GENERAL NOTES

1. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE, AND DO NOT INDICATE THE METHOD OR MEANS OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES, SEQUENCE AND SAFETY. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL REQUIRED TEMPORARY BRACING AND SHORING DURING CONSTRUCTION TO MAINTAIN THE STABILITY OF THE STRUCTURE. CONSTRUCTION LOADS SHALL NOT EXCEED THE CAPACITY OF THE INSTALLED STRUCTURE AT ANY TIME.
2. THE ENGINEER DOES NOT HAVE CONTROL OR CHARGE OF, AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTOR, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
3. STRUCTURAL DRAWINGS ARE TO BE USED IN CONJUNCTION WITH ARCHITECTURAL AND OTHER CONTRACT DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF THE MOST CURRENT SET OF DRAWINGS. DISCREPANCIES, INCLUDING DIMENSIONS, SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR DESIGN ENGINEER PRIOR TO PROCEEDING WITH FABRICATION OR CONSTRUCTION.
4. ALL THINGS WHICH, IN THE OPINION OF THE CONTRACTOR, APPEAR TO BE DEFICIENCIES, OMISSIONS, CONTRADICTIONS OR AMBIGUITIES IN THE DESIGN DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER PRIOR TO ORDERING, FABRICATION OR CONSTRUCTION. NO EXTRA CHARGE OR COMPENSATION WILL BE ALLOWED BY THE OWNER RESULTING FROM CONTRACTORS FAILURE TO COMPLY WITH REQUIREMENT.
5. DETAILS / SECTIONS SHOWN ON DRAWINGS ARE TYPICAL AND MAY APPLY TO LOCATIONS OTHER THAN WHERE SPECIFICALLY MARKED ON THE PLANS. IF SECTIONS OR DETAILS DO NOT REPRESENT ALL REQURED CONDITIONS, THE ENGINEER SHALL BE CONTACTED FOR CLARIFICATION BY THE GENERAL CONTRACTOR.
6. IF EXISTING CONDITIONS MAKE IT NECESSARY TO REVISE STRUCTURAL DETAILS, NOTIFY DESIGN ENGINEER BEFORE PROCEEDING WITH ANY CHANGES.
7. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL CONTRACT DRAWINGS AND LATEST ADDENDA AND SUBMITTING THESE DOCUMENTS TO SUBCONTRACTORS AND MATERIAL SUPPLIERS PRIOR TO THE SUBMITTAL OF SHOP DRAWINGS, FABRICATION OF ANY STRUCTURAL MEMBER AND ERECTION IN THE FIELD.
8. THE GENERAL CONTRACTOR SHALL PROTECT EXISTING STRUCTURES AND UTILITY LINES FROM ALL DAMAGE.
9. IF ANY CONFLICTS OCCUR BETWEEN THE NOTES, SPECIFICATIONS, AND DETAILS, THE MOST STRINGENT REQUIREMENT SHALL GOVERN.
10. EQUIPMENT PADS ARE TO BE PROVIDED BY THE MECHANICAL OR ELECTRICAL CONTRACTORS REQUIRING THE PADS. PADS NOT SHOWN BY MECHANICAL OR ELECTRICAL ENGINEER SHALL BE 4" CONCRETE SLAB ON GRADE WITH THICKENED EDGES.
11. DRAWINGS ISSUED FOR PERMIT/CONSTRUCTION ARE FOR PERMITTING ONLY. DRAWINGS MAY REQUIRED REVISIONS IN ORDER TO OBTAIN A CONSTRUCTION PERMIT AND/OR COORDINATION WITH OTHER TRADES. DRAWINGS ARE TO BE ISSUED AND APPROVED FOR CONSTRUCTION PRIOR TO ANY BUILDING CONSTRUCTION, MATERIAL MILL ORDERS, AND MATERIAL FABRICATION.
12. ALL WORK SHALL BE DONE IN ACCORDANCE WITH OSHA AND OWNERS REGULATIONS.
13. ALL INSPECTIONS SHALL BE ACCORDING TO THE REFERENCED CODE OR INSPECTION PLAN PROVIDED.
14. FITZPATRICK ENGINEERING GROUP WELCOMES QUESTIONS OR CONCERNS REGARDING FRAMING OR DETAILS SHOWN IN THESE DOCUMENTS. PLEASE CALL DEVIN HORNER AT 704-987-9114 FOR ASSISTANCE. IF THE PROJECT ENGINEER IS NOT AVAILABLE, PLEASE PROVIDE FEG JOB NUMBER 184587.000 TO ANOTHER ENGINEER TO HELP ANSWER YOUR QUESTIONS.

DESIGN CRITERIA

1. BUILDING DESIGNED IN ACCORDANCE WITH THE 2015 INTERNATIONAL BUILDING CODE (WITH 2018 NORTH CAROLINA STATE BUILDING CODE AMENDMENTS).
   a. CONCRETE DESIGN - ACI 318-14
   b. STEEL DESIGN AISC 360-10 EDITION
   c. MASONRY ACI 530 13
   d. WOOD DESIGN - NDS - 2015
2. FLOOR LOADS:
   a. LIVE -
      i. FIRST FLOOR 100 PSF (REDUCIBLE)
      ii. TYPICAL FLOOR 40 PSF (REDUCIBLE)
      iii. CORRIDORS ON 1ST FLOOR 100 PSF
      iv. CORRIDORS ON ELEVATED FLOORS 40 PSF
   b. SUPERIMPOSED DEAD - 15 PSF

NOTE : REGARDING DEFLECTIONS EXTERIOR AND INTERIOR NON-LOAD BEARING STEEL STUDS
STEEL STUD FRAMING FROM SLAB ON GRADE TO STEEL FLOOR OR ROOF SHALL BE DESIGNED TO ACCOMMODATE VERTICAL DEFLECTION OF L/360 OF BEAM SPAN WITHOUT LOADING THE STUDS. STUDS SPANNING BETWEEN FRAMED FLOORS SHALL BE DESIGNED FOR VERTICAL MOVEMENT OF L/540 OF BEAM SPAN. WHERE THE HEAD OF A WINDOW OR CURTAIN WALL IS SUPPORTED BY WALL FRAMING THAT IS RIGIDLY ATTACHED TO THE STRUCTURE, A DEFLECTION HEAD SHALL BE PROVIDED MEETING THE SAME DEFLECTION CRITERIA AS NOTED ABOVE.

