

ALL SHEET CHANGES AND REVISIONS MUST BE RECORDED AND THE ENGINEER AND THE ARCHITECT MUST BE NOTIFIED. THE ENGINEER IS NOT RESPONSIBLE FOR ANY STRUCTURAL MODIFICATIONS OR OTHER CHANGES.

GENERAL NOTES:

COORDINATION:

1. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH AND COORDINATED WITH ARCHITECTURAL DRAWINGS AND OTHER CONTRACT DOCUMENTS.
2. THE PROJECT ARCHITECT SHALL BE RESPONSIBLE FOR REVIEWING/COORDINATING ALL DIMENSIONS, ELEVATIONS AND DETAILS SHOWN ON THE STRUCTURAL DRAWINGS WITH THE ARCHITECTURAL DRAWINGS.
3. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL OF THE CONTRACT DOCUMENTS AND LATEST ADDENDA AND FOR SUBMITTING SUCH DOCUMENTS TO SUBCONTRACTORS AND MATERIAL SUPPLIERS PRIOR TO THE SUBMITTAL OF SHOP DRAWINGS, FABRICATION OF ANY STRUCTURAL MEMBERS, AND ERECTION IN THE FIELD.
4. THE GENERAL CONTRACTOR SHALL COMPILE THE STRUCTURAL DRAWINGS AND OTHER CONTRACT DRAWINGS AND REPORT ANY DISCREPANCY BETWEEN AND WITHIN EACH SET OF DRAWINGS WITH THE PROJECT ARCHITECT AND THE STRUCTURAL ENGINEER PRIOR TO THE FABRICATION AND INSTALLATION OF ANY STRUCTURAL MEMBERS.
5. THE GENERAL CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, ELEVATIONS AND CONDITIONS OF THE EXISTING BUILDING AT THE JOB SITE AND REPORT ANY DISCREPANCIES FROM THE ASSUMED CONDITIONS SHOWN ON THE STRUCTURAL DRAWINGS TO THE PROJECT ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO THE FABRICATION AND ERECTION OF ANY STRUCTURAL MEMBERS.
6. DRAWINGS SHOW GENERAL AND TYPICAL SECTIONS/DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY SHOWN, SIMILAR SECTIONS/DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO THE APPROVAL OF THE ENGINEER.
7. THE STRUCTURAL MEMBERS OF THIS PROJECT HAVE BEEN DESIGNED BY THE STRUCTURAL ENGINEER TO RESIST THE REQUIRED CODE GRAVITY AND LATERAL FORCES THAT COULD OCCUR IN THE FINAL COMPLETED STRUCTURE ONLY. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL REQUIRED BRACING DURING CONSTRUCTION TO MAINTAIN THE STABILITY AND SAFETY OF ALL STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PROCESS UNTIL THE STRUCTURE IS TIED TOGETHER AND COMPLETED.
8. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION BRACING AND SHORING OF EXISTING STRUCTURE AS REQUIRED TO INSTALL NEW BEAMS, WALLS, COLUMNS AND FOUNDATIONS SHOWN ON THE STRUCTURAL DRAWINGS.
9. THE STRUCTURAL ENGINEER SHALL NOT BE RESPONSIBLE FOR THE METHODS, TECHNIQUES AND SEQUENCES OF PROCEDURES TO PERFORM THE WORK. THE SUPERVISION OF THE WORK IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. LOADS APPLIED TO THE STRUCTURE DURING CONSTRUCTION SHALL NOT EXCEED THE SAFE LOAD-CARRYING CAPACITY OF THE STRUCTURAL MEMBERS. THE LIVE LOADS USED FOR THE DESIGN OF THE STRUCTURE ARE INDICATED IN THE GENERAL NOTES. DO NOT APPLY ANY CONSTRUCTION LOADS UNTIL STRUCTURAL FRAMING IS PROPERLY INSTALLED AND ALL TEMPORARY BRACING IS IN PLACE.
11. ALL ASTM AND OTHER REFERENCES ARE PER THE LATEST EDITIONS UNLESS NOTED OTHERWISE.
12. EQUIPMENT PADS SHALL BE PROVIDED BY THE MECHANICAL, ELECTRICAL, OR PLUMBING CONTRACTORS REQUIRING THE PAD.
13. COORDINATE THE EXACT SIZE AND LOCATION OF ALL SLEEVES AND OPENINGS THROUGH CONCRETE WALLS, CONCRETE SLABS OR MASONRY WALLS WITH ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS.
14. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION. CONTRACTOR SHALL REVIEW, APPROVE AND SIGN EACH SHEET PRIOR TO SUBMISSION. THE STRUCTURAL ENGINEER'S REVIEW SHALL BE FOR CONFORMANCE WITH THE DESIGN CONCEPT AND GENERAL COMPLIANCE WITH THE CONTRACT DOCUMENTS. THE ENGINEER'S REVIEW DOES NOT RELIEVE THE CONTRACTOR OF THE SOLE RESPONSIBILITY TO REVIEW, CHECK AND COORDINATE THE SHOP DRAWINGS PRIOR TO SUBMISSION. THE CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF THE SHOP DRAWINGS AS THEY PERTAIN TO MEMBER SIZES, DETAILS, DIMENSIONS, ETC. CONTRACT DRAWINGS SHALL NOT BE USED FOR SHOP DRAWINGS.
15. CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID TO ASCERTAIN CONDITIONS WHICH MAY ADVERSELY AFFECT THE WORK OR COST THEREOF.
16. WHERE CONFLICTS OCCUR BETWEEN GENERAL NOTES AND SPECIFICATIONS THE MOST STRINGENT REQUIREMENT SHALL APPLY.
18. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL SAFETY PRECAUTIONS AND REGULATIONS DURING THE WORK. THE ENGINEER WILL NOT ADVISE NOR ISSUE DIRECTION AS TO SAFETY PRECAUTIONS AND PROGRAMS.

