I GENERAL

- 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 VERIEVALL 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.
- 9) 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.
- 10) CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR DIMENSIONS AND CONDITIONS OF THE JOB.

II SITE VERIFICATION WORK

- 1) BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE A MINIMUM OF 1'-0" BELOW EXTERIOR GRADE. UNLESS NOTED
- 2) 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 (AS APPLICABLE)
- 1) ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH ACI -301, ACI 318 AND ACI -302.
- 2) REINFORCING STEEL
- DEFORMED BILLET STEEL ASTM A615 - GRADE 60 ASTM A185
- . WELDED WIRE FABRIC (WWF)
- 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
- PORTLAND CEMENT
- ii. AGGREGATES (3/4 IN MAXIMUM SIZE) ASTM C33 iii. NO CALCIUM CHLORIDE SHALL BE PERMITTED
- iv. AIR ENTRAINMENT:
- ASTM C260 v. WATER REDUCING ADMIXTURE
- ASTM C494 vi. FLY ASH CLASS F (20% MAXIMUM BY WEIGHT): ASTM C618
- 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.

- 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.
- 4) 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
- 5) 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".
- 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.

ASTENERS:

NO. DESCRIPTION OF BUILDING ELEMEN

RAFTER, LAPS OVER PARTITIONS

CEILING JOISTS ATTACHED TO PARALLEI

AND R802.3.2 AND TABLE R802.5.1(9)]

RAFTER OR ROOF TRUSS TO PLATE

CEILING JOISTS TO PLATE

BLOCKING BETWEEN JOISTS OR RAFTERS TO

CEILING JOISTS NOT ATTACHED TO PARALLEL

RAFTER (HEEL JOINT) ISEE SECTIONS R802.3.1

ROOF RAFTERS TO RIDGE, VALLEY OR HIP RAFTER OR ROOF RAFTER TO MIN. 2" RIDGE

STUD TO STUD (NOT BRACED WALL PANEL)

COLLAR TJE RAFTER, FACE NAJL OR 1 1/4" x 20 (3) 10d COMMON (3"x0.148")

- 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
- 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

V. 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
- MINIMUM MASONRY BLOCK (ASTM C90) STRENGTH SHALL (FIM) 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). CROUT 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.

ASTM 992 (WHERE AVAILABLE) OR ASTM A572 (GRADE 50)

VI. STRUCTURAL STEEL

1) STRUCTURAL STEEL SHALL CONFORM TO AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", LATEST EDITION, EXCEPT CHAPTER 4.2.1, CODE OF STANDARD PRACTICE.

2) ALL STRUCTURAL STEEL SHALL BE

ii. PLATES, CHANNELS AND ANGLES: ASTM A572 (GRADE 50) OR A36

iii. STRUCTURAL TUBES (HSS): ASTM A500 (GRADE B)

iv. PIPE SECTIONS

ASTM A53 (STANDARD PIPE, UNO) v. BOLTS: ASTM A325 OR A490 BOLTS.

vi. ANCHOR BOLTS ASTM F1554 GRADE 55

- 3) NON-SHRINK GROUT SHALL BE NONMETALLIC SHRINKAGE-RESISTANT GROUT, PREMIXED, NONMETALLIC NON-CORROSIVE, NON-STAINING PRODUCT CONTAINING SELECTED SILICA SANDS, PORTLAND CEMENT, SHRINKAGE COMPENSATING AGENTS, PLASTICIZING AND WATER-REDUCING AGENTS, COMPLYING WITH CE-CRD-C621
- 4) WELDED CONNECTIONS SHALL CONFORM TO THE LATEST REVISED CODE OF THE AMERICAN WELDING SOCIETY, AWS D1.1. ALL WELDING SHALL BE PERFORMED USING E70XX, LOW HYDROGEN ELECTRODES, UNLESS NOTED OTHERWISE. ELECTRODES ARE TO BE PROTECTED FROM MOISTURE.
- 5) BOLTS AND BOLTED CONNECTIONS SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR STRUCTURAL JOINTS" AS APPROVED BY THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS, USE BEARING TYPE BOLTS WITH THREAD ALLOWED ACROSS THE SHEAR PLANE. SIZE AND USE OF HOLES: SEE AISC TABLE J3.1 U.N.O.
- 6) ALL MISCELLANEOUS STEEL CONNECTIONS SHALL BE WELDED ALL AROUND WITH 3/16" FILLET WELD UNLESS OTHERWISE NOTED, EXCEPT FOR SLOTTED CONNECTIONS.
- 7) ALL STEEL MEMBERS EXPOSED TO WEATHER OR LOCATED WITHIN 4" OF THE OUTSIDE FACE OF EXTERIOR WALL SHALL BE PAINTED WITH RUST INHIBITED PAINT IN THEIR ENTIRETY

NO FIELD WELDING OF GALVANIZED MEMBERS IS PERMITTED.





