

W	SCHEDULE				
	AREA	U VALUE	SHGC	COUNT	REMARKS
	12 SF	0.35	0.25	4	NEW

)' - 2"	21 SF	0.35	0.25	1	LOCKED	NEW
	35 SF	0.35	0.25	1	LOCKED	NEW
)' - 2"	21 SF			1	LOCKED	NEW

.\272MadisonLn,Cameron,NCRev2-egreeswindows2-3355830.jpg







A006

21-2005



		000 01/24/2021 Permit Submittal	NO. DATE DESCRIPTIONS REVISIONS
DETAILS	SINGLE FAMILY HOUSE	272 Madison Ln	Cameron, NC, 28326
	SEAL 042307 042307 071 V 071 V 724/2		MC
EIRMLIC. # 1869	121 EDINBURGH SOUTH DRI., STE	CARY, NC 27511 PHONE:919.444.5442	EMAIL:MOTI.KC@EQUAGEN.CC
DRAWN BY: CHECKED BY: DATE: SCALE:		DK MKC 01/24 AS SF 21-2	/2021 HOWN 005



DRAWN BY:	DK
CHECKED BY:	МКС
DATE:	01/24/2021
SCALE:	AS SHOWN
(A008)	21–2005

I. GENERAL

- 1) DESIGN BUILDING CODE: 2018 NORTH CAROLINA RESIDENTIAL CODE.
- 2) THE CONTRACTOR SHALL COORDINATE ALL DIMENSIONS AND ELEVATIONS SHOWN ON THESE DRAWINGS WITH THE ARCHITECTURAL AND OTHER TRADES DRAWINGS. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE DESIGNER OF ANY DISCREPANCIES OR OMISSIONS PRIOR TO CONSTRUCTION.
- 3) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY BRACING AND SHORING, AS REQUIRED, TO INSURE VERTICAL AND LATERAL STABILITY OF THE ENTIRE STRUCTURE OR PORTION THEREOF DURING CONSTRUCTION. THE DESIGN PROCEDURES SHALL CONFORM TO ALL GOVERNING CODES AND SAFETY REQUIREMENTS. TEMPORARY BRACING AND SHORING SHALL BE IN CONFORMANCE WITH OSHA REGULATIONS.
- 4) ALL VERTICAL ELEMENTS (WALLS, COLUMNS) ARE DESIGNED AS LATERALLY BRACED BY THE FLOOR AND ROOF SYSTEMS. CONTRACTOR SHALL ENSURE THAT WALLS ARE ADEQUATELY BRACED DURING CONSTRUCTION.
- 5) THE PURPOSE OF THIS ENGINEERING PROJECT IS TO MAKE CHANGES TO THE ORIGINAL STRUCTURAL PLANS. THE ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL ITEMS SPECIFICALLY ADDRESSED IN THIS PROJECT, AND STRUCTURAL SPECIFICATIONS PROVIDED ARE DESIGNED TO MEET THE INTENT OF THE NC RESIDENTIAL CODE, 2018 EDITION..
 6) ANY SUBCONTRACTOR WHICH AGREES TO CONSTRUCT THE PROJECT PURSUANT TO THESE PLANS FULLY ASSUMES THE RISK OF ALL ERRORS AND OMISSIONS WHICH SHOULD HAVE BEEN DETECTED BY A CAREFUL REVIEW BY A KNOWLEDGEABLE LICENSED CONTRACTOR, THAT WHICH FOR ANY REASON WERE NOT RESOLVED DURING THE BIDDING OR NEGOTIATION PROCESS. FURTHER, THE CONTRACTOR SHALL CAREFULLY REVIEW THESE PLANS AS THE WORK PROGRESSES IN ORDER TO IDENTIFY ANY SIGNIFICANT ERRORS AND OMISSIONS AND TO ASCERTAIN ALL NECESSARY INFORMATION BEFORE PROCEEDING WITH THE AFFECTED WORK, AND ASSUMES THE RISK OF ANY AND ALL LOSS, INCLUDING DELAY, WHICH MAY BE CAUSED OR CONTRIBUTED TO BY THE FAILURE TO ASCERTAIN CORRECT OR NECESSARY INFORMATION IN A TIMELY MANNER.