FOUNDATIONS:

1. FOUNDATION DESIGN OF FOOTINGS BASED ON "SUMMARY REPORT OF GEOTECHNICAL SUBSURFACE EXPLORATION AND ENGINEERING EVALUATION" BY EGLE ENGINEERING, INC. INDIAN TRAIL, NORTH CAROLINA. PROJECT NO. 5658-G-NC, DATED SEPTEMBER 29, 2016. ALLOWABLE SOIL BEARING PRESSURE 2,000 PSF.
2. ALL FOOTINGS AND SLAB ON GRADE SHALL BEAR ON UNDISTURBED RESIDUAL SOIL OR STRUCTURAL COMPACTED FILL AS PER SOIL REPORT RECOMMENDATIONS. ALL FOUNDATION EXCAVATIONS SHALL BE EVALUATED BY THE GEOTECHNICAL ENGINEER/TESTING AGENCY PRIOR TO PLACING CONCRETE FOR FOUNDATIONS.
3. NO UNBALANCED BACKFILLING SHALL BE DONE AGAINST BASEMENT WALLS UNLESS WALLS ARE BRACED BY TEMPORARY BRACING OR BY PERMANENT CONSTRUCTION.
4. COORDINATE FOUNDATION WORK WITH EXISTING UTILITIES. FOUNDATIONS SHALL BE LOWERED WHERE REQUIRED TO AVOID UTILITIES. NOTIFY PROJECT ARCHITECT AND STRUCTURAL ENGINEER TO PROVIDE REINFORCED CONCRETE PIER FOR COLUMN FOOTINGS.
5. UNLESS NOTED OTHERWISE COLUMN CENTERLINES SHALL BE CENTERLINES OF COLUMN FOOTINGS.

