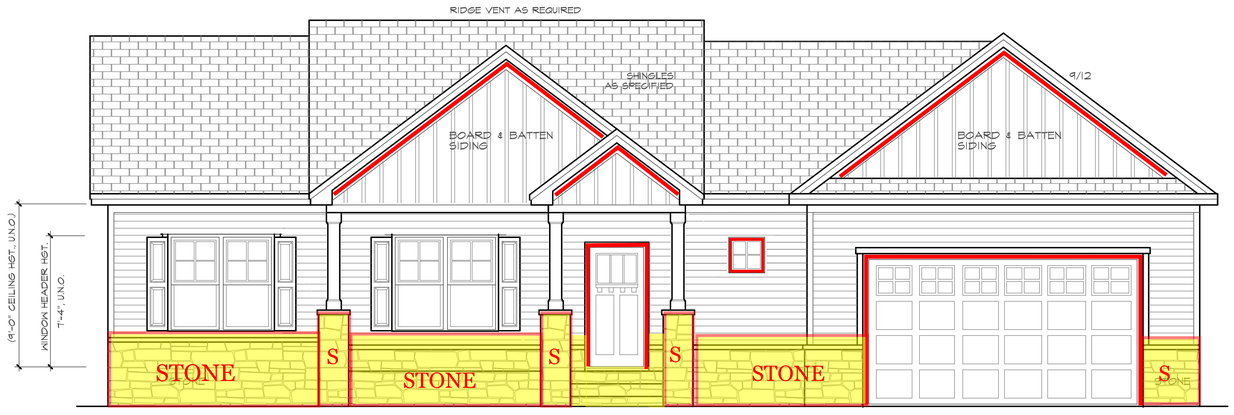
WEST PRESERVE - LOT 53
274 BOYCE COURT SANFORD, NC 27332
3 CAR GARAGE



FRONT ELEVATION

SCALE 1/4" = 1'0"

ATTIC VENTILATION:

THE NET FREE VENTILATING AREA SHALL BE NOT LESS THAN 1/150 OF THE AREA OF THE SPACE VENTILATED EXCEPT THAT THE AREA MAY BE 1/300 PROVIDED AT LEAST 50% AND NOT MORE THAN 80% OF THE VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE SPACE TO BE VENTILATED AT LEAST 3 FEET ABOVE EAVE OR CORNICE VENTS WITH THE BALANCE OF THE REQUIRED VENTILATION TO BE PROVIDED BY EAVE OR CORNICE VENTS.

GROSS ATTIC AREA TO BE VENTILATED 1992 SQ.FT.

1992/300 = 6.64 SQ.FT. NET FREE AREA

50% OF VENTING MUST BE 3FT. ABOVE EAVE OR SOFFIT VENTS.

THIS PLAN DESIGNED UNDER NORTH CAROLINA RESIDENTIAL CODE 2018 EDITION (2015 IRC)

NC (2018 NCRC) ; Wind ; 115 - 120 mph

REAR ELEVATION

PARGE

NOTICE TO CONTRACTOR
All construction must comply with current NC Building Codes and is subject to field inspection and verification.
APPROVED
Limited building only review
Permit holder responsible for full compliance with the code
04/01/2025
Harnett COUNTY NORTH CAROLINA

MIDTOWN DESIGNS

The Highland

WEAVER HOMES

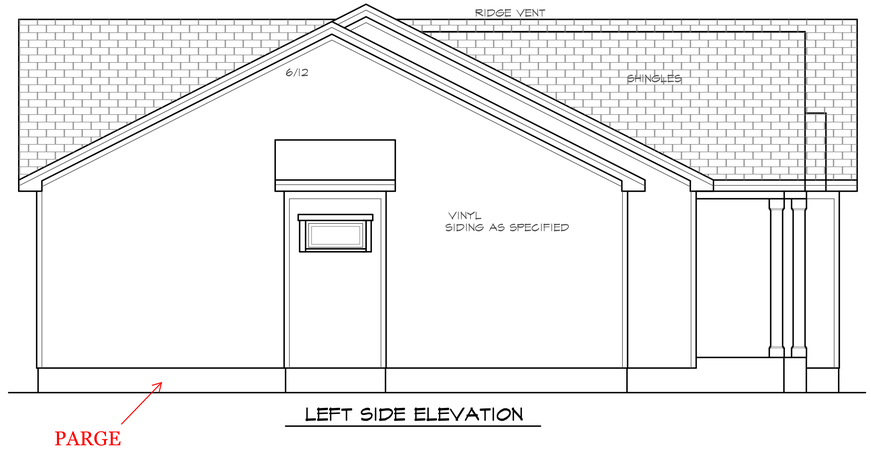
LOT SUB

DATE 1/17/2021

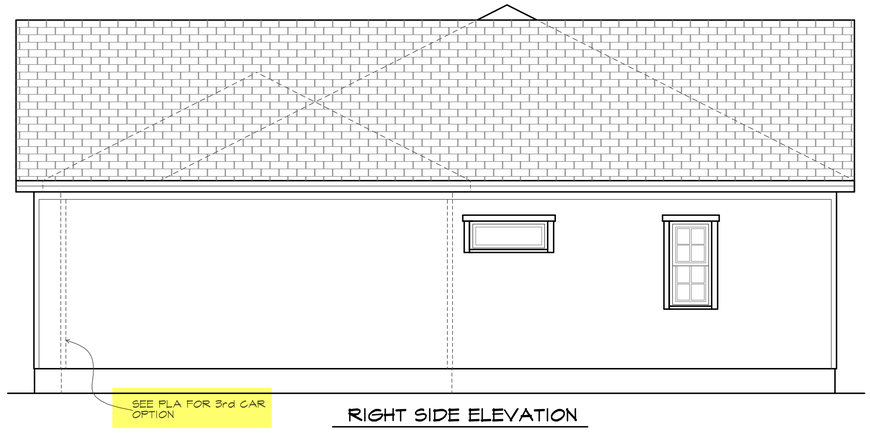
SCALE

PROJECT # 201211

MidTown Designs Inc. 1529 Big Falls Dr. Wendell 27591 Phone: 919-783-8626 www.midtowndesigns.com



LEFT SIDE ELEVATION



RIGHT SIDE ELEVATION

MIDTOWN DESIGNS

The Highland

WEAVER HOMES

LOT SUB.

DATE 1/17/2021

SCALE

PROJECT # 201211

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FOUNDATION STRUCTURAL NOTES

1. (3) 2" X 10" SPF GIRDER, DROPPED, TYPICAL.
2. CONCRETE BLOCK PIER SIZE SHALL BE:

SIZE	HOLLOW MASONRY	SOLID MASONRY
8" X 16"	UP TO 32" HIGH	UP TO 8'0" HIGH
12" X 16"	UP TO 48" HIGH	UP TO 9'0" HIGH
16" X 16"	UP TO 64" HIGH	UP TO 12'0" HIGH
24" X 24"	UP TO 96" HIGH	

WITH 30" X 30" X 10" CONCRETE FOOTING, UNO.

3. WALL FOOTING AS FOLLOWS:

DEPTH: 8" - UP TO 2 1/2 STORY
10" - 3 STORY

WIDTH: SIDING OR EQUAL
16"- UP TO 2-1/2 STORY
18" - 3 STORY

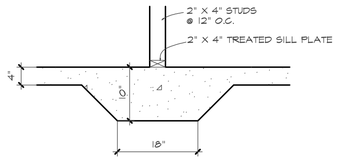
BRICK VENEER
16" - 1-STORY
20" - 2-STORY
24" - 3 STORY

FOR FOUNDATION WALL HEIGHT AND BACKFILL REQUIREMENTS, REFER TO NORTH CAROLINA RESIDENTIAL BUILDING CODE TABLE R404.1.1 (1 THRU 4)
NOTE: ASSUMED SOIL BEARING CAPACITY = 2000 PSF. CONTRACTOR MUST VERIFY SITE CONDITIONS AND CONTACT SOILS ENGINEER IF MARGINAL OR UNSTABLE SOILS ARE ENCOUNTERED.