- 7) THE PLANS SHALL BE REVIEWED FOR DIMENSIONAL & EXISTING SITE CONFORMANCE WITH THE PLANS BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE ARCHITECT & ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES.
- 8) THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS IN THE FIELD; AND ALL QUESTIONS AS TO DIMENSIONS AND FIELD CONDITIONS SHALL BE RESOLVED BEFORE THE AFFECTED WORK PROCEEDS. NO DIMENSIONS SHALL BE OBTAINED BY SCALING THESE PLANS.
- CONTRACTOR SHALL HIRE A PROFESSIONAL ENGINEER TO INSPECT CONSTRUCTION OF PROPOSED FLOOR FRAMING, FOUNDATION, WALL BRACING PANELS AND OTHE PROPOSED STRUCTURAL ELEMENTS TO ENSURE THE RECOMMENDATIONS MADE ON THESE PLANS ARE STRICTLY FOLLOWED.
 CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR DIMENSIONS AND CONDITIONS OF THE JOB.
- II. SITE WORK
- BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE A MINIMUM OF 1'-0" BELOW EXTERIOR GRADE, UNLESS NOTED OTHERWISE (UNO).
 VERIFY EXISTING UTILITIES PRIOR TO START OF ANY EXCAVATION WORKS. COORDINATE WITH CIVIL DRAWINGS FOR
- WORKS RELATED TO UTILITIES. DO NOT PLACE UTILITY LINES THROUGH OR BELOW ANY FOUNDATIONS WITHOUT THE APPROVAL OF THE DESIGNER OF RECORD.
- 3) ALL FOOTINGS SHALL PROJECT AT LEAST 1 FT INTO UNDISTURBED NATURAL SOIL OR COMPACTED STRUCTURAL FILL. ALL BEARING STRATA SHALL BE ADEQUATELY DRAINED BEFORE FOUNDATION CONCRETE IS POURED. NO EXCAVATION SHALL BE CLOSER THAN AT A SLOPE OF 1.5:1 (ONE AND HALF HORIZONTAL TO ONE VERTICAL). FOOTINGS SHALL NOT BE FOUNDED ON EXISTING FILL, LOOSE OR WET SOIL. STEP FOOTINGS WITH A RATIO OF 2 HORIZONTAL TO 1 VERTICAL.
- III. CAST-IN-PLACE CONCRETE
- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH ACI -301, ACI-318 AND ACI -302.
 REINFORCING STEEL
- i. DEFORMED BILLET STEEL: ASTM A615 GRADE 60 ii. WELDED WIRE FABRIC (WWF): ASTM A185
- ALL REINFORCING SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH THE "MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES (ACI-315)". DETAILS OF REINFORCEMENT SHALL CONFORM TO ACI-318, ACI-315 AND CRSI STANDARDS.
- 4) REINFORCEMENT SPLICES SHALL BE LAP SPLICES WITH A MINIMUM LAP OF 48 BAR DIAMETERS UNLESS NOTED OTHERWISE.
 5) CAST-IN-PLACE CONCRETE SHALL BE READY-MIX PER ASTM-C94. THE MIX SHALL BE PROPORTIONED WITH:

