

CAN/CSA A277
ONTARIO APPROVAL
FOR MODEL 146060

2/13/2025

Reviewed to the Canadian standards.
NTA is a subsidiary of the International Code Council.

FAIRMONT HOMES LLC

2181 East Market Street
Nappanee, Indiana, USA 46550

THE UNDERSIGNED HAS REVIEWED AND TAKE RESPONSIBILITY FOR THIS DESIGN, AND HAS THE QUALIFICATIONS AND MEETS THE REQUIREMENTS SET OUT IN THE ONTARIO BUILDING CODE TO DESIGN THE WORK SHOWN ON THE ATTACHED DOCUMENTS.	
REQUIRED UNLESS DESIGN IS EXEMPT UNDER DIV. C - 3.2.5.1. OF THE BUILDING CODE	
MAJID ALKATAN NAME	BCIN 126532
REGISTRATION INFORMATION REQUIRED UNLESS DESIGN IS EXEMPT UNDER DIV. C - 3.2.4.1 OF THE BUILDING CODE	
JSR ENGINEERING INC. FIRM	BCIN 127470

BCIN review based on provided documents; completeness and compliance with design elements outside OBC part 9 are responsibility of the client.

INDEX:

DESIGN CRITERIA
FLOOR PLAN
BLOCKING(WHERE APPLICABLE)
EXTERIOR ELEVATIONS
ELECTRICAL LAYOUT
PLUMBING
GAS LINE
HVAC CALCULATION
HVAC LAYOUT
ONTARIO ENERGY DESIGN ZONE-1 (5000 > DEGREE DAYS)
ONTARIO ENERGY DESIGN ZONE-2 (5000 < DEGREE DAYS)
TYPICAL HRV SYSTEM INSTALLATION

ROOM OPTIONS (WHERE APPLICABLE)
FLOOR PLAN (WHERE APPLICABLE)
ELECTRICAL LAYOUT (WHERE APPLICABLE)
PLUMBING (WHERE APPLICABLE)
GAS LINE (WHERE APPLICABLE)
HVAC CALCULATION (WHERE APPLICABLE)
HVAC LAYOUT (WHERE APPLICABLE)



THE UNDERSIGNED HAS REVIEWED AND TAKE RESPONSIBILITY FOR THIS DESIGN, AND HAS THE QUALIFICATIONS AND MEETS THE REQUIREMENTS SET OUT IN THE ONTARIO BUILDING CODE TO DESIGN THE WORK SHOWN ON THE ATTACHED DOCUMENTS.

QUALIFICATIONS INFORMATION
REQUIRED UNLESS DESIGN IS EXEMPT UNDER DIV. C - 3.2.5.1. OF THE BUILDING CODE

MAJD ALKATAN
NAME
BCIN
126532

REGISTRATION INFORMATION
REQUIRED UNLESS DESIGN IS EXEMPT UNDER
DIV. C - 3.2.4.1 OF THE BUILDING CODE

JSR ENGINEERING INC.
FIRM
BCIN
127470

BCIN review based on provided documents; completeness and compliance with design elements outside OBC part 9 are responsibility of the client.

NOTE:
REFER TO INSTALLATION
MANUAL FOR SUPPORT
SYSTEM

INDEX

FAIRMONT HOMES LLC.

2181 E. MARKET STREET, NAPPANEE, INDIANA, USA 46550

Scale: NTS

Date: 5/21/24

Name: BJA

THIS DOCUMENT IS THE SOLE PROPERTY OF FAIRMONT HOMES, LLC. UNAUTHORIZED USE, DISCLOSURE, OR DISSEMINATION OF INFORMATION CONTAINED HEREIN IS STRICTLY PROHIBITED. THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION, TRADE SECRETS, AND PROPRIETARY INFORMATION AND ANY UNAUTHORIZED USE OR POSSESSION OF THIS DOCUMENT WILL WARRANT PROSECUTION.

Proprietary
& Confidential

MODEL NUMBER:

CSA MOD SUB-0002

GENERAL DESIGN CRITERIA

☐ CAN / CSA A277-16 (R2021)
ONTARIO

ONTARIO BUILDING CODE 2024

ONTARIO ELECTRICAL SAFETY CODE - C22.1-21

MINIMUM LATERAL EARTHQUAKE FORCE
S(2.0) & S(0.2)

PROVINCE SPECIFIC THERMAL REQUIREMENTS FOR NATURAL GAS HEAT:

☐ ONTARIO: ZONE 1, COMPLIANCE PACKAGE A1 REF: THE ENERGY DESIGN SUMMARY FOR ONTARIO ROOF (WITH ATTIC): RSI-10.56 WALL: RSI-3.87 FLOOR: RSI-5.46 WINDOWS AND SLIDING GLASS DOORS: ENERGY RATING 25 SPACE HEATING EQUIPMENT: MINIMUM AFUE 96% HRV: MINIMUM SRE 75% DOMESTIC WATER HEATER: MINIMUM EF 0.8	EFFECTIVE VALUE RSI-10.43 RSI-3.00 RSI-5.25
☐ ONTARIO: ZONE 2, COMPLIANCE PACKAGE A1 REF: THE ENERGY DESIGN SUMMARY FOR ONTARIO ROOF (WITH ATTIC): RSI-10.56 WALL: RSI-3.34+0.88 C.I. FLOOR: RSI-5.46 WINDOWS AND SLIDING GLASS DOORS: ENERGY RATING 34 SPACE HEATING EQUIPMENT: MINIMUM AFUE 96% HRV: MINIMUM SRE 81% DOMESTIC WATER HEATER: MINIMUM EF 0.70	EFFECTIVE VALUE RSI-10.43 RSI-3.58 RSI-5.25

NOTES:

-OCCUPANCY- "C"

RESIDENTIAL - SINGLE FAMILY DWELLING
SINGLE FLOOR WITH BASEMENT AVAILABLE
ON CERTAIN FLOOR PLANS

-MECHANICAL VENTILATION IS PROVIDED BY A
HUMIDISTATICALLY CONTROLLED EXHAUST FAN
LOCATED IN THE MASTER BATHROOM
OF EACH HOME.

-RADON GAS MITIGATION, PER 9.13.4, PROVIDED BY OTHERS

DESIGN LOADS

WIND $q(1/50)$ 0.50 kPa

ROOF DEAD LOAD.....10 PSF (0.48 kPa)

FLOOR LIVE LOAD.....40 PSF (1.92 kPa)

FLOOR DEAD LOAD.....10 PSF (0.48 kPa)

ATTIC LIVE LOAD.....0 PSF

SEISMIC DESIGN DATA: $S_a(0.2) = 0.320$, SITE CLASS = D

GROUND SNOW LOAD..... $S_s=70$ PSF (3.35 kPa)

RAIN LOAD..... $S_r=8.4$ PSF (0.4kPa)

ASSOCIATED ROOF LOAD (SNOW).....43.96 PSF (2.105kPa)



Reviewed to the Canadian standards.
NTA is a subsidiary of the International Code Council.

THE UNDERSIGNED HAS REVIEWED AND TAKE RESPONSIBILITY FOR THIS DESIGN,
AND HAS THE QUALIFICATIONS AND MEETS THE REQUIREMENTS SET OUT IN THE
ONTARIO BUILDING CODE TO DESIGN THE WORK SHOWN ON THE ATTACHED
DOCUMENTS.

QUALIFICATIONS INFORMATION

REQUIRED UNLESS DESIGN IS EXEMPT UNDER DIV. C - 3.2.5.1. OF THE BUILDING CODE

MAJID ALKATAN
NAME

BCIN
126532

REGISTRATION INFORMATION
REQUIRED UNLESS DESIGN IS EXEMPT UNDER
DIV. C - 3.2.4.1 OF THE BUILDING CODE

JSR ENGINEERING INC.
FIRM

BCIN
127470

BCIN review based on provided documents; completeness and
compliance with design elements outside OBC part 9 are
responsibility of the client.

CANADIAN MODULAR DESIGN CRITERIA

FAIRMONT HOMES LLC.

2181 E. MARKET STREET, NAPPANEE, INDIANA, USA 46550

Scale: NTS

Date: 1/29/25

Name: **BJA**

THIS DOCUMENT IS THE SOLE PROPERTY OF FAIRMONT HOMES, L.
UNAUTHORIZED USE, DISCLOSURE, OR DISSEMINATION OF INFORMATION
CONTAINED HEREIN IS STRICTLY PROHIBITED. THIS DOCUMENT CON-
TAINS CONFIDENTIAL INFORMATION, TRADE SECRETS, AND PROPRIETARY
INFORMATION AND ANY UNAUTHORIZED USE OR POSSESSION OF THIS
DOCUMENT WILL WARRANT PROSECUTION.

