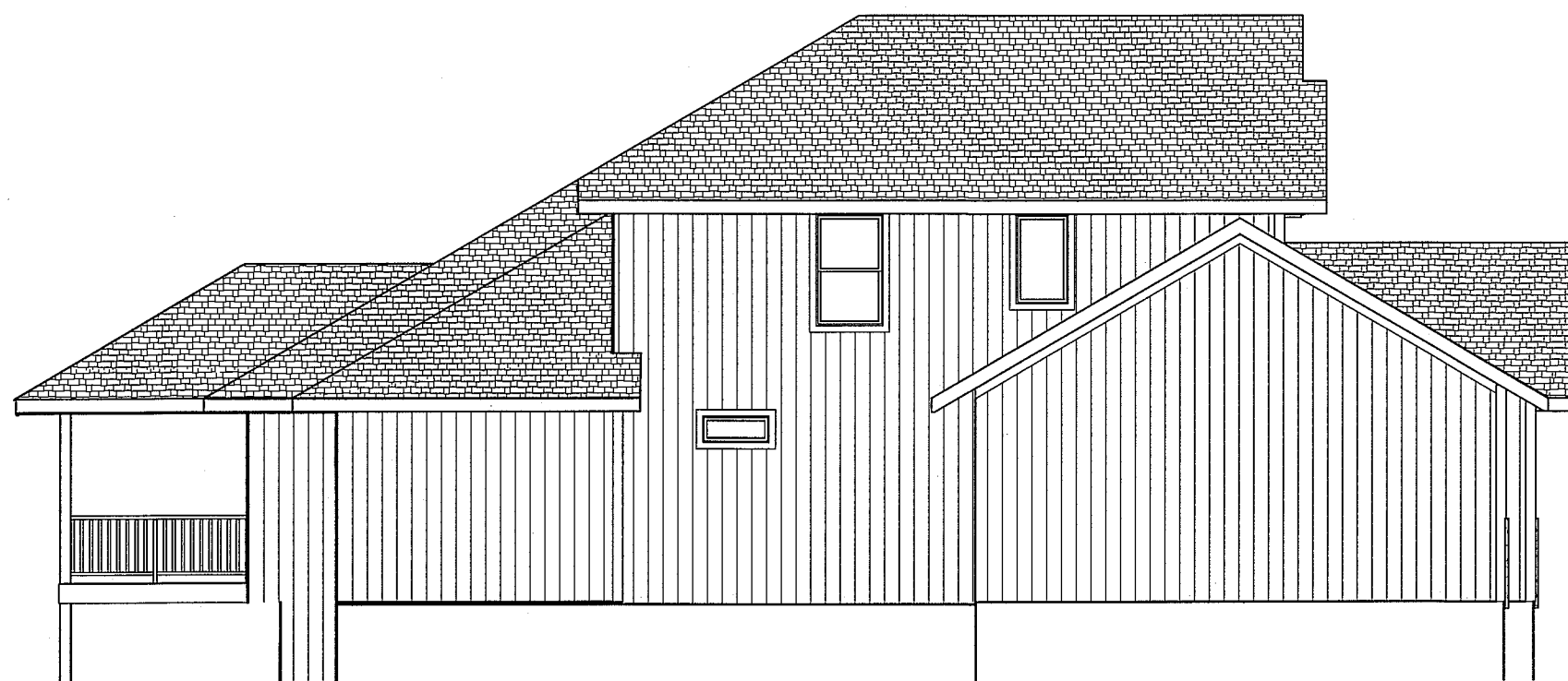
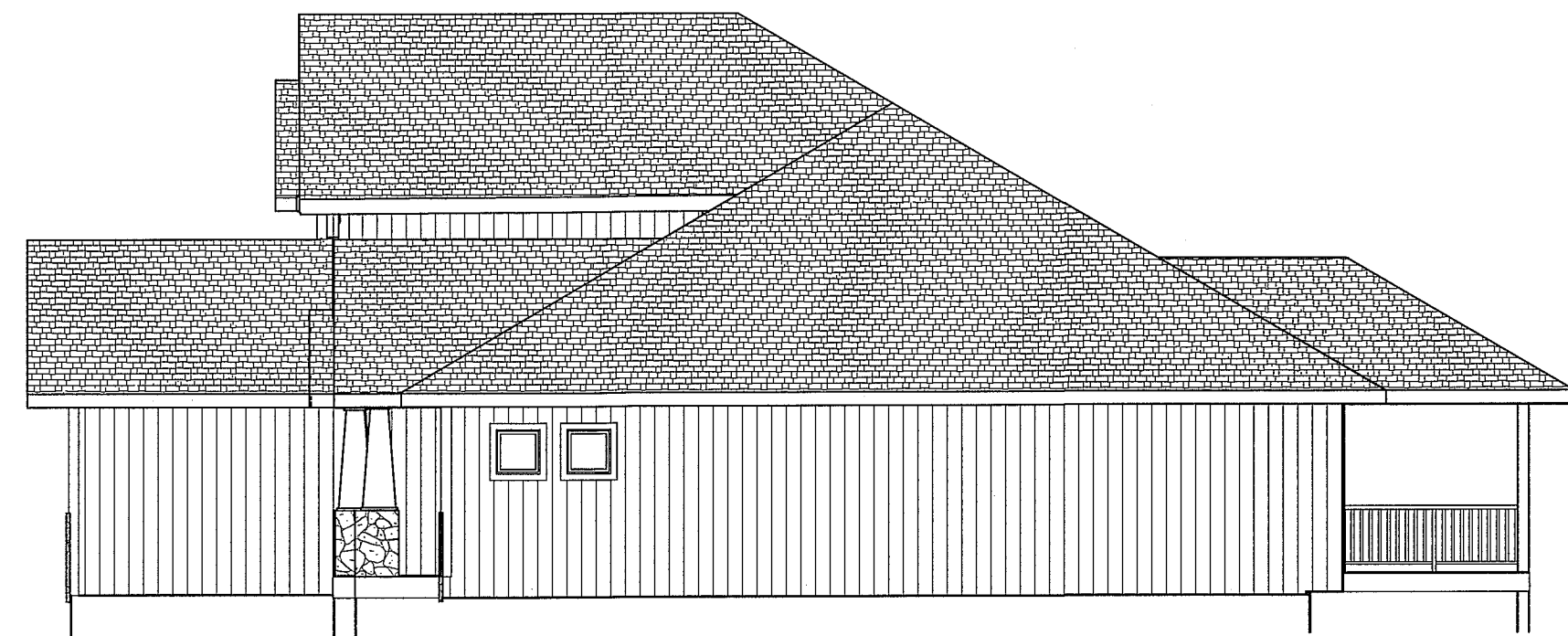




