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10. CODES AND STANDARDS:

1.1. INTERNATIONAL BUILDING CODE 2012 EDITION INCLUDING ALL SUBSEQUENT SUPPLEMENTS AND AMENDMENTS "THERETO".

1.2. "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES", AMERICAN SOCIETY OF CIVIL ENGINEERS, ASCE 7-10.

1.3. "SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS", PUBLICATION 360-10 BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, AND AS AMENDED IN SPECIFICATIONS.

1.4. "SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS", PUBLICATION 341-10 BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION.

1.5. "STRUCTURAL WELDING CODE" (AWS D1.1:2010) AND "STRUCTURAL WELDING CODE REINFORCING STEEL" (AWS D1.4:2007, AMERICAN WELDING SOCIETY.

1.6. "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318-11)", AMERICAN CONCRETE INSTITUTE AND ALL SUCCEEDING REVISIONS.

1.7. "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" (ACI 530-11) AND "SPECIFICATIONS FOR MASONRY STRUCTURES" (ACI 530.1-11), AMERICAN CONCRETE INSTITUTE.

1.8. "MANUAL OF STANDARD PRACTICE", CONCRETE REINFORCING STEEL INSTITUTE, LATEST EDITION.

1.9. "STANDARD FOR STEEL ROOF DECK", ANSIS/DIR RD-2010, STEEL DECK INSTITUTE.

1.10. "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, WITH SUPPLEMENT 1, DATED 2010", S100-07/S1-10, AMERICAN IRON AND STEEL INSTITUTE.

20. SPECIFICATIONS:

2.1. THE STRUCTURAL GENERAL NOTES ARE NOT A SUBSTITUTE OR A REPLACEMENT FOR THE PROJECT SPECIFICATIONS. THESE NOTES ARE INTENDED AS A GUIDE TO THE DESIGN AND/OR CONSTRUCTION REQUIREMENTS ESTABLISHED FOR THIS PROJECT. NO CONTRACTOR SHOULD ATTEMPT TO DESIGN, BID, OR CONSTRUCT ANY PORTION OF THE WORK HEREIN WITHOUT CONSULTING THE PROJECT SPECIFICATIONS. WHERE CONFLICTS OCCUR BETWEEN THESE NOTES AND THE SPECIFICATIONS.

2.2. CONTRACTOR AND STRUCTURAL STEEL FABRICATOR SHOULD ACQUAINT THEMSELVES WITH THE REQUIREMENTS FOR DOMESTICALLY PRODUCED BOLTS AND FOR STEEL CONNECTION DESIGN REQUIREMENTS, INCLUDING SIGNED AND SEALED SHOP DRAWINGS AND CONNECTION DESIGN CALCULATIONS, NOTED HEREIN AND IN THE STRUCTURAL STEEL SPECIFICATIONS. REQUIREMENTS ARE MANDATORY. REFER TO SPECIFICATION SECTION 051200 "STRUCTURAL STEEL FRAMING"

2.3. STRUCTURAL STEEL SHALL BE FABRICATED BY A QUALIFIED FABRICATOR WHO PARTICIPATES IN THE AISC CERTIFICATION PROGRAM AND IS DESIGNATED AS AN AISC CERTIFIED PLANT "STANDARD FOR STEEL BUILDING STRUCTURES (STD)" AND THE STRUCTURAL STEEL FABRICATOR MUST DEMONSTRATE A CONSISTENT RECORD OF AT LEAST TEN (10) SUCCESSFUL PROJECTS OF EQUAL OR GREATER MAGNITUDE OVER THE PRECEDING FIVE (5) YEARS. CONTRACTOR SHALL SUBMIT EVIDENCE TO THE ARCHITECT VERIFYING THEIR PROPOSED FABRICATOR'S COMPLIANCE. FABRICATOR'S CREDENTIALS MUST BE IN COMPLIANCE WITHIN 48 HOURS OF BID.

2.4. STRUCTURAL STEEL SHALL BE ERECTED BY A QUALIFIED INSTALLER WHO MUST DEMONSTRATE A CONSISTENT RECORD OF AT LEAST TEN (10) SUCCESSFUL PROJECTS OF EQUAL OR GREATER MAGNITUDE OVER THE PRECEDING FIVE (5) YEARS. CONTRACTOR SHALL SUBMIT EVIDENCE TO THE ARCHITECT VERIFYING THEIR ERECTOR'S COMPLIANCE. ERECTOR'S CREDENTIALS MUST BE IN COMPLIANCE WITHIN 48 HOURS OF BID.

30. DESIGN LOADS:

3.1. SUPERIMPOSED GRAVITY LOADS:

AREA	LIVE LOAD	DEAD LOAD
STAIRS	100 PSF	50 PSF

LIVE LOADS ARE REDUCED IN CONFORMANCE WITH ASCE 7-10 SECTION 4.8 "REDUCTION IN LIVE LOADS"

3.2. SEISMIC LOADS:

RISK CATEGORY	IV
RISK IMPORTANCE FACTOR "I _e "	1.5
SITE SOIL CLASSIFICATION	D
MAPPED SPECTRAL RESPONSE "S _s /S _i "	0.169g/0.093g
DESIGN SPECTRAL RESPONSE "S _{ds} /S _{d1} "	0.180g/0.149g
SEISMIC DESIGN CATEGORY	C

THE ADDITION IS ATTACHED TO THE EXISTING STRUCTURE AND DOES NOT ADD MORE THAN 10% TO THE EXISTING FORCES.

3.3. WIND LOADS PER ASCE 7-10:

BASIC WIND SPEED (3-SECOND GUST)	115 MPH
RISK CATEGORY	IV
ASCE 7 EXPOSURE CATEGORY	B

WIND LOADS FOR THE ADDITION ARE RESISTED BY THE EXISTING STRUCTURE.

3.4. DRIFTING SNOW LOADS PER ASCE 7-10:

50 YEAR GROUND SNOW LOAD "P _g "	10.0 PSF
RISK CATEGORY	IV
IMPORTANCE FACTOR "I"	1.5
ROOF EXPOSURE TYPE	PARTIAL
EXPOSURE FACTOR "C _e "	1.00
THERMAL FACTOR "C _t "	1.00
MINIMUM ROOF SNOW LOAD (P _g)	10.0 PSF
FLAT ROOF SNOW LOAD "P _f "	7.0 PSF
RAIN-ON-SNOW SURCHARGE	5.0 PSF
FLAT ROOF DESIGN SNOW LOAD	12.0 PSF

40. FOUNDATIONS:

4.1. NO GEOTECHNICAL STUDY HAS BEEN PERFORMED FOR THIS PROJECT ON THIS SITE. FOUNDATION DESIGN HAS BEEN BASED ON BEARING STRATA CAPABLE OF SUSTAINING A MINIMUM BEARING PRESSURE OF 2000 PSF. CONTRACTOR SHALL BE RESPONSIBLE FOR ASSURING AND OBTAINING REQUIRED ALLOWABLE BEARING CAPACITY.