Proprietary
& Confidential
Drawing Name:

CSA MOD SUB-0127

THE UNDERSIGNED HAS REVIEWED AND TAKE RESPONSIBILITY FOR THIS DESIGN, AND HAS THE QUALIFICATIONS AND MEETS THE REQUIREMENTS SET OUT IN THE ONTARIO BUILDING CODE TO DESIGN THE WORK SHOWN ON THE ATTACHED DOCUMENTS.

QUALIFICATIONS INFORMATION

REQUIRED UNLESS DESIGN IS EXEMPT UNDER DIV. C - 3.2.5.1. OF THE BUILDING CODE

MAJID ALKATAN
NAME

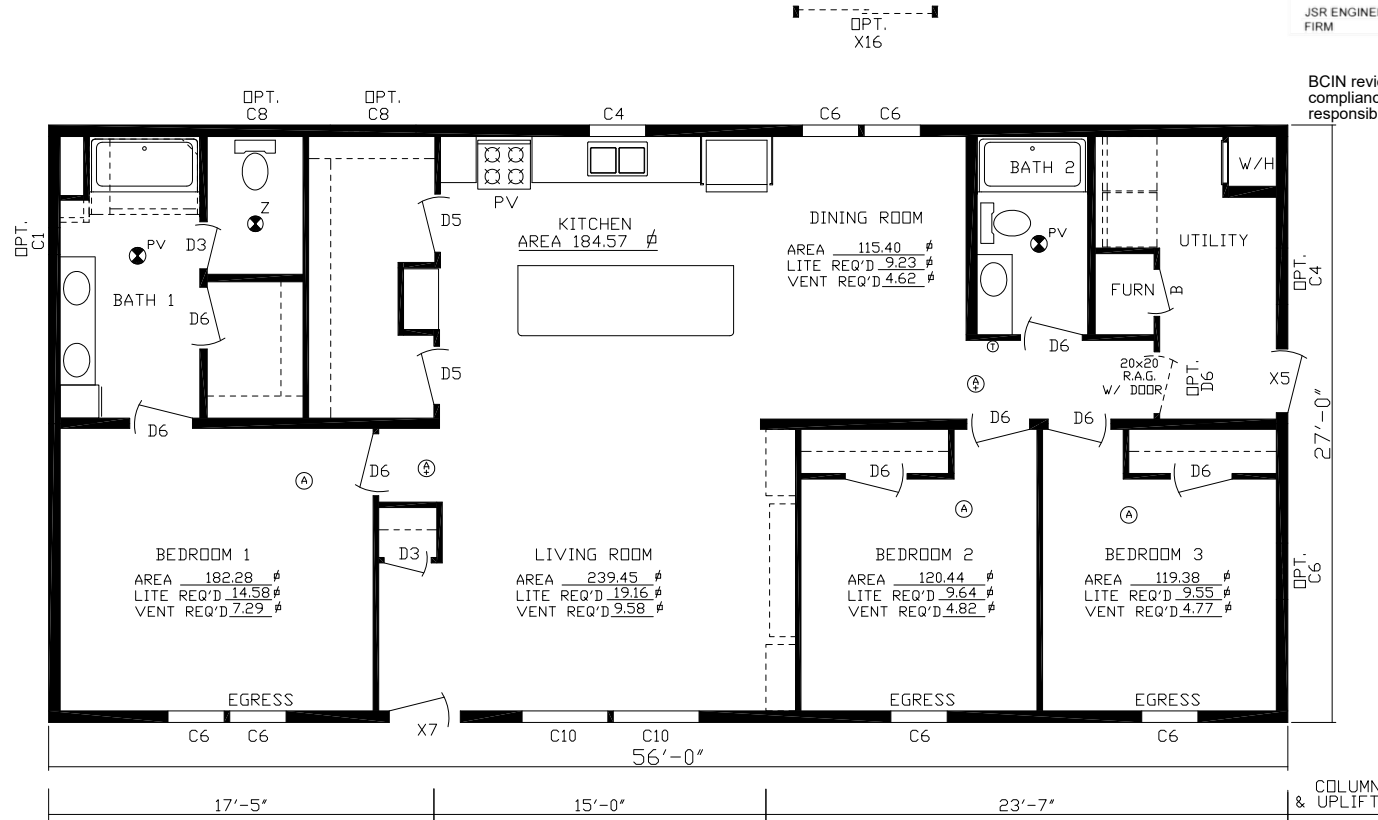
BCIN
08532

REGISTRATION INFORMATION
REQUIRED UNLESS DESIGN IS EXEMPT UNDER
DIV. C - 3.2.4.1 OF THE BUILDING CODE

JSR ENGINEERING INC.
FIRM

BCIN
12740

BCIN review based on provided documents; completeness and compliance with design elements outside OBC part 9 are responsibility of the client.



Reviewed to the Canadian standards.
NTA is a subsidiary of the International Code Council.

NOTES:
-WALL HEIGHT 8'-0"
-INTERIOR WALL THICKNESS 3 1/2" OR 4 1/2"
-EXTERIOR WALL THICKNESS 6 1/2"
-WINDOWS/DOORS MAY BE ADDED OR RELOCATED
IN THE ROOM OR CAN BE SUBSTITUTED WITH
ALTERNATE WINDOW/S AND/OR DOOR/S BUT
MUST SATISFY MINIMUM LIGHT, VENT, SAFETY
GLASS AND EGRESS REQUIREMENTS

NOTE:
REFERENCE WINDOW
AND DOOR SCHEDULE
FOR ALL WINDOW AND
DOOR SPECIFICATIONS

- (A) SMOKE ALARM
(A) SMOKE/CO ALARM

REVISIONS

3B 2BA

FAIRMONT HOMES LLC

2181 E. MARKET ST., P.O. BOX 27 NAPPANEE, INDIANA, USA 46550

Scale: NTS

Date: 5/21/24

Name: **BJA**

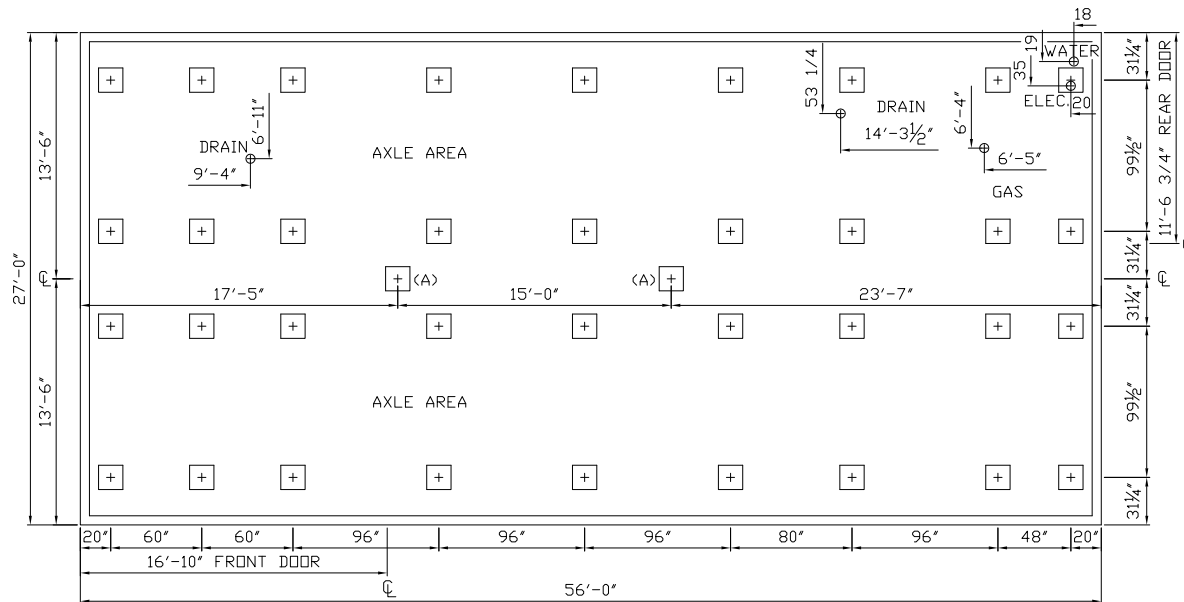
THIS DOCUMENT IS THE SOLE PROPERTY OF FAIRMONT HOMES, INC. UNAUTHORIZED USE, DISCLOSURE, OR DISSEMINATION OF INFORMATION CONTAINED HEREIN IS STRICTLY PROHIBITED. THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION, TRADE SECRETS, AND PROPRIETARY INFORMATION AND ANY UNAUTHORIZED USE OR POSSESSION OF THIS DOCUMENT WILL WARRANT PROSECUTION.

