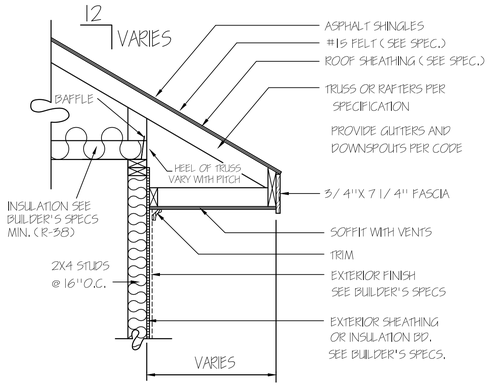
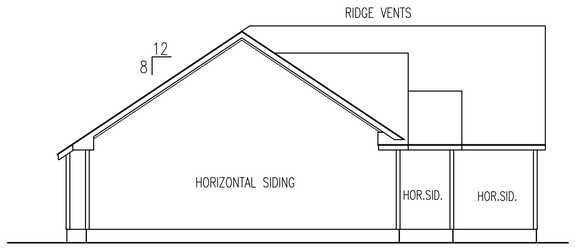


FRONT ELEVATION

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



LEFT ELEVATION

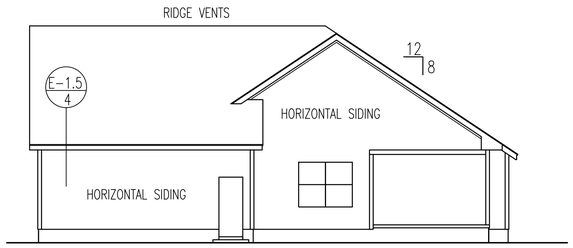
NOTICE TO CONTRACTOR:
All construction must comply with current NC Building Codes and is subject to field inspection and verification.

APPROVED

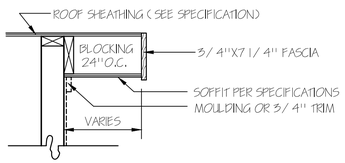
Limited building only review
Permit holder responsible for full compliance with the code