FRONT EL.
STUCCO & STONE



LEFT EL.
1/8" = 1'-0"



RIGHT EL.
1/8" = 1'-0"



REAR EL.
1/8" = 1'-0"

BUILD IN ACCORDANCE WITH
2018 INTERNATIONAL
RESIDENTIAL CODE AND
LOCAL CODES.

NICK ZVACEK HOMES
CARTER
LOT 130 MONTECELLO
4813 NE FREEHOLD CT
LEE SUMMIT MO

SCALE
1/4" = 1'-0"

DATE
9-21-21

PLAN NO.
3523-130

SHEET NO.

1 OF 6

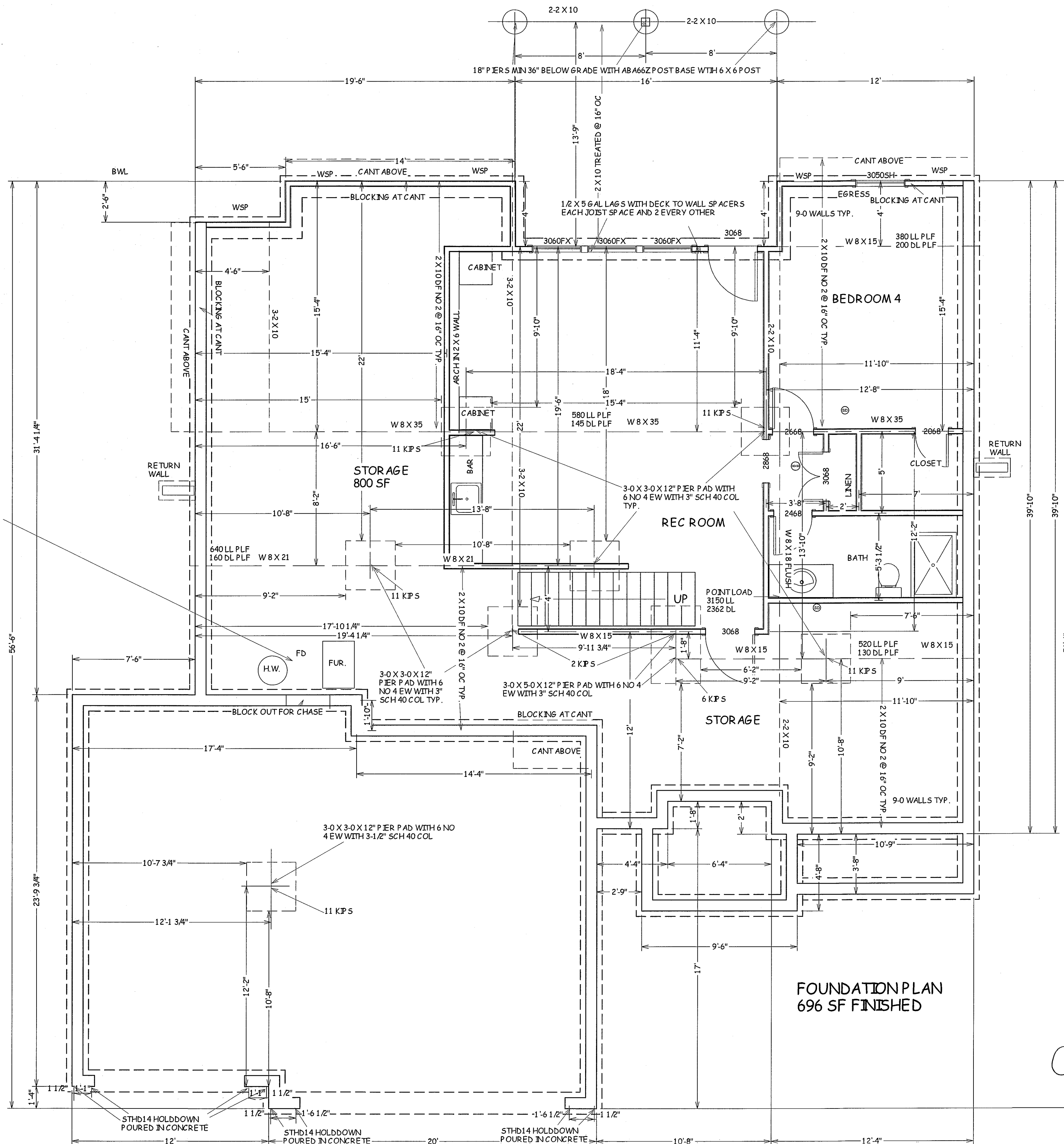


JOSEPH A. TOWNS P.E.
MO. LIC # 22017
PROFESSIONAL SEAL
APPLIES TO STRUCTURAL
ELEMENTS ONLY

INPUT CAPACITY
FURNACE = 100,000 BTU/ HR
H.W. HEATER = 50,000 BTU/ HR
TOTAL = 150,000 BTU/HR

50 CUBIC VOLUME REQ. PER 1,000 BTU/ HR
VOLUME IN UNFINISHED
 $800 \times 9 = 7,200$ CU. FT.

SINCE UNFINISHED AREA DOES NOT PROVIDE SUFFICIENT VOLUME FOR NORMAL INFILTRATION, INSTALL 2 METAL LOUVER VENTS IN WALL BETWEEN FAMILY ROOM AND FURNACE ROOM. ONE VENT SHALL BE @ MIN. WITHIN 12" OF THE TOP OF THE WALL AND ONE VENT SHALL COMMENCE WITHIN 12" OF THE BOTTOM OF THE WALL. EACH VENT SHALL PROVIDE A MINIMUM FREE AREA OF 150 SQUARE INCHES (1" PER 1,000 BTU/HR) SINCE METAL LOUVERS HAVE 75% FREE AREA, MINIMUM LOUVER SIZE REQUIRED = $150/75 = 200$ SQ. IN.