Proprietary
& Confidential

MODEL NUMBER:

146060

FLOOR PLAN



NOTICE
IT IS THE RESPONSIBILITY OF THE DEALER TO OBTAIN LEGIBLE BLOCKING AND/OR FOUNDATION PRINTS FROM HARMONY HOMES. HARMONY HOMES WILL NOT BE LIABLE FOR DAMAGES ARISING FROM THE DEALER SUPPLYING THE CONTRACTOR WITH TELEFAXED BLOCKING AND/OR FOUNDATION PRINTS.

THE UNDERSIGNED HAS REVIEWED AND TAKE RESPONSIBILITY FOR THIS DESIGN, AND HAS THE QUALIFICATIONS AND MEETS THE REQUIREMENTS SET OUT IN THE ONTARIO BUILDING CODE TO DESIGN THE WORK SHOWN ON THE ATTACHED DOCUMENTS.

QUALIFICATIONS INFORMATION
REQUIRED UNLESS DESIGN IS EXEMPT UNDER DIV. C - 3.2.5.1. OF THE BUILDING CODE

MAJD ALKATAN
NAME

BCIN
126532

REGISTRATION INFORMATION
REQUIRED UNLESS DESIGN IS EXEMPT UNDER DIV. C - 3.2.4.1 OF THE BUILDING CODE

JSR ENGINEERING INC.
FIRM

BCIN
127470

BCIN review based on provided documents; completeness and compliance with design elements outside OBC part 9 are responsibility of the client.

NOTE:
THE HOME DESIGNED FOR THIS SUPPORT SYSTEM IS BUILT WITH 12" LONGITUDINAL I-BEAMS

NOTICE
IT IS THE RESPONSIBILITY OF THE DEALER AND/OR INSTALLER TO CERTIFY THAT ANY BLOCKING OR FOUNDATION PRINTS, OR ANY OTHER DIAGRAMS SUPPLIED TO A CONTRACTOR FOR SITE WORK, CORRELATE WITH THE UNIT ORDERED. THE MANUFACTURER WILL NOT BE LIABLE FOR DAMAGES ARISING FROM FAILURE OF THE DEALER AND/OR INSTALLER TO MAKE CERTAIN THAT THE CONTRACTOR HAS THE CORRECT DIAGRAMS, REGARDLESS OF WHAT WAS SUPPLIED BY THE MANUFACTURER. MANUFACTURER ASSUMES NO RESPONSIBILITY FOR THE DESIGN OF THE FOUNDATION EXCEPT FOR THE METHOD OF SUPPORT AS SHOWN ON THIS DRAWING.

NOTE:
1. BLOCKING SPACING IS NOT TO EXCEED 8'-0"
2. ALL PLUMBING CROSSOVERS (GAS, WATER, SEWER, etc.) ARE DEALER AND/OR INSTALLERS RESPONSIBILITY.
3. ENOUGH CONCRETE BLOCKS AND HARDWOOD SHIMS TO MEET MINIMUM BLOCKING SPECIFICATIONS MUST BE SUPPLIED, THIS IS NOT THE MANUFACTURER'S RESPONSIBILITY.

[+] = PIER LOCATION

THE INTENT OF THIS DRAWING IS TO ASSIST THE INSTALLER IN INTERPRETATION OF THE INSTALLATION MANUAL DURING THE INSTALLATION PROCESS. THE INSTALLATION MANUAL IS THE INSTALLING DOCUMENT, SHOULD THERE BE A CONFLICT BETWEEN THIS AND THE MANUAL, THE STAMPED/CERTIFIED MANUAL CONTROLS.

CENTERLINE COLUMN LOADS				
SUPPORT LOCATION	DESIGN ROOF LOADINGS (SEE STRUCTURAL DESIGN BASIS CERTIFICATE IN THE HOME)			
	20 PSF	30 PSF	40 PSF	60 PSF
(A)	3500	4500	5500	7500
(B)				
REFER TO TABLE 4-10 IN THE INSTALLATION MANUAL FOR FOOTING SIZES BASED ON COLUMN LOAD				



REVISION:

3B 2BA

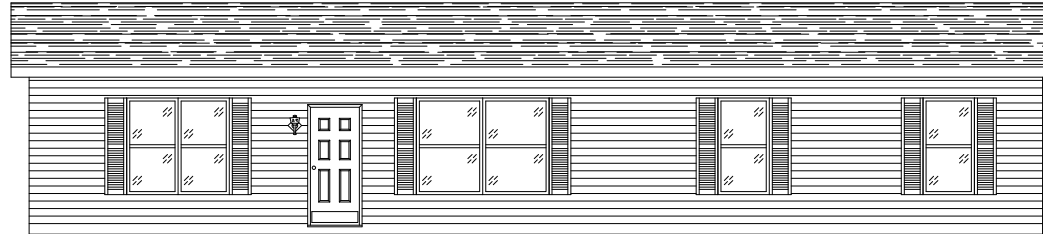
FAIRMONT HOMES LLC
2181 E. MARKET ST., P.O. BOX 27 NAPPANEE, INDIANA, USA 46550

Scale: NTS Date: 5/21/24 Name: **BJA**

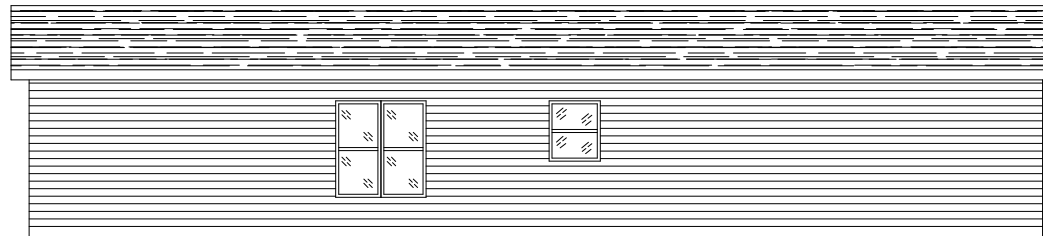
THIS DOCUMENT IS THE SOLE PROPERTY OF FAIRMONT HOMES, INC. UNAUTHORIZED USE, DISCLOSURE, OR DISSEMINATION OF INFORMATION CONTAINED HEREIN IS STRICTLY PROHIBITED. THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION, TRADE SECRETS, AND PROPRIETARY INFORMATION AND ANY UNAUTHORIZED USE OR POSSESSION OF THIS DOCUMENT WILL WARRANT PROSECUTION.

Proprietary & Confidential
MODEL NUMBER:
146060

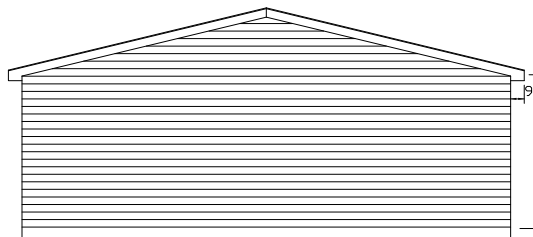
BLOCKING



FRONT ELEVATION



REAR ELEVATION

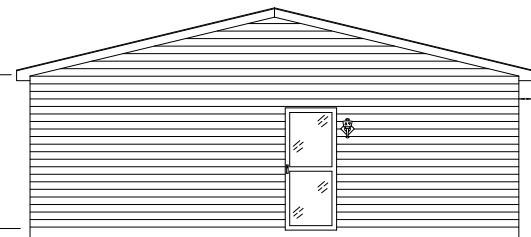


RIGHT ELEVATION

CEILING
LINE

96"

FLOOR
LINE



LEFT ELEVATION

THE UNDERSIGNED HAS REVIEWED AND TAKE RESPONSIBILITY FOR THIS DESIGN AND HAS THE QUALIFICATIONS AND MEETS THE REQUIREMENTS SET OUT IN THE ONTARIO BUILDING CODE TO DESIGN THE WORK SHOWN ON THE ATTACHED DOCUMENTS.

QUALIFICATIONS INFORMATION

REQUIRED UNLESS DESIGN IS EXEMPT UNDER DIV. C - 3.2.5.1. OF THE BUILDING CODE

MAJID ALKATAN
NAME

BCIN
126532

REGISTRATION INFORMATION
REQUIRED UNLESS DESIGN IS EXEMPT UNDER
DIV. C - 3.2.4.1 OF THE BUILDING CODE

JSR ENGINEERING INC.
FIRM

BCIN
127410

BCIN review based on provided documents; completeness and compliance with design elements outside OBC part 9 are responsibility of the client.



Reviewed to the Canadian standards.
NTA is a subsidiary of the International Code Council.