06/24/2021

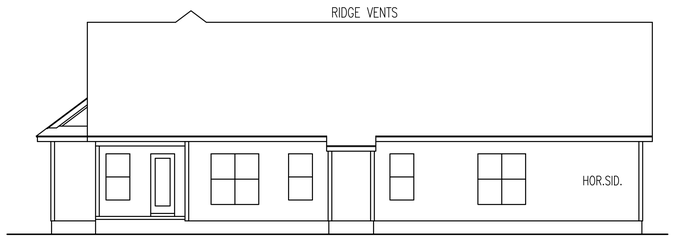
Harnett COUNTY NORTH CAROLINA



RIGHT ELEVATION



RAKE DETAIL FOR GABLE ENDS



REAR ELEVATION

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

HERO PACKAGE

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

EXCLUSIVE RESIDENCE DESIGN FOR:
WATERMARK HOMES
LOT: 155 BALLARD WOODS
NAME: PINION III

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

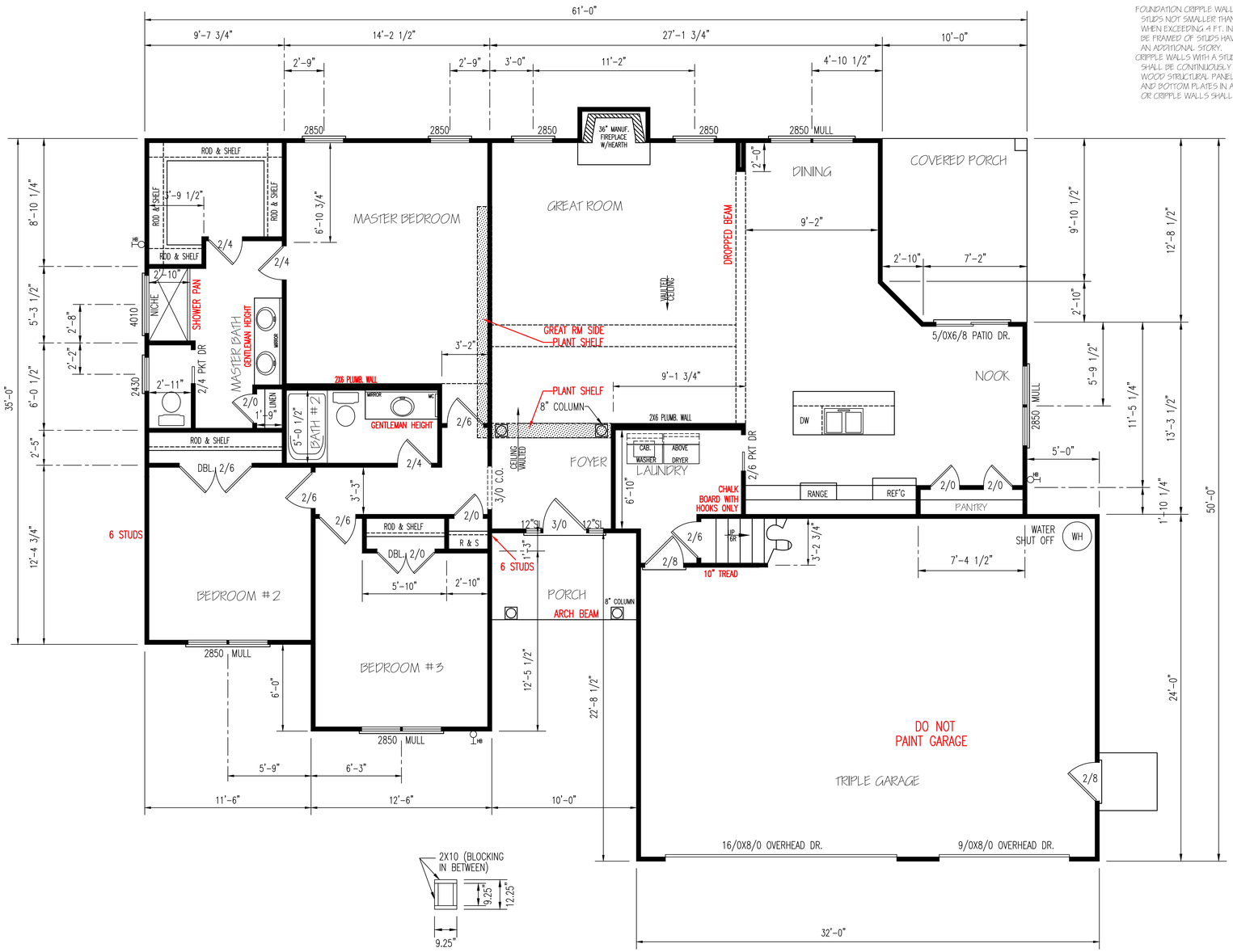
THIS IS FOR THE CONSTRUCTION OF ONE HOUSE ON A SINGLE LOT, NOT TO BE REUSED

PLAN NUMBER
RG20-A04

OPTION #1

1 | GARAGE | F | R

DATE: 11/5/20



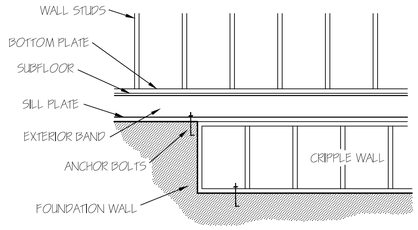
2X10 (BLOCKING IN BETWEEN)

9.25"

12.25"

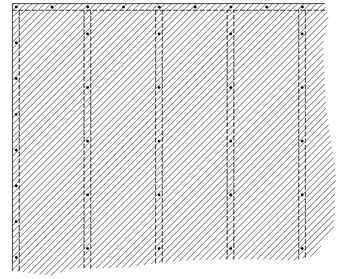
9.25"

PORCH DETAIL



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 8" ON ALL EDGES AND 12" IN FIELD, WITH 8d NAILS.

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		

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

FIRST FLOOR PLAN

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

HEATED AREA

1ST FL	1779	SQ FT
2ND FL	302	SQ FT
TOTAL	2081	SQ FT

OTHER AREAS

GARAGE	626	SQ FT
F.PORCH	54	SQ FT
R.PORCH	115	SQ FT

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

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.

HERO PACKAGE

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

EXCLUSIVE RESIDENCE DESIGN FOR:
WATERMARK HOMES

LOT: 155 BALLARD WOODS

NAME: PINION III

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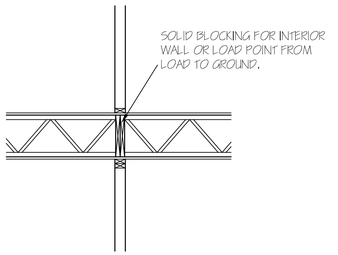
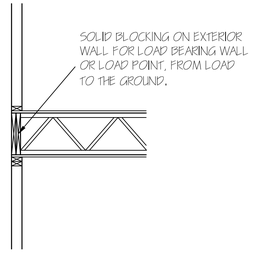
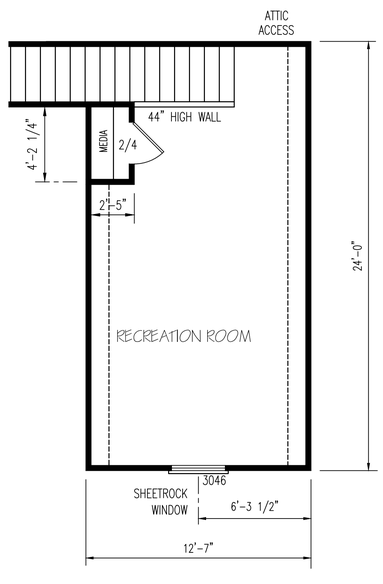
PLAN NUMBER
RG20-A04