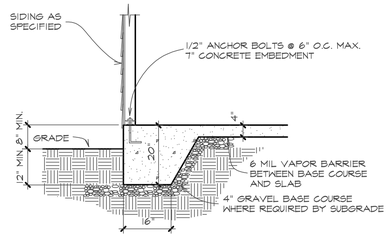
ATTACH SILL PLATE WITH 1/2" DIA. ANCHOR BOLTS AT 6'0" CENTERS (7" EMBEDMENT) AND 12" FROM EACH CORNER. (SECTION R403.1.6)

4. ■ DESIGNATES A SIGNIFICANT POINT LOAD TO HAVE SOLID BLOCKING TO PIER. SOLID BLOCKING ALL BEAM BEARING POINTS NOTED TO HAVE THREE OR MORE STUDS TO FOUNDATION, TYPICAL.
5. ABBREVIATIONS

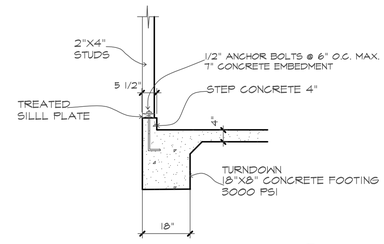
"SJ" - SINGLE JOIST
"DJ" - DOUBLE JOIST
"TJ" - TRIPLE JOIST



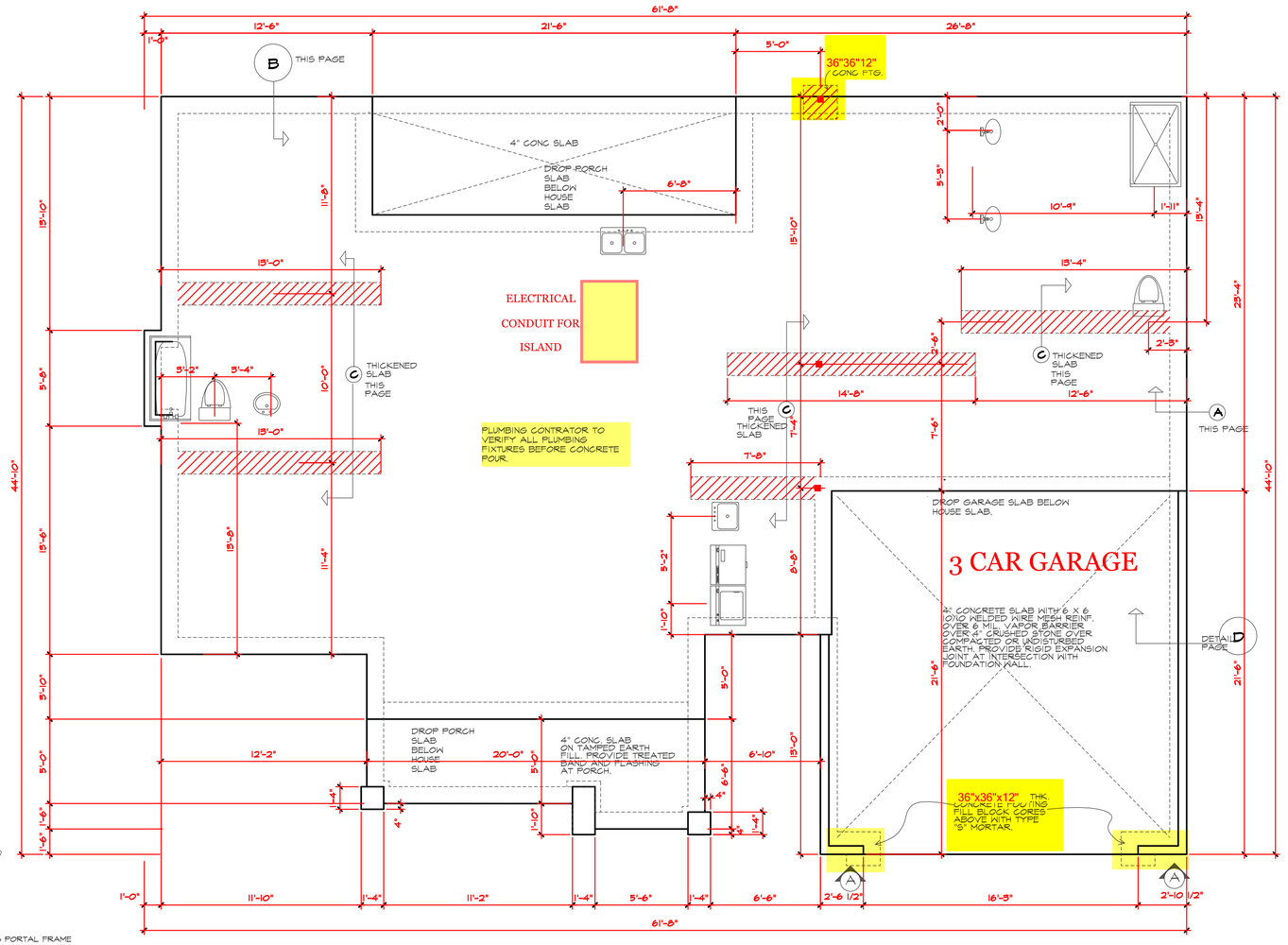
SECTION Ⓒ ELEVATION
THICKENED SLAB



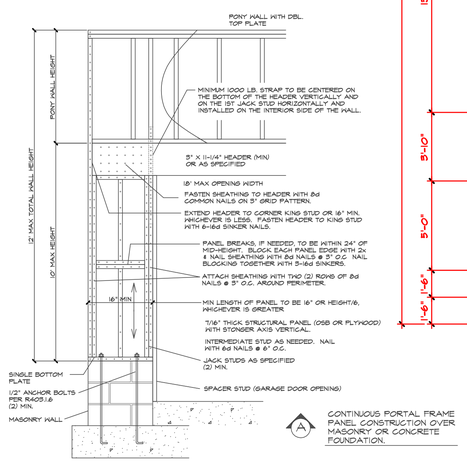
SECTION THROUGH MONOLITHIC SLAB/ FOOTING B
SCALE 1/2" = 1'-0"



MONOLITHIC SLAB @ GARAGE D
SCALE 1/2" = 1'-0"



MONOLITHIC SLAB FOUNDATION PLAN
SCALE 1/4" = 1'-0"



Ⓐ CONTINUOUS PORTAL FRAME PANEL CONSTRUCTION OVER MASONRY OR CONCRETE FOUNDATION.

MIDTOWN DESIGNS

The Highland

WEAVER HOMES

LOT: SUB:
DATE: 1/17/2021
SCALE:
PROJECT # 20121I

MidTown Designs Inc. 1529 Big Falls Dr. Wendell 27591 Phone: 919-783-8626 www.midtowndesigns.com