3. ROOF LOADS
   a. LIVE - 20 PSF (REDUCIBLE)
   b. PONDING:
      i. STATIC HEAD 4"
      ii. DYNAMIC HEAD 1"
      iii. DESIGN LOAD = 26 PSF
4. ROOF SNOW LOAD
   a. GROUND SNOW LOAD — Pg = 10 PSF
   b. FLAT-ROOF SNOW LOAD — Pf = 10 PSF
   c. SNOW EXPOSURE FACTOR — Ce = 0.9
   d. THERMAL FACTOR — Ct = 1.0
   e. SNOW LOAD IMPORTANCE FACTOR — Is = 1.0
5. WIND LOADS DESIGNED IN ACCORDANCE WITH THE 2015 INTERNATIONAL BUILDING CODE AND ASCE 7-10.
   a. BASIC WIND SPEED: = 115 MPH
   b. WIND EXPOSURE: B
   c. WIND BASE SHEAR: VX = 280 kips VY = 68 kips
   d. INTERNAL PRESSURE COEFFICIENT: GCPI = 0.18 ±
   e. COMPONENTS AND CLADDING SHALL BE DESIGNED PER ASCE-7 OR THE WIND PRESSURE TABULATED BELOW. THE WIND LOAD SHALL BE PERMITTED TO BE TAKEN AS 0.42 TIMES TABULATED VALUES FOR THE PURPOSE OF DETERMINING DEFLECTION LIMITS HEREIN. WHERE MEMBERS SUPPORT GLASS, THE WIND LOAD SHALL BE NO LESS THAN 0.6 TIMES THE COMPONENT AND CLADDING LOADS FOR THE PURPOSE OF DETERMINING DEFLECTION.

ZONE PER TABLE 30.7-2	EFFECTIVE WIND AREA (SQUARE FT.)	POSITIVE PRESSURE PSF	NEGATIVE PRESSURE PSF
1	50	+16.0	-23.0
2	50	+20.0	-30.0
3	50	+20.0	-30.0
4	10	+22.0	-24.0
4	20	+21.0	-23.0
4	50	+20.0	-22.0
4	100	+19.0	-21.0
5	10	+22.0	-29.0
5	20	+21.0	-27.0
5	50	+20.0	-25.0
5	100	+19.0	-23.0

6. EARTHQUAKE DESIGN DATA
   a. RISK CATEGORY: II
   b. MAPPED SPECTRAL RESPONSE ACCELERATIONS: $S_S = 0.237$, $S_1 = 0.102$
   c. SPECTRAL RESPONSE COEFFICIENTS: $S_{DS} = 0.253$, $S_{D1} = 0.163$
   d. SITE CLASS: D
   e. BASIC SEISMIC-FORCE-RESISTING SYSTEM:
      i. INTERMEDIATE REINFORCED MASONRY SHEAR WALLS
   f. DESIGN BASE SHEAR: $V_{EQXY} = 449$ kips
   g. ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE
   h. SEISMIC DESIGN CATEGORY: C
   i. SEISMIC IMPORTANCE FACTOR $I_E = 1.0$
   j. SEISMIC RESPONSE COEFFICIENT: $C_S = 0.072$
   k. RESPONSE MODIFICATION FACTOR: R = 3.5

FOUNDATION NOTES

1. ALL FOUNDATION AND SLAB ON GRADE EXCAVATIONS ARE TO FOLLOW RECOMMENDATIONS STATED IN THE REPORT OF GEOTECHNICAL EXPLORATION TO BE PROVIDED BY OWNER.
2. ALL EXISTING TOPSOIL, VEGETATION, DISTURBED SOILS AND SURFACE SOILS CONTAINING ORGANIC MATTER OR OTHER DELETERIOUS MATERIALS SHOULD BE STRIPPED FROM WITHIN THE PROPOSED BUILDING AND PAVED AREAS. AREAS THAT ARE TO PROVIDE SUPPORT FOR THE FOUNDATIONS, FLOOR SLAB, STRUCTURAL FILL AND ANY PAVEMENTS SHALL BE CAREFULLY INSPECTED FOR SOFT SURFICIAL SOILS AND PROOF ROLLED WITH A 25 TO 35 TON, FOUR WHEELED, RUBBER TIRED ROLLER OR SIMILAR APPROVED EQUIPMENT. THE PROOFROLLER SHOULD MAKE AT LEAST FOUR PASSES OVER EACH LOCATION WITH AT LEAST TWO PASSES PERPENDICULAR TO THE FIRST TWO. ANY AREAS WHICH WAVE, RUT, OR DEFLECT DEEPER THAN 1/2" AND CONTINUE TO DO SO AFTER SEVERAL PASSES OF THE PROOFROLLER SHOULD BE UNDERCUT TO FIRMER SOILS. THE UNDERCUT AREAS SHOULD BE BACK FILLED IN THIN LIFTS WITH SUITABLE COMPACTED FILL MATERIALS. THE PROOFROLLING AND UNDERCUTTING OPERATIONS SHOULD BE CAREFULLY MONITORED BY AN EXPERIENCED ENGINEERING TECHNICIAN WORKING UNDER THE DIRECT SUPERVISION OF THE GEOTECHNICAL ENGINEER.
3. FOUNDATIONS AND SLABS ARE TO BE PLACED ON FIRM UNDISTURBED NATURAL SOIL OR PROPERLY COMPACTED FILL MATERIAL. FILL MATERIAL SHALL BE COMPACTED IN THIN LIFTS TO AT LEAST 95 PERCENT OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D 698).
4. IN ORDER TO VERIFY THAT THE SOILS ENCOUNTERED IN FOOTING EXCAVATIONS ARE SIMILAR TO THOSE ENCOUNTERED IN THE SOIL TEST BORINGS, FOOTING EXCAVATIONS ARE TO BE EXAMINED AND CHECKED WITH A DYNAMIC HAND PENETROMETER BY AN EXPERIENCED ENGINEERING TECHNICIAN WORKING UNDER THE DIRECT SUPERVISION OF THE GEOTECHNICAL ENGINEER.
5. FOOTINGS SHOULD BE POURED AS SOON AS POSSIBLE AFTER EXCAVATION. THE FOUNDATION BEARING AREA SHOULD BE LEVEL AND BE FREE OF LOOSE SOIL, PONDED WATER, AND DEBRIS. FOUNDATION CONCRETE SHOULD NOT BE PLACED ON SOILS THAT HAVE BEEN DISTURBED BY SEEPAGE. IF BEARING SOILS ARE SOFTENED BY SURFACE WATER INTRUSION OR EXPOSURE, THE SOFTENED SOILS MUST BE REMOVED FROM THE FOUNDATION EXCAVATION BOTTOM IMMEDIATELY PRIOR TO PLACEMENT OF CONCRETE.
6. MINIMUM FOUNDATION NET SOIL BEARING PRESSURE 4000 PSF AS RECOMMENDED IN GEOTECHNICAL STUDY PREPARED BY: SUMMIT ENGINEERING, DATED APRIL 3, 2019 USING GEOPIERS REINFORCED SOILS.
7. CENTER ALL FOOTINGS UNDER WALLS, COLUMNS OR GRID LINES UNLESS NOTED OTHERWISE.
8. RETAINING, OR BASEMENT WALLS, TO BE PROPERLY SHORED BEFORE BACK FILLING. HEAVY EQUIPMENT SHALL NOT BE ALLOWED WITHIN 10 FEET OF THESE WALLS. USE MECHANICAL HAND TAMPERS FOR COMPACTING BACK FILL AGAINST WALLS.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATE PROTECTION OF ALL EXCAVATION SLOPES. WHERE NECESSARY SHEETING AND SHORING OF EXCAVATION SHALL BE PROVIDED WITH ALL REQUIRED TIE BACKS AND BRACING.
10. CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE SUBSURFACE CONDITIONS BEFORE COMMENCING EXCAVATION WHICH SHALL NOT BE LIMITED TO DEWATERING.
11. METHODS EMPLOYED IN ALL SHEETING AND SHORING SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT LOCATION TO AVOID SETTLEMENT ORDISPLACEMENT OF EXISTING STRUCTURE WHERE APPLICABLE.

CONCRETE NOTES

1. CONCRETE:
   a. ALL CONCRETE DESIGN AND CONSTRUCTION SHALL CONFORM TO THE 'SPECIFICATIONS FOR STRUCTURAL CONCRETE', (ACI 30) AND 'BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE', (ACI 318).
   b. ALL CONCRETE CONSTRUCTION SHALL CONFORM TO THE 'SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS, (ACI 117)
   c. ALL CONCRETE SHALL BE READY-MIXED MEETING THE REQUIREMENTS OF ASTM C-94, 'SPECIFICATION FOR READY-MIXED CONCRETE'. MAXIMUM SLUMP = 5"±.
   d. CONCRETE IS TO BE NORMAL WEIGHT AND MADE WITH TYPE 1 PORTLAND CEMENT CONFORMING TO ASTM C150 SPECIFICATION, 'STANDARD SPECIFICATION FOR PORTLAND CEMENT'.
   e. CLASS F FLYASH IS PERMITTED TO BE USED IN CONCRETE MIXES. FLYASH IS TO BE LIMITED TO A MAXMUM OF 20% OF TOTAL CEMENTITIOUS MATERIAL WEIGHT.
   f. CONCRETE AGGREGATE GRADATION SHALL BE IN ACCORDANCE WITH ASTM C33 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 GRADATION SHALL HAVE A MINIMUM SIZE #57 STONE MX PER ASTM C33. FINE AGGREGATE CONTENT IS TO BE BETWEEN 35% AND 45% BY WEIGHT OR VOLUME OF THE TOTAL AGGREGATE CONTENT. FOR 6" SLABS OR GREATER, LARGER COURSE AGGREGATE MIXS UP TO #467 ARE ACCEPTABLE FOR FLOOR SLAB CONCRETE TO MINIMIZE SHRINKAGE CRACKING.
   g. A MID RANGE WATER REDUCING ADMIXTURE IN CONFORMANCE WITH ASTM C494 TYPE 'A' IS TO BE USED TO REDUCE WATER REQUIREMENTS. DOSAGE AMOUNT IS NOT TO EXCEED 6 OZ. PER 100 POUNDS OF CEMENTITIOUS MATERIAL.
   h. CONCRETE MIX DESIGNS ARE TO BE PREPARED BY CONCRETE SUPPLIER AND SUBMITTED TO ENGINEER FOR APPROVAL A MINIMUM OF 14 DAYS PRIOR TO CONCRETE WORK COMMENCING. CONCRETE MIX DESIGNS ARE TO BE PROPORTIONED IN ACCORDANCE WITH ACI 301.
   i. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH (f'c) AT 28 DAYS AND DENSITIES AS FOLLOWS:
      COLUMN AND WALL FOOTINGS: f'c = 3000 PSI - 145 PCF
      INTERIOR SLAB ON GRADE: f'c = 3000 PSI - 145 PCF
      EXTERIOR SLAB ON GRADE: f'c = 4500 PSI - 145 PCF (AIR ENTRAINED)
      ELEVATED TOPPING SLABS: f'c = 3000 PSI - 145 PCF
      ALL OTHER CONCRETE: f'c = 3000 PSI - 145 PCF
   j. MAXMUM WATER-CEMENTITIOUS MATERIAL RATIO SHALL BE AS FOLLOWS:

COMPRESSIVE STRENGTH AT 28 DAYS - PSI	WATER/CEMENT RATIO, BY WEIGHT
3000	0.55
4000	0.50
4500	0.45
5000	0.40

   k. NO WATER SHALL BE ADDED TO THE CONCRETE AT THE JOB SITE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE CONCRETE SUPPLIER TO ENSURE A PUMPABLE AND WORKABLE MIX WITHOUT THE ADDITION OF WATER AT THE JOB SITE.
   l. MEMBERS NOT TO BE LOADED UNTIL CONCRETE HAS REACHED ITS REQUIRED COMPRESSIVE STRENGTH.
   m. CONCRETE PLACEMENT IS TO CONFORM WITH ACI 305R HOT WEATHER CONCRETING AND ACI 306R COLD WEATHER CONCRETNG. MINIMUM TEMPERATURE OF CONCRETE AT TIME OF PLACEMENT AND MAINTAINED DURING CURING IS 55 DEGREES FAHRENHEIT.
   n. GROUT AT COLUMN BASES AND AT EXTERIOR WALL BASE SHALL CONFORM TO ASTM C-1107, FACTORY - PACKAGED, NON-METALLIC AGGREGATE GROUT. NON-CORROSIVE AND NON-STAINING, MIXED WITH WATER TO CONSISTENCY SUITABLE FOR APPLICATION AND A 30 MINUTE WORKING TIME. MINIMUM COMPRESSIVE STRENGTH IS 8000 PSI AT 28-DAYS.
   o. FORMWORK SHALL BE DESIGNED AND CONSTRUCTED/INSTALLED IN ACCORDANCE WITH ACI 347, "GUIDE TO FORMWORK FOR CONCRETE"
   p. ALL EXTERIOR CONCRETE IS TO HAVE 5% AIR ENTRAINMENT IN ACCORDANCE WITH ASTM C260.
   q. CONCRETE SHALL BE TESTED IN ACCORDANCE WITH ASTM C172. QUALIFIED FIELD TESTING TECHNICIANS SHALL PERFORM TESTS ON FRESH CONCRETE AT THE JOB SITE, PREPARE SPECIMENS REQUIRED FOR CURING UNDER FIELD CONDITIONS, PREPARE SPECIMENS REQUIRED FOR TESTING IN THE LABORATORY, AND RECORD THE TEMPERATURE OF THE CONCRETE WHEN PREPARING SPECIMENS FOR STRENGTH TESTS. QUALIFIED LABORATORY TECHNICIANS SHALL PERFORM ALL REQUIRED LABORATORY TESTS. SAMPLES FOR STRENGTH TESTS OF EACH CLASS OF CONCRETE PLACED EACH DAY SHALL BE TAKEN NOT LESS THAN ONCE FOR EACH 150 CUBIC YARDS OF CONCRETE, NOR LESS THAN ONCE FOR EACH 5000 SQUARE FEET OF SURFACE AREA FOR SLABS OR WALLS.
   r. ALL CONCRETE DEFECTS, INCLUDING JOINT DAMAGE, HONEYCOMBS, TIE HOLES, SPALLS, AND OTHER DEFECTS SHALL BE PROPERLY REPAIRED IMMEDIATELY IN ACCORDANCE WITH APPLICABLE REQUIREMENTS OF SECTION 5 OF ACI 301.
2. REINFORCEMENT:
   a. REINFORCING STEEL SHALL BE HIGH STRENGTH DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60.
   b. REINFORCING STEEL TO BE WELDED SHALL BE HIGH STRENGTH DEFORMED BARS CONFORMING TO ASTM A706 GRADE 60.
   c. DEFORMED BAR ANCHOR STUDS SHALL BE PRODUCED FROM DEFORMED WIRE COMPLYING WITH ASTM A496.
   d. WELDED WIRE REINFORCEMENT SHALL CONFORM TO ASTM A185 AND SHALL BE LAPPED ONE FULL SQUARE AT END SPLICES AND BE WIRED TOGETHER. PLACE FABRIC 2" CLEAR FROM TOP AND BOLSTERS AT 3'-0" O.C.
   e. REINFORCING STEEL DESIGN, DETAILING, FABRICATION AND ERECTION SHALL CONFORM TO C.R.S.I. 'MANUAL OF STANDARD PRACTICE', ACI 318 "BUILDING CODE REQUIREMENTS, AND ACI 301, SECTION 3 "REINFORCEMENT AND REINFORCEMENT SUPPORT", FOR STRUCTURAL CONCRETE', ACI 315, "DETAILS AND DETAILING OF CONCRETE REINFORCING".
   f. UNLESS OTHERWISE NOTED ON THE DRAWINGS, LAP SPLICES SHALL BE A CLASS B SPLICE.
   g. SPLICED BARS SHALL NOT BE SPACED TRANSVERSELY FARTHER APART THAN ONE-FIFTH THE REQUIRED LAP SPLICE LENGTH, NOR 6".
   h. REINFORCEMENT PROTECTON SHALL BE:
      CONCRETE POURED AGAINST EARTH — 3"
      CONCRETE POURED IN FORMS EXPOSED TO WEATHER OR EARTH — 2"
      COLUMNS AND BEAMS (TIE BARS) — 1 1/2"
      SLABS AND WALLS NOT EXPOSED TO WEATHER — 3/4"
   i. REINFORCING BARS MAY NOT BE WELDED WITHOUT APPROVAL OF THE STRUCTURAL ENGINEER.
3. SLABS ON GRADE:
   a. CONCRETE FLOOR SLAB ON GRADE CONSTRUCTION SHALL CONFORM TO ACI 302.1R04 "GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION". FLOOR IS TO BE A SINGLE COURSE, MONOLITHIC SLAB ON GRADE.
   b. FLOOR SLABS ARE TO BE PLACED OVER A MINIMUM OF 4" CRUSHED STONE BASE OR AS RECOMMENDED BY THE SOILS ENGINEER. JUST PRIOR TO PLACING CONCRETE, SUBGRADE OF SUBBASE SHALL BE PROOF-ROLLED PER GENERAL FOUNDATION NOTES. THE BASE SHOULD BE FREE OF FROST BEFORE CONCRETE PLACING BEGINS AND ABLE TO SUPPORT CONSTRUCTION TRAFFIC SUCH AS LOADED TRUCK MIXERS. THE BASE SHOULD NORMALLY BE DRY AT THE TIME OF CONCRETING. HOWEVER, IF PROTECTION FROM THE SUN AND WIND CANNOT BE PROVIDED OR IF THE CONCRETE IS PLACED IN HOT, DRY CONDITIONS, THE BASE SHOULD BE LIGHTLY DAMPENED WITH WATER IN ADVANCE OF CONCRETING. THERE SHOULD BE NO FREE WATER STANDING ON THE BASE, NOR SHOULD THERE BE ANY MUDDY OR SOFT SPOTS, WHEN THE CONCRETE IS PLACED.
   c. CRUSHED STONE BASE IS TO BE TYPE 1, GRADATION C, IN CONFORMANCE WITH ASTM D 1241-68 STANDARD SPECIFICATION FOR MATERIALS FOR SOIL-AGGREGATE SUBBASE, BASE AND SURFACE COURSES.
   d. IN ORDER TO MINIMIZE PLASTIC SHRINKAGE CRACKS IN THE FLOOR SLAB, CONCRETE IS NOT TO BE PLACED WHEN THE EVAPORATION RATE OF WATER IS GREATER THAN 0.2 POUNDS PER SQUARE FOOT SURFACE AREA PER HOUR UNLESS MEASURES ARE TAKEN TO COMPENSATE FOR THE HIGH RATE OF EVAPORATION AS DESCRIBED IN ACI 305.1-06. EVAPORATION RATES GREATER THAN 0.2 LB/SF/HR TYPICALLY OCCUR WHEN THE AIR TEMPERATURE IS GREATER THAN 90° F, RELATIVE HUMIDITY IS 80% OR LESS, AND WIND VELOCITY IS 10 MPH OR GREATER.
   e. THE FOLLOWING INFORMATION IS TO BE RECORDED BY THE GENERAL CONTRACTOR DURING PLACEMENT OF THE SLAB CONCRETE AND SENT TO THE ENGINEER OF RECORD:
      - AIR TEMPERATURE
      - CONCRETE TEMPERATURE IN ACCORDANCE WITH ASTM C1064
      - GENERAL WEATHER CONDITIONS
      - WIND SPEED
      - RELATIVE HUMIDITY
      - EVAPORATIVE RATE OF WATER
      - CONCRETE SLUMP
   f. INTERIOR CONCRETE IS TO HAVE A HARD STEEL TROWELLED FINISH (SMOOTH) AND SHALL BE FINISHED WITH A FLOOR FLATNESS (FF) AND A FLOOR LEVELNESS (FL) IN ACCORDANCE WITH ASTM E 1155, 'STANDARD TEST METHOD FOR DETERMINING FLOOR FLATNESS AND LEVELNESS USING THE F-NUMBER SYSTEM' AS SHOWN BELOW. EXTERIOR CONCRETE IS TO HAVE A STEEL TROWELLED FINISHED FOLLOWED BY A LIGHT BROOM NONSKID FINISH. MEASURE FLOOR AND SLAB FLATNESS AND LEVELNESS WITHIN 48 HOURS OF FINISHING.

FLOOR TYPE	SPECIFIED OVERAL		MINIMUM LOCAL	
	F (F)	F(L)	F(F)	F(L)
OFFICE	35	25	24	17

   g. FLOOR SLAB IS TO HAVE APPROPRIATELY SPACED CONSTRUCTION AND CONTROL JOINTS. INTERIOR SLAB JOINTS ARE TO BE SAW CUT 1/8" WIDE 1/4 SLAB THICKNESS. MAXIMUM JOINT SPACING, UNLESS NOTED OTHERWISE ON PLAN. JOINT CUTS TO BE COMPLETED WITHIN 24 HOURS OF CONCRETE PLACEMENT.
      1. 4" SLAB = 15'-0" MAX. SPACING, 5" SLAB = 18'-0" MAX. SPACING, 6" SLAB = 21-0" MAX. SPACING
   h. ISOLATION JOINTS SHALL BE AS SHOWN ON DRAWING AND FILLED WITH POLYURETHANE JOINT FILLER FOR HOUSEKEEPING PURPOSES.
   i. FLOOR SLAB AREAS ARE TO RECEIVE (2) COATS OF 25% SOLIDS ACRYLIC CURE AND SEAL, CONFORMING TO ASTM C309. APPLICATION IS TO CONFORM TO MANUFACTURERS SPECIFICATIONS.FIRST COAT IS FOR CURING, SECOND COAT IS FOR SEALING AND DUST PROOFING AFTER BUILDING CONSTRUCTION COMPLETION.
   j. FLOOR SLAB MAY RECEIVE DENSIFIER APPLICATION (NOX-CRETE DURONOX OR ASHFORD FORMULA) IN PLACE OF ACRYLIC FLOOR SEALER. DENSIFIERS DO NOT CONFORM WITH ASTM-C309 AND MAY REQUIRE A CURING COMPOUND PRIOR TO APPLICATION OF DENSIFIER. IF CURING COMPOUND IS APPLIED, FLOOR SLAB IS TO BE CLEANED WITH NOX-CRETE BIO-CLEAN. CURING COMPOUND REQUIREMENT IS TO BE BASED ON CLIMATE CONDITIONS DURING TIME OF CONCRETE PLACEMENT. CONTRACTOR TO CONTACT MANUFACTURER FOR RECOMMENDATIONS.
   k. ALL FLOOR SEALERS, FINISHES, ETC., SHALL BE COORDINATED WITH ARCHITECTURAL FINISHES AND REQUIREMENTS OF PREPARED SLAB FOR CHEMICAL COMPATIBILITY.
4. EMBEDMENTS:
   a. ADHESIVE ANCHORS SHALL BE EPOXY-TIE SET EPOXY ADHESIVE SYSTEM WITH A36 (SAE 1018) THREADED RODS BY SIMPSON STRONG-TIE ANCHOR SYSTEMS OR APPROVED EQUAL. MINIMUM EMBEDMENT SHALL BE AS SPECIFIED BY THE MANUFACTURER UNLESS NOTED OTHERWISE ON THE ENGINEERING DRAWINGS.
   b. EXPANSION ANCHORS SHALL BE STRONG-BOLT WEDGE ANCHOR BY SIMPSON STRONG-TIE ANCHOR SYSTEMS OR APPROVED EQUAL. MINIMUM EMBEDMENT SHALL BE AS SPECIFIED BY THE MANUFACTURER UNLESS NOTED OTHERWISE ON THE ENGINEERING DRAWINGS.
5. PRECAST CONCRETE:
   a. ALL PRECAST CONCRETE, INCLUDING PANELS, JOISTS, SLABS, ETC., THEIR CONNECTIONS, AND ANY MISCELLANEOUS STEEL REQUIRED FOR THE CONNECTIONS SHALL BE DESIGNED AND FURNISHED BY THE PRECAST SUPPLIER. PROPER COORDINATION SHALL TAKE PLACE BETWEEN THE PRECAST SUPPLIER, THE GENERAL CONTRACTOR, AND THE STEEL FABRICATOR TO INSURE PROPER PLACEMENT ON EMBEDDED ITEMS, WELDED PLATES ETC. THE PRECAST MANUFACTURER'S ERECTION DRAWINGS ARE SUBJECT TO APPROVAL BY THE STRUCTURAL ENGINEER FOR THE LOCATION AND TYPE OF CONNECTIONS TO THE BUILDING STRUCTURE. THE CONNECTION DETAILS SHOWN ON THESE DRAWINGS ARE FOR INTENT ONLY. THE PRECAST SUPPLIER SHOULD DESIGN FOR THE FOLLOWING: WIND AND SEISMIC LOADS, AS WELL AS DEAD LOADS, IN ACCORDANCE WITH THE 2015 INTERNATIONAL BUILDING CODE. CONTRACTOR TO COORDINATE PRECAST ELEMENTS WITH CONSTRUCTION DOCUMENTS.

PRECAST CONCRETE

1. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE REQUIREMENTS OF THE FOLLOWING CODES AND STANDARDS:
   a. "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", (ACI 318), AMERICAN CONCRETE INSTITUE.
   b. "PCI DESIGN HANDBOOK - PRECAST AND PRESTRESSED CONCRETE" LATEST EDITION, PRESTRESSED CONCRETE INSTITUTE.
2. ALL PRECAST CONCRETE, INCLUDING PANELS, JOISTS, SLABS, ETC., THEIR CONNECTIONS, AND ANY MISCELLANEOUS STEEL REQUIRED FOR THE CONNECTIONS SHALL BE DESIGNED AND FURNISHED BY THE PRECAST SUPPLIER. PROPER COORDINATION SHALL TAKE PLACE BETWEEN THE PRECAST SUPPLIER, THE GENERAL CONTRACTOR, AND THE STEEL FABRICATOR TO INSURE PROPER PLACEMENT ON EMBEDDED ITEMS, WELDED PLATES ETC.
3. THE PRECAST MANUFACTURER'S ERECTION DRAWINGS ARE SUBJECT TO APPROVAL BY THE STRUCTURAL ENGINEER FOR THE LOCATION AND TYPE OF CONNECTIONS TO THE BUILDING STRUCTURE. THE CONNECTION DETAILS SHOWN ON THESE DRAWINGS ARE FOR INTENT ONLY.
4. THE PRECAST CONCRETE STRUCTURE SHALL BE DESIGNED IN ACCORDANCE WITH PCI AND ACI STANDARDS AND SHALL BE CAPABLE OF SUPPORTING THE SUPERIMPOSED DEAD LOADS AND LIVE LOADS INDICATED IN THE GENERAL NOTES AND DRAWINGS.
5. PRECAST SUPPLIER SHALL COORDINATE WITH ARCHITECTURAL AND MEP DRAWINGS FOR THE LOCATIONS OF INSERTS, EMBEDDED PLATES, OPENINGS AND CORE DRILLS FOR OTHER TRADES. DESIGN OF PRECAST SLABS SHALL TAKE INTO ACCOUNT ALL OPENINGS AND FIELD CORE DRILLS IN SATISFYING DESIGN REQUIREMENTS.
6. ALL PRECAST PANEL GRAVITY SUPPORT SHALL BE DESIGNED TO BEAR DIRECTLY ON FOUNDATION WALL OR FOOTING, UNLESS NOTED OTHERWISE ON PLAN.
7. PRE-CAST/PRE-STRESSED HOLLOW CORE CONCRETE SLABS SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH (f'c) OF 5000 PSI. MINIMUM COMPRESSIVE STRENGTH (f'c) AT TIME OF RELEASE SHALL BE 3000 PSI. HOLLOW CORE SLABS PERMANENTLY EXPOSED TO WEATHER SHALL BE AIR-ENTRAINED TO 5% (+1%) WITH AN ADMIXTURE THAT CONFORMS TO ASTM C 260.
8. ALL GROUT SHALL BE 2,500 PSI (1 PART PORTLAND CEMENT WITH 3 PARTS FINE SAND).
9. UNLESS GREATER STRENGTH IS REQUIRED BY THE PRECAST MANUFACTURER, ALL REINFORCING STEEL SHALL CONFORM TO THE FOLLOWING

	ASTM	MIN. STRENGTH
PRESTRESSING STRAND	(UNCOATED A416 7-WIRE, STRESS RELIEVED)	250 KSI (ULTIMATE)
REINFORCING BARS	A615	60 KSI
WELDED WIRE FABRIC	A185	70 KSI

10. ALL WELD PLATES, INSERTS, ANCHOR BOLTS, WELDING, LIFTING HARDWARE, GROUT SLEEVES, ETC. SHALL BE DESIGNED AND PROVIDED BBY THE PRECAST SLAB MANUFACTURER. UNLESS NOTED OTHERWISE ALL CONNECTIONS EXPOSED TO EARTH OR WEATHER SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTEM A153.
11. NORMAL WEIGHT CONCRETE TOPPING SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH (f'c) OF 3000 PSI WITH A MAXIMUM AGGREGATE SIZE OF 1/4" AND SHALL BE REINFORCED WITH FIBERMESH - 2" MINIMUM THICKNESS.
12. THE PRECAST SLAB SUPPLIER SHALL FURNISH SLABS WITH NOTCHES/HOLES AS REQUIRED FOR ALL OPENINGS. GENERAL CONTRACTOR SHALL COORDINATE ALL OPENINGS OR CORE DRILLING WITH THE PRECAST MANUFACTURER. CORE DRILLING OF THE PRECAST MEMBERS OR CUTTING OF OPENINGS SHALL NOT BE PERMITTED WITHOUT THE PRECAST MANUFACTURERS RECOMMENDATIONS.
13. ALL PRECAST HOLLOW CORE SLABS MEMBERS BEARING ON MASONRY OR CONCRETE SHALL HAVE A 1/8" THICK CONTINUOUS MULTI-MONOMER PLASTIC (KOROLATH OR EQUIVALENT) BEARING STRIPS.
14. ALL FLOOR/ROOF FRAMING SHOWN ON STRUCTURAL DRAWINGS SHALL BE PRECAST/PRESTRESSED HOLLOW CORE CONCRETE SLABS AND THE LAYOUT IS SCHEMATIC. IF THE PRECAST SUPPLIER CHOOSES TO FRAME AREAS USING CAST IN PLACE CONCRETE, THESE AREAS ARE TO BE DESIGNED BY AN ENGINEER REGISTERED IN THE LOCATION OF THE PROJECT AND SEALED CALCULATIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW. SUBMIT DETAILS OF CAST IN PLACE CONCRETE IN RELATION TO PRECAST HOLLOW CORE SLABS.

MASONRY

1. THE REINFORCED CONCRETE MASONRY FOR THIS PROJECT HAS BEEN DESIGNED AND DETAILED IN ACCORDANCE WITH THE WORKING STRESS DESIGN METHOD OF THE INTERNATIONAL BUILDING CODE CURRENT EDITION AS NOTED IN CODE REFERENCED.
2. REINFORCED MASONRY SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH, fm, OF 2000 PSI. MASONRY UNITS SHALL BE NORMAL WEIGHT BLOCK CONFORMING TO ASTM C90, GRADE N, TYPE 1, AND SHALL HAVE A MINIMUM NET AREA COMPRESSIVE STRENGTH OF 2800 PSI. MORTAR SHALL CONFORM TO ASTM C270, TYPE S. GROUT SHALL CONFORM TO ASTM C476 OR HAVE fc OF 3000 PSI. BLOCK SHALL BE INSTALLED ON FULL BED OF MORTAR AND IN RUNNING BOND.
3. REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60, UNLESS NOTED OTHERWISE.
4. CONTINUOUS WIRE REINFORCING (JOINT REINFORCING) SHALL BE GALVANIZED TRUSS OR LADDER TYPE FORMED FROM 9 GAUGE COLD - DRAWN STEEL WIRE COMPLYING WITH ASTM A82. JOINT REINFORCING SHALL BE SPACED AT 16" O.C. HORIZONTALLY IN ALL MASONRY WALLS.
5. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF VERTICAL CONTROL JOINTS. HORIZONTAL BOND BEAM AND LINTEL REINFORCING SHALL BE CONTINUOUS ACROSS VERTICAL CONTROL JOINTS. JOINT REINFORCING SHALL BE STOPPED EITHER SIDE OF VERTICAL CONTROL JOINTS.
6. ALL REINFORCED CELLS AND ALL CELLS BELOW GRADE SHALL BE GROUTED SOLID.
7. WHEN A FOUNDATION DOWEL DOES NOT LINE UP WITH A VERTICAL BLOCK CORE, IT SHALL NOT BE SLOPED MORE THAN ONE HORIZONTAL IN 6 VERTICAL. DOWELS MAY BE GROUTED INTO A CELL IN VERTICAL ALIGNMENT, EVEN THOUGH IT IS IN AN ADJACENT CELL TO THE VERTICAL WALL REINFORCING.
8. REINFORCING STEEL SHALL BE SECURED IN PLACE BEFORE GROUTING STARTS.
9. VERTICAL REINFORCING BARS SHALL HAVE A MINIMUM GROUT COVER OF 1/2 OF AN INCH TO THE INSIDE FACE OF MASONRY UNIT AND A MINIMUM TOTAL MASONRY COVER NOT LESS THAN TWO INCHES.
10. PARALLEL ADJACENT VERTICAL REINFORCING BARS SHALL HAVE A MINIMUM CLEAR DISTANCE NOT LESS THAN 1 1/2 BAR DIAMETERS NOR 1 1/2 INCHES.
11. GROUTING SHALL BE STOPPED 1-1/2" BELOW THE TOP OF A COURSE SO AS TO FORM A KEY AT THE POUR JOINT.
12. GROUTING OF MASONRY BEAMS OVER OPENINGS SHALL BE DONE IN ONE CONTINUOUS OPERATION.
13. ALL BOLTS, ANCHORS, ETC., INSERTED IN THE WALLS, SHALL BE GROUTED SOLID INTO POSITION.
14. SPLICED REINFORCING BARS SHALL BE LAPPED TO LENGTHS IN ACCORDANCE WITH ACI-530-08.
15. GROUT LIFT HEIGHTS OF HOLLOW CMU CELLS SHALL NOT EXCEED (5) FEET UNLESS APPROVED BY THE ENGINEER.
16. PROVIDE (1) #4 BAR WITH CELL GROUTED AT ENDS, INTERSECTIONS AND OPENINGS OF CMU WALLS.
17. LOOSE LINTELS SHALL BE PROVIDED IN ACCORDANCE WITH REQUIREMENTS OF LOADING. USE CAST CRETE PRECAST LINTEL, OR EQUAL, UNLESS OTHERWISE NOTED ON PLANS.
18. QUALITY ASSURANCE FOR MASONRY SHALL CONFORM TO LEVEL 3 (ESSENTIAL, ENGINEERED) ACCORDING TO ACI-530 CURRENT EDITION.
19. HORIZONTAL BOND BEAMS SHALL BE LOCATED AT 10'-0" O.C. VERTICALLY (MINIMUM), AT EACH FLOOR LEVEL, AT ALL STAIR LANDING ELEVATIONS, AND AT TOP OF ALL WALLS AND PARAPETS.