 i. PORTLAND CEMENT:
 ASTM C150
- i.PORTLAND CEMENT:ASTM C150ii.AGGREGATES (3/4 IN MAXIMUM SIZE):ASTM C33
- iii. NO CALCIUM CHLORIDE SHALL BE PERMITTED iv. AIR ENTRAINMENT:
- iv. AIR ENTRAINMENT:ASTM C260v. WATER REDUCING ADMIXTURE:ASTM C494
- vi. FLY ASH CLASS F (20% MAXIMUM BY WEIGHT): ASTM C618 v. WATER: CLEAN AND POTABLE
- 6) RESTRICT THE ADDITION OF WATER AT THE JOB SITE. DO NOT ADD WATER WITHOUT THE APPROVAL OF CONCRETE MIX DESIGNER AND DO NOT EXCEED SLUMP LIMITATIONS. USE COLD WATER FROM THE TRUCK TANK AND REMIX TO ACHIEVE CONSISTENCY. THE REPORTS SHALL INDICATE HOW MUCH WATER WAS ADDED AT THE JOB SITE. CONCRETE SHALL BE PLACED WITHIN 90 MINUTES OF BATCH TIME.
- 7) PROVIDE CONTINUOUS MOISTURE TO CONCRETE IN ACCORDANCE WITH ACI-301 AND ACI-308. APPLY A 30% SOLIDS LIQUID MEMBRANE FORMING CHEMICAL CURING COMPOUND IN ACCORDANCE WITH ASTM C-309. LIQUID MEMBRANE MUST NOT ADVERSELY AFFECT SURFACE FOR BONDING OF FUTURE FINISHES.
- 8) CONCRETE COMPRESSIVE STRENGTH AT 28 DAY CURE SHALL BE 2500 PSI.
- 9) SLUMP: 4" PLUS OR MINUS 1" AT THE POINT OF DISCHARGE INTO THE FORMS.10) WATER CEMENT RATIO SHALL NOT EXCEED 0.45 FOR ALL AIR ENTRAINED CONCRETE
- 11)ALL CONCRETE EXPOSED TO WEATHER SHALL HAVE A MINIMUM AIR ENTRAINMENT OF 6% ±1.5 PER ACI-318 CLAUSE 4.4.1.
- 12)PROVIDE CORNER BARS 3'-0" X 3'-0" AT ALL WALL AND FOOTING INTERSECTIONS TO MATCH CONTINUOUS REINFORCING. ALL LAPS SHALL BE A MINIMUM OF 30 BAR DIAMETER.
- 13)PROVIDE PROPERLY TIED SPACERS, CHAIRS, BOLSTERS, ETC, AS REQUIRED AND NECESSARY TO ASSEMBLE, PLACE AND SUPPORT ALL REINFORCING IN PLACE. USE WIRE BAR TYPE SUPPORTS COMPLYING WITH CRSI RECOMMENDATIONS. USE PLASTIC TIP LEGS ON ALL EXPOSED SURFACES.
- 14)SEE STRUCTURAL DRAWINGS FOR REQUIRED CONCRETE FINISHES.
- IV. WOOD

1) ALL LUMBER SHALL CONFORM TO NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION WITH 2015 SUPPLEMENT.

- 2) LUMBER SHALL BE SOUND, SEASONED, AND FREE FROM WARP.