OPTION #1

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







SECOND FLOOR PLAN

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

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LOT: 155 BALLARD WOODS

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

PLAN NUMBER
RG20-A04

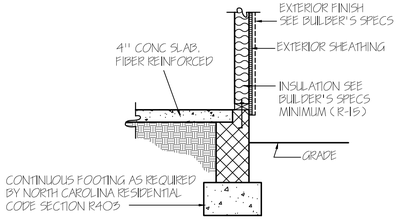
OPTION #1

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

WALL ANCHOR OPTIONS

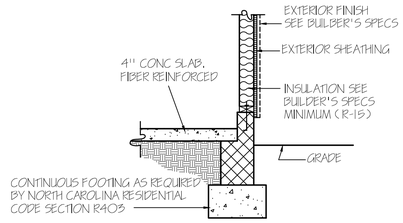
USE ANCHOR BOLTS
ANCHOR BOLTS: 1/ 2" DIA. BOLTS AT 6'-0" O.C. AND NOT MORE THAT 12" FROM CORNERS, EMBEDDED MIN. 7" INTO FOUNDATION. USE A MIN. OF 2 BOLTS PER EACH STUD WALL

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.



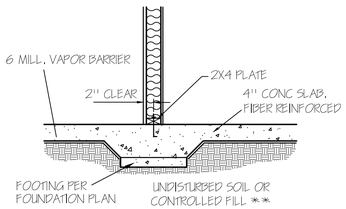
NOTE:
PERIMETER INSUL. MAY EXTEND HORIZ. UNDER SLAB 24" OR VERTICAL 24" BELOW SLAB FLOOR

CONCRETE SLAB FLOOR — (A)

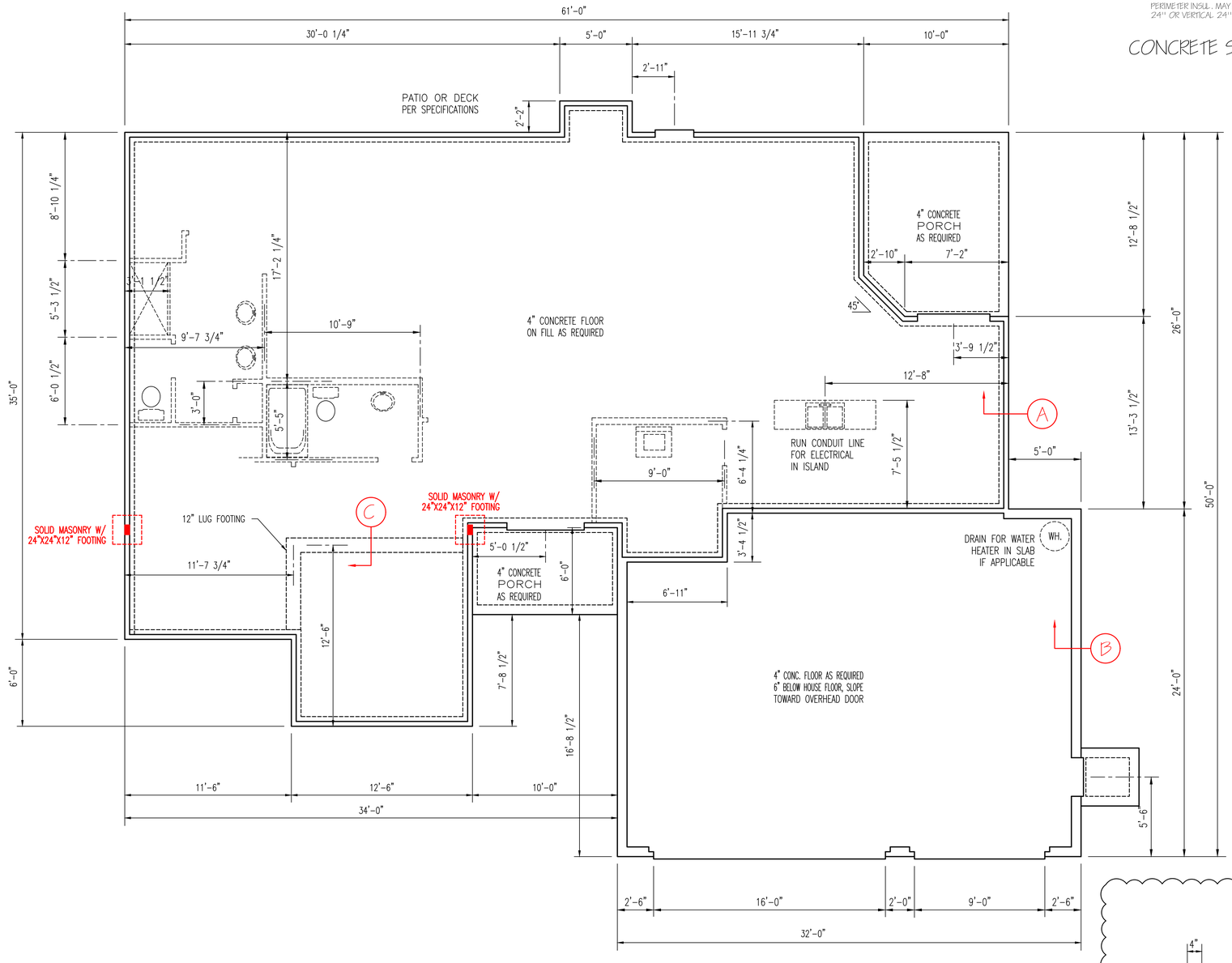


NOTE:
PERIMETER INSUL. MAY EXTEND HORIZ. UNDER SLAB 24" OR VERTICAL 24" BELOW SLAB FLOOR

GARAGE WALL — (B)