REVISION:

3B 2BA

FAIRMONT HOMES LLC

2181 E. MARKET ST., P.O. BOX 27 NAPPANEE, INDIANA, USA 46550

Scale: NTS

Date: 5/21/24

Name: **BJA**

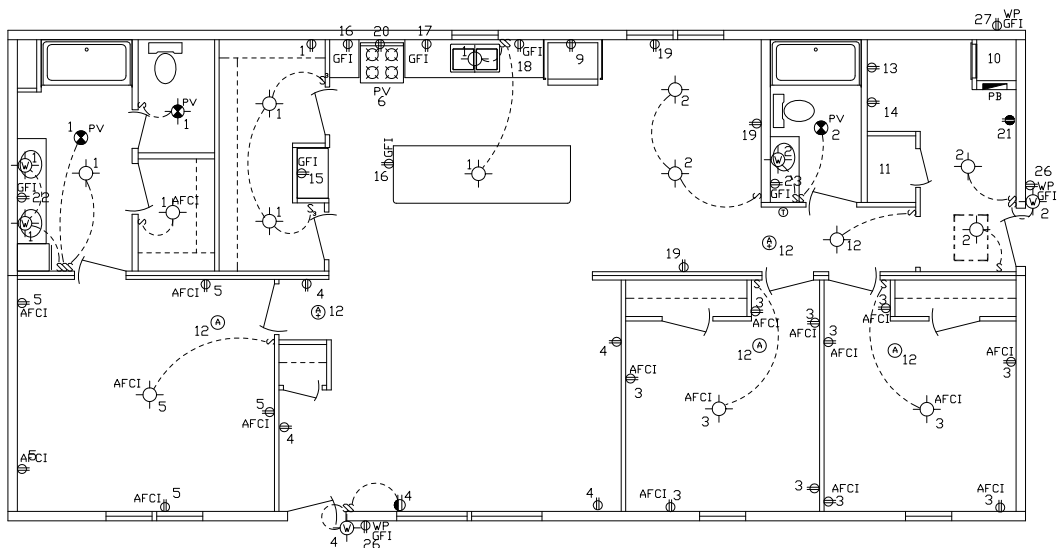
THIS DOCUMENT IS THE SOLE PROPERTY OF FAIRMONT HOMES, INC. UNAUTHORIZED USE, DISCLOSURE, OR DISSEMINATION OF INFORMATION CONTAINED HEREIN IS STRICTLY PROHIBITED. THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION, TRADE SECRETS, AND PROPRIETARY INFORMATION AND ANY UNAUTHORIZED USE OR POSSESSION OF THIS DOCUMENT WILL WARRANT PROSECUTION.

Proprietary
& Confidential

MODEL NUMBER:

146060

EXTERIOR ELEVATIONS



Reviewed to the Canadian standards.
NTA is a subsidiary of the International Code Council.

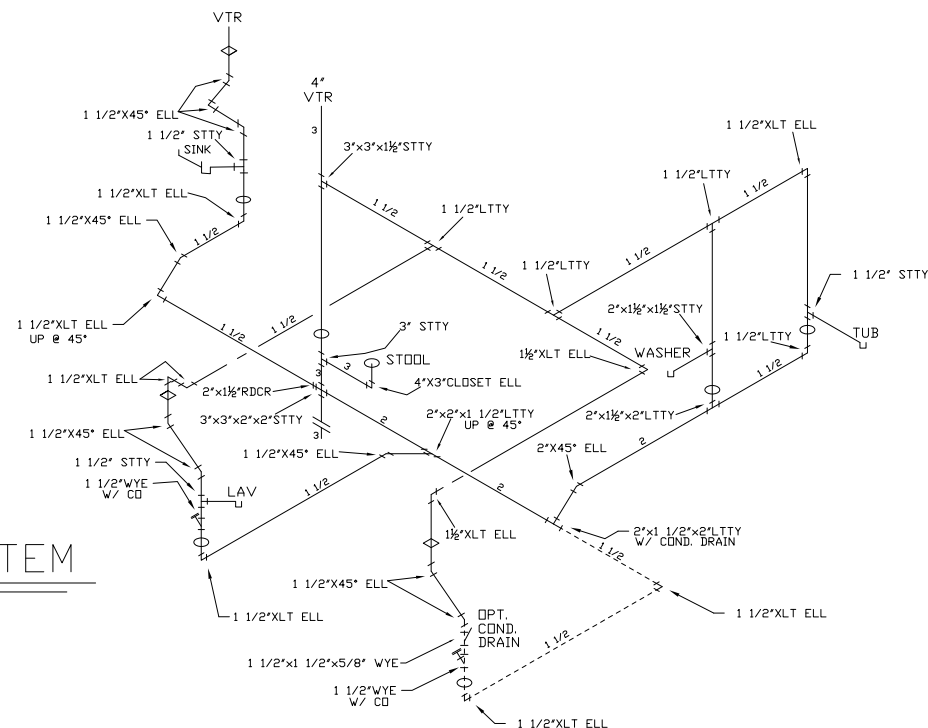
ELECTRICAL LEGEND	
PANEL BOXES & DISCONNECTS	
PB	BREAKER BOX
PB	APPROX. LOCATION OF BASEMENT BREAKER BOX WHEN STANDARD
WH	WATER HEATER DISCONNECT
RECEPTACLE OUTLETS	
15	DUPLEX RECEPT
WP	WEATHERPROOF 120 V. RECEPT
15	GROUND FAULT CIRCUIT INTERRUPTER RECEPT
15	ARC FAULT CIRCUIT INTERRUPTER RECEPT
15	RECEPTACLE TOP HALF SWITCHED
240	240 V RECEPT
SWITCHES	
T	THERMOSTAT
S	DOUBLE POLE SWITCH
S ₃	THREE-WAY SWITCH
S ₁₅	EMERGENCY FURNACE SHUT OFF SWITCH (LIGHTED)
LIGHTS AND EXHAUST FANS	
CL	CEILING LIGHT (EXTERIOR)
WL	WALL MOUNTED LIGHT
FC	FULL CHAIN CEILING LIGHT
CEF	COMBINATION EXHAUST FAN & LIGHT
EF	EXHAUST FAN
MISCELLANEOUS	
T	TELEPHONE JACK
J	JUNCTION BOX
C	COMMUNICATION OUTLET
G	GROUND
S	COMBINATION SMOKE/ CARBON MONOXIDE ALARM
B	DOOR BELL BUTTON
CL	CEILING LIGHT
RH	RADIANT WALL HEATER
TS	TELEVISION ANTENNA/CABLE JACK

CIRCUIT IDENTIFICATION									
NO.	CIRCUIT	AFCI	AMPS	NO.	CIRCUIT	AFCI	AMPS	NO.	CIRCUIT
1	LIGHTS OR RECEPTS	AFCI	15	10	WATER HEATER	N/A	20	19	DINING ROOM
2	LIGHTS OR RECEPTS	AFCI	15	11	FURNACE	N/A	15	20	RANGE
3	LIGHTS OR RECEPTS	AFCI	15	12	SMOKE ALARMS/ CO DET.	AFCI	15	21	UTILITY
4	LIGHTS OR RECEPTS	AFCI	15	13	DRYER	AFCI	20	22	GFI
5	LIGHTS OR RECEPTS	AFCI	15	14	WASHER	AFCI	20	23	GFI
6	RANGE HOOD/MICROWAVE	AFCI	15	15	APPLIANCE	GFI	20	24	GFI
7				16	APPLIANCE	GFI	20	25	GFI
8				17	APPLIANCE	GFI	20	26	GFI (EXTERIOR RECEPTS)
9	REFER	N/A	20	18	APPLIANCE	GFI	20	27	HEAT TAPE (WATER INLET)

NOTES:
 -SERVICE PANEL TO BE 200 AMP WITH MAIN BREAKER
 -SERVICE PANEL IS LOCATED AS SHOWN ON THE MAIN LEVEL OR IN BASEMENT.
 -ALL ELECTRICAL EQUIPMENT IS TO BE LISTED AND LABELED
 -CIRCUIT NUMBERS ON PLAN DO NOT REPRESENT BREAKER LOCATION IN PANEL BOX
 -ANY EQUIPMENT OR APPLIANCES INSTALLED ON-SITE SHALL HAVE BREAKERS AND WIRE SIZED AND SUPPLIED BY ON-SITE ELECTRICIAN
 -DISCONNECT BOX LOCATED AND INSTALLED BY OTHERS ON-SITE IN THE JURISDICTION HAVING AUTHORITY
 -ALL SMOKE ALARMS ARE INTERCONNECTED AND HAVE A BATTERY BACKUP
 -FOR ONTARIO, SMOKE ALARMS REQUIRE A VISUAL SIGNALLING COMPONENT CONFORMING TO 18.5.3 OF THE NFPA 72.
 REFERENCE 9.10.9.19.1 (2) OF THE ONTARIO BUILDING CODE

2/12/25
REVISION:

