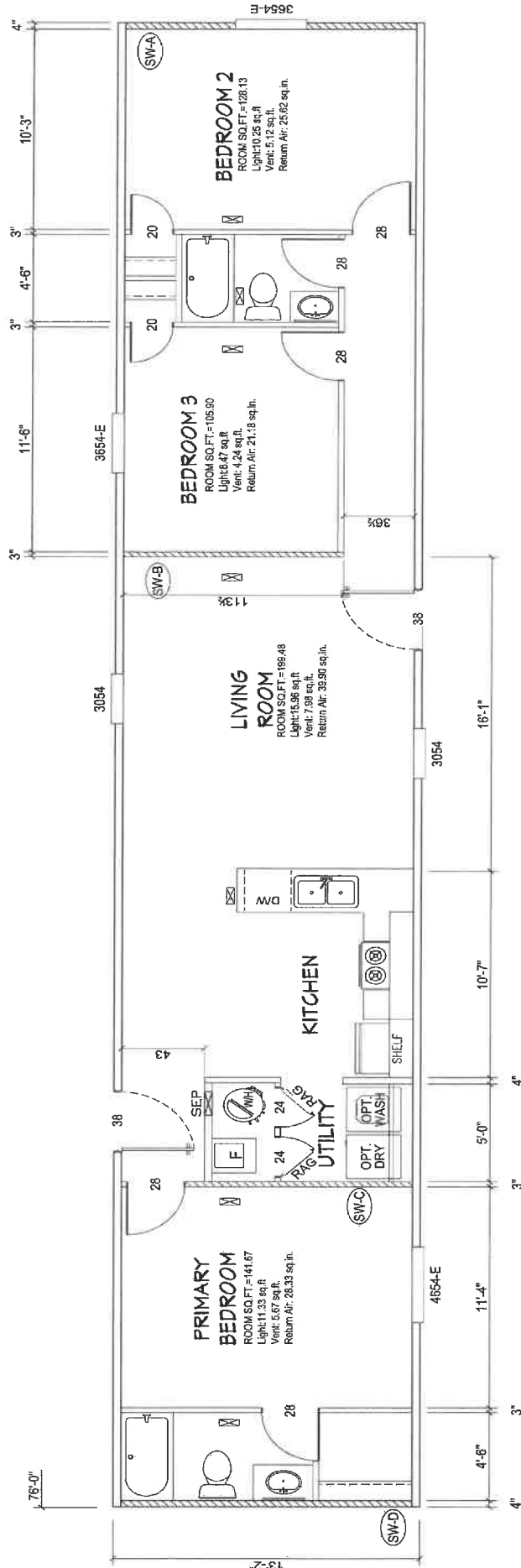




TRU TN/TX CALC

Model # TRU-1476-32-1
Box Width = 153"
Box Length = 76 ft.
No Skylights
No Porches
Joel Size = #2 gtr 26

Single wide
No Offset Box
58.5" 12" MIN/EE/M
No Origami Corner
No Sunken Floor
No Parquet Roof

Minimum Joist Spacing 16"
Lugs 9x63"

Version R13.20

Wind Zone 1 Standard Roof				Wind Zone 2 Standard Roof			
100 mph (150 mph in 150 mph zone)				100 mph (150 mph in 150 mph zone)			
Shearwall Type	Height	Length	Notes	Shearwall Type	Height	Length	Notes
A	0"	113.5"	2	1/1	Notes	SW1SW2	59' 7 1/2" 71'
B	27.31"	112"	2	3/1	Notes	SW1SW2	59' 7 1/2" 71'
C	76"	112"	2	2/1	Notes	SW1SW2	59' 7 1/2" 71'
Wind Zone 3 Standard Roof				Wind Zone 4 Standard Roof			
100 mph (150 mph in 150 mph zone)				100 mph (150 mph in 150 mph zone)			
Shearwall Type	Height	Length	Notes	Shearwall Type	Height	Length	Notes
A	0"	113.5"	2	1/1	Notes	SW1SW2	59' 7 1/2" 71'
B	27.31"	112"	2	3/1	Notes	SW1SW2	59' 7 1/2" 71'
C	76"	112"	2	2/1	Notes	SW1SW2	59' 7 1/2" 71'