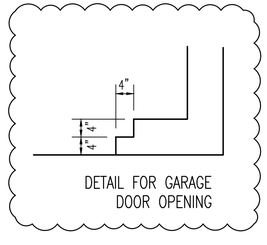
LOAD BEARING WALL THICKENED SLAB — (C)



FOUNDATION PLAN

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

STEPS:
SET BRICK STEPS ON 4" CONCRETE SIDEWALK



DETAIL FOR GARAGE DOOR OPENING

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

EXCLUSIVE RESIDENCE DESIGN FOR:
WATERMARK HOMES

LOT: 155 BALLARD WOODS

NAME: PINION III

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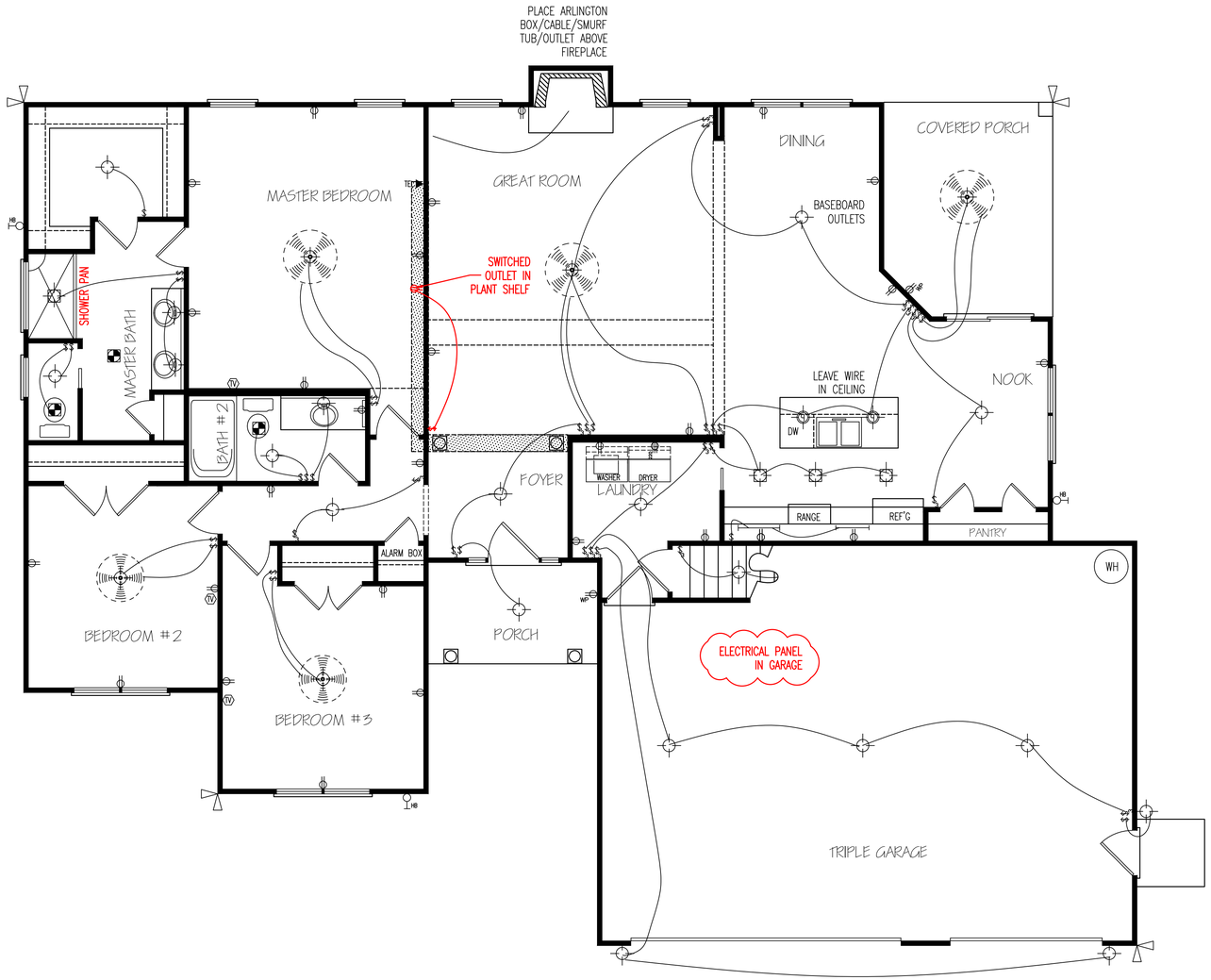
PLAN NUMBER
RG20-A04