- 3) ALL STUDS SHALL BE INSTALLED IN ACCORDANCE WITH AF & PA (AMERICAN FOREST & PAPER ASSOCIATION) REQUIREMENTS. MEMBERS ARE NOT TO BE DRILLED IN EXCESS OF NDS OR LOCAL CODE REQUIREMENTS, WHICHEVER IS MORE STRINGENT. ALL POSTS AND STUDS SHALL STACK CONTINUOUSLY TO SOLID BEARING ON FOUNDATION WALLS OR BEAMS; PROVIDE SOLID BLOCKING AND/OR CRIPPLES AS REQUIRED BETWEEN FLOORS.
- STUD BEARING WALLS AND EXTERIOR STUD WALLS SHALL BE CONTINUOUSLY BRIDGED WITH WOOD BLOCKING AT MID-SPAN VERTICAL SPACING BETWEEN FLOOR (AND ROOF) LEVELS. STUDS AND POSTS SHALL BE ONE-PIECE-CONTINUOUS BETWEEN FLOOR LEVELS AND BETWEEN FLOOR LEVEL AND ROOF DIAPHRAGMS. ALL DOUBLE STUDS SHALL BE NAILED TO EACH OTHER AT 8" MAXIMUM SPACING FULL- HEIGHT.
 MINIMUM GRADES, FOR DIMENSIONED LUMBER, SHALL BE SPF #1/ #2 GRADE AS DEFINED BY THE NATIONAL DESIGN
- SPECIFICATION FOR WOOD CONSTRUCTION, NFPA. ALL WOOD MEMBERS SHALL BE MANUFACTURED TO COMPLY WITH PS20 OF "AMERICAN SOFTWOOD LUMBER STANDARDS". i. MOISTURE CONTENT SHALL BE 19% MAXIMUM.
- ii. LUMBER ON SITE SHALL BE PROTECTED FROM WEATHER AND STORED ABOVE GROUND WITH SUPPORTS. DRY-IN EACH BUILDING FRAME IMMEDIATELY ONCE FRAMING IS COMPLETE, AND COMMENCE BRICK INSTALLATION.
 6) ALL MULTIPLE MEMBERS ARE TO BE FASTENED TOGETHER WITH 16d NAILS AT 12" ON CENTER (2) ROWS FOR BEAMS 9" - 12"
- DEEP, (3) ROWS FOR BEAMS 14" 18" DEEP (STAGGERED). 7) PLYWOOD SHALL BE IDENTIFIED WITH THE DFPA GRADE-TRADEMARK OF THE AMERICAN PLYWOOD ASSOCIATION, AND
- SHALL BE INSTALLED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. 8) WALL SHEATHING: SEE WALL SHEATHING SCHEDULE.
- 9) WOOD POSTS SHALL BE FRAMED TO TRUE END BEARINGS, AND SHALL BE POSITIVELY ANCHORED TO FOUNDATION WITH APPROVED POST BASES. SUPPORT POST SECURELY IN POSITION AND PROTECT BASE FROM DETERIORATION. POSTS OF TREATED WOOD MAY BE PLACED DIRECTLY ON CONCRETE OR MASONRY. USE TREATED WOOD FOR ALL FLOOR JOISTS AND BEAMS, WHICH ARE EXPOSED, OR WITHIN 18" OF THE GROUND, OR IN PERMANENT CONTACT WITH EARTH.
 10)PROVIDE COMPATIBLE METAL FASTENERS AND METAL CONNECTORS FOR ACQ, CBA OR SBX TREATED WOOD MEMBERS. THE FOLLOWING FASTENER OR CONNECTOR PRODUCTS ARE RECOMMENDED:
- i. STAINLESS STEEL FASTENERS ii. Zmax (G185 HDG PER ASTM 653)

