GENERAL NOTES

I. GENERAL
- A. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, SHOP DRAWINGS AND SPECIFICATIONS.
- B. IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL CONTRACT DOCUMENTS AND LATEST ADDENDA AND TO SUBMIT TO ALL SUBCONTRACTORS AND SUPPLIERS PRIOR TO THE SUBMITTAL OF SHOP DRAWINGS.
- C. THE GENERAL CONTRACTOR SHALL COMPARE ALL CONTRACT DRAWINGS AND REPORT ANY DISCREPANCY BETWEEN DISCIPLINES AND WITHIN A GIVEN DISCIPLINE TO THE ARCHITECT AND ENGINEER PRIOR TO FABRICATION AND ERECTION.
- D. IF A CONFLICT EXISTS AMONG THE STRUCTURAL DRAWINGS, GENERAL NOTES, OR THE SPECIFICATIONS, THE STRICTEST REQUIREMENTS, AS INDICATED BY THE ENGINEER, SHALL GOVERN.
- E. THE CONTRACTOR SHALL COORDINATE ALL ELEVATIONS AND DIMENSIONS, INCLUDING BUT NOT LIMITED TO THOSE FOR OPENINGS IN WALLS AND IN ROOF AND FLOOR SYSTEMS, WITH THE ARCHITECTURAL, PLUMBING, ELECTRICAL, AND MECHANICAL PLANS.
- F. THE COMPLETED LATERAL-FORCE RESISTING SYSTEMS AND DIAPHRAGMS ARE REQUIRED FOR THE STRUCTURE TO RESIST LATERAL LOADS AND PROVIDE STABILITY UNDER GRAVITY LOADS. DURING THE CONSTRUCTION PROCESS, THE CONTRACTOR SHALL PROVIDE ALL REQUIRED BRACING DURING CONSTRUCTION TO MAINTAIN THE STABILITY AND SAFETY OF ALL STRUCTURAL ELEMENTS UNTIL THE LATERAL-LOAD RESISTING OR STABILITY-PROVIDING SYSTEM IS COMPLETELY INSTALLED AND THE STRUCTURE IS COMPLETELY TIED TOGETHER.
- G. UNLESS OTHERWISE NOTED, DETAILS SHOWN ON ANY DRAWING ARE TO BE CONSIDERED TYPICAL FOR ALL SIMILAR CONDITIONS.
- H. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS AND METHODS AND FOR SAFETY PRECAUTIONS AND PROGRAMS.
- I. BRITT, PETERS & ASSOCIATES, INC. SHALL NOT BE RESPONSIBLE FOR THE ACTS OR OMISSION OF THE CONTRACTOR OR FOR THEIR FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- J. THE BUILDING OWNER SHALL PROVIDE PERIODIC MAINTENANCE TO INSURE STRUCTURAL INTEGRITY. SUCH MAINTENANCE SHALL INCLUDE BUT NOT LIMITED TO PAINTING OF STEEL, PROTECTIVE COATING FOR CONCRETE, SEALANTS, CAULKED JOINTS, EXPANSION JOINTS, CONTROL JOINTS, SPALLS AND CRACKS IN CONCRETE, AND PRESSURE WASHING OF EXPOSED STRUCTURAL ELEMENTS.

II. DESIGN CRITERIA
- A. THE CONTRACT DOCUMENTS ARE BASED ON THE REQUIREMENTS OF THE NORTH CAROLINA STATE BUILDING CODE 2018
- B. DEAD LOADS
  - 1. TYPICAL ROOF SYSTEMS: (20 PSF TOTAL)
    - a. MEP*: 10 PSF
    - b. INSULATION & ROOFING: 10 PSF
    - * MISCELLANEOUS CEILING AND HANGING MECHANICAL LOADS SUCH AS DUCT WORK AND SPRINKLER PIPES.
- C. LIVE LOADS*
  - 1. LIVE LOADS ARE BASED ON THE MORE RESTRICTIVE OF THE UNIFORM LOAD LISTED BELOW OR THE CONCENTRATED LOAD LISTED ACTING OVER A 6.25 SQUARE FOOT AREA EXCEPT FOR PARKING GARAGES WHICH ACT OVER AN AREA OF 20 SQUARE INCHES. LIVE LOADS HAVE BEEN REDUCED AS PRESCRIBED IN THE AFOREMENTIONED BUILDING CODE.

