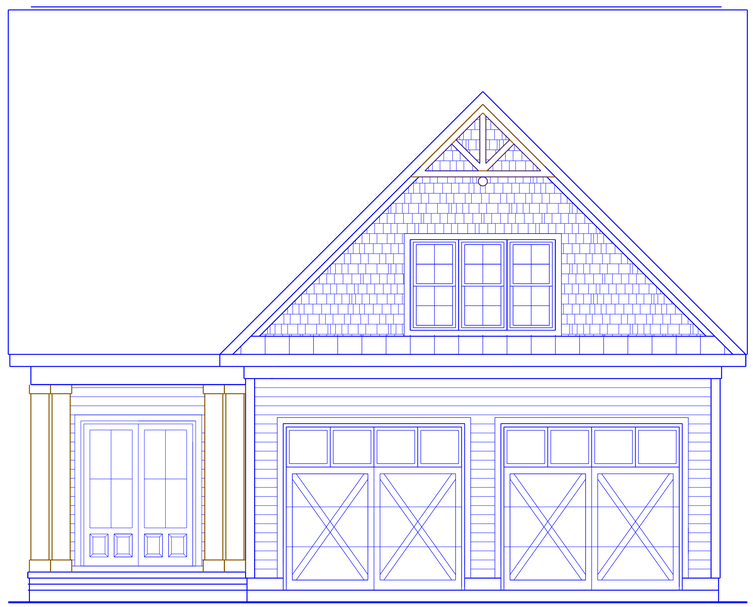
ANOTHER DESIGN BY THOM FOR THE

KELLY FAMILY

131 PEACOCK ROAD / SANFORD NORTH CAROLINA 27332

HARNETT COUNTY / BUFFALO LAKE



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

12/06/2023

Harnett COUNTY NORTH CAROLINA

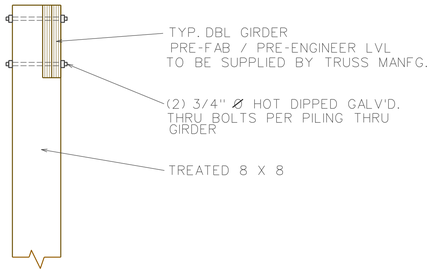
THOM STAHL DESIGNS
210 JUDD STREET
FAYETTEVILLE, NC 28305
(910) 286-2766

DO NOT SCALE DRAWINGS !! CALL THOM STAHL WITH ANY QUESTIONS!!

ANOTHER DESIGN BY THOM FOR THE
KELLY FAMILY
HARNETT COUNTY / BUFFALO LAKE
131 PEACOCK LANE / SANFORD NORTH CAROLINA 27332

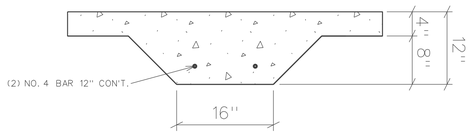
COVER SHEET
DATE: 10-26-23
REVISED: 12-1-23
CODE: KELRES1-23

SHEET NO.
A1
OF 7



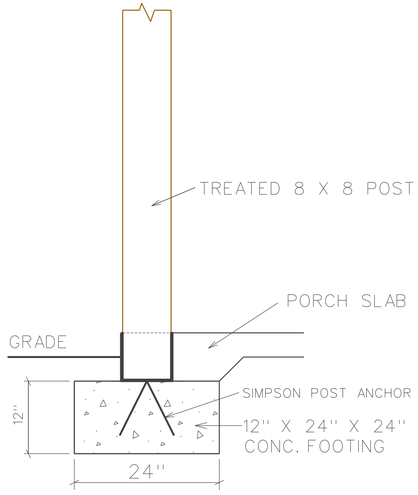
GIRDER / PILE DETAIL

1" = 1'-0"



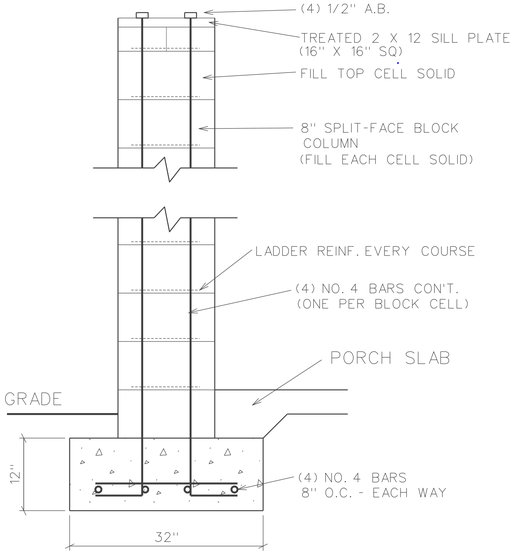
LUG FOOTING DETAIL 202

1" = 1'-0"



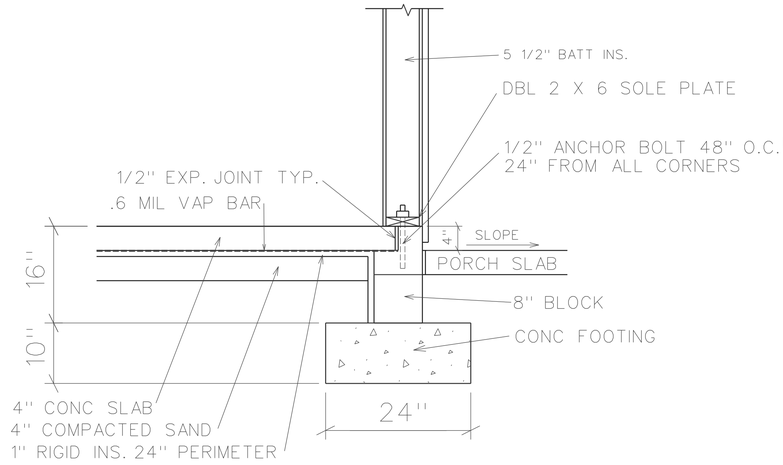
POST FOOTING 201

1" = 1'-0" NOTE: ALL SOIL ASSUMED TO BE 2000 PSF



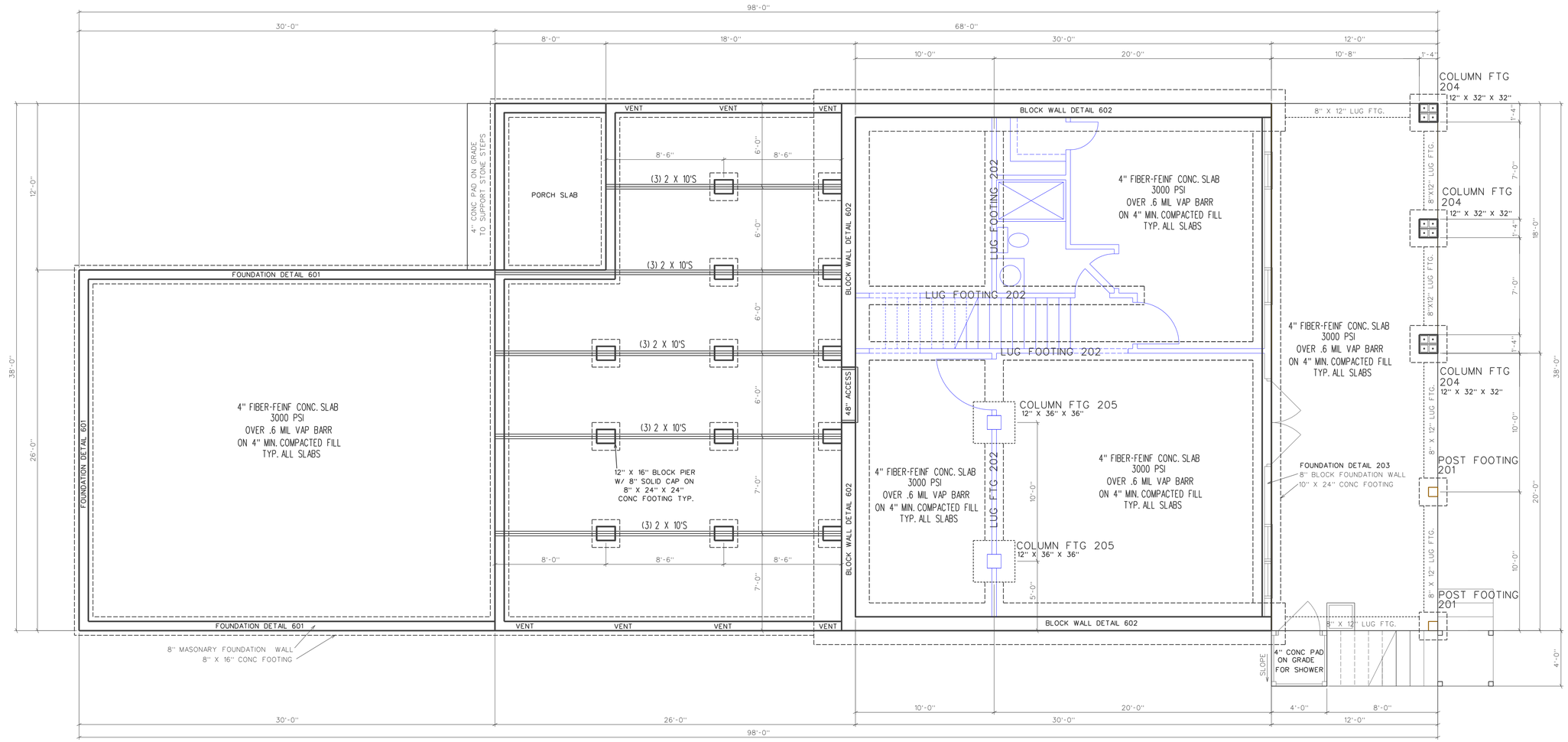
COLUMN FTG 204

1" = 1'-0" NOTE: ALL SOIL ASSUMED TO BE 2000 PSF



FOUNDATION DETAIL 203

1" = 1'-0" NOTE: ALL SOIL ASSUMED TO BE 2000 PSF



FOUNDATION PLAN

1/4" = 1'-0"

NOTE: CONTRACTOR TO INSTALL NEW GUTTERS AND DOWN SPOUTS
DOWN SPOUTS TO BE TIED INTO NEW DRAINAGE SYSTEM, THAT IS TO BE
DISCHARGED INTO THE LAKE. PER CODE AND EPA REGULATIONS!!