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MO. LIC E 22017
PROFESSIONAL SEAL
APPLIES TO STRUCTURAL
ELEMENTS ONLY

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NICK ZVACEK HOMES
CARTER
LOT 130 MONTICELLO
4813 NE FREEHOLD CT
LEE SUMMIT MO

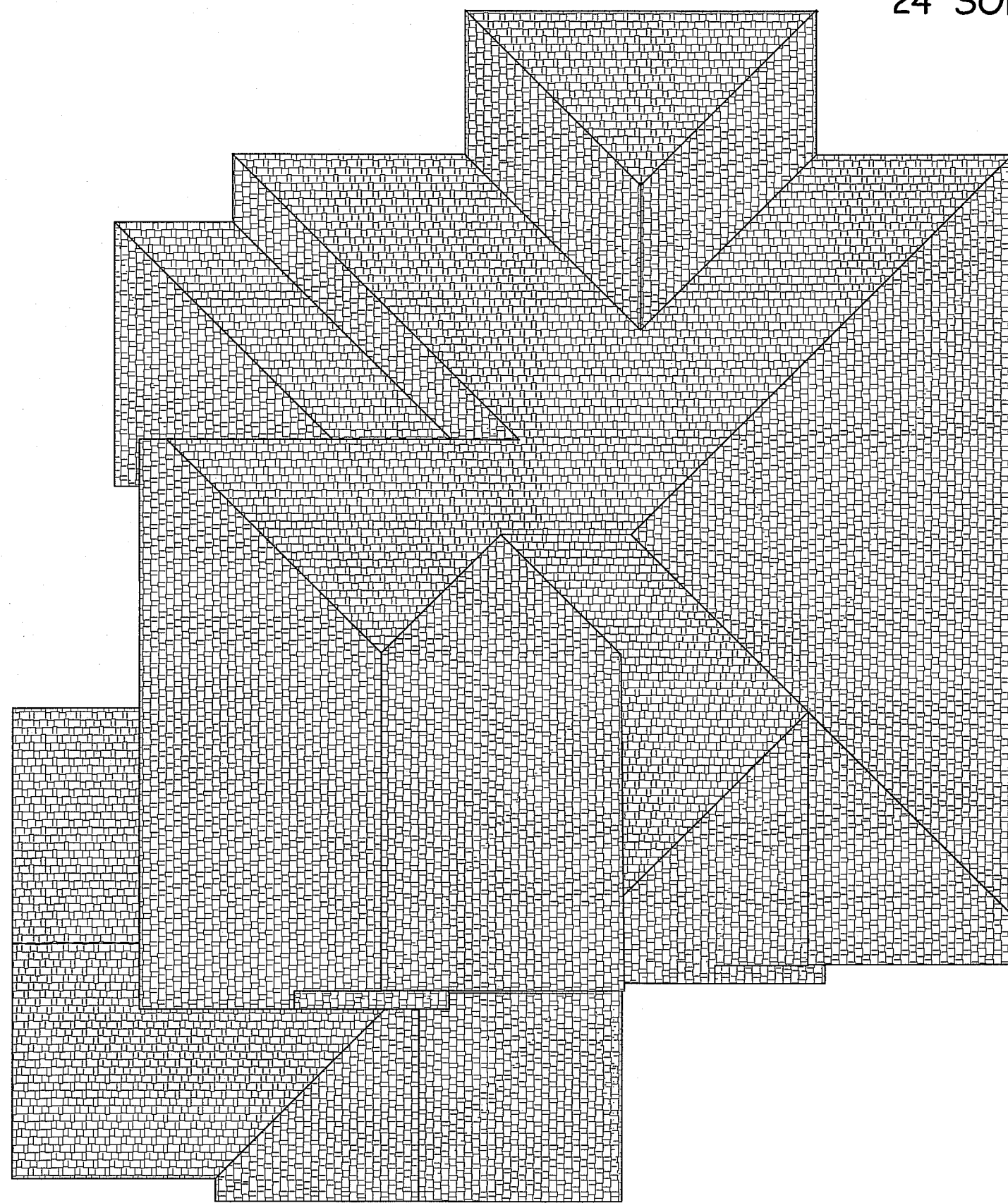
SCALE
1/4" = 1'-0"

DATE
9-21-21

PLAN NO.
3523-130

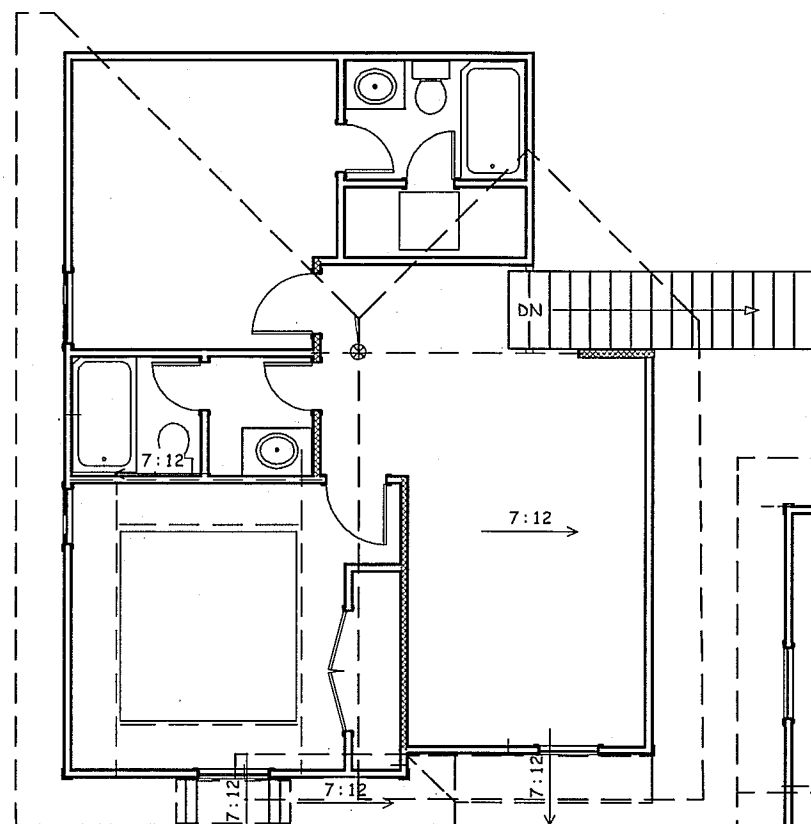
SHEET NO.