3B 2BA		
FAIRMONT HOMES LLC		
2181 E. MARKET ST., P.O. BOX 27 NAPPANEE, INDIANA, USA 46550		
Scale: NTS	Date: 5/21/24	Name: BJA
THIS DOCUMENT IS THE SOLE PROPERTY OF FAIRMONT HOMES, INC. UNAUTHORIZED USE, DISCLOSURE, OR DISSEMINATION OF INFORMATION CONTAINED HEREIN IS STRICTLY PROHIBITED. THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION, TRADE SECRETS, AND PROPRIETARY INFORMATION AND ANY UNAUTHORIZED USE OR POSSESSION OF THIS DOCUMENT WILL WARRANT PROSECUTION.		Proprietary & Confidential
ELECTRICAL LAYOUT		MODEL NUMBER: 146060



 2/13/2025

DRAIN SYSTEM LEGEND

————	PLANT INSTALLED PLUMBING	
-----	SITE INSTALLED PLUMBING	
	NOTE: VENT LINES STUB THRU CEILING AT THESE POINTS	
	NOTE: DRAIN LINES DROP OUT OF FLOOR AT THESE POINTS	



REVISION:

PLUMBING DWV

APPLICATION ENGINEERING FOR HEATING AND COOLING

FAIRMONT HOMES, LLC

P.O. Box 27

Nappanee, IN 46650

Manufacturer's Model #: 146060 (8-0 Flat)

HVAC System Type: INFLOOR GRAD D.B. WITH PER. REGISTERS

Prepared By LaSalle Air Systems 1/16/2025 {Method & Output © 2025}

All rights reserved: this information proprietary to LaSalle Bristol Co. and FAIRMONT HOMES, LLC

Calculations on this page are based on design standards set forth in ASHRAE and ACCA Manuals J Rev 8.2 and D Rev 1.1. System registers are located for best distribution based on Manual T. Design calculations are based on worst case orientation. Room loads may vary based on actual conditions.

ENTIRE HOUSE VALUES - DESIGN ZONE: CSA-Ontario 3.1.1.2(1), SB-12 (MAX C.D.D.: 5000) 46N Latitude

COOLING LOAD: 21,436 Btuh for Outside Temp/Humidity of 90 °F (32 C)/ 33% and Inside reduced to 72 °F (22 C)/ 50%

HEATING LOAD: 36,782 Btuh based on outside temp of -20 °F (-29 C) with inside temp raised to 72 °F (22 C)

Crawlspace is not heated by the primary air handler.

Actual UA = 209 (IECC 402.1.4)

CONSTRUCTION DETAILS & U / SHGC VALUES: (RSI: 5.46 - 3.87+0.88 cont - 10.57)

Total Cond. Floor Area:	1512.00 s.f.	TRUE Outside Perimeter:	166.00 ft		
Level 1 Ceiling:	96 to 96 in.	Level 2 Ceiling:	0 to 0 in.	Level 3 Ceiling:	0 to 0 in.
Primary Wall Area:	1095.83 s.f. (Net)	Dark Roof(U):	0.021	FLOOR DUCTS (U):	0.0301 Duct TEL
Secondary Wall Area:	0.00 s.f. (Net)	Prim Wall (U):	0.050	ATTIC DUCTS (U):	0.125 389.5 ft
TOTAL Low-E window	108.89 s.f.	Sec Wall (U):	0.025	EXT. DUCTS (U):	0.125
TOTAL S.G.D.	80.00 s.f.	Exp Floor(U):	0.034	INFLOOR DUCT AREA:	232.5 S.F. @ 58.4 TD/ 28 TD
TOTAL Glass Block	0.00 s.f.	Low-E wi 0.320 / 0.29		ATTIC DUCT AREA:	0 S.F.(return) @ 132 TD/ 88.3 TD
TOTAL Skylite	0.00 s.f.	S.G.D. 0.360 / 0.36		EXT. DUCT AREA:	0 S.F. @ 132 TD/ 46 TD
TOTAL Door1 Area:	43.28 s.f.	Glass Blc 0.510 / 0.48		PEOPLE:	4 3757.2 Btuh Total Appliances
TOTAL Door2 Area:	0.00 s.f.	Skylite 0.460 / 0.75		FIREPLACES:	0
All Glass % of Floor:	12.49 %	Door 1: 0.170		DUCT GAIN:	@ Semi-Tight 591 Btuh
All Glass % of Wall:	14.22 %	Door 2: 0.670		DUCT LOSS:	2428 Btuh
LATENT GAIN:	1852 Btuh			Summer Infiltr (7.5 mph):	27.8 cfm
Mech. Ventilation :	86.84 cfm (41 L/s)	Altitude: 1300 ft		Winter Infiltration (20 mph):	69.9 cfm @ Semi-Tight

ROOM BY ROOM VALUES:

963.4 FPM, max velocity in trunk #: 3

Heat Exiting Furnace: 100 deg A/C Exiting : 47 deg

0.25 Max pressure at A/H

NOTICE: Due to glass area variations, the hourly cooling loads may not be balanced by a single-zone system

ROOM NAME		HEATING		COOLING		CFM		Cooling Air Values for		Heating Air Values for		12.5 kW		Maximum A/C capacity Calibrated Blower Test
		LOSS (Btu)		GAIN (Btu)		DIST		2.5 ton unit		90 % Gas/Oil		Elec		
								CFM	Btuh	CFM	Btuh	E	Btuh	Btuh (alt adj)
Bedroom #3	h	3,774		1,933		99		139	3,747	133	5,376		5,095	4,645
Bedroom #2	h	2,851		1,565		74		121	3,258	116	4,674		4,430	4,038
Living Room	h	5,967		3,644		156		150	4,032	143	5,785		5,483	4,997
Bedroom #1	h	5,162		2,861		135		182	4,905	174	7,038		6,671	6,081
Bath #1	h	3,475		1,505		91		110	2,952	105	4,235		4,014	3,659
Pantry	h	1,243		462		32		75	2,015	72	2,892		2,741	2,498
Kitchen	h	5,627		4,173		147		98	2,632	93	3,777		3,579	3,263
Dining Room	h	3,901		3,101		102		145	3,909	139	5,608		5,316	4,845
Bath #2	h	1,194		433		31		91	2,454	87	3,520		3,337	3,042
Utility	h	3,588		1,759		94		-	-	-	-		-	-
TOTALS		36,782		21,436		960		1,112	29,904	1,062	42,905		40,665	37,067



Reviewed to the Canadian standards.
NTA is a subsidiary of the International Code Council.

APPLICATION ENGINEERING FOR HEATING AND COOLING

FAIRMONT HOMES, LLC

P.O. Box 27

Nappanee, IN 46650

Manufacturer's Model #: 146060 (8-0 Flat)

HVAC System Type: INFLOOR GRAD D.B. WITH PER. REGISTERS

Prepared By LaSalle Air Systems 1/16/2025 {Method & Output © 2025}

All rights reserved: this information proprietary to LaSalle Bristol Co. and FAIRMONT HOMES, LLC

Calculations on this page are based on design standards set forth in ASHRAE and ACCA Manuals J Rev 8.2 and D Rev 1.1. System registers are located for best distribution based on Manual T. Design calculations are based on worst case orientation. Room loads may vary based on actual conditions.

ENTIRE HOUSE VALUES - DESIGN ZONE: CSA-Ontario 3.1.1.3(1), SB-12 (MAX C.D.D.: 6500) 50N Latitude

COOLING LOAD: 21,484 Btuh for Outside Temp/Humidity of 90 °F (32 C)/ 33% and Inside reduced to 72 °F (22 C)/ 50%

HEATING LOAD: 42,842 Btuh based on outside temp of -30 °F (-35 C) with inside temp raised to 72 °F (22 C)

Crawlspace is not heated by the primary air handler.