- REFER TO IRC TABLE R301.5 FOR MORE INFORMATION.
- SNOW LOAD SPECIFIED IS GROUND SNOW LOAD ONLY. A SINGLE CONCENTRATED LOAD APPLIED IN ANY DIRECTION AT ANY
- POINT ALONG THE TOP. MECHANICAL EQUIPMENT LOADS IN EXCESS OF 200 LBS SHALL BE NOTIFIED TO STRUCTURAL ENGINEER.
- PRE-FABRICATED STRUCTURAL COMPONENT SHALL COMPLY WITH DESIGN LOADS FROM APPLICABLE CODES/STANDARDS IN ADDITION TO LOADS SPECIFIED IN THESE NOTES. 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. THESE SOIL PROPERTIES SHALL BE FIELD VERIFIED BY A LICENSED

GEOTECHNICAL ENGINEER, AS NECESSARY

17 PSF 20 PSF FLOOR 15 PSF 40 PSF 10 PSF 10 PSF

ATTIC W/O STORAGE 10 PSF ATTIC W/ LIMIT STORAGE 20 PSF HABITABLE ATTICS & 10 PSF 30 PS ATTICS W/ FIXED STAIR 15 PSF SLEEPING ROOMS 30 PSF 10 PSF 40 PSF BALCONIES & DECKS 10 PSF 40 PSF TAIRS

WIND SPEED 115 MPH WIND EXPOSURE CATEGORY

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:

GUARD RAILS & HAND RAILS

DEFLECTION CRITERIA

ROOF TRUSSES/RAFTERS/CEILING JOISTS

BRICK/HORIZONTAL MASONRY MEMBERS

JOISTS/TRUSSES SUPPORTING CERAMIC TILE

FLOOR JOISTS/FLOOR TRUSSES

MEMBERS SUPPORTING

DESCRIPTION

DESIGN LOADS

DESCRIPTION

STUD TO STUD AND ABUTTING STUDS AT 16d COMMON (3 1/2"x0.135") 12" OC FACE NAIL INTERSECTING WALL CORNERS (AT BRACED WALL PANEL) 0 BUILT-UP HEADER. (2" TO 2" HEADER W/ 1/2" 16d COMMON (3 1/2"x0.162") 16" OC EACH EDGE TOE NAME CONTINUOUS HEADER TO STUD (TOE NAIL) (4) 8d COMMON (2 1/2"x0.131") 16" OC FACE NAIL TOP PLATE TO TOP PLATE 16d COMMON (3"x0.162") 16" OC FACE NAII 6d COMMON (3 1/2"x0.162") JOIST OR BLOCKING (NOT AT BRACED WALL BOTTOM PLATE TO JOIST, RIM JOIST, BAND 2-16d COMMON (3 1/2"x0.162") 2 EACH 16" OC FACE NAI JOIST OR BLOCKING (AT BRACED WALL TOP OR BOTTOM PLATE TO STUD (4) 8d BOX (2.1/2"x0.113 TOE NAME OR (3) 16d (3 1/2"x0.135" (2) 16d COMMON (3 1/2"x0.162") END NAI TOP PLATE, LAPS AT CORNERS AND (3) 10d BOX (3"x0.128" FACE NAIL INTERSECTIONS (FACE NAIL) FACE NAIL 1" BRACE TO EACH STUD AND PLATE OR (2) STAPLES 13/4" (2) 8d (2 1/2"v0 113"\ OF 18 1" x 6" SHEATHING TO EACH BEARING (2) STAPLES 13/4 (3) Rd BOX (2 1/2"v0 113"). OI 1" x 8" SHEATHING TO EACH BEARING 1 3/4" LONG (4) 8d BOX (2 1/2"x0.113") OF 20 WIDER THAN 1" x 8" SHEATHING TO EACH (3) STAPLES, 1" CROWN, 16 GA, 1 3/4" LONG BEARING (4) 8d BOX (2 1/2"x0.113") JOIST TO SILL OR GIRDER TOE NAIL RIM JOIST, BAND JOIST OR BLOCKING TO SILL 6" OC TOE NAIL 8d COMMON (2 1/2"x0.131" OR TOP PLATE (ROOF APPLICATION ALSO) 8d BOX (2 1/2"x0.113") OR 1" x 6" SUBFLOOR OR LESS TO FACH JOIST FACE NAIL (2) STAPLES, 1" CROWN, 16 GA, 3/4" LONG (3) 16d BOX (3 1/2"x0.135") BLIND AND FACE NAI 2" SUBFLOOR TO JOIST OR GIRDER 3) 16d BOX (3 1/2"x0.135" 2" PLANKS (PLANK & BEAM - FLOOR & ROOF FACE NAIL 26 B AND OR RIM JOIST TO JOIST (3) 16d COMMON (3 1/2"x0.162") END NAIL 10d BOX (3"x0.128") BUILT-UP GIRDERS & BEAMS, 2" LUMBER C FACE VAIL AT TOP A 28 LEDGER STRIP SUPPORTING JOISTS OR AT EACH JOIST OR RAFTE (4) 16d BOX (3 1/2"x0.135") FACE NAIL 29 BRIDGING TO JOIS (2) 10d (3 1/2"x0.128") EACH END, TOE NAIL

TOTAL LOAD LIVE LOAD

L/600 OR 0.3" MAX

L/720

DEAD LOAD LIVE LOAD SNOW LOAD (b)

200 LBS (c

D (ASSUMED DEFAULT)

L/360 OR 1/2" MAX

10 PSF

L/240 L/600 OR 1/4" MAX

NUMBER AND TYPE OF FASTNER | SPACING AND LOCATION

PER JOIST, TOE NAIL

FACE NAIL

TOE NAIL

END NAIL

16" OC FACE NAII

(3) 8d COMMON (2 1/2"x0.131"

(3) 8d COMMON (2 1/2"x0.131")

(3) 10d COMMON NAILS (3 1/2"x0.148")

(3) 10d COMMON (3 1/2"x0 148")

(2) 16d COMMON (3 1/2"x0,162")

10d BOX (3"x0.128")

4-10d BOX (3"v0 128"

TABLE R802.5.1(9)

CONCRETE CLEAR COVERS MIN. COVER (IN.) CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED CONCRETE EXPOSED T #5 BAR, W31 OR D31 WIRE AND EARTH OR WEATHER 1 1/2" SMALLER CONCRETE NOT EXPOSED TO EARTH REAMS COLUMNS (PRIMARY 1 1/2" REINF., TIES, STIRRUPS, SPIRALS OR WEATHER #6 BARS AND LARGER #5 BAR W31 OR D31 PLATES WIRE AND SMALLER