2 OF 6

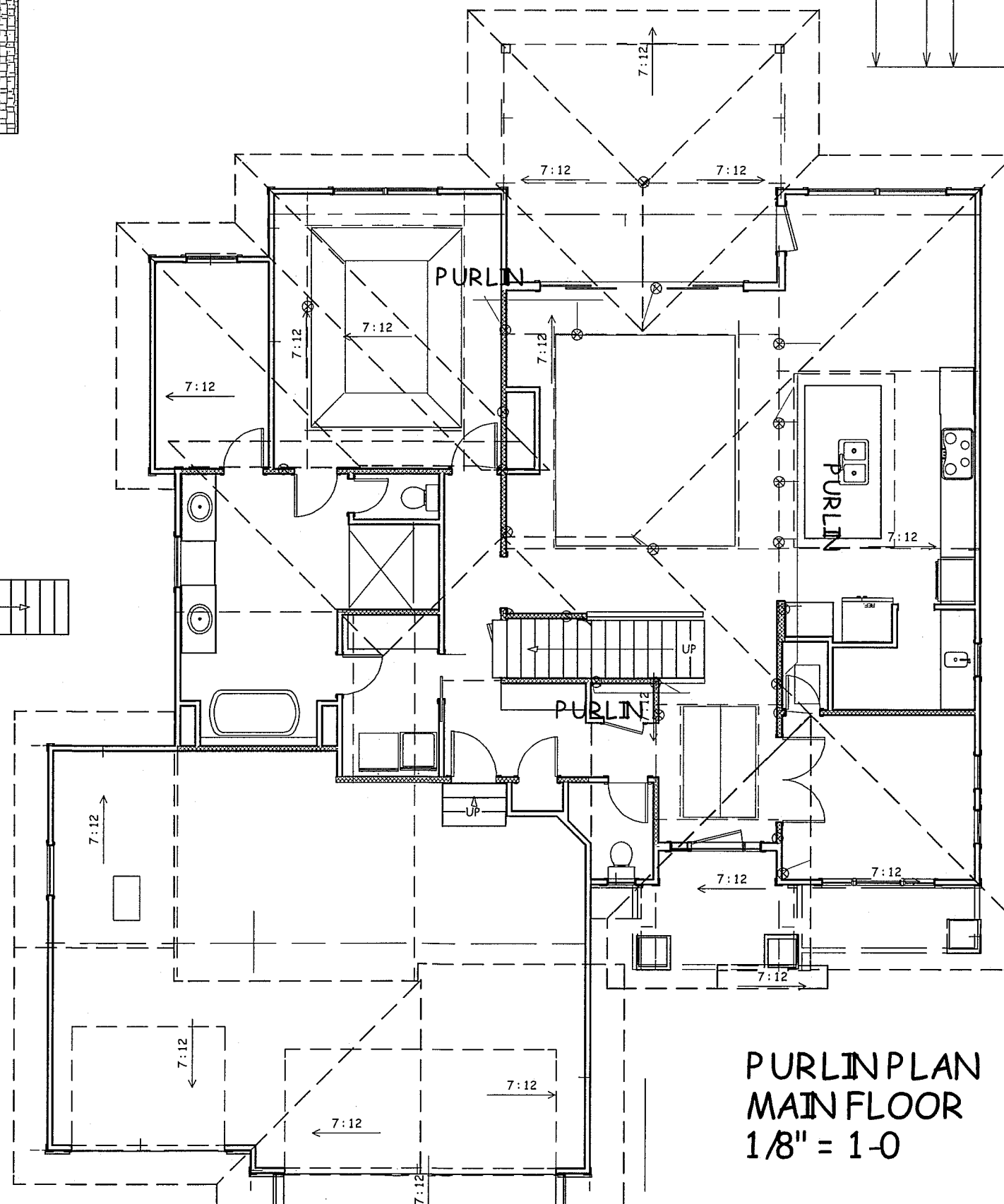


ROOF PLAN
1/8" = 1-0
ALL ROOF PITCHES 7/12

RAFTERS 2 X 6 DF NO 2 @ 16" OC TYP.
HP'S AND RIDGES 2 X 8 DF NO 2 TYP.



