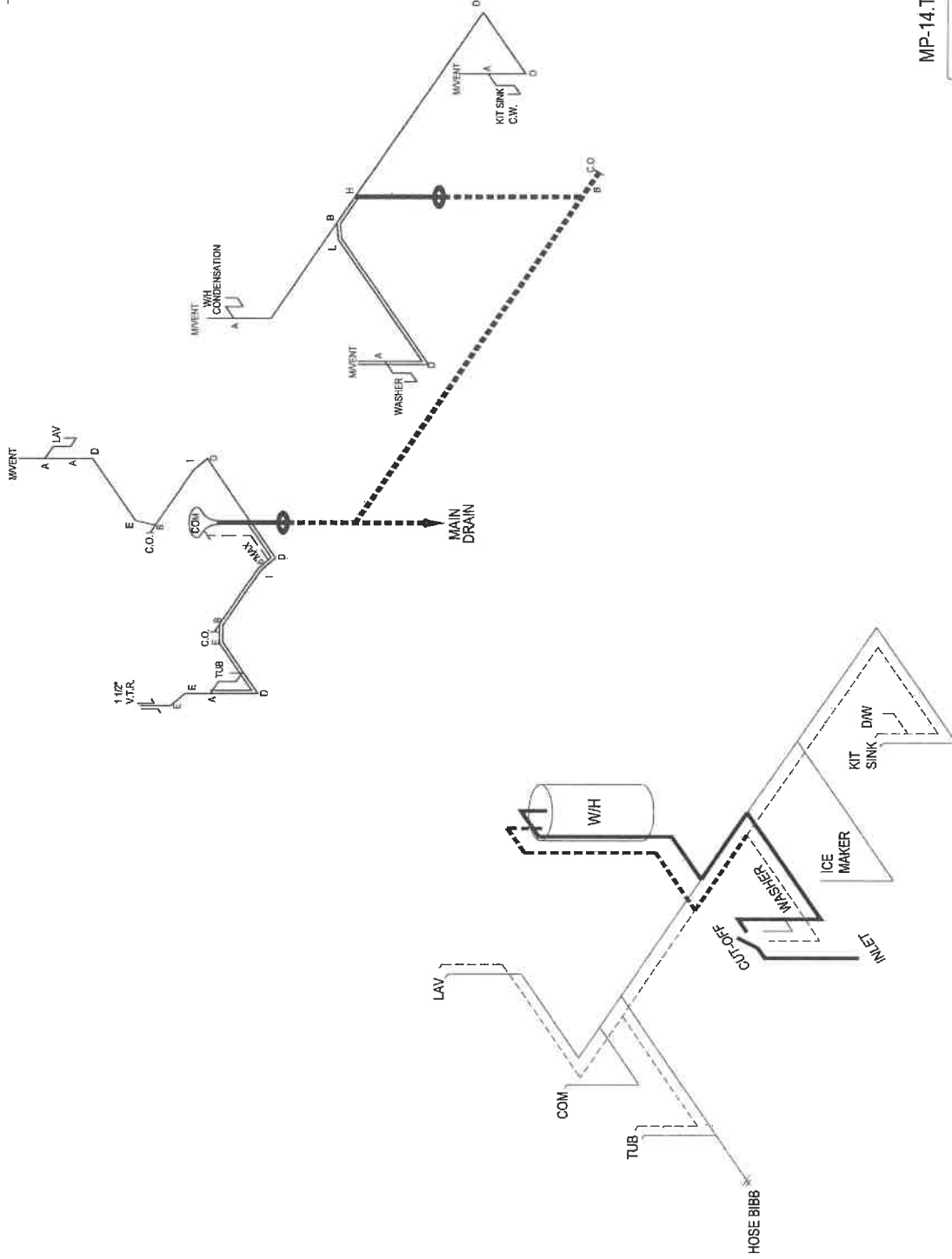
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CONSTRUCTION AND SAFETY STANDARDS