CONCRETE:

1. CONCRETE SHALL BE PROPORTIONED TO MEET THE REQUIREMENTS OF THE FOLLOWING:

ELEMENT	28-DAY STRENGTH (PSI)	SLUMP RANGE (IN.)	UNIT WEIGHT (PCF)
COLUMN FOOTINGS	3000	3-5	150
WALL FOOTINGS	3000	3-5	150
SLAB ON GRADE	3000	3-4	150
EXTERIOR CONCRETE	4000	3-5	150

2. PORTLAND CEMENT SHALL BE ASTM C 150, TYPE I. FLY ASH SHALL BE ASTM C 618, CLASS F AND SHALL NOT EXCEED 25% OF CEMENT CONTENT BY WEIGHT. NORMAL WEIGHT AGGREGATE SHALL BE ASTM C 33.

3. CONCRETE AGGREGATE GRADATION SHALL BE IN ACCORDANCE WITH ASTM C 33 SPECIFICATION. SPECIFICATION FOR CONCRETE AGGREGATE. FINE AGGREGATE SHALL CONSIST OF NATURAL SAND OR A COMBINATION THEREOF, WITH A FINENESS MODULUS BETWEEN 2.3 AND 3.1. COURSE AGGREGATE CONTENT IS TO BE BETWEEN 35% BASED BY WEIGHT OR VOLUME OF THE TOTAL AGGREGATE CONTENT. LARGER COURSE AGGREGATE MIXES UP TO #57 ARE ACCEPTABLE FOR FLOOR SLAB CONCRETE TO MINIMIZE SHRINKAGE CRACKING.

4. FLY ASH SHALL NOT BE PERMITTED IN CONCRETE PLACED SUBJECT TO COLD WEATHER PLACEMENT PROCEDURES.

5. CONCRETE EXCEEDING THE SPECIFIED SLUMP RANGES SHALL BE RETURNED. DO NOT ADD WATER TO THE CONCRETE MIX AT THE JOB SITE WITHOUT THE WRITTEN PERMISSION FROM THE STRUCTURAL ENGINEER.

6. ALL REINFORCING STEEL SHALL BE ASTM A615 GRADE 60 UNLESS NOTED OTHERWISE. ALL WELDED WIRE FABRIC (W.W.F.) SHALL BE ASTM A625 AND A185 COLD DRAWN STEEL WIRE. W.W.F. SHALL BE DELIVERED TO THE JOB SITE IN FLAT SHEETS (NO ROLLS). PLACE SHEETS ON BOLSTERS AT 48" MAXIMUM TO LOCATE IN UPPER THIRD OF SLAB.

7. LAP CONTINUOUS REINFORCING BARS 36 BAR DIAMETERS UNLESS NOTED OTHERWISE. PROVIDE CORNER BARS IN ALL WALLS AND FOOTINGS.

8. BAR SUPPORTS, DESIGN, DETAILING, FABRICATION, AND PLACING OF REINFORCING BARS SHALL BE IN ACCORDANCE WITH THE ACI CODE AND DETAILING MANUAL AND CRSI'S "MANUAL OF STANDARD PRACTICE".

9. MINIMUM CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE:

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
CONCRETE EXPOSED TO EARTH OR WEATHER:	
No. 6 THROUGH No. 18 BARS	2"
No. 5 AND SMALLER	1 1/2"
CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:	
SLABS, WALLS AND JOISTS:	1 1/2"
No. 14 AND No. 18 BARS	3/4"
No. 11 AND SMALLER	3/4"
BEAMS AND COLUMNS:	
PRIMARY REINFORCEMENT, TIES, STIRRUPS AND SPIRALS	1 1/2"

10. ANCHOR RODS FOR COLUMNS SHALL BE POSITIONED WITH A TEMPLATE PRIOR TO PLACING CONCRETE IN PIER OR FOOTING. NUTS SHALL BE TIGHTENED ON EACH SIDE OF THE TEMPLATE TO HOLD THE ANCHOR BOLTS IN PLACE.