4.2. WHERE FOOTING EXCAVATIONS MUST REMAIN OPEN OVERNIGHT OR IF RAINFALL BECOMES IMMINENT WHILE BEARING SOILS ARE EXPOSED, A 2" TO 4" THICK MUD MAT OF UNREINFORCED LEAN (FC = 2000 PSI) CONCRETE SHALL BE PLACED ON THE BEARING SOILS BEFORE PLACEMENT OF THE FOOTING REINFORCING.

4.3. TOP OF FOOTING (T/F) ELEVATIONS ARE SHOWN ON THE DRAWINGS OR ARE TO BE DETERMINED BY THE CONTRACTOR IN THE FIELD IN ACCORDANCE WITH THE GUIDELINES SET FORTH IN THE DRAWINGS AND SPECIFICATIONS.

4.4. BOTTOM OF EXTERIOR FOOTINGS SHALL BEAR AT A MINIMUM DEPTH OF 1'-6" BELOW FINAL GRADE FOR FROST PROTECTION.

4.5. TESTING AND INSPECTION:

A. ALL AREAS TO HAVE SLABS ON GRADE SHALL BE PROOF ROLLED AND UNDER OBSERVATION OF THE GEOTECHNICAL ENGINEER AND APPROVED PRIOR TO PREPARATION FOR CONCRETE PLACEMENT.

B. ALL FOUNDATION BEARING STRATA SHALL BE INSPECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO ANY CONCRETE PLACEMENT.

C. GEOTECHNICAL ENGINEER SHALL BE THE SOLE JUDGE AS TO SUITABILITY OF ALL FOUNDATION AND/OR SLAB BEARING STRATA.

D. FOOTING BEARING ELEVATIONS SHALL BE ADJUSTED IN THE FIELD AS REQUIRED TO MEET THE DESIGN BEARING PRESSURES BY ADDITIONAL EXCAVATION OR COMPACTION AND/OR BACKFILLING OR BY OTHER MEANS ACCEPTABLE TO THE GEOTECHNICAL ENGINEER.

4.6. UNACCEPTABLE SOILS: CONTRACTOR SHALL REMOVE AND REPLACE UNACCEPTABLE SOILS IN ACCORDANCE WITH THE GEOTECHNICAL REPORT AND/OR AT THE DIRECTION OF THE GEOTECHNICAL ENGINEER. ALL SOILS WITH PLASTICITY INDICES GREATER THAN 15 OF WHICH MORE THAN 10% PASSES A #200 SIEVE SHALL BE REMOVED TO A DEPTH OF NOT LESS THAN 3'-0" OR GREATER AS DIRECTED BY THE GEOTECHNICAL ENGINEER WHERE SUCH MATERIAL OCCURS BELOW FOUNDATIONS.

4.7. ENGINEERED FILL: ALL FILL MATERIAL SHALL BE A CLEAN, LOW PLASTICITY SOIL WITH A PLASTICITY INDEX LESS THAN 30 (LESS THAN 15 IS PREFERRED), LIQUID LIMIT LESS THAN 60, UNIFORMITY COEFFICIENT OF 120 (4-5 PPT), AND SHALL NOT CONTAIN MORE THAN 5% BY WEIGHT OF FIBROUS ORGANIC MATERIALS. PARTIALLY WEATHERED ROCK MATERIALS MAY BE USED FOR STRUCTURAL FILL PROVIDED THE MATERIAL CAN BE REDUCED TO MAXIMUM DIMENSIONS OF 6".

4.8. DEEP FILL: WHERE SEVERAL FEET OF STRUCTURAL FILL WILL BE REQUIRED TO ACHIEVE THE FINAL GRADES, CONSTRUCTION SHALL BE DELAYED TO PERMIT THE UNDERLYING SOILS TO SETTLE AND CONSOLIDATE UNDER THE WEIGHT OF THE NEWLY PLACED FILL. OVERBURDEN SEVERAL WEEKS OF TIME MAY BE REQUIRED FOR THIS SETTLING TO OCCUR. SETTLEMENT PINS SHALL BE INSTALLED AT THE TOP OF THE FILL AND MONITORED TO DETERMINE WHEN THE CONSOLIDATION HAS REACHED A SUFFICIENTLY MOVEMENT THUS PERMITTING CONSTRUCTION TO BEGIN. THE GEOTECHNICAL ENGINEER SHALL BE THE SOLE JUDGE AS TO THE REQUIREMENTS FOR DELAY AND COMPLETION OF ADEQUATE CONSOLIDATION.

4.9. EXTENT OF FILL PLACEMENT: STRUCTURAL FILL SHALL EXTEND HORIZONTALLY BEYOND THE EDGE OF BUILDING FOUNDATIONS AT LEAST A DISTANCE OF 10'-0" BUT NOT LESS THAN THE HEIGHT OF THE FILL MATERIAL PLACED. SLOPE OF FILL SHALL NOT EXCEED 2:1 (H:V) AND SHOULD BE PROPERLY COMPACTED.

4.10. COMPACTION: ALL FILL SHALL BE PLACED IN LOOSE LIFTS NOT EXCEEDING 8 INCHES IN THICKNESS AND COMPACTED TO A MINIMUM OF 95 PERCENT STANDARD PROCTOR (ASTM D-698) EXCEPT THAT THE TOP 12 INCHES UNDER FOUNDATIONS AND THE BUILDING PAD SHALL BE COMPACTED TO A MINIMUM OF 98 PERCENT STANDARD PROCTOR. MOISTURE SHALL BE CONTROLLED AT ALL TIMES TO BE WITHIN 3 PERCENT ABOVE OR BELOW OPTIMUM CONTENT.

4.11. MUD SLABS: PROVIDE 2" TO 4" THICK LAYER CONCRETE (2,000 PSI) "MUD-MAT" SLABS WHERE FOUNDATION EXCAVATIONS WILL BE LEFT OPEN TO POTENTIAL RAINFALLS.