CIRCUIT	CIRCUIT #	WIRE	BREAKER	CIRCUIT	CIRCUIT #	WIRE	BREAKER	CIRCUIT	CIRCUIT #	WIRE	BREAKER
LIGHT/RECEP	1A, 3A, 13B, 14A	14-2	15-SP	DRYER	5A, 7B	SEE NOTE #8	SEE NOTE #8	BATHROOM	16A	12-2	20-SP
LIGHT/RECEP	1B, 3B, 14B	14-2	15-SP	WATER HEATER	4A, 6B	SEE NOTE #8	SEE NOTE #8	OPT GDISP	9B	SEE NOTE #8	
KITCHEN	2A, 2B	12-2	20-SP	RANGE	5B, 7A	SEE NOTE #8	SEE NOTE #8	OPT SPA/ WP/JAC	11A, B	SEE NOTE #8	
WASHER	12A	12-2	20-SP	FURNACE	6A, 8A, B, 10A, B	SEE NOTE #8	SEE NOTE #8	FREEZER	13A	SEE NOTE #8	
RANG HOOD/ MICROWAVE	15B	SEE NOTE #8	SEE NOTE #8	OPT DWASH	9A	SEE NOTE #8	SEE NOTE #8	OPT ELEC. FIREPLACE	16B	SEE NOTE #8	
OPT. GAS RANG	15A	SEE NOTE #8	SEE NOTE #8	SMOKE/CO DETCT.	4B	SEE NOTE #8	SEE NOTE #8				
				REFER	12B	SEE NOTE #8	SEE NOTE #8				

NOTE:
DASHED LINES INDICATE HOT WATER
SOLID LINES INDICATE COLD WATER

— = 3/4"
— = 1/2"



LEGEND	
A	SHORT TURN T-Y
B	LONG TURN T-Y
C	1/4 BEND
D	LONG SWEEP 1/4 BEND
E	45° ELL
F	DRILL SANITARY TEE
G	4x3 CLOSET ELL
H	DOUBLE ELL
I	22 1/2° ELL
J	45° Y
K	LONG TURN STREET ELBOW
L	45° ELL

DWV LINE SIZE	CHART
—	≈ 3"
—	≈ 2"
—	≈ 1 1/2"

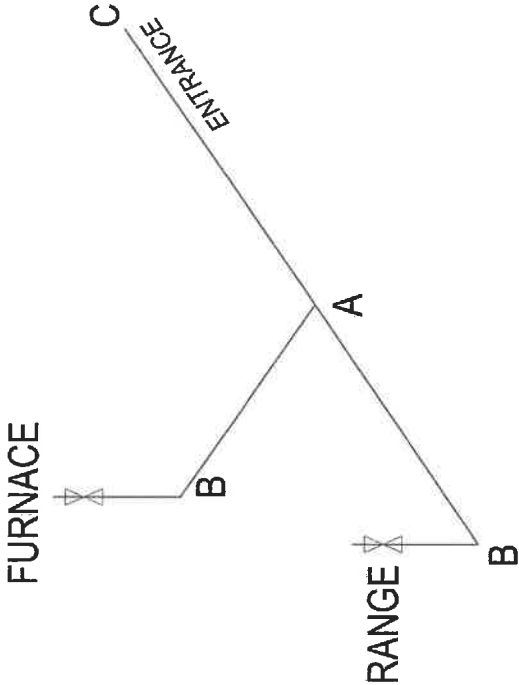
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MP-14.TRU-1456-21-1.3

CLAYTON Built	DATE	REVISION	MODEL NAME ELM	MODEL NO. TRT14562E	BOX SIZE 14' x 56'	MODEL SQ. FT. 737	DATE DRAWN 2/27/2025	DRAWN BY Dustin Harville	DATE PRINTED 8/21/2025	SCALE 3/16"=1'	SHEET NAME TRU-1456-21-1	SHEET NO. D.W.V. & SUPPLY	SHEET NO. PI-1
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LEGEND		APPLIANCE BTU'S RATINGS MAX. INPUT		GAS LINE SIZE CHART	
SYM	FITTINGS				
A	TEE	FURNACE	60,000 BTU'S	— = 1"	
B	90 ELL	W/H	N/A BTU'S	— = 3/4"	
⌵	VALVE	RANGE	52,000 BTU'S		
C	CAP	DRYER	N/A BTU'S		

MDL = 17'



NOTES:
ALL PIPE IS 3/4" I.D. CAST
(EXCEPT WHERE NOTED OTHERWISE)
MDL=MAX. DETERMINED LENGTH OF PIPE
FITTING MAY BE ADDED OR SUBTRACTED
TO TRAVERSE VARIATIONS IN AXLE
QUANTITY, PLACEMENT, AND FRAME TYPE.
INLET LOCATION MAY VARY TO STAY WITHIN
MAY DETERMINED LENGTH