11. CONCRETE DESIGN AND REINFORCEMENT SHALL BE IN ACCORDANCE WITH THE "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (ACI 318-02) AND WITH "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT" (ACI 315-02). CONCRETE PLACED DURING HOT WEATHER AND COLD WEATHER SHALL MEET THE RECOMMENDATIONS OF ACI/PCA/TCA.

12. CONCRETE MIXES SHALL BE DESIGNED IN ACCORDANCE WITH ACI 301. WATER SHALL NOT BE ADDED TO THE CONCRETE MIX AT THE JOB SITE WITHOUT THE PRIOR WRITTEN PERMISSION OF THE STRUCTURAL ENGINEER.

13. UNLESS OTHERWISE SHOWN ON ARCHITECTURAL DRAWINGS, PROVIDE 3/4" CHAMFER AT ALL COLUMN, WALL SLAB AND BEAM EDGES THAT ARE EXPOSED TO VIEW IN THE FINAL STRUCTURE..

14. FIBER REINFORCEMENT - POLYPROPYLENE FIBRILLATED FIBERS USE AT 1.5 POUNDS PER CUBIC YARD WITH A MINIMUM AVERAGE RESIDUAL STRENGTH OF 45 PSI IN ACCORDANCE WITH ASTM 1399 TESTING - FIBREX 300 OR EQUIVALENT. FIBER REINFORCEMENT - AN ENGINEERED BLEND OF COLD DRAWN STEEL WIRE FIBER (23 lbs.) AND A GRADED MULTIFILAMENT POLYPROPYLENE FIBER (1 lb.) AT 1 BAG (24 lbs.) PER CUBIC YARD - NOVAMESH 850 OR EQUIVALENT.

SLAB ON GRADE:

1. CONTROL JOINTS FOR SLAB ON GRADE SHALL BE LOCATED AS SHOWN ON PLAN, WITH A MAXIMUM JOINT SPACING OF 2 1/2 TIMES THE SLAB THICKNESS IN FEET. JOINTS SHALL BE FORMED USING SAW CUTS 1/8" WIDE (MAXIMUM) BY 7/4 (1 1/4" MIN.) DEEP. SAW CUT AS SOON AS PRACTICAL AND WITHIN 12 HOURS AFTER PLACING CONCRETE. JOINTS SHALL BE FILLED WITH SEMI-RIGID EPOXY JOINT FILLER (CONSPEC POLYUREA JOINT FILL (OR EQUIVALENT). JOINTS IN AREAS SUBJECT TO FORKLIFT TRAFFIC SHALL BE FILLED WITH CONSPEC POLYUREA JOINT SAVER II (OR EQUIVALENT).
2. SIDEWALKS AND OTHER EXTERIOR SLABS ARE NOT SHOWN ON THE STRUCTURAL DRAWINGS. SEE ARCHITECTURAL, SITE AND CIVIL DRAWINGS FOR LOCATIONS, DIMENSIONS AND ELEVATIONS.
3. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF DEPRESSED SLAB AREAS AND DRAINS. SLOPE SLAB TO DRAIN WHERE INDICATED.
4. ALL INTERIOR AND EXTERIOR FLOOR SLABS ARE TO RECEIVE ONE (1) COAT OF EVAPORATION REDUCER (CONSPEC AQUAFILM (OR EQUIVALENT) APPLIED TO FRESHLY PLACED CONCRETE IMMEDIATELY AFTER SCREEDING AND/OR AFTER THE FIRST FLOATING OPERATION. EVAPORATION REDUCER IS NOT RECOMMENDED FOR USE DURING COLUMN AND OTHER PLACEMENT.
5. FLOOR SLAB AREAS ARE TO RECEIVE 2 - COATS OF 25% MIN. SOLIDS ACRYLIC HARDNER AND SEALER (CONSPEC INTRASEAL, OR EQUIVALENT). APPLICATION IS TO CONFORM TO MANUFACTURER'S RECOMMENDATIONS. FIRST COAT IS FOR CURING, SECOND COAT IS FOR SEALING AND DUST PROOFING AFTER BUILDING CONSTRUCTION IS COMPLETE.
6. FLOOR SLAB MAY RECEIVE DENSIFIER APPLICATION (NOX-CRETE DURONOX, CONSPEC INTRASEAL, OR SHAFORD FORMULA, OR EQUIVALENT) IN PLACE OF ACRYLIC FLOOR SEALER. DENSIFIERS DO NOT CONFORM WITH ASTM C 939 AND MAY REQUIRE A CURING COMPOUND PRIOR TO APPLICATION OF DENSIFIER. CURING COMPOUND REQUIREMENT IS TO BE BASED ON CLIMATE CONDITIONS DURING TIME OF CONCRETE PLACEMENT. CONTRACTOR TO CONTACT ENGINEER FOR RECOMMENDATIONS.
7. DUE TO THE LACK OF SPECIFIC GEOTECHNICAL INFORMATION FOR SPECIFIC FLOOR LOADING REQUIREMENTS, THIS SLAB ON GRADE HAS BEEN DESIGNED USING A SUBGRADE MODULES = 120 PSF AND DESIGN LOADING OF 100 PSF.
8. SEE GEOTECHNICAL REPORT/GEOTECHNICAL ENGINEER FOR 10 MIL LAYER RADARD AND UNDERSLAB DRAINAGE FILL REQUIREMENTS.

