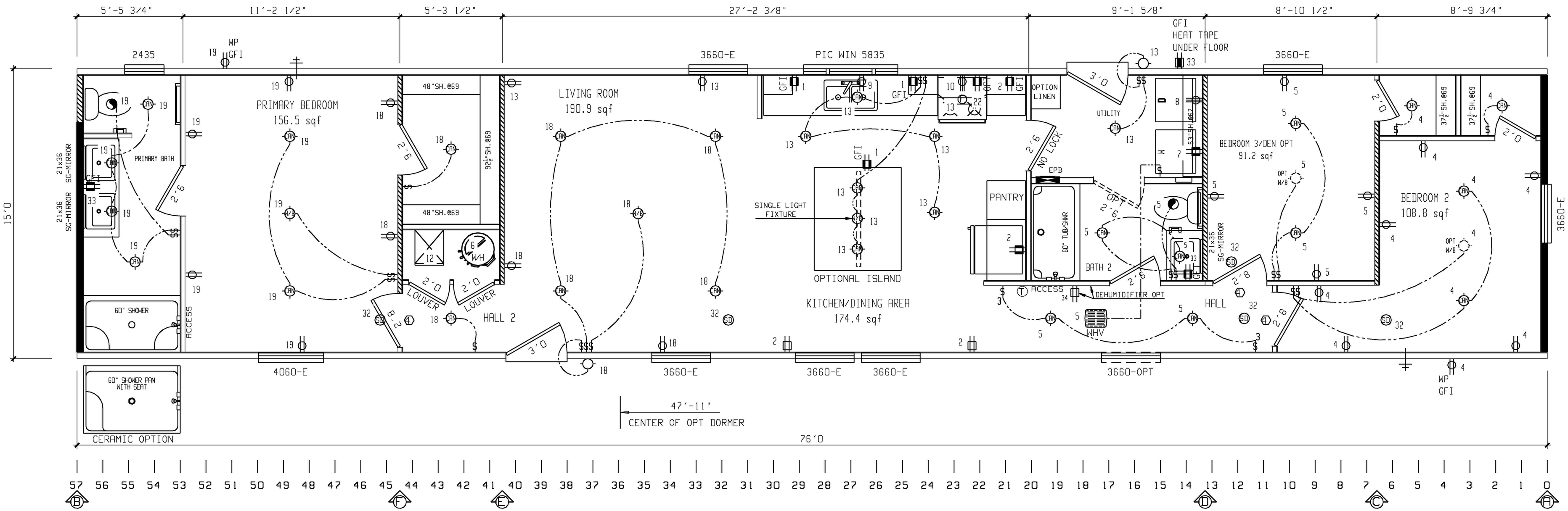
APPROVED BY
NTA INC.
FEDERAL MANUFACTURED HOME
CONSTRUCTION AND SAFETY STANDARDS

REVISED
3/3/2025



957-335.0

WIND-1		DIAPHRAGM = 232 PLF		WIND-2		DIAPHRAGM = 232 PLF		WIND-3		DIAPHRAGM = 232 PLF				DIAPHRAGM = PLF				DIAPHRAGM = PLF				DIAPHRAGM = PLF				DESIGN LOADS
SHEARWALL	DESIGN PLF	SHEAR AREA	JOISTS	SHEARWALL	DESIGN PLF	SHEAR AREA	JOISTS	SHEARWALL	DESIGN PLF	SHEAR AREA	JOISTS	SHEARWALL	DESIGN PLF	SHEAR AREA	JOISTS	SHEARWALL	DESIGN PLF	SHEAR AREA	JOISTS	SHEARWALL	DESIGN PLF	SHEAR AREA	JOISTS	SHEARWALL	DESIGN PLF	SHEAR AREA	JOISTS	WIND-ROOF PSF
A	210 PLF	134"	2	A	210 PLF	120"	2	A	210 PLF	120"	2	A				A				A				A				1-20
B	210 PLF	132"	2	B	210 PLF	112"	2	B	210 PLF	112"	2	B				B				B				B				2-20
C				C	210 PLF	102"	2	C	210 PLF	102"	2	C				C				C				C				3-20
D				D	350 PLF	124"	3	D	420 PLF	124"	3	D				D				D				D				
E				E	350 PLF	120"	3	E	420 PLF	120"	3	E				E				E				E				
F				F	210 PLF	103"	3	F	350 PLF	103"	5	F				F				F				F				
G				G				G				G				G				G				G				

RETURN AIR REQUIREMENTS

1. 20"x16" GRILL REQUIRED
2. 4"x10" GRILL W/ 2 1/2" DOOR UNDERCUT
3. DOOR(S) MUST BE UNDERCUT 2 1/2" MIN.
4. 4"x24" OR 6"x14" GRILL REQUIRED

◇# INDICATES REQUIRED NUMBER OF STUDS IN COLUMN

◇#* THE * SPECIFIES THAT THERE CAN BE NO HOLES IN STUDS IN COLUMNS

BRAND: CLAYTON
SERIES: FS16

CLAYTON
HOME BUILDING GROUP

REVISIONS	BY	DATE

GENERAL NOTES

- CEILING HEIGHT = 96.00
- REFER TO DAPIA PAGE MMP-2.0 FOR AREA LIGHT & VENT
- REFER TO DAPIA PAGE EL-1.2 FOR ELEC. SYMBOL & BRANCH CIRCUIT NUMBER
- FLOOR FRAMING SPACING = 16
- TOTAL WINDOW SQFT = 145

DRAWING TITLE: MASTER PLAN

MODEL NAME	SQ. FT.
335	1140

PLANT	DESCRIPTION	MODEL NO.
957	16X76 3BR-2BA	335

DRAWN BY	ORIG. DATE	DATE PRINTED	SHEET NO.
GDB	04/16/2024	03/03/2025	1-1

CMH Inc.
SHEARWALL DESIGN - HUD

APPROVED BY NTA INC. 4/23/2024
FEDERAL MANUFACTURED HOME CONSTRUCTION AND SAFETY STANDARDS

Model # 335

Box Width =	180 "	Single wide	Minimum Joist Spacing 16 "
Box Length =	76 ft.	99.5" 10" MIN.IBEAM	No Offset Box
No Skylights			No Clerestory
No Porches			No Origami Dormer
Joist Size =	#2 spf 2x6	Lags 9Mx3"	No Sunken Floor
			No Parapet Roof

Version R13.20

Wind Zone 1 Standard Roof — 96 inch sidewall

Diaphragm Construction: (3/8" sheathing w/ceiling with 16ga. @ 4/8 oc) [232 plf] Chords: 2x4 SPF #3 Top Plate & 2x4 Rail. Each spliced w/ 12" glue block.

Shearwall	Dist./ Hitch	Length	PLF	# of Joists	Lags	Notes	SW1/SW2
A	0 '	134 "	210	2	2/2	Split Shearwall	67/67
B	76 '	132 "	210	2	2/1		

Wind Zone 2 Standard Roof — 96 inch sidewall

Diaphragm Construction: (3/8" sheathing w/ceiling with 16ga. @ 4/8 oc) [232 plf] Chords: 2x4 SPF #3 Top Plate & 2x4 Rail. Each spliced w/ 12" glue block.

Shearwall	Dist./ Hitch	Length	PLF	# of Joists	Lags	Notes	SW1/SW2
A	0 '	120 "	210	2	1/1	Split Shearwall	60/60
B	76.08 '	112 "	210	2	2/1		
C	8.83 '	102 "	210	2	1/1	Island Shearwall	
D	17.75 '	124 "	350	3	3/1		
E	54.08 '	120 "	350	3	3/1		
F	59.41 '	103 "	210	3	2/2	Split Shearwall	73/30

Wind Zone 3 Standard Roof — 96 inch sidewall

Diaphragm Construction: (3/8" sheathing w/ceiling with 16ga. @ 4/8 oc) [232 plf] Chords: 2x4 SPF #3 Top Plate & 2x4 Rail. Each spliced w/ 12" glue block.