4.12. MODULUS OF SUBGRADE REACTION FOR SLABS ON GRADE: 100 PCI

4.13. FOUNDATION AND RETAINING WALL DESIGN PRESSURES:

ACTIVE PRESSURE	50 PSF/FT
AT REST PRESSURE	70 PSF/FT
PASSIVE PRESSURE	360 PSF/FT
FRICTION COEFFICIENT	.30

4.14. FOUNDATION AND RETAINING WALLS SHALL HAVE A MINIMUM OF TWO FEET (2'-0") OF FREE DRAINING GRANULAR FILL AGAINST THE BACK OF THE WALL OR SHALL HAVE AN ACCEPTABLE COMMERCIAL GRADE OF DRAINAGE MAT PLACED AGAINST THE BACK OF THE WALL.

4.15. FOUNDATION WALLS RETAINING EARTH SHALL BE BRACED AGAINST BACKFILL PRESSURES UNTIL FLOOR SLABS AT TOP AND BOTTOM ARE IN PLACE. BACKFILLING IS STRICTLY PROHIBITED UNTIL SLABS ARE IN PLACE.

4.16. FOUNDATION WALLS OR GRADE BEAMS HAVING EARTH PLACED ON EACH SIDE SHALL HAVE BOTH FILLED SIMULTANEOUSLY TO MAINTAIN A COMMON ELEVATION.

4.17. REINFORCING IN ALL CONTINUOUS STRIP FOOTINGS SHALL HAVE CORNER BARS OR DOWELS PROVIDED AT ALL CORNERS AND BE BENT 90 DEGREES TO REMAIN IN PLACE.

4.18. IF UNDERPINNING OF EXISTING FOUNDATIONS ADJACENT TO THE NEW CONSTRUCTION WILL BE REQUIRED, THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL SUCH WORK AND FOR PROVIDING FOR THE ADEQUACY AND PERMANENT SUPPORT FOR ALL EXISTING BUILDINGS. CONTRACTOR SHALL RETAIN A PROFESSIONAL ENGINEER REGISTERED IN ARKANSAS TO DESIGN AND DETAIL ALL UNDERPINNING WORK BASED ON CONDITIONS UNCOVERED AND DOCUMENTED IN THE FIELD. CALCULATIONS AND DRAWINGS FOR ALL UNDERPINNING WORK, SIGNED AND SEALED BY THE CONTRACTOR'S ENGINEER, SHALL BE SUBMITTED TO THE ARCHITECT FOR RECORD ONLY.

50. CONCRETE:

5.1. CONCRETE SHALL HAVE 28-DAY COMPRESSIVE STRENGTHS AND DENSITIES AS FOLLOWS:

ELEMENT/MEMBER	STRENGTH FC	DENSITY WC
FOOTINGS & SLABS ON GRADE	3 KSI	145 PCF
EXTERIOR CONCRETE OR CONCRETE EXPOSED TO WEATHER	4.5 KSI	145 PCF
ALL OTHER CONCRETE U.N.O.	4 KSI	145 PCF
STAIR PAN FILL	3KSI	115 PCF

5.2. CONCRETE MIX DESIGNS:

A. SUBMITTALS: SUBMIT WRITTEN REPORTS OF EACH PROPOSED CONCRETE MIX NOT LESS THAN 15 DAYS PRIOR TO THE START OF WORK. DESIGN MIXES PREPARED MORE THAN TWENTY-FOUR (24) MONTHS PRIOR TO THE DATE OF THE SUBMITTAL ARE NOT PERMITTED.

B. MIX DESIGNS, INCLUDING W/C RATIOS AND SLUMPS, SHALL BE PREPARED IN ACCORDANCE WITH THE MOST CURRENT ACI 301 CHAPTER 4, EXCEPT WHERE NOTED OTHERWISE IN THE PROJECT SPECIFICATIONS. CEMENT SHALL CONFORM TO ASTM C 150 TYPE I OR AT CONTRACTOR'S OPTION, ASTM C 595 TYPE II. WHERE FLY ASH IS PERMITTED IN ACCORDANCE WITH THE SPECIFICATIONS, NORMAL WEIGHT AGGREGATE SHALL CONFORM TO ASTM C 33 AND LIGHT WEIGHT AGGREGATE SHALL CONFORM TO ASTM C 330. NO ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL BE PERMITTED IN ANY CONCRETE.

C. AGGREGATE SIZES SHALL BE:

FORMED CONCRETE ELEMENTS, U.N.O.	#57 STONE (3/4" MAX.)
GRADE SLABS AND EARTH FORMED ELEMENTS <th>#57 STONE (1" MAX.)</th>	#57 STONE (1" MAX.)

D. WATER REDUCING ADMIXTURE SHALL BE USED IN ALL CONCRETE.

E. AIR ENTRAINING ADMIXTURE IN ACCORDANCE WITH ACI 301 TABLE 4.4.1. SHALL BE USED IN ALL CONCRETE EXPOSED TO FREEZING AND THAWING DURING CONSTRUCTION OR SERVICE CONDITIONS.

F. WATER/CEMENT RATIO SHALL NOT EXCEED 0.45 FOR ANY CONCRETE SUBJECTED TO FREEZING/THAWING.

G. ALL PUMPED CONCRETE SHALL HAVE A WATER/CEMENT RATIO LESS THAN 0.50 AND SHALL CONTAIN A HIGH RANGE WATER REDUCING ADMIXTURE (SUPERPLASTICIZER).

H. IN NO CASE SHALL A WATER/CEMENT RATIOS EXCEED THE FOLLOWING:

FC	3000 PSI	0.60 MAX. W/C RATIO
FC <th>4500 PSI</th> <th>0.42 MAX. W/C RATIO</th>	4500 PSI	0.42 MAX. W/C RATIO

5.3. CURING:

A. LIQUID MEMBRANE CURING COMPOUND WITH A MINIMUM 30% SOLIDS CONTENT SHALL BE APPLIED WITHIN TWO (2) HOURS AFTER COMPLETION OF FINISHING TO ALL CONCRETE FLOWWORK AND WALLS, U.N.O., OTHER THAN FOOTINGS AND GRADE BEAMS.

B. FLOORS IN AREAS RECEIVING QUARRY TILE, CERAMIC TILE AND LIQUID FLOOR HARDENER SHALL BE CURED WITH SPECIFIED DISSIPATING LIQUID MEMBRANE CURING COMPOUND OR WET CURED BY USE OF MOISTURE RETAINING COVER. DISSIPATING CURING COMPOUND SHALL BE THOROUGHLY BROOMED AND WASHED OFF PRIOR TO APPLICATION OF FLOOR FINISH.