MASONRY:

1. MASONRY CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATION FOR MASONRY STRUCTURES (ACI 530.1-02)".
2. ALL HOLLOW CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C-90, LIGHTWEIGHT. MINIMUM NET COMPRESSIVE STRENGTH (f_m) SHALL BE 1,500 PSI. ALL BLOCK CELLS WHERE REBAR OCCURS SOLID WITH GROUT. SUBMIT VERIFICATION OF ALL MATERIALS TO ARCHITECT FOR APPROVAL.
3. ALL BRICK UNIT MASONRY SHALL CONFORM TO ASTM C-216, GRADE SW, TYPE FBS. MINIMUM NET COMPRESSIVE STRENGTH (f_m) SHALL BE 1,000 PSI. VERIFICATION OF ALL MATERIALS TO ARCHITECT FOR APPROVAL.
4. PORTAR SHALL BE PORTLAND CEMENT-LIME MIX (PORTLAND CEMENT SHALL COMPLY WITH ASTM C 150, TYPE I OR III, AND AGGREGATE SHALL COMPLY WITH ASTM C 207) OR MORTAR CEMENT ASTM C 1329 - TYPE S. THE USE OF PORTLAND CEMENT IS STRICTLY FORBIDDEN.
5. GROUT FOR UNIT MASONRY SHALL COMPLY WITH ASTM C 476 (SLUMP 8 TO 11 INCHES). AGGREGATE FOR MORTAR SHALL COMPLY WITH ASTM C 144 AND AGGREGATE FOR GROUT SHALL COMPLY WITH ASTM C404. COMPRESSIVE STRENGTH SHALL BE GREATER THAN OR EQUAL TO 2,000 PSI OR f_m, WHICHEVER IS GREATER. TESTING SHALL BE DONE IN AN ABSORBENT MOLD IN ACCORDANCE WITH ASTM C 1019.
6. MASONRY JOINT REINFORCEMENT SHALL COMPLY WITH ASTM A-951 AND SHALL BE HOT DIPPED GALVANIZED, CARBON STEEL. BRICK TIES SHALL CONFORM TO SEISMIC DESIGN CATEGORY REQUIREMENTS (SUBMIT FOR APPROVAL). BRICK TIES USED IN SEISMIC DESIGN CATEGORY D AND E SHALL HAVE A CONTINUOUS 3/16" DIAMETER GALVANIZED WIRE ROD EMBEDDED INTO THE BRICK MORTAR JOINT (HECKMAN SEISMIC POS-1-TIE OR EQUIVALENT). BRICK TIES USED IN SEISMIC DESIGN CATEGORY F SHALL HAVE A CONTINUOUS 1/4" DIAMETER GALVANIZED WIRE ROD EMBEDDED IN THE MORTAR JOINT. PROVIDE IN LENGTHS NOT LESS THAN 10 FEET IN LENGTH WITH PREFABRICATED CORNER AND TEE UNITS. FOR MULTIPLE MASONRY PROVIDE ADJUSTABLE 2-PIECE UNITS. PROVIDE CONTINUITY AT CORNERS AND WALL INTERSECTIONS BY USING PREFABRICATED "L" AND "T" SECTIONS. LAP REINFORCEMENT A MINIMUM OF 6". SPACE REINFORCEMENT NOT MORE THAN 16" O.C. CUT REINFORCEMENT NOT MORE THAN 8" ABOVE OR BELOW WALL OPENINGS AND EXTENDING 24" BEYOND OPENINGS. OUT REINFORCEMENT AT CONTROL AND EXPANSION JOINTS UNLESS NOTED OTHERWISE.