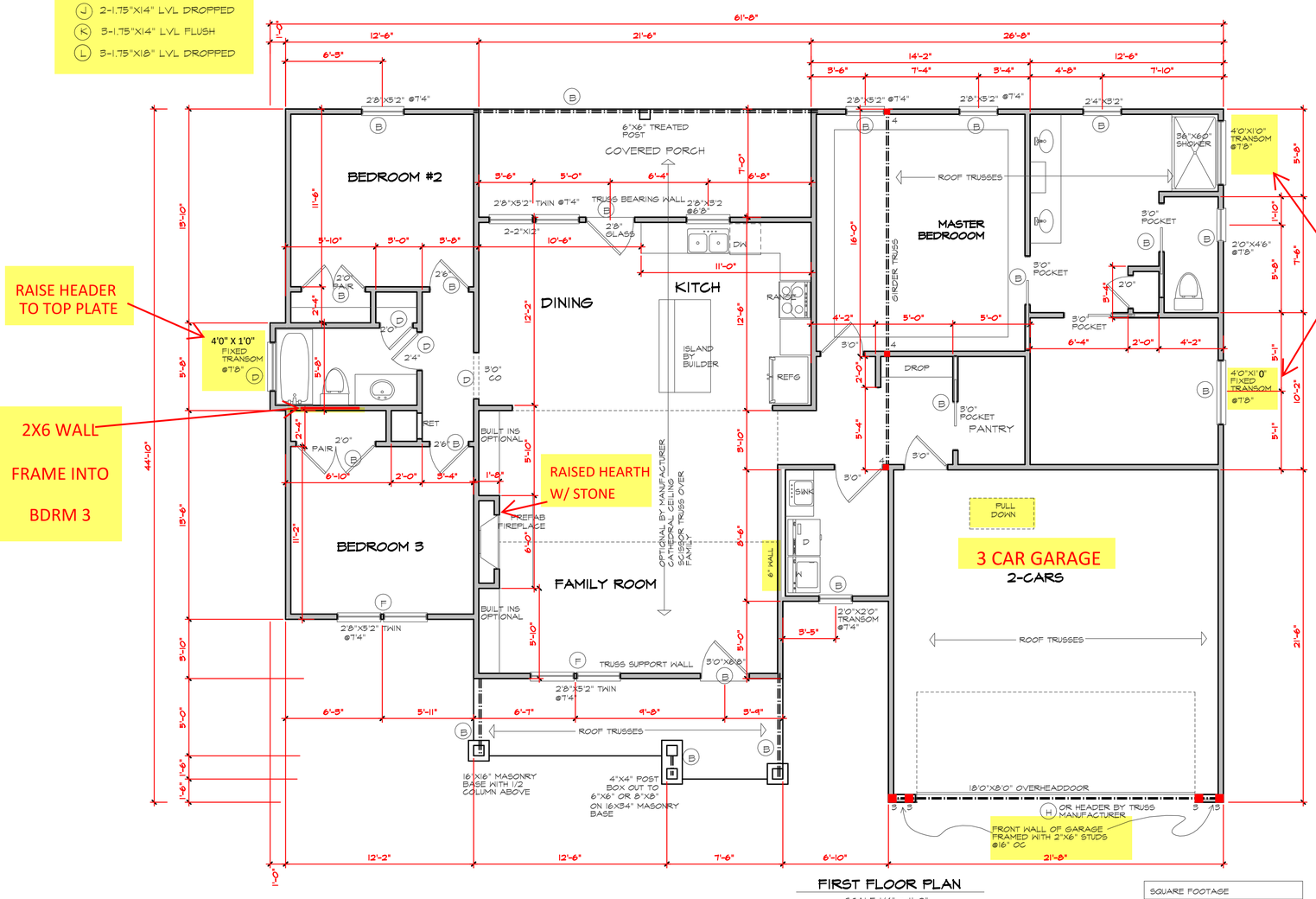
BEAM SCHEDULE
(OR BY OTHERS)

- (A) 2-2"X10" FLUSH
- (B) 2-2"X10" DROPPED
- (C) 2-2"X8 FLUSH
- (D) 2-2"X8" DROPPED
- (E) 2-1.75"X9.25" LVL FLUSH
- (F) 2-1.75"X9.25" DROPPED
- (G) 1-1.75"X14" LVL FLUSH
- (H) 2-1.75"X11 7/8" LVL FLUSH
- (J) 2-1.75"X14" LVL DROPPED
- (K) 3-1.75"X14" LVL FLUSH
- (L) 3-1.75"X18" LVL DROPPED

WALL BRACING NOTES:

WALL BRACING SHALL BE IN ACCORDANCE WITH SECTION R602.10.3 CONTINUOUS SHEATHING. BRACING METHOD CS-WSP SHALL BE USED IN ACCORDANCE WITH TABLE R602.10.1

1. THE REQUIRED LENGTH OF BRACING FOR EACH SIDE OF A RECTANGLE CIRCUMSCRIBED AROUND THE PLAN OR A PORTION OF THE PLAN AT EACH STORY LEVEL SHALL BE IN ACCORDANCE WITH TABLE R602.10.3 AND FIGURE R602.10.3(1), UNLESS NOTED OTHERWISE. THE ENTIRE STRUCTURE IS ASSUMED TO CIRCUMSCRIBED WITHIN A SINGLE RECTANGLE.
2. MINIMUM PANEL WIDTH IS 24". SEE SECTION R602.10.1 FOR ADDITIONAL INFORMATION. CONNECTION CRITERIA SHALL BE IN ACCORDANCE WITH TABLE R602.10.1.
3. PORTAL FRAME CONSTRUCTION SHALL BE IN ACCORDANCE WITH FIGURE R602.10.1.
4. HOLD DOWN DEVICE SHALL BE AS FOLLOWS: SIMPSON LSTA24 STRAP (OR EQUIVALENT) BETWEEN FLOORS EXTENDING FROM BOTTOM OF FLOOR BAND AND UP THE STUDS PER SITE PER BUILDER SIMPSON HD3B HOLD DOWN (OR EQUIVALENT) WHERE REQUIRED TO CONNECT DIRECTLY TO FOUNDATION.



FIRST FLOOR PLAN
SCALE 1/4" = 1'-0"

SQUARE FOOTAGE	
FIRST FLOOR	1649 SQ.FT.
GARAGE	441 SQ.FT.
PORCHES	262 SQ.FT.

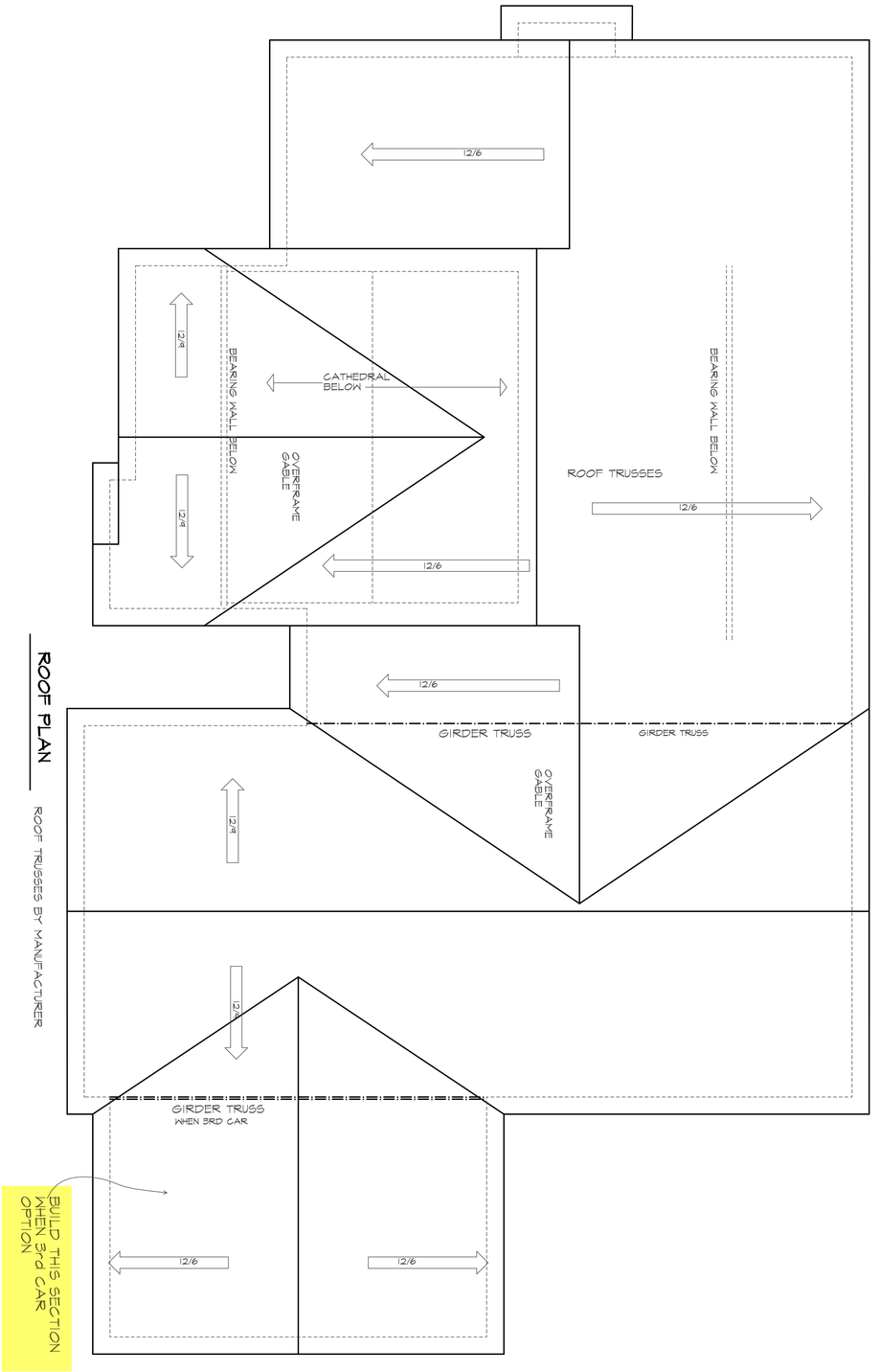
MIDTOWN DESIGNS

The Highland

WEAVER HOMES

MidTown Designs Inc. 1529 Big Falls Dr. Wendell 27591 Phone: 919-783-8626 www.midtowndesigns.com