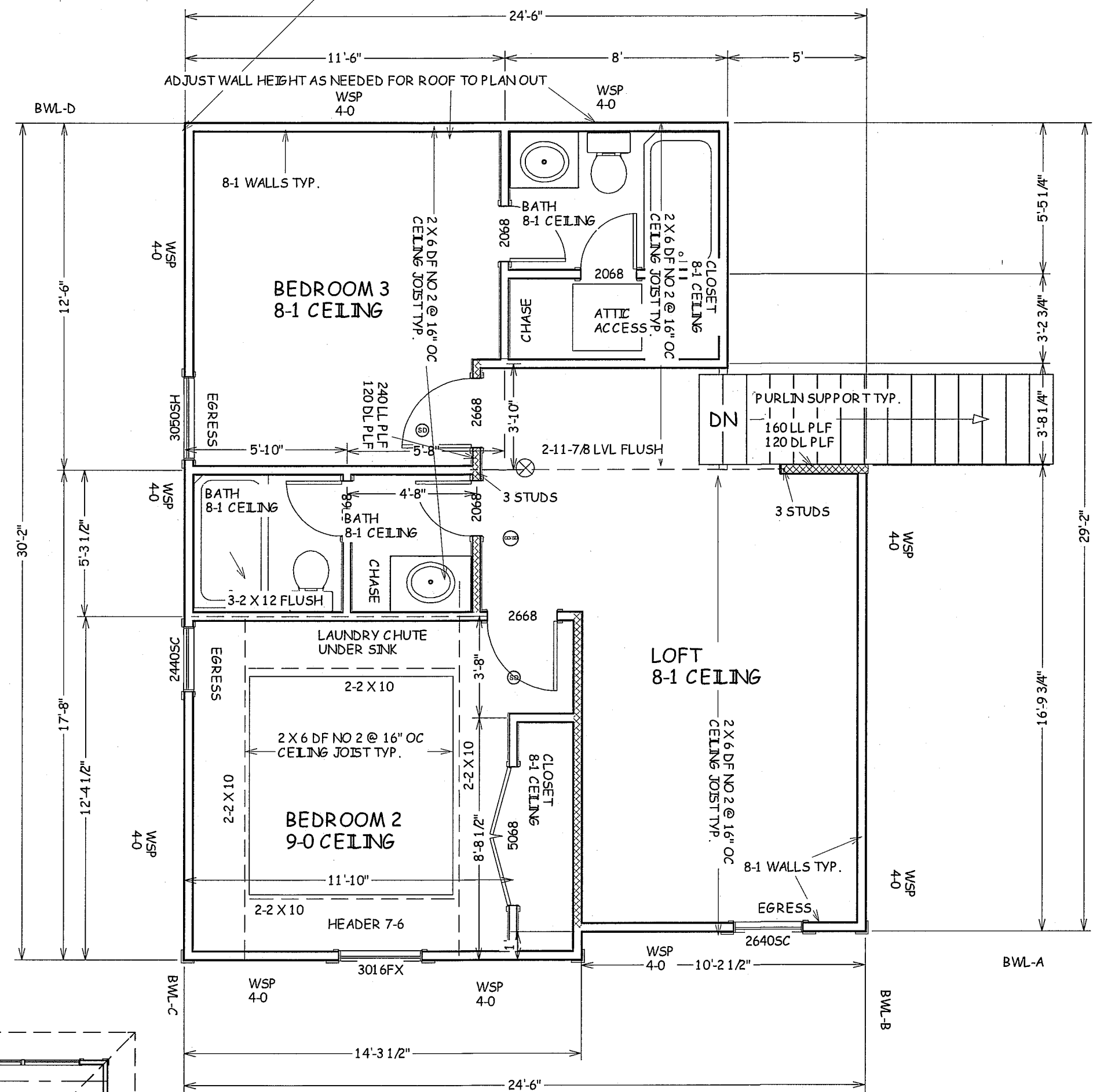
PURLIN PLAN
SECOND FLOOR
1/8" = 1-0
NO PURLINS
REQUIRED
SECOND FLOOR



PURLIN PLAN
MAIN FLOOR
1/8" = 1-0

24" SOFFITS TYP.

LINES UP WITH CORNER OF MASTER BATH BELOW



SECOND FLOOR
667 SF

BUILD IN ACCORDANCE WITH
2018 INTERNATIONAL
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LOCAL CODES.

NICK ZVACEK HOMES
CARTER
LOT 130 MONTECELLO
4813 NE FREEHOLD CT
LEE SUMMIT MO

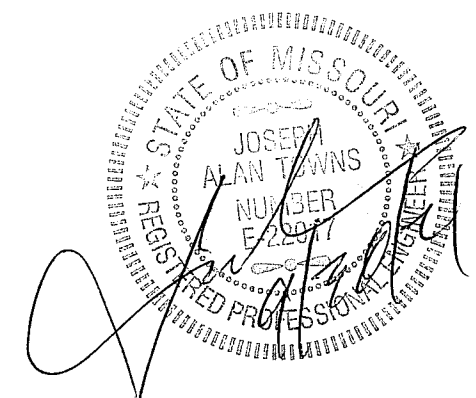
SCALE
1/4" = 1-0

DATE
9-21-21

PLAN NO.
3523-130

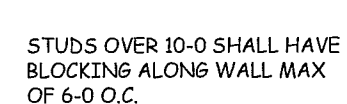
SHEET NO.

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JOSEPH A. TOWNS P.E.
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ELEMENTS ONLY