iii. BATCH/POST HOT-DIPPED GALVANIZED (CONNECTORS PER ASTM A123 AND FASTENERS PER ASTM A153). CONTRACTOR SHALL COORDINATE WITH TREATED LUMBER MANUFACTURER AND FASTENER / CONNECTOR MANUFACTURER FOR COMPATIBILITY OF PRODUCT USED.

- 11)BEAR BEAMS AND GIRDERS AT LEAST 4" ON MASONRY OR CONCRETE. FLOOR JOISTS, CEILING JOISTS AND ROOF RAFTERS SHALL HAVE 4" MINIMUM BEARING ON WOOD OR WOOD PLATES ON METAL OR MASONRY.
 12)PROVIDE 2" NOMINAL THICKNESS FULL DEPTH SOLID BLOCKING FOR JOISTS AND RAFTERS AT ENDS AND AT SUPPORTS.
- OMIT SOLID BLOCKING WHEN JOISTS ARE NAILED TO A CONTINUOUS HEADER. LAP JOISTS FRAMING FROM OPPOSITE SIDES OF A BEAM, GIRDER OR PARTITION AT LEAST 6". SECURE JOISTS FRAMED END TO END WITH METAL STRAPS. USE APPROVED FRAMING ANCHORS TO SUPPORT JOISTS FRAMING INTO THE SIDES OF WOOD OR STEEL BEAMS. 13)PROVIDE DOUBLED (OR EQUIVALENT CROSS- SECTION) TRIMMER AND HEADER JOISTS AROUND OPENINGS UNLESS NOTED OTHERWISE. SUPPORT HEADER JOISTS FROM FRAMING ANCHORS OR JOIST HANGERS UNLESS BEARING ON A
- BEAM, PARTITION OR A WALL. 14) JOISTS CARRYING PARTITIONS PERPENDICULAR TO JOISTS SHALL NOT BE OFFSET FROM SUPPORTING GIRDERS, WALLS OR PARTITIONS MORE THAN THE JOIST DEPTH. JOISTS CARRYING PARTITIONS PARALLEL TO JOISTS SHALL BE DOUBLED.
- 15)FLOOR DECKING SHALL BE APA RATED FLOOR SHEATHING, GLUED AND NAILED PER APA RECOMMENDATIONS FOR THE STURDI-FLOOR SYSTEM.
- REINFORCED MASONRY (CMU)
- 1. ALL MASONRY SHALL BE REINFORCED CONCRETE MASONRY UNIT IN ACCORDANCE WITH THE LATEST EDDITION OF ACI 530/ASCE 5/TMS 402.
- 2. MINIMUM MASONRY BLOCK (ASTM C90) STRENGTH SHALL (F'M) BE 2000 PSI.
- TYP.E "S" MORTAR (ASTM C270) SHALL BE USED USING 3/8" FULL BEDDING REINFORCED W/ 9 GAGE GALVANIZED LADDER WIRE EVERY 2ND ROW.
 FILLED CELLS SHALL BE REINFORCED WITH #4 REBARS @ 48" O.C. (UNLESS OTHERWISE IS SPECIFIED ON THE PLANS).
- GROUT SHALL BE PEA ROCK PUMP MIX (ASTM C476) WITH A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI (28 DAY) (ASTM C1019). TARGETED SLUMP SHALL BE 8"-11".