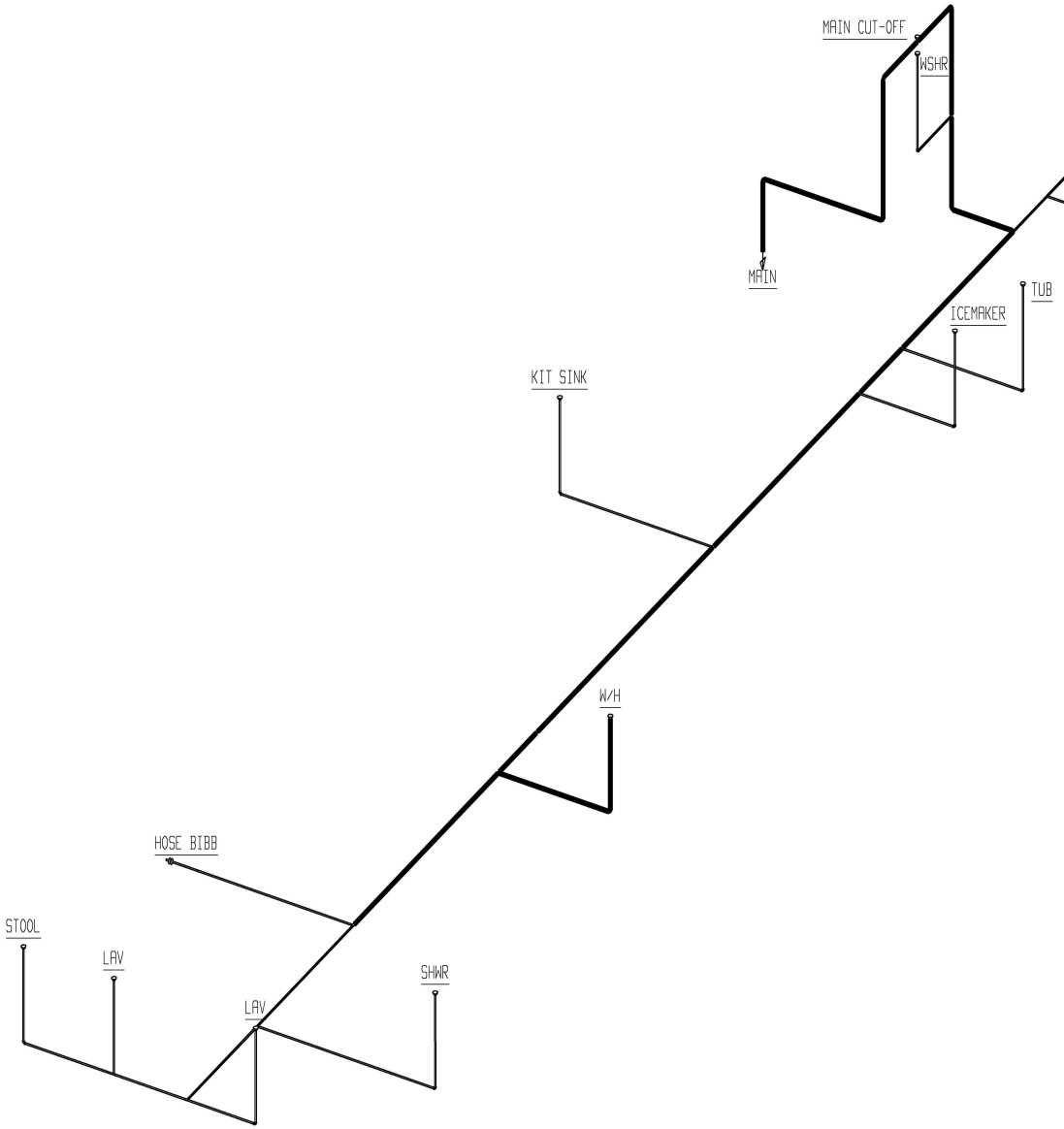
Shearwall	Dist./ Hitch	Length	PLF	# of Joists	Lags	Notes	SW1/SW2
A	0 '	120 "	210	2	1/1	Split Shearwall	60/60
B	76.08 '	112 "	210	2	2/1		
C	8.83 '	102 "	210	2	2/2	Island Shearwall	
D	17.75 '	124 "	420	3	4/1		
E	54.08 '	120 "	420	3	4/1		
F	59.41 '	103 "	350	5	2/2	Split Shearwall	73/30

Diaphragm Construction: (3/8" sheathing w/ceiling with 16ga. @ 4/8 oc) [232 plf] Chords: 2x4 SPF #3 Top Plate & 2x4 Rail. Each spliced w/ 12" glue block.

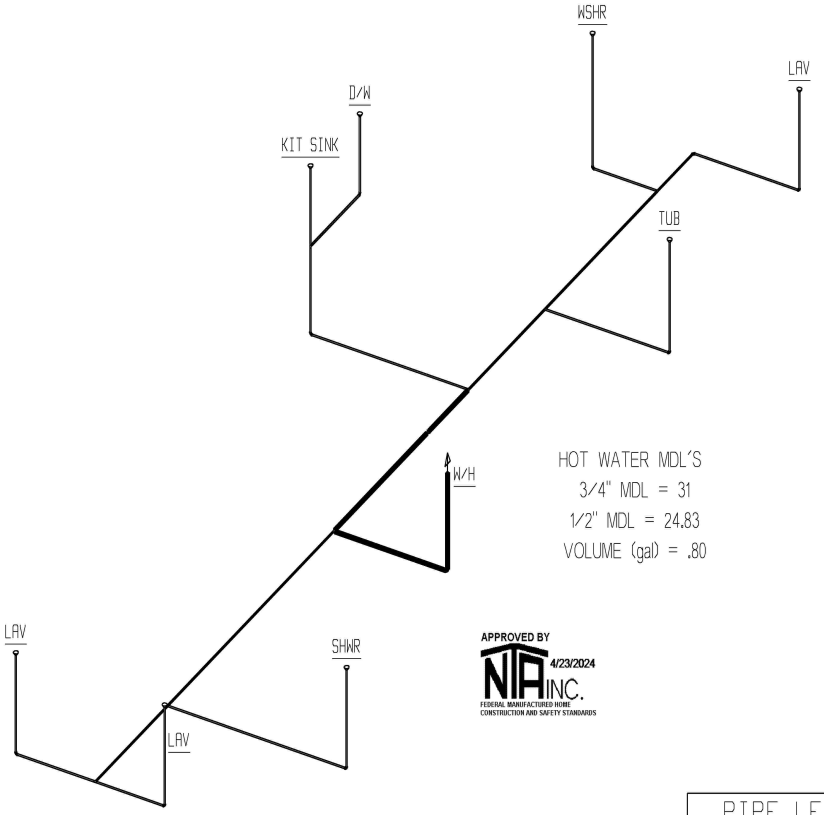
Shearwall	Dist./ Hitch	Length	PLF	# of Joists	Lags	Notes

Designed by GDB

957-335.0.1



COLD WATER SUPPLY PLUMBING



HOT WATER MDL'S
3/4" MDL = 31
1/2" MDL = 24.83
VOLUME (gal) = .80

APPROVED BY NTA INC. 4/23/2024
FEDERAL MANUFACTURED HOME CONSTRUCTION AND SAFETY STANDARDS

957-335.1

HOT WATER SUPPLY PLUMBING

PIPE LEGEND

1"