BUILDING INFORMATION DESCRIPTION LEVELS CRAWL SPACE, FIRST FLOOR & ATTIC FIRST FLOOR AREA 1.131 SQ F DECK AREA 521 SQ FT 19'-1" REAR (ABOVE GRADE) BUILDING HEIGHT

17'-9" FRONT (ABOVE GRADE)

EDGES INTERMEDIATE SUPPORTS WOOD STRUCTURAL PANELS, SUB-FLOOR, ROOF AND INTERIOR WALL SHEATHING TO FRAMING & PARTICLE BOARD WALL SHEATHING TO FRAMING 6d (2"x0.113") COMMON NAIL (SUBFLOOF WALL) (J) 3/8" - 1/2" 8d (2 1/2"x0.131") COMMON NAIL (ROOF) 6d (2"x0.113") COMMON NAIL (SUBFLOOR, 5/16" - 1/2" 12" (g) 8d (2 1/2"x0.131") COMMON NAIL (ROOF)(F) 19/32" -8d (2 1/2"x0.131") COMMON NAIL 12" (g) 10d (3"v0 148") COMMON NAIL OR 6" 12" 8d (2 1/2"x0.131") DEFORMED NAIL OTHER WALL SHEATHING (h 1/2" GALVANIZED ROOFING NAIL. CELLULOSIC 7/16" CROWN OR 16 GAGE STAPLE. 1" CROWN & 1 1/4" LONG FIBERBOARD SHEATHING 25/32" STRUCTURA 3/4" GALVANIZED ROOFING NAIL CELLULOSIC /16" CROWN OR 16 GAGE STAPLE FIBERBOARD " CROWN & 1 1/2" LONG SHEATHING 1/2" GALVANIZED ROOFING NAIL OR 1/2" LONG GALVANIZED STAPLES, SHEATHING (d) OR 1 1/4" SCREWS TYPE W OR S 3/4" GALVANIZED ROOFING NAIL OR 1 5/8* LONG GALVANIZED STAPLES OR 1 5/8* SCREWS TYPE W OR S SHEATHING (d) WOOD STRUCTURAL PANELS, COMBINATION OF SUB-FLOOR UNDERLAYMENT TO FRAMING 8d (2 1/2"x0.131") COMMON NAIL OR 3/4" OR LESS 8d (2 1/2"x0.131") COMMON NAIL OR 12" 7/8" - 1" 8d (2"x0.120") DEFORMED NAI 10d (3"x0.148") COMMON NAIL OR 1 1/8" - 1 1/4" FASTNER SCHEDULE PER INTERNATIONAL RESIDENTIAL CODE

NUMBERS AND TYPE OF

BUILDING

SPACING OF FASTNERS

WOOD SPE	CIES:								
SPECIES		Fb	Ft (a)	Fv (a)	Fc II (a)	Fc⊥(b)	E	Emin	
HEM FIR #2		850 psi	525 psi	150 psi	405 psi	1300 psi	1300000 psi	470000 psi	
SPF #2		875 psi	450 psi	135 psi	425 psi	1150 psi	1400000 psi	510000 psi	
THICKNESS	WIDTH			SOUTHERN PINE #2					
2" TO 4"	2" TO 4"	1050 psi	650 psi	175 psi	565 psi	1100 psi	1400000 psi	510000 psi	
	5" TO 6"	1250 psi	725 psi	175 psi	565 psi	1600 psi	1600000 psi	580000 psi	
	8"	1200 psi	650 psi	175 psi	565 psi	1600 psi	1600000 psi	580000 psi	
	10"	1050 psi	575 psi	175 psi	565 psi	1500 psi	1600000 psi	580000 psi	
	12"	975 psi	550 psi	175 psi	565 psi	1450 psi	1600000 psi	580000 psi	
MICROLAM LVL (ML)		2600 psi	1555 psi	285 psi	2510 psi	750 psi	1900000 psi	965710 psi	
PARALLAM PSL 1.8E		2400 psi	1755 psi	190 psi	2500 psi	425 psi	1800000 psi	914880 psi	
PARALLAM 2.0E		2900 psi	2025 psi	290 psi	2900 psi	750 psi	2000000 psi	1016535 ps	
TIMERSTRAND LSL 1,3E		1900 psi	1075 psi	400 psi	1400 psi	680 psi	1300000 psi	660750 psi	
TIMERSTRAND	LSL 1.55E	2325 psi	1070 psi	310 psi	2050 psi	800 psi	1550000 psi	787815 psi	

ARREVIATIONS

BEARING CONCRETE CONC= CONTINUOUS DOUBLE EACH END EXTERIOR FOUNDATION GIRDER TRUSS HEADER INTERIOR INFO= INFORMATION JACK STUD MANUF MANUFACTURER MINIMUM MAX= NTS= MAXIMUM NOT TO SCALE ON CENTER PLYWD= PLYWOOD PRESSURE TREATED POST FROM ABOVE REQD= REQUIRED SPRUCE PINE FIR SOUTHERN PINE STL= STEEL

TYPICAL WOOD WELDED WIRE FABRIC UNLESS NOTED OTHERWISE

ARCHITECTURA

BOTTOM EACH WA

DRIVE 27526 192 MELS MEADOWS FUQUAY VARINA, NC

NOISIN:

- SIONAL SEAL

- CARO

- ESS

- CONTROL

- CARO

- CAR SFAL F ...d psi ...