5.4. WHEN COLD WEATHER CONDITIONS EXIST, PLACE AND CURE CONCRETE IN ACCORDANCE WITH ACI 308 "COLD WEATHER CONCRETING". WHERE USE IS DESIRED, SUBMIT FOR ENGINEER'S APPROVAL A NON-CORROSIVE, NON-CHLORIDE, ACCELERATING ADMIXTURE FOR CONCRETE EXPOSED TO TEMPERATURES BELOW 40 DEGREES. UNIFORMLY HEAT WATER AND AGGREGATES TO A TEMPERATURE OF NOT LESS THAN 50 DEGREES.

5.5. WHEN HOT WEATHER CONDITIONS EXIST, PLACE AND CURE CONCRETE IN ACCORDANCE WITH ACI 305 "HOT WEATHER CONCRETING". COOL MATERIALS BEFORE MIXING TO MAINTAIN CONCRETE PLACEMENT TEMPERATURE BELOW 90 DEGREES.

5.6. ALL CONSTRUCTION JOINTS SHOWN ON THE DRAWINGS SHALL BE INCORPORATED INTO THE STRUCTURE UNLESS THE COR APPROVES THEIR ELIMINATION.

5.7. ADDITIONAL CONSTRUCTION JOINTS, REQUIRED TO FACILITATE CONSTRUCTION, ARE SUBJECT TO THE APPROVAL OF THE COR AND MAY REQUIRE ADDITIONAL REINFORCING. SUCH JOINTS SHALL BE CLEARLY DETAILED ON THE SHOP DRAWINGS AND ALL REINFORCING SHALL PASS CONTINUOUSLY THROUGH THE JOINT.

5.8. REINFORCING IN ALL ABUTTING CONCRETE, INCLUDING FOOTINGS, SHALL BE CONTINUOUS THROUGH OR AROUND ALL CORNERS OR INTERSECTIONS. DOWELS OR SPLICES SHALL BE EQUAL IN SIZE AND SPACING TO THE REINFORCING IN THE ABUTTING MEMBERS.

5.9. REFER TO ARCHITECTURAL DRAWINGS FOR DOOR AND WINDOW OPENINGS, DRIPS, REGLETS, WASHES, MASONRY ANCHORS, BRICK LEDGE ELEVATIONS, SLAB DEPRESSIONS AND MISCELLANEOUS EMBEDDED BOLTS, PLATS, ANCHORS, ANGLES, ETC.

5.10. REFER TO ARCHITECTURAL DRAWINGS FOR CONCRETE FINISHES. WHERE FINISH IS NOT SPECIFIED, CONFORM TO REQUIREMENTS OF ACI 301.

5.11. REFER TO PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS FOR UNDERFLOOR, PERIMETER AND OTHER DRAINS AND FOR SLEEVES, OUTLET BOXES, CONDUIT, ANCHORS, ETC. THE VARIOUS TRADES ARE RESPONSIBLE FOR THEIR ITEMS.

5.12. BASE PLATES, ANCHOR BOLTS, SUPPORT ANGLES AND OTHER STEEL EXPOSED TO EARTH OR GRANULAR FILL SHALL BE COVERED WITH A MINIMUM OF 3" OF CONCRETE.

5.13. FILL SLABS, NOT SHOWN ON THE STRUCTURAL DRAWINGS, SHALL BE REINFORCED WITH A MINIMUM OF #4 WWM UNLESS NOTED OTHERWISE ON OTHER DRAWINGS OR IN THE SPECIFICATIONS.

5.14. FINISHING TOLERANCE SHALL BE REACHED WITHIN CLASS B IN ACCORDANCE WITH ACI 301 AND CONSIDERATION SHALL BE GIVEN TO SEQUENCING OF CONCRETE PLACEMENT TO FACILITATE CONTROL OF FINISH ELEVATIONS.

5.15. NON-SHRINK GROUT SHALL BE PRE-MIXED, NON-CORROSIVE, NON-METALLIC, NON-STAINING CONTAINING SILICA SANDS, PORTLAND CEMENT, SHRINKAGE REDUCING AGENTS AND WATER REDUCING AGENTS. PRODUCT SHALL ONLY REQUIRE THE ADDITION OF WATER. MINIMUM COMPRESSIVE STRENGTH SHALL BE 2500 PSI AFTER ONE DAY AND 7000 PSI AFTER 28 DAYS. GROUT SHALL BE FREE OF GAS PRODUCING OR AIR LEAKING AND OXIDIZING AGENTS AND CONTAIN NO CORROSIVE IRON, ALUMINUM OR GYPSUM.

5.16. PROVIDE CONCRETE GROUT - NOT MORTAR - FOR REINFORCED MASONRY LINTEL AND BOND BEAMS WHERE INDICATED ON DRAWINGS OR AS SCHEDULED.

5.17. OTHER CONNECTIONS SHALL BE DETAILED AND ALL EMBEDDED ITEMS SHALL BE PER THE AISC CODE OF STANDARD PRACTICE SECTION 7.5.

5.18. UNLESS OTHERWISE SHOWN IN THE ARCHITECTURAL DRAWINGS, PROVIDE #3/4" CHAMFERS AT ALL COLUMN, WALL, SLAB OR BEAM EDGES THAT ARE EXPOSED TO VIEW IN THE FINISHED STRUCTURE.

60. REINFORCING STEEL:

6.1. REINFORCING SHALL BE DOMESTIC NEW BILLET STEEL CONFORMING TO ASTM A615, GRADE 60 OR 60S INCLUDING STIRRUPS AND TIES, EXCEPT THAT REINFORCING WHICH IS REQUIRED TO BE WELDED SHALL CONFORM TO ASTM A706.

6.2. FIELD BENDING OF CONCRETE REINFORCING STEEL IS NOT PERMITTED WITHOUT WRITTEN APPROVAL OF THE COR.

6.3. WELDED WIRE REINFORCING SHALL CONFORM TO ASTM A1084.

6.4. ALL REINFORCING SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH ACI SP-68 "ACI DETAILING MANUAL - 2004" AND THE "CRS" MANUAL OF STANDARD PRACTICE, LATEST EDITION.