7. THE MASONRY CONTRACTOR SHALL PROVIDE ALL REQUIRED TEMPORARY WALL BRACING DURING CONSTRUCTION.

8. THE MINIMUM QUALITY ASSURANCE PROGRAM FOR NON-ESSENTIAL FACILITIES SHALL COMPLY WITH TABLE 1.14.2 OF ACI 530-02. THE MINIMUM QUALITY ASSURANCE PROGRAM FOR ESSENTIAL FACILITIES SHALL COMPLY WITH TABLE 1.14.3 OF ACI 530-02.

STRUCTURAL STEEL:

1. ALL W-SHAPE STRUCTURAL STEEL SHALL BE ASTM A992, ALL OTHER STRUCTURAL SHAPES SHALL BE ASTM A-36, SQUARE OR RECTANGULAR HSS SHAPES SHALL CONFORM TO ASTM A-500, GRADE B, ROUND HSS SHAPES SHALL CONFORM TO ASTM A-500, GRADE B. STRUCTURAL STEEL PIPE COLUMNS SHALL CONFORM TO ASTM A-501 OR ASTM A-53, TYPE E OR S. GRADE B. DESIGN, DETAILING, FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE AISC CODE AND DETAILING MANUAL. NO STRUCTURAL MEMBERS SHALL BE SPliced EXCEPT AS SHOWN ON APPROVED SHOP DRAWINGS.
2. ALL TIMBER CONNECTORS, ANCHORS, FASTENERS, TIES, STRAPS, BASES, CAPS, ETC. SHALL BE SIMPSON "STRONG-TIE" (OR EQUIVALENT). CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS. ALL CONNECTORS IN CONTACT WITH PRESSURE-TREATED LUMBER SHALL MEET THE REQUIREMENTS OF ASTM A653 (CLASS G185) OR ASTM A153.
3. ALL LOAD BEARING TIMBER WALL STUDS SHALL BE SOUTHERN PINE NO. 2 (SURFACE AT 19% MOISTURE CONTENT). TYPICAL UNLESS NOTED OTHERWISE.
4. ALL FRAMED LUMBER SHALL HAVE THE FOLLOWING MINIMUM ALLOWABLE STRESS STRESSES - UNLESS NOTED OTHERWISE (SURFACED AT 19% MOISTURE CONTENT):