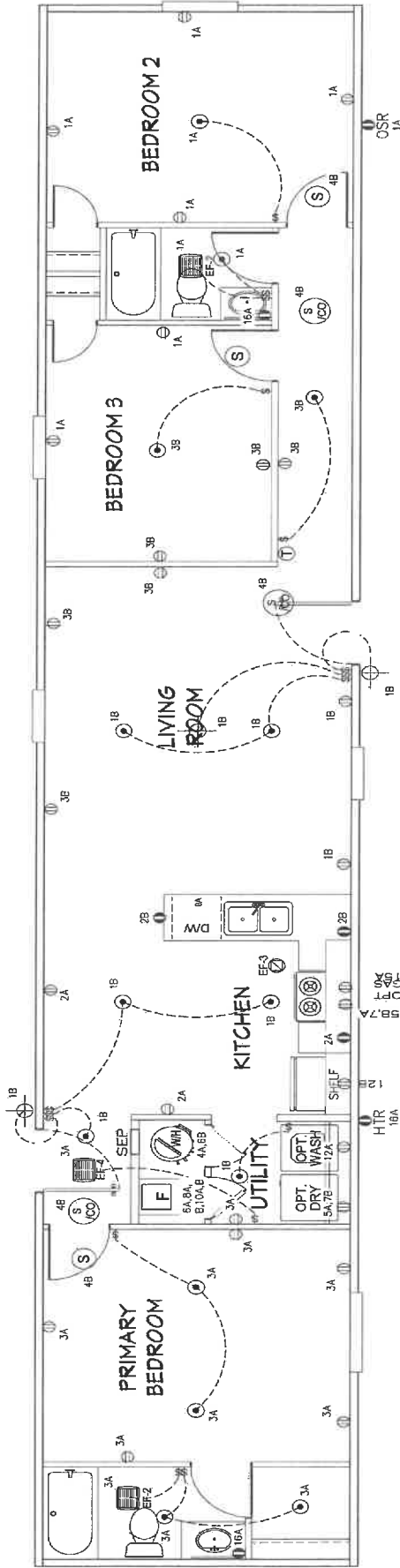
MP-14. TRU-1476-32-1.1

APPROVED BY

8/28/2025

NIA INC.