WARNING: THE STRUCTURAL INTEGRITY OF THE BUILDING SHOWN IN THESE PLANS DEPENDS ON COMPLETION ACCORDING TO THE PLANS AND SPECIFICATIONS. STRUCTURAL MEMBERS ARE NOT SELF-BRACING UNTIL PERMANENTLY AFFIXED TO THE STRUCTURE. THE DESIGNER ASSUME NO LIABILITY FOR THE STRUCTURE DURING CONSTRUCTION.

SCOPE STATEMENT: ADDITION OF 24 FEET X 20 FEET ADDITIONAL HEATED AREA : 480 SQ. FT

DESIGN LOADS:			
DESCRIPTION	DEAD LOAD	LIVE LOAD	SNOW LOAD
ROOF	17 PSF	20 PSF	10 PSF
FLOOR	15 PSF	40 PSF	-
ATTIC W/O STORAGE	10 PSF	10 PSF	-
ATTIC W/ LIMIT STORAGE	10 PSF	20 PSF	-
HABITABLE ATTICS & ATTICS W/ FIXED STAIR	10 PSF	30 PSF	-
SLEEPING ROOMS	15 PSF	30 PSF	-
BALCONIES & DECKS	10 PSF	40 PSF	-
STAIRS	10 PSF	40 PSF	-
GUARD RAILS & HAND RAILS	-	200 LBS (c)	-

WIND SPEED 110 MPH
 WIND EXPOSURE CATEGORY: B

FOUNDATION DESIGN LOADS (g):

- SOIL BEARING CAPACITY: 1500 PSF
- LATERAL EARTH PRESSURE: 60 PSF/FT (AT REST)
- EARTHQUAKE LOADS:

• SEISMIC DESIGN CATEGORY: B

• SITE CLASS: D (ASSUMED DEFAULT)

NOTES:

- a. REFER TO IRC TABLE R301.5 FOR MORE INFORMATION.
- b. SNOW LOAD SPECIFIED IS GROUND SNOW LOAD ONLY.
- c. A SINGLE CONCENTRATED LOAD APPLIED IN ANY DIRECTION AT ANY POINT ALONG THE TOP.
- d. MECHANICAL EQUIPMENT LOADS IN EXCESS OF 200 LBS SHALL BE NOTIFIED TO STRUCTURAL ENGINEER.
- e. PRE-FABRICATED STRUCTURAL COMPONENT SHALL COMPLY WITH DESIGN LOADS FROM APPLICABLE CODES/STANDARDS IN ADDITION TO LOADS SPECIFIED IN THESE NOTES.
- f. WIND PRESSURE SPECIFIED IS FOR MAIN WIND FORCE RESISTING SYSTEM ONLY. WIND PRESSURE & LOADS FOR STRUCTURAL COMPONENTS AND CLADDING SHALL BE DETERMINED BY RESPECTIVE REGISTERED DESIGN PROFESSIONAL PER APPLICABLE STANDARDS/CODES.
- g. THESE SOIL PROPERTIES SHALL BE FIELD VERIFIED BY A LICENSED GEOTECHNICAL ENGINEER, AS NECESSARY.