ELEMENT	BENDING Fb-PSI	SHEAR Fv-PSI	COMPRESSION Fc-PSI	MODULUS OF ELASTICITY E-PSI
2"-4" THICK 2"-4" WIDE	1,100	175	1,450	1,400,000
2"-4" THICK 5"-6" WIDE	1,000	175	1,400	1,400,000
2"-4" THICK 8" WIDE	925	175	1,350	1,400,000
2"-4" THICK 10" WIDE	800	175	1,300	1,400,000
2"-4" THICK 12" WIDE	750	175	1,250	1,400,000

4. ALL TIMBER IN CONTACT WITH CONCRETE OR MASONRY OR EXPOSED TO WEATHER SHALL BE PRESSURE TREATED.
5. ALL TIMBER CONNECTORS SHALL NOT BE LESS THAN THOSE SPECIFIED IN CHAPTER 23 OF THE CURRENT BUILDING UNLESS NOTED OTHERWISE.
6. GENERAL CONTRACTOR SHALL COORDINATE LOCATION OF TRUSSES WITH OTHER TRADES - SHIFT TRUSSES A MAXIMUM OF 3" AS REQUIRED.
7. ALL TRUSS TONGUE AND GROOVE PLYWOOD/OSB PANELS SHALL HAVE 1/8" GAP AT ALL PANEL EDGES. PROVIDE SIMPSON PCLIP (OR EQUIVALENT) PLYWOOD CLIPS @ 24" AT PANEL EDGES OF ALL ROOF PLYWOOD/OSB SHEATHING.
8. FORMED DECK FRAMING:
9. COLD FORMED STEEL FRAMING SHALL BE AS PER THE LATEST EDITION OF A151.
10. METAL STUDS SHALL BE DESIGNED BY A STRUCTURAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF THE PROJECT. DESIGNS SHALL BE SEALED AND SIGNED BY HIM/HER AND SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL. SUBMIT SHOP DRAWINGS SHOWING LAYOUT OF STUDS AND STRUCTURAL FRAMING, INCLUDING ARRANGEMENT, DIMENSIONS, MATERIALS, STRESS VALUES, CONNECTORS, ANCHORAGE, AND RELATION TO ADJACENT WORK TO ARCHITECT FOR APPROVAL. METAL STUDS USED FOR BRICK BACKUP SHALL BE LIMITED IN DEFLECTION TO L_s/600.
11. ALL METAL STUDS SHALL BE CLARK (OR EQUIVALENT). ALL METAL STUDS SHALL HAVE A MINIMUM F_y = 50 KSI YIELD STRENGTH FOR 16 GAUGE AND HEAVIER AND F_y = 33 KSI FOR 18 GAUGE AND LIGHTER, AND ALL STUD RUNNERS SHALL HAVE A MINIMUM F_y = 33 KSI YIELD STRENGTH. ALL CLIP ANGLES AND ACCESSORIES SHALL HAVE A MINIMUM F_y = 40 KSI YIELD STRENGTH. SCREW FASTENERS SHALL BE #12-14 SCREWS UNLESS NOTED OTHERWISE. POWDER ACTUATED FASTENERS SHALL BE HILTI DX FASTENERS (OR EQUIVALENT). SUBMIT SHOP DRAWINGS SHOWING LAYOUT OF STUDS AND STRUCTURAL FRAMING, INCLUDING ARRANGEMENT, DIMENSIONS, MATERIALS, STRESS VALUES, CONNECTORS, ANCHORAGE, AND RELATION TO ADJACENT WORK TO ARCHITECT FOR APPROVAL.
12. ALL STUDS SHALL BE LATERALLY BRACED WITH MECHANICAL BRACING INSTALLED @ 48" O.C. MAXIMUM.
13. CONTINUOUS OR RUNNERS SHALL BE OF THE SAME GAUGE (OR HEAVIER) AS THAT OF THE FRAMING MEMBER BEING CONNECTED U.N.O.