LOT: SUB:
DATE: 1/17/2021
SCALE:
PROJECT #: 20121I



ROOF PLAN

ROOF TRUSSES BY MANUFACTURER

BUILD THIS SECTION WHEN 3rd CAR OPTION

MIDTOWN DESIGNS

PROJECT # 20121

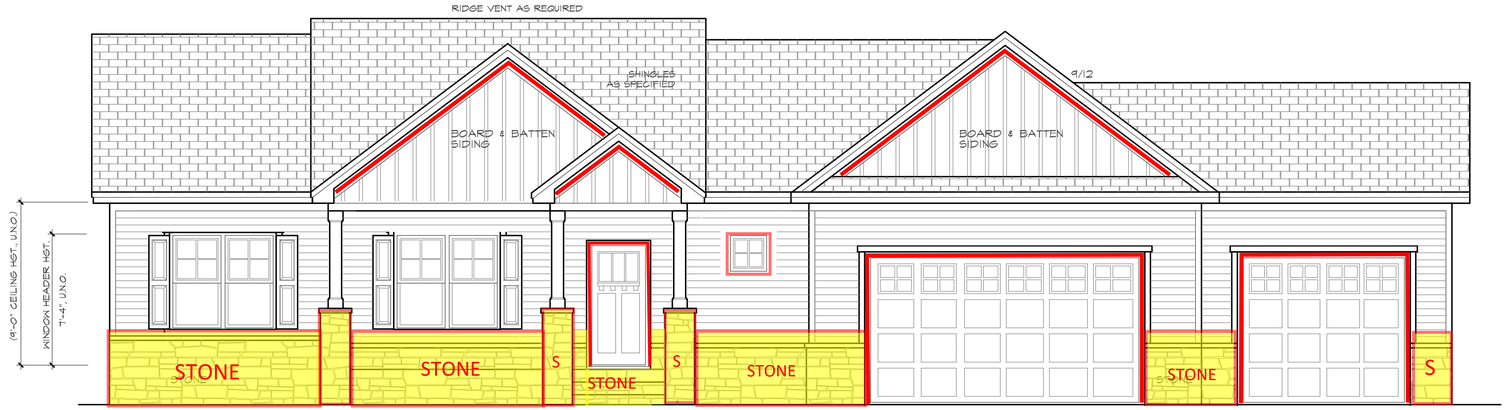
SCALE

DATE 1/17/2021

LOT SUB.

WEAVER HOMES

The Highland



FRONT ELEVATION 3 CAR

SCALE 1/4" = 1'0"

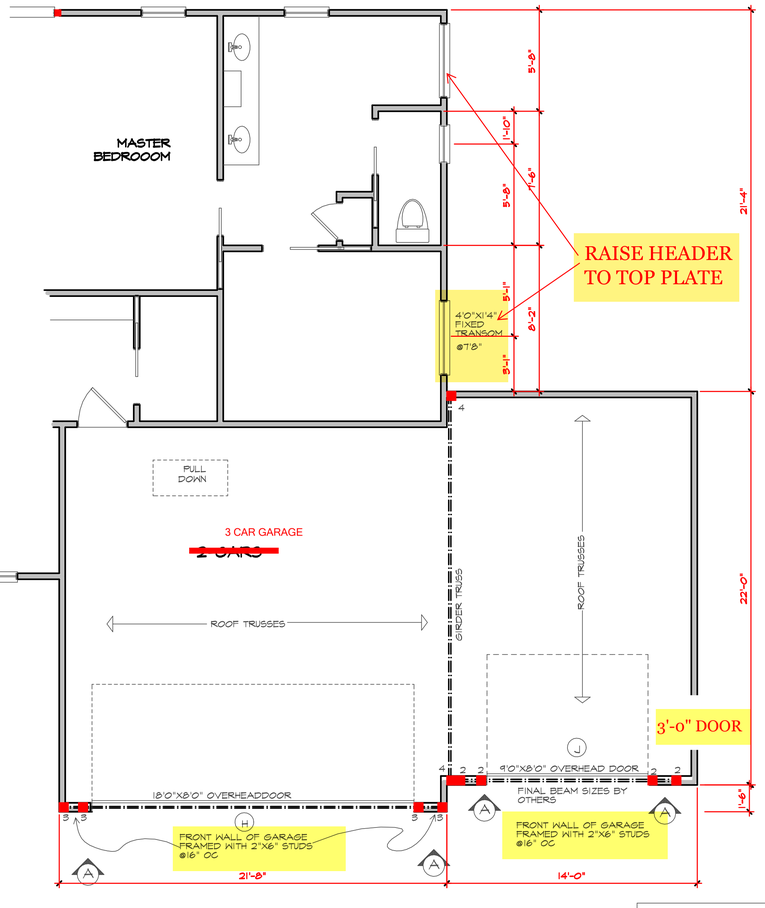
ATTIC VENTILATION:

THE NET FREE VENTILATING AREA SHALL BE NOT LESS THAN 1:150 OF THE AREA OF THE SPACE VENTILATED EXCEPT THAT THE AREA MAY BE 1:300 PROVIDED AT LEAST 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE SPACE TO BE VENTILATED AT LEAST 3 FEET ABOVE EAVE OR CORNICE VENTS WITH THE BALANCE OF THE REQUIRED VENTILATION TO BE PROVIDED BY EAVE OR CORNICE VENTS.

GROSS ATTIC AREA TO BE VENTILATED 2300 SQ.FT.

2300/300 = 7.66 SQ.FT. NET FREE AREA

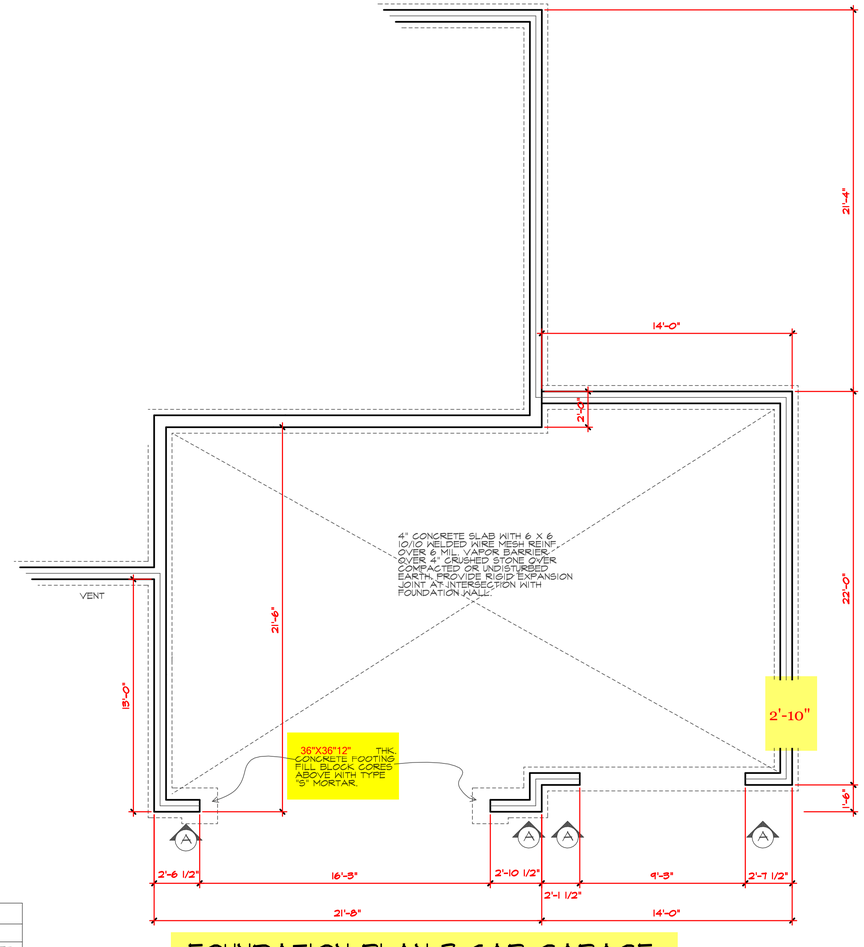
50% OF VENTING MUST BE 3FT. ABOVE EAVE OR SOFFIT VENTS.