DEFLECTION CRITERIA:

DESCRIPTION	TOTAL LOAD	LIVE LOA
ROOF TRUSSES/RAFTERS/CEILING JOISTS	L/240	L/360 OR 1/2
FLOOR JOISTS/FLOOR TRUSSES	L/240	L/600 OR 1/4
MEMBERS SUPPORTING BRICK/HORIZONTAL MASONRY MEMBERS	L/600 OR	0.3" MAX
JOISTS/TRUSSES SUPPORTING CERAMIC TILE	L/720	

CONCRETE CLEAR COVERS:

DESCRIPTION			MIN. COVER
CONCRETE CAST AGAINS TO EARTH	ST AND PERI	MANENTLY EXPOSED	3"
	#6 THROU	GH #18 BARS	2"
CONCRETE EXPOSED TO EARTH OR WEATHER	#5 BAR, W SMALLER	1 1/2"	
	SLAB, WAI	3/4"	
CONCRETE NOT EXPOSED TO EARTH OR WEATHER	BEAMS, CO REINF., TII	OLUMNS (PRIMARY ES, STIRRUPS, SPIRALS	1 1/2"
	SHELLS.	#6 BARS AND LARGER	3/4"
	FOLDED PLATES	#5 BAR W31 OR D31 WIRE AND SMALLER	1/2"

(b)

O IN FOR Y A

AD 2" MAX 4" MAX

R (IN.)

FAS	TENERS:		
NO.	DESCRIPTION OF BUILDING ELEMENT	NUMBER AND TYPE OF FASTNER	SPACING AND LOCATION
1	BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE	(3) 8d COMMON (2 1/2"x0.131")	TOE NAIL
2	CEILING JOISTS TO PLATE	(3) 8d COMMON (2 1/2"x0.131")	PER JOIST, TOE NAIL
3	CEILING JOISTS NOT ATTACHED TO PARALLEL RAFTER. LAPS OVER PARTITIONS	4-10d BOX (3"x0.128")	FACE NAIL
4	CEILING JOISTS ATTACHED TO PARALLEL RAFTER (HEEL JOINT) [SEE SECTIONS R802.3.1 AND R802.3.2 AND TABLE R802.5.1(9)]	TABLE R802.5.1(9)	FACE NAIL
5	COLLAR TIE RAFTER, FACE NAIL OR 1 1/4" x 20 GAGE RIDGE STRAP TO RAFTER	(3) 10d COMMON (3"x0.148")	FACE NAIL EACH RAFER
6	RAFTER OR ROOF TRUSS TO PLATE	(3) 10d COMMON NAILS (3 1/2"x0.148"	2 TOE NAILS ON ONE SIDE AN 1 TOE NAIL ON OPPOSITE SIE OF EACH RAFTER OR TRUSS
7	ROOF RAFTERS TO RIDGE, VALLEY OR HIP RAFTER OR ROOF RAFTER TO MIN. 2" RIDGE	(3) 10d COMMON (3 1/2"x0.148")	TOE NAIL
	BEAM	(2) 16d COMMON (3 1/2"x0.162")	END NAIL
8	STUD TO STUD (NOT BRACED WALL PANEL)	10d BOX (3"x0.128")	16" OC FACE NAIL
9	STUD TO STUD AND ABUTTING STUDS AT INTERSECTING WALL CORNERS (AT BRACED WALL PANEL)	16d COMMON (3 1/2"x0.135")	12" OC FACE NAIL
10	BUILT-UP HEADER. (2" TO 2" HEADER W/ 1/2" SPACER)	16d COMMON (3 1/2"x0.162")	16" OC EACH EDGE FACE NAIL
11	CONTINUOUS HEADER TO STUD (TOE NAIL)	(4) 8d COMMON (2 1/2"x0.131")	TOE NAIL
12	TOP PLATE TO TOP PLATE	16d COMMON (3"x0.162")	16" OC FACE NAIL
13	BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING (NOT AT BRACED WALL PANEL)	16d COMMON (3 1/2"x0.162")	16" OC FACE NAIL
14	BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING (AT BRACED WALL PANEL)	2-16d COMMON (3 1/2"x0.162")	2 EACH 16" OC FACE NAIL
15	TOP OR BOTTOM PLATE TO STUD	(4) 8d BOX (2 1/2"x0.113") OR (3) 16d (3 1/2"x0.135")	TOE NAIL
		(2) 16d COMMON (3 1/2"x0.162")	END NAIL
16	TOP PLATE. LAPS AT CORNERS AND INTERSECTIONS (FACE NAIL)	(3) 10d BOX (3"x0.128")	FACE NAIL
17	1" BRACE TO EACH STUD AND PLATE	(3) 8d BOX (2 1/2"x0.113") OR (2) STAPLES 1 3/4"	FACE NAIL
18	1" x 6" SHEATHING TO EACH BEARING	(2) 8d (2 1/2"x0.113") OR (2) STAPLES 1 3/4"	FACE NAIL
19	1" x 8" SHEATHING TO EACH BEARING	(3) 8d BOX (2 1/2"x0.113") OR (3) STAPLES, 1" CROWN, 16 GA, 1 3/4" LONG	FACE NAIL
20	WIDER THAN 1" x 8" SHEATHING TO EACH BEARING	(4) 8d BOX (2 1/2"x0.113") OR (3) STAPLES, 1" CROWN, 16 GA, 1 3/4" LONG	FACE NAIL
21	JOIST TO SILL OR GIRDER	(4) 8d BOX (2	TOE NAIL
22	RIM JOIST, BAND JOIST OR BLOCKING TO SILL OR TOP PLATE (ROOF APPLICATION	8d COMMON (2 1/2"x0.131")	6" OC TOE NAIL
23	1" x 6" SUBFLOOR OR LESS TO EACH JOIST	(3) 8d BOX (2 1/2"x0.113") OR (2) STAPLES, 1" CROWN, 16 GA, 1 3/4" LONG	FACE NAIL
24	2" SUBFLOOR TO JOIST OR GIRDER	(3) 16d BOX (3 1/2"x0.135")	BLIND AND FACE NAIL
25	2" PLANKS (PLANK & BEAM - FLOOR & ROOF)	(3) 16d BOX (3 1/2"x0.135")	AT EACH BEARING, FACE NAIL
26	B AND OR RIM JOIST TO JOIST	(3) 16d COMMON (3	END NAIL
27	BUILT-UP GIRDERS & BEAMS. 2" LUMBER LAYERS	10d BOX (3"x0.128")	24" OC FACE NAIL AT TOP AN BOTTOM STAGGERED ON
28	LEDGER STRIP SUPPORTING JOISTS OR	(4) 16d BOX (3 1/2"x0.135")	AT EACH JOIST OR