Actual UA = 211.2 (IECC 402.1.4)

CONSTRUCTION DETAILS & U / SHGC VALUES: (RSI: 5.46 - 3.34+0.88 cont - 10.57)

Total Cond. Floor Area:	1512.00 s.f.	TRUE Outside Perimeter:	166.00 ft		
Level 1 Ceiling:	96 to 96 in.	Level 2 Ceiling:	0 to 0 in.	Level 3 Ceiling:	0 to 0 in.
Primary Wall Area:	1095.83 s.f. (Net)	Dark Roof(U):	0.021	FLOOR DUCTS (U):	0.0301 Duct TEL
Secondary Wall Area:	0.00 s.f. (Net)	Prim Wall (U):	0.052	ATTIC DUCTS (U):	0.125 389.5 ft
TOTAL Low-E window	108.89 s.f.	Sec Wall (U):	0.026	EXT. DUCTS (U):	0.125
TOTAL S.G.D.	80.00 s.f.	Exp Floor(U):	0.034	INFLOOR DUCT AREA:	232.5 S.F. @ 60.4 TD/ 28 TD
TOTAL Glass Block	0.00 s.f.	Low-E wi 0.320 / 0.29		ATTIC DUCT AREA:	0 S.F.(return) @ 142 TD/ 88.3 TD
TOTAL Skylite	0.00 s.f.	S.G.D. 0.360 / 0.36		EXT. DUCT AREA:	0 S.F. @ 142 TD/ 46 TD
TOTAL Door1 Area:	43.28 s.f.	Glass Blc 0.510 / 0.48		PEOPLE:	4 3757.2 Btuh Total Appliances
TOTAL Door2 Area:	0.00 s.f.	Skylite 0.460 / 0.75		FIREPLACES:	0
All Glass % of Floor:	12.49 %	Door 1: 0.170		DUCT GAIN: @ Semi-Tight	591 Btuh
All Glass % of Wall:	14.22 %	Door 2: 0.670		DUCT LOSS:	2662 Btuh
LATENT GAIN:	1852 Btuh			Summer Infiltr (7.5 mph):	27.8 cfm
Mech. Ventilation :	86.84 cfm (41 L/s)	Altitude: 1300 ft		Winter Infiltration (25 mph):	87.3 cfm @ Semi-Tight

ROOM BY ROOM VALUES:

963.4 FPM, max velocity in trunk #: 3

Heat Exiting Furnace: 107 deg A/C Exiting : 47 deg

0.25 Max pressure at A/H

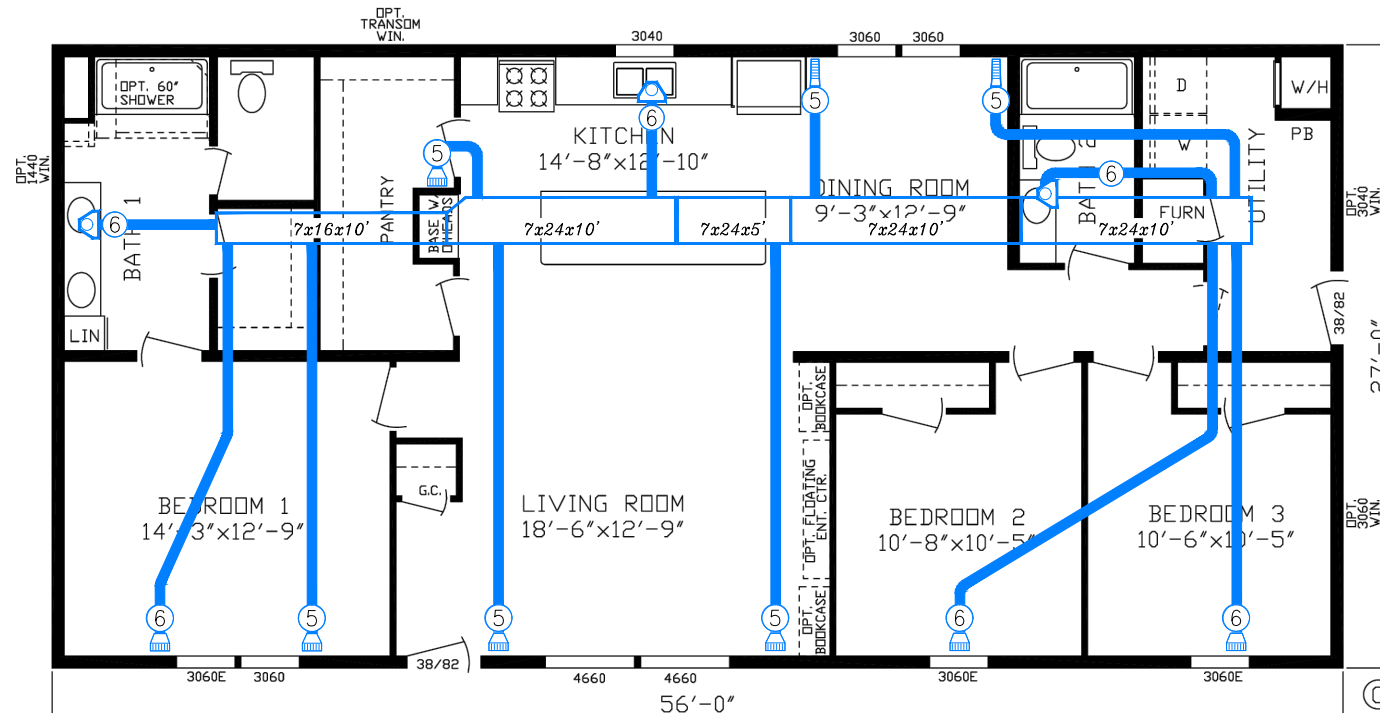
NOTICE: Due to glass area variations, the hourly cooling loads may not be balanced by a single-zone system

ROOM NAME		HEATING		COOLING		CFM		Cooling Air Values for		Heating Air Values for		15.0 kW		Maximum A/C capacity Calibrated Blower Test
		LOSS (Btu)		GAIN (Btu)		DIST		2.5 ton unit		90 % Gas/Oil		Elec		
								CFM	Btuh	CFM	Btuh	E	Btuh	Btuh (alt adj)
Bedroom #3	h	4,423		1,941		96		139	3,747	133	6,451		6,115	4,645
Bedroom #2	h	3,322		1,568		72		121	3,258	116	5,609		5,316	4,038
Living Room	h	6,925		3,648		151		150	4,032	143	6,942		6,579	4,997
Bedroom #1	h	6,015		2,870		131		182	4,905	174	8,446		8,005	6,081
Bath #1	h	4,071		1,513		89		110	2,952	105	5,082		4,817	3,659
Pantry	h	1,436		464		31		75	2,015	72	3,470		3,289	2,498
Kitchen	h	6,552		4,176		143		98	2,632	93	4,532		4,295	3,263
Dining Room	c	4,502		3,102		100		145	3,909	139	6,730		6,379	4,845
Bath #2	h	1,375		435		30		91	2,454	87	4,224		4,004	3,042
Utility	h	4,220		1,766		92		-	-	-	-		-	-
TOTALS		42,842		21,484		934		1,112	29,904	1,062	51,487		48,798	37,067

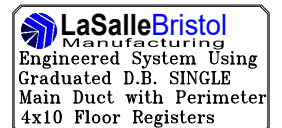


Reviewed to the Canadian standards.
NTA is a subsidiary of the International Code Council.

OPT. PATIO DOOR



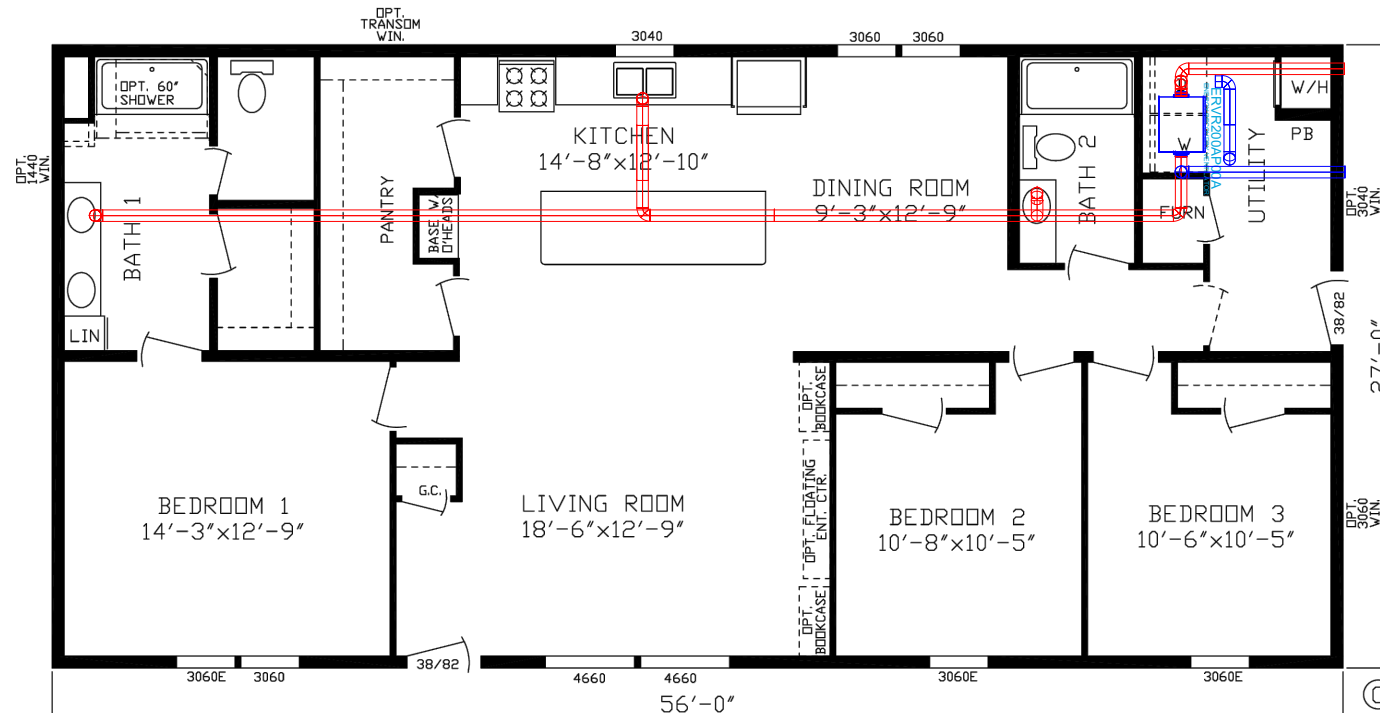
Reviewed to the Canadian standards.
NTA is a subsidiary of the International Code Council.