3 CAR OPTION

SCALE 1/4" = 1'-0"

SQUARE FOOTAGE	
THIRD GARAGE	307 SQ.FT.



FOUNDATION PLAN 3 CAR GARAGE

SCALE 1/4" = 1'-0"

The Highland

WEAVER HOMES

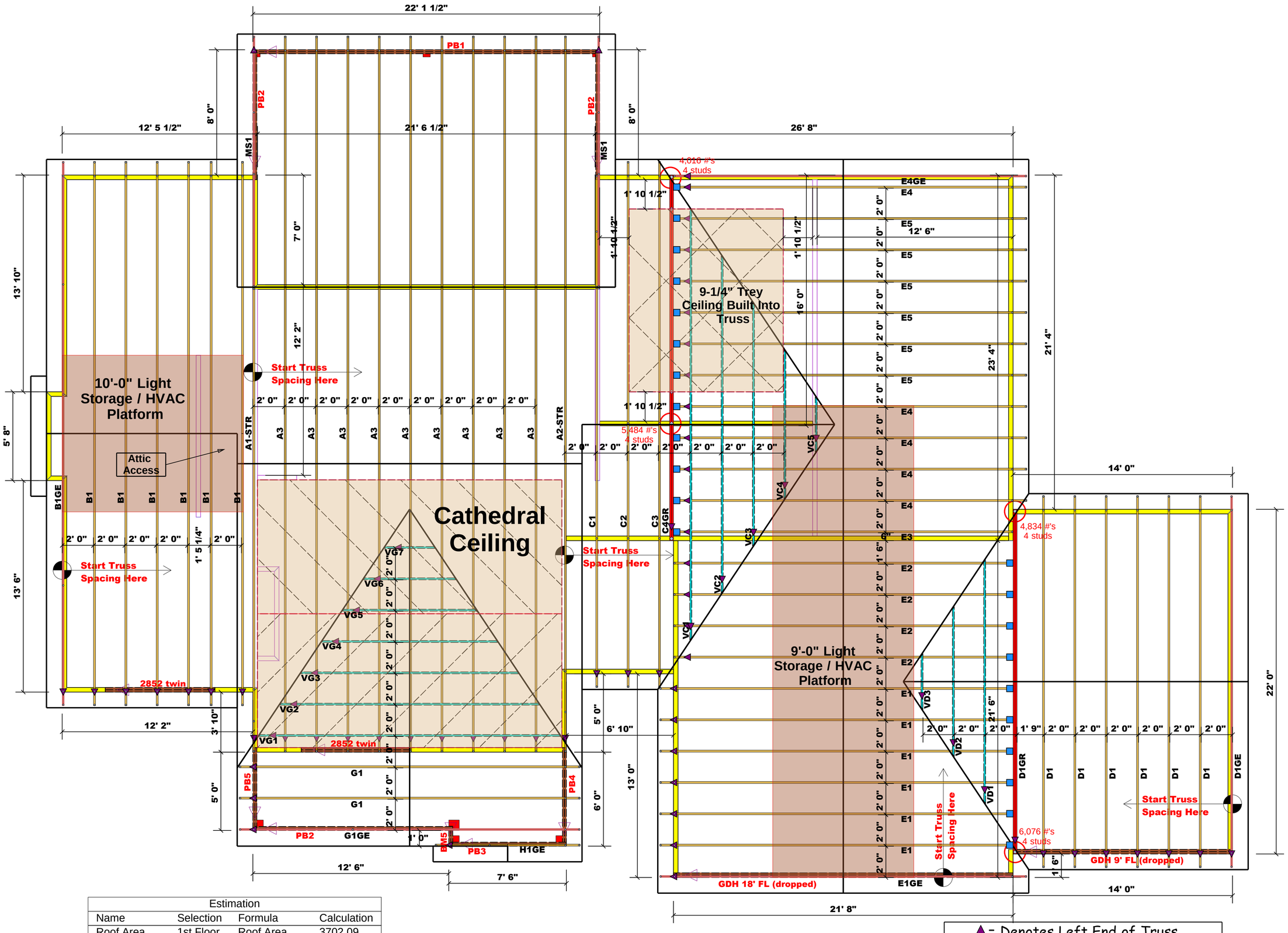
LOT | SUB.

DATE 1/17/2021

SCALE

PROJECT # 201211

MidTown Designs Inc. 1529 Big Falls Dr. Wendell 27591 Phone: 919-783-8626 www.midtowndesigns.com



Estimation			
Name	Selection	Formula	Calculation
Roof Area	1st Floor	Roof Area	3702.09
Roof Decking	1st Floor	Roof Decking	127

BEAM LEGEND					
PlotID	Length	Product	Plies	Net Qty	Fab Type
2852 twin	7-00-00	1-3/4"x 9-1/4" LVL Kerto-S	2	4	FF
GDH 9' FL (dropped)	14-00-00	1-3/4"x 11-7/8" LVL Kerto-S	2	2	FF
GDH 18' FL (dropped)	22-00-00	1-3/4"x 14" LVL Kerto-S	2	2	FF
PB1	24-00-00	2x10 SP No.2	2	2	FF
PB2	14-00-00	2x10 SP No.2	2	2	FF
PB3	8-00-00	2x10 SP No.2	2	2	FF
PB4	8-00-00	2x10 SP No.2	2	2	FF
PB5	6-00-00	2x10 SP No.2	2	2	FF

	HUS26	USP	22	NA	16d/3-1/2"	16d/3-1/2"

Hatch Legend

= LOAD BEARING WALLS @ 9-1-8 HGT.

Truss Placement Plan

SCALE: 1/4" = 1'-0"

▲ = Denotes Left End of Truss (Reference Engineered Truss Drawing)

All Truss Reactions are Less than 3,000 lbs. Unless Noted Otherwise.

-- Denotes Reaction Greater than 3,000 lbs. Reaction / # of Studs

COMTECH

ROOF & FLOOR TRUSSES & BEAMS

Reilly Road Industrial Park
Fayetteville, N.C. 28309
Phone: (910) 864-8787
Fax: (910) 864-4444

Bearing reactions less than or equal to 3000# are deemed to comply with the prescriptive Code requirements. The contractor shall refer to the attached Tables (derived from the prescriptive Code requirements) to determine the minimum foundation size and number of wood studs required to support reactions greater than 3000# but not greater than 15000#. A registered design professional shall be retained to design the support system for any reaction that exceeds those specified in the attached Tables. A registered design professional shall be retained to design the support system for all reactions that exceed 15000#.