FEDERAL MANUFACTURED HOME CONSTRUCTION AND SAFETY STANDARDS

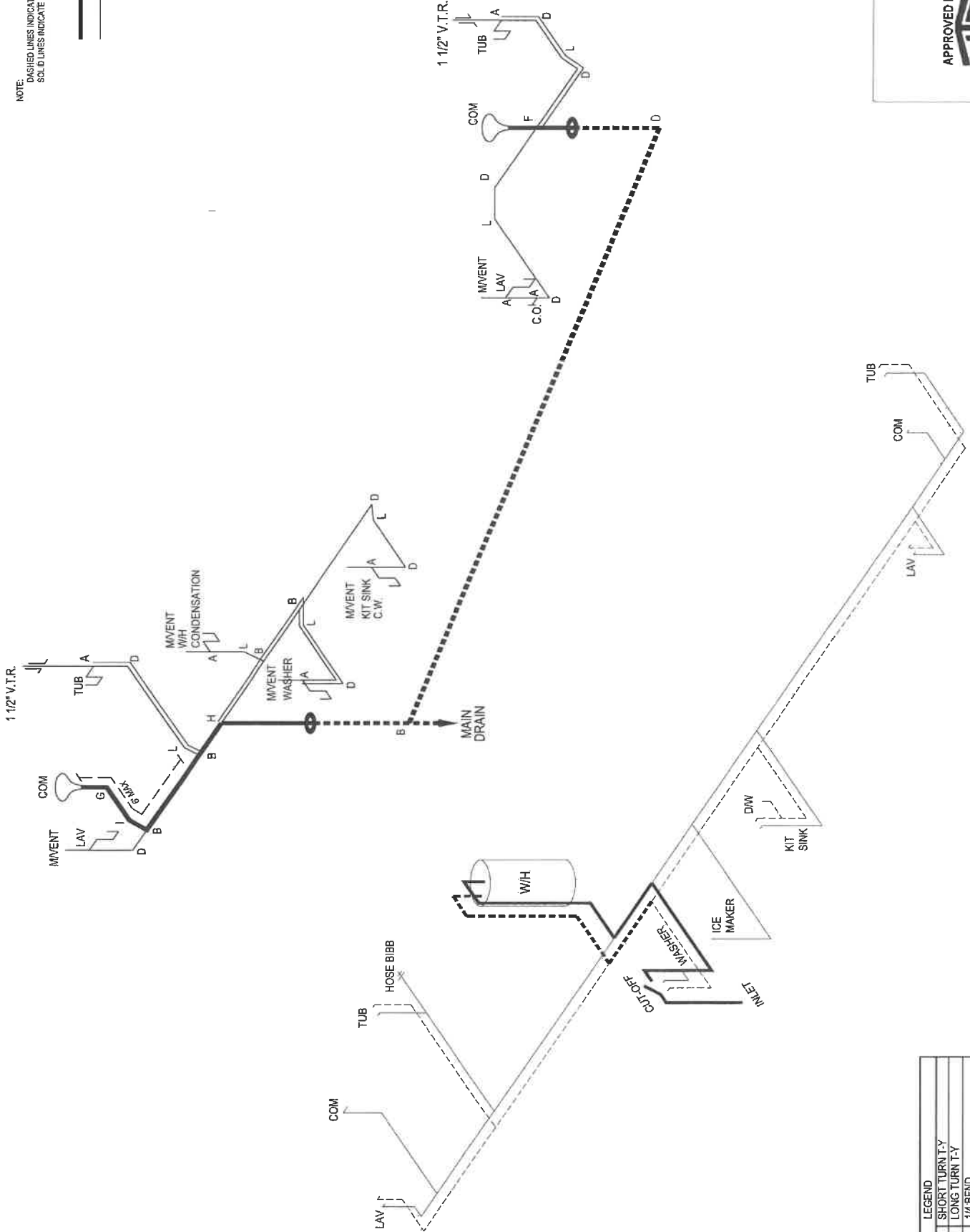


- NOTES:
- ALL CIRCUITS SHOWN ARE FOR REFERENCE AND MAY BE CHANGED BASED ON OPTIONAL COMPONENTS INSTALLED IN THE HOME.
 - REFER TO DAPA MANUAL FOR SYMBOL CHART.
 - EF-1- 50 CFM EXHAUST FAN REQUIRED FOR THERMAL ZONE III.
 - EF-2- 50 CFM EXHAUST FAN REQUIRED FOR THERMAL ZONE III.
 - EF-3- 50 CFM EXHAUST FAN REQUIRED FOR THERMAL ZONE I, II, AND III.
 - EF-4- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-5- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-6- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-7- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-8- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-9- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-10- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-11- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-12- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-13- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-14- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-15- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-16- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-17- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-18- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-19- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-20- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-21- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-22- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-23- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-24- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-25- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-26- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-27- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-28- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-29- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-30- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-31- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-32- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-33- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-34- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-35- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-36- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-37- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-38- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-39- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-40- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-41- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-42- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-43- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-44- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-45- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-46- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-47- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-48- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-49- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 - EF-50- 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.

CIRCUIT	CIRCUIT #	WIRE	BREAKER	CIRCUIT	CIRCUIT #	WIRE	BREAKER	CIRCUIT	CIRCUIT #	WIRE	BREAKER
LIGHT/RECP	1A, 3A, 13B, 14A	14-2	15-SP	DRYER	5A, 7B	SEE NOTE #8	SEE NOTE #8	BATHROOM	16A	12-2	20-SP
LIGHT/RECP	1B, 3B, 14B	14-2	15-SP	WATER HEATER	4A, 6B	SEE NOTE #8	SEE NOTE #8	OPT GDISP	9B	SEE NOTE #8	SEE NOTE #8
KITCHEN	2A, 2B	12-2	20-SP	RANGE	5B, 7A	SEE NOTE #8	SEE NOTE #8	OPT SPN WP/JAC	11A, B	SEE NOTE #8	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	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	SEE NOTE #8
OPT. GAS RANG	15A	SEE NOTE #8	SEE NOTE #8	SMOKE/CO DET.	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	DBL. SANITARY TEE
G	4x3 CLOSET ELL
H	DOUBLE ELL
I	22 1/2° ELL
J	45° Y
K	LONG TURN STREET ELBOW