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MP-14.TRU-1456-21-1.4

MODEL NAME	ELM	MODEL NO.	TRT14562E	BOX SIZE	14' x 56'	MODEL SQ. FT.	737
DRAWN BY	Dustin Harville						
DATE DRAWN	2/27/2025						
DATE PRINTED	8/20/2025						
SCALE	3/16"=1'						
PLAN NO.	TRU-1456-21-1						
SHEET NAME	GAS LINES						
SHEET NO.	PI -4						

REVISION	DATE

Clayton Built



Manual S Compliance Report

Entire House

Clayton Homes

Job: TRU-1456-21-1-FDJ

Date: Aug 20, 2025

By:

5000 Clayton Road, Maryville, TN 37804 Phone: 865-380-3000

Project Information

For: TRU-1456-21-1-FDJ

Cooling Equipment

Design Conditions

Outdoor design DB:	90.4°F	Sensible gain:	16540	Btuh	Entering coil DB:	76.2°F
Outdoor design WB:	73.3°F	Latent gain:	4593	Btuh	Entering coil WB:	63.4°F
Indoor design DB:	75.0°F	Total gain:	21133	Btuh		
Indoor RH:	50%	Estimated airflow:	780	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	SplitASHP		
Manufacturer:	Smart Comfort	Model:	R4H5S24*K*AAA*+FEVA0024**+NAVA43601CK
Actual airflow:	780	cfm	
Sensible capacity:	18157	Btuh	110% of load
Latent capacity:	4600	Btuh	100% of load
Total capacity:	22757	Btuh	108% of load SHR: 80%

Heating Equipment

Design Conditions

Outdoor design DB:	21.0°F	Heat loss:	32571	Btuh	Entering coil DB:	66.2°F
Indoor design DB:	70.0°F					

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	SplitASHP		
Manufacturer:	Smart Comfort	Model:	R4H5S24*K*AAA*+FEVA0024**+NAVA43601CK
Actual airflow:	780	cfm	
Output capacity:	15994	Btuh	49% of load
Supplemental heat required:	16578	Btuh	
		Capacity balance:	35 °F
		Economic balance:	-99 °F

Backup equipment type:	Elec strip		
Manufacturer:	Smart Comfort	Model:	FEVA002410
Actual airflow:	780	cfm	
Output capacity:	10.0	kW	105% of load Temp. rise: 41 °F

Meets all requirements of ACCA Manual S.

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CONSTRUCTION AND SAFETY STANDARDS



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Project Summary

Entire House

Clayton Homes

Job: TRU-1456-21-1-FDJ
Date: Aug 20, 2025
By:

5000 Clayton Road, Maryville, TN 37804 Phone: 865-380-3000

Project Information

For: TRU-1456-21-1-FDJ

Notes: DUCT CAPACITY: 26,000 BTUH

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Design Information

Weather: TN 25

Winter Design Conditions

Outside db	21 °F
Inside db	70 °F
Design TD	49 °F

Ventilation Method MJ8

Heating Summary

Structure	11119 Btuh
Ducts (R-0.0)	18329 Btuh
Central vent (60 cfm)	3123 Btuh
Outside air	
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	32571 Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

	Heating	Cooling
Area (ft²)	728	728
Volume (ft³)	5824	5824
Air changes/hour	0.61	0.32
Equip. AVF (cfm)	59	31

Heating Equipment Summary

Make	Smart Comfort
Trade	15 SEER2 R SERIES R410A HP
Model	R4H5S24*K*AAA*
AHRI ref	210537896

Efficiency	7.5 HSPF2
Heating input	
Heating output	22800 Btuh @ 47°F
Temperature rise	28 °F
Actual air flow	780 cfm
Air flow factor	0.026 cfm/Btuh
Static pressure	0.30 in H2O
Space thermostat	
Capacity balance point = 35 °F	

Backup: Smart Comfort FEVA002410
Input = 10 kW, Output = 34121 Btuh, 100 AFUE

Summer Design Conditions

Outside db	90 °F
Inside db	75 °F
Design TD	15 °F
Daily range	M
Relative humidity	50 %
Moisture difference	34 gr/lb

Sensible Cooling Equipment Load Sizing

Structure	7189 Btuh
Ducts (R-0.0)	8369 Btuh
Central vent (60 cfm)	982 Btuh
Outside air	
Blower	0 Btuh
Use manufacturer's data	n
Rate/swing multiplier	0.95
Equipment sensible load	15779 Btuh