3/4"

1/2"

BRAND	SERIES
CLAYTON	FS16

CLAYTON HOME BUILDING GROUP

REVISIONS	BY	DATE

GENERAL NOTES

HOSE BIBBS PER SPECS

DRAWING TITLE

SUPPLY PLUMBING

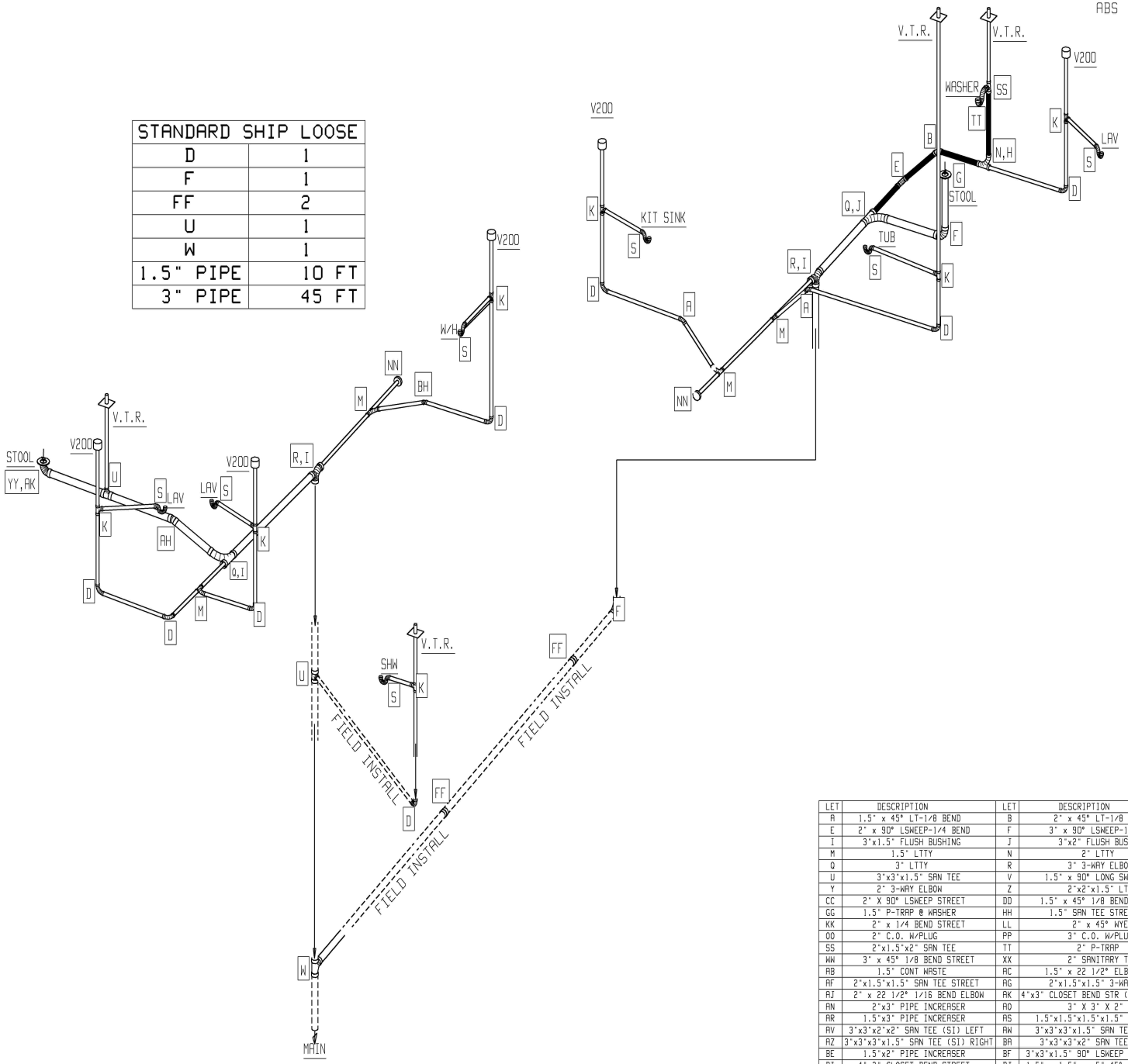
MODEL NAME			SQ. FT.
335			1140
PLANT	DESCRIPTION		MODEL NO.
957	16X76 3BR-2BA		335
DRAWN BY	ORIG. DATE	DATE PRINTED	SHEET NO.
GDB	04/16/2024	04/19/2024	9-1

PIPING AND FITTING MATERIAL TYPE TO BE:
ABS (ACRYLONITRILE-BUTADIENE-STYRENE)
OR PVC (POLYVINYL CHLORIDE)

PIPE LEGEND

1 1/2"	
2"	
3"	

STANDARD SHIP LOOSE	
D	1
F	1
FF	2
U	1
W	1
1.5" PIPE	10 FT
3" PIPE	45 FT



APPROVED BY
NTA INC. 4/23/2024
FEDERAL MANUFACTURED HOME CONSTRUCTION AND SAFETY STANDARDS

957-335.2

LET	DESCRIPTION	LET	DESCRIPTION	LET	DESCRIPTION	LET	DESCRIPTION
A	1.5" x 45° LT-1/8 BEND	B	2" x 45° LT-1/8 BEND	C	3" x 45° LT-1/8 BEND	D	1.5" x 90° LONG SWEEP-1/4 BEND
E	2" x 90° LSWEEP-1/4 BEND	F	3" x 90° LSWEEP-1/4 BEND	G	4"x3" CLOSET FLANGE	H	2"x1.5" FLUSH BUSHING
I	3"x1.5" FLUSH BUSHING	J	3"x2" FLUSH BUSHING	K	1.5" SANITARY TEE	L	2"x1.5"x1.5" SAN TEE
M	1.5" LTTY	N	2" LTTY	O	3"x3"x1.5" LTTY	P	3"x3"x2" LTTY
Q	3" LTTY	R	3" 3-WAY ELBOW	S	1.5"x1.5" P-TRAP	T	3"x3"x1.5"x1.5" DBL SAN TEE
U	3"x3"x1.5" SAN TEE	V	1.5" x 90° LONG SWEEP STREET	W	3" SANITARY TEE	X	3"x3"x1.5" WYE
Y	2" 3-WAY ELBOW	Z	2"x2"x1.5" LTTY	AA	3"x3"x2" SAN TEE	BB	1.5" x 45° WYE
CC	2" X 90° LSWEEP STREET	DD	1.5" x 45° 1/8 BEND STREET	EE	1.5" COUPLING	FF	3" COUPLING
GG	1.5" P-TRAP @ WASHER	HH	1.5" SAN TEE STREET	II	2"x1.5"x1.5" LTTY	JJ	2"x1.5"x2" LTTY
KK	2" x 1/4 BEND STREET	LL	2" x 45° WYE	MM	3" DBL SAN TEE	NN	1.5" C.O. W/PLUG
OO	2" C.O. W/PLUG	PP	3" C.O. W/PLUG	QQ	2"x2"x1.5" WYE REDUCING	RR	1.5" 1/4 BEND
SS	2"x1.5"x2" SAN TEE	TT	2" P-TRAP	UU	2" x 45° 1/8 BEND STREET	VV	2" COUPLING
WW	3" x 45° 1/8 BEND STREET	XX	2" SANITARY TEE	YY	4" CLOSET FLANGE	ZZ	4" COUPLING
AB	1.5" CONT WASTE	AC	1.5" x 22 1/2° ELBOW STREET	AD	2" x 22 1/2° ELBOW STREET	AE	3"x3"x2"x2" DBL SAN TEE
AF	2"x1.5"x1.5" SAN TEE STREET	AG	2"x1.5"x1.5" 3-WAY ELBOW	AH	3" x 22 1/2° 1/16 BEND ELBOW	AI	1.5" 3-WAY ELBOW
AJ	2" x 22 1/2° 1/16 BEND ELBOW	AK	4"x3" CLOSET BEND STR (CUT DOWN 1.5")	AL	3"x3"x3" WYE	AM	3" 1/4 BEND
AN	2"x3" PIPE INCREASER	AO	3" X 3" X 2" WYE	AP	2" 1/4 BEND	AQ	2"x2"x2"x2" DBL SAN TEE
AR	1.5"x3" PIPE INCREASER	AS	1.5"x1.5"x1.5"x1.5" DBL SAN TEE	AT	3" DOUBLE FIXTURE TEE	AU	2"x2"x1.5"x1.5" DBL SAN TEE
AV	3"x3"x2"x2" SAN TEE (SI) LEFT	AW	3"x3"x3"x1.5" SAN TEE (SI) LEFT	AX	3"x3"x3"x2" SAN TEE (SI) LEFT	AY	3"x3"x2"x2" SAN TEE (SI) RIGHT
AZ	3"x3"x3"x1.5" SAN TEE (SI) RIGHT	BA	3"x3"x3"x2" SAN TEE (SI) RIGHT	BC	3"x3"x3"x2"x2" SAN TEE DBL(SI)	BD	3"x3"x3"x1.5"x1.5" SAN T DBL(SI)
BE	1.5"x2" PIPE INCREASER	BF	3"x3"x1.5" 90° LSWEEP LOW HEEL INLET	BG	3"x3"x2" 90° LSWEEP LOW HEEL INLET	BH	1.5" x 22 1/2° 1/16 BEND ELBOW
BI	4"x3" CLOSET BEND STREET	BJ	1.5" x 1.5" x .5" 45° APPLIANCE WYE	BK		BL	