THOM STAHL DESIGNS
210 JUDD STREET
FAYETTEVILLE, NC 28305
(910) 286-2766

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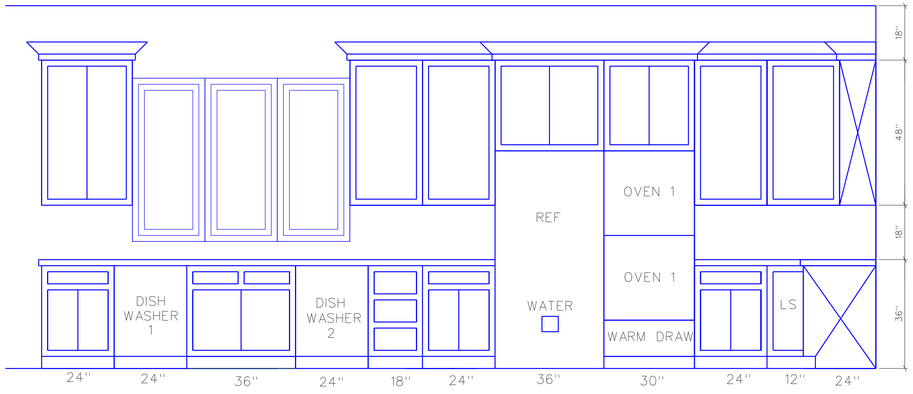
ANOTHER DESIGN BY THOM FOR THE

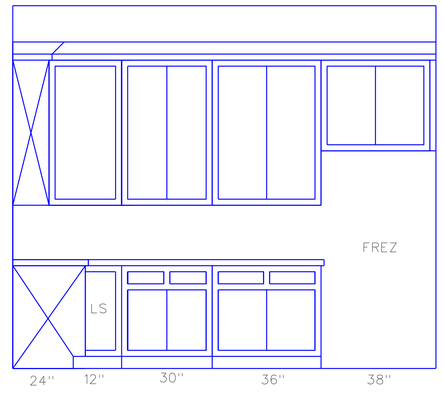
KELLY FAMILY

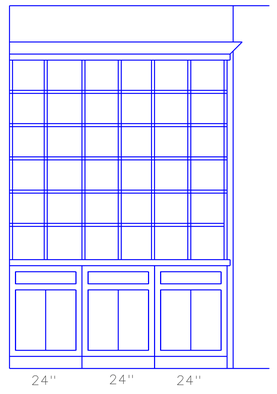
HARNETT COUNTY / BUFFALO LAKE
(31) PEACOCK LANE / SANFORD NORTH CAROLINA 27332

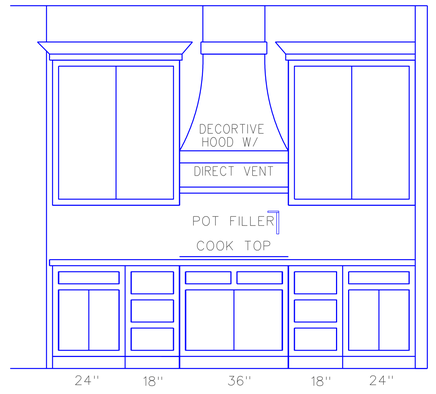
FOUNDATION
DATE: 10-26-23
REVISED: 12-1-23
CODE: KELRES1-23

SHEET NO.
A2
OF 7





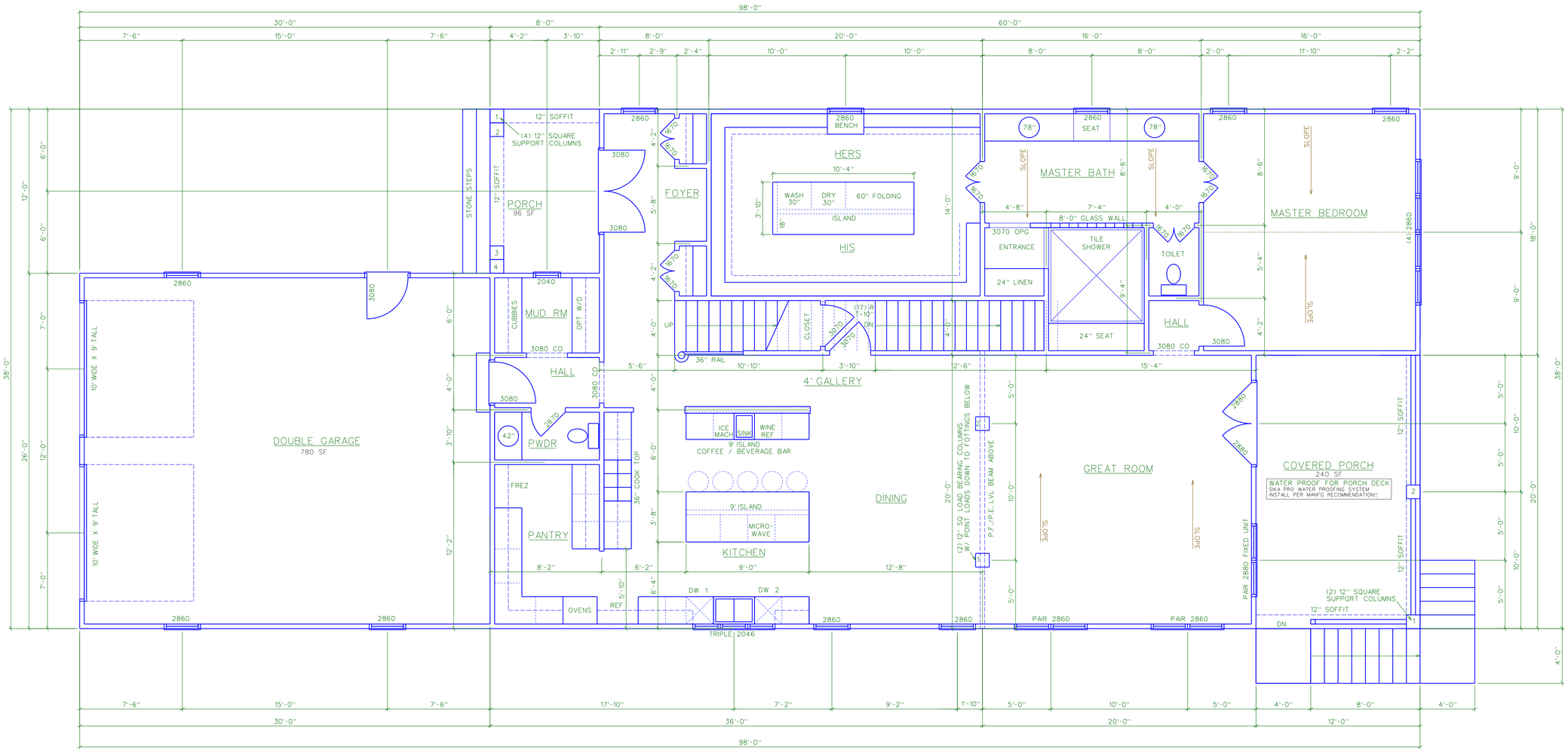




KITCHEN CABINET ELEVATIONS

1/2" = 1'-0"

CABINET SUPPLIER TO FIELD VERIFY ALL DIMENSIONS ON SITE BEFORE ANY CABINETS ARE MADE!!



FIRST FLOOR PLAN

1/4" = 1'-0"

2248 SF HEATED
830 SF HEATED
3078 SF TOTAL HEATED

THOM STAHL DESIGNS
210 JUDD STREET
FAYETTEVILLE, NC 28305
(910) 286-2766

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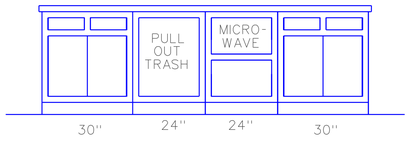
ANOTHER DESIGN BY THOM FOR THE

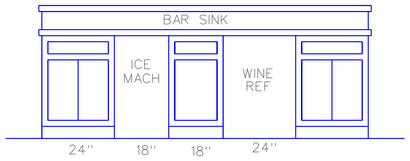
KELLY FAMILY

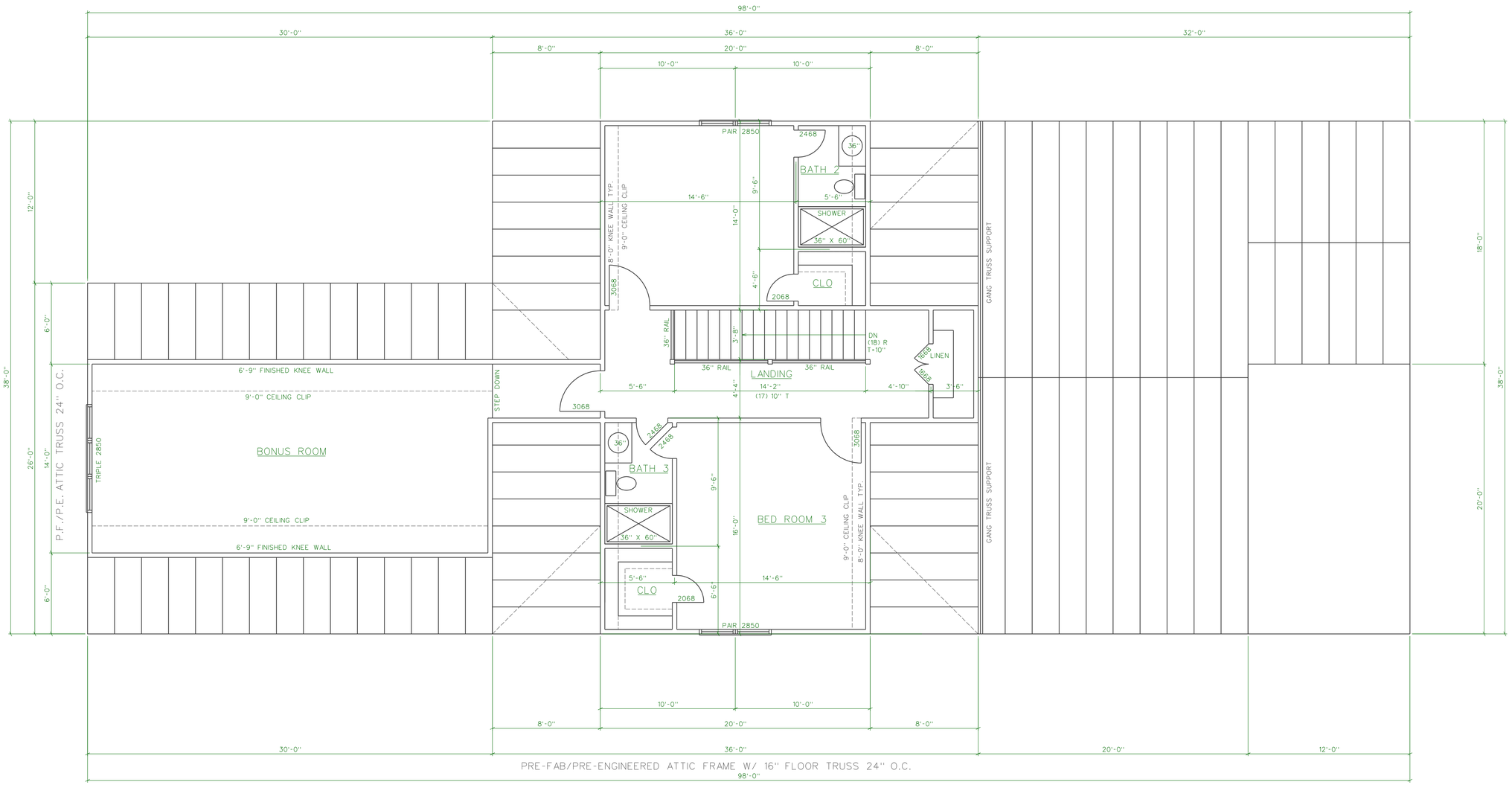
HARNETT COUNTY / BUFFALO LAKE
131 PEACOCK LANE / SANFORD NORTH CAROLINA 27332

FIRST FLOOR
DATE: 10-26-23
REVISED: 12-1-23
CODE: KELRES1-23

SHEET NO.
A3
OF 7







SECOND FLOOR PLAN

1/4" = 1'-0"