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

APPROVED BY
NIA INC.
8/28/2025
FEDERAL MANUFACTURED HOME
CONSTRUCTION AND SAFETY STANDARDS

MP-14.TRU-1476-32-1.3



REVISION	DATE

MODEL NAME	Magnolia
MODEL NO.	TRT14763M
BOX SIZE	14' X 76'
MODEL SQ. FT.	1000

DRAWN BY	DUSTIN HARVILLE
DATE DRAWN	1/30/2025

DATE PRINTED	7/24/2025
--------------	-----------

SCALE	3/16"=1'
-------	----------

PLAN NO.	TRU-1476-32-1
----------	---------------

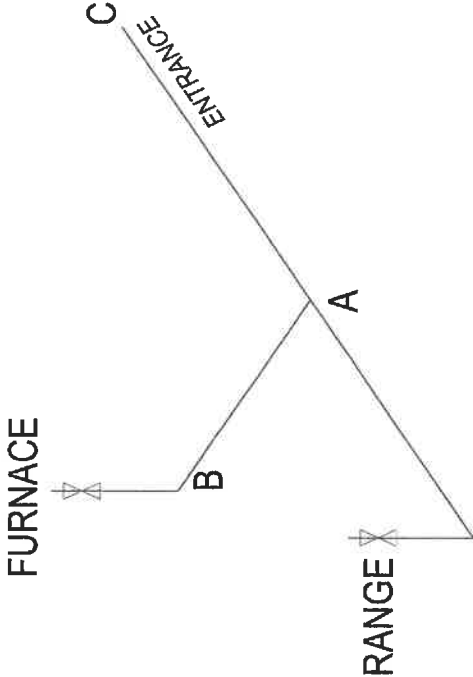
SHEET NAME	D.W.V. & SUPPLY
------------	-----------------

SHEET NO.	PI -1
-----------	-------

Path:\Product Design\DWG Files\TRU\TRU-1476-32-1.dwg, Last Saved By:HarvilleD, Saved Date:7/24/2025 9:06 AM

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"	
Σ	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

APPROVED BY
8/28/2025
NIA INC.
FEDERAL MANUFACTURED HOME
CONSTRUCTION AND SAFETY STANDARDS

DATE PRINTED
7/24/2025
SCALE
3/16"=1'
PLAN NO.
TRU-1476-32-1
SHEET NAME
GAS
LINES
SHEET NO.
PI -4

DATE DRAWN
1/30/2025

DRAWN BY
DUSTIN HARVILLE

MODEL NAME
Magnolia
MODEL NO.
TRT14763M
BOX SIZE
14' X 76'
MODEL SQ. FT.
1000

Path: A:\Product Design\DWG Files\TRU\TRU-1476-32-1.dwg, Last Saved By: HarvilleD, Saved Date: 7/24/2025 9:06 AM



Project Information

For: TRU-1476-32-1-FDJ, TRU

Cooling Equipment

Design Conditions

Outdoor design DB:	90.4°F	Sensible gain:	11829	Btuh	Entering coil DB:	77.6°F
Outdoor design WB:	73.3°F	Latent gain:	3599	Btuh	Entering coil WB:	64.4°F
Indoor design DB:	75.0°F	Total gain:	15428	Btuh		
Indoor RH:	50%	Estimated airflow:	580	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Smart Comfort	Model:	R4H5S18*K*AAA*+FEVA0024**+NAVA43601CK
Actual airflow:	580	cfm	
Sensible capacity:	13182	Btuh	111% of load
Latent capacity:	3633	Btuh	101% of load
Total capacity:	16815	Btuh	109% of load SHR: 78%

Heating Equipment

Design Conditions

Outdoor design DB:	21.0°F	Heat loss:	18780	Btuh	Entering coil DB:	61.8°F
Indoor design DB:	70.0°F					

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Smart Comfort	Model:	R4H5S18*K*AAA*+FEVA0024**+NAVA43601CK
Actual airflow:	580	cfm	
Output capacity:	16800	Btuh	89% of load
Supplemental heat required:	1980	Btuh	
		Capacity balance:	29 °F
		Economic balance:	-99 °F

Backup equipment type:	Elec strip		
Manufacturer:	Smart Comfort	Model:	FEVA002410
Actual airflow:	580	cfm	
Output capacity:	10.0	KW	182% of load Temp. rise: 55 °F

Meets all requirements of ACCA Manual S.