DUCTWORK NEEDS TO HAVE AN R-8 VALUE



OVERHEAD GARAGE DOORS
MUST MEET DASHMA 115 MPH
OR IRC 2018 REQUIREMENTS

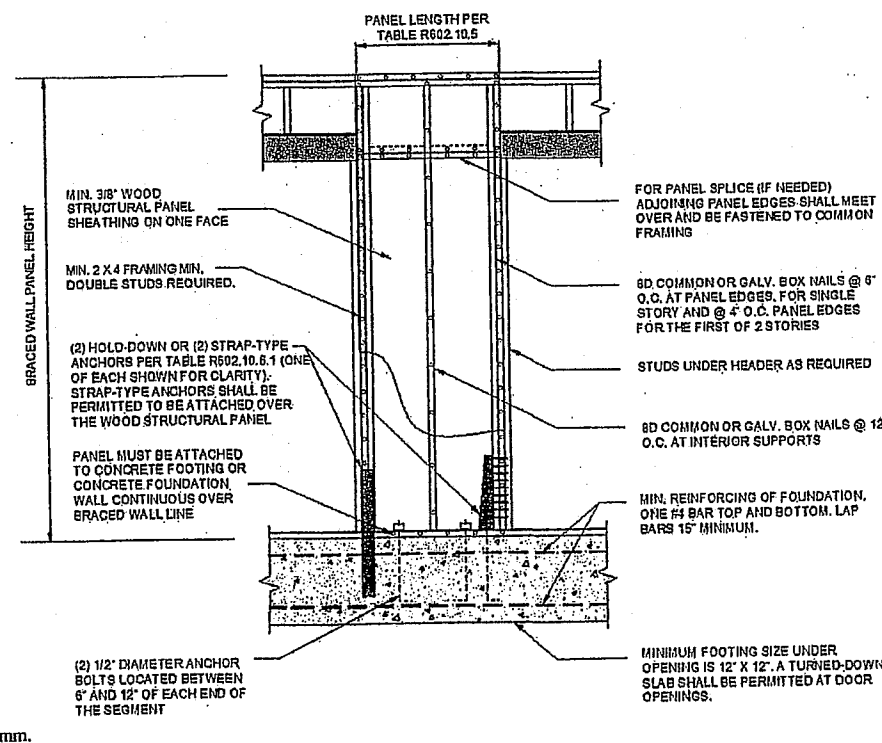
ALL POINT LOADS SHALL HAVE A MINIMUM OF 2 STUDS UNLESS NOTED OTHERWISE

5 OF 6

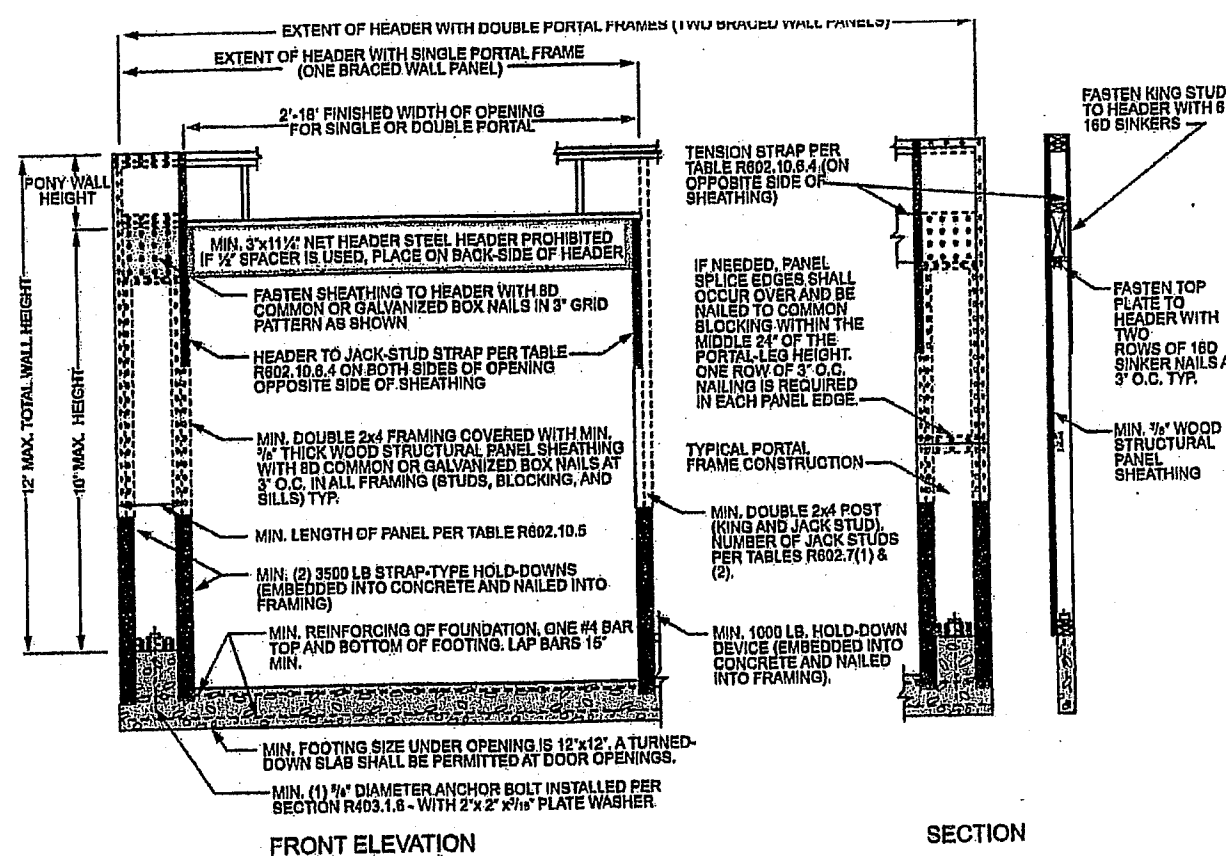
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**TABLE R602.10.3(1)
BRACING REQUIREMENTS BASED ON WIND SPEED**

EXPOSURE CATEGORY B 15-FOOT MEAN ROOF HEIGHT 10-FOOT WALL HEIGHT 2 BRACED WALL LINES		MINIMUM TOTAL LENGTH (FEET) OF BRACED WALL PANELS REQUIRED ALONG EACH BRACED WALL LINE ^a				
Ultimate Design Wind Speed (mph)	Story Location	Braced Wall Line Spacing ^b (feet)	Method LIP ^c	Method OB	Methods DWB, WSP, SFB, FBS, FCF, HFS, BV-WSP, ABW, PFH, PCP, CS-SFB	Methods CS-WSP, CS-G, CS-PF
≤ 115		10	3.5	3.5	2.0	2.0
		20	6.5	6.5	3.5	3.5
		30	9.5	9.5	5.5	4.5
		40	12.5	12.5	7.0	6.0
		50	15.0	15.0	9.0	7.5
		60	18.0	18.0	10.5	9.0
		10	7.0	7.0	4.0	3.5
		20	12.5	12.5	7.5	6.5
		30	18.0	18.0	10.5	9.0
		40	23.5	23.5	13.5	11.5
		50	29.0	29.0	16.5	14.0
		60	34.5	34.5	20.0	17.0
		10	NP	10.0	6.0	5.0
		20	NP	18.5	11.0	9.0
		30	NP	27.0	15.5	13.0
		40	NP	35.0	20.0	17.0
		50	NP	43.0	24.5	21.0
		60	NP	51.0	29.0	25.0