830 SF HEATED
360 BONUS ROOM

THOM STAHL DESIGNS
210 JUDD STREET
FAYETTEVILLE, NC 28305
(910) 286-2766

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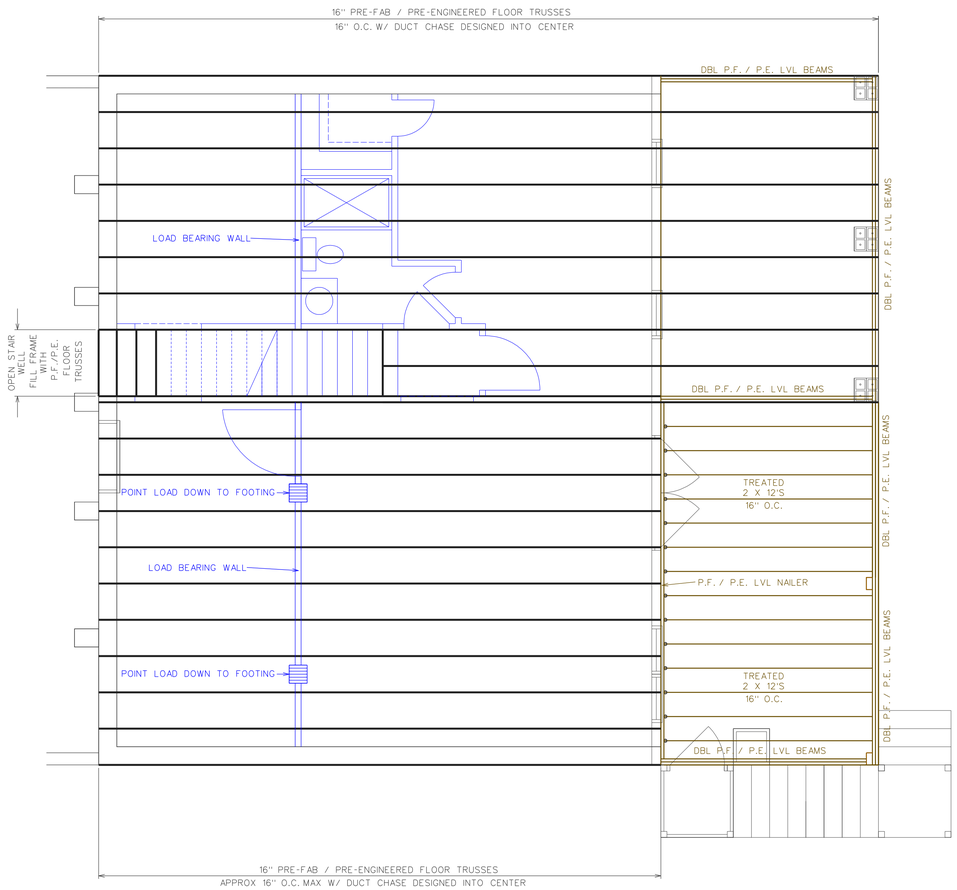
ANOTHER DESIGN BY THOM FOR THE

KELLY FAMILY

HARNETT COUNTY / BUFFALO LAKE
131 PEACOCK LANE / SANFORD NORTH CAROLINA 27332

SECOND FLOOR
DATE: 10-26-23
REVISED: 12-1-23
CODE: KELRES1-23

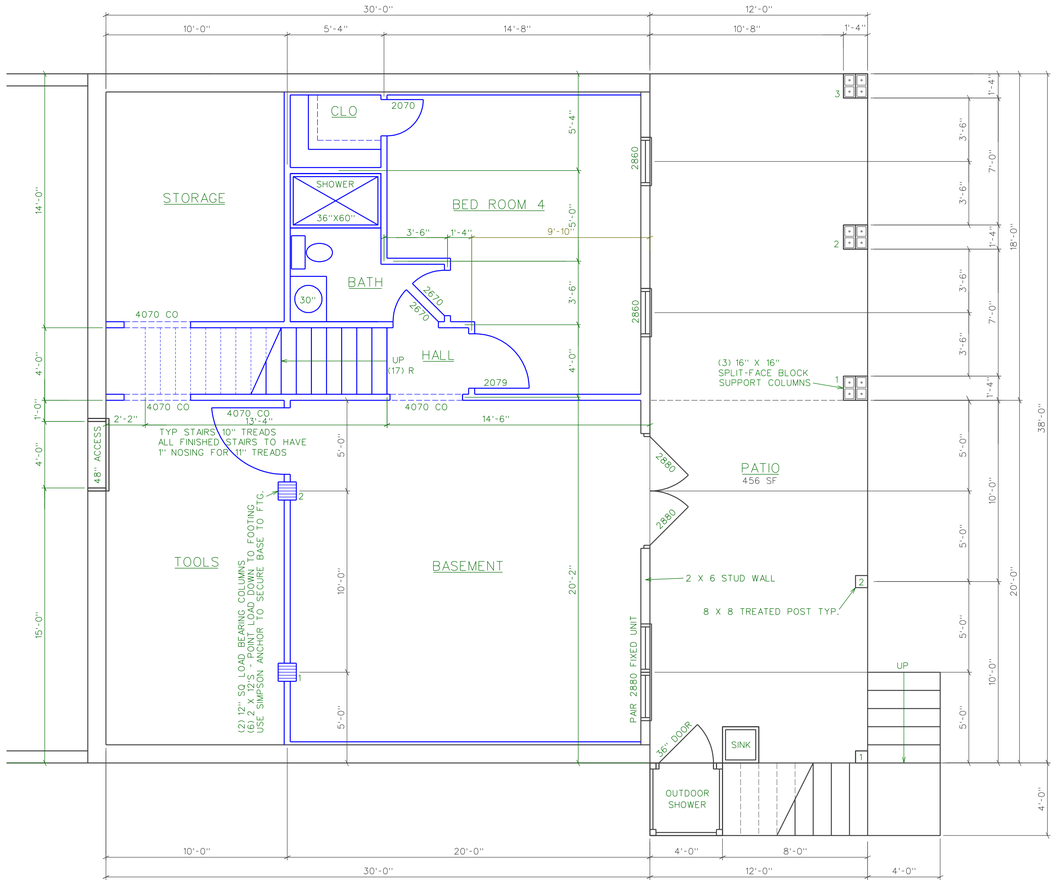
SHEET NO.
A4
OF 7



FIRST FLOOR FRAMING PLAN

1/4" = 1'-0"

SEE PRE-FAB / PRE-ENGINEERED FLOOR TRUSS AND LVL BEAM PLANS PROVIDED BY COMTECH



LOWER LEVEL PLAN

1/4" = 1'-0"

1140 SF TOTAL
380 SF UNFINISHED
760 SF FUTURED

THOM STAHL DESIGNS
210 JUDD STREET
FAYETTEVILLE, NC 28305
(910) 286-2766

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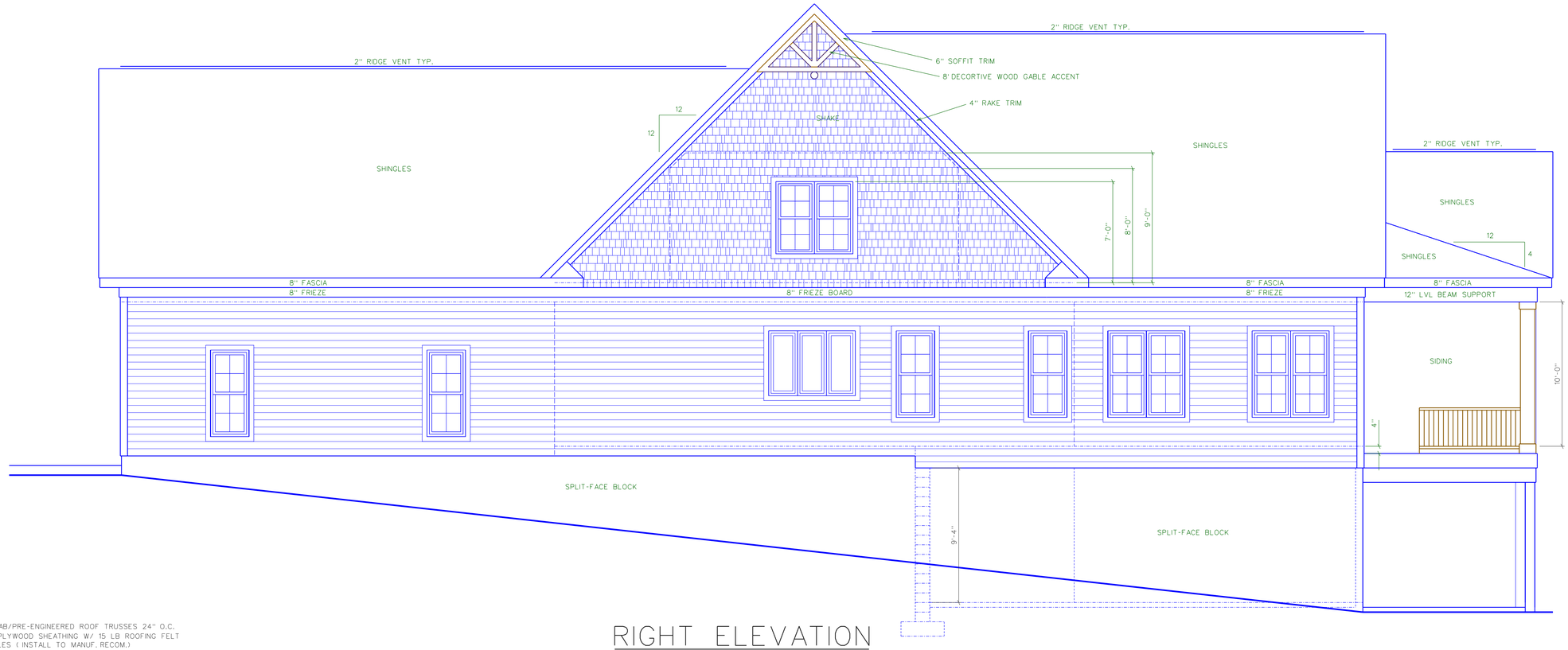
ANOTHER DESIGN BY THOM FOR THE

KELLY FAMILY

HARNETT COUNTY / BUFFALO LAKE
131 PEACOCK LANE / SANFORD, NORTH CAROLINA 27332

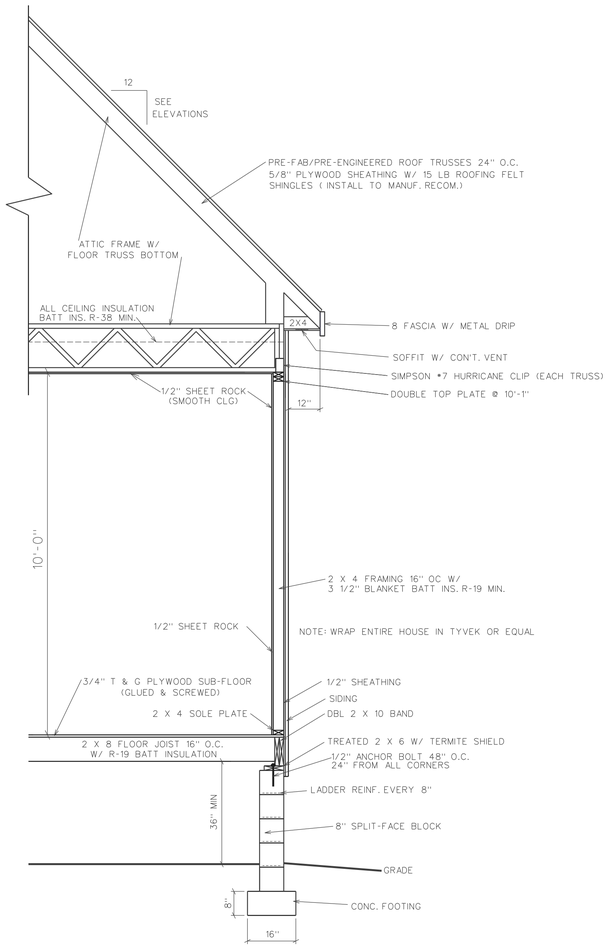
LOWER LEVEL
DATE: 10-26-23
REVISED: 12-1-23
CODE: KELRES1-23

SHEET NO.
A5
OF 7



RIGHT ELEVATION

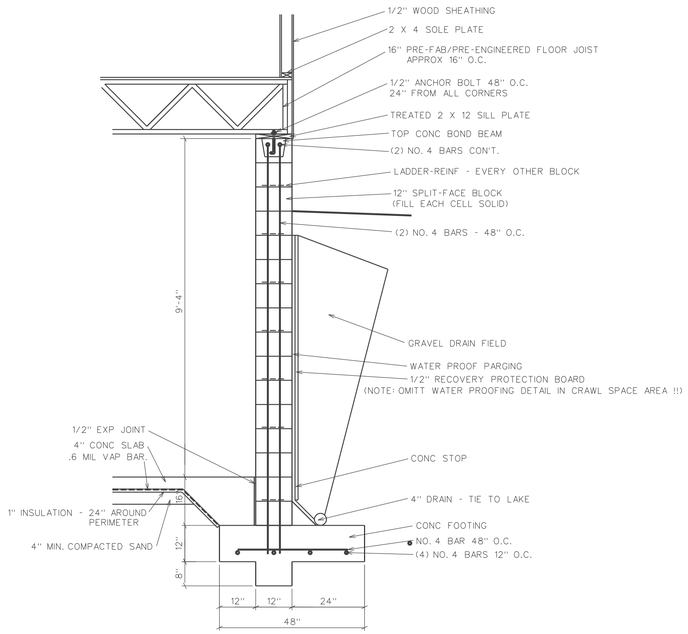
1/4" = 1'-0"



TYP. WALL SECTION DETAIL 601

1/2" = 1'-0"

NOTE: ALL SOIL ASSUMED TO BE 2000 PSF

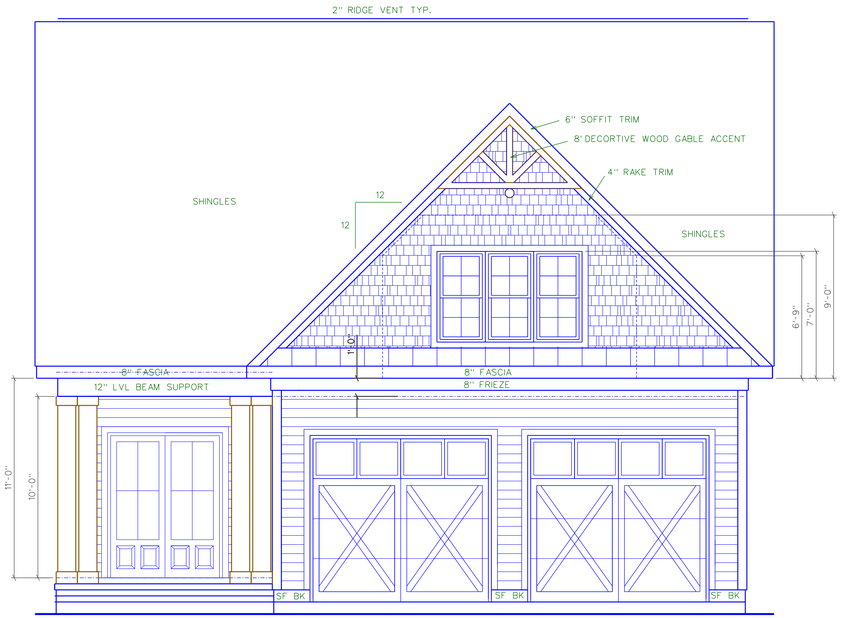


12" BLOCK WALL DETAIL 602

1/2" = 1'-0"

NOTE: ALL SOIL ASSUMED TO BE 2000 PSF

THOM STAHL TO REVIEW ALL FLOOR AND ROOF TRUSS SHOP DRAWINGS BEFORE ANY ARE MADE !!
EMAIL TRUSS PLANS FOR REVIEW TO : thomtanic1912@aol.com



FRONT ELEVATION

1/4" = 1'-0"

THOM STAHL DESIGNS
210 JUDD STREET
FAYETTEVILLE, NC 28305
(910) 286-2766

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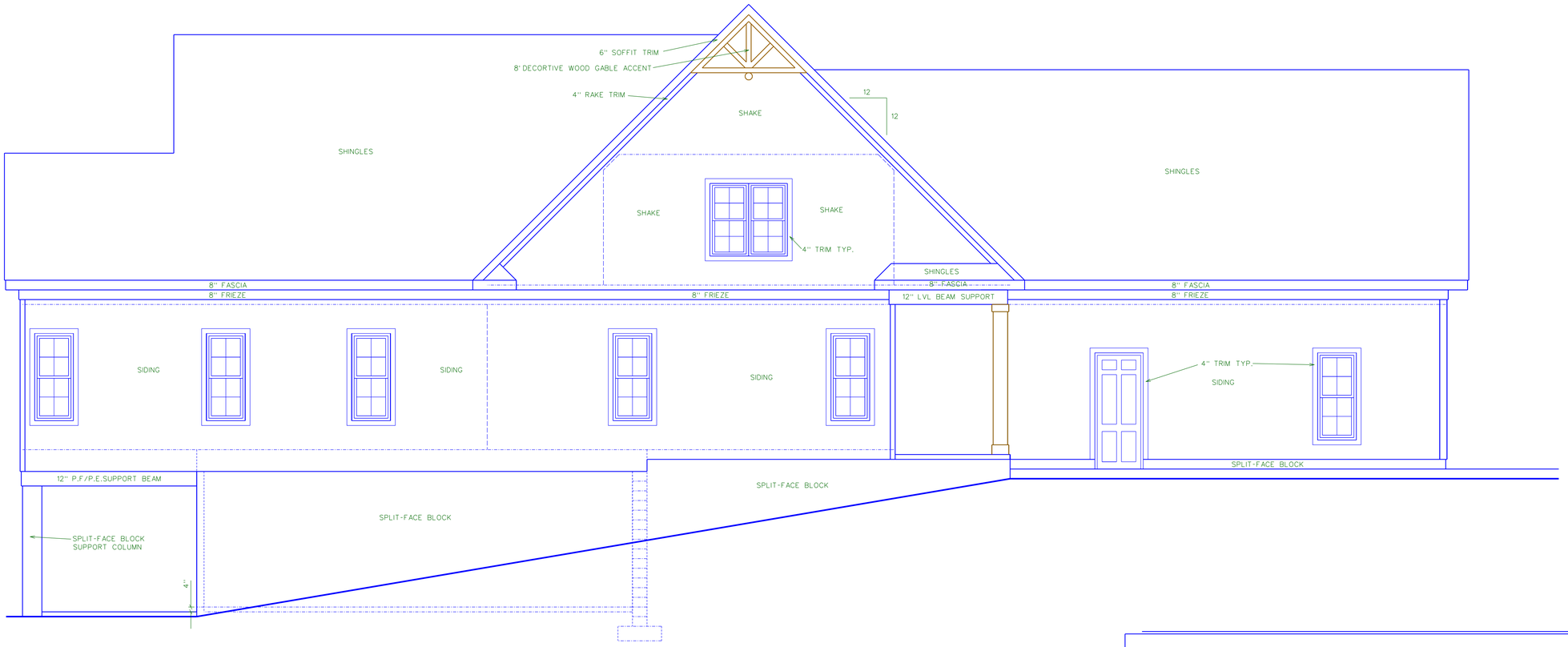
ANOTHER DESIGN BY THOM FOR THE

KELLY FAMILY

HARNETT COUNTY / BUFFALO LAKE
131 PEACOCK LANE / SANFORD NORTH CAROLINA 27332

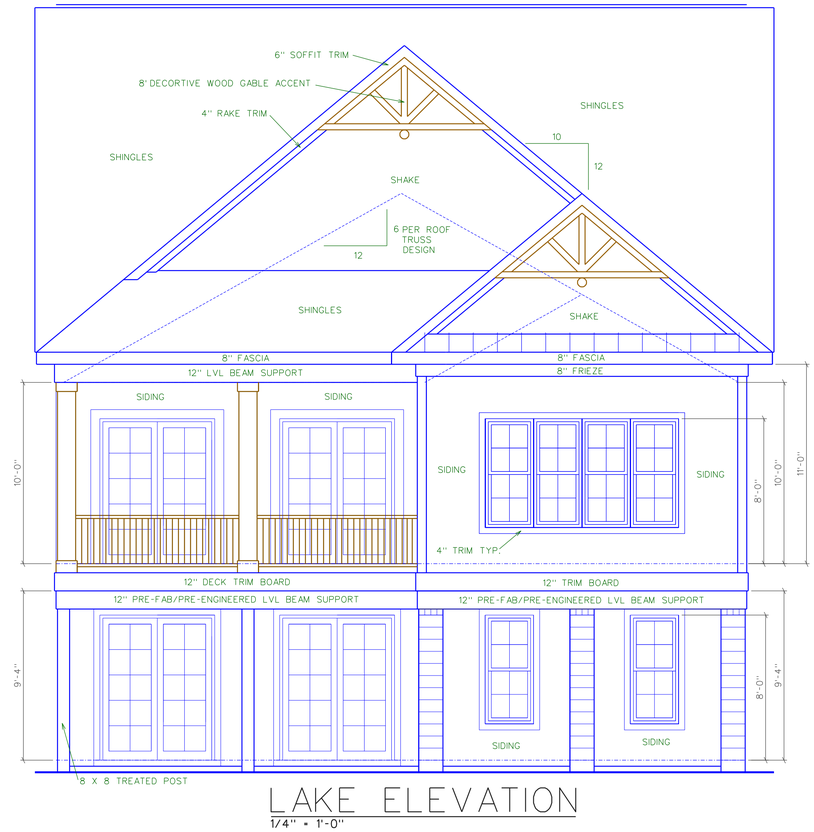
ELEVATIONS
DATE: 10-26-23
REVISED: 12-1-23
CODE: KELRES1-23

SHEET NO.
A6
OF 7



LEFT ELEVATION

1/4" = 1'-0"



LAKE ELEVATION

1/4" = 1'-0"

THOM STAHL DESIGNS
210 JUDD STREET
FAYETTEVILLE, NC 28305
(910) 286-2766

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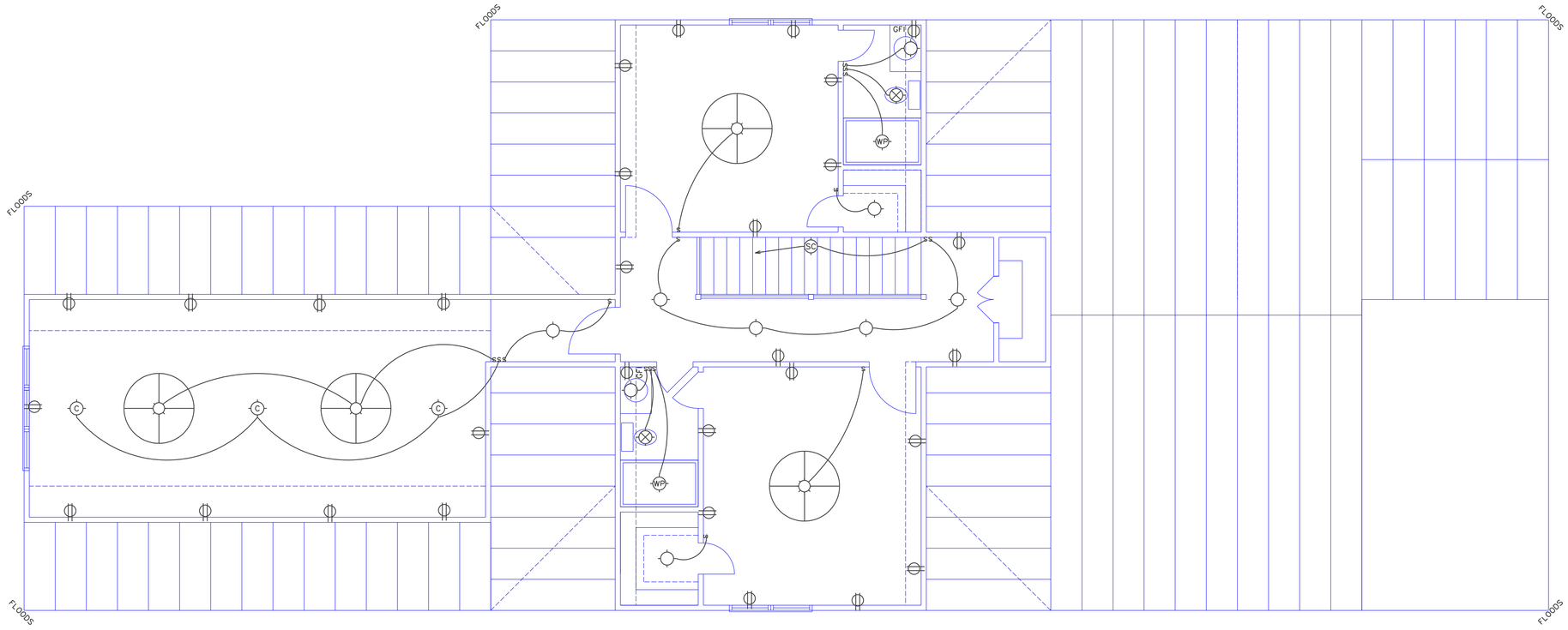
ANOTHER DESIGN BY THOM FOR THE

KELLY FAMILY

HARNETT COUNTY / BUFFALO LAKE
131 PEACOCK LANE / SANFORD NORTH CAROLINA 27332

ELEVATIONS
DATE: 10-6-23
REVISED: 12-1-23
CODE: KELRES1-23

SHEET NO.
A7
OF 7

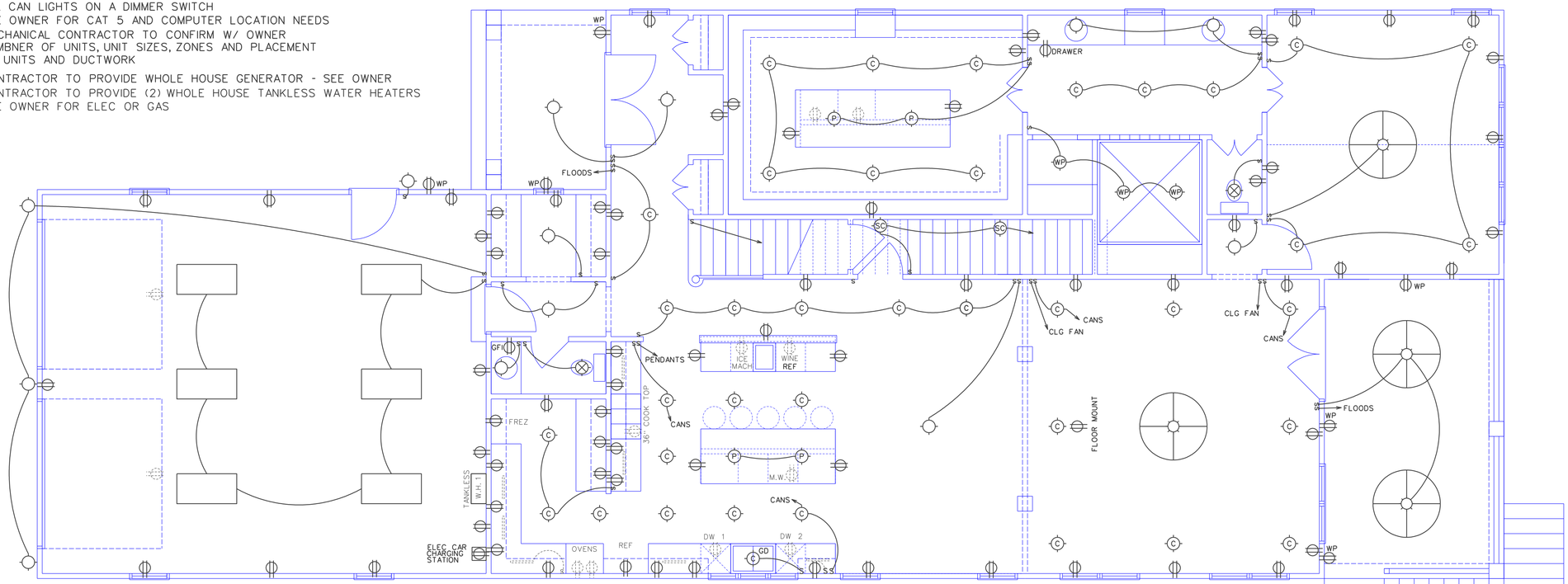


SECOND FLOOR ELEC PLAN

1/4" = 1'-0"

GENERAL NOTES

1. WIRE ALL FANS AND LIGHT SEPERATE
2. ALL CAN LIGHTS ON A DIMMER SWITCH
3. SEE OWNER FOR CAT 5 AND COMPUTER LOCATION NEEDS
4. MECHANICAL CONTRACTOR TO CONFIRM W/ OWNER NUMBNER OF UNITS, UNIT SIZES, ZONES AND PLACEMENT OF UNITS AND DUCTWORK
5. CONTRACTOR TO PROVIDE WHOLE HOUSE GENERATOR - SEE OWNER
6. CONTRACTOR TO PROVIDE (2) WHOLE HOUSE TANKLESS WATER HEATERS SEE OWNER FOR ELEC OR GAS



FIRST FLOOR ELEC PLAN

1/4" = 1'-0"

THOM STAHL DESIGNS
210 JUDD STREET
FAYETTEVILLE, NC 28305
(910) 286-2766

DO NOT SCALE DRAWINGS !! CALL THOM STAHL WITH ANY QUESTIONS!!

ANOTHER DESIGN BY THOM FOR THE

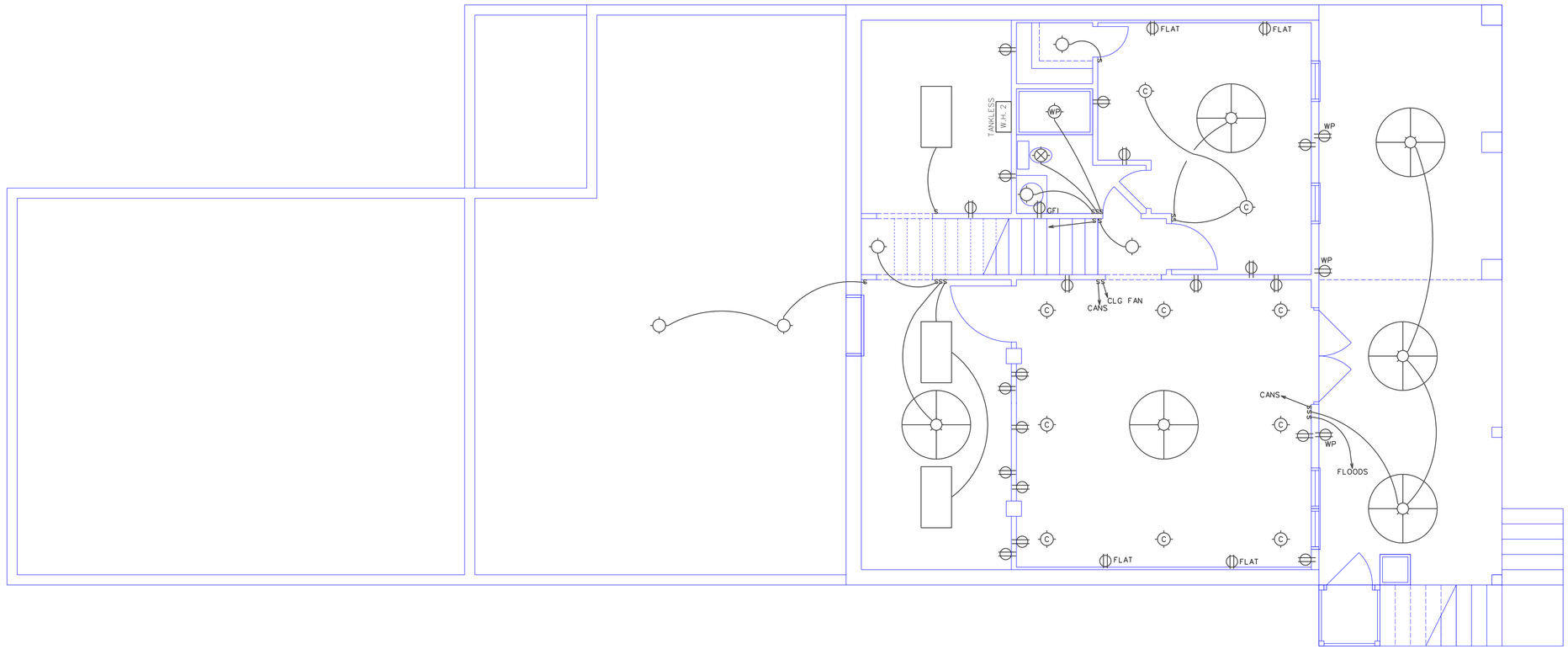
KELLY FAMILY

131 PEACOCK LANE / SANFORD NORTH CAROLINA 27332

HARNETT COUNTY / BUFFALO LAKE

ELEC PLANS
DATE: 10-26-23
REVISED:
CODE: KELRES1-23

SHEET NO.
E 1
OF 2



LOWER LEVEL ELEC PLAN

1/4" = 1'-0"

THOM STAHL DESIGNS
210 JUDD STREET
FAYETTEVILLE, NC 28305
(910) 286-2766

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ANOTHER DESIGN BY THOM FOR THE

KELLY FAMILY

HARNETT COUNTY / BUFFALO LAKE
131 PEACOCK LANE / SANFORD NORTH CAROLINA 27332

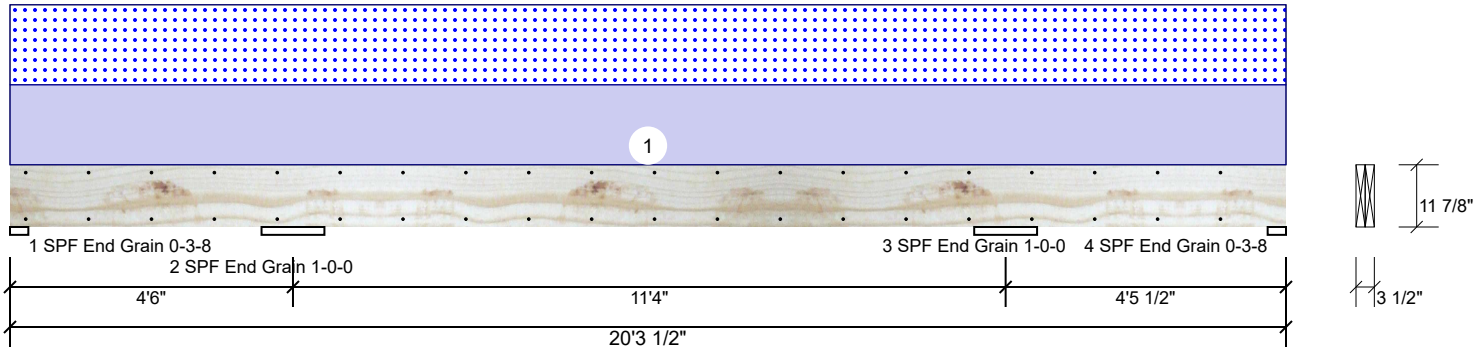
ELEC PLAN
DATE: 10-26-23
REVISED: 12-1-23
CODE: KELRES1-23

SHEET NO.
E2
OF 2

Client:	Weaver Homes, Inc.	Date:	11/15/2023
Project:		Input by:	David Landry
Address:		Job Name:	Kelly Residence
		Project #:	J1123-6331

BM1 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:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal - II	Ceiling:	Gypsum 1/2"
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	228	225	0	0
2	Vertical	0	6241	6150	0	0
3	Vertical	0	6240	6149	0	0
4	Vertical	0	202	199	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	9%	162 / 787	949 (-313)	L_L	D+S(D+S)
2 - SPF End Grain	12.000"	Vert	36%	6306 / 6259	12565	LL_	D+S
3 - SPF End Grain	12.000"	Vert	36%	6308 / 6263	12571	_LL	D+S
4 - SPF End Grain	3.500"	Vert	9%	134 / 768	903 (-364)	L_L	D+S(D+S)

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-11476 ft-lb	15'10"	22897 ft-lb	0.501 (50%)	D+S	_LL
Pos Moment	9036 ft-lb	10'2"	22897 ft-lb	0.395 (39%)	D+S	_L_
Unbraced	9036 ft-lb	10'2"	9059 ft-lb	0.997 (100%)	D+S	_L_
Shear	5314 lb	14'4 1/8"	10197 lb	0.521 (52%)	D+S	_LL
LL Defl inch	0.117 (L/1158)	10'2"	0.283 (L/480)	0.414 (41%)	S	_L_
TL Defl inch	0.233 (L/585)	10'2"	0.378 (L/360)	0.616 (62%)	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. Tie-down connection required at bearing 1 for uplift 313 lb (Combination D+S, Load Case _L_).
7. Tie-down connection required at bearing 4 for uplift 364 lb (Combination D+S, Load Case _L_).
8. Top must be laterally braced at a maximum of 10'5 1/16" o.c.
9. Bottom must be laterally braced at a maximum of 7'8" o.c.
10. Lateral slenderness ratio based on single ply width.

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

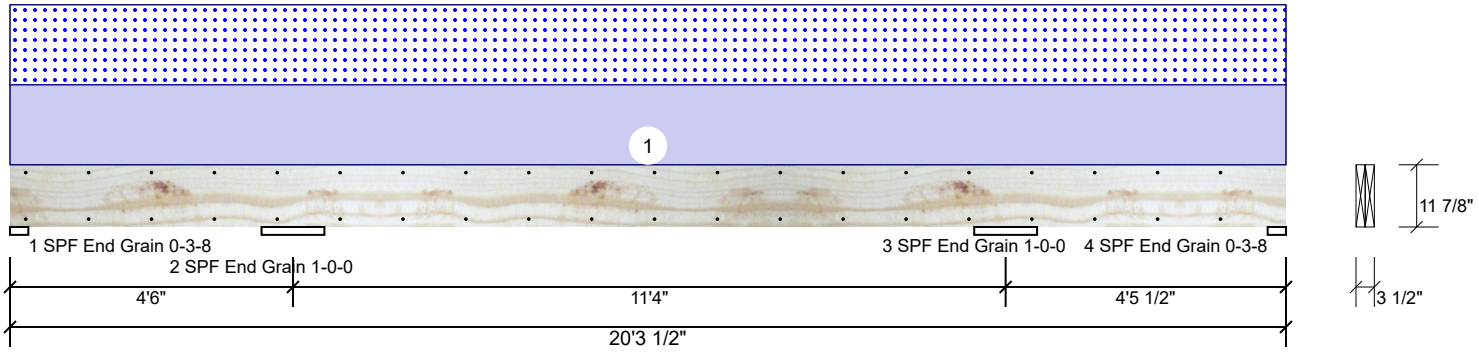
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us

Comtech, Inc.
1001 S Reilly Rd., NC
28314
(910) 864-8787

Client:	Weaver Homes, Inc.	Date:	11/15/2023
Project:		Input by:	David Landry
Address:		Job Name:	Kelly Residence
		Project #:	J1123-6331

BM1 Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Level



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	627 PLF	0 PLF	627 PLF	0 PLF	0 PLF	B1
	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

Comtech, Inc.
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Client:	Weaver Homes, Inc.	Date:	11/15/2023
Project:		Input by:	David Landry
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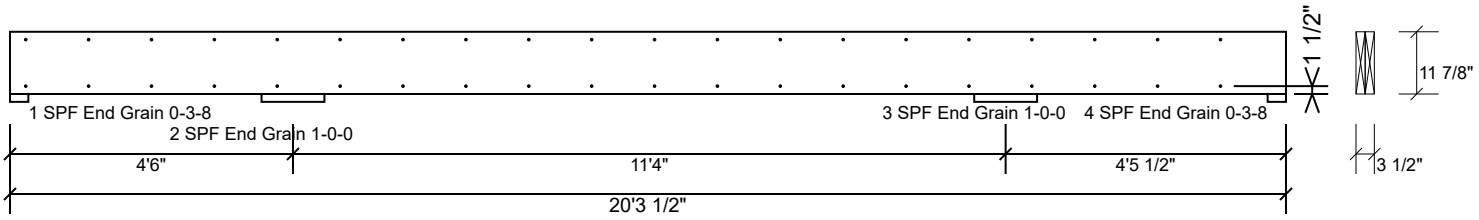
BM1 Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Level



Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	163.7 PLF
Yield Limit per Fastener	81.9 lb.
C_M	1
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

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

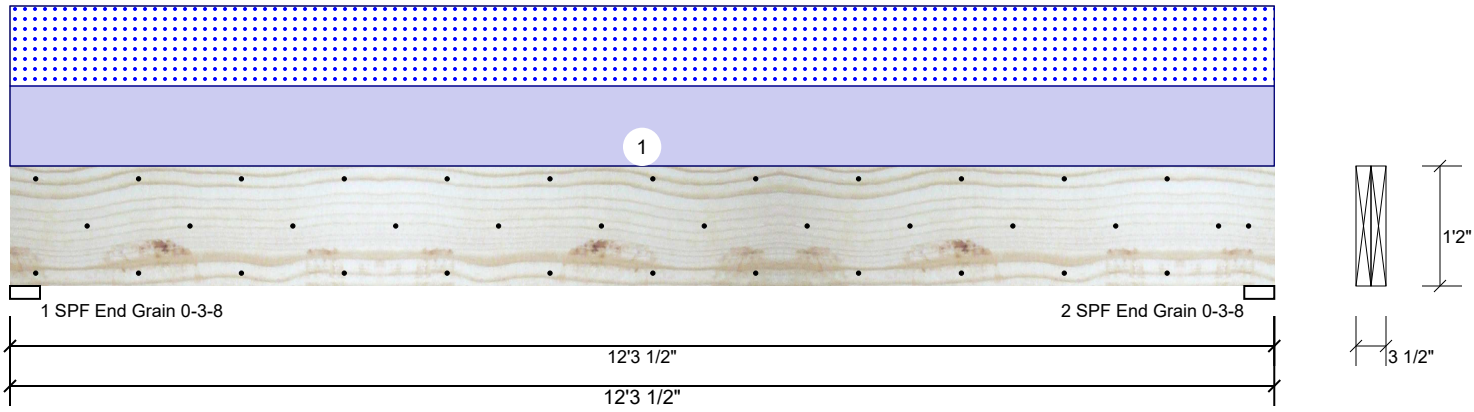
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us

Comtech, Inc.
1001 S Reilly Rd., NC
28314
(910) 864-8787

Client:	Weaver Homes, Inc.	Date:	11/15/2023
Project:		Input by:	David Landry
Address:		Job Name:	Kelly Residence
		Project #:	J1123-6331

BM2 Kerto-S LVL 1.750" X 14.000" 2-Ply - PASSED

Level: Level



Member Information

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal - II	Ceiling:	Gypsum 1/2"
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	3263	3196	0	0
2	Vertical	0	3263	3196	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	63%	3263 / 3196	6459	L	D+S
2 - SPF End Grain	3.500"	Vert	63%	3263 / 3196	6459	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	18394 ft-lb	6'1 3/4"	31049 ft-lb	0.592 (59%)	D+S	L
Unbraced	18394 ft-lb	6'1 3/4"	18405 ft-lb	0.999 (100%)	D+S	L
Shear	4939 lb	1'5 1/2"	12021 lb	0.411 (41%)	D+S	L
LL Defl inch	0.165 (L/862)	6'1 3/4"	0.296 (L/480)	0.557 (56%)	S	L
TL Defl inch	0.333 (L/427)	6'1 3/4"	0.394 (L/360)	0.844 (84%)	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 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 5'5 3/16" o.c.
7 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	520 PLF	0 PLF	520 PLF	0 PLF	0 PLF	B2
	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

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Comtech, Inc.
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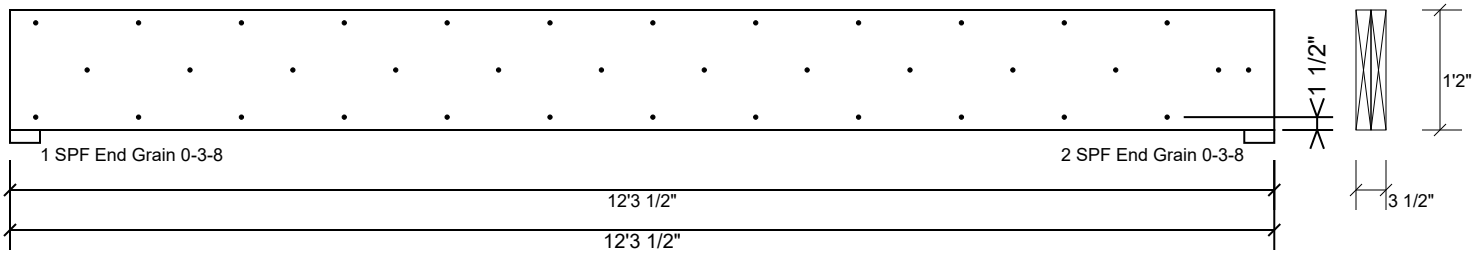
BM2 Kerto-S LVL 1.750" X 14.000" 2-Ply - PASSED

Level: Level



Multi-Ply Analysis

Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	245.6 PLF
Yield Limit per Fastener	81.9 lb.
C_M	1
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

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

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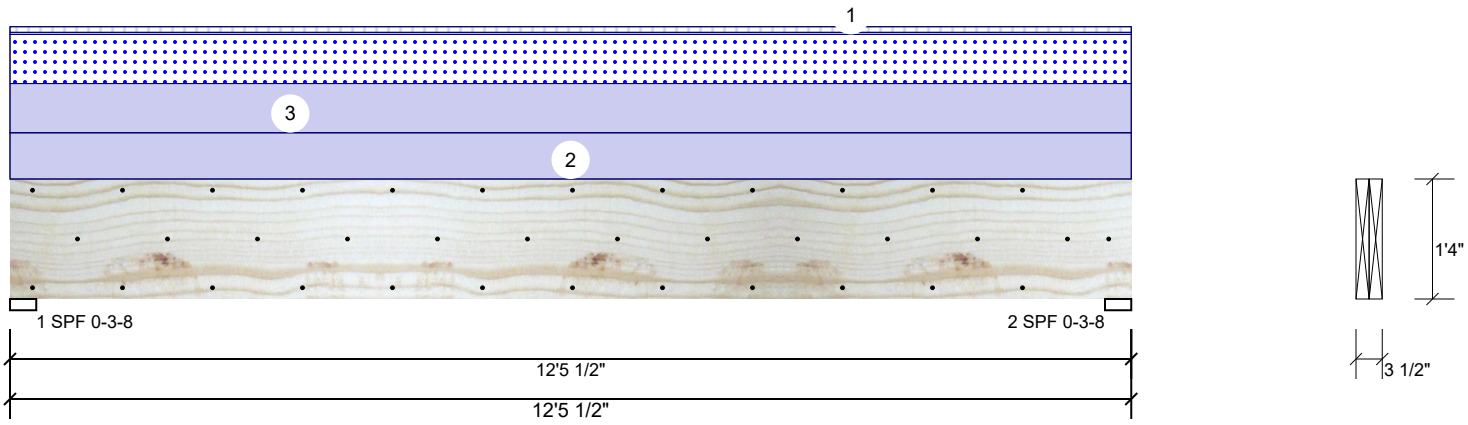
www.metsawood.com/us

Comtech, Inc.
1001 S Reilly Rd., NC
28314
(910) 864-8787

BM3 Kerto-S LVL 1.750" X 16.000" 2-Ply - PASSED

Level: Level



Member Information

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal - II	Ceiling:	Gypsum 1/2"
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	249	2289	1090	0	0
2	Vertical	249	2289	1090	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	65%	2289 / 1090	3379	L	D+S
2 - SPF	3.500"	Vert	65%	2289 / 1090	3379	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	9798 ft-lb	6'2 3/4"	39750 ft-lb	0.246 (25%)	D+S	L
Unbraced	9798 ft-lb	6'2 3/4"	10484 ft-lb	0.935 (93%)	D+S	L
Shear	2514 lb	10'10"	13739 lb	0.183 (18%)	D+S	L
LL Defl inch	0.041 (L/3526)	6'2 3/4"	0.301 (L/480)	0.136 (14%)	S	L
TL Defl inch	0.127 (L/1137)	6'2 3/4"	0.401 (L/360)	0.316 (32%)	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 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 end bearings.
7 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	Tie-In Far	0-0-0 to 12-5-8	1-0-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	0 PSF	Floor
1	Tie-In Near	0-0-0 to 12-5-8	0-0-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	0 PSF	Floor
2	Uniform			Top	165 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall
3	Uniform			Top	175 PLF	0 PLF	175 PLF	0 PLF	0 PLF	D1
	Self Weight				12 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

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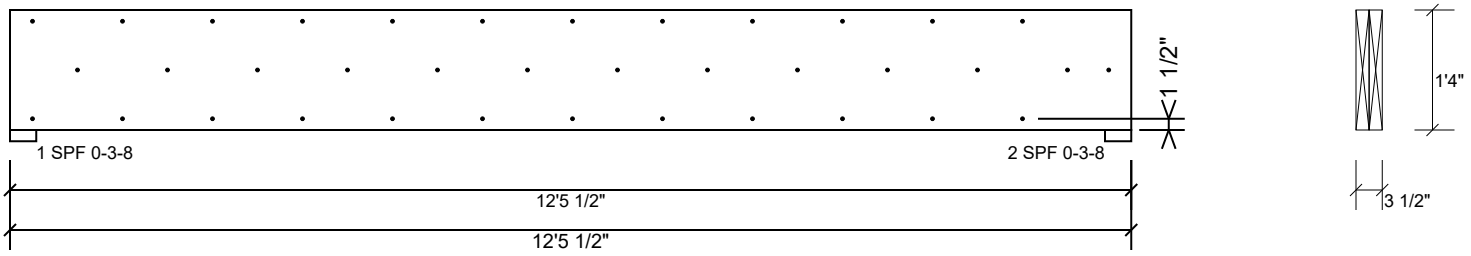
www.metsawood.com/us

Comtech, Inc.
1001 S Reilly Rd., NC
28314
(910) 864-8787

Client:	Weaver Homes, Inc.	Date:	11/15/2023
Project:		Input by:	David Landry
Address:		Job Name:	Kelly Residence
		Project #:	J1123-6331

BM3 Kerto-S LVL 1.750" X 16.000" 2-Ply - PASSED

Level: Level



Multi-Ply Analysis

Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	245.6 PLF
Yield Limit per Fastener	81.9 lb.
C_M	1
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

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

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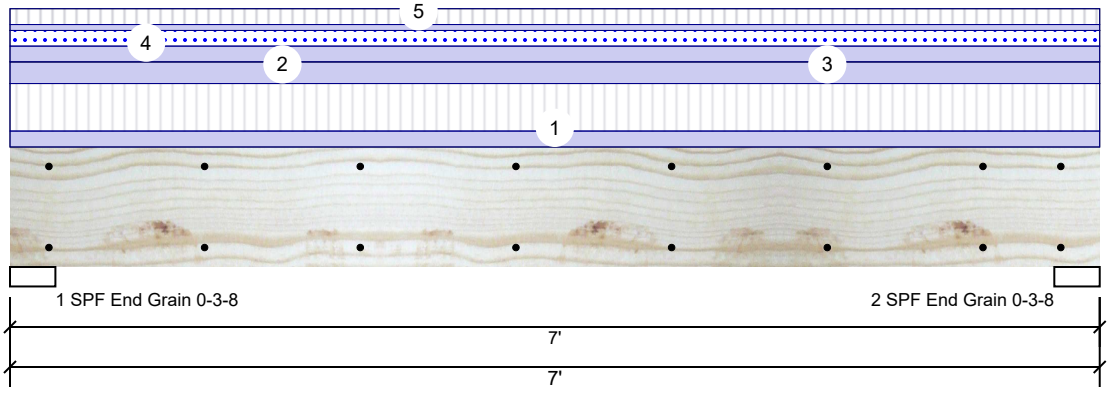
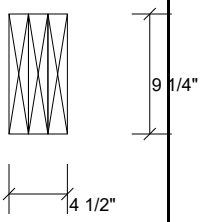
Comtech, Inc.
1001 S Reilly Rd., NC
28314
(910) 864-8787

BM4 S-P-F #2 2.000" X 10.000" 3-Ply - PASSED

Level: Level





Member Information

Type:	Girder	Application:	Floor
Plies:	3	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	Yes
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal - II	Ceiling:	Gypsum 1/2"
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	2104	1733	417	0	0
2	Vertical	2104	1733	417	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	57%	1733 / 2104	3836	L	D+L
2 - SPF End Grain	3.500"	Vert	57%	1733 / 2104	3836	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5863 ft-lb	3'6"	5919 ft-lb	0.990 (99%)	D+L	L
Unbraced	5863 ft-lb	3'6"	5919 ft-lb	0.990 (99%)	D+L	L
Shear	2672 lb	5'11 1/4"	3746 lb	0.713 (71%)	D+L	L
LL Defl inch	0.060 (L/1317)	3'6"	0.164 (L/480)	0.364 (36%)	L	L
TL Defl inch	0.109 (L/722)	3'6"	0.218 (L/360)	0.498 (50%)	D+L	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". Nail from both sides.
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 continuously laterally braced.
7. 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	121 PLF	361 PLF	0 PLF	0 PLF	0 PLF	F1
3	Uniform			Top	165 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall
4	Uniform			Top	119 PLF	0 PLF	119 PLF	0 PLF	0 PLF	M2
5	Tie-In Far	0-0-0 to 7-0-0	6-0-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	0 PSF	Floor
5	Tie-In Near	0-0-0 to 7-0-0	0-0-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	0 PSF	Floor

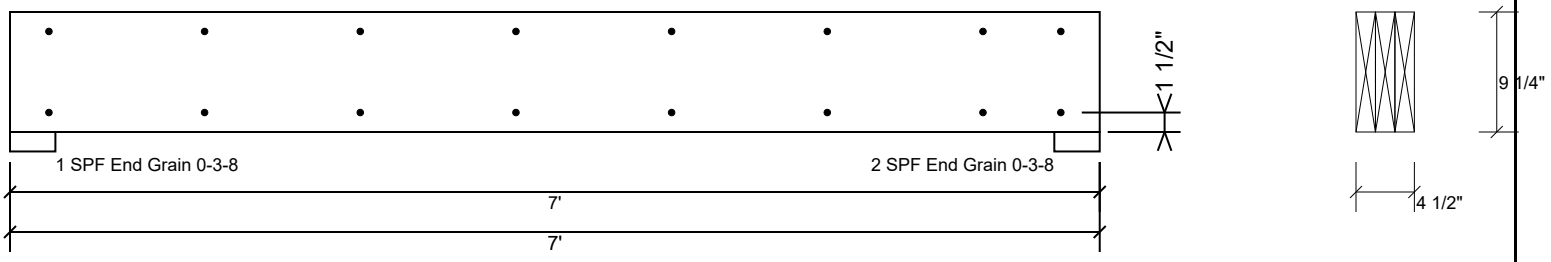
This design is valid until 6/28/2026

Manufacturer Info

Comtech, Inc.
1001 S Reilly Rd., NC 28314
(910) 864-8787

BM4 S-P-F #2 2.000" X 10.000" 3-Ply - PASSED

Level: Level



Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Nail from both sides. Maximum end distance not to exceed 6".

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	157.4 PLF
Yield Limit per Fastener	78.7 lb.
C_M	1
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

Manufacturer Info

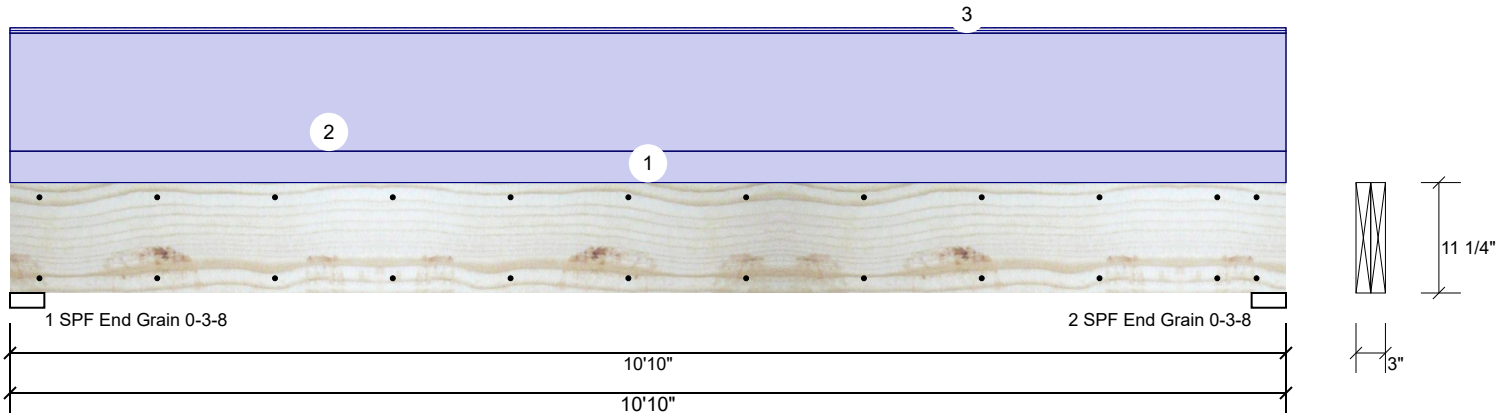
Comtech, Inc.
1001 S Reilly Rd., NC 28314
(910) 864-8787

This design is valid until 6/28/2026

Client:	Weaver Homes, Inc.	Date:	11/15/2023
Project:		Input by:	David Landry
Address:		Job Name:	Kelly Residence
		Project #:	J1123-6331

GDH S-P-F #2 2.000" X 12.000" 2-Ply - PASSED

Level: Level



Member Information

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal - II	Ceiling:	Gypsum 1/2"
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	1598	54	0	0
2	Vertical	0	1598	54	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	37%	1598 / 54	1652	L	D+S
2 - SPF End Grain	3.500"	Vert	37%	1598 / 54	1652	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3969 ft-lb	5'5"	4153 ft-lb	0.956 (96%)	D	Uniform
Unbraced	3969 ft-lb	5'5"	3972 ft-lb	0.999 (100%)	D	Uniform
Shear	1235 lb	1'2 3/4"	2734 lb	0.452 (45%)	D	Uniform
LL Defl inch	0.005 (L/23799)	5'5"	0.259 (L/480)	0.020 (2%)	S	L
TL Defl inch	0.160 (L/780)	5'5"	0.346 (L/360)	0.461 (46%)	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 a maximum of 4'4 1/2" o.c.
7. 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	60 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall
2	Uniform			Top	225 PLF	0 PLF	0 PLF	0 PLF	0 PLF	C1GE
3	Tie-In Far	0-0-0 to 10-10-0	0-6-0	Top	20 PSF	0 PSF	20 PSF	0 PSF	0 PSF	Roof
3	Tie-In Near	0-0-0 to 10-10-0	0-0-0	Top	20 PSF	0 PSF	20 PSF	0 PSF	0 PSF	Roof

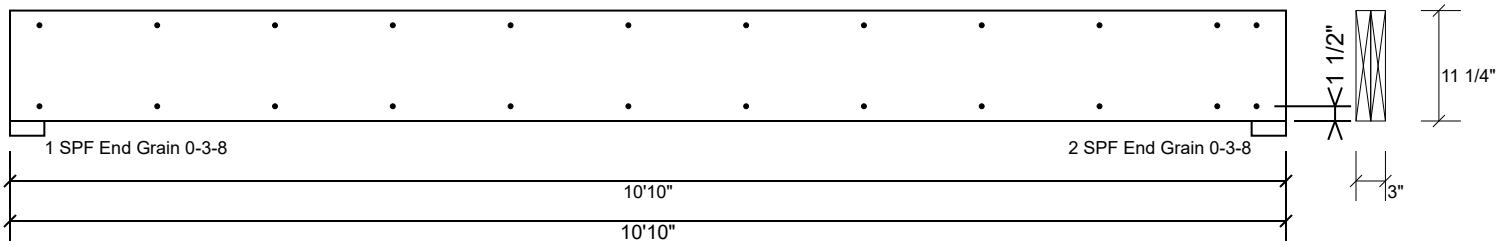
This design is valid until 6/28/2026

Manufacturer Info

Comtech, Inc.
1001 S Reilly Rd., NC 28314
(910) 864-8787

GDH S-P-F #2 2.000" X 12.000" 2-Ply - PASSED

Level: Level



Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	157.4 PLF
Yield Limit per Fastener	78.7 lb.
C_M	1
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

This design is valid until 6/28/2026

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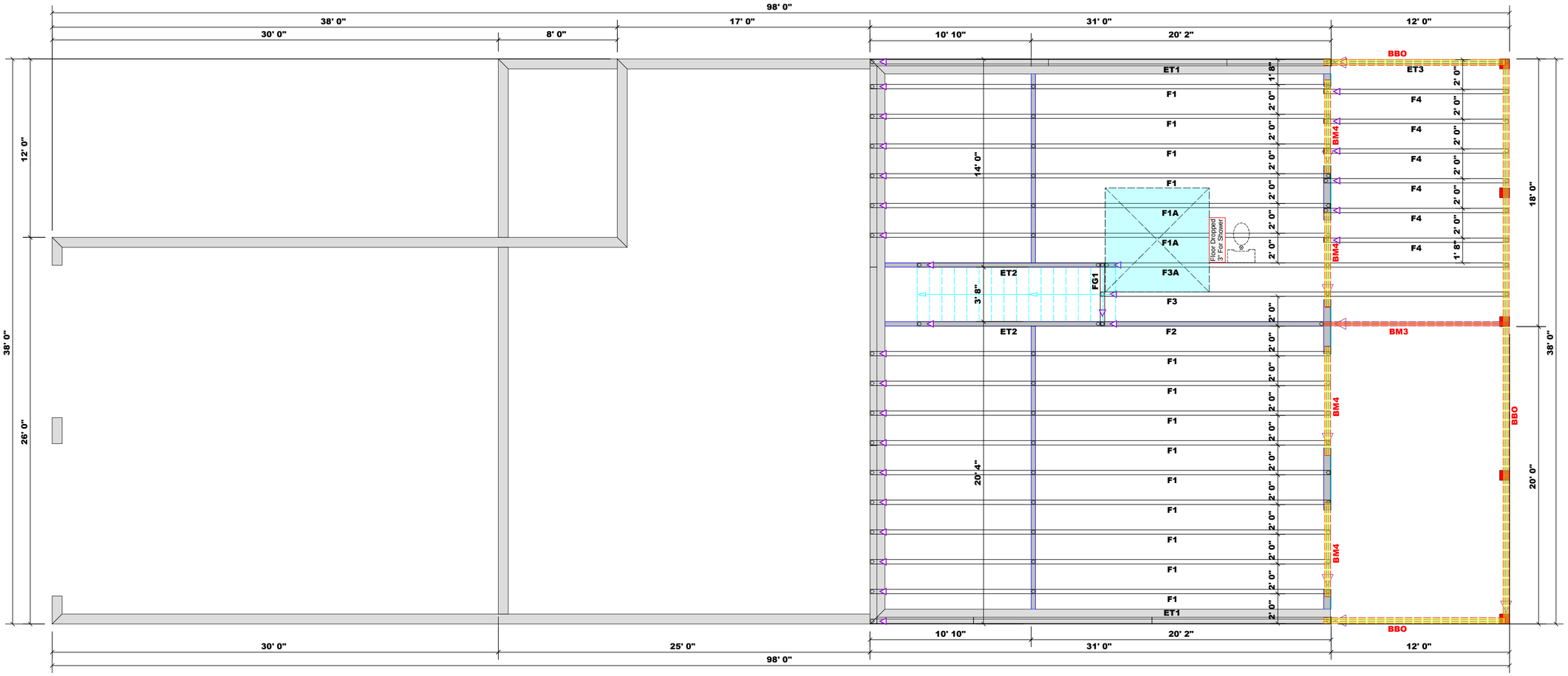


Products				
PlotID	Length	Product	Plies	Net Qty
BM3	13' 0"	1-3/4"x 16" LVL Kerto-S	2	2
BM4	8' 0"	2x10 SPF No.2	3	12

Plumbing Drop Notes
1. Plumbing drop locations shown are NOT exact. 2. Contractor to verify ALL plumbing drop locations prior to setting Trusses. 3. Adjust spacing as needed not to exceed 24"oc.

1 Truss Placement Plan
Scale: 1/4"=1'

All Walls Shown Are Considered Load Bearing

Dimension Notes
1. All exterior wall to wall dimensions are to face of sheathing unless noted otherwise 2. All interior wall dimensions are to face of frame wall unless noted otherwise 3. All exterior wall to truss dimensions are to face of frame wall unless noted otherwise

Hatch Legend
Tray Ceiling
Vaulted Ceiling
Drop Beam
Flush Beam

= Indicates Left End of Truss
(Reference Engineered Truss Drawing)
Do NOT Erect Truss Backwards

LOAD CHART FOR JACK STUDS

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

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

END REACTION (LB #'S)	REQ'D STUDS FOR (2) PLY HEADER	END REACTION (LB #'S)	REQ'D STUDS FOR (3) PLY HEADER	END REACTION (LB #'S)	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				

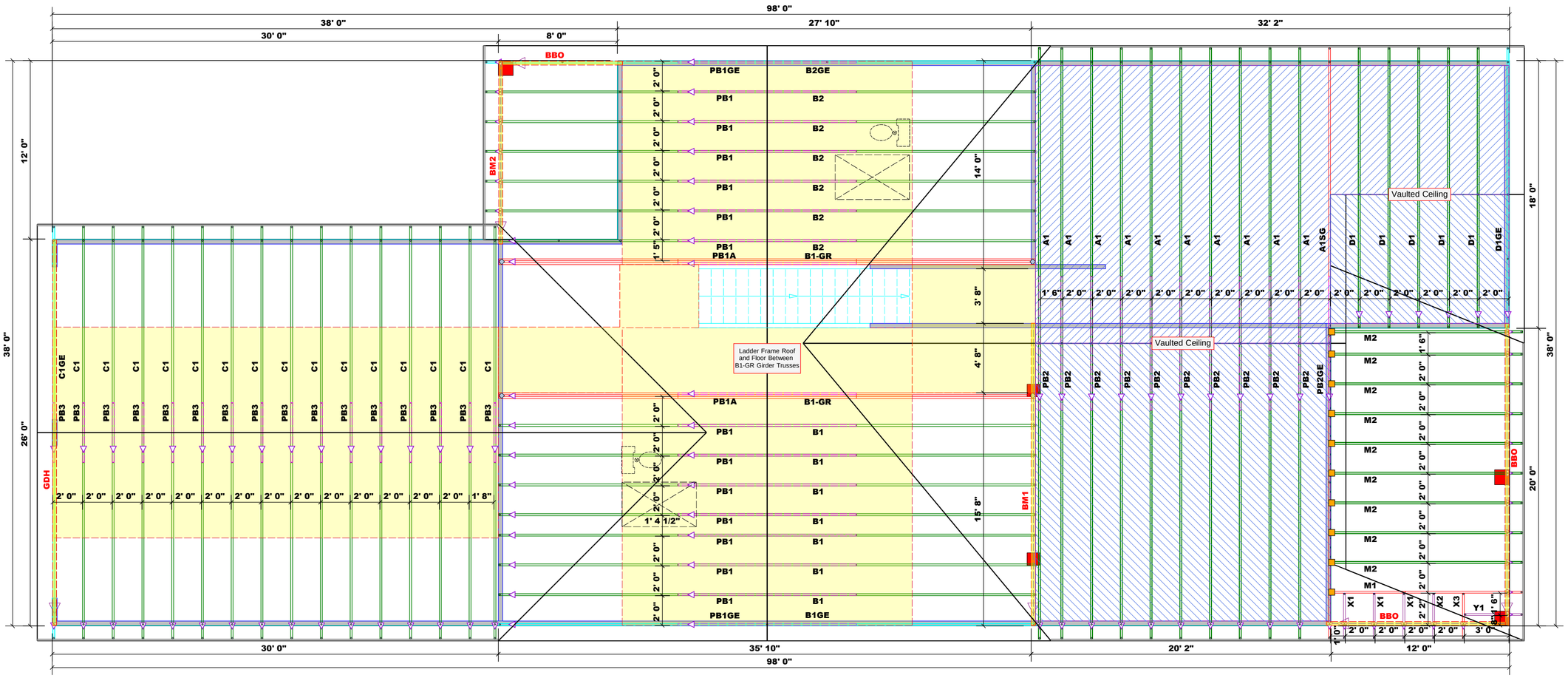
BUILDER	Weaver Homes, Inc.	CITY / CO.	Sanford / Harnett
JOB NAME	Kelly Residence	ADDRESS	131 Peacock Lane
PLAN	Custom	MODEL	Roof
SEAL DATE	Seal Date	DATE REV.	11/28/23
QUOTE #	Quote #	DRAWN BY	David Landry
JOB #	J1123-6330	SALES REP.	Lenny Norris

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

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 David Landry
David Landry

comTECH
ROOF & FLOOR TRUSSES & BEAMS
Reilly Road Industrial Park
Fayetteville, N.C. 28309
Phone: (910) 864-8787
Fax: (910) 864-4444



Products				
PlotID	Length	Product	Plies	Net Qty
BM1	21' 0"	1-3/4"x 11-7/8" LVL Kerto-S	2	2
BM2	14' 0"	2x10 SPF No.2	2	2
GDH	26' 0"	2x12 SPF No.2	2	2

Plumbing Drop Notes

1. Plumbing drop locations shown are NOT exact.
2. Contractor to verify ALL plumbing drop locations prior to setting Trusses.
3. Adjust spacing as needed not to exceed 24"oc.

Roof Area = 4938.52 sq.ft.
Ridge Line = 133.5 ft.
Hip Line = 14.7 ft.
Horiz. OH = 215.93 ft.
Raked OH = 209.56 ft.
Decking = 170 sheets

1 Truss Placement Plan
Scale: 1/4"=1'

All Walls Shown Are Considered Load Bearing

Dimension Notes

1. All exterior wall to wall dimensions are to face of sheathing unless noted otherwise
2. All interior wall dimensions are to face of frame wall unless noted otherwise
3. All exterior wall to truss dimensions are to face of frame wall unless noted otherwise

Hatch Legend
Vaulted Ceiling
Drop Beam
Flush Beam

Connector Information					Nail Information	
Sym	Product	Manuf	Qty	Supported Member	Header	Truss
	JUS26	USP	10	NA	10d/3"	10d/3"

LOAD CHART FOR JACK STUDS

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

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

END REACTION (LB #'S)	REQ'D # STUDS FOR (1) PLY HEADER	END REACTION (LB #'S)	REQ'D # STUDS FOR (2) PLY HEADER	END REACTION (LB #'S)	REQ'D # STUDS FOR (3) 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				

= Indicates Left End of Truss
(Reference Engineered Truss Drawing)
Do NOT Erect Truss Backwards

BUILDER	Weaver Homes, Inc.	**CITY / CO.**	Sanford / Harnett
JOB NAME	Kelly Residence	**ADDRESS**	131 Peacock Lane
PLAN	Custom	**MODEL**	Roof
SEAL DATE	Seal Date	**DATE REV.**	11/13/23
QUOTE #	Quote #	**DRAWN BY**	David Landry
JOB #	J1123-6330	**SALES REP.**	Lenny Norris

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