OPTION #1

3

GARAGE R F

DATE: 11/5/20



FIRST FLOOR
ELECTRICAL LAYOUT

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

EXCLUSIVE RESIDENCE DESIGN FOR:
WATERMARK HOMES

LOT: 155 BALLARD WOODS

NAME: PINION III

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PLAN NUMBER
RG20-A04

OPTION #1

E-1

GARAGE R F

DATE: 11/5/20

SECOND FLOOR
ELECTRICAL LAYOUT

EXCLUSIVE RESIDENCE DESIGN FOR:
WATERMARK HOMES
LOT: 155 BALLARD WOODS
NAME: PINION III

TM DESIGNS
RESIDENTIAL PLANS BY TINA MCFADDEN
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THIS IS FOR THE CONSTRUCTION OF ONE HOUSE ON A SINGLE LOT, NOT TO BE REUSED

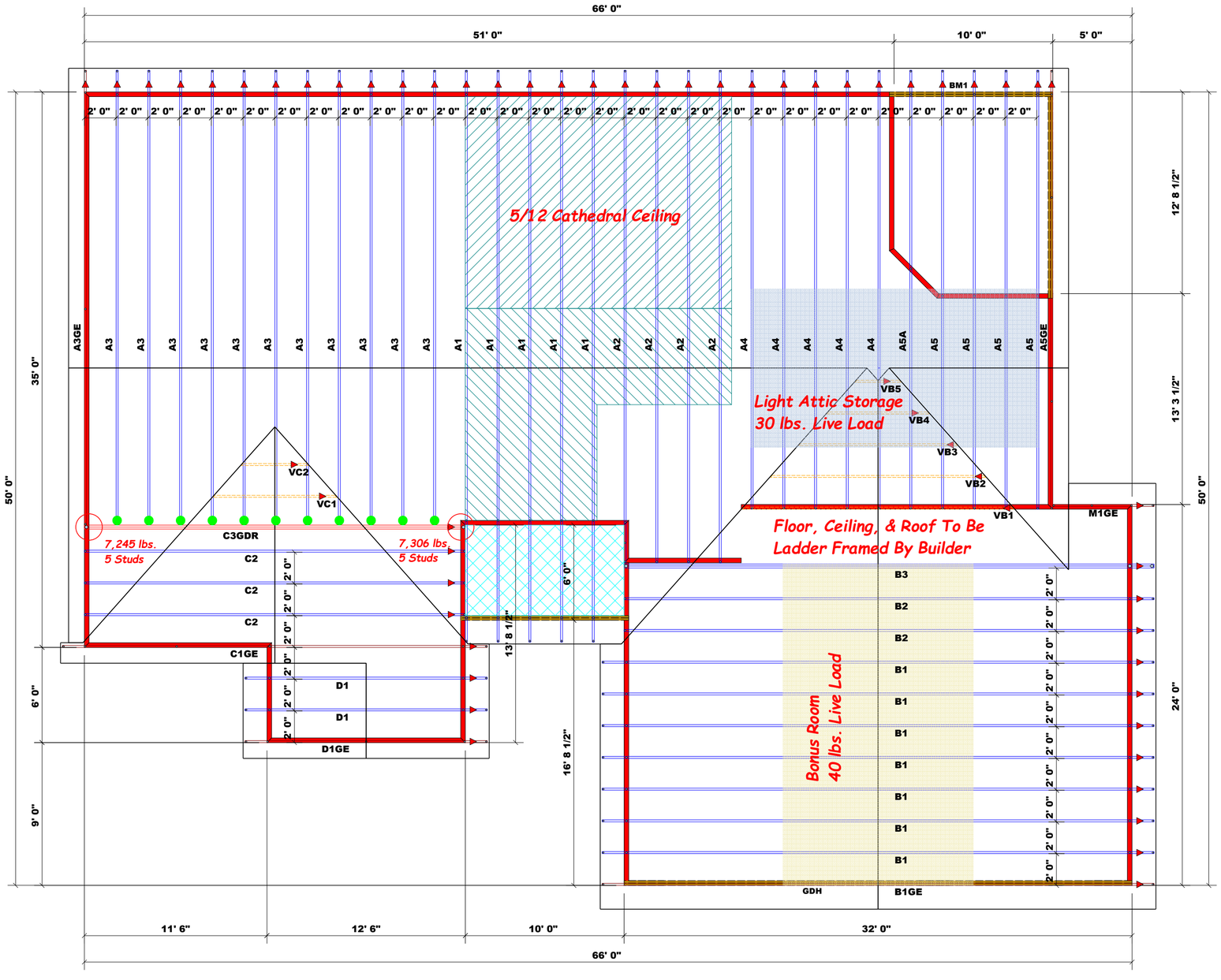
PLAN NUMBER
RG20-A04

OPTION #1

E-2

GARAGE R F

DATE:
11/5/20



Hatch Legend

Ceiling Height @ 10' 1-1/2"

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

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

-- Denotes Reaction Greater than 3,000 lbs.