NOTE: FOR MODEL DIMENSIONS, OUR STANDARDS AND STANDARDS OF THE INDUSTRY GENERALLY INCLUDE A NOMINAL 4-FOOT ALLOWANCE FOR HITCH LENGTH PLUS ALLOWANCE FOR OTHER APPURTENANCES FOR WIDTH AND FOR LENGTH NORMALLY INCLUDED IN MEASUREMENTS FOR HIGHWAY MOVEMENT. REAR BEDROOM DIMENSIONS INCLUDE BAY, UNLESS BAY IS OPTIONAL ON A PARTICULAR UNIT OR IS OMITTED BY SPECIAL ORDER. ROOM SIZES ARE NOMINAL AND SOMETIMES THE DIMENSION INCLUDES WALL THICKNESS. DESIGNS, SPECIFICATIONS AND PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE. SOME OPTIONAL ITEMS ARE SHOWN. SOME TIRES, WHEELS, BRAKES AND AXLES ARE REUSED AFTER CAREFUL INSPECTION.

DATE OF LAST ISSUE		MODEL 6028 3B 2BA	
2/9/23		SCALE: NTS	DATE: 12/14/22
9/5/24		DRAWN BY: BJA	
		DRAWING NUMBER	
		146060	

OPT. PATIO DOOR



Reviewed to the Canadian standards.
NTA is a subsidiary of the International Code Council.

System Type: HRV-Central Supply
Trunks: R-8 Flex Thru Rafters
Vents: Bath Exhaust/Gable In-Take
Crossovers: Over Ridge Beam
On-Site
HRV Unit: Trane 200
Mounted: Wall in Closet

NOTE: FOR MODEL DIMENSIONS, OUR STANDARDS AND STANDARDS OF THE INDUSTRY GENERALLY INCLUDE A NOMINAL 4-FOOT ALLOWANCE FOR HITCH LENGTH PLUS ALLOWANCE FOR OTHER APPURTENANCES FOR WIDTH AND FOR LENGTH NORMALLY INCLUDED IN MEASUREMENTS FOR HIGHWAY MOVEMENT. REAR BEDROOM DIMENSIONS INCLUDE BAY, UNLESS BAY IS OPTIONAL ON A PARTICULAR UNIT OR IS OMITTED BY SPECIAL ORDER. ROOM SIZES ARE NOMINAL AND SOMETIMES THE DIMENSION INCLUDES WALL THICKNESS. DESIGNS, SPECIFICATIONS AND PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE. SOME OPTIONAL ITEMS ARE SHOWN. SOME TIRES, WHEELS, BRAKES AND AXLES ARE REUSED AFTER CAREFUL INSPECTION.

DATE OF LAST ISSUE		MODEL 6028 3B 2BA	
2/9/23		SCALE: NTS	DATE: 12/14/22
9/5/24		DRAWN BY: BJA	
		DRAWING NUMBER	
		146060	

Energy Efficiency Design Summary

(Part 9 Residential)

This form to be completed & signed by the person who reviews and takes responsibility for the energy efficiency design of the project.
Information on completing this form is contained on the reverse.

For use by Principal Authority	
Application No.	Model / Certification Number

A. Project Information

Building number, street name		Unit Number 146060	Lot / Con
Municipality	Postal Code	Reg. Plan number / other description Modular A277	

B. Compliance Option

☒ SB-12 Prescriptive [SB-12 - 3.1.1]	Table: 3.1.1.2.A Package: A6
☐ SB-12 Performance * [SB-12 - 3.1.2]	* Attach energy performance calculations using an approved software
☐ Energy Star® * [SB-12 - 3.1.3]	* Attach BOP form. House must be labeled on completion by Energy Star
☐ EnerGuide 80® *	* House must be evaluated by NRCAN advisor and meet a rating of 80

C. Project Design Conditions

Climate Zone (SB-1)	Heating Equip. Eff.	Space Heating Fuel Source
☒ Zone 1 (<5000 degree days)	☒ ≥ 90% AFUE	☒ Gas ☐ Propane ☐ Solid Fuel
☐ Zone 2 (≥5000 degree days)	☐ ≥ 78% <90% AFUE	☐ Oil ☐ Electric ☐ Earth Energy
Windows+Skylights+Glass Doors		Other Building Conditions
Gross Wall Area = 140.469 m ²	% Window = 8.30%	☐ ICF Basement ☐ Walkout Basement ☐ Log/Post & Beam
Gross Window + Area = 11.6593 m ²		☐ ICF Above Grade ☐ Slab-on-ground

D. Building Specifications

Building Component	RSI / R values	Building Component	Efficiency Ratings
Thermal Insulation		Windows & Doors¹	
Ceiling with Attic Space	10.56 / R60	Windows / Sliding Glass Doors	25ER
Ceiling without Attic Space	5.46 / R31	Skylights	n/a
Exposed Floor	5.46 / R31	Mechanicals	
Walls Above Grade	3.87+0.88ci / R22+5ci	Space Heating Equipment ²	92%
Basement Walls	20ci	HRV Efficiency (%)	65%
Slab (all > 600 mm below grade)	n/a	DHW Heater (EF)	80%
Slab (edge only ≤ 600 mm below grade)	n/a	NOTES 1. Provide U-Value in W/m ² .K, or ER Rating 2. Provide AFUE or indicate if condensing type combined system	
Slab (all ≤ 600 mm below grade, or heated)	n/a		

E. Performance Design Verification [complete applicable sections of SB-12 Performance, Energy Star or EnerGuide80 options used]

SB-12 Performance:
 The annual energy consumption using Subsection 3.1.1. SB-12 Package _____ is _____ GJ (1 GJ=1000MJ)
 The annual energy consumption of this house as designed is _____ GJ
 The software used to simulate the annual energy use of the building is: _____
 The building is being designed using an air leakage of _____ air changes per hour @ 50Pa.

Energy Star: BOP form attached. The house will be labeled on completion by:

Energy Star and EnerGuide80:
 Evaluator / Advisor / Rater Name: _____ Evaluator / Advisor / Rater License #: _____

F. Declaration [by the person who reviews and takes responsibility for the energy efficiency design]

I certify that I have reviewed the design documents submitted with the permit application, that the information contained on this form is consistent with the design documents, and that information used in any annual energy use calculation, if applicable, is a true representation of the design documents.

Name	Signature	Date
Brett Andrews		1/29/25

Energy Efficiency Design Summary

(Part 9 Residential)

This form to be completed & signed by the person who reviews and takes responsibility for the energy efficiency design of the project.
Information on completing this form is contained on the reverse.

For use by Principal Authority	
Application No.	Model / Certification Number

A. Project Information

Building number, street name		Unit Number 146060	Lot / Con
Municipality	Postal Code	Reg. Plan number / other description Modular A277	

B. Compliance Option

☒ SB-12 Prescriptive [SB-12 - 3.1.1]	Table: 3.1.1.3.A Package: A1
☐ SB-12 Performance * [SB-12 - 3.1.2]	* Attach energy performance calculations using an approved software
☐ Energy Star® * [SB-12 - 3.1.3]	* Attach BOP form. House must be labeled on completion by Energy Star
☐ EnerGuide 80® *	* House must be evaluated by NRCAN advisor and meet a rating of 80

C. Project Design Conditions

Climate Zone (SB-1)	Heating Equip. Eff.	Space Heating Fuel Source
☐ Zone 1 (<5000 degree days)	☒ ≥ 90% AFUE	☒ Gas ☐ Propane ☐ Solid Fuel
☒ Zone 2 (≥5000 degree days)	☐ ≥ 78% <90% AFUE	☐ Oil ☐ Electric ☐ Earth Energy
Windows+Skylights+Glass Doors	Other Building Conditions	
Gross Wall Area = 140.469 m ²	☐ ICF Basement ☐ Walkout Basement ☐ Log/Post & Beam	
Gross Window + Area = 11.6593 m ²	☐ ICF Above Grade ☐ Slab-on-ground	
% Window = 8.30%		