CATEGORY	UNIFORM LOAD (PSF)	CONCENTRATED LOAD (LBS)
a. ROOFS		
ALL ROOF SURFACES SUBJECT TO WORKERS		300
ORDINARY ROOF	20	

- D. DESIGN SNOW LOAD:

GROUND SNOW LOAD,	PG	15 PSF
FLAT ROOF SNOW LOAD,	PF	10 PSF
EXPOSURE FACTOR,	CE	1.0
SNOW THERMAL FACTOR,	CT	1.0
SNOW IMPORTANCE FACTOR,	I	1.0

- E. DESIGN WIND LOADS:

BASIC WIND SPEED,	Vult/asd	115/90 MPH	(3-SEC GUST)
WIND IMPORTANCE FACTOR,	I	1.0	
EXPOSURE		B	
INTERNAL PRESSURE COEFF	GCPI	±0.18	

Design Wind Pressure (psf):

			Effective Wind Area (sqft)					
Walls:			10	20	50	100	200	500
Interior	Area 4	+	18.8	18.0	16.9	16.0	16.0	16.0
		-	-20.4	-19.6	-18.4	-17.6	-16.8	-16.0
Edge	Area 5	+	18.8	18.0	16.9	16.0	16.0	16.0
		-	-25.1	-23.4	-21.2	-19.6	-17.9	-16.0
Roof:			10	20	50	100	200	500
Interior	Area 1	+	16.0	16.0	16.0	16.0	16.0	16.0
		-	-20.6	-20.0	-19.3	-18.8	-18.8	-18.8
Edge	Area 2	+	18.8	18.0	16.9	16.0	16.0	16.0
		-	-34.5	-30.8	-26.0	-22.3	-22.3	-22.3
Corner	Area 3	+	18.8	18.0	16.9	16.0	16.0	16.0
		-	-34.5	-30.8	-26.0	-22.3	-22.3	-22.3
Overhang:			10	20	50	100	200	500
Interior	Area 1	+	16.0	16.0	16.0	16.0	16.0	16.0
		-	-29.6	-29.1	-28.4	-27.9	-24.2	-19.3
Edge	Area 2	+	16.0	16.0	16.0	16.0	16.0	16.0
		-	-29.6	-29.1	-28.4	-27.9	-24.2	-19.3
Corner	Area 3	+	16.0	16.0	16.0	16.0	16.0	16.0
		-	-48.8	-38.3	-24.4	-16.0	-16.0	-16.0

Parapet Design Pressure (psf):

			Effective Wind Area (sqft)					
Parapet:			10	20	50	100	200	500
Edge	Area 2	+	56.4	51.0	43.9	38.5	37.5	36.1
		-	-39.5	-37.5	-34.8	-32.8	-30.8	[illegible]
Corner	Area 3	+	56.4	51.0	43.9	38.5	37.5	36.1
		-	-45.1	-42.1	-38.2	-35.2	[illegible]	[illegible]

Width of pressure coeff. zone, a: 7.2 ft

- F. SEISMIC LOADS:

SHORT PERIOD SPECTRAL RESPONSE ACCELERATION,	SS	0.180g
1-SEC PERIOD SPECTRAL RESPONSE ACCELERATION,	S1	0.084g
SHORT PERIOD DESIGN SPECTRAL RESPONSE ACCELERATION,	SDS	0.192g
1-SEC PERIOD DESIGN SPECTRAL RESPONSE ACCELERATION,	SD1	0.134g
OCCUPANCY CATEGORY	GROUP	II
SEISMIC DESIGN CATEGORY		B
SITE CLASS		D
BASIC SEISMIC-FORCE RESISTING SYSTEM: LIGHT FRAME WOOD SHEAR WALLS		
RESPONSE MODIFICATION FACTOR,	R	6.5
DEFLECTION AMPLIFICATION FACTOR,	CD	4
SEISMIC IMPORTANCE FACTOR	IE	1.0
SEISMIC RESPONSE COEFFICIENT	CS	0.027
ANALYSIS PROCEDURE:	EQUIVALENT LATERAL FORCE	
DESIGN BASE SHEAR	V	6

- G. THE CONTRACTOR SHALL VERIFY ALL MECHANICAL EQUIPMENT WEIGHTS, LOCATIONS AND ASSOCIATED OPENINGS WITH THE MECHANICAL CONTRACTOR AND SUBMIT SUCH INFORMATION PRIOR TO FABRICATION OF THE SUPPORTING STRUCTURE. PROMPTLY NOTIFY THE ENGINEER IF THE ACTUAL WEIGHT EXCEEDS THE WEIGHT SHOWN ON THE STRUCTURAL DRAWINGS.
- H. PROVISIONS SHALL BE MADE IN THE DETAILING, FABRICATION, AND ERECTION OF ALL CLADDING, PARTITIONS, WALLS, ETC. TO ACCOUNT FOR FLOOR TO FLOOR DEFLECTIONS AND LATERAL FRAME DEFLECTION.