Truss Placement Plan
SCALE: NTS

HANGER LEGEND

● = *USP HUS26 / Single 2x Hanger*

Beam Legend				
PlotID	Length	Product	Plies	Net Qty
BM1	11' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2
GDH	32' 0"	1-3/4"x 11-7/8" LVL Kerto-S	2	2

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 Curtis Quick

Curtis Quick

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				

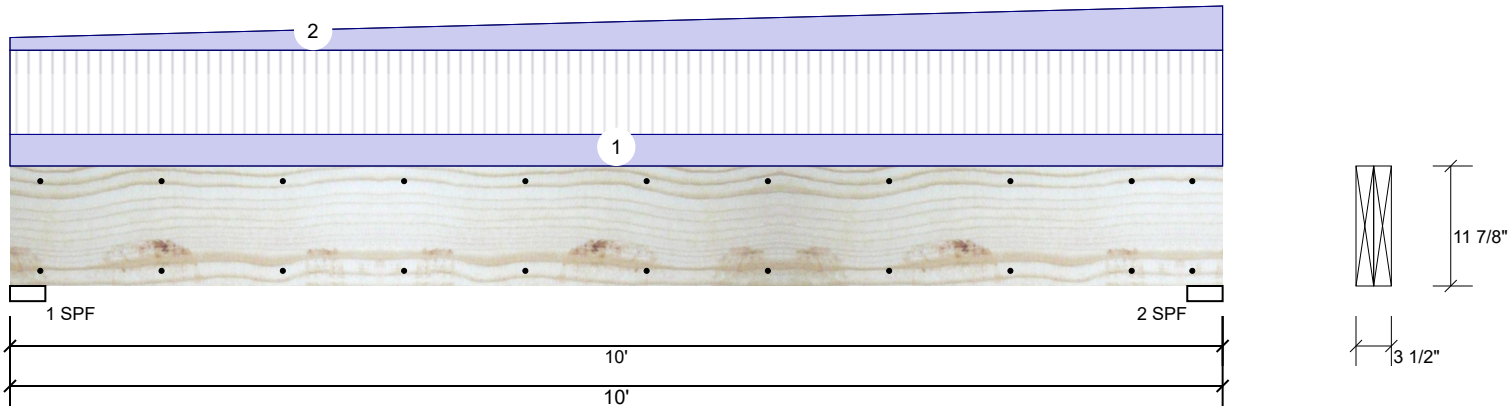
BUILDER	Watermark Homes
JOB NAME	Lot 155 Ballard Woods
PLAN	The Pinion III
SEAL DATE	11/5/2020
QUOTE #	Quote #
JOB #	J0221-0982
CITY / CO.	Lillington / Harnett
ADDRESS	Lot 155 Ballard Woods
MODEL	Roof
DATE REV.	2/15/2020
DRAWN BY	Curtis Quick
SALES REP.	Anthony Williams

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:	Watermark Homes	Date:	2/17/2021
Project:		Input by:	Curtis Quick
Address:		Job Name:	Lot 155 Ballard Woods
		Project #:	J0221-0982

GDH (PT 1) 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 2012
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	2000	1341	0	0	0
2	2000	1602	0	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	64%	1341 / 2000	3341	L	D+L
2 - SPF	3.500"	69%	1602 / 2000	3602	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	7903 ft-lb	5'1"	19911 ft-lb	0.397 (40%)	D+L	L
Unbraced	7903 ft-lb	5'1"	9628 ft-lb	0.821 (82%)	D+L	L
Shear	2675 lb	8'9 3/8"	8867 lb	0.302 (30%)	D+L	L
LL Defl inch	0.089 (L/1287)	5'	0.239 (L/480)	0.370 (37%)	L	L
TL Defl inch	0.154 (L/741)	5' 5/16"	0.318 (L/360)	0.490 (49%)	D+L	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	Tie-In	0-0-0 to 10-0-0	10-0-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	0 PSF	Roof
2	Tapered Start	0-0-0		Top	60 PLF	0 PLF	0 PLF	0 PLF	0 PLF	B1GE
	End	10-0-0			210 PLF	0 PLF	0 PLF	0 PLF	0 PLF	
	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 11/13/2022