103

QUAGEN Ш

SUIT FIRM # P-1869 H SOUTH DRIVE, S RRY, NC 27511 NE: 919.267.3004 FO@EQUAGEN.C EDINBURGH SOUTCARY, NI CARY, NI PHONE: 918 121

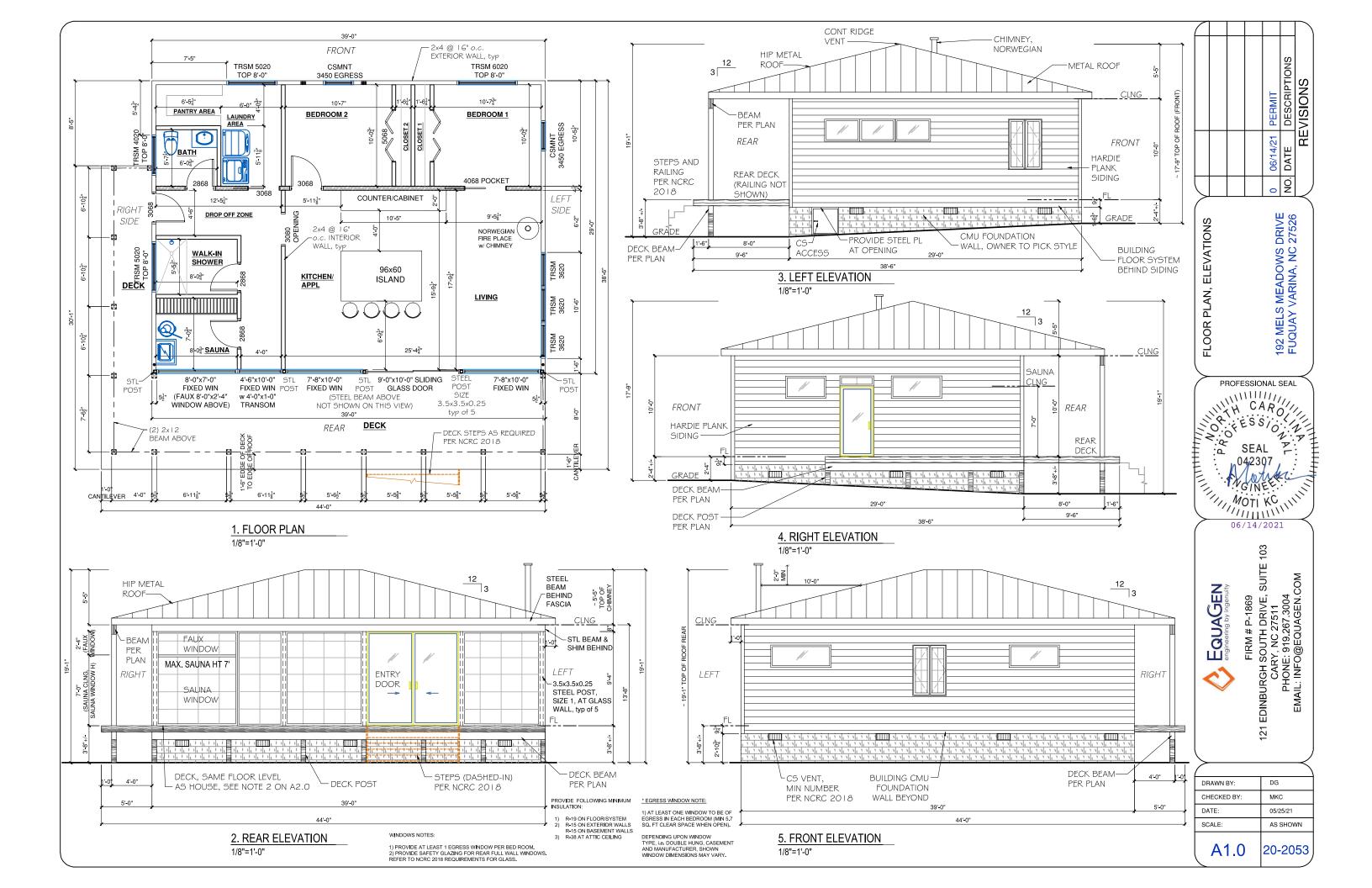
DRAWN BY DG CHECKED BY MKC DATE 05/25/21 SCALE AS SHOWN