APPROVED BY

 8/28/2025
 FEDERAL MANUFACTURED HOME
 CONSTRUCTION AND SAFETY STANDARDS



Project Summary

Entire House

Clayton Homes

Job: TRU-1476-32-1-FDJ
Date:
By:

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

Project Information

For: TRU-1476-32-1-FDJ, TRU

Notes: Duct Capacity: 19,333 Btuh's

APPROVED BY



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 13835 Btuh
Ducts 0 Btuh
Central vent (95 cfm) 4945 Btuh
Outside air
Humidification 0 Btuh
Piping 0 Btuh
Equipment load 18780 Btuh

Infiltration

Method Simplified
Construction quality Average
Fireplaces 0

	Heating	Cooling
Area (ft²)	1036	1036
Volume (ft³)	8288	8288
Air changes/hour	0.45	0.23
Equiv. AVF (cfm)	62	32

Heating Equipment Summary

Make Smart Comfort
Trade 15 SEER2 R SERIES R410A HP
Model R4H5S18*K*AAA*
AHRI ref 210537859
Efficiency 7.5 HSPF2
Heating input
Heating output 16800 Btuh @ 47°F
Temperature rise 27 °F
Actual air flow 580 cfm
Air flow factor 0.042 cfm/Btuh
Static pressure 0.30 in H2O
Space thermostat
Capacity balance point = 29 °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 10275 Btuh
Ducts 0 Btuh
Central vent (95 cfm) 1554 Btuh
Outside air
Blower 0 Btuh
Use manufacturer's data n
Rate/swing multiplier 0.95
Equipment sensible load 11285 Btuh

Latent Cooling Equipment Load Sizing

Structure 1501 Btuh
Ducts 0 Btuh
Central vent (95 cfm) 2097 Btuh
Outside air
Equipment latent load 3599 Btuh

Equipment Total Load (Sen+Lat) 14884 Btuh
Req. total capacity at 0.70 SHR 1.3 ton

Cooling Equipment Summary

Make Smart Comfort
Trade 15 SEER2 R SERIES R410A HP
Cond R4H5S18*K*AAA*
Coil FEVA0024**+NAVA43601CK
AHRI ref 210537859
Efficiency 12.0 EER2, 15 SEER2
Sensible cooling 12180 Btuh
Latent cooling 5220 Btuh
Total cooling 17400 Btuh
Actual air flow 580 cfm
Air flow factor 0.056 cfm/Btuh
Static pressure 0.30 in H2O
Load sensible heat ratio 0.77

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



wrightsoft®
A BILTUS® / Gerdau Building Technology Company

Right-Suite® Universal 2024 24.0.04 RSU55718

...MODELS\TRU-1476-32-1\TRU-1476-32-1-FDJ-ZERH.rup Calc = MJ8 Front Door faces: E

MP-14.TRU-1476-32-1.5.1

2025-Aug-18 07:24:09

Page 1

CLAYTON HOME BUILDING GROUP

MAGNOLIA

Model Number	TRT14763M	Drawing Number	TRU-1476-32-1	Version 24
--------------	-----------	----------------	---------------	------------

BOX SIZE: 13.17 ft. x 76 ft.

AVG. SIDEWALL HEIGHT = 8 FEET

PERCENTAGE OF CEILING THAT IS VAULTED = 31.6%

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

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



Window Glass Area:

	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	69.00	0.300	20.70
Option	0.00	0.300	0.00
Net:			
Floor	1000.67	0.044	43.63
Wall	1317.07	0.085	112.35
Ceiling	1000.67	0.0306	30.62
Ext. Duct	0.00	0.000	0.00
Th. Zone 1:			
Th. Zone 2:			
Th. Zone 3:			
Ext. Duct	0.00	0.000	0.00
Ext. Duct	0.00	0.000	0.00
Ext. Duct	0.00	0.000	0.00
Overhead TZ 1:			
Overhead TZ 2:			
Overhead TZ 3:			
Supply	0.00	0.000	0.00
Supply	0.00	0.000	0.00
Supply	0.00	0.00	0.00

Energy Star v3 & ZERH Max Glass (sq.ft)	
Th. Zone 1	272.1
Th. Zone 2	96.4
Th. Zone 3	0.0

Thermal Zone	Outdoor Design Temp (F)	UA	Uo	EStar v3 & ZERH Compliant	Heatloss BTUH/F
1	11	218.44	0.064	OK	343.30
2	0	218.44	0.064	OK	343.30
3	-14	218.44	0.064	NG	343.30

Design Temperatures	
Furnace Heating Temp (F)	Economy Outdoor Temp (F)
-29	0
-49	-13
-79	-34
-47	-12
-105	-52
-163	-93

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