6.5. MINIMUM CONCRETE COVER OVER REINFORCING SHALL BE U.N.O.:

A. UNFORMED SURFACE CAST AGAINST EARTH.....	3 IN.
B. FORMED SURFACE EXPOSED TO EARTH/WEATHER.....	2 IN.
C. FLOORING, SLABS AND WALLS NOT EXPOSED TO EARTH/WEATHER FOR #11 AND SMALLER BAR.....	3/4 IN.
D. ALL OTHER FORMED ELEMENTS NOT EXPOSED TO EARTH/WEATHER.....	1-1/2 IN.

6.6. DEVELOPMENT LENGTHS AND LAP SPLICES SHALL BE IN ACCORDANCE WITH ACI 318 CHAPTER 12 AS INDICATED BELOW AND AS INDICATED ON THE DRAWINGS. WHERE SPLICES ARE NOT CALLED OUT ON THE DRAWINGS, USE CLASS "B". THE BASIC DEVELOPMENT LENGTH (L_D) IS SHOWN AS A MULTIPLE OF THE BAR DIAMETER (DB) IN THE TABLE BELOW. THE TENSION DEVELOPMENT LENGTHS SHALL BE MULTIPLIED BY EACH OF THE APPLICABLE FACTORS IN PARAGRAPH "C" AS INDICATED FOR TENSION. THE COMPRESSION DEVELOPMENT LENGTHS DO NOT REQUIRE ANY MODIFICATION. THE COMPRESSION LAP SPICE LENGTH IS NOTED IN PARAGRAPH "C". FINAL LENGTHS SHALL BE ROUNDED UP TO THE NEAREST WHOLE INCH.

FC	COMPRESSION	TENSION	
PSI	ALL CASES	CASE 1	CASE 2
3000	22 DB	55 DB	82 DB
4000/4500	19 DB	48 DB	72 DB

C. DEVELOPMENT LENGTH MODIFIERS: MULTIPLICATION FACTORS APPLY TO THE BASIC "L_D" INDICATED ABOVE AND ARE CUMULATIVE OVER EACH OF THE REQUIREMENTS NOTED BELOW.

I. COMPRESSION: CLASS "C" LAP SPICE REQUIREMENT.....	30 DB
II. TENSION: CLASS "A" LAP SPICE REQUIREMENT (EQUALS L _D).....	1.0
III. TENSION: CLASS "B" LAP SPICE REQUIREMENT.....	1.3
IV. TENSION: TOP BARS WITH > 12" OF CONCRETE BELOW.....	1.3
V. TENSION: BARS SMALLER THAN #.....	0.8

6.7. A CLASS "B" SPICE IS REQUIRED WHEREVER ALL REINFORCING BARS CROSSING A SECTION ARE SPLICED.

6.8. REINFORCING BARS SHALL BE WELDED ONLY WHERE SHOWN ON THE STRUCTURAL DRAWINGS AND WELDS SHALL BE IN ACCORDANCE WITH THE "STRUCTURAL WELDING CODE - REINFORCING STEEL" (AWS D1.4). NO OTHER REINFORCING MAY BE WELDED WITHOUT THE APPROVAL OF THE COR. TACK WELDING OF ANY REINFORCING IS STRICTLY PROHIBITED.

6.9. WELDED WIRE MAT/FABRIC SHALL BE LAPPED 1'-0" AT ALL SPLICES.

6.10. ALL REINFORCING TERMINATING AT THE TOP OF COLUMNS AND PILASTERS SHALL BE HOOKED, U.N.O.

6.11. SUBMIT SHOP DRAWINGS FOR FABRICATION, BENDING, AND PLACEMENT OF CONCRETE REINFORCEMENT. COMPLY WITH ACI DETAILING MANUAL (SP-68) SHOWING BAR SCHEDULES, STIRRUP SPACING, DIAGRAMS OF BENT BARS, ARRANGEMENT OF CONCRETE REINFORCEMENT. INCLUDE SPECIAL REINFORCEMENT REQUIRED AT OPENINGS THROUGH CONCRETE STRUCTURES. INCLUDE ALL ACCESSORIES SPECIFIED/REQUIRED TO SUPPORT REINFORCING. THE SHOP DRAWING SHOULD INCLUDE ELEVATIONS OF ALL WALLS.

6.12. SHOP DRAWINGS SHALL BE REVIEWED BY THE CONTRACTOR PRIOR TO SUBMISSION AND SHALL BEAR THE CONTRACTOR'S APPROVAL STAMP ACCEPTING RESPONSIBILITY FOR DIMENSIONS, QUANTITIES AND COORDINATION WITH THE OTHER TRADES.

6.13. DRAWINGS MAY BE ELECTRONICALLY SUBMITTED, PROVIDED LEGIBILITY IS MAINTAINED. REVIEW COMMENTS ONLY WILL BE ELECTRONICALLY FORWARDED TO THE CONTRACTOR.

6.14. CONTRACTOR SHALL PROVIDE IN THEIR SCHEDULE FOR A SHOP DRAWING REVIEW AND ERECTOR TIME OF A MINIMUM OF FIFTEEN (15) WORKING DAYS IN THE COR'S OFFICE.

6.15. CONTRACTOR SHALL NOTIFY THE COR A MINIMUM OF 48 HOURS PRIOR TO ALL CONCRETE POURS IN ORDER TO PERMIT REINFORCING STEEL REVIEW IF REQUIRED BY THE COR.

70. STRUCTURAL STEEL:

7.1. ALL STRUCTURAL STEEL SHALL BE OF THE GRADES INDICATED BELOW, UNLESS NOTED OTHERWISE ON PLANS OR DETAILS:

A. WIDE FLANGE SHAPES ASTM A992 GR50.	
B. OTHER ROLLED SHAPES ASTM A36 TYPICALLY, U.N.O.	
C. ANCHOR BOLTS ASTM F1554 GR36 U.N.O.	
D. STRUCTURAL TUBING (SQUARE AND RECTANGULAR) ASTM A500, GRADE B, FY=46 KSI.	
E. STRUCTURAL TUBING (ROUND) ASTM A500, GRADE B, FY=42 KSI.	
F. PLATES AND BARS ASTM A36 U.N.O.	
G. MISCELLANEOUS ASTM A36 U.N.O.	

7.2. ALL STRUCTURAL STEEL SHALL BE DETAILED AND, FABRICATED IN ACCORDANCE WITH THE AISC CODE OF STANDARD PRACTICE AS MODIFIED IN THESE NOTES AND THE PROJECT SPECIFICATIONS.