BRAND: CLAYTON
SERIES: FS16

CLAYTON HOME BUILDING GROUP

REVISIONS	BY	DATE

GENERAL NOTES

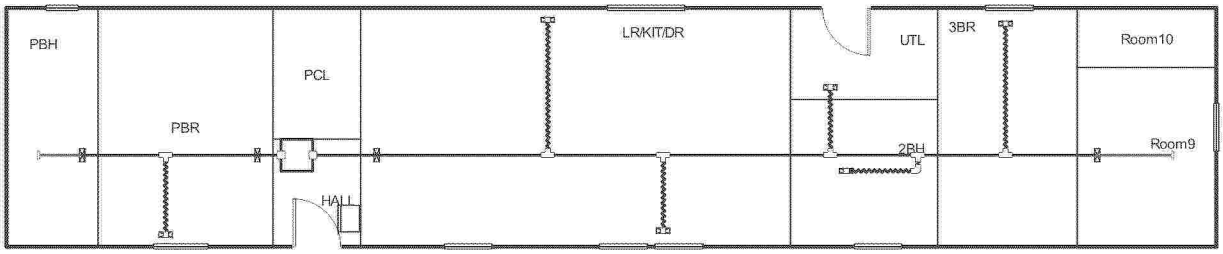
DRAWING TITLE
DWV SCHEMATIC

MODEL NAME: 335
SQ. FT.: 1140

PLANT	DESCRIPTION	MODEL NO.
957	16X76 3BR-2BA	335

DRAWN BY	ORIG. DATE	DATE PRINTED	SHEET NO.
GDB	04/16/2024	04/19/2024	8-1

Level 1



APPROVED BY
NTA INC. 4/23/2024
FEDERAL MANUFACTURED HOME
CONSTRUCTION AND SAFETY STANDARDS

957-335.4.1

Job #: 335(I) **Performed by CLAYTON ROCKWELL for:** MODEL NUMBER HERE ROCKWELL, NC		Scale: 1 : 136 Page 1 Right-Suite® Universal 2023 23.0.04 RSU28036 2024-Apr-18 09:48:07 ...Clayton Homes\Desktop\335(I).rup

wrightsoft

Manual S Compliance Report
Entire House

Job: 335(l)
Date: Apr 18, 2024
By: CLAYTON ROCKWELL

Project Information

For: MODEL NUMBER HERE, CLAYTON 957
ROCKWELL, NC

Cooling Equipment

Design Conditions

Outdoor design DB:	94.7°F	Sensible gain:	16806	Btuh	Entering coil DB:	76.5°F
Outdoor design WB:	75.9°F	Latent gain:	4169	Btuh	Entering coil WB:	63.7°F
Indoor design DB:	75.0°F	Total gain:	20975	Btuh		
Indoor RH:	50%	Estimated airflow:	813	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type: Split ASHP
Manufacturer: Smart Comfort Model: R4H5S24*K*AAA*+FEVA0036**+NAVA43601CK

Actual airflow:	813	cfm		
Sensible capacity:	17080	Btuh	102% of load	
Latent capacity:	7320	Btuh	176% of load	
Total capacity:	24400	Btuh	116% of load	SHR: 70%

Heating Equipment

Design Conditions

Outdoor design DB:	25.8°F	Heat loss:	19252	Btuh	Entering coil DB:	66.7°F
Indoor design DB:	70.0°F					

Manufacturer's Performance Data at Actual Design Conditions

Equipment type: Split ASHP
Manufacturer: Smart Comfort Model: R4H5S24*K*AAA*+FEVA0036**+NAVA43601CK

Actual airflow:	813	cfm			
Output capacity:	23000	Btuh	119% of load	Capacity balance:	23 °F
Supplemental heat required:	0	Btuh		Economic balance:	-99 °F

Backup equipment type: Elec strip
Manufacturer: Smart Comfort Model:

Actual airflow:	813	cfm			
Output capacity:	10.0	kW	177% of load	Temp. rise:	38 °F

Meets all requirements of ACCA Manual S.

APPROVED BY NTA INC. 4/23/2024
FEDERAL MANUFACTURED HOME CONSTRUCTION AND SAFETY STANDARDS

wrightsoft

Project Summary
Entire House

APPROVED BY
NTA INC. 4/23/2024
FEDERAL MANUFACTURED HOME CONSTRUCTION AND SAFETY STANDARDS

Job: 335(I)
Date: Apr 18, 2024
By: CLAYTON ROCKWELL

Project Information

For: MODEL NUMBER HERE, CLAYTON 957
ROCKWELL, NC

Notes: DUCT COOLING CAPACITY = 27,100 BTU/HR
REFER TO MODEL PLAN FOR THERMAL ZONE CALCULATIONS

Design Information

Weather: Fort Bragg/Simmons, NC, US

Winter Design Conditions

Outside db	26	°F
Inside db	70	°F
Design TD	44	°F

Summer Design Conditions

Outside db	95	°F
Inside db	75	°F
Design TD	20	°F
Daily range	M	
Relative humidity	50	%
Moisture difference	41	gr/lb

Heating Summary

Structure	12957	Btuh
Ducts	3404	Btuh
Central vent (60 cfm)	***2892***	Btuh
Outside air		
Humidification	0	Btuh
Piping	0	Btuh
Equipment load	19252	Btuh

Sensible Cooling Equipment Load Sizing

Structure	12364	Btuh
Ducts	3153	Btuh
Central vent (60 cfm)	***1289***	Btuh
Outside air		
Blower	0	Btuh
Use manufacturer's data	n	
Rate/swing multiplier	1.00	
Equipment sensible load	16755	Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

	Heating	Cooling
Area (ft²)	1140	1140
Volume (ft³)	9120	9120
Air changes/hour	0.45	0.23
Equiv. AVF (cfm)	74	41