(2) 10d (3 1/2"x0.128")

RAFTER, FACE NAIL

EACH END, TOE NAIL

ARCH=	ARCHITECTUR	RAL
B.E.W=	BOTTOM EACH WAY	Y
BM=	BEAM	
BRG=	BEARING	COL=
	COLUMN	CON
	CONCRETE	
CONT=	CONTINUOUS	DE
	DOUBLE	EA=
	EACH	E
		EX
	FOUNDATION	FTG
	FOOTING	G
	GIRDER TRUSS	C
GDR=	HEADER	
INT=	INTERIOR	
INFO=	INFORMATION	
	JACK STUD	I
	KING STUD	
MANUF=	MANUFACTURER	M
		MA
NTS-		00-
1110-	ON CENTER	PI YWD=
	PLYWOOD	121110-
PT=	PRESSURE TREATE	ED
PA=	POST FROM ABOVE	
REQD=	REQUIRED	
SPF=	SPRUCE PINE FIR	
SP=	SOUTHERN PINE	
STL=	STEEL	
TYP=	TYPICAL	
W/=	WITH	
WD=	WOOD	
WWF=	WELDED WIRE FAE	RIC
UNO=	UNLESS NOTED OT	HERWISE

FAST	ENERS:			
NO.	BUILDING	NUMBERS AND TYPE OF	SPACING	OF FASTNERS
	MATERIALS	FASTNER	EDGES	INTERMEDIATE SUPPORTS
w	OOD STRUCTURAL PA FRAMING &	NELS, SUB-FLOOR, ROOF AND INTERIOR W/ PARTICLE BOARD WALL SHEATHING TO FR/	ALL SHEATH Aming	IING TO
30	3/8" - 1/2"	6d (2"x0.113") COMMON NAIL (SUBFLOOR, WALL) (J)	6"	12" (g)
		8d (2 1/2"x0.131") COMMON NAIL (ROOF)		
31	5/16" - 1/2"	6d (2"x0.113") COMMON NAIL (SUBFLOOR, WALL)	6"	12" (g)
		8d (2 1/2"x0.131") COMMON NAIL (ROOF)(F)		
32	19/32" - 1"	8d (2 1/2"x0.131") COMMON NAIL	6"	12" (g)
33	1 1/8" - 1 1/4"	10d (3"x0.148") COMMON NAIL OR 8d (2 1/2"x0.131") DEFORMED NAIL	6"	12"
		OTHER WALL SHEATHING (h)		
34	1/2" STRUCTURAL CELLULOSIC FIBERBOARD SHEATHING	1/2" GALVANIZED ROOFING NAIL. 7/16" CROWN OR 16 GAGE STAPLE. 1" CROWN & 1 1/4" LONG	3"	6"
35	25/32" STRUCTURAL CELLULOSIC FIBERBOARD SHEATHING	1 3/4" GALVANIZED ROOFING NAIL. 7/16" CROWN OR 16 GAGE STAPLE. 1" CROWN & 1 1/2" LONG	3"	6"
36	1/2" GYPSUM SHEATHING (d)	1 1/2" GALVANIZED ROOFING NAIL OR 1 1/2" LONG GALVANIZED STAPLES, OR 1 1/4" SCREWS TYPE W OR S	7"	7"
37	1/2" GYPSUM SHEATHING (d)	1 3/4" GALVANIZED ROOFING NAIL OR 1 5/8" LONG GALVANIZED STAPLES, OR 1 5/8" SCREWS TYPE W OR S	7"	7"
	WOOD STRUCTURAL	PANELS, COMBINATION OF SUB-FLOOR UND FRAMING	ERLAYMEN	ТТО
38	3/4" OR LESS	8d (2 1/2"x0.131") COMMON NAIL OR 6d (2"x0.120") DEFORMED NAIL	6"	12"
39	7/8" - 1"	8d (2 1/2"x0.131") COMMON NAIL OR 8d (2"x0.120") DEFORMED NAIL	6"	12"
40	1 1/8" - 1 1/4"	10d (3"x0.148") COMMON NAIL OR 8d (2 1/2"x0.120") DEFORMED NAIL	6"	12"
	FAS	TNER SCHEDULE	PER	

2015 INTERNATIONAL RESIDENTIAL CODE

RAFTERS

29 BRIDGING TO JOIST

SPECIES		Fb	Ft (a)	Fv (a)	Fc II (a)	Fc⊥ (b)	E	Emi
HEM FIR #2		850 psi	525 psi	150 psi	405 psi	1300 psi	1300000 psi	47000
SPF #2		875 psi	450 psi	135 psi	425 psi	1150 psi	1400000 psi	51000
THICKNESS	WIDTH			SOUTHEI	RN PINE #2	2		I
	2" TO 4"	1050 psi	650 psi	175 psi	565 psi	1100 psi	1400000 psi	51000
	5" TO 6"	1250 psi	725 psi	175 psi	565 psi	1600 psi	1600000 psi	58000
2" TO 4"	8"	1200 psi	650 psi	175 psi	565 psi	1600 psi	1600000 psi	58000
	10"	1050 psi	575 psi	175 psi	565 psi	1500 psi	1600000 psi	58000
	12"	975 psi	550 psi	175 psi	565 psi	1450 psi	1600000 psi	58000
MICROLAM L	VL (ML)	2600 psi	1555 psi	285 psi	2510 psi	750 psi	1900000 psi	96571
PARALLAM P	SL 1.8E	2400 psi	1755 psi	190 psi	2500 psi	425 psi	1800000 psi	91488
PARALLAM 2	.0E	2900 psi	2025 psi	290 psi	2900 psi	750 psi	2000000 psi	10165
TIMERSTRAN	D LSL 1.3E	1900 psi	1075 psi	400 psi	1400 psi	680 psi	1300000 psi	66075
IMERSTRAND LSL	1.55E	2325 psi	1070 psi	310 psi	2050 psi	800 psi	1550000 psi	78781

URAL NOTES	Image: Solution line Image: Solution line Image: No. Bate Descriptions Image: No. Bate Descriptions Image: Solution line Image: Solution line Image: Solution line Image: Solution line
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Content Content	
DRAWN BY: CHECKED BY: DATE: SCALE: SO 01	DK MKC 01/24/2021 AS SHOWN 21-2005





5 SECTION VIEW 1/2" = 1'-0"