7.3. SUBMIT SHOP DRAWINGS FOR DETAILS, FABRICATION, AND ERECTION OF STRUCTURAL STEEL. COMPLY WITH AISC "STEEL CONSTRUCTION MANUAL", AISC "DETAILING FOR STEEL CONSTRUCTION", AND AISC "ENGINEERING FOR STEEL CONSTRUCTION" PUBLICATIONS.

7.4. SHOP DRAWINGS SHALL BE REVIEWED BY THE CONTRACTOR PRIOR TO SUBMISSION. DRAWINGS SHALL BEAR THE CONTRACTOR'S APPROVAL STAMP ACCEPTING RESPONSIBILITY FOR DIMENSIONS, QUANTITIES AND COORDINATION WITH THE OTHER TRADES.

7.5. DRAWINGS MAY BE ELECTRONICALLY SUBMITTED, PROVIDED LEGIBILITY IS MAINTAINED. REVIEW COMMENTS ONLY WILL BE ELECTRONICALLY FORWARDED TO THE CONTRACTOR.

7.6. CONNECTION DESIGN: SEE SPECIFICATIONS FOR SPECIFIC REQUIREMENTS.

A. FABRICATOR IS RESPONSIBLE FOR THE DESIGN OF CONNECTIONS NOT DESIGNED ON THE STRUCTURAL DRAWINGS.

B. ALL CONNECTIONS SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED. SHOP DRAWING CONTAINING CONNECTION DESIGNS SHALL BE SIGNED AND SEALED. A NOTE INDICATING "CONNECTION DESIGN ONLY" SHOULD ACCOMPANY THE SEAL. FABRICATOR SHALL SUBMIT SIGNED AND SEALED CALCULATIONS FOR ALL CONNECTIONS DESIGNED AS PART OF THEIR WORK AND APPEARING ON THEIR SHOP DRAWINGS.

C. GENERALLY, CONNECTIONS SHOWN ON THE DRAWINGS ARE SCHEMATIC AND ARE INTENDED TO SHOW THE RELATIONSHIP OF THE MEMBERS.

D. CONNECTIONS SHALL BE DESIGNED FOR THE REACTIONS AS SHOWN ON THE DRAWINGS, WITH A MINIMUM REACTION OF 10 KIPS. IF NO REACTION IS SHOWN ON PLAN, DESIGN CONNECTIONS FOR ONE-HALF (1/2) THE MAXIMUM TOTAL UNIFORM LOAD ON THE MEMBER, AS DEFINED IN TABLE 3-6, "MAXIMUM TOTAL UNIFORM LOAD" IN THE AISC SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS". PUBLICATION 360-05.

E. MEMBER FORCES AND REACTIONS HAVE BEEN REDUCED IN CONFORMANCE TO CODE PROVISIONS RELATED TO COMBINATIONS OF LOADS THAT INCLUDE WIND AND SEISMIC FORCES. NO FURTHER REDUCTIONS IN FORCES OR INCREASES IN ALLOWABLE STRESSES ARE PERMITTED.

F. CONNECTIONS SHOWN ON DRAWINGS ARE ULTIMATE (LRFD) LOAD REACTIONS. G. CONNECTIONS MAY BE BOLTED OR WELDED, U.N.O. ON THE DRAWINGS.

7.7. BOLTED CONNECTIONS:

A. SLIP CRITICAL CONNECTIONS WITH A325SC OR A490SC BOLTS SHALL BE USED IN ALL BOLTED MOMENT PLATE CONNECTIONS. OVERSIZED OR LONG-SLOTTED HOLES ARE PERMITTED.

B. BEARING TYPE BOLTED CONNECTIONS WITH A325H OR A490H BOLTS SHALL BE USED FOR ALL OTHER BOLTED CONNECTIONS. OVERSIZED AND LONG-SLOTTED HOLES ARE NOT PERMITTED U.N.O. IN SINGLE TAB PLATE CONNECTIONS ONLY BEARING-TYPE FASTENERS ARE PERMITTED, FASTENERS SHALL NOT BE TORQUED, AND SHORT SLOTTED HOLES ARE REQUIRED.

C. ANCHOR BOLTS OR OTHER BOLTS, WHERE INDICATED, SHALL CONFORM TO ASTM F1554 GR36 U.N.O.

D. SHAPES, SIZES, HEADS, SHAFTS OR NUTS SHALL NOT EXTEND NOR PROHIBIT THE APPLICATION OF ARCHITECTURAL FINISHES OR PLACEMENT OF STEEL DECK AT ITS CORRECT LOCATION AND ELEVATION.

E. CONNECTION DESIGNER IS RESPONSIBLE FOR VERIFYING THE AXIAL CAPACITY AFTER A SECTION IS REDUCED FOR BOLT HOLES. MEMBER SIZE MAY BE INCREASED OR PLATES ADDED TO MAINTAIN REQUIRED CAPACITY.

F. SHOP DRAWINGS SHALL INDICATE THE TYPE OF BOLT USED IN EACH CONNECTION. ALLOWABLE VALUES FOR THE VARIOUS BOLT TYPES AND CAPACITY OF EACH CONNECTION SHOWN.

G. DOMESTIC FASTENERS (AMERICAN OR CANADIAN) ARE REQUIRED IN ALL STRUCTURAL STEEL WORK ON THIS PROJECT. IMPORTED FASTENERS ARE PROHIBITED.

7.8. WELDED CONNECTIONS:

A. ALL WELDING SHALL BE IN ACCORDANCE WITH THE "STRUCTURAL WELDING CODE - STEEL" (AWS D1.1) OF THE AMERICAN WELDING SOCIETY.

B. ELECTRODES FOR WELDING SHALL COMPLY WITH THE REQUIREMENTS OF AWS D1.1 TABLE 4.1.1.

C. SHOP DRAWINGS SHALL INDICATE WELD TYPE, REQUIRED ELECTRODES AND CAPACITY FOR EACH CONNECTION DETAILED ON THE SHOP DRAWINGS.

D. PERFORM VISUAL INSPECTIONS OF ALL WELDS.

E. PERFORM NON-DESTRUCTIVE TESTS OF WELDS AS FOLLOWS:

1. PARTIAL PENETRATION WELDS - ONE SPOT TEST PER WELD USING MAGNETIC PARTICLE TESTING TECHNIQUES.	
2. FULL PENETRATION WELDS - TEST ENTIRE LENGTH OF ALL WELDS. USE RADIOGRAPHIC OR ULTRASONIC TESTING TECHNIQUES.	

7.9. WHERE CANTILEVER BEAMS OCCUR ON PLAN AND THE SIZE IS NOTED ONLY FOR THE SPAN, THE CANTILEVER IS INTENDED TO BE THE SAME SIZE AS THE BACK-SPAN.