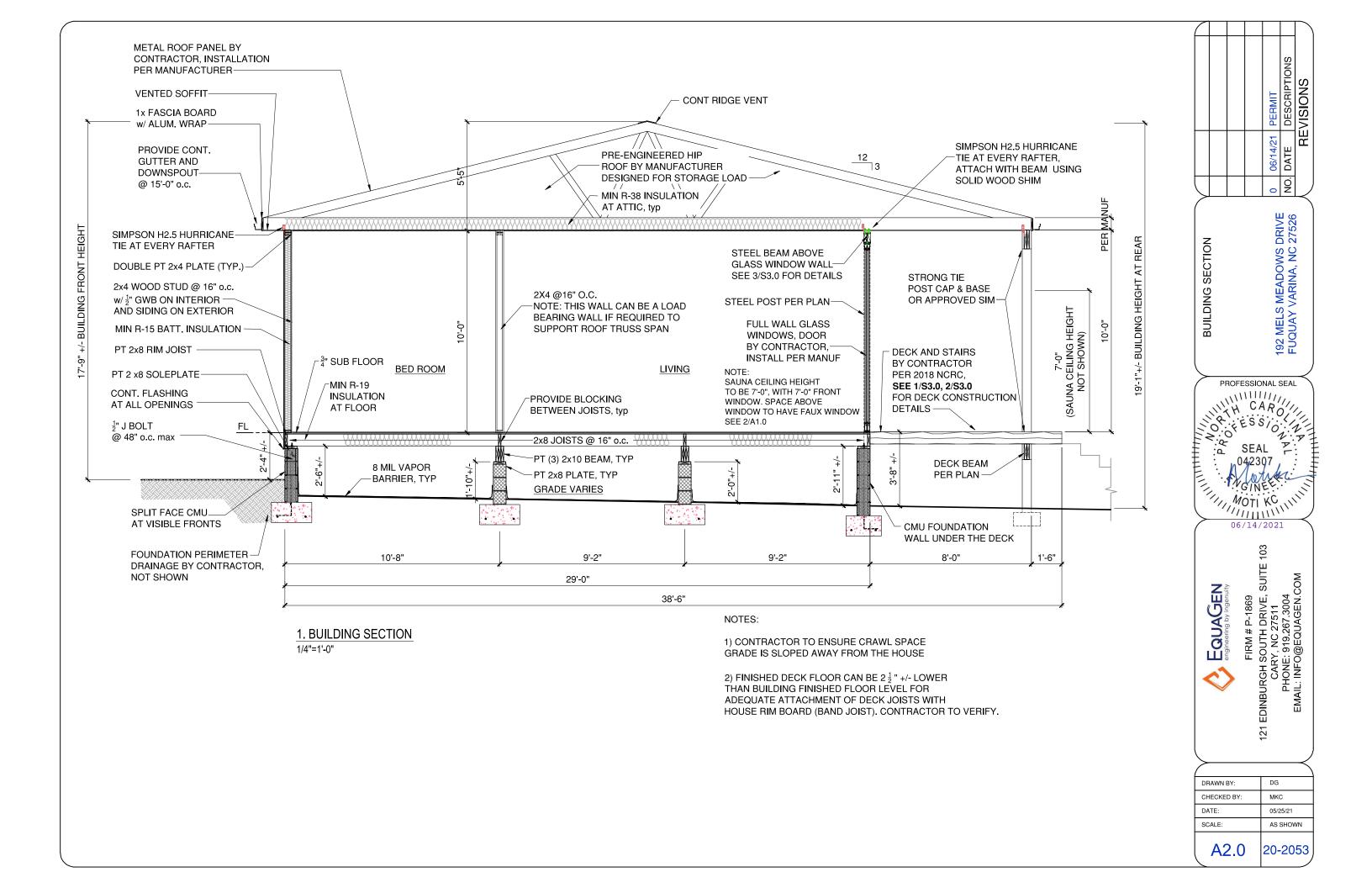
T1.0

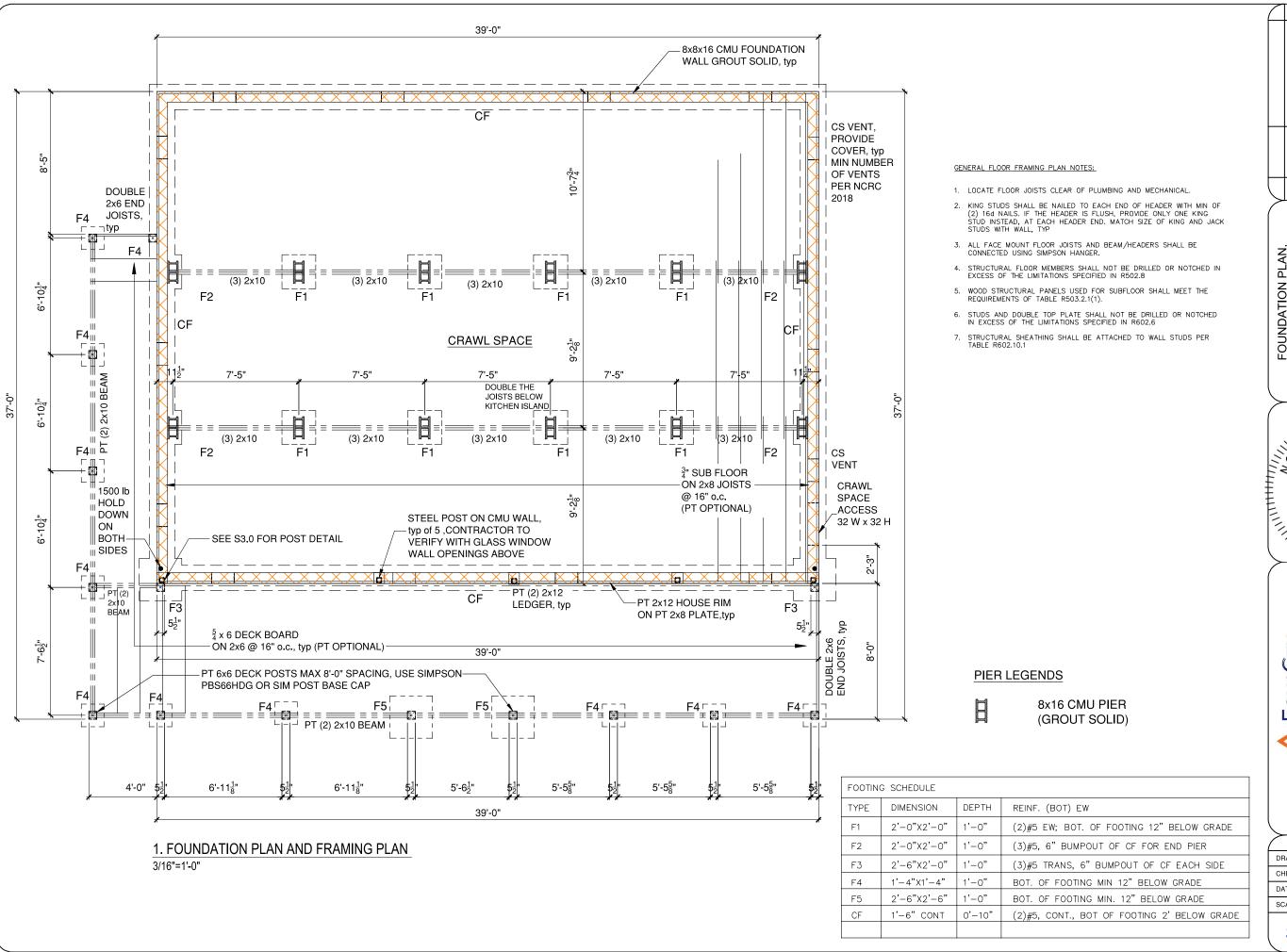
SET PRINT SIZE TO SCALE: 11x17 LANDSCAPE