III. FOUNDATIONS
- A. AN ALLOWABLE BEARING CAPACITY OF 2,000PSF HAS BEEN ASSUMED AND SHALL BE CONFIRMED BY A QUALIFIED SOILS ENGINEER PRIOR TO PLACEMENT OF CONCRETE.
- B. CONTRACTOR SHALL OBTAIN A COPY OF THE SOILS REPORT AND ADHERE TO ALL RECOMMENDATION WITHIN, INCLUDING PREPARATION OF SOILS AT BUILDING PAD.
- C. ALL SOILS WORK, INCLUDING BACKFILL OF UTILITY TRENCHES AND THE VERIFICATION OF BEARING CAPACITY OF SAME SHALL BE UNDER THE DIRECTION OF A QUALIFIED SOILS ENGINEER. PROXIMITY OF UTILITY TRENCHES TO BUILDING FOUNDATION SYSTEM SHALL BE AS APPROVED BY THE SOILS ENGINEER TO INSURE INTEGRITY OF THE BEARING SOILS.
- D. ALL FOOTINGS SHALL BEAR ON UNDISTURBED EARTH OR ENGINEERED FILL AT ELEVATIONS SHOWN ON PLANS AND DETAILS. GC TO COORDINATE FINAL TOP OF FOOTING ELEVATIONS WITH THE ARCHITECTURAL ELEVATIONS, MEP DRAWINGS, AND CIVIL GRADING PLANS PRIOR TO PLACEMENT. FOOTING STEPS DENOTED ON PLAN ARE APPROXIMATE, UNLESS NOTED OTHERWISE, AND SHALL BE FIELD COORDINATED.
- E. FLOOR SLABS SHALL BEAR ON 4 INCHES OF COMPACTED STONE MINIMUM UNLESS OTHERWISE NOTED IN THE GEOTECHNICAL REPORT. THE MOISTURE RETARDER SHALL BE PLACED BETWEEN THE STONE AND THE SLAB.
- F. NO FOUNDATION CONCRETE SHALL BE INSTALLED UNTIL ALL FOUNDATION WORK HAS BEEN COORDINATED WITH UNDERGROUND UTILITIES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD OF ALL CONFLICTS THAT EXIST BETWEEN FOOTINGS AND UTILITIES.
- G. ALL FOUNDATIONS OR PORTIONS THEREOF, BELOW GRADE MAY BE EARTH FORMED BY NEAT EXCAVATIONS.
- H. UNLESS OTHERWISE SHOWN, ALL FOOTINGS SHALL BE CENTERED ON WALLS AND/OR COLUMNS.
- I. THE CONTRACTOR SHALL DETERMINE THE EXTENT OF CONSTRUCTION DEWATERING REQUIRED FOR THE EXCAVATION. THE CONTRACTOR SHALL SUBMIT TO THE GEOTECHNICAL ENGINEER FOR REVIEW THE PROPOSED PLAN FOR CONSTRUCTION DEWATERING, PRIOR TO EXCAVATION.
- J. FOOTINGS SHALL NOT BE PLACED ON FROZEN SUBGRADE OR IN STANDING WATER.

IV. CONCRETE
- A. CONCRETE SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
  CONCRETE 28-DAY COMPRESSIVE STRENGTH AND DENSITY REQUIREMENTS:

USAGE	STRENGTH (PSI)	CONC. TYPE	COMMENTS
a. ALL CONCRETE NOT OTHERWISE SPECIFIED	4000	NWT	
b. FOOTINGS	3000	NWT	
c. SLAB-ON-GRADE	3000	NWT	

  - 1. NWT = NORMAL WEIGHT CONCRETE
  - 2. ALL CONCRETE SHALL HAVE ALLOWABLE UNIT SHRINKAGE OF 0.045% AT 28 DAYS. (SEE ASTM C157)
  - 3. ALL SLABS TO RECEIVE MOISTURE SENSITIVE FLOOR COVERINGS SHALL HAVE MAXIMUM WATER/ CEMENT RATIO OF 0.45.
- B. CONCRETE SHALL CONFORM TO THE FOLLOWING DURABILITY REQUIREMENTS PER ACI-318 SECTION 4.2 & 4.3:

