#### GENERAL NOTES:

THE GENERAL NOTES ARE NOT A SUBSTITUTE OR A REPLACEMENT TO 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 THE MORE STRINGENT REQUIREMENTS SHALL APPLY UNLESS A WRITTEN CLARIFICATION IS ISSUED BY THE STRUCTURAL ENGINEER. VARIATION IN THE FIELD CONDITIONS RELATIVE TO THE CONTRACT DOCUMENTS SHALL BE REPORTED TO THE ARCHITECT. WORK SHALL NOT PROGRESS UNTIL WRITTEN PERMISSION FROM THE ARCHITECT IS OBTAINED.

### CODES AND STANDARDS:

- I. GOVERNING BUILDING CODE: IBC/2015
- "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318-14)"AMERICAN CONCRETE INSTITUTE 2014 AND ANY FOLLOWING REVISIONS "MANUAL OF STANDARD PRACTICE", CONCRETE REINFORCING STEEL INSTITUTE 2009.
- 3. AMERICAN INSTITUTE OF STEEL CONSTRUCTION SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS FOURTEENTH EDITION WITH "SEISMIC PROVISION FOR STRUCTURAL STEEL BUILDINGS AISC 341-10.
- 4. "STRUCTURAL WELDING CODE-STEEL (AWS DI.I-04)"AND "STRUCTURAL WELDING CODE - REINFORCING STEEL (AWS DI.4-98)". AMERICAN WELDING SOCIETY.
- 5. RECOMMENDED CODE OF STANDARD PRACTICE FOR STEEL JOISTS AND JOIST GIRDERS", STEEL JOIST INSTITUTE, AUGUST 1, 2002
- 6. "DESIGN MANUAL FOR FLOOR DECKS AND ROOF DECKS". STEEL DECK INSTITUTE
- 7. "BUILDING CODE REQUIREMENTS FOR CONCRETE MASONRY STRUCTURES" TMS 402-l3

# DESIGN CRITERIA:

l.	ROOF DATA:  DEAD LOAD: LIVE LOAD: SNOW LOAD: EXPOSURE CATEGORY: EXPOSURE FACTOR: THERMAL FACTOR: IMPORTANCE FACTOR:	13 PSF 20 PSF 142 PSF C Ce=1.0 Ct=1.0 1=1.0
2.	WIND DATA: BASIC WIND SPEED:	90 MPH

IMPORTANCE FACTOR: I.O EXPOSURE CATEGORY:

3. SEISMIC DATA: D (ASSUMED) SITE CLASS: OCCUPANCY CATEGORY: II IMPORTANCE FACTOR: I.O Ss = 0.322 51 = 0.139Fa = 1.5425ds = 0.331Fv = 2.2445dl = 0.208DESIGN CATEGORY:

RESISTING SYSTEM: BEARING WALL SYSTEM WITH SPECIAL REINFORCED MASONRY SHEAR WALLS R = 5.0OSF = 2.5

DAF= 3.5 EQUIVALENT LATERAL FORCE PROCEDURE Cs = .066

FTG,F

full penetration

grade beam

footing

ABBREV.	DEFINITION	ABBREV.	DEFINITION
ABBREV.  ===================================		HGK HORZ IF T HORZ IF T J L L L L L L L L L L L L L L L L L L	height hook horizontal inner face interior joist bearing joint ledge lateral long leg horizontal long leg vertical longitudinal masonry maximum mechanical manufacturer minimum metal not in contract nominal near side outer face opposite hand opening precast plate reinforcement required retaining slip critical schedule section spacing stiffener steel top top of xx transverse typical unless noted other vertical wide, width
FP	full penetration	WWF	welded wire fabric

### SUBMITTALS:

ALL TRADES.