WD=

20-2053







FOUNDATION PLAN SCHEDULE

PROFESSIONAL SEAL 042307 042307 042307 06/14/2021

4/21 PERMIT
E DESCRIPTIONS
REVISIONS

192 MELS MEADOWS DRIVE FUQUAY VARINA, NC 27526

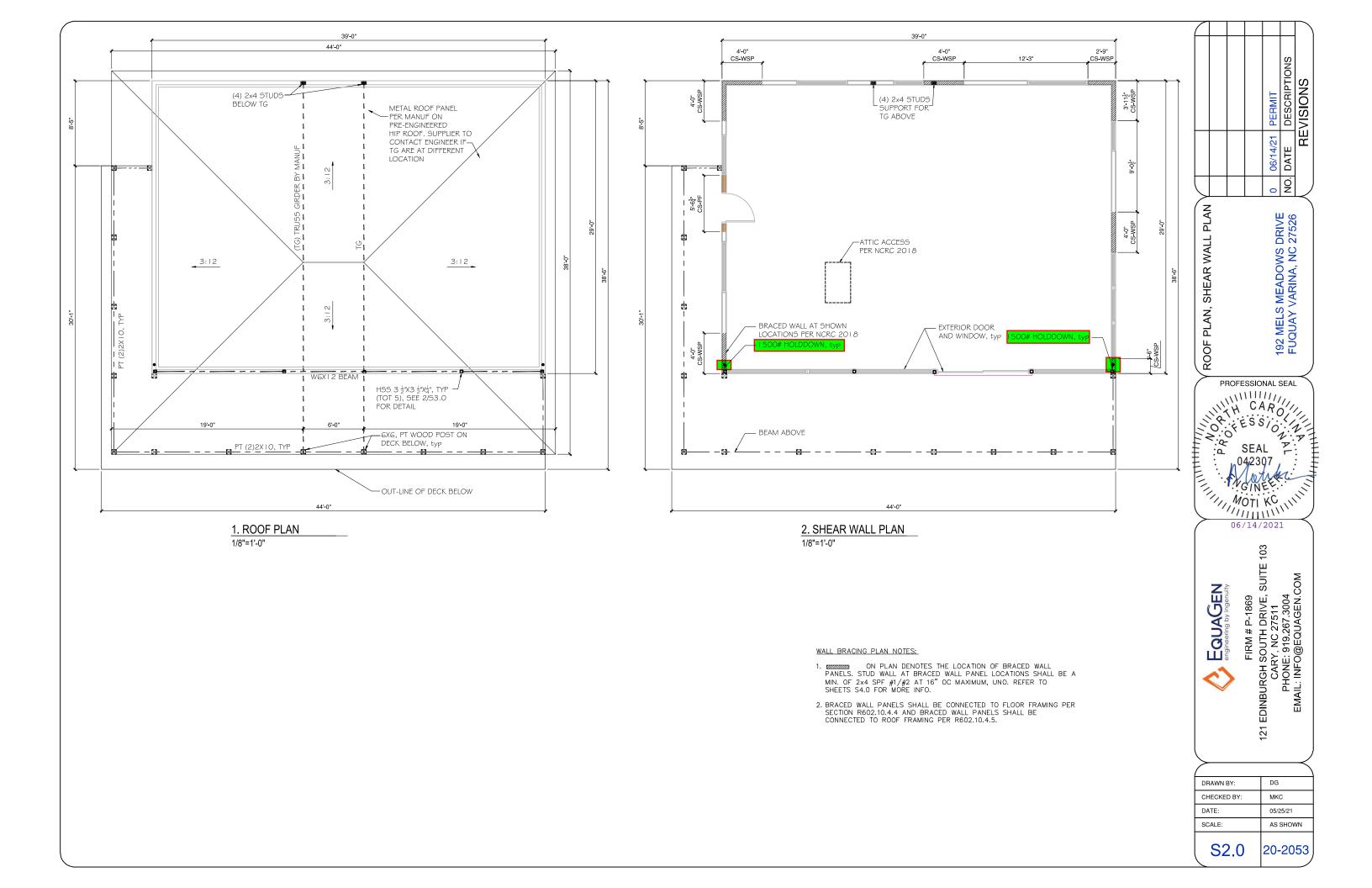
EQUAGEN

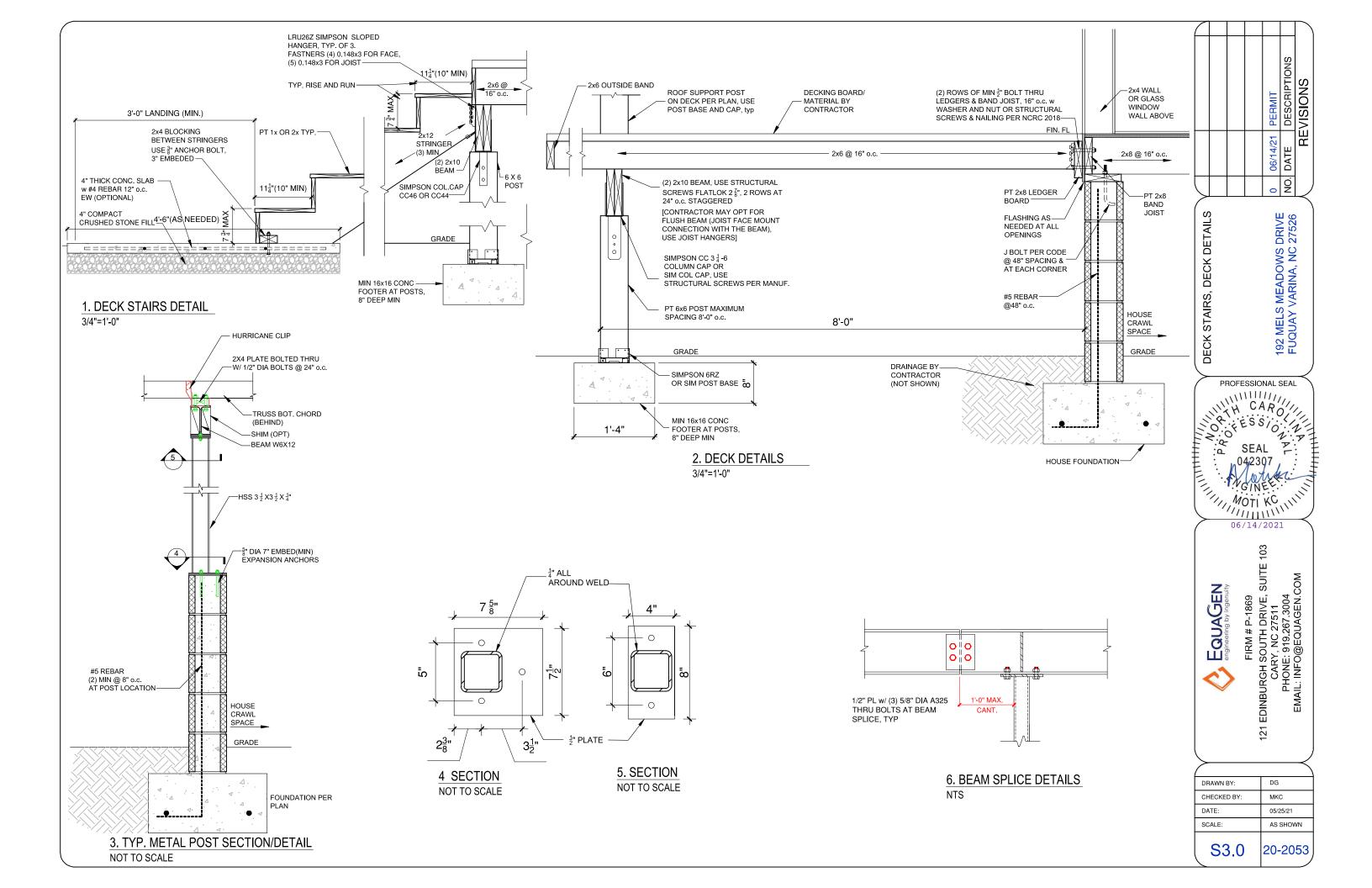
SUITE FIRM # P-1869 :1 EDINBURGH SOUTH DRIVE, SUITE CARY, NC 27511 PHONE: 919.267.3004 EMAIL: INFO@EQUAGEN.COM

121

S1.0	20-2053
SCALE:	AS SHOWN
DATE:	05/25/21
CHECKED BY:	МКС
DRAWN BY:	DG

31.0







WIND SPEED ≤115 MPH SEISMIC DESIGN CATEGORY: B

BRACED WALL PANEL LEGEND:

- LENGTH OF WALL PANEL IN INCHES

AT EXTERIOR FACE OF WALL:
WOOD STRUCTURAL PANEL: 7/16" OSB WALL SHEATHING w/ 8d
COMMON NAILS (2 1/2"x0.131") AT 4" OC AT EDGES & 12" OC
AT INTERMEDIATE SUPPORTS
AN ALTERNATIVE:
G GAUGE X1 3/4" STAPLES AT 3" OC AT EDGES & 6" OC AT
INTERMEDIATE SUPPORTS