EXPOSURE/LOCATION	
a. FOOTINGS	F0, S0, P0, C1
b. INTERIOR SLABS, COLUMNS, WALLS	F0, S0, P0, C0

- C. ALL CONCRETE CONSTRUCTION SHALL CONFORM TO THE CURRENT "ACI MANUAL OF CONCRETE PRACTICE".
- D. PORTLAND CEMENT SHALL CONFORM TO ASTM C-150, TYPE I OR II.
- E. ALL AGGREGATE FOR NORMAL WEIGHT CONCRETE SHALL MEET ASTM C 33.
- F. ALL REINFORCEMENT SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS:
  - 1. ALL REINFORCING, UNO: ASTM A615 GRADE 60
  - 2. WELDED WIRE REINFORCEMENT (WWR):
    - a. SMOOTH WIRE: ASTM A 185 (65 KSI)
    - b. POLYPROPYLENE FIBRILLATED FIBER MAY BE USED TO SUBSTITUTE WWR IN SLABS ON GRADE, WHEN ADDED TO CONCRETE MIX ACCORDING TO MANUFACTURER'S INSTRUCTIONS AND RECOMMENDED DOSAGES.
- G. REINFORCEMENT DETAILING:
  - 1. REINFORCEMENT SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH ACI 315.
  - 2. DEVELOPMENT AND SPLICE LENGTHS ARE IN TENSION UNLESS OTHERWISE INDICATED AND SHALL BE AS TABULATED IN THE SPLICE LENGTH TABLE. UNLESS OTHERWISE INDICATED.
  - 3. LAP WWR ONE CROSSWIRE SPACING PLUS 2".
  - 4. PROVIDE CORNER BARS AT ALL FOOTINGS AND WALL INTERSECTIONS TO MATCH HORIZONTAL REINFORCING SIZE AND SPACING. AT INTERSECTIONS OF CONTINUOUS SPREAD FOOTINGS EXTEND ALL BARS TO FAR SIDE OF INTERSECTING FOOTING
  - 5. REINFORCEMENT SHALL BE SECURELY PLACED TO PREVENT DISPLACEMENT DURING CONCRETE PLACEMENT. PROVIDE THE FOLLOWING CONCRETE COVER FOR REINFORCING [ACI 318 SECTION 7.7 AND IBC TABLE 720.1], UNLESS SPECIFICALLY DETAILED OTHERWISE:
    - a. CAST AGAINST EARTH 3"
    - b. EXPOSED TO EARTH/WEATHER
      - #6 THRU #18 2"
      - #5 & SMALLER 1 1/2"
  - 6. PROVIDE DOWELS TO MATCH REINFORCEMENT SIZE AND SPACING INDICATED FOR ALL STRUCTURAL ELEMENTS, UNLESS OTHERWISE INDICATED.
- H. FOUNDATION WALLS, GRADE BEAMS AND FOOTINGS SHALL BE CAST IN ALTERNATE PANELS NOT TO EXCEED 60'-0" IN LENGTH. SHEAR KEYS SHALL BE PROVIDED AT EACH CONSTRUCTION JOINT AND SHALL BE LOCATED AT 1/3 POINTS OF SPANS.
- I. CHAMFER ALL PERMANENTLY EXPOSED CONCRETE EDGES 3/4 INCH, UNLESS NOTED OTHERWISE.
- J. SEE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR LOCATIONS OF OPENINGS AND SLEEVES IN CONCRETE WALLS AND SUPPORTED FLOORS. SPREAD REINFORCEMENT AT OPENINGS AND SLEEVES UNLESS OTHERWISE SHOWN. DO NOT CUT REINFORCEMENT. SEE TYPICAL REINFORCEMENT DETAILS FOR OPENINGS IN SLABS AND WALLS FOR ADDITIONAL REQUIREMENTS.
- K. NO HOLES OR OPENINGS THROUGH FOUNDATION WALLS AND/OR FOOTINGS WITHOUT ENGINEER'S APPROVAL.
- L. ALUMINUM SHALL NOT BE EMBEDDED IN ANY CONCRETE.

V. POST-INSTALLED ANCHORS
- A. POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE DRAWINGS.
- B. CONTRACTOR SHALL OBTAIN APPROVAL FROM ENGINEER OF RECORD PRIOR TO USING POST-INSTALLED ANCHORS FOR MISSING OR MISPLACED CAST-IN-PLACE ANCHORS.
- C. CARE SHALL BE GIVEN TO AVOID CONFLICTS WITH EXISTING REBAR. HOLES SHALL BE DRILLED AND CLEANED PER THE MANUFACTURER'S INSTRUCTIONS. ANCHORS SHALL BE INSTALLED PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AT NOT LESS THAN MINIMUM EDGE DISTANCES AND/OR SPACING INDICATED IN THE MANUFACTURER'S LITERATURE. CONTACT MANUFACTURER PRIOR TO ANCHOR INSTALLATION, IF TRAINING IS REQUIRED.
- D. UNLESS SPECIFIED OTHERWISE, ANCHORS SHALL BE EMBEDDED IN THE APPROPRIATE SUBSTRATE WITH A MINIMUM EMBEDMENT OF 8 TIMES THE NOMINAL ANCHOR DIAMETER OR THE EMBEDMENT REQUIRED TO SUPPORT THE INTENDED LOAD.
- E. ADHESIVE ANCHOR DESIGN BOND STRENGTH HAS BEEN BASED ON CRACKED CONCRETE, ACI 355.4 TEMPERATURE CATEGORY B, AND INSTALLATIONS INTO DRY HOLES DRILLED USING A HAMMER DRILL INTO CONCRETE THAT HAS CURED FOR AT LEAST 21 DAYS. ADHESIVE ANCHORS SHALL BE INSTALLED BY A CERTIFIED ADHESIVE ANCHOR INSTALLER PER ACI 318-11, D.9.2.2 WHERE INDICATED ON THE CONTRACT DOCUMENTS. INSTALLATION REQUIRING CERTIFIED INSTALLERS SHALL BE INSPECTED PER ACI 318-11, D.9.2.4.
- F. SUBSTITUTION REQUESTS, FOR PRODUCTS OTHER THAN THOSE LISTED BELOW, SHALL BE SUBMITTED TO THE ENGINEER WITH CALCULATIONS THAT ARE PREPARED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER SHOWING THAT THE SUBSTITUTED PRODUCT WILL ACHIEVE AN EQUIVALENT CAPACITY USING THE APPROPRIATE DESIGN PROCEDURE REQUIRED BY THE BUILDING CODE.
- G. ACCEPTABLE PRODUCTS ARE:
  - 1. CONCRETE MECHANICAL ANCHORS:
    - a. HILTI KB-TZ
    - b. HILTI KWIK HUS-EZ
    - c. SIMPSON STRONG-TIE TITEN-HD
    - d. SIMPSON STRONG-TIE "STRONG-BOLT 2"
  - 2. CONCRETE ADHESIVE ANCHORS:
    - a. HILTI RE 500-SD
    - b. HILTI HY 200
    - c. SIMPSON STRONG-TIE "SET-XP"
    - d. SIMPSON STRONG-TIE "AT-XP"