Manufacturer Info

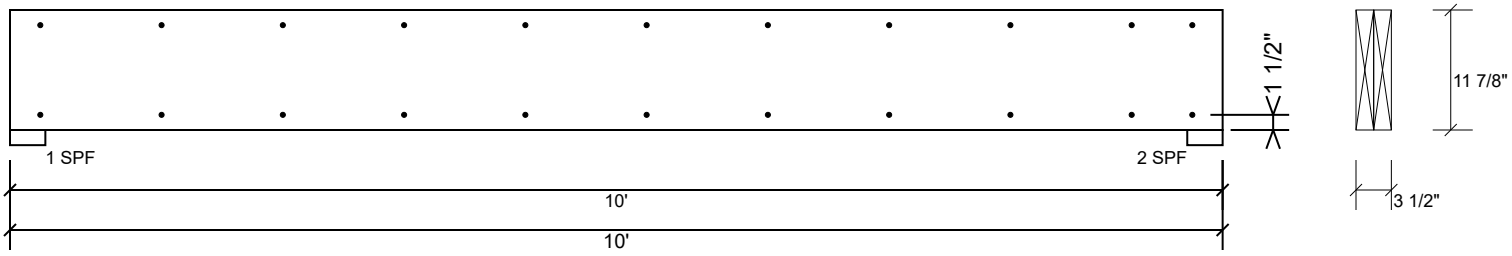
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us
ICC-ES: ESR-3633

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

Client:	Watermark Homes	Date:	2/17/2021
Project:		Input by:	Curtis Quick
Address:		Job Name:	Lot 155 Ballard Woods
		Project #:	J0221-0982

GDH (PT 1) 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

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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
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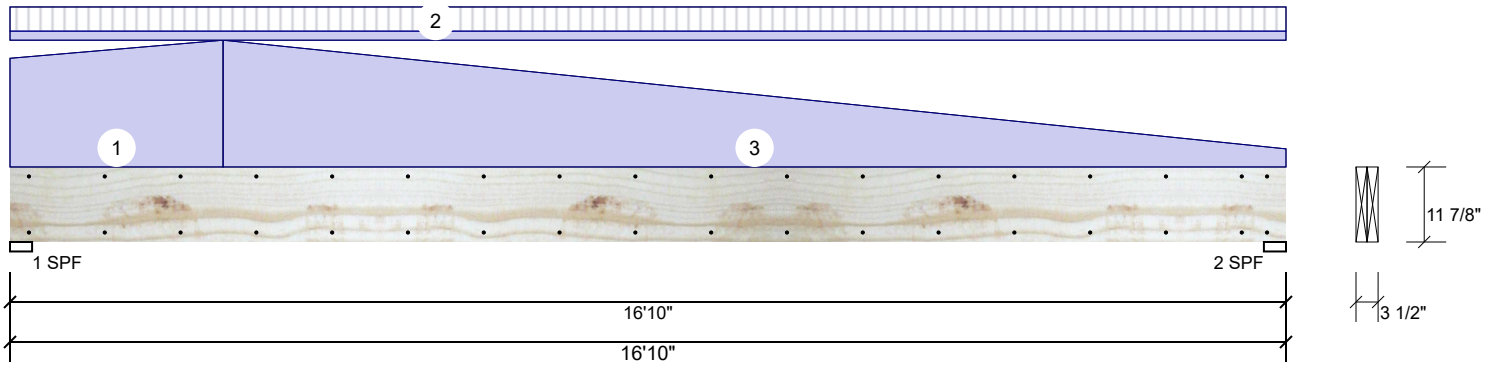
910-864-TRUS

Client:	Watermark Homes	Date:	2/17/2021
Project:		Input by:	Curtis Quick
Address:		Job Name:	Lot 155 Ballard Woods
		Project #:	J0221-0982

GDH (PT 2) 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 2012
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	337	1588	0	0	0
2	337	1051	0	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	37%	1588 / 337	1925	L	D+L
2 - SPF	3.500"	27%	1051 / 337	1387	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	6794 ft-lb	7'8 7/8"	19911 ft-lb	0.341 (34%)	D+L	L
Unbraced	6794 ft-lb	7'8 7/8"	6805 ft-lb	0.998 (100%)	D+L	L
Shear	1619 lb	1'2 5/8"	8867 lb	0.183 (18%)	D+L	L
LL Defl inch	0.070 (L/2809)	8'5 1/16"	0.409 (L/480)	0.170 (17%)	L	L
TL Defl inch	0.352 (L/558)	8'2 13/16"	0.546 (L/360)	0.640 (64%)	D+L	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 14'6 3/8" 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	Tapered Start	0-0-0		Top	180 PLF	0 PLF	0 PLF	0 PLF	0 PLF	B1GE
	End	2-9-12			210 PLF	0 PLF	0 PLF	0 PLF	0 PLF	
2	Tie-In	0-0-0 to 16-10-0	1-0-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	0 PSF	Roof
3	Tapered Start	2-9-12		Top	210 PLF	0 PLF	0 PLF	0 PLF	0 PLF	B1GE
	End	16-10-0			30 PLF	0 PLF	0 PLF	0 PLF	0 PLF	
	Self Weight				9 PLF					

Notes

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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 11/13/2022