AT INTERIOR FACE OF WALL:

1/2" GYPSUM BOARD/SHEATHING WITH 5d COOLER NAILS AT 4" OC AT EDGES AND INTERMEDIATE SUPPORTS.

L LENGTH OF WALL PANEL IN INCHES

. 1/2" GYPSUM SHEATHING W/ 13 GAUGE, 1 3/8" LONG, 19/64" HEAD NAIL OR 0.098" DIA, 1 1/4" LONG, ANNULAR-RINGED NAIL OR 5d COOLER NAIL, 0.086" DIA, 1 5/8" LONG, 15/64" HEAD, OR GYPSUM BOARD NAIL W/ 0.086" DIA, 1 5/8" LONG, 9/32" HEAD @ 4" OC AT EDGES AND INTERMEDIATE SUPPORTS, OR 1 1/4" SCREWS TYPE W OR S, 12" OC W/ 4" AT EDGES AND INTERMEDIATE SUPPORTS W/ MIN 5/8" PENETRATION TO WHOLD FEABURG

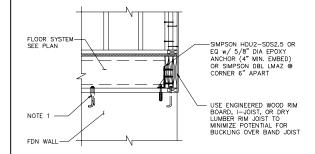
NUIE:
WSP = WOOD STRUCTURAL PANEL | CS = CONTINUOUSLY SHEATHED
PF = PORTAL FRAME | GB = GYPSUM BOARD

FOR CONTINUOUS SHEATHING BRACED WALL METHOD, PROVIDE:

AT EXTERIOR FACE OF WALL: 7/16" OSB WITH 8d NAILS AT 4" OC ON EDGES AND 12" OC ON FIELD.