Latent Cooling Equipment Load Sizing

Structure	1934	Btuh
Ducts	591	Btuh
Central vent (60 cfm)	***1644***	Btuh
Outside air		
Equipment latent load	4169	Btuh
Equipment Total Load (Sen+Lat)	20924	Btuh
Req. total capacity at 0.70 SHR	2.0	ton

Heating Equipment Summary

Make	Smart Comfort
Trade	15 SEER2 R SERIES R410A HP
Model	R4H5S24*K*AAA*
AHRI ref	0

Efficiency	7.5 HSPF2	
Heating input		
Heating output	23000	Btuh @ 47°F
Temperature rise	26	°F
Actual air flow	813	cfm
Air flow factor	0.050	cfm/Btuh
Static pressure	0.30	in H2O

Space thermostat
Capacity balance point = 23 °F

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

Cooling Equipment Summary

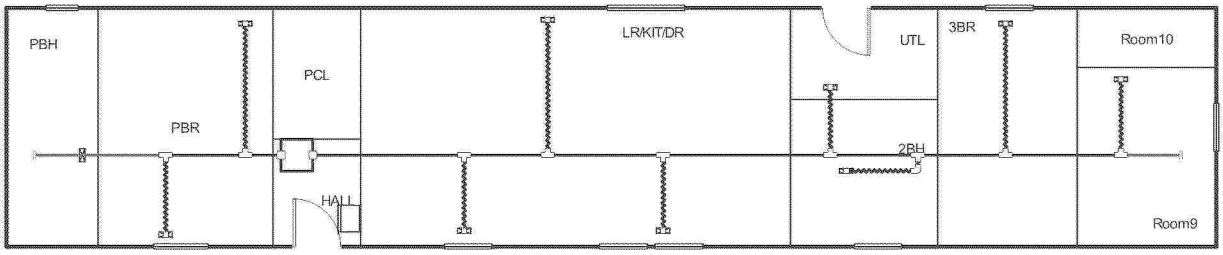
Make	Smart Comfort
Trade	15 SEER2 R SERIES R410A HP
Cond	R4H5S24*K*AAA*
Coil	FEVA0036**+NAVA43601CK
AHRI ref	0

Efficiency	12.0 EER2,15.2 SEER2	
Sensible cooling	17080	Btuh
Latent cooling	7320	Btuh
Total cooling	24400	Btuh
Actual air flow	813	cfm
Air flow factor	0.052	cfm/Btuh
Static pressure	0.30	in H2O
Load sensible heat ratio	0.80	

Bold/italic values have been manually overridden

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

Level 1



APPROVED BY
NTA INC. 4/23/2024
FEDERAL MANUFACTURED HOME
CONSTRUCTION AND SAFETY STANDARDS

957-335.4.4

Job #: 335(P)
Performed by CLAYTON ROCKWELL for:
MODEL NUMBER HERE

ROCKWELL, NC

Scale: 1 : 136

Right-Suite® Universal 2023
23.0.04 RSU28036
2024-Apr-18 09:44:37
...Clayton Homes\Desktop\335(P).rup

wrightsoft

Project Summary
Entire House

APPROVED BY
NTA INC. 4/23/2024
FEDERAL MANUFACTURED HOME CONSTRUCTION AND SAFETY STANDARDS

Job: 335(P)
Date: Apr 18, 2024
By: CLAYTON ROCKWELL

Project Information

For: MODEL NUMBER HERE, CLAYTON 957
ROCKWELL, NC

Notes: DUCT COOLING CAPACITY = 27,100 BTU/HR
REFER TO MODEL PLAN FOR THERMAL ZONE CALCULATIONS

Design Information

Weather: Fort Bragg/Simmons, NC, US

Winter Design Conditions

Outside db	26	°F
Inside db	70	°F
Design TD	44	°F

Summer Design Conditions

Outside db	95	°F
Inside db	75	°F
Design TD	20	°F
Daily range	M	
Relative humidity	50	%
Moisture difference	41	gr/lb

Heating Summary

Structure	14058	Btuh
Ducts	3404	Btuh
Central vent (60 cfm)	***2892***	Btuh
Outside air		
Humidification	0	Btuh
Piping	0	Btuh
Equipment load	20353	Btuh

Sensible Cooling Equipment Load Sizing

Structure	12336	Btuh
Ducts	3153	Btuh
Central vent (60 cfm)	***1289***	Btuh
Outside air		
Blower	0	Btuh
Use manufacturer's data	n	
Rate/swing multiplier	1.00	
Equipment sensible load	16728	Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

	Heating	Cooling
Area (ft²)	1140	1140
Volume (ft³)	9120	9120
Air changes/hour	0.45	0.23
Equiv. AVF (cfm)	74	41

Latent Cooling Equipment Load Sizing

Structure	1934	Btuh
Ducts	591	Btuh
Central vent (60 cfm)	***1644***	Btuh
Outside air		
Equipment latent load	4169	Btuh
Equipment Total Load (Sen+Lat)	20897	Btuh
Req. total capacity at 0.70 SHR	2.0	ton

Heating Equipment Summary

Make	Smart Comfort
Trade	15 SEER2 R SERIES R410A HP
Model	R4H5S24*K*AAA*
AHRI ref	0

Efficiency	7.5 HSPF2	
Heating input		
Heating output	23000	Btuh @ 47°F
Temperature rise	26	°F
Actual air flow	813	cfm
Air flow factor	0.047	cfm/Btuh
Static pressure	0.30	in H2O

Space thermostat
Capacity balance point = 25 °F

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

Cooling Equipment Summary

Make	Smart Comfort
Trade	15 SEER2 R SERIES R410A HP
Cond	R4H5S24*K*AAA*
Coil	FEVA0036**+NAVA43601CK
AHRI ref	0

Efficiency	12.0 EER2,15.2 SEER2	
Sensible cooling	17080	Btuh
Latent cooling	7320	Btuh
Total cooling	24400	Btuh
Actual air flow	813	cfm
Air flow factor	0.053	cfm/Btuh
Static pressure	0.30	in H2O
Load sensible heat ratio	0.80	

957-335.4.5

Bold/italic values have been manually overridden

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

wrightsoft

Manual S Compliance Report
Entire House

Job: 335(P)
Date: Apr 18, 2024
By: CLAYTON ROCKWELL

Project Information

For: MODEL NUMBER HERE, CLAYTON 957
ROCKWELL, NC

Cooling Equipment

Design Conditions

Outdoor design DB:	94.7°F	Sensible gain:	16778	Btuh	Entering coil DB:	76.5°F
Outdoor design WB:	75.9°F	Latent gain:	4169	Btuh	Entering coil WB:	63.7°F
Indoor design DB:	75.0°F	Total gain:	20947	Btuh		
Indoor RH:	50%	Estimated airflow:	813	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type: Split ASHP
Manufacturer: Smart Comfort Model: R4H5S24*K*AAA*+FEVA0036**+NAVA43601CK

Actual airflow:	813	cfm		
Sensible capacity:	17080	Btuh	102% of load	
Latent capacity:	7320	Btuh	176% of load	
Total capacity:	24400	Btuh	116% of load	SHR: 70%

Heating Equipment

Design Conditions

Outdoor design DB:	25.8°F	Heat loss:	20353	Btuh	Entering coil DB:	66.7°F
Indoor design DB:	70.0°F					

Manufacturer's Performance Data at Actual Design Conditions

Equipment type: Split ASHP
Manufacturer: Smart Comfort Model: R4H5S24*K*AAA*+FEVA0036**+NAVA43601CK

Actual airflow:	813	cfm				
Output capacity:	23000	Btuh	113% of load		Capacity balance:	25 °F
Supplemental heat required:	0	Btuh			Economic balance:	-99 °F