Signature Lenny Norris

Lenny Norris

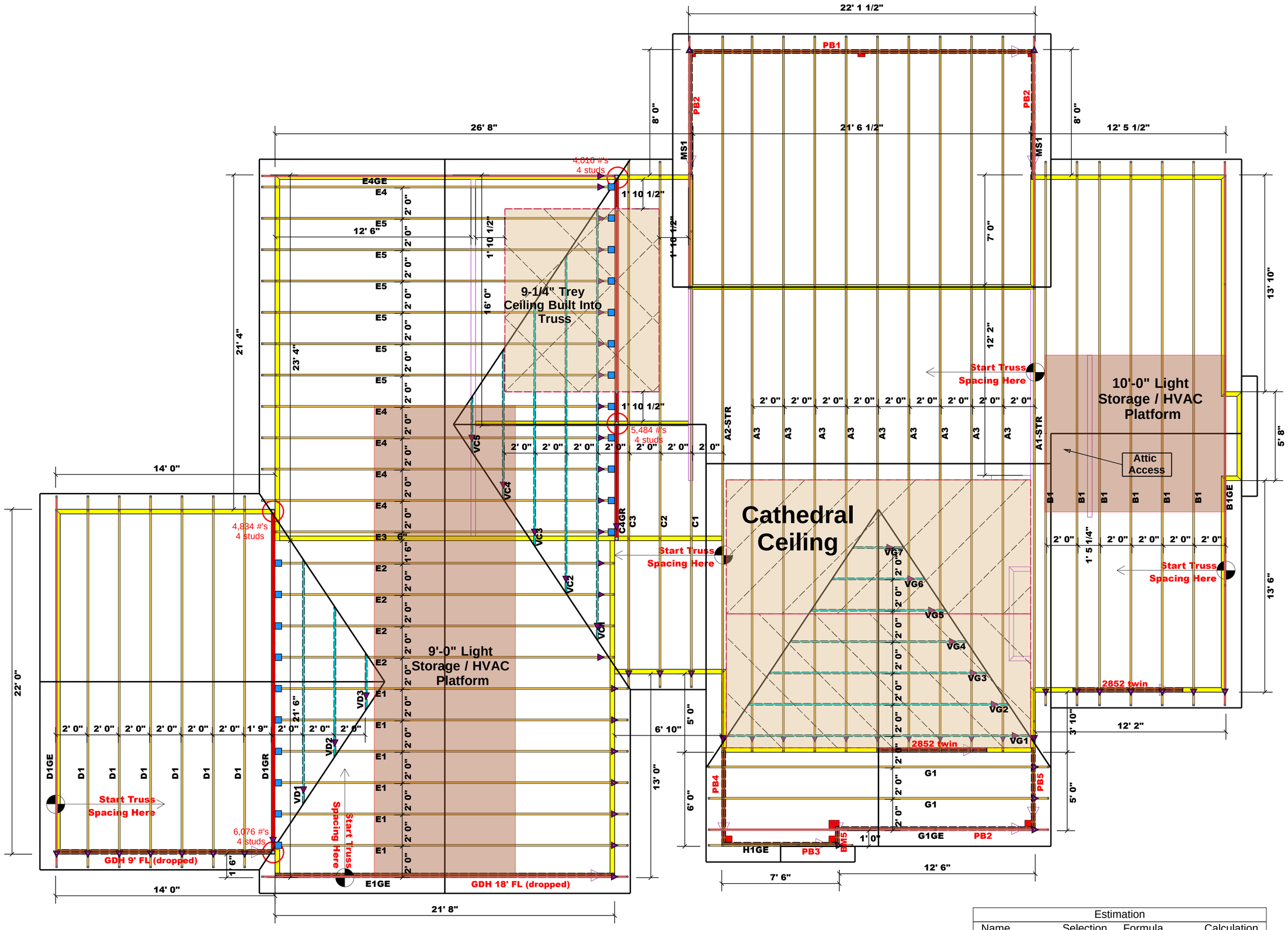
LOAD CHART FOR JACK STUDS

(BASED ON TABLES R502.5(1) & (b))

NUMBER OF JACK STUDS REQUIRED @ EA END OF HEADER/GIRDER

END REACTION (UP TO)	REQ'D STUDS FOR (2) PLY HEADER	END REACTION (UP TO)	REQ'D STUDS FOR (3) PLY HEADER	END REACTION (UP TO)	REQ'D STUDS FOR (4) PLY HEADER
1700	1	2550	1	3400	1
3400	2	5100	2	6800	2
5100	3	7650	3	10200	3
6800	4	10200	4	13600	4
8500	5	12750	5	17000	5
10200	6	15300	6		
11900	7				
13600	8				
15300	9				

BUILDER	Weaver Homes, Inc.
JOB NAME	Lot 53 West Preserve
PLAN	The Highland / Mod
SEAL DATE	Seal Date
QUOTE #	Quote #
JOB #	J0225-1078
CITY / CO.	Sanford / Harnett
ADDRESS	274 Boyce Court
MODEL	ROOF
DATE REV.	/ /
DRAWN BY	Lenny Norris
SALES REP.	Lenny Norris



▲= Denotes Left End of Truss
(Reference Engineered Truss Drawing)

All Truss Reactions are Less than 3,000 lbs. Unless Noted Otherwise.

-- Denotes Reaction Greater than 3,000 lbs. Reaction / # of Studs

■	HUS26	USP	22	NA	16d/3-1/2"	16d/3-1/2"

Hatch Legend

= LOAD BEARING WALLS @ 9-1-8 HGT.

Truss Placement Plan
SCALE: 1/4" = 1'-0"

Estimation			
Name	Selection	Formula	Calculation
Roof Area	1st Floor	Roof Area	3702.09
Roof Decking	1st Floor	Roof Decking	127

BEAM LEGEND					
PlotID	Length	Product	Plies	Net Qty	Fab Type
2852 twin	7' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	4	FF
GDH 9' FL (dropped)	14' 0"	1-3/4"x 11-7/8" LVL Kerto-S	2	2	FF
GDH 18' FL (dropped)	22' 0"	1-3/4"x 14" LVL Kerto-S	2	2	FF
PB1	24' 0"	2x10 SP No.2	2	2	FF
PB2	13' 0"	2x10 SP No.2	2	2	FF
PB3	8' 0"	2x10 SP No.2	2	2	FF
PB4	7' 0"	2x10 SP No.2	2	2	FF
PB5	6' 0"	2x10 SP No.2	2	2	FF

COMTECH
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Signature Lenny Norris

Lenny Norris

LOAD CHART FOR JACK STUDS

(BASED ON TABLES R502.5(1) & (b))

NUMBER OF JACK STUDS REQUIRED @ EA END OF HEADER/GIRDER

END REACTION (#'S TO)	REQ'D STUDS FOR (2) PLY HEADER	END REACTION (#'S TO)	REQ'D STUDS FOR (3) PLY HEADER	END REACTION (#'S TO)	REQ'D STUDS FOR (4) PLY HEADER
1700	1	2550	1	3400	1
3400	2	5100	2	6800	2
5100	3	7650	3	10200	3
6800	4	10200	4	13600	4
8500	5	12750	5	17000	5
10200	6	15300	6		
11900	7				
13600	8				
15300	9				

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SEAL DATE	Seal Date
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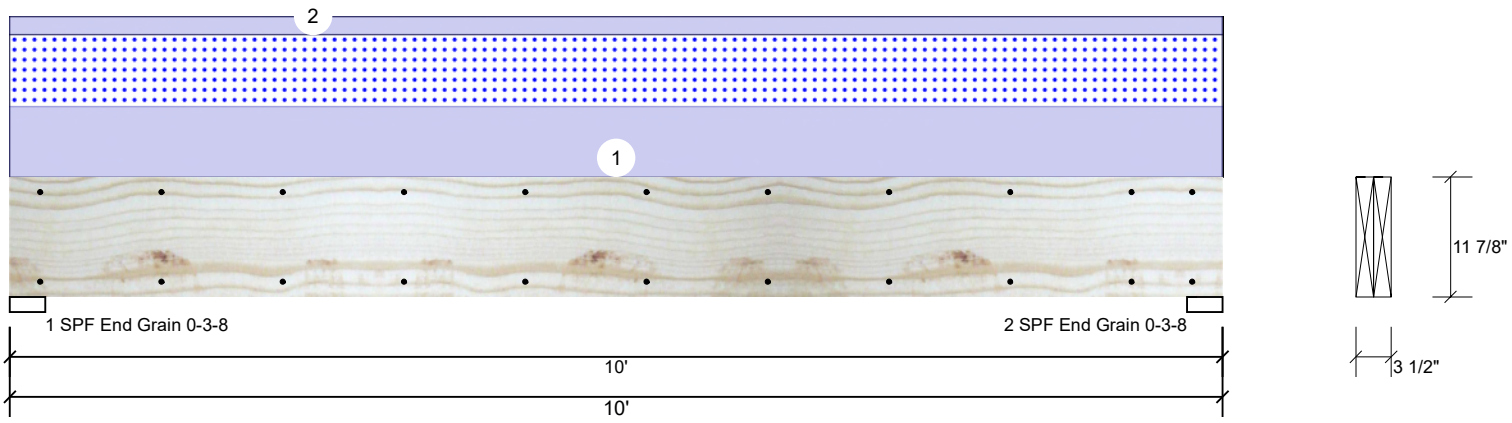
JOB #	J0225-1078
CITY / CO.	Sanford / Harnett
ADDRESS	274 Boyce Court
MODEL	ROOF
DATE REV.	/ /
DRAWN BY	Lenny Norris
SALES REP.	Lenny Norris

THIS IS A TRUSS PLACEMENT DIAGRAM ONLY. These trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on the placement drawing. The building designer is responsible for temporary and permanent bracing of the roof and floor system and for the overall structure. The design of the truss support structure including headers, beams, walls, and columns is the responsibility of the building designer. For general guidance regarding bracing, consult BCSI-B1 and BCSI-B3 provided with the truss delivery package or online @ sbcindustry.com

Client:	WEAVER HOMES	Date:	2/6/2025
Project:		Input by:	LENNY NORRIS
Address:		Job Name:	HIGHLAND
		Project #:	