VI. STRUCTURAL STEEL
- A. ALL HOT ROLLED STEEL PLATES, SHAPES, SHEET PILING, AND BARS SHALL BE NEW STEEL CONFORMING TO ASTM SPECIFICATION A6-98A.
- B. STRUCTURAL STEEL SHALL BE AS FOLLOWS, U.N.O.:

1. WIDE FLANGE SHAPES:	ASTM A992	FY = 50 KSI
2. STRUCTURAL RECTANGULAR TUBING:	ASTM A500 GRADE B	FY = 46 KSI
3. ALL OTHER STRUCTURAL STEEL:	ASTM A36	FY = 36 KSI

  - 4. CONNECTION MATERIALS:
    - a. BEAM COLUMN STIFFENER PLATES AND DOUBLER PLATES: ASTM A572 GRADE 50
    - b. ALL OTHER CONNECTION MATERIAL, U.N.O.: ASTM A36 UNLESS A HIGHER GRADE OF STEEL IS REQUIRED BY STRENGTH AND PROVIDED THE RESULTING SIZES ARE COMPATIBLE WITH THE CONNECTED MEMBERS.
  - 5. ASTM A572 GRADE 50 IS ACCEPTABLE AS A SUBSTITUTE FOR A992.
- C. STRUCTURAL STEEL SHALL MEET THE LATEST AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
- D. THE CENTERLINES OF ALL COLUMNS AND BEAMS SHALL BE LOCATED ON COLUMN LINES UNLESS OTHERWISE SHOWN.
- E. CONNECTIONS:
  - 1. BOLTS SHALL BE A325N TYPE 1, UNLESS OTHERWISE INDICATED.
  - 2. ALL BOLTS SHALL BE SNUG TIGHT, UNLESS NOTED OTHERWISE, BOLTS SHALL BE TIGHTENED UNTIL ALL PLIES OF THE JOINT ARE IN FIRM CONTACT.
  - 3. ANCHOR RODS SHALL CONFORM TO ASTM F1554, GRADE 36, UNLESS NOTED OTHERWISE.
  - 4. THREADED RODS SHALL CONFORM TO ASTM A36.
  - 5. WELDING SHALL CONFORM TO THE STANDARDS SET FORTH IN AWS PUBLICATION, "WELDING IN BUILDING CONSTRUCTION".
  - 6. UNLESS NOTED OTHERWISE, ELECTRODES FOR WELDING SHALL CONFORM TO E70XX (SMAW), F7XX-EXXX (SAW), ER70S-X (GMAW), OR E7XT-X (FCAW).
  - 7. ALL ERECTION DRAWINGS SHALL SHOW ALL FIELD WELDS REQUIRED.
  - 8. CONNECTION DETAILS NOT COMPLETELY DETAILED ON THE DRAWINGS SHALL BE DESIGNED BY THE CONTRACTOR'S ENGINEER TO RESIST FORCES INDICATED ON THE DRAWINGS. INDICATED FORCES ARE BASED ON FACTORED LOADS AND ARE INTENDED FOR USE WITH THE LOAD AND RESISTANCE FACTOR DESIGN METHOD. WHERE NONE ARE INDICATED, BEAMS SHALL BE DESIGNED FOR AN END REACTION EQUAL TO 1/2 OF THE TOTAL UNIFORM LOAD CAPACITY TABULATED IN THE UNIFORM LOAD TABLES OF THE AISC MANUAL. THE CONTRACTOR SHALL EMPLOY THE ASSISTANCE OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT. DESIGN CALCULATIONS FOR THE CONNECTIONS DESIGNED BY THE SPECIALTY ENGINEER SHALL BE SUBMITTED FOR THE FILES OF THE ARCHITECT AND ENGINEER. CALCULATIONS SHALL BEAR THE SEAL OF THE PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT. SHOP DRAWINGS CONTAINING CONNECTIONS FOR WHICH CALCULATIONS HAVE NOT BEEN RECEIVED WILL BE RETURNED UNCHECKED AS AN INCOMPLETE SUBMITTAL. CONNECTIONS ECCENTRICITY SHALL BE TAKEN INTO ACCOUNT WHEN DESIGNED AND DETAILING THE CONNECTION.
- F. WHERE THE WORK OF OTHER TRADES REQUIRES CUTS, HOLES, ETC., IN STRUCTURAL STEEL MEMBERS, CUTS, HOLES, ETC., SHALL BE MADE IN THE SHOP AND SHALL BE SHOWN ON THE SHOP DRAWINGS. MAKING HOLES OR CUTS IN STRUCTURAL STEEL MEMBERS IN THE FIELD WILL NOT BE PERMITTED WITHOUT SPECIFIC APPROVAL OF THE ENGINEER.
- G. GROUT BELOW BASE PLATES SHALL BE NON-METALLIC, NON-SHRINK GROUT WITH A MINIMUM STRENGTH OF 6000 PSI WHEN BEARING ON 3000 PSI CONCRETE OR LESS, STRENGTH OF 8000 PSI WHEN BEARING ON CONCRETE BETWEEN 3000 AND 4000 PSI.
- H. ALL STRUCTURAL STEEL SHALL BE SHIPPED WITH ONE COAT OF SHOP PRIMER EXCEPT THOSE MEMBERS THAT ARE GALVANIZED OR IN AREAS SCHEDULED TO RECEIVE FIRE PROOFING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AREAS TO BE FIRE PROOFED.