STRUCTURAL DESIGN CRITERIA:

DESIGN:

1. STRUCTURAL DESIGN CONFORMS TO THE REQUIREMENTS OF THE NORTH CAROLINA BUILDING CODE, 2012 EDITION AND ASCE 7-05.
2. FLOOR LIVE LOADS USED IN DESIGN (POUNDS PER SQUARE FOOT):

RETAIL	100 PSF
LIVE SNOW - Pg	20 PSF
SNOW - Pf	10 PSF
SNOW EXPOSURE FACTOR, Ce	1.0
SNOW LOAD IMPORTANCE FACTOR, Is	1.0
SNOW THERMAL FACTOR, Ct	1.0
SNOW ROOF SLOPE FACTOR, Cs	1.0 (SLIDING SNOW)

3. BUILDING CODE REQUIRED ROOF LIVE AND SNOW LOAD USED IN DESIGN (POUNDS PER SQUARE FOOT):

ROOF DEAD LOAD	3 PSF
ROOFING (SINGLY MECHANICALLY FASTENED)	3 PSF
INSULATION	2 PSF
DECK	2 PSF
HANDICAPPED	3 PSF
SPRINKLER	5 PSF
JOISTS	3 PSF

5. WIND LOAD DATA:

BASE WIND SPEED, V	90 MPH
WIND IMPORTANCE FACTOR, Iw	1.0
WIND EXPOSURE	C

CALCULATED WIND BASE SHEARS (FOR MFRS) Vx = 9.7K Vy = 26.9K

6. SEISMIC LOAD DATA:

SEISMIC DESIGN CATEGORY A - COMPLIANCE WITH SECTION 1616.4? YES

SEISMIC DESIGN CATEGORY B, C & D

SEISMIC IMPORTANCE FACTOR, Ie	1.0
SEISMIC USE GROUP	1

DUE TO LACK OF GEOTECHNICAL INFORMATION THE FOLLOWING SOIL SITE CLASS WAS ASSUMED:

SOIL SITE CLASS	C
SPECTRAL RESPONSE ACCELERATION - SHORT PERIOD, SDS	0.274g
SPECTRAL RESPONSE ACCELERATION - 1.0 SECOND, S01	0.125g
SEISMIC DESIGN CATEGORY	B

BASIC SEISMIC-FORCE RESISTING SYSTEM

ORDINARY MASONRY SHEAR WALLS	2
RESPONSE MODIFICATION COEFFICIENT, R	2
DEFLECTION AMPLIFICATION FACTOR, Cd	H-NL
BUILDING HEIGHT LIMIT, FEET	H-NL
EQUIVALENT LATERAL-FORCE PROCEDURE	

BASIC SEISMIC-FORCE RESISTING SYSTEM

BUILDING FRAME SYSTEM/INTERMEDIATE REINFORCED MASONRY SHEAR WALLS	4
RESPONSE MODIFICATION COEFFICIENT, R	4
DEFLECTION AMPLIFICATION FACTOR, Cd	H = NL
BUILDING HEIGHT LIMIT, FEET	H = NL
EQUIVALENT LATERAL-FORCE PROCEDURE	

SEISMIC BASE SHEAR Vx = 14.4K Vy = 25.2K

ARCHITECTURAL, MECHANICAL, COMPONENTS ANCHORED? YES

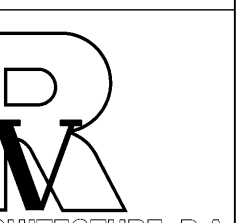
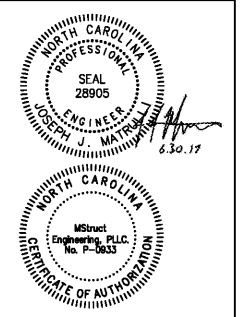
LATERAL DESIGN CONTROLLED BY: X WIND SEISMIC

SOIL BEARING CAPACITIES:

FIELD TEST (PROVIDED COPY OF TEST REPORT)	2000 PSF
PRESUMPTIVE BEARING CAPACITY	NA
PILE SIZE, TYPE AND CAPACITY	NA

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