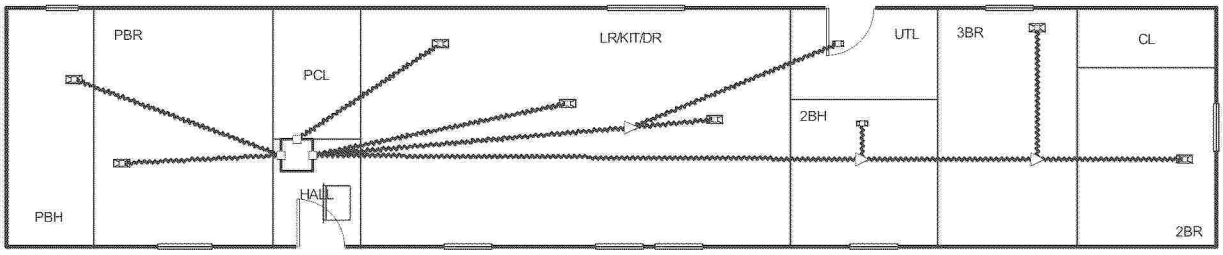
Backup equipment type: Elec strip
Manufacturer: Smart Comfort Model:

Actual airflow:	813	cfm				
Output capacity:	10.0	kW	168% of load	Temp. rise:	38	°F

Meets all requirements of ACCA Manual S.

APPROVED BY NTA INC. 4/23/2024
FEDERAL MANUFACTURED HOME CONSTRUCTION AND SAFETY STANDARDS

Level 1



APPROVED BY
NTA INC. 4/23/2024
FEDERAL MANUFACTURED HOME
CONSTRUCTION AND SAFETY STANDARDS

957-335.4.7

Job #: 335(OHVD) **Performed by CLAYTON ROCKWELL for:** 335((OHVD) ROCKWELL, NC		Scale: 1 : 136 Page 1 Right-Suite® Universal 2023 23.0.04 RSU28036 2024-Apr-18 12:56:04 ...yton Homes\Desktop\335(OHVD).rup

wrightsoft

Project Summary
Entire House

APPROVED BY
NTA INC. 4/23/2024
FEDERAL MANUFACTURED HOME CONSTRUCTION AND SAFETY STANDARDS

Job: 335(OHVD)
Date: Apr 18, 2024
By: CLAYTON ROCKWELL

Project Information

For: 335((OHVD), CLAYTON 957
ROCKWELL, NC

Notes: DUCT COOLING CAPACITY = 26,000 BTU/HR
REFER TO MODEL PLAN FOR THERMAL ZONE CALCULATIONS

Design Information

Weather: Gainesville Regional, FL, US

Winter Design Conditions

Outside db	33	°F
Inside db	70	°F
Design TD	37	°F

Summer Design Conditions

Outside db	92	°F
Inside db	75	°F
Design TD	17	°F
Daily range	M	
Relative humidity	50	%
Moisture difference	44	gr/lb

Heating Summary

Structure	10773	Btuh
Ducts	2711	Btuh
Central vent (60 cfm)	***2418***	Btuh
Outside air		
Humidification	0	Btuh
Piping	0	Btuh
Equipment load	15902	Btuh

Sensible Cooling Equipment Load Sizing

Structure	11715	Btuh
Ducts	2562	Btuh
Central vent (60 cfm)	***1130***	Btuh
Outside air		
Blower	0	Btuh
Use manufacturer's data	n	
Rate/swing multiplier	0.97	
Equipment sensible load	14976	Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

	Heating	Cooling
Area (ft²)	1140	1140
Volume (ft³)	9120	9120
Air changes/hour	0.45	0.23
Equiv. AVF (cfm)	74	41

Latent Cooling Equipment Load Sizing

Structure	2028	Btuh
Ducts	623	Btuh
Central vent (60 cfm)	***1779***	Btuh
Outside air		
Equipment latent load	4429	Btuh
Equipment Total Load (Sen+Lat)	19406	Btuh
Req. total capacity at 0.70 SHR	1.8	ton

Heating Equipment Summary

Make	Smart Comfort
Trade	15 SEER2 R SERIES R410A HP
Model	R4H5S24*K*AAA*
AHRI ref	0

Efficiency	7.5 HSPF2	
Heating input		
Heating output	22800	Btuh @ 47°F
Temperature rise	27	°F
Actual air flow	780	cfm
Air flow factor	0.058	cfm/Btuh
Static pressure	0.30	in H2O

Space thermostat
Capacity balance point = 25 °F

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

Cooling Equipment Summary

Make	Smart Comfort
Trade	15 SEER2 R SERIES R410A HP
Cond	R4H5S24*K*AAA*
Coil	FEVA0024**+NAVA43601CK
AHRI ref	0

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	0.055	cfm/Btuh
Static pressure	0.30	in H2O
Load sensible heat ratio	0.78	

Bold/italic values have been manually overridden

957-335.4.8

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

wrightsoft

Manual S Compliance Report
Entire House

Job: 335(OHVD)
Date: Apr 18, 2024
By: CLAYTON ROCKWELL

Project Information

For: 335((OHVD), CLAYTON 957
ROCKWELL, NC

Cooling Equipment

Design Conditions

Outdoor design DB:	92.2°F	Sensible gain:	15408 Btuh	Entering coil DB:	76.4°F
Outdoor design WB:	75.8°F	Latent gain:	4429 Btuh	Entering coil WB:	63.7°F
Indoor design DB:	75.0°F	Total gain:	19837 Btuh		
Indoor RH:	50%	Estimated airflow:	780 cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type: Split ASHP
Manufacturer: Smart Comfort Model: R4H5S24*K*AAA*+FEVA0024**+NAVA43601CK

Actual airflow:	780	cfm		
Sensible capacity:	16380	Btuh	106% of load	
Latent capacity:	7020	Btuh	158% of load	
Total capacity:	23400	Btuh	118% of load	SHR: 70%

Heating Equipment

Design Conditions

Outdoor design DB:	33.2°F	Heat loss:	15902 Btuh	Entering coil DB:	67.1°F
Indoor design DB:	70.0°F				

Manufacturer's Performance Data at Actual Design Conditions

Equipment type: Split ASHP
Manufacturer: Smart Comfort Model: R4H5S24*K*AAA*+FEVA0024**+NAVA43601CK

Actual airflow:	780	cfm			
Output capacity:	22800	Btuh	143% of load	Capacity balance:	25 °F
Supplemental heat required:	0	Btuh		Economic balance:	-99 °F

Backup equipment type: Elec strip
Manufacturer: Smart Comfort Model:

Actual airflow:	780	cfm			
Output capacity:	10.0	kW	215% of load	Temp. rise:	40 °F

APPROVED BY
NTA INC. 4/23/2024
FEDERAL MANUFACTURED HOME CONSTRUCTION AND SAFETY STANDARDS

Meets all requirements of ACCA Manual S.