**FIGURE R602.10.5.1
METHOD ABW—ALTERNATE BRACED WALL PANEL**



**FIGURE R602.10.6.2
METHOD PFH—PORTAL FRAME WITH HOLD-DOWNS**

**TABLE R602.10.4
BRACING METHODS**

METHODS, MATERIAL	MINIMUM THICKNESS	FIGURE	CONNECTION CRITERIA ^a	
LIB Let-in-bracing	1 x 4 wood or approved metal straps at 45° to 60° angles for maximum 16\" stud spacing		Fasteners: Wood: 2-8d common nails or 3-8d (2 1/2\" long x 0.113\" dia.) nails	Spacing: Wood: per stud and top and bottom plates Metal: per manufacturer
	DWB Diagonal wood boards		2-8d (2 1/2\" long x 0.113\" dia.) nails or 2 - P/4\" long staples	Per stud
WSP Wood structural panel (See Section R604)	1/4\"		Exterior sheathing per Table R602.3(3) Interior sheathing per Table R602.3(1) or R602.3(2)	6\" edges 12\" field Varies by fastener
BV-WSP ^b Wood structural panels with stone or masonry veneer (See Section R602.10.6.5)	1/16\"	See Figure R602.10.6.5	8d common (2 1/2\" x 0.131\" dia.) nails	4\" at panel edges 12\" at intermediate supports 4\" at braced wall panel end posts
SFB Structural fiberboard sheathing	1/2\" or 3/32\" for maximum 16\" stud spacing		1 1/2\" long x 0.12\" dia. (for 1/2\" thick sheathing) 1 1/4\" long x 0.12\" dia. (for 3/32\" thick sheathing) galvanized roofing nails	3\" edges 6\" field
GB Gypsum board	1/2\"		Nails or screws per Table R602.3(1) for exterior locations Nails or screws per Table R702.3.5 for interior locations	For all braced wall panel locations: 7\" edges (including top and bottom plates) 7\" field
FBS Particleboard sheathing (See Section R605)	3/8\" or 1/2\" for maximum 16\" stud spacing		For 3/8\" dia. common (2\" long x 0.113\" dia.) nails For 1/2\" dia. common (2 1/2\" long x 0.131\" dia.) nails	3\" edges 6\" field
PCP Portland cement plaster	See Section R703.7 for maximum 16\" stud spacing		1 1/2\" long, 11 gage, 1/8\" dia. head nails or 1/4\" long, 16 gage staples	6\" o.c. on all framing members
HFS Hardboard panel siding	1/4\" for maximum 16\" stud spacing		0.092\" dia., 0.225\" dia. head nails with length to accommodate 1 1/4\" penetration into studs	4\" edges 8\" field
ABW Alternate braced wall	1/4\"		See Section R602.10.6.1	See Section R602.10.6.1

**TABLE R602.10.5
MINIMUM LENGTH OF BRACED WALL PANELS**

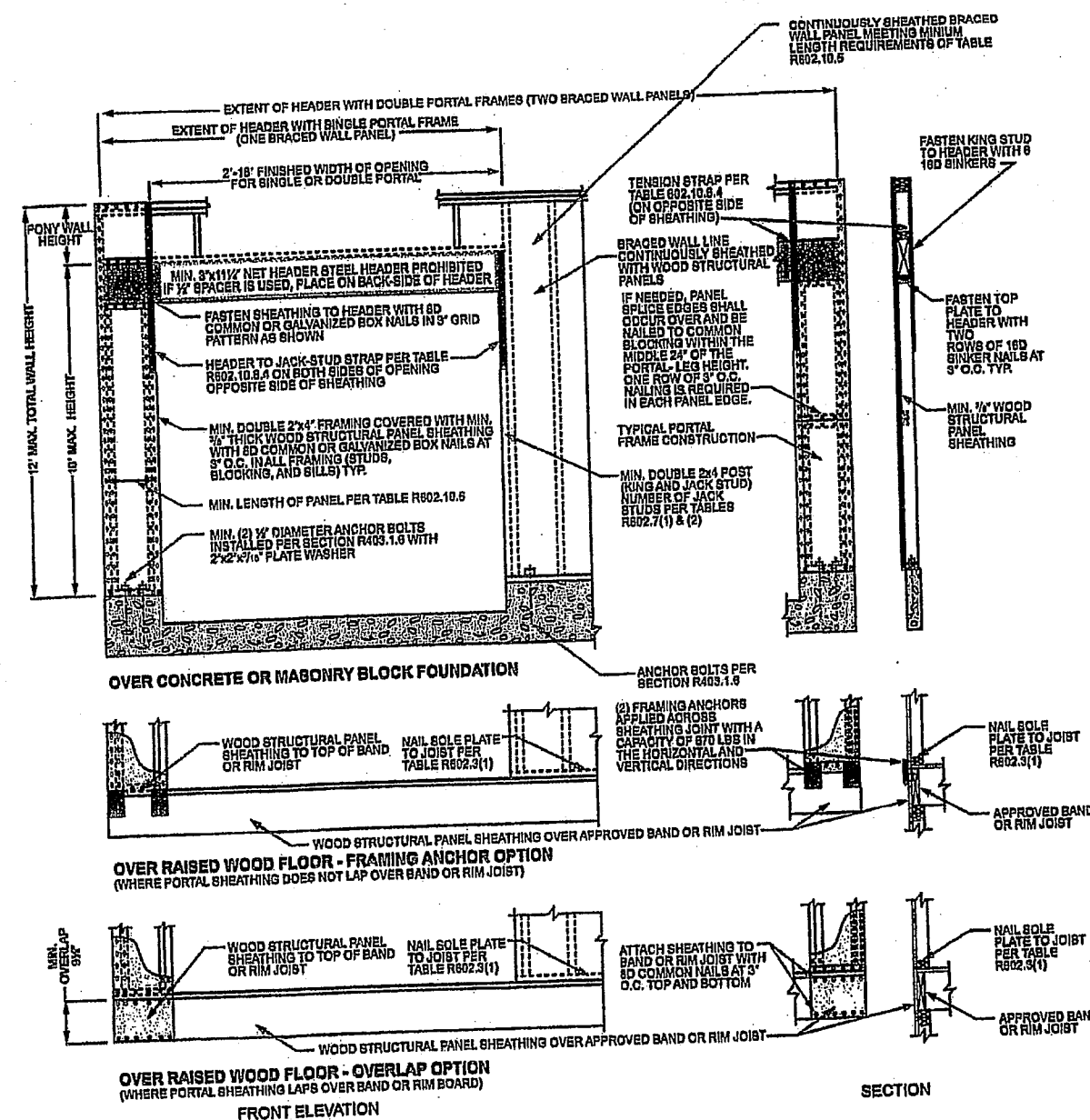
METHOD (See Table R602.10.4)	MINIMUM LENGTH ^a (inches)					CONTRIBUTING LENGTH (inches)
	8 feet	9 feet	10 feet	11 feet	12 feet	
DWB, WSP, SFB, FBS, FCF, HFS, BV-WSP	48	48	48	53	58	Actual ^b
OB	48	48	48	53	58	Double sided = Actual Single sided = 0.5 x Actual
LIB	55	62	69	NP	NP	Actual ^b
ABW	SDC A, B and C, ultimate design wind speed < 140 mph	28	32	34	38	42
	SDC D ₁ , D ₂ and D ₃ , ultimate design wind speed < 140 mph	32	32	34	NP	NP
CS-G	Adjacent clear opening height (inches)	24	27	30	33	36
CS-WSP, CS-SFB	≤ 64	24	27	30	33	36
	68	26	27	30	33	36
	72	27	27	30	33	36
	76	30	29	30	33	36
	80	32	30	30	33	36
	84	35	32	32	33	36
	88	38	35	33	33	36
	92	43	37	35	35	36
	96	48	41	38	36	36
	100	—	44	40	38	36
	104	—	49	43	40	39
	108	—	54	46	43	41
	112	—	—	50	45	43
	116	—	—	55	48	45
	120	—	—	60	52	48
	124	—	—	—	56	51
	128	—	—	—	61	54
	132	—	—	—	66	58
	136	—	—	—	—	62
	140	—	—	—	—	66
	144	—	—	—	—	72
METHOD (See Table R602.10.4)	Portal header height					
	8 feet	9 feet	10 feet	11 feet	12 feet	
PFH	Supporting roof only	16	16	16	Note c	Note c
	Supporting one story and roof	24	24	24	Note c	Note c
PFH		24	27	30	Note d	Note d
CS-PF	SDC A, B and C	16	18	20	Note e	Note e
	SDC D ₁ , D ₂ and D ₃	16	18	20	Note e	Note e