Manufacturer Info

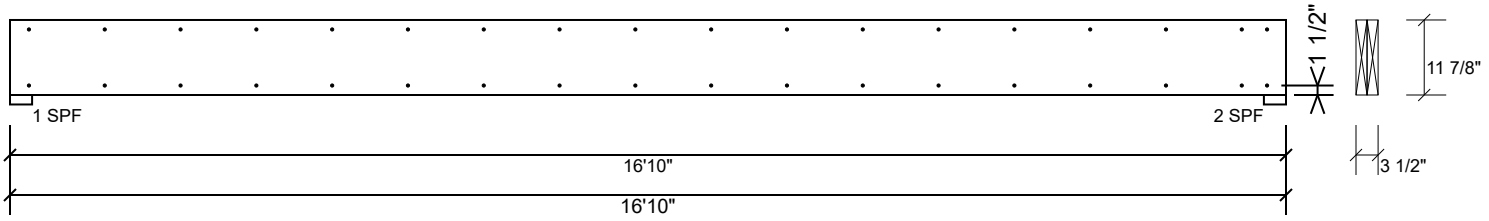
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us
ICC-ES: ESR-3633

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

Client:	Watermark Homes	Date:	2/17/2021
Project:		Input by:	Curtis Quick
Address:		Job Name:	Lot 155 Ballard Woods
		Project #:	J0221-0982

GDH (PT 2) 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

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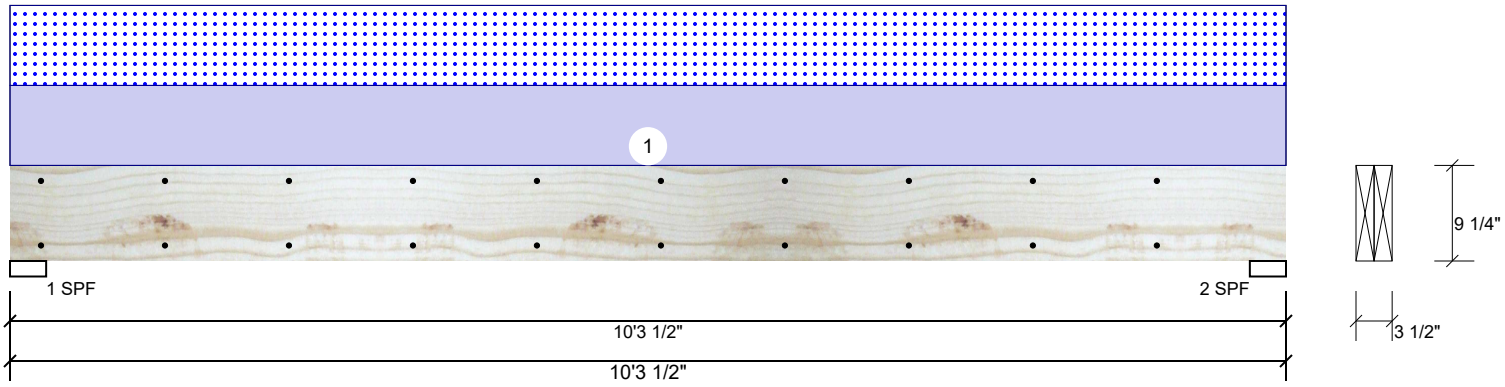
BM1 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level



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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	0	1447	1410	0	0
2	0	1447	1410	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	55%	1447 / 1410	2857	L	D+S
2 - SPF	3.500"	55%	1447 / 1410	2857	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	6711 ft-lb	5'1 3/4"	14423 ft-lb	0.465 (47%)	D+S	L
Unbraced	6711 ft-lb	5'1 3/4"	7519 ft-lb	0.892 (89%)	D+S	L
Shear	2302 lb	1'	7943 lb	0.290 (29%)	D+S	L
LL Defl inch	0.137 (L/864)	5'1 3/4"	0.246 (L/480)	0.560 (56%)	S	L
TL Defl inch	0.277 (L/426)	5'1 3/4"	0.328 (L/360)	0.840 (84%)	D+S	L

Design Notes

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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	274 PLF	0 PLF	274 PLF	0 PLF	0 PLF	A4
	Self Weight				7 PLF					

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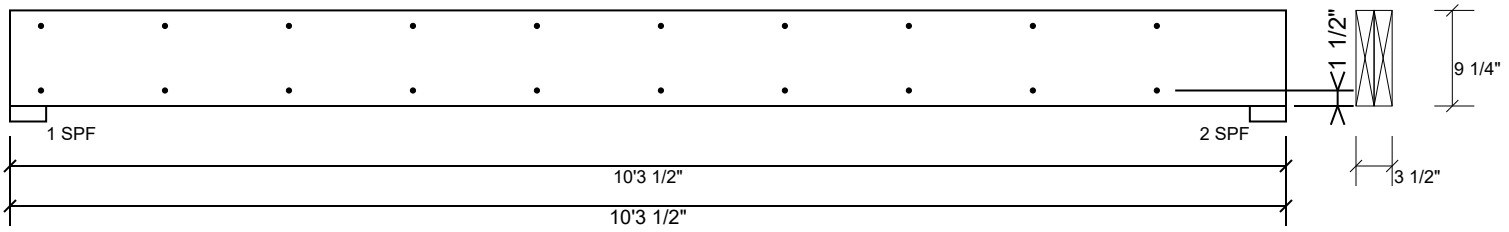

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