Latent Cooling Equipment Load Sizing

Structure	2686 Btuh
Ducts	583 Btuh
Central vent (60 cfm)	1325 Btuh
Outside air	
Equipment latent load	4593 Btuh
Equipment Total Load (Sen+Lat)	20372 Btuh
Req. total capacity at 0.70 SHR	1.9 ton

Cooling Equipment Summary

Make	Smart Comfort
Trade	15 SEER2 R SERIES R410A HP
Cond	R4H5S24*K*AAA*
Coil	FEVA0024**+NAVA43601CK
AHRI ref	210537896
Efficiency	12.0 EER2, 15.2 SEER2
Sensible cooling	16380 Btuh
Latent cooling	7020 Btuh
Total cooling	23400 Btuh
Actual air flow	780 cfm
Air flow factor	0.050 cfm/Btuh
Static pressure	0.30 in H2O
Load sensible heat ratio	0.78

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.



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CLAYTON HOME BUILDING GROUP

ELM

Model Number	TRT14562E	Drawing Number	TRU-1456-21-1	Version 24
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BOX SIZE: 13.17 ft. x 56 ft.

AVG. SIDEWALL HEIGHT = 8 FEET

PERCENTAGE OF CEILING THAT IS VAULTED = 42.9%

IN-FLOOR DUCT SYSTEM

	UNHEATED FLOOR	WALL	FLAT ROOF
INSULATION VALUES	R-11 OR / R-11 FW / R-11 BIB	R-13	R-33
DAPIA PAGE	THP-335	THP-515	THP-1972
U VALUE (BTUH/SQ.FT.-F)	0.0436	0.0853	0.0306

Area U Value UA

Doors:

Front	20.30	0.189	3.84
Rear	20.30	0.360	7.31
Other Door	0.00	0.300	0.00
Other Door	0.00	0.330	0.00
OSB	0.00	0.000	0.00
Skylights	0.00	0.330	0.00
Standard	51.00	0.300	15.30
Option	0.00	0.300	0.00
Net: Floor	737.33	0.044	32.15
Wall	1015.07	0.085	86.59
Ceiling	737.33	0.0306	22.56
Ext. Duct	0.00	0.000	0.00
Th. Zone 1: Ext. Duct	0.00	0.000	0.00
Th. Zone 2: Ext. Duct	0.00	0.000	0.00
Th. Zone 3: Ext. Duct	0.00	0.000	0.00
Overhead TZ 1: Supply	0.00	0.000	0.00
Overhead TZ 2: Supply	0.00	0.000	0.00
Overhead TZ 3: Supply	0.00	0.00	0.00

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Window Glass Area:

Net:

Th. Zone 1:

Th. Zone 2:

Th. Zone 3:

Overhead TZ 1:

Overhead TZ 2:

Overhead TZ 3:

Overhead Duct	
Diameter	Length
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
15	0
Exterior Supply	Length
14	0
16	0
Exterior Return	Length
14	0
16	0

Energy Star v3 & ZERH Max Glass (sq ft)	
Th. Zone 1	188.8
Th. Zone 2	56.5
Th. Zone 3	0.0

Thermal Zone	Outdoor Design Temp (F)	UA	Uo	EStar v3 & ZERH Compliant	Heatloss BTUH/F
1	11	167.74	0.065	OK	264.60
2	0	167.74	0.065	OK	264.60
3	-14	167.74	0.065	NG	264.60

Design Temperatures	
Furnace Heating Temp (F)	Economy Outdoor Temp (F)
-59	-20
-85	-38
-123	-65
-81	-36
-157	-89
-232	-142

10kW
12kW
15kW
40k Gas
60k Gas
80k Gas

Thermal Zone	U-Value	Thermal Zone	U-Value	Thermal Zone	U-Value
Energy Star Version 2					
1-EHP-S	0.080	2-EHP-S	0.080	3-EHP-S	0.079
1-GAS-S	0.080	2-GAS-S	0.080	3-GAS-S	0.071
1-ENV-S	0.076	2-ENV-S	0.067	3-ENV-S	0.059
1-EHP-M	0.074	2-EHP-M	0.074	3-EHP-M	0.074
1-GAS-M	0.074	2-GAS-M	0.074	3-GAS-M	0.065
1-ENV-M	0.071	2-ENV-M	0.064	3-ENV-M	0.056

Energy Star Version 3 & ZERH					
1 Single	0.076	2 Single	0.065	3 Single	0.057
1 Double	0.070	2 Double	0.063	3 Double	0.054

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