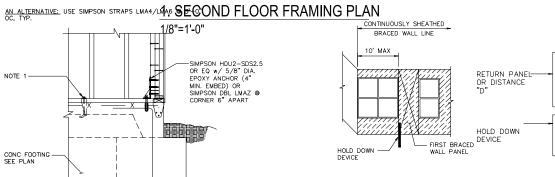
2. <u>AT INTERIOR FACE OF WALL:</u> 1/2" GYPSUM BOARD/SHEATHING WITH 5d COOLER NAILS AT 4" OC AT ÉDGES AND INTERMEDIATE SUPPORTS.

SHEATHING SHALL BE EXTENDED CONTINUOUS 12" ABOVE AND BELOW THE FLOOR SYSTEM



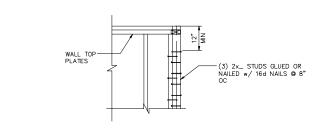
FOUNDATION WALL CONDITION

NOTE 1: 1/2" DIA ANCHOR BOLTS (7" MIN EMBED) w/ 2"x2"x3/16" WASHER PLATES @ 4"-0" OC MAX AT 12" MAX FROM EA END OF WALL.

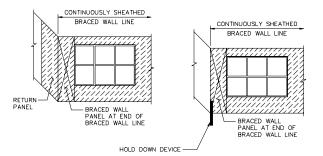


SLAB ON GRADE CONDITION

HOLD-DOWN DETAIL AT CONCRETE FOUNDATION

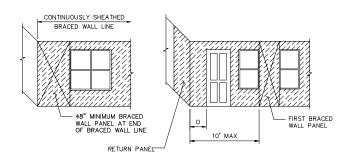


HOLD-DOWN DETAIL SCALE - NTS AT RAISED WOOD FLOOR



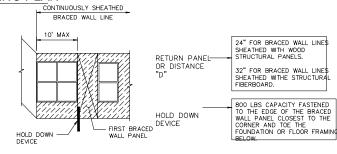
END CONDITION - 1

END CONDITION - 2



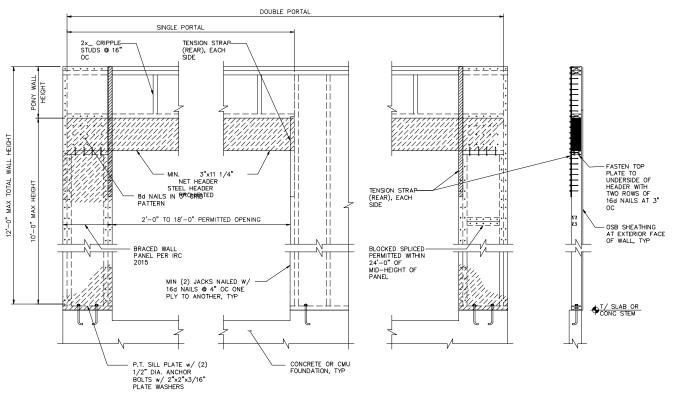
END CONDITION - 3

END CONDITION - 4

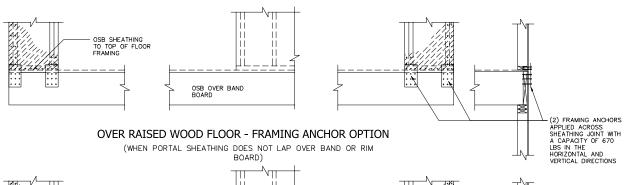


END CONDITION - 5

END CONDITIONS FOR BRACED WALL LINES WITH CONTINUOUS SHEATHING METHOD



OVER CONCRETE OR MASONRY BLOCK FOUNDATION



OSB OVER BAND BOARD OVER RAISED WOOD FLOOR - OVERLAP OPTION (WHEN PORTAL SHEATHING LAPS OVER BAND OR RIM BOARD)

FRONT ELEVATION

SECTION

CONTINUOUS SHEATHING PORTAL FRAME (CS-PF)

REFERENCE: IRC 2015 FIG. R602.10.6.4

PORTAL FRAME REQUIREMENTS									
MIN. SIZE & GRADE OF WALL STUDS	MAX. PONY WALL HEIGHT (FEET)		MAX. OPENING WIDTH (FEET)	REQUIRED TENSION CAPACITY OF STRAP (LBS)	MIN. SIZE & GRADE OF WALL STUDS	MAX. PONY WALL HEIGHT (FEET)	MAX. TOTAL WALL HEIGHT (FEET)		REQUIRED TENSION CAPACITY OF STRAP (LBS)
2x4 SPF #1/# 2 GRADE	0	10	18	1000	2x4 # 2 GRADE	2	12	18	3850
	1	10	9	1000		4	12	9	2350
			16	1000				16	DESIGN REQUIRED
			18	1200	2x6 STUD GRADE	_		9	1000
	2	10	9	1000		2	12	16	2050
			16	2025				18	2450
			18	2400			4 12	9	1500
	2	12	9	1200		4		16	3150
			16	3200				18	3675



SUITE QUAGEN Ш

FIRM # P-1869 1 EDINBURGH SOUTH DRIVE, S CARY, NC 27511 PHONE: 919.267.3004 EMAIL: INFO@EQUAGEN.CC 121

DRAWN BY:	DG
CHECKED BY:	MKC
DATE:	05/25/21
SCALE:	AS SHOWN
04.0	00 0050

20-2053 S4.0