VII. METAL STUD FRAMING
- A. DESIGN, FABRICATION, AND ERECTION SHALL CONFORM TO AISI "SPECIFICATIONS FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS", LATEST EDITION. ALL METAL STUDS SHALL BE GALVANIZED.
- B. ALL 33 MIL AND 43 MIL STUDS, JOISTS, TRACK, BRIDGING, END CLOSURES, AND ACCESSORIES SHALL BE FORMED FROM STEEL THAT CORRESPONDS TO THE REQUIREMENTS OF AISI "SPECIFICATIONS FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS" WITH A MINIMUM YIELD OF 33 KSI U.N.O. ALL 54 MIL AND THICKER MEMBERS SHALL HAVE A MINIMUM YIELD OF 50 KSI.
- C. ALL MATERIAL AND ACCESSORIES SHALL BE FORMED FROM STEEL HAVING A G-60 GALVANIZED COATING MEETING ASTM A 635.
- D. UNLESS NOTED OTHERWISE, ALL SCREWS OR PINS SHALL BE NON-CORROSIVE NO. 8-18 (D=.125") OR LARGER. DO NOT USE STAINLESS STEEL OR COPPER-COATED FASTENERS.
- E. UNLESS NOTED OTHERWISE, TRACKS SHALL BE THE SAME DEPTH AS STUDS OR JOISTS AND OF EQUAL OR THICKER GAUGE THAN STUDS OR JOISTS. TRACKS SHALL BE CONNECTED TO SUPPORT AT 16" O.C. MAX. STUDS OR JOISTS SHALL BE CONNECTED TO TRACKS AT EACH SIDE.
- F. THE QUANTITY OF STUDS AND JOISTS DISPLACED OR CUT FOR OPENING SHALL BE PLACED HALF ON EACH SIDE OF OPENING PER METAL STUD HEADER SCHEDULE ON THIS SHEET.
- G. INSTALLATION OF CURTAIN WALL FRAMING SHALL ACCOMMODATE VERTICAL DISPLACEMENT OF THE PRIMARY STRUCTURE.
- H. THE DESIGN OF SLIP TRACKS SHALL CONFORM TO GUIDELINES ESTABLISHED IN SSMA TECHNICAL NOTE NO. 1 PUBLISHED JAN. 2001.
- I. PROVIDE THE MANUFACTURER'S STANDARD TRACK, CLIP ANGLES, BRACING, REINFORCEMENTS, FASTENERS, AND ACCESSORIES AS RECOMMENDED BY THE MANUFACTURER FOR THE APPLICATION INDICATED AND AS NEEDED TO PROVIDE A COMPLETE FRAMING SYSTEM. UNLESS OTHERWISE NOTED, INSTALL THE FRAMING SYSTEM IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS.
- J. ALL EXTERIOR METAL WALL STUDS FOR ELEVATED FLOORS SHALL BE 6" - 18 GAUGE STUDS SPACED @ 16" ON CENTER, UNO. MINIMUM SECTION PROPERTIES FOR STUDS SHALL BE:
  - 1. I = 1.30 IN.
  - 2. S = 0.66 IN.
  - 3. FY = 33 KSI (MIN.)
- K. WALL SHEATHING SHALL BE FASTENED TO SUPPORTING FRAMING WITH NO. 10, FLAT-HEAD SELF-DRILLING TAPPING SCREWS WITH A MINIMUM HEAD DIAMETER OF 0.333 INCHES AT THE SPACING INDICATED BELOW UNLESS NOTED OTHERWISE IN THE SHEAR WALL SCHEDULE:
  - 1. WALL EDGE__6"OC
  - 2. SUPPORTED PANEL EDGES AWAY FROM EDGE OF WALL____6"OC
  - 3. CENTER OF PANELS12"OC
- L. PREPUNCHED HOLES SHALL NOT BE LOCATED WITHIN 10 INCHES OF THE STUD SUPPORT LOCATIONS.
- M. USE FLUX COVERED, MILD STEEL ELECTRODES AWS E-6012, E-6013, OR E-7014 FOR WELDING STEEL STUDS. ALL WELDING SHALL BE PERFORMED IN ACCORDANCE AWS PROCEDURES. CONSULT MANUFACTURER FOR EQUIPMENT RECOMMENDATIONS AND PROPER ELECTRODE SELECTION. TOUCH UP WELDED AREAS WITH A ZINC RICH PAINT.