D. Building Specifications

Building Component	RSI / R values	Building Component	Efficiency Ratings
Thermal Insulation		Windows & Doors¹	
Ceiling with Attic Space	10.57/ R60	Windows / Sliding Glass Doors	34 ER
Ceiling without Attic Space	5.46/ R31	Skylights	n/a
Exposed Floor	5.46/ R31	Mechanicals	
Walls Above Grade	3.34+0.88ci / R19+5ci	Space Heating Equipment ²	96%
Basement Walls	3.52ci / R20ci	HRV Efficiency (%)	81%
Slab (all > 600 mm below grade)	n/a	DHW Heater (EF)	0.7
Slab (edge only ≤ 600 mm below grade)	n/a	NOTES 1. Provide U-Value in W/m ² .K, or ER Rating 2. Provide AFUE or indicate if condensing type combined system	
Slab (all ≤ 600 mm below grade, or heated)	n/a		

E. Performance Design Verification [complete applicable sections of SB-12 Performance, Energy Star or EnerGuide80 options used]

SB-12 Performance:
 The annual energy consumption using Subsection 3.1.1. SB-12 Package _____ is _____ GJ (1 GJ=1000MJ)
 The annual energy consumption of this house as designed is _____ GJ
 The software used to simulate the annual energy use of the building is: _____
 The building is being designed using an air leakage of _____ air changes per hour @ 50Pa.

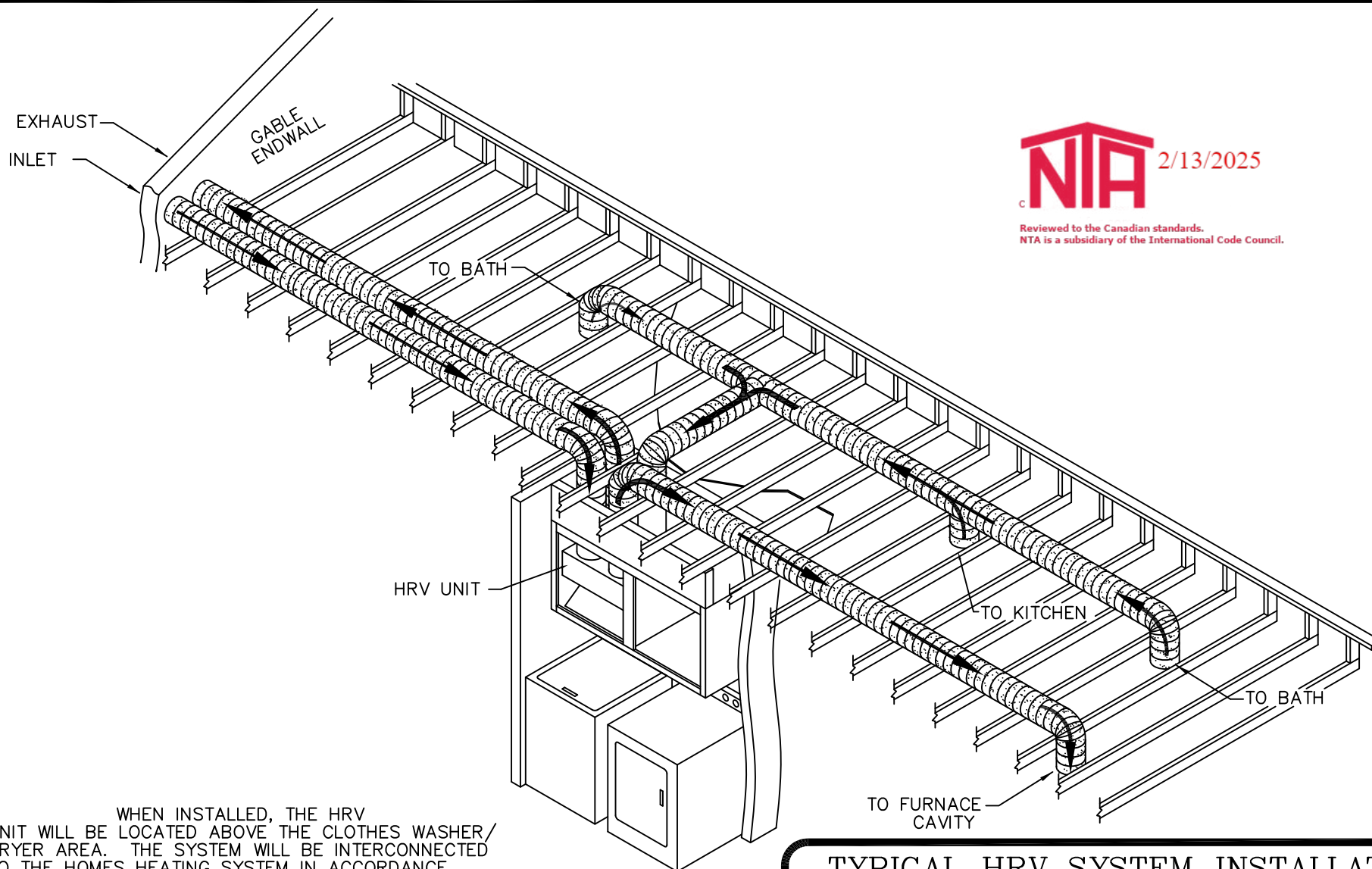
Energy Star: BOP form attached. The house will be labeled on completion by:

Energy Star and EnerGuide80:
 Evaluator / Advisor / Rater Name: _____ Evaluator / Advisor / Rater License #: _____

F. Declaration [by the person who reviews and takes responsibility for the energy efficiency design]

I certify that I have reviewed the design documents submitted with the permit application, that the information contained on this form is consistent with the design documents, and that information used in any annual energy use calculation, if applicable, is a true representation of the design documents.

Name	Signature	Date
Brett Andrews		1/29/25



2/13/2025

Reviewed to the Canadian standards.
NTA is a subsidiary of the International Code Council.

WHEN INSTALLED, THE HRV UNIT WILL BE LOCATED ABOVE THE CLOTHES WASHER/ DRYER AREA. THE SYSTEM WILL BE INTERCONNECTED TO THE HOMES HEATING SYSTEM IN ACCORDANCE WITH THE HRV MANUFACTURER'S INSTALLATION INSTRUCTIONS.

TYPICAL HRV SYSTEM INSTALLATION

FAIRMONT HOMES LLC.

2181 EAST MARKET STREET, NAPPANEE, INDIANA, USA 46550

Scale: NTS

Date: 2/9/24

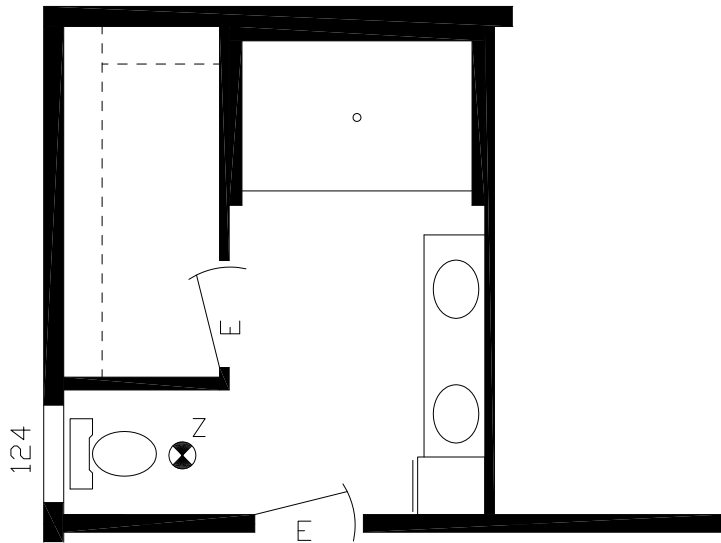
Name: BJA

THIS DOCUMENT IS THE SOLE PROPERTY OF FAIRMONT HOMES, LLC. UNAUTHORIZED USE, DISCLOSURE, OR DISSEMINATION OF INFORMATION CONTAINED HEREIN IS STRICTLY PROHIBITED. THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION, TRADE SECRETS, AND PROPRIETARY INFORMATION AND ANY UNAUTHORIZED USE OR POSSESSION OF THIS DOCUMENT WILL WARRANT PROSECUTION.

Proprietary
& Confidential
Drawing Name:

Ref Number: **_**_****

CSA MOD SUB-0101



REFER TO FLOOR PLAN
FOR ALL DATA
NOT SHOWN ON
THIS DRAWING

REVISIONS

OPT. BATH 1 W/ TILED SHOWER FOR 146060		
SCALE: 3/16"=1'-0"	DATE: 11/26/23	DRAWN BY: BJA
		DRAWING NUMBER 146060-R01