GDH 9' FL Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Level



Member Information

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IRC 2018
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	1511	1165	0	0
2	Vertical	0	1511	1165	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	26%	1511 / 1165	2676	L	D+S
2 - SPF End Grain	3.500"	Vert	26%	1511 / 1165	2676	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	6091 ft-lb	5'	22897 ft-lb	0.266 (27%)	D+S	L
Unbraced	6091 ft-lb	5'	9721 ft-lb	0.627 (63%)	D+S	L
Shear	2000 lb	1'3 3/8"	10197 lb	0.196 (20%)	D+S	L
LL Defl inch	0.052 (L/2209)	5'	0.239 (L/480)	0.217 (22%)	S	L
TL Defl inch	0.119 (L/962)	5'	0.318 (L/360)	0.374 (37%)	D+S	L

Design Notes

1. Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2. Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
3. Refer to last page of calculations for fasteners required for specified loads.
4. Girders are designed to be supported on the bottom edge only.
5. Top loads must be supported equally by all plies.
6. Top must be laterally braced at end bearings.
7. Bottom must be laterally braced at end bearings.
8. Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	233 PLF	0 PLF	233 PLF	0 PLF	0 PLF	D1 TRUSS
2	Uniform			Top	60 PLF	0 PLF	0 PLF	0 PLF	0 PLF	DEAD WALL
	Self Weight				9 PLF					

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 6/28/2026

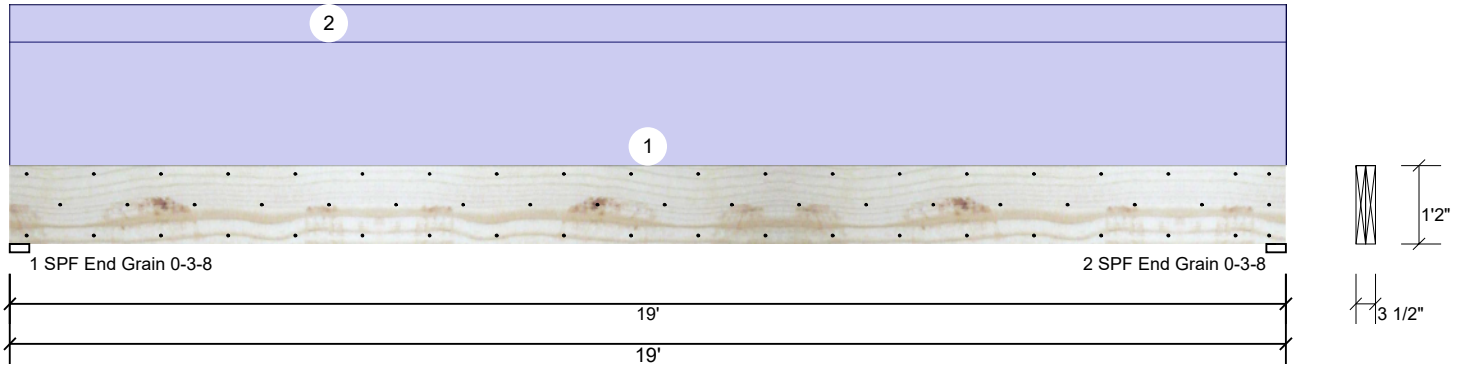
Manufacturer Info

Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us

Client:	WEAVER HOMES	Date:	2/6/2025
Project:		Input by:	LENNY NORRIS
Address:		Job Name:	HIGHLAND
		Project #:	

GDH 18' FL Kerto-S LVL 1.750" X 14.000" 2-Ply - PASSED

Level: Level



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Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	2573	0	0	0
2	Vertical	0	2573	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	25%	2573 / 0	2573	Uniform	D
2 - SPF End Grain	3.500"	Vert	25%	2573 / 0	2573	Uniform	D

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	11641 ft-lb	9'6"	24299 ft-lb	0.479 (48%)	D	Uniform
Unbraced	11641 ft-lb	9'6"	11659 ft-lb	0.999 (100%)	D	Uniform
Shear	2191 lb	17'6 1/2"	9408 lb	0.233 (23%)	D	Uniform
LL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
TL Defl inch	0.477 (L/466)	9'6 1/16"	0.618 (L/360)	0.772 (77%)	D	Uniform

Design Notes

1. Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2. Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
3. Refer to last page of calculations for fasteners required for specified loads.
4. Girders are designed to be supported on the bottom edge only.
5. Top loads must be supported equally by all plies.
6. Top must be laterally braced at a maximum of 8'11 5/16" o.c.
7. Bottom must be laterally braced at end bearings.
8. Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	200 PLF	0 PLF	0 PLF	0 PLF	0 PLF	GABLE END
2	Uniform			Top	60 PLF	0 PLF	0 PLF	0 PLF	0 PLF	DEAD WALL
	Self Weight				11 PLF					

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 6/28/2026

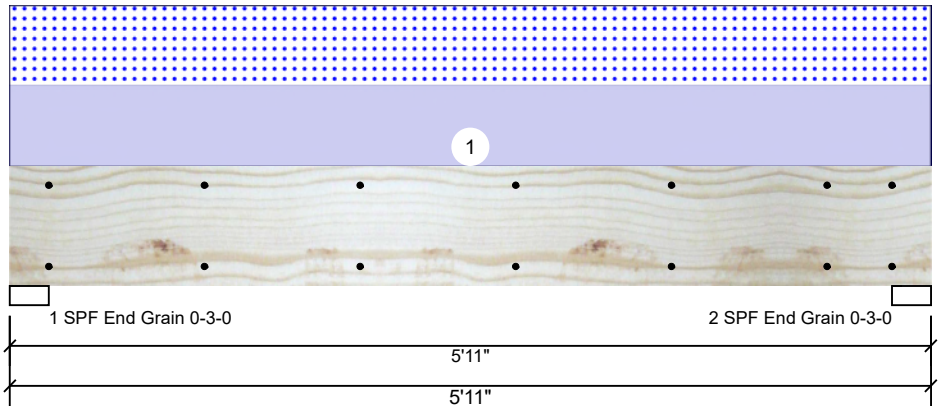
Manufacturer Info

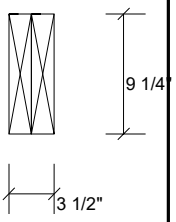
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us

Client:	WEAVER HOMES	Date:	2/6/2025
Project:		Input by:	LENNY NORRIS
Address:		Job Name:	HIGHLAND
		Project #:	

2852 TWIN Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level





Member Information

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IRC 2018
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	1403	1382	0	0
2	Vertical	0	1403	1382	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	Vert	32%	1403 / 1382	2784	L	D+S
2 - SPF End Grain	3.000"	Vert	32%	1403 / 1382	2784	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3613 ft-lb	2'11 1/2"	14423 ft-lb	0.251 (25%)	D+S	L
Unbraced	3613 ft-lb	2'11 1/2"	11027 ft-lb	0.328 (33%)	D+S	L
Shear	1829 lb	4'10 3/4"	7943 lb	0.230 (23%)	D+S	L
LL Defl inch	0.028 (L/2388)	2'11 1/2"	0.139 (L/480)	0.201 (20%)	S	L
TL Defl inch	0.056 (L/1185)	2'11 1/2"	0.185 (L/360)	0.304 (30%)	D+S	L

Design Notes

1. Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2. Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
3. Refer to last page of calculations for fasteners required for specified loads.
4. Girders are designed to be supported on the bottom edge only.
5. Top loads must be supported equally by all plies.
6. Top must be laterally braced at end bearings.
7. Bottom must be laterally braced at end bearings.
8. Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	467 PLF	0 PLF	467 PLF	0 PLF	0 PLF	A3 & B1 TRUSS
	Self Weight				7 PLF					

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
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This design is valid until 6/28/2026

Manufacturer Info

Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us

FOUNDATION STRUCTURAL NOTES

1. (5) 2" X 10" SPF GIRDER, DROPPED, TYPICAL.
2. CONCRETE BLOCK PIER SIZE SHALL BE:

SIZE	HOLLOW MASONRY	SOLID MASONRY
8" X 16"	UP TO 32" HIGH	UP TO 9'0" HIGH
12" X 16"	UP TO 48" HIGH	UP TO 11'0" HIGH
16" X 16"	UP TO 64" HIGH	UP TO 12'0" HIGH
24" X 24"	UP TO 96" HIGH	

WITH 50" X 50" X 10" CONCRETE FOOTING, UNO.