VIII. OPEN WEB STEEL JOISTS AND JOIST GIRDERS
- A. STEEL JOISTS AND BRIDGING SHALL BE DESIGNED, FABRICATED, AND ERECTED PER SJI RECOMMENDATIONS.
- B. THE SJI LOAD TABLES SHALL BE TAKEN AS THE MINIMUM DESIGN LOADINGS FOR JOISTS. JOISTS SHALL ADDITIONALLY BE DESIGNED TO CARRY ALL OTHER LOADINGS INDICATED ON THE DRAWINGS.
- C. BRIDGING INDICATED ON PLANS IS FOR PURPOSES OF ILLUSTRATING MISCELLANEOUS ATTACHMENTS AND DETAILS ONLY. GREATER OR FEWER LINES OF BRIDGING MAY BE REQUIRED BY SJI AND THESE REQUIREMENTS WILL SUPERSEDE THE CONTRACT DOCUMENTS. SEE PLANS AND DETAILS FOR SPECIAL BRIDGING AND BRACING REQUIREMENTS.
- D. ALL JOISTS SHALL BE CAMBERED IN ACCORDANCE WITH SJI CRITERIA.
- E. STEEL JOIST SPACING SHALL NOT EXCEED SPACING INDICATED ON DRAWINGS AND PLACEMENT OF JOISTS SHALL BE CAREFULLY COORDINATED WITH PARTITIONS AND WORK OF OTHER TRADES TO AVOID INTERFERENCES.
- F. PROVIDE STABILITY BRACING FOR JOIST GIRDERS AS REQUIRED PER JOIST GIRDER MANUFACTURER.
- G. ALL STEEL JOISTS, BRIDGING, AND THEIR CONNECTIONS SHALL BE DESIGNED FOR ALL LOADS INDICATED ON THE DRAWINGS. WHERE UPLIFT LOADS ARE INDICATED, AN OPPOSING DEAD LOAD OF 10PSF MAY BE UTILIZED.
- H. JOISTS AT OR NEAREST TO CENTERLINES OF COLUMNS ARE TO HAVE BOLTED CONNECTIONS.
- I. SEAT DEPTHS SHALL BE AS FOLLOWS, ANY DEVIATIONS MUST BE APPROVED PRIOR TO SUBMITTAL OF SHOP DRAWINGS:
  - 1. K & KCS JOIST:
    - a. ≤1/4:12 SLOPE: 2.5"
    - b. >1/4:12 SLOPE: PER SJI RECOMMENDATIONS