CLAYTON HOME BUILDING GROUP

335 ZONE 1 AND 2

Model Number	57FWR16763BH24	Drawing Number	335	Version 17

BOX SIZE: 15 ft. x 76 ft.
AVG. SIDEWALL HEIGHT = 8 FEET
PERCENTAGE OF CEILING THAT IS VAULTED = 0%

IN-FLOOR DUCT SYSTEM

	UNHEATED FLOOR	WALL	FLAT ROOF
INSULATION VALUES	R-22 FW	R-13	R-38
DAPIA PAGE	THP-164	THP-552	THP-2024
U VALUE (BTUH/SQ.FT.-F)	0.0454	0.0808	0.0294

THIS INSULATION COMBINATION COMPLIES WITH ZONE 1 PRESCRIPTIVE ZERH REQUIREMENTS

APPROVED BY NTA INC. 4/23/2024
FEDERAL MANUFACTURED HOME CONSTRUCTION AND SAFETY STANDARDS

		Area	U Value	UA
Doors:	Front	22.00	0.210	4.62
	Rear	22.00	0.280	6.16
	Other Door	0.00	0.280	0.00
	Other Door	0.00	0.330	0.00
	OSB	0.00	0.000	0.00
	Skylights	0.00	0.330	0.00
Window Glass Area:	Standard	130.00	0.300	39.00
	Option	0.00	0.300	0.00
Net:	Floor	1140.00	0.045	51.76
	Wall	1282.00	0.081	103.59
	Ceiling	1140.00	0.0294	33.52
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

Overhead Duct	
Diameter	Length
4	0
5	0
6	0
7	0
8	0
9	0
12	0
11	0
14	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	344.2
Th. Zone 2	156.7
Th. Zone 3	20.3

Thermal Zone	Outdoor Design Temp (F)	UA	Uo	EStar v3 & ZERH Compliant	Heatloss BTUH/F
1	11	238.64	0.064	OK	366.00
2	0	238.64	0.064	OK	366.00
3	-14	238.64	0.064	NG	366.00

Design Temperatures

Furnace Heating Temp (F)	Economy Outdoor Temp (F)	
-23	5	10kW
-42	-8	12kW
-70	-28	15kW
-39	-7	40k Gas
-94	-45	60k Gas
-149	-83	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

CLAYTON HOME BUILDING GROUP

335 ZONE 3

Model Number	57FWR16763BH24	Drawing Number	335	Version 17

BOX SIZE: 15 ft. x 76 ft.
AVG. SIDEWALL HEIGHT = 8 FEET
PERCENTAGE OF CEILING THAT IS VAULTED = 0%

IN-FLOOR DUCT SYSTEM

	UNHEATED FLOOR	WALL	FLAT ROOF
INSULATION VALUES	(2) R-11 OR / R-33 BIB	R-21	R-38
DAPIA PAGE	THP-3004	THP-560	THP-2024
U VALUE (BTUH/SQ.FT.-F)	0.0389	0.0541	0.0294

THIS INSULATION COMBINATION COMPLIES WITH ZONE 2 PRESCRIPTIVE ZERH REQUIREMENTS

APPROVED BY NTA INC. 4/23/2024
FEDERAL MANUFACTURED HOME CONSTRUCTION AND SAFETY STANDARDS

Overhead Duct	
Diameter	Length
4	0
5	0
6	0
7	0
8	0
9	0
12	0
11	0
14	0
Exterior Supply	Length
14	0
16	0
Exterior Return	Length
14	0
16	0

		Area	U Value	UA
Doors:	Front	22.00	0.210	4.62
	Rear	22.00	0.280	6.16
	Other Door	0.00	0.280	0.00
	Other Door	0.00	0.330	0.00
	OSB	0.00	0.000	0.00
	Skylights	0.00	0.330	0.00
Window Glass Area:	Standard	130.00	0.300	39.00
	Option	0.00	0.300	0.00
Net:	Floor	1140.00	0.039	44.35
	Wall	1282.00	0.054	69.36
	Ceiling	1140.00	0.0294	33.52
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

Energy Star v3 & ZERH Max Glass (sq ft)	
Th. Zone 1	490.2
Th. Zone 2	323.1
Th. Zone 3	201.6

Thermal Zone	Outdoor Design Temp (F)	UA	Uo	EStar v3 & ZERH Compliant	Heatloss BTUH/F
1	11	197.00	0.053	OK	324.40
2	0	197.00	0.053	OK	324.40
3	-14	197.00	0.053	OK	324.40

Design Temperatures

Furnace Heating Temp (F)	Economy Outdoor Temp (F)	
-35	-4	10kW
-56	-18	12kW
-88	-40	15kW
-53	-16	40k Gas
-115	-59	60k Gas
-177	-103	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

CLAYTON HOME BUILDING GROUP

335 ZONE 1 WITH OVERHEAD

Model Number	57FWR16763BH24	Drawing Number	335	Version 17

BOX SIZE: 15 ft. x 76 ft.
AVG. SIDEWALL HEIGHT = 8 FEET
PERCENTAGE OF CEILING THAT IS VAULTED = 0%

OVERHEAD DUCT SYSTEM

	UNHEATED FLOOR	WALL	FLAT ROOF
INSULATION VALUES	R-22 FW	R-13	R-38
DAPIA PAGE	THP-164	THP-552	THP-2024
U VALUE (BTUH/SQ.FT.-F)	0.0454	0.0808	0.0294

THIS INSULATION COMBINATION COMPLIES WITH ZONE 1 PRESCRIPTIVE ZERH REQUIREMENTS

APPROVED BY NTA INC. 4/23/2024
FEDERAL MANUFACTURED HOME CONSTRUCTION AND SAFETY STANDARDS

Overhead Duct	
Diameter	Length
4	0
5	20
6	54
7	22
8	20
9	21
12	0
11	0
14	0
Exterior Supply	Length
14	0
16	0
Exterior Return	Length
14	0
16	0

		Area	U Value	UA
Doors:	Front	22.00	0.210	4.62
	Rear	22.00	0.280	6.16
	Other Door	0.00	0.280	0.00
	Other Door	0.00	0.330	0.00
	OSB	0.00	0.000	0.00
	Skylights	0.00	0.330	0.00
Window Glass Area:	Standard	130.00	0.300	39.00
	Option	0.00	0.300	0.00
Net:	Floor	1140.00	0.045	51.76
	Wall	1282.00	0.081	103.59
	Ceiling	1140.00	0.0294	33.52
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	19.34	0.242	4.68
Overhead TZ 2:	Supply	19.34	0.223	4.31
Overhead TZ 3:	Supply	19.34	0.21	3.98

Energy Star v3 & ZERH Max Glass (sq ft)	
Th. Zone 1	322.8
Th. Zone 2	137.0
Th. Zone 3	2.2

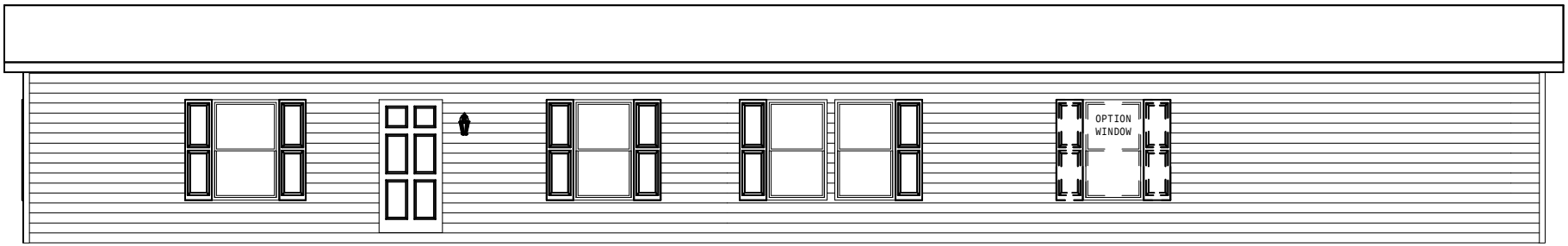
Thermal Zone	Outdoor Design Temp (F)	UA	Uo	EStar v3 & ZERH Compliant	Heatloss BTUH/F
1	11	243.32	0.065	OK	370.70
2	0	242.95	0.065	OK	370.30
3	-14	242.61	0.065	NG	370.00