3. WALL FOOTING AS FOLLOWS:

DEPTH: 8" - UP TO 2 1/2 STORY
10" - 3 STORY

WIDTH: SIDING OR EQUAL
16"- UP TO 2-1/2 STORY
18" - 3 STORY

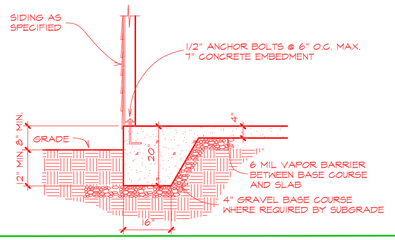
BRICK VENEER
16" - 1-STORY
20" - 2-STORY
24" - 3 STORY

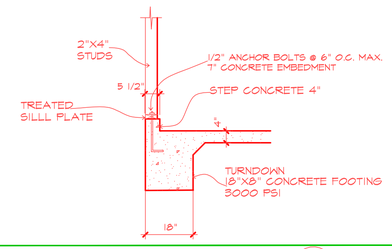
FOR FOUNDATION WALL HEIGHT AND BACKFILL REQUIREMENTS, REFER TO NORTH CAROLINA RESIDENTIAL BUILDING CODE TABLE R404.1.1 THRU 4)
NOTE: ASSUMED SOIL BEARING CAPACITY = 2000 PSF. CONTRACTOR MUST VERIFY SITE CONDITIONS AND CONTACT SOILS ENGINEER IF MARGINAL OR UNSTABLE SOILS ARE ENCOUNTERED.

ATTACH SILL PLATE WITH 1/2" DIA. ANCHOR BOLTS AT 6'-0" CENTERS (7" EMBEDMENT) AND 12" FROM EACH CORNER. (SECTION R403.1.6)

4. ■ DESIGNATES A SIGNIFICANT POINT LOAD TO HAVE SOLID BLOCKING TO PIER. SOLID BLOCKING ALL BEAM BEARING POINTS NOTED TO HAVE THREE OR MORE STUDS TO FOUNDATION, TYPICAL.
5. ABBREVIATIONS

"SJ" - SINGLE JOIST
"DJ" - DOUBLE JOIST
"TJ" - TRIPLE JOIST

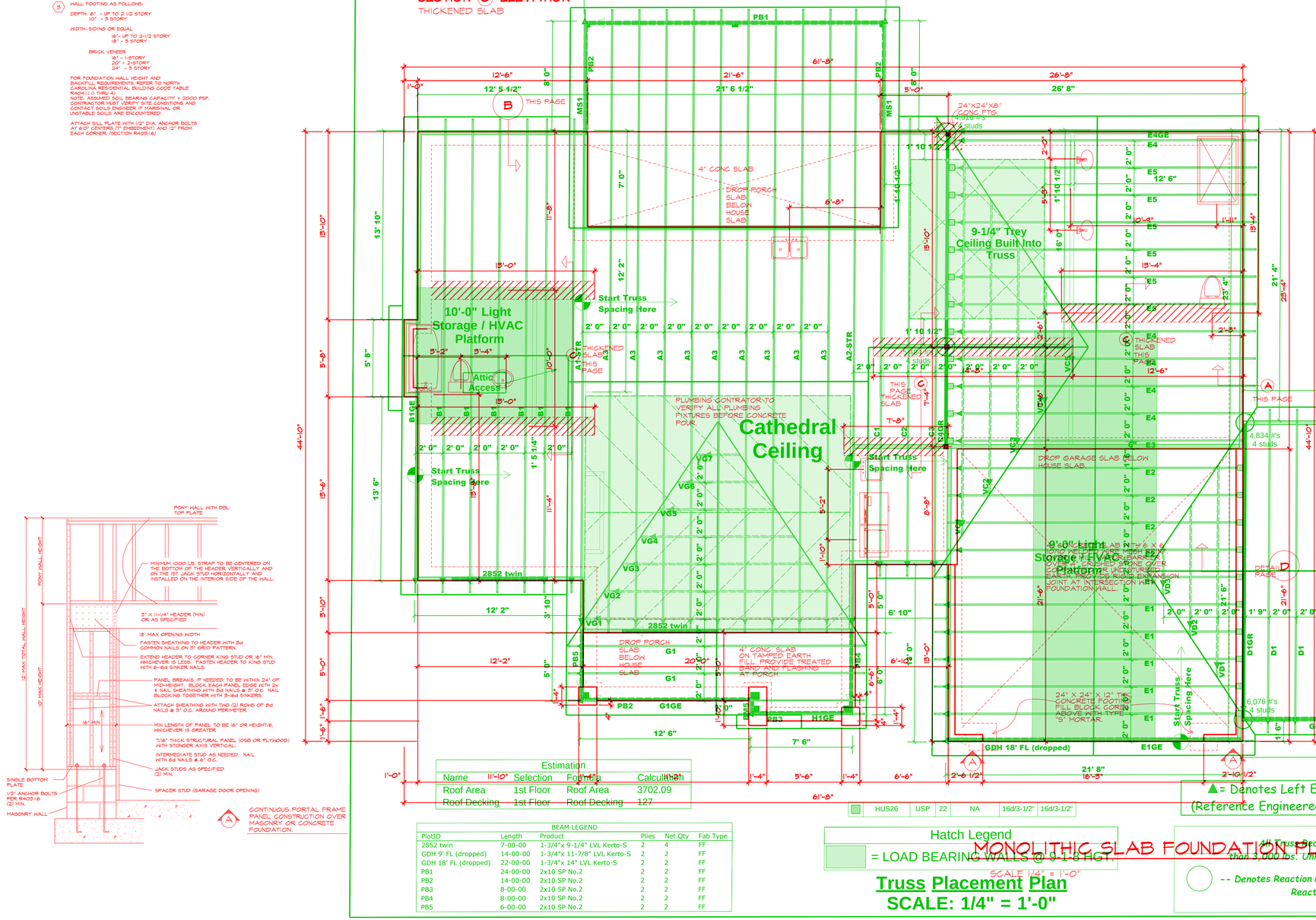




SECTION © ELEVATION
THICKENED SLAB

SECTION THROUGH MONOLITHIC SLAB/ FOOTING B
SCALE 1/2" = 1'-0"

MONOLITHIC SLAB @ GARAGE D
SCALE 1/2" = 1'-0"


22' 1 1/2"
PB1
PB2
PB2
MS1
MS1
12'-6"
12' 5 1/2"
21'-6"
21' 6 1/2"
61'-8"
26'-8"
26' 8"
1'-0"
8' 0"
5' 0"
5'-0"
B
THIS PAGE
24"X24"X8" CONC FTG. 4-#10 #'s 4 studs
4" CONC SLAB
DROP PORCH SLAB BELOW HOUSE SLAB
7' 0"
6'-8"
11'-8"
1'-10 1/2"
1' 10 1/2"
13' 10"
15'-0"
13'-0"
12' 2"
Start Truss Spacing Here
10'-0" Light Storage / HVAC Platform
2' 0"
3'-2"
3'-4"
Attic Access
THICKENED SLAB THIS PAGE
A3-STR
A2-STR
A3
B1GE
B1
B3
5'-8"
44'-10"
13' 6"
15'-6"
11'-4"
1' 5 1/4"
2852 twin
3' 10"
5'-10"
5'-0"
1'-6"
PLUMBING CONTRACTOR TO VERIFY ALL PLUMBING FIXTURES BEFORE CONCRETE POUR.
Cathedral Ceiling
VG7
VG6
VG5
VG4
VG3
VG2
VG1
C1
C2
C2GE
C2GR
THIS PAGE THICKENED SLAB
7'-8"
5'-3"
1'-10"
8'-8"
DROP PORCH SLAB BELOW HOUSE SLAB
G1
20'-0"
PB5
PB4
PB2
G1GE
PB3
H1GE
6' 10"
6'-6"
4" CONC SLAB ON TAMPED EARTH FILL. PROVIDE TREATED SAND AT FLASHING AT PORCH.
1'-4"
7' 6"
12' 6"
1'-0"
5'-6"
6'-6"
2'-6 1/2"
21' 8"
18'-3"
61'-8"
9'-0" Light Storage / HVAC Platform
DROP GARAGE SLAB BELOW HOUSE SLAB
VG8
VG9
VG10
VG11
VG12
VG13
VG14
VG15
VG16
VG17
VG18
VG19
VG20
VG21
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