IX. DECKING
- A. STEEL DECK SHALL BE DESIGNED AND FABRICATED IN COMPLIANCE WITH THE LATEST EDITION OF THE STEEL DECK INSTITUTE'S DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS, AND ROOF DECKS PUBLICATION.
- B. PROVIDE DECK IN LENGTHS ADEQUATE FOR A THREE-SPAN CONDITION WHERE POSSIBLE.
- C. THE CONTRACTOR SHALL VERIFY THE SIZE AND LOCATION OF ALL OPENINGS, SLEEVES, INSERTS, ETC., WITH SHOP DRAWINGS OF THE EQUIPMENT TO BE INSTALLED.
- D. STEEL DECK SHALL BE ATTACHED TO ALL MEMBERS ON WHOM IT BEARS.
- E. STEEL DECK SHALL HAVE SUFFICIENT BEARING AT END AND INTERMEDIATE SUPPORTS TO PREVENT WEB CRIPPLING (1 1/2" AND 3", RESPECTIVELY). MINIMUM SHORING BEAM WIDTHS SHALL BE PER THE DECK MANUFACTURER'S RECOMMENDATIONS.
- F. DECK MANUFACTURER SHALL PROVIDE CELL CLOSURES, COLUMN CLOSURES, FINISH STRIPS, GIRDER FILLERS, AND THE ATTACHMENTS AS REQUIRED TO ACHIEVE A COMPLETE SYSTEM.
- G. PROVIDE WELD WASHERS WHEN WELDING DECK THINNER THAN 22 GAGE MATERIAL.
- H. GENERAL CONTRACTOR SHALL SUBMIT ALL ALTERNATE PRODUCTS TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO FABRICATION OF ANY MATERIAL.

X. SUBMITTALS
- A. THE GENERAL CONTRACTORS SHALL REVIEW AND STAMP ALL SHOP DRAWINGS BEFORE SUBMITTING FOR REVIEW. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND/OR ENGINEER AND HAVE THE ENGINEER'S SHOP DRAWING STAMP AFFIXED PRIOR TO FABRICATION. FABRICATION AND ERECTION SHALL BE FROM REVIEWED SHOP DRAWINGS. PLEASE ALLOW 10 BUSINESS DAYS FOR REVIEW.
- B. A RECORD SET OF APPROVED SHOP DRAWINGS SHALL BE KEPT IN THE FIELD BY THE GENERAL CONTRACTOR.
- C. ANY DEVIATION FROM, ADDITION TO, SUBSTITUTION FOR, OR MODIFICATION TO THE STRUCTURE OR ANY PART OF THE STRUCTURE DETAILED ON THE CONTRACT DOCUMENTS SHALL BE SUBMITTED IN WRITING TO THE ENGINEER FOR REVIEW. SHOP DRAWINGS SUBMITTED FOR REVIEW DO NOT CONSTITUTE "IN-WRITING" UNLESS IT IS CLEARLY NOTED THAT SPECIFIC CHANGES ARE BEING SUGGESTED.
- D. THE CONTRACTOR SHALL PREPARE A LIST AND SCHEDULE OF ALL STRUCTURAL SUBMITTALS PRIOR TO CONSTRUCTION.
- E. THE FOLLOWING SHOP DRAWINGS SHALL BE SUBMITTED BY THE CONTRACTOR FOR THE ENGINEER'S REVIEW:
  - 1. CONCRETE MIX DESIGNS
  - 2. STRUCTURAL STEEL, SHOP AND ERECTION DRAWINGS (1, 3)
  - 3. ROOF METAL DECK
- F. ITEMS MARKED (1) SHALL HAVE SHOP DRAWINGS SEALED BY A REGISTERED ENGINEER IN THE STATE WHERE THE PROJECT IS LOCATED. ITEMS MARKED (2) SHALL HAVE DESIGN CALCULATIONS SEALED BY A REGISTERED ENGINEER IN THE STATE WHERE THE PROJECT IS LOCATED.
  - 1. CONTRACTOR SHALL SUBMIT ONE SET OF REPRODUCIBLES AND TWO SETS OF PRINTS FOR ALL SHOP DRAWINGS SPECIFIED TO BE RETURNED BY THE ENGINEER.
  - 2. THE OMISSION FROM THE SHOP DRAWINGS OF ANY MATERIALS REQUIRED BY THE CONTRACT DOCUMENTS TO BE FURNISHED SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF FURNISHING AND INSTALLING SUCH MATERIALS, REGARDLESS OF WHETHER THE SHOP DRAWINGS HAVE BEEN REVIEWED AND APPROVED.
- G. THE USE OF ELECTRONIC FILES OR REPRODUCTIONS OF THESE CONTRACT DOCUMENTS BY ANY CONTRACTOR, SUBCONTRACTOR, ERECTOR, FABRICATOR, OR MATERIAL SUPPLIER IN LIEU OF PREPARATION OF SHOP DRAWINGS SIGNIFIES THEIR ACCEPTANCE OF ALL INFORMATION SHOWN HEREON AS CORRECT, AND OBLIGATES THEMSELVES TO ANY JOB EXPENSE, REAL OR IMPLIED, ARISING DUE TO ANY ERRORS THAT MAY OCCUR HEREON.

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PROJECT: ***RETAIL SHOPS***
COUNTRY CLUB ROAD
WINSTON SALEM, NC

DRAWING: GENERAL NOTES

Revisions

REVISION DATE

PROJECT DATE 6/18/2019

Drawn By JNJ

Checked By SH

Sheet No. S0.0