Design Temperatures

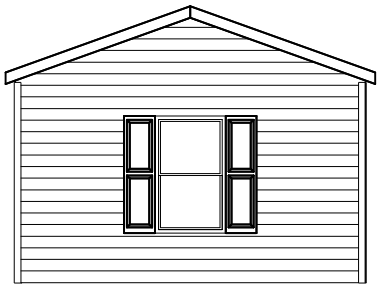
Furnace Heating Temp (F)	Economy Outdoor Temp (F)	
-22	6	10kW
-40	-7	12kW
-68	-27	15kW
-38	-6	40k Gas
-92	-43	60k Gas
-146	-81	80k Gas

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



FRONT ELEVATION



RIGHT SIDE ELEVATION

BRAND	SERIES
CLAYTON	FS16

CLAYTON HOME BUILDING GROUP

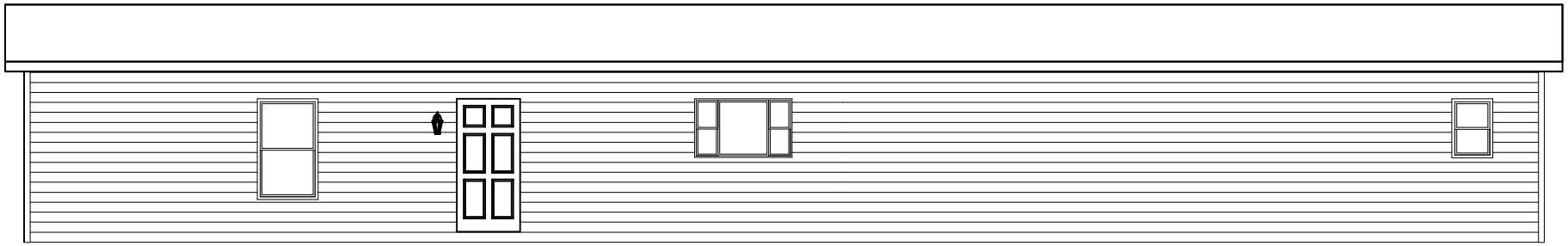
REVISIONS	BY	DATE

GENERAL NOTES

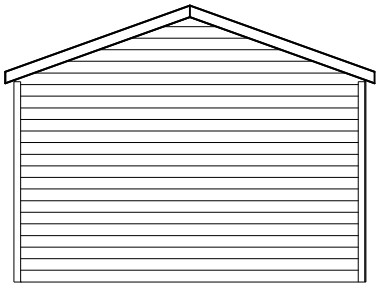
DRAWING TITLE

EXTERIOR ELEVATION
FRONT & RIGHT SIDE

MODEL NAME			SQ. FT.
335			1140
PLANT	DESCRIPTION		MODEL NO.
957	16X76 3BR-2BA		335
DRAWN BY	ORIG. DATE	DATE PRINTED	SHEET NO.
GDB	04/16/2024	04/24/2024	20-1



BACK ELEVATION



LEFT SIDE ELEVATION

BRAND	SERIES
CLAYTON	FS16

CLAYTON HOME BUILDING GROUP

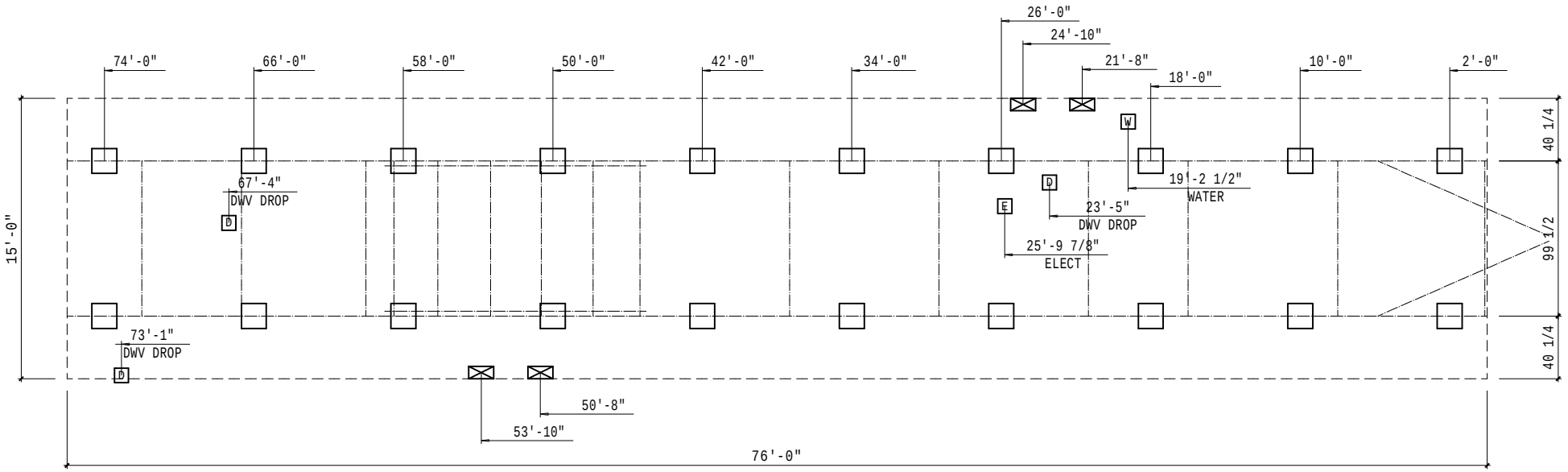
REVISIONS	BY	DATE

GENERAL NOTES

DRAWING TITLE

EXTERIOR ELEVATION
BACK & LEFT SIDE

MODEL NAME			SQ. FT.
335			1140
PLANT	DESCRIPTION		MODEL NO.
957	16X76 3BR-2BA		335
DRAWN BY	ORIG. DATE	DATE PRINTED	SHEET NO.
GDB	04/16/2024	04/24/2024	20-2



SERVICE ENTRANCE LEGEND
E = ELECTRICAL DROP
W = WATER INLET
D = DWV PLUMBING DROP
G = GAS INLET
NOTE: ALL LOCATIONS ARE APPROXIMATE

CRAWLSPACE VENTILATION
VENTILATION IS BASED ON 144 SQ. IN. OF VENT FOR EVERY 300 SQ. FT. OF CRAWLSPACE AREA WITH APPROVED VAPOR RETARDER MATERIAL. ONE SUCH VENT MUST BE WITHIN 3 FT. OF EACH CORNER

1140 SQ. FT. OF CRAWLSPACE AREA
548 SQ. IN. OF VENT REQUIRED
11 VENTS NEEDED @ 52 SQ. IN. EACH
572 SQ. IN. VENTILATION INSTALLED MINIMUM

FOUNDATION SLOP NOTE

PIER LEGEND
= SUPPORT AT MATING COLUMN
= SUPPORT UNDER MATING WALL
= SUPPORT UNDER MATING OPENING
= SUPPORT AT PORCH/RECESSED ENTRY
= SUPPORT UNDER MAIN I-BEAM
= SUPPORT UNDER PERIMETER WALL
= SUPPORT AT CROSS I-BEAM BASEMENT

BRAND	SERIES
CLAYTON	FS16

CLAYTON
HOME BUILDING GROUP

REVISIONS	BY	DATE

GENERAL NOTES
FOOTING SIZES VARY BASED ON SOIL BEARING CAPACITY AND PIER LOADS
REFER TO INSTALLATION MANUAL FOR PROPER FOOTING SIZING
( ) - DIMENSIONS DENOTES 2X6 WALLS OPTION

DRAWING TITLE
PIER SET
99 1/2 BEAM SPACING

MODEL NAME			SQ. FT.
335			1140
PLANT	DESCRIPTION		MODEL NO.
957	16X76 3BR-2BA		335
DRAWN BY	ORIG. DATE	DATE PRINTED	SHEET NO.
GDB	04/16/2024	08/22/2024	21-PS-99