- I. SHOP DRAWING REVIEW: REVIEW OF SHOP DRAWING IS ONLY FOR CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS TO BE CONFIRMED AND CORRELATED AT THE SITE; FOR INFORMATION THAT PERTAINS SOLELY TO THE FABRICATION PROCESSES OR TO THE MEANS, METHODS, TECHNIQUES, SEQUENCES, TEMPORARY SHORING BRACING AND PROCEDURES OF CONSTRUCTION; AND FOR COORDINATION OF WORK OF
- 2. SHOP DRAWINGS SHALL BE APPROVED BY THE ARCHITECT/ENGINEER OF RECORD PRIOR TO CONSTRUCTION
- 3. CONCRETE MIX DESIGNS: SUBMIT WRITTEN REPORTS OF EACH PROPOSED CONCRETE MIX NOT LESS THAN 15 DAYS PRIOR TO THE START OF PLACEMENT. MIX DESIGNS SHALL INCLUDE WATER CEMENT RATIO, SLUMP, AND AIR CONTENT. SUBMITTAL SHALL BE PREPARED IN ACCORDANCE WITH ACI 301-84, CHAPTER 3 EXCEPT NOTED OTHERWISE IN THE PROJECT SPECIFICATIONS.
- 4. CONCRETE REINFORCING STEEL SUBMIT SHOP DRAWINGS FOR FABRICATION, BENDING, AND PLACEMENT OF CONCRETE REINFORCEMENT. COMPLY WITH ACI DETAILING MANUAL(SP-66) SHOWING BAR SCHEDULES, STIRRUP SPACING, DIAGRAMS OF BENT BARS, ARRANGEMENT OF CONCRETE REINFORCING. INCLUDE SPECIAL REINFORCEMENT REQUIRED AT OPENINGS THROUGH CONCRETE STRUCTURES. INCLUDE ALL ACCESSORIES SPECIFIED/REQUIRED TO SUPPORT REINFORCING
- . STRUCTURAL STEEL 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. CONNECTIONS MUST BE SHOWN ON SHOP DRAWINGS AND INDICATE THE TYPE OF BOLT USED AND ALL CLIP ANGLES OR PLATES IN EACH CONNECTION. INDICATE ALL TYPES OF WELDS. ELECTRODES REQUIRED FOR EACH CONNECTION
- 6. STEEL DECK SUBMIT SHOP DRAWINGS FOR DETAILS AND ERECTION OF STEEL DECK, COMPLY WITH STEEL DECK INSTITUTE "STANDARD PRACTICE DETAILS: PUBLICATIONS. INCLUDE DECK PLACEMENT DRAWINGS WITH TYPE OF DECK, GAUGE, ATTACHMENT TO SUPPORTING STEEL AND SIDE LAP FASTENERS.
- 7. STEEL JOIST SUBMIT SHOP DRAWINGS FOR DETAILS AND ERECTION OF STEEL JOIST. COMPLY WITH STEEL JOIST INSTITUTE "STANDARD SPECIFICATION FOR OPEN WEB STEEL JOIST: INCLUDE PLAN LAYOUT OF JOIST PLACEMENT AND BRIDGING. INCLUDE BILL OF MATERIALS AND SPECIAL JOIST LOAD DIAGRAMS.

- I. THE FOLLOWING MUST BE SUBMITTED SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE SATE WHERE THE PROJECT IS LOCATED:
- A. STEEL JOIST FABRICATION/ERECTION DRAWINGS AND CALCULATIONS, INCLUDING **ACCESSORIES**
- B. STRUCTURAL STEEL FABRICATION/ERECTION DRAWINGS, INCLUDING CONNECTIONS.

## FOUNDATIONS:

- I. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO RETAIN A GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION TO DETERMINE THE SUITABILITY OF THE EXISTING SOIL CONDITIONS SUCH AS PLASTIC SOILS, UNACCEPTABLE FILL, ETC.
- 2. CONTINUOUS WALL FOOTINGS HAVE BEEN PROPORTIONED FOR AN ASSUMED NET ALLOWABLE SOIL BEARING PRESSURE OF 2000 PSF. SPREAD FOOTINGS HAVE BEEN PROPORTIONED FOR AN ASSUMED NET ALLOWABLE SOIL BEARING PRESSURE OF 2000 PSF.
- 3. GEOTECHNICAL ENGINEER SHALL BE THE SOLE JUDGE AS TO THE SUITABILITY OF 7. IT SHALL BE THE ERECTOR'S RESPONSIBILITY VERIFY JOISTS ARE NOT ALL FOUNDATION AND/OR SLAB BEARING STRATA.
- 4. CONTRACTOR SHALL REMOVE AND REPLACE UNACCEPTABLE SOILS IN ACCORDANCE WITH THE GEOTECHNICAL REPORT. ALL ORGANIC MATERIAL AND SOILS WHICH "PUMP" AFTER PROOF ROLLING WITH A FULLY LOADED TRUCK SHALL BE REMOVED.
- 5. BOTTOM OF FOOTINGS MUST EXTEND 2'-6' BELOW PROPOSED GRADE AND MUST BE ON UNDISTURBED SOIL OR "ENGINEERED FILL"
- 6. ENGINEERED FILL. ALL FILL MATERIAL SHALL BE SELECