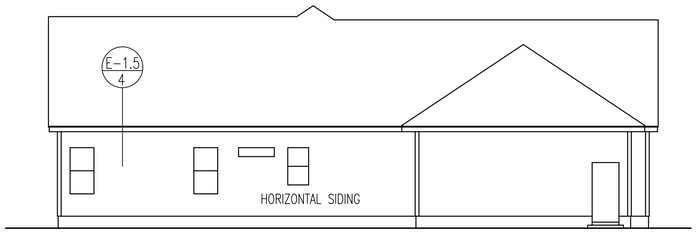
NOTICE TO CONTRACTOR
All construction must comply with current NC Building Codes and is subject to field inspection and verification.

APPROVED
Limited building only review
Permit holder responsible for full compliance with the code

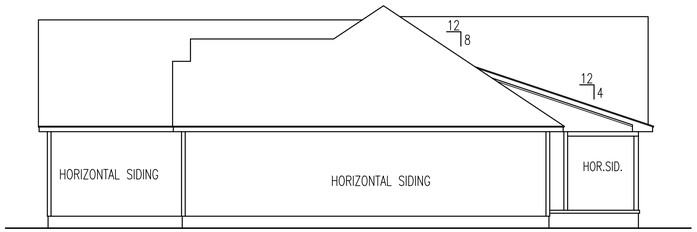
03/30/2021

Harnett COUNTY NORTH CAROLINA

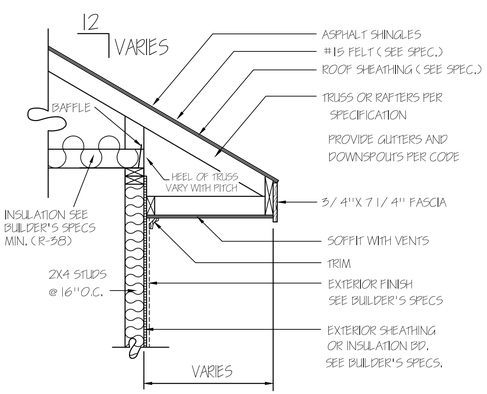
FRONT ELEVATION
SCALE:1/4"=1'-0"

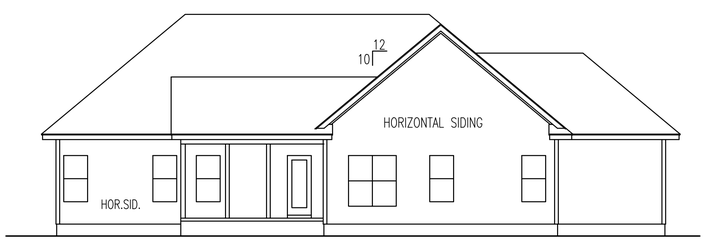


LEFT ELEVATION

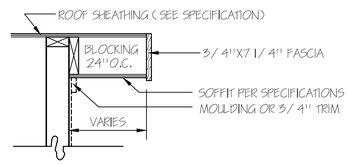


RIGHT ELEVATION





REAR ELEVATION
SCALE:1/8"=1'-0"



RAKE DETAIL FOR GABLE ENDS

TM DESIGNS
RESIDENTIAL PLANS BY TINA MCFADDEN
(910) 354-4736 TMDESIGNS2016@GMAIL.COM

EXCLUSIVE RESIDENCE DESIGN FOR:
WATERMARK HOMES
NAME: RIVER OAK
LOT: 46 SOUTH CREEK

TM DESIGNS WILL NOT BE LIABLE FOR ANY ERRORS NOT BROUGHT TO THEIR ATTENTION PRIOR TO THE START OF CONSTRUCTION. WHILE EVERY EFFORT WAS MADE IN THE PREPARATION OF THESE DRAWINGS AND DIMENSIONS TO AVOID ERRORS THE OWNER AND/OR BUILDER SHALL VERIFY ALL DIMENSIONS, DETAILS, LOCAL AND STATE CODES.

I HEREBY CERTIFY THAT THIS DRAWING MEETS LOCAL CODES, 2012 INTERNATIONAL BUILDING CODES

THIS IS FOR THE CONSTRUCTION OF ONE HOUSE ON A SINGLE LOT, NOT TO BE REUSED

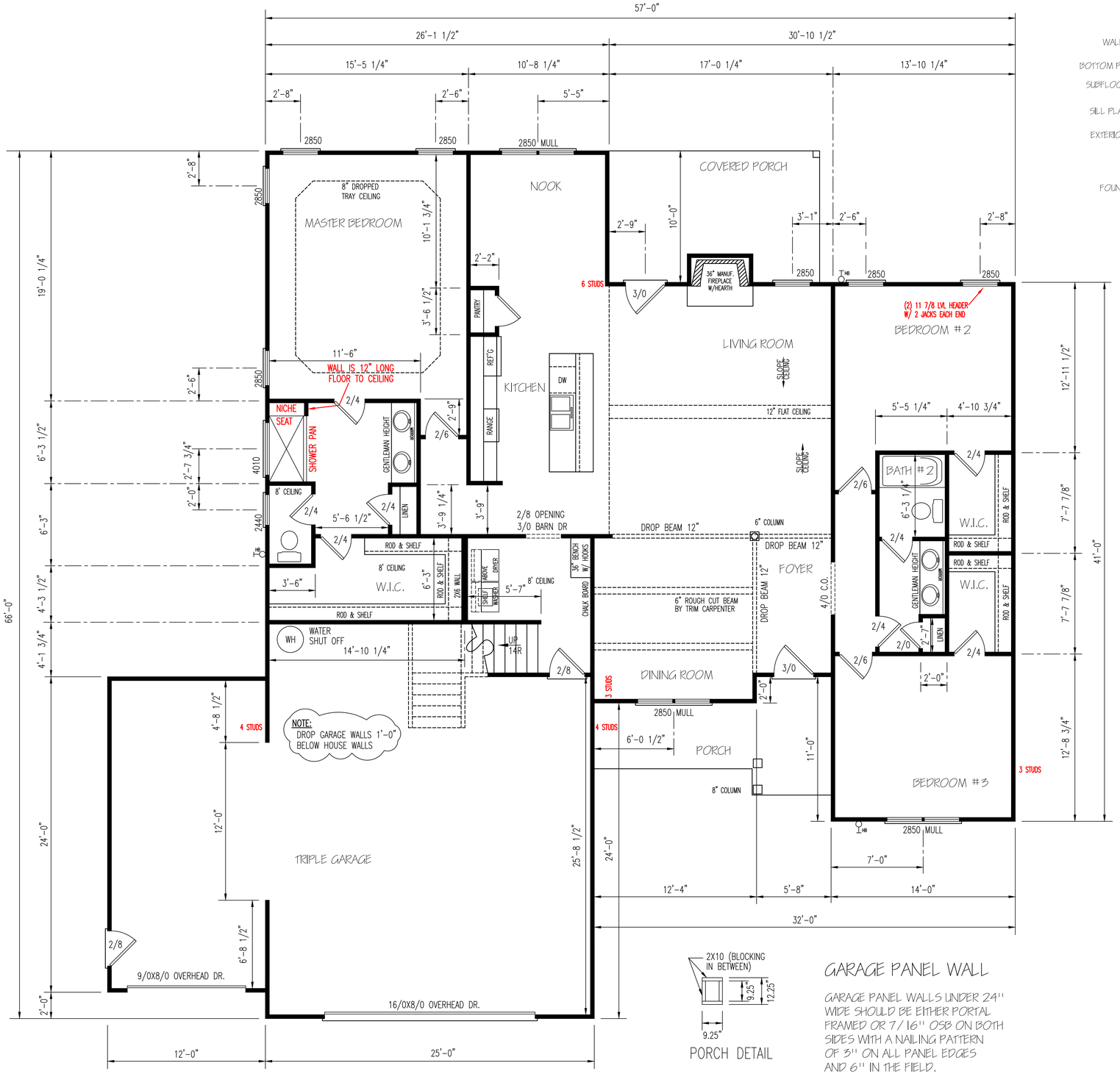
PLAN NUMBER
RG25-A07

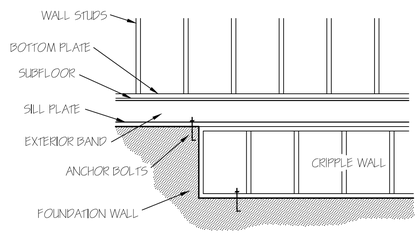
OPTION #1

1

GARAGE L F

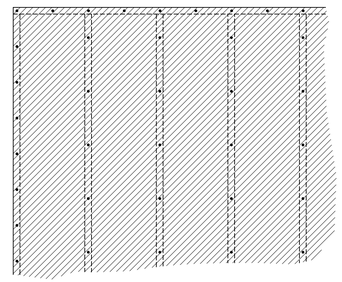
DATE: 11/5/20





FOUNDATION CRIPPLE WALLS SHALL BE FRAMED OF STUDS NOT SMALLER THAN THE STUDDING ABOVE. WHEN EXCEEDING 4 FT. IN HEIGHT, SUCH WALLS SHALL BE FRAMED OF STUDS HAVING THE SIZE REQUIRED FOR AN ADDITIONAL STORY.
CRIPPLE WALLS WITH A STUD HEIGHT LESS THAN 14 INCHES SHALL BE CONTINUOUSLY SHEATHED ON ONE SIDE WITH WOOD STRUCTURAL PANELS FASTENED TO BOTH THE TOP AND BOTTOM PLATES IN ACCORDANCE WITH TABLE R602.3(1), OR CRIPPLE WALLS SHALL BE CONSTRUCTED OF SOLID BLOCKING.

BRACING METHOD



EXTERIOR WALL TO BE FULLY SHEATHED WITH 7/16" OSB. NAILING PATTERN TO BE 3" ON ALL EDGES AND 12" IN FIELD, WITH 8d NAILS.

HERO PACKAGE

ENERGY TABLE
U-FACTOR OF WINDOWS .30
CLIMATE ZONE 3
INSULATION: WALLS 15
CEILING 38
FLOORS 19

EXERIOR WALLS (2) 2X10 HEADERS		
CLEAR SPAN FOR HEADER	NUMBER OF STUDS JACKS	KINGS
ALL DOOR & C.O. BELOW 4'	1	1
ALL DOOR & C.O. 4' TO 7'-11"	2	2
ALL DOOR & C.O. 8' AND ABOVE	SIZED BY ENGINEER	
UNLESS NOTED OTHER WISE		

FIRST FLOOR PLAN

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

HEATED AREA
1ST FL. 2066 SQ FT
2ND FL. 455 SQ FT
TOTAL 2521 SQ FT

OTHER AREAS
GARAGE 734 SQ FT
F.PORCH 113 SQ FT
R.PORCH 109 SQ FT

NOTE:
CEILINGS ARE 9'-0" UNLESS NOTED.
SET WINDOWS @ 7'-4" UNLESS NOTED.

PORCH DETAIL

GARAGE PANEL WALL

GARAGE PANEL WALLS UNDER 24" WIDE SHOULD BE EITHER PORTAL FRAMED OR 7/16" OSB ON BOTH SIDES WITH A NAILING PATTERN OF 3" ON ALL PANEL EDGES AND 6" IN THE FIELD.

TM DESIGNS
RESIDENTIAL PLANS BY TINA MCFADDEN
(910) 354-4736 TMDESIGNS2016@GMAIL.COM

EXCLUSIVE RESIDENCE DESIGN FOR:
WATERMARK HOMES
NAME: RIVER OAK III
LOT: 46 SOUTH CREEK

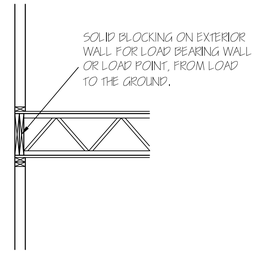
I HEREBY CERTIFY THAT THIS DRAWING MEETS LOCAL CODES, 2018 INTERNATIONAL BUILDING CODES

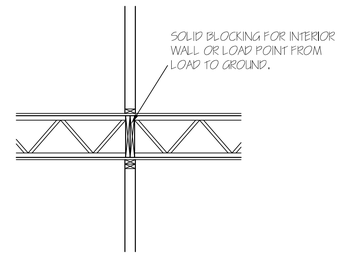
THIS IS FOR THE CONSTRUCTION OF ONE HOUSE ON A SINGLE LOT, NOT TO BE RELEASED

PLAN NUMBER
RG25-A07

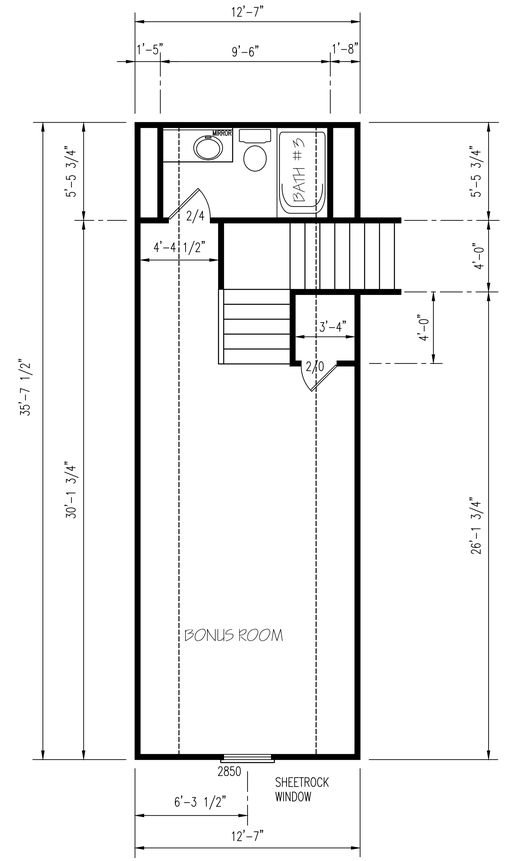
OPTION #1

2 A | GARAGE | L | F
DATE: 11/5/20





EXERIOR WALLS (2) 2X10 HEADERS		
CLEAR SPAN FOR HEADER	NUMBER OF STUDS	
	JACKS	KINGS
ALL DOOR & C.O. BELOW 4'	1	1
ALL DOOR & C.O. 4' TO 7'-11"	2	2
ALL DOOR & C.O. 8' AND ABOVE	SIZED BY ENGINEER	
UNLESS NOTED OTHER WISE		



HERO PACKAGE

SECOND FLOOR PLAN

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

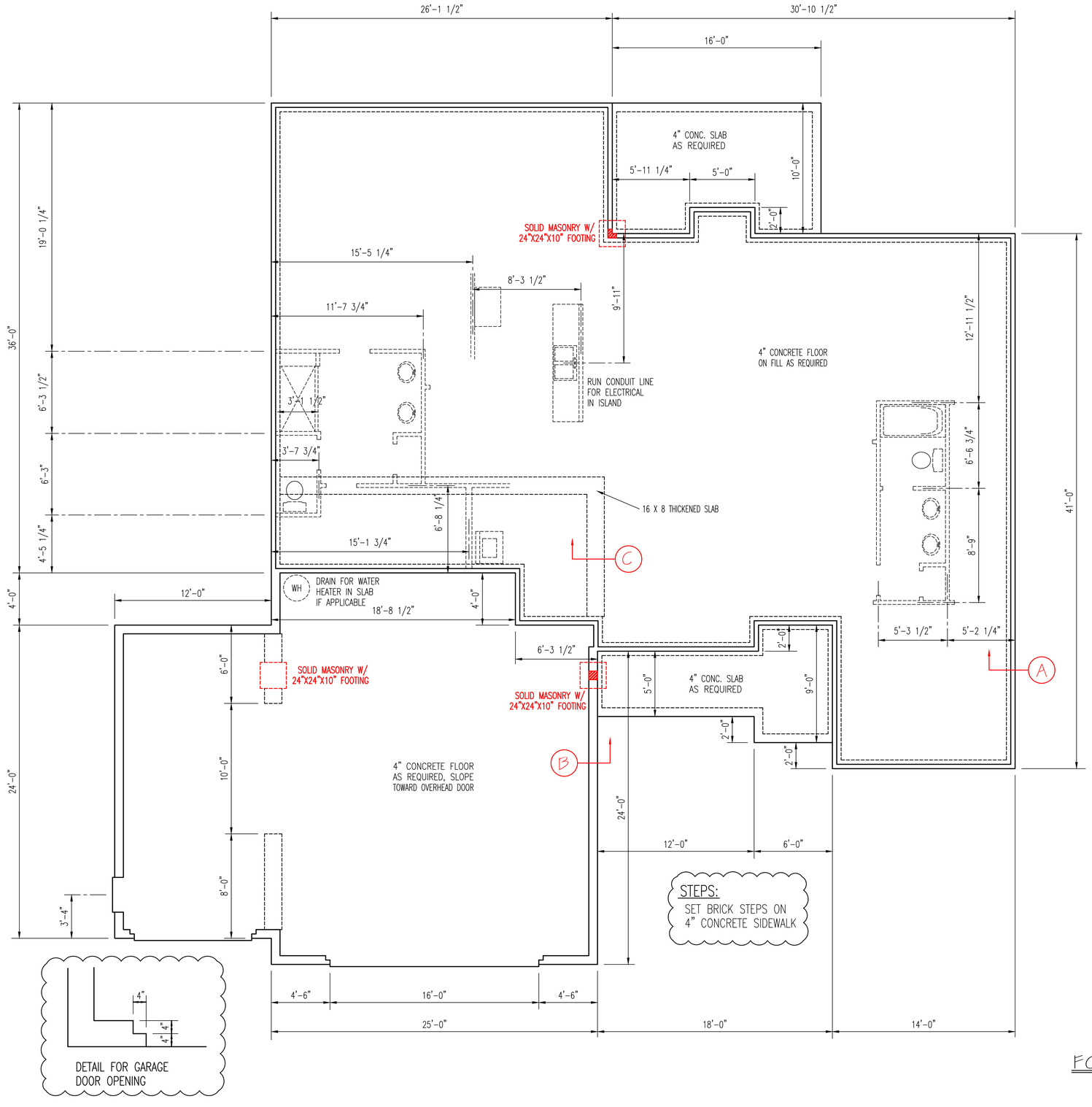
TM DESIGNS
RESIDENTIAL PLANS BY TINA MCFADDEN
(910) 354-4736 TMDESIGNS2016@GMAIL.COM

EXCLUSIVE RESIDENCE DESIGN FOR:
WATERMARK HOMES
NAME: RIVER OAK III
LOT: 46 SOUTH CREEK

PLAN NUMBER
RG25-A07

OPTION #1

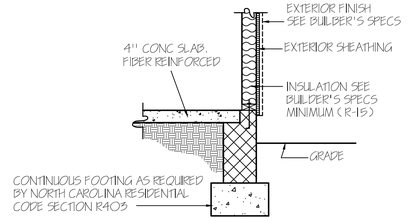
2 B | GARAGE L F | DATE: 11/5/20



DETAIL FOR GARAGE DOOR OPENING

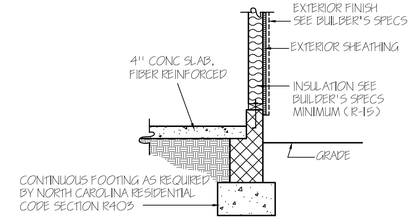
FOUNDATION PLAN

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



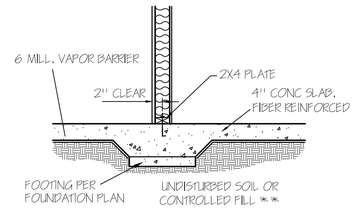
NOTE:
PERIMETER INSUL. MAY EXTEND HORIZ. UNDER SLAB 24" OR VERTICAL 24" BELOW SLAB FLOOR

CONCRETE SLAB FLOOR — (A)



NOTE:
PERIMETER INSUL. MAY EXTEND HORIZ. UNDER SLAB 24" OR VERTICAL 24" BELOW SLAB FLOOR

GARAGE WALL — (B)



LOAD BEARING WALL THICKENED SLAB — (C)

WALL ANCHOR OPTIONS

USE ANCHOR BOLTS
ANCHOR BOLTS: 1/ 2" DIA. BOLTS AT 6'-0" O.C. AND NOT MORE THAT 12" FROM CORNERS, EMBEDDED MIN. 7" INTO FOUNDATION. USE A MIN. OF 2 BOLTS PER EACH STUD WALL

NOTE:
FOUNDATION DETAILS SHOWN ARE BASED ON ASSUMED SOIL BEARING CAPACITY OF 2000 PSF. LOCAL SITE CONDITIONS MUST BE INVESTIGATED. ALL FOOTING TO BE LOCATED BELOW FROST DEPTH.

TM DESIGNS
RESIDENTIAL PLANS BY TINA MCFADDEN
(910) 354-4736 TMDESIGNS2016@GMAIL.COM

EXCLUSIVE RESIDENCE DESIGN FOR:
WATERMARK HOMES

NAME: RIVER OAK III
LOT: 46 SOUTH CREEK

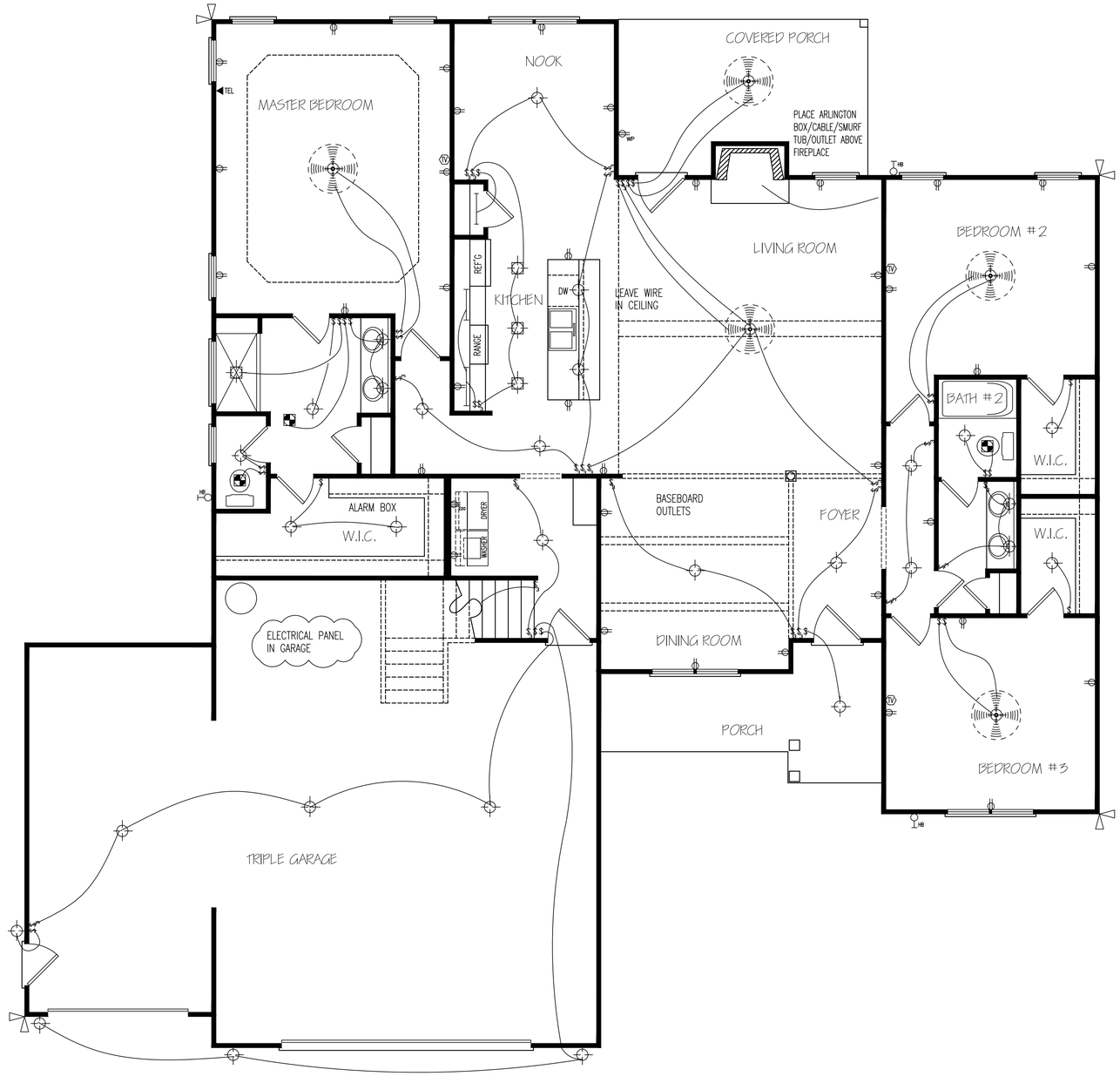
I HEREBY CERTIFY THAT THIS DRAWING MEETS LOCAL CODES, 2018 INTERNATIONAL BUILDING CODES

THIS IS FOR THE CONSTRUCTION OF ONE HOUSE ON A SINGLE LOT, NOT TO BE RELISED

PLAN NUMBER
RG25-A07

OPTION #1

3 | GARAGE L F | DATE: 11/5/20



HERO PACKAGE

FIRST FLOOR
ELECTRICAL LAYOUT

TM DESIGNS

RESIDENTIAL PLANS BY TINA MCFADDEN
(910) 354-4736 TMDESIGNS2016@GMAIL.COM

EXCLUSIVE RESIDENCE DESIGN FOR:

WATERMARK HOMES

LOT: 46 SOUTH CREEK

NAME: RIVER OAK III

I HEREBY CERTIFY THAT THIS DRAWING MEETS LOCAL CODES, 2018 INTERNATIONAL BUILDING CODES

THIS IS FOR THE CONSTRUCTION OF ONE HOUSE ON A SINGLE LOT, NOT TO BE REUSED

PLAN NUMBER
RG25-A07

OPTION #1

E-1

GARAGE L F

DATE: 11/5/20

HERO PACKAGE

SECOND FLOOR
ELECTRICAL LAYOUT

TM DESIGNS
RESIDENTIAL PLANS BY TINA MCFADDEN
(910) 354-4736 TMDESIGNS2016@GMAIL.COM

EXCLUSIVE RESIDENCE DESIGN FOR:
WATERMARK HOMES
NAME: RIVER OAK III
LOT: 46 SOUTH CREEK

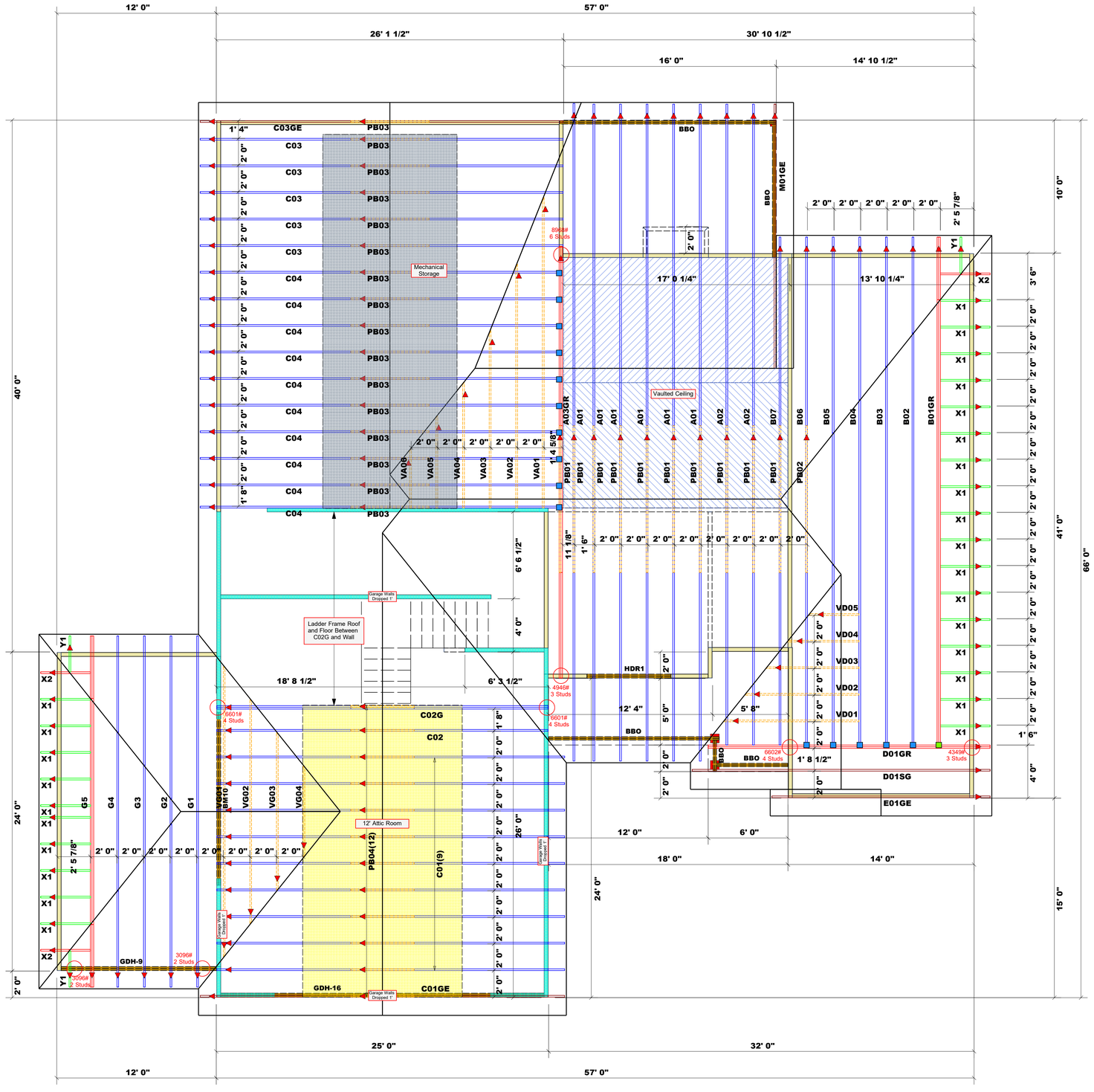
PLAN NUMBER
RG25-A07

OPTION #1

E-2

GARAGE L | F

DATE: 11/5/20



ROOF TRUSS PLACEMENT PLAN

24" O.C. SPACING (TYP. U.N.O.)
SCALE: 1/4" = 1'-0"

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

Roof Area	= 4663.54 sq.ft.
Ridge Line	= 122.39 ft.
Hip Line	= 81.64 ft.
Horiz. OH	= 228.83 ft.
Raked OH	= 157.79 ft.
Decking	= 160 sheets

▲ = Indicates Left End of Truss
(Reference Engineered Truss Drawing)
Do Not Erect Trusses Backwards

All Walls Shown Are Considered Load Bearing

WALL SCHEDULE

- 1st Floor Brg. Wall
- Gar. Walls Dropped
- Non-Bearing Walls

Connector Information					Nail Information	
Sym	Product	Manuf	Qty	Supported Member	Header	Truss
	THD26-2	USP	1	Varies	16d/3-1/2"	10d/3"
	HUS26	USP	15	Varies	16d/3-1/2"	16d/3-1/2"

Beam Schedule

PlotID	Length	Product	Plies	Net Qty
HDR1	7' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2
GDH-16	25' 0"	1-3/4"x 11-7/8" LVL Kerto-S	2	2
GDH-9	12' 0"	1-3/4"x 11-7/8" LVL Kerto-S	2	2

For all Beams Labeled BBO Assume (2)2x10 SP#2 or Better U.N.O.

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 support number of jack studs required to support reactions less than or equal to 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_____

Randy Wilson

LOAD CHART FOR JACK STUDS

(BASED ON TABLES R502.5(1) & (3))
NUMBER OF JACK STUDS REQUIRED @ EA END OF HEADER/GIRDER

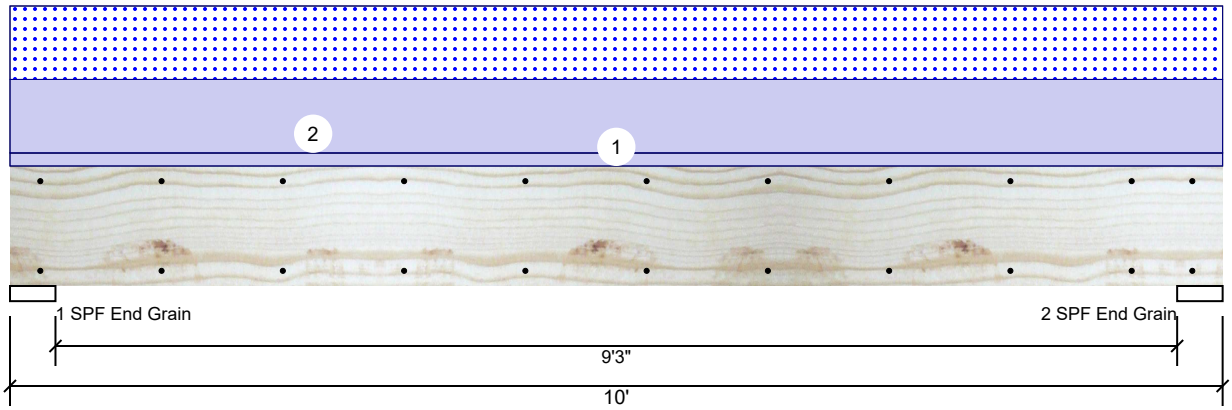
END REACTION (LBS)	NO. OF STUDS FOR (2) 1X'S HEADER	END REACTION (LBS)	NO. OF STUDS FOR (3) 1X'S HEADER	END REACTION (LBS)	NO. OF STUDS FOR (4) 1X'S HEADER
1700	1	2550	1	3400	1
3400	2	5100	2	6800	2
5100	3	7650	3	10200	3
6800	4	10200	4	13600	4
8500	5	12750	5	17000	5
10200	6	15300	6		
11900	7				
13600	8				
15300	9				

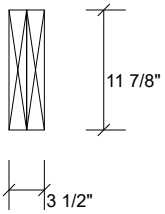
BUILDER	Watermark Homes, Inc.
JOB NAME	Lot 46 South Creek
PLAN	River Oak w/ 3rd Car
SEAL DATE	Plan Date: 11/5/20
QUOTE #	NA
JOB #	J1120-5330
COUNTY	Harnett County
ADDRESS	Lot 46 South Creek
MODEL	Roof
DATE REV.	11/13/20
DRAWN BY	Anthony Williams
SALESMAN	Anthony Williams

Client:	Watermark Homes	Date:	11/13/2020
Project:		Input by:	Anthony Williams
Address:		Job Name:	River Oak - RG25-A07
		Project #:	J1120-5330

GDH-9 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:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	0	1696	1400	0	0
2	0	1696	1400	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	4.500"	23%	1696 / 1400	3096	L	D+S
2 - SPF End Grain	4.500"	23%	1696 / 1400	3096	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	6803 ft-lb	5'	22897 ft-lb	0.297 (30%)	D+S	L
Unbraced	6803 ft-lb	5'	9857 ft-lb	0.690 (69%)	D+S	L
Shear	2290 lb	1'3 5/8"	10197 lb	0.225 (22%)	D+S	L
LL Defl inch	0.058 (L/1928)	5'	0.312 (L/360)	0.190 (19%)	S	L
TL Defl inch	0.129 (L/872)	5'	0.469 (L/240)	0.280 (28%)	D+S	L

Design Notes

1 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
2 Refer to last page of calculations for fasteners required for specified loads.
3 Girders are designed to be supported on the bottom edge only.
4 Top loads must be supported equally by all plies.
5 Top braced at bearings.
6 Bottom braced at 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	Uniform			Top	50 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall
2	Uniform			Top	280 PLF	0 PLF	280 PLF	0 PLF	0 PLF	ROOF
	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 2/26/2023

Manufacturer Info

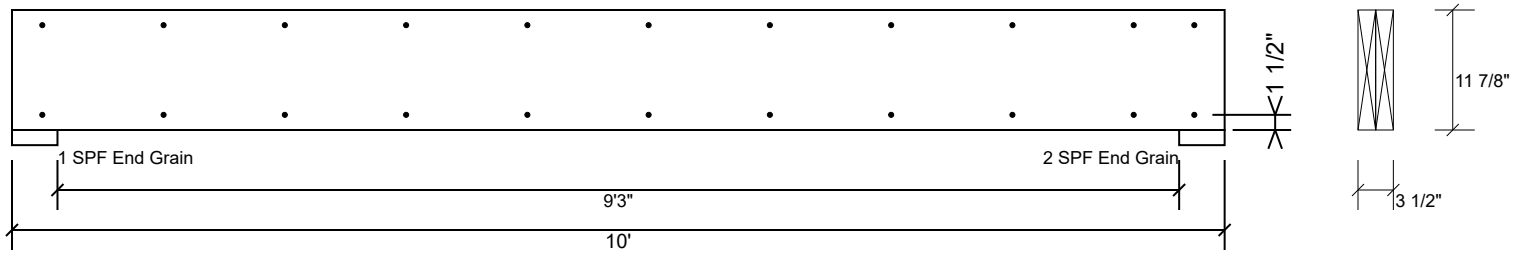
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us
ICC-ES: ESR-3633

Comtech, Inc.
1001 S. Reilly Road, Suite #639
Fayetteville, NC
USA
28314
910-864-TRUS

Client:	Watermark Homes	Date:	11/13/2020
Project:		Input by:	Anthony Williams
Address:		Job Name:	River Oak - RG25-A07
		Project #:	J1120-5330

GDH-9 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.
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 2/26/2023

Manufacturer Info

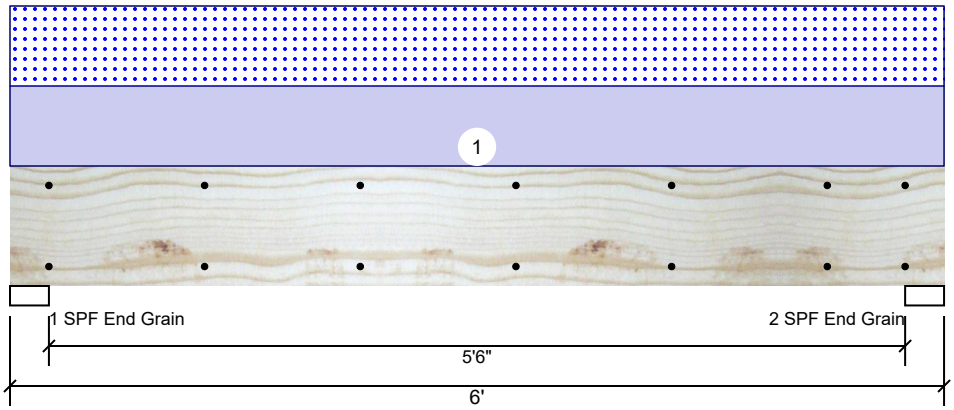
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us
ICC-ES: ESR-3633

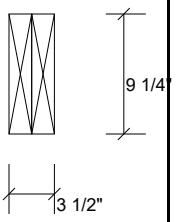
Comtech, Inc.
1001 S. Reilly Road, Suite #639
Fayetteville, NC
USA
28314
910-864-TRUS

Client:	Watermark Homes	Date:	11/13/2020
Project:		Input by:	Anthony Williams
Address:		Job Name:	River Oak - RG25-A07
		Project #:	J1120-5330

HDR1 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:	IBC/IRC 2015
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	0	1294	1272	0	0
2	0	1294	1272	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	28%	1294 / 1272	2566	L	D+S
2 - SPF End Grain	3.000"	28%	1294 / 1272	2566	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3382 ft-lb	3'	14423 ft-lb	0.235 (23%)	D+S	L
Unbraced	3382 ft-lb	3'	10944 ft-lb	0.309 (31%)	D+S	L
Shear	1746 lb	11 1/2"	7943 lb	0.220 (22%)	D+S	L
LL Defl inch	0.027 (L/2532)	3'	0.188 (L/360)	0.140 (14%)	S	L
TL Defl inch	0.054 (L/1256)	3'	0.281 (L/240)	0.190 (19%)	D+S	L

Design Notes

1 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
2 Refer to last page of calculations for fasteners required for specified loads.
3 Girders are designed to be supported on the bottom edge only.
4 Top loads must be supported equally by all plies.
5 Top braced at bearings.
6 Bottom braced at 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	Uniform			Top	424 PLF	0 PLF	424 PLF	0 PLF	0 PLF	A01
	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
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 2/26/2023

Manufacturer Info

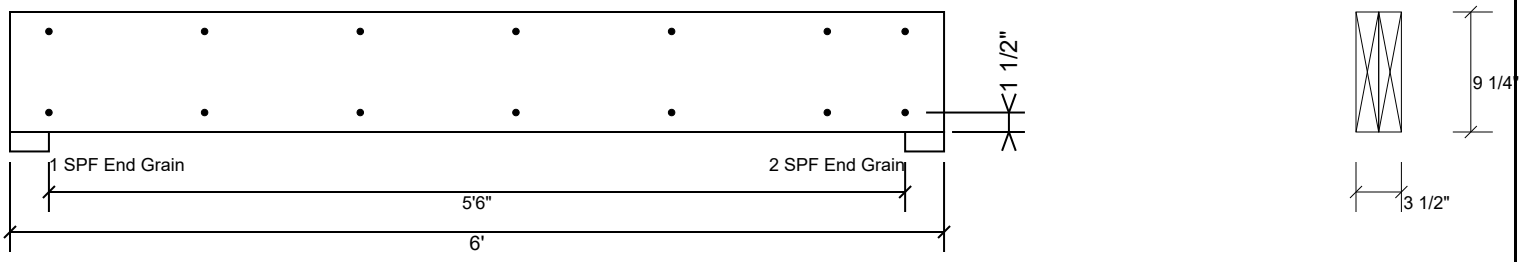
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us
ICC-ES: ESR-3633

Comtech, Inc.
1001 S. Reilly Road, Suite #639
Fayetteville, NC
USA
28314
910-864-TRUS

Client:	Watermark Homes	Date:	11/13/2020
Project:		Input by:	Anthony Williams
Address:		Job Name:	River Oak - RG25-A07
		Project #:	J1120-5330

HDR1 Kerto-S LVL 1.750" X 9.250" 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.
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 2/26/2023

Manufacturer Info

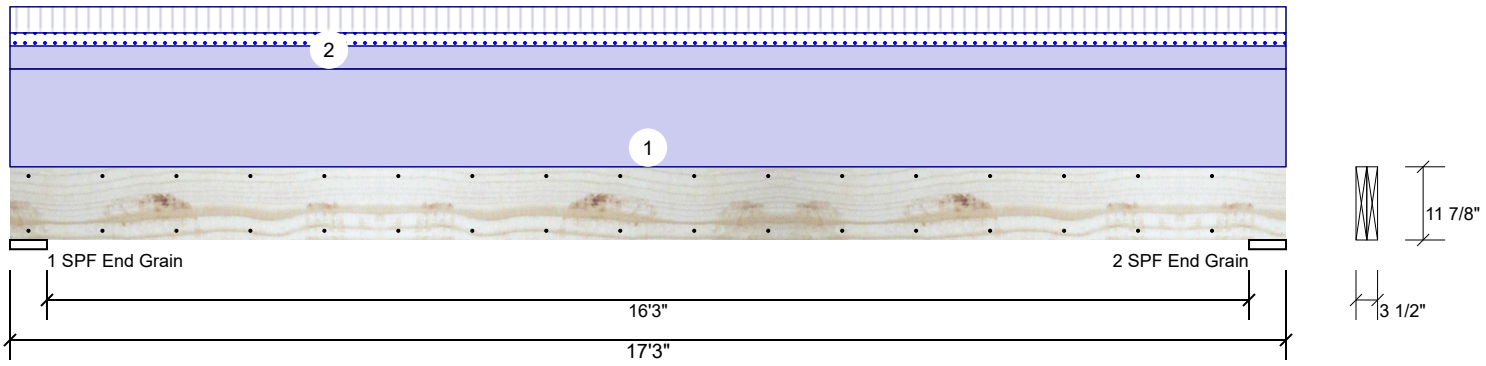
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us
ICC-ES: ESR-3633

Comtech, Inc.
1001 S. Reilly Road, Suite #639
Fayetteville, NC
USA
28314
910-864-TRUS

Client:	Watermark Homes	Date:	11/13/2020
Project:		Input by:	Anthony Williams
Address:		Job Name:	River Oak - RG25-A07
		Project #:	J1120-5330

GDH-16 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		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	345	1675	173	0	0
2	345	1675	173	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	6.000"	11%	1675 / 388	2063	L	D+0.75(L+S)
2 - SPF End Grain	6.000"	11%	1675 / 388	2063	L	D+0.75(L+S)

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	7851 ft-lb	8'7 1/2"	19911 ft-lb	0.394 (39%)	D+L	L
Unbraced	8019 ft-lb	8'7 1/2"	8032 ft-lb	0.998 (100%)	D+0.75(L+S)	L
Shear	1686 lb	15'9 7/8"	8867 lb	0.190 (19%)	D+L	L
LL Defl inch	0.079 (L/2497)	8'7 9/16"	0.409 (L/480)	0.190 (19%)	0.75(L+S)	L
TL Defl inch	0.418 (L/470)	8'7 9/16"	0.546 (L/360)	0.770 (77%)	D+0.75(L+S)	L

Design Notes

1. Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
2. Refer to last page of calculations for fasteners required for specified loads.
3. Girders are designed to be supported on the bottom edge only.
4. Top loads must be supported equally by all plies.
5. Top must be laterally braced at a maximum of 12' 3/4" o.c.
6. Bottom braced at 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	Uniform			Top	150 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall
2	Uniform			Top	35 PLF	40 PLF	20 PLF	0 PLF	0 PLF	F+R
	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 2/26/2023

Manufacturer Info

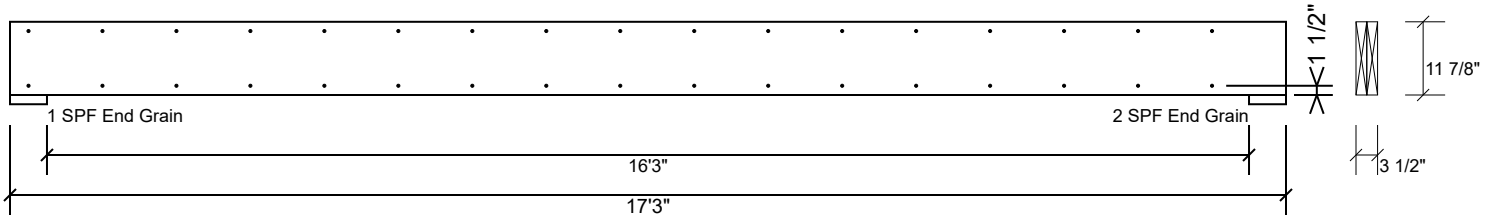
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us
ICC-ES: ESR-3633

Comtech, Inc.
1001 S. Reilly Road, Suite #639
Fayetteville, NC
USA
28314
910-864-TRUS

Client:	Watermark Homes	Date:	11/13/2020
Project:		Input by:	Anthony Williams
Address:		Job Name:	River Oak - RG25-A07
		Project #:	J1120-5330

GDH-16 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.
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 2/26/2023

Manufacturer Info

Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us
ICC-ES: ESR-3633

Comtech, Inc.
1001 S. Reilly Road, Suite #639
Fayetteville, NC
USA
28314
910-864-TRUS