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 0.447 m/s.
NP = Not Permitted.
a. Linear interpolation shall be permitted.
b. Use the actual length where it is greater than or equal to the minimum length.
c. Maximum header height for PFH is 10 feet in accordance with Figure R602.10.6.2, but wall height shall be permitted to be increased to 12 feet with pony wall.
d. Maximum header height for PFH is 10 feet in accordance with Figure R602.10.6.3, but wall height shall be permitted to be increased to 12 feet with pony wall.
e. Maximum header height for CS-PF is 10 feet in accordance with Figure R602.10.6.4, but wall height shall be permitted to be increased to 12 feet with pony wall.

**TABLE R602.10.4—continued
BRACING METHODS**

METHODS, MATERIAL	MINIMUM THICKNESS	FIGURE	CONNECTION CRITERIA ^a	
			Fasteners	Spacing
PFH Portal frame with hold-downs	1/4\"		See Section R602.10.6.2	See Section R602.10.6.2
PFH Portal frame at garage	1/4\"		See Section R602.10.6.3	See Section R602.10.6.3
CS-WSP Continuously sheathed wood structural panel	1/4\"		Exterior sheathing per Table R602.3(3) Interior sheathing per Table R602.3(1) or R602.3(2)	6\" edges 12\" field Varies by fastener
CS-G ^b Continuously sheathed wood structural panel adjacent to garage openings	1/4\"		See Method CS-WSP	See Method CS-WSP
CS-PF Continuously sheathed portal frame	1/4\"		See Section R602.10.6.4	See Section R602.10.6.4
CS-SFB ^c Continuously sheathed structural fiberboard	1/2\" or 3/32\" for maximum 16\" stud spacing		1 1/2\" long x 0.12\" dia. (for 1/2\" thick sheathing) 1 1/4\" long x 0.12\" dia. (for 3/32\" thick sheathing) galvanized roofing nails	3\" edges 6\" field

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 degree = 0.0175 rad, 1 pound per square foot = 47.88 N/m², 1 mile per hour = 0.447 m/s.
a. Adhesive attachment of wall sheathing, including Method OB, shall not be permitted in Seismic Design Categories C, D₁, D₂, and D₃.
b. Applies to panels next to garage door opening where supporting gable end wall or roof load only. Shall only be used on one wall of the garage. In Seismic Design Categories D₁, D₂, and D₃, roof covering dead load shall not exceed 3 psf.
c. Garage openings adjacent to a Method CS-G panel shall be provided with a header in accordance with Table R602.7(1). A full-height clear opening shall not be permitted adjacent to a Method CS-G panel.
d. Method CS-SFB does not apply in Seismic Design Categories D₁, D₂, and D₃.
e. Method applies to detached one- and two-family dwellings in Seismic Design Categories D₁ through D₃ only.



**FIGURE R602.10.6.4
METHOD CS-PF—CONTINUOUSLY SHEATHED PORTAL FRAME PANEL CONSTRUCTION**

BUILD IN ACCORDANCE WITH
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LOCAL CODES.

NICK ZVACEK HOMES
CARTER
LOT 130 MONTICELLO
4813 NE FREEHOLD CT
LEE SUMMIT MO

SCALE
1/4\" = 1-0

DATE
9-21-21

PLAN NO.
3523-130

SHEET NO.

6 OF 6

STATE OF MISSOURI
JAMES E. TOWNS P.E.
MO. LIC # 22017
PROFESSIONAL SEAL
APPLIES TO STRUCTURAL
ELEMENTS ONLY

BRACE WALL DETAILS
WIND SPEED 115 MPH
WIND EXPOSURE A
SEISMIC DESIGN CATEGORY A