7.10. SPlicing OF STEEL MEMBERS, UNLESS SHOWN ON THE DRAWINGS, IS PROHIBITED WITHOUT WRITTEN APPROVAL OF THE COR.

7.11. NO CHANGE IN SIZE OR POSITION OF ANY STRUCTURAL ELEMENT NOR HOLES, SLOTS, CUTS, ETC. SHALL BE MADE UNLESS DETAILED AND NOTED AS A PROPOSED CHANGE ON THE SHOP DRAWINGS AND REVIEWED AND ACCEPTED BY THE COR.

7.12. NO FINAL BOLTING OR WELDING SHALL BE PERFORMED UNTIL AS MUCH OF THE STRUCTURE AS WILL BE STIFFENED THEREBY HAS BEEN PROPERLY ALIGNED.

7.13. FABRICATE ALL BEAMS WITH MILL CAMBERS UP.

7.14. U.N.O. BEAMS ARE EQUALLY SPACED BETWEEN COLUMNS.

7.15. MINIMUM PLATE THICKNESS SHALL BE 3/8" U.N.O.; MINIMUM BOLT DIAMETER SHALL BE 3/4" U.N.O.; MINIMUM SHOP WELD SHALL BE 3/16" AND MINIMUM FIELD WELD SHALL BE 1/4" U.N.O.

7.16. ALL RE-ENTRANT CORNERS (SUCH AS COPES AND BLOCKS) SHALL BE CUT AND SHAPED NOTCH FREE WITH A RADIUS OF AT LEAST 1/2".

7.17. FIELD USE OF GAS CUTTING TORCHES IS PROHIBITED FOR CORRECTING FABRICATION ERRORS IN PRIMARY STRUCTURAL FRAMING.

7.18. PARAGRAPH 4.4.1 OF THE AISC CODE OF STANDARD PRACTICE SHALL BE SUPERSEDED BY THE FOLLOWING: INDICATION OF COMPLIANCE BY THE OWNER OF SHOP DRAWINGS PREPARED BY THE FABRICATOR INDICATES THAT THE FABRICATOR HAS CORRECTLY INTERPRETED THE CONTRACT REQUIREMENTS. SUCH INDICATION DOES NOT RELIEVE THE FABRICATOR OF THE RESPONSIBILITY ASSIGNED TO HIM FOR THE DESIGN AND DETAILING OF CONNECTIONS ASSIGNED TO HIM, NOR FOR THE ACCURACY OF DIMENSIONS ON THE SHOP DRAWINGS, NOR FOR GENERAL FIT UP OF PARTS TO BE ASSEMBLED IN FIELD.

7.19. PARAGRAPHS 7.2 THROUGH 7.6 OF THE AISC CODE OF STANDARD PRACTICE SHALL BE SUPERSEDED AS FOLLOWS: ALL REFERENCES TO "OWNER" SHALL BE REPLACED BY "CONTRACTOR".

7.20. EXPANSION BOLTS SHALL PROVIDE A MINIMUM SAFETY FACTOR OF FOUR (4) TIMES THE FOLLOWING MINIMUM SERVICE LOAD CAPACITIES, U.N.O.

SLEEVE ANCHORS (2000 PSI MASONRY)	WEDGE ANCHORS (3000 PSI CONCRETE)		
DIA. SHEAR	TENSION	DIA. SHEAR	TENSION
1/4"	270 LB.	3/8"	1950 LB.
1/2"	300 LB.	1/2"	1250 LB.
3/4"	530 LB.	3/4"	3750 LB.
	600 LB.		2250 LB.

80. INSPECTION AND TESTING:

8.1. AN INDEPENDENT TESTING LABORATORY SHALL BE RETAINED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS TO PERFORM TESTING OF FOUNDATION BEARING STRATA, ENGINEERED FILLS, CONCRETE, GROUT, STEEL, AND WELDING. SEE PROJECT SPECIFICATIONS FOR REQUIREMENTS.

8.2. THE CONTRACTOR, IN CONJUNCTION WITH THE TESTING LABORATORY AND IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, SHALL DETERMINE THE FREQUENCY OF THE TESTING NECESSARY TO INSURE THAT THE DESIGN REQUIREMENTS ARE BEING MET.

8.3. THE TESTING AGENCY SHALL VERIFY THAT ALL WELDERS HAVE SATISFACTORILY PASSED AWS QUALIFICATION TESTS FOR THE WELDS WHICH THEY WILL PERFORM.

8.4. THE CONTRACTOR AND TESTING AGENCY SHALL REQUIRE THAT AWS QUALIFICATION TESTS FOR WELDING OF MATERIAL LESS THAN 1/8" IN THICKNESS ARE PASSED BY WELDERS EXPECTED TO ERECT LIGHT-GAGE FRAMING MATERIALS. THESE TESTS ARE NOT THE SAME AS FOR MATERIALS 1/8" OR GREATER IN THICKNESS (I.E. STRUCTURAL STEEL MATERIALS).

8.5. ALL WELDING SHALL BE INSPECTED AND TESTED IN ACCORDANCE WITH AWS D1.1 OR D1.3 AS APPROPRIATE TO THE MATERIAL THICKNESS.

8.6. THE TESTING AGENCY SHALL VERIFY THAT THE METAL DECK IS ATTACHED TO THE STRUCTURAL STEEL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND APPROVED SHOP DRAWINGS.

8.7. CONCRETE TESTING SHALL BE IN ACCORDANCE WITH ACI 301 CHAPTER 16 AND APPROPRIATE AND WITH THE PROJECT SPECIFICATIONS.

90. CONSTRUCTION AND SAFETY:

9.1. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL SAFETY REGULATIONS, PROGRAMS AND PRECAUTIONS RELATED TO ALL WORK ON THIS PROJECT.

9.2. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE PROTECTION OF PERSONS AND PROPERTY EITHER ON OR ADJACENT TO THE PROJECT AND SHALL PROTECT SAME AGAINST INJURY, DAMAGE OR LOSS.

9.3. MEANS AND METHODS OF CONSTRUCTION AND ERECTION OF STRUCTURAL MATERIALS ARE SOLELY THE CONTRACTOR'S RESPONSIBILITY.

9.4. STRUCTURAL DRAWINGS ARE INTENDED TO BE USED IN CONJUNCTION WITH THE DRAWINGS OF OTHER CONSULTANTS AND TRADES. THE CONTRACTOR SHALL COORDINATE THE VARIOUS REQUIREMENTS.