POST INSTALLED ANCHORS

1. ADHESIVE ANCHORAGES HAVE BEEN SPECIFIED IN ACCORDANCE WITH HILTI DESIGN DATA. THE CONTRACTOR MAY SUBSTITUTE ANY OF THE BELOW LISTED MANUFACTURERS PROVIDED SIGNED AND SEALED CALCULATIONS ARE SUBMITTED FOR ENGINEER REVIEW. THE CALCULATIONS SHALL DEMONSTRATE THAT THE SUBSTITUTED PRODUCT MEETS OR EXCEEDS THE STRENGTH OF THE BASIS OF DESIGN ANCHORAGE.
2. ANCHORAGE TO CONCRETE
   a. ADHESIVE EPOXY ANCHORS SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI355.4 AND ICC-ES AC308 AND MEET LOAD SPECIFIED SUCH AS: THE FOLLOWING OR EQUAL:
      i. HILTI HIT-RE 500-V3 EPOXY ADHESIVE ANCHORING SYSTEM (ICC ESR-2322)
      ii. HILTI HIT-HY 200 ADHESIVE (ICC ESR-3187)
      iii. POWERS PE-1000+ (ICC ES ESR 2583)
      iv. SIMPSON STRONG TIE "SET-XP" (ICC-ES ESR-2508)
      v. OR EQUAL ADHERING TO ICC ES AC 308
   NOTE: FOR HILTI PRODUCTS, STEEL ELEMENTS SHALL BE HILTI HAS-E CONTINUOUSLY THREADED ROD, HILTI HIS-N INTERNALLY THREADED INSERTS OR CONTINUOUSLY DEFORMED STEEL REBAR. FOR POWERS PRODUCTS, STEEL ELEMENTS SHALL BE ASTM A307-GRADE C. ASTM A 193 GRADE B7 TYPE 304 OR 316 STAINLESS STEEL (F 593, CONDITION CW) OR CONTINUOUSLY DEFORMED STEEL REBAR. FOR EQUAL PRODUCTS USE ACCORDING TO MANUFACTURER'S SPECIFICATIONS THAT MEET OR EXCEED LOADING REQUIREMENTS.
   b. MECHANICAL EXPANSION ANCHORS SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC 193 AND MEET LOAD SPECIFIED SUCH AS:
      i. HILTI KWIK BOLT - TZ ANCHORS (ICC ES ESR-1917)
      ii. HILTI HSL-3 HEAVY DUTY SLEEVE ANCHORS (ICC ES ESR 1545)
      iii. POWERS POWER-STUD SD-1 (ICC ES ESR 2818)
      iv. POWERS POWER-BOLTS+
      v. SIMPSON STRONG-TIE "TITEN-HD"(ICC-ES ESR 2713)
      vi. SIMPSON STRONG TIE "STRONG BOLT 2" (ICC-ES ESR 3037)
      vii. OR EQUAL ADHERING TO ICC ES AC 193.
   c. MECHANICAL UNDERCUT ANCHORS SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ICC ES AC 193 AND MEET LOAD SPECIFIED SUCH AS:
      i. HILTI HDA UNDERCUT ANCHORS
      ii. POWERS ATOMIC+ UNDERCUT ANCHORS (ICC ES ESR 3067)
      iii. OR EQUAL ADHERING TO ICC ES AC 193
   d. CONCRETE SCREW ANCHORS SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ICC ES AC 193 AND MEET LOAD SPECIFIED SUCH AS:
      i. HILTI KWIK HUS-EZ CONCRETE SCREW ANCHORS (ICC ES ESR 3027)
      ii. POWERS WEDGE BOLT+ (ICC ES ESR 2526)
      iii. OR EQUAL ADHERING TO ICC ES AC 193
3. ANCHORAGE TO SOLID GROUTED CONCRETE MASONRY
   a. ADHESIVE (EPOXY) ANCHORS SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ICC ES AC58 AND MEET LOAD SPECIFIED SUCH AS:
      i. HILTI HIT-HY 70 ADHESIVE ANCHORING SYSTEM (ICC ES ESR-3342) USING STEEL ELEMENTS HILTI HAS-E CONTINUOUSLY THREADED ROD OR CONTINUOUSLY DEFORMED STEEL REBAR
      ii. SIMPSON STRONG TIE "SET" (ICC ES ESR-1772)
      iii. OR EQUAL ADHERING TO ICC ES AC 58
   b. MECHANICAL ANCHORS SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ISS ES AC01 OR ISS ES AC106 AND MEET LOAD SPECIFIED SUCH AS:
      i. HILTI KWIK BOLT-3 EXPANSION ANCHORS, (ISS ES ESR-1385)
      ii. POWER STUD SD-1 (ICC ES ESR -2966)
      iii. SIMPSON STRONG TIE "TITEN HD" (ICC ES ESR-1056)
      iv. SIMPSON STRONG TIE "WEDGE ALL" (ICC ES ESR 1396)
      v. OR EQUAL ADHERING TO ICC ES ESR AC 106.
4. ANCHORAGE TO HOLLOW/MULTI-WYTHE MASONRY AND/OR CONCRETE MASONRY
   a. ADHESIVE (EPOXY) ANCHORS SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ICC ES AC 58 AND MEET LOAD SPECIFIED SUCH AS:
      i. HILTI HIT-HY 70 ADHESIVE ANCHORING SYSTEM (ES ESR3342) USING STEEL ELEMENTS HILTI HAS-E CONTINUOUSLY THREADED ROD OR CONTINUOUSLY DEFORMED STEEL REBAR.
      ii. POWERS T308+ ADHESIVE ANCHOR (ICC ES ESR-3149) BRICK MASONRY ONLY
      iii. SIMPSON STRONG TIE "SET" (ICC ES ESR 1772) CONCRETE MASONRY ONLY OR EQUAL ADHERING TO ICC ES 58
   b. MECHANICAL ANCHORS SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ICC ES AC 106 AND MEET LOAD SPECIFIED SUCH AS:
      i. SIMPSON STRONG TIE "TITEN HD" - CONCRETE MASONRY ONLY
      ii. OR EQUAL ADHERING TO ICC ES AC 106
5. INSTALLATION
   a. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL FASTENERS ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND AS REQUIRED BY CODE. A PRE-CONSTRUCTION MEETING AND OR TRAINING IS RECOMMENDED TO ENSURE PROPER INSTALLATIONS AT NO COST TO THE OWNER.
   b. IF EXISTING CONDITIONS PREVENT INSTALLATION AS SHOWN ON DRAWINGS OR AS RECOMMENDED. CONTRACTOR SHALL CONTACT ENGINEER OR ANCHOR REPRESENTATIVE PRIOR TO INSTALLATION OF ANCHORS FOR ALTERNATE RECOMMENDATION.
   c. CONTRACTOR SHALL BE SURE ALL SURFACES ARE CLEAN AND ARE PREPARED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
   d. ALL ANCHORS INSTALLATIONS SHALL BE PLUMB, NEAT AND LEVEL UNLESS OTHERWISE NOTED.
   e. ARCHITECT/ENGINEER MAY REQUIRE PULLOUT OR SHEAR TESTS TO DETERMINE ADEQUACY OF ANCHORS AT NO COST TO THE OWNER.
   f. DESIGN BOND STRENGTH HAS BEEN BASED ON THE FOLLOWING CONDITIONS. ANY CHANGES SHALL BE APPROVED BY ENGINEER PRIOR TO INSTALLATION.
      i. CONCRETE TO BE CURED FOR AT LEAST 21 DAYS
      ii. TEMPERATURE CATEGORY B ACCORDING TO ACI 355.4
      iii. DRY HOLES
      iv. HOLES DRILLED WITH A CARBIDE BIT
      v. HOLE PREPARED ACCORDING TO MANUFACTURER'S INSTALLATION.
   g. INSTALLERS FOR VERTICAL AND HORIZONTAL APPLICATION FOR TENSION LOADS SHALL BE CERTIFIED. CERTIFICATIONS SHALL BE SUBMITTED WITH PRODUCT SUBMITTAL.
6. INSPECTION
   a. ALL ANCHOR INSTALLATIONS REQUIRING CERTIFIED INSTALLER'S SHALL BE CONTINUOUSLY INSPECTED.

SCHEDULE OF SPECIAL INSPECTIONS

☐ NO SPECIAL INSPECTIONS REQUIRED FOR THIS PROJECT
☒ SPECIAL INSPECTIONS REQUIRED

THE FOLLOWING SHEETS COMPRISE THE REQUIRED SCHEDULE OF SPECIAL INSPECTIONS FOR THIS PROJECT. THE CONSTRUCTION DIVISIONS THAT REQUIRE SPECIAL INSPECTIONS FOR THIS PROJECT ARE AS FOLLOWS:

☒	IT-1 VERIFICATION OF SOILS	☒	IT-10 INSPECTION OF STRUCTURAL STEEL
☒	IT-2 EXCAVATION AND FILL	☒	IT-11 STRUCTURAL MASONRY
☐	IT-3 PILING AND DRILLING PIERS	☒	IT-12 WELDING
☐	IT-4 MODULAR RETAINING WALLS	☒	IT-13 HIGH STRENGTH BOLTS & STEEL FRAMING
☒	IT-5 REINFORCED CONCRETE	☒	IT-14 SPRAYED FIRE-RESISTANCE MATERIALS
☐	IT-6 POST TENSION SLAB	☒	IT-15 EXTERIOR INSULATION AND FINISH SYSTEM
☒	IT-7 PRE-CAST CONCRETE ERECTION	☐	IT-16 SEISMIC RESISTANCE
☒	IT-8 PRE-STRESSED CONCRETE	☐	IT-17 SMOKE CONTROL
☒	IT-9 INSPECTION OF PRE-CAST FABRICATORS	☐	IT-18 WOOD
		☐	IT-19 SPECIAL CASES

1 / S-300 — SPECIAL INSPECTION NOTES
NO SCALE

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KEY PLAN

Revisions		
#	Date	Description

Project Number: 18021
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Issue Date: 06/07/19

DRAWING TITLE
GENERAL NOTES

SHEET NUMBER
S-300

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