9.5. NO OPENINGS NOR ANY CHANGES IN SIZE, DIMENSION OR LOCATION SHALL BE MADE IN ANY STRUCTURAL ELEMENTS WITHOUT WRITTEN APPROVAL OF THE COR.

9.6. OPENINGS 1'-0" OR LESS ON A SIDE ARE GENERALLY NOT SHOWN ON THE STRUCTURAL DRAWINGS. REFER TO DRAWINGS OF OTHER CONSULTANTS FOR SUCH OPENINGS.

9.7. FIREPROOFING OF STRUCTURAL ELEMENTS IS NOT SHOWN ON THE STRUCTURAL DRAWINGS. REFER TO THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS FOR FIRE RATING REQUIREMENTS, MATERIALS AND METHODS.

9.8. THE CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION LOAD IMPOSED ON THE STRUCTURE TO THE CAPACITY OF THE STRUCTURE AT ANY TIME.

9.9. THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION, AND ANY TEMPORARY BRACING OR SUPPORT REQUIRED TO ACCOMMODATE THE CONTRACTOR'S MEANS AND METHODS ARE THE RESPONSIBILITY OF THE CONTRACTOR.

9.10. THE CONTRACTOR SHALL INFORM THE COR, CLEARLY AND EXPLICITLY IN WRITING, OF ANY DEVIATION OR SUBSTITUTION OF REQUIREMENTS OF THE CONTRACT DOCUMENTS. CONTRACTOR IS NOT RELIEVED OF ANY REQUIREMENTS OF THE CONTRACT DOCUMENTS BY VIRTUE OF THE COR'S REVIEW OF SHOP DRAWINGS, PRODUCT DATA, ETC., UNLESS THE CONTRACTOR HAS CLEARLY AND EXPLICITLY INFORMED THE COR IN WRITING OF ANY DEVIATIONS OR SUBSTITUTIONS AT TIME OF SUBMISSION, AND THE COR HAS GIVEN WRITTEN APPROVAL FOR THE SPECIFIC DEVIATIONS OR SUBSTITUTIONS.

9.11. ALL THINGS WHICH, IN THE OPINION OF THE CONTRACTOR, APPEAR TO BE DEFICIENCIES, OMISSIONS, CONTRADICTIONS OR AMBIGUITIES IN THE DRAWINGS OR SPECIFICATIONS, SHALL BE BROUGHT TO THE ATTENTION OF THE COR. CORRECTIONS OR WRITTEN INTERPRETATIONS SHALL BE ISSUED PRIOR TO PROCEEDING WITH THE WORK.

9.12. IF THE CONTRACTOR CANNOT CONSTRUCT ANY PORTION OF THE WORK IDENTIFIED IN THE DRAWINGS IN ACCORDANCE WITH THESE DRAWINGS AND SPECIFICATIONS, THEN THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE COR PRIOR TO PROCEEDING WITH THE WORK. WORK THAT DOES NOT COMPLY WITH THE DRAWINGS MAY REQUIRE REMOVAL, TESTING, OR ENGINEERING EVALUATION AT THE CONTRACTOR'S EXPENSE.

9.13. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO ORDERING ANY SHOP DRAWINGS OR CONSTRUCTION WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING CONDITIONS. COR SHALL BE INFORMED IN WRITING OF ANY CONFLICTS BETWEEN EXISTING AND PROPOSED NEW CONSTRUCTION.

9.14. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL DIMENSIONS SHOWN ON THE CONTRACT DOCUMENTS. INCONSISTENCIES ON THE STRUCTURAL DRAWINGS OR BETWEEN THE STRUCTURAL DRAWINGS AND ANY OTHER CONTRACT, SHOP, FABRICATION, OR OTHER DRAWINGS OR INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE COR PRIOR TO PROCEEDING WITH THE WORK.

9.15. DO NOT SCALE THESE DRAWINGS. USE THE DIMENSIONS SHOWN.

9.16. FOR METAL STAIRS, PROVIDE A DELEGATED DESIGN SUBMITTAL INCLUDING CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF THE PROJECT. SHOP DRAWINGS REFLECTING THIS DESIGN SHALL BE SUBMITTED WITH THE CALCULATIONS.

100. STRUCTURAL ABBREVIATIONS:

ABBREV.	DEFINITION	ABBREV.	DEFINITION
A.B.	ANCHOR BOLTS	HOF	HORIZONTAL OUTER FAC
ABV	ABOVE	HK	HOOK
ADDNL	ADDITIONAL	HORZ	HORIZONTAL
AFF	ABOVE FINISHED FLOOR	IF	INNER FACE
ALT.	ALTERNATE	INT	INTERIOR
ARCH	ARCHITECTURAL	IT	INTERIOR
B, BOT	BOTTOM	K	KIPS (1000 LBS)
B/XXX	BOTTOM OF XXX	L, LEN	LENGTH
BAL.	BALANCE	LAT	LATERAL
BB	BOND BEAM	LSB	POUNDS
BCX	BOTTOM CHORD EXTENSION	LE	LEFT END
BL	BRICK LEDGE	LLH	LONG LEG HORIZONTAL
BLDG	BUILDING	LLV	LONG LEG OUTSTANDING
BLW	BELOW	LLV	LONG LEG VERTICAL
BM	BEAM	LONG	LONGITUDINAL
BRG	BEARING	MAS	MASONRY
BRK	BRICK	MAX	MAXIMUM
BTWN	BETWEEN	MECH	MECHANICAL
CL, CLR	CLEAR	MFR	MANUFACTURER
CMU	CONC. MASONRY UNIT	MIN	MINIMUM
COL	COLUMN	NOM	NOMINAL
CONC	CONCRETE	OC, O/C	ON CENTER
CONN	CONNECTION	OF	OUTER FACE, OPP. FACE
CONST	CONSTRUCTION	OH	OPPOSITE HAND
CTR	CENTER	OPP	OPPOSITE
CNTD	CENTERED	OPNG	OPENING
DBA	DEFORMED BAR ANCHOR	PC	PRECAST
DET, DTL	DETAIL	PL	PLATE
DIM	DIMENSION	RE	RIGHT END
DK	DECK	REINFG	REINFORCING
DK	DECK	REINF	REINFORCEMENT
DWGS	DRAWINGS	REQD	REQUIRED
DWL	DRAWING	RET	REINFORCING
EA	EACH	SOG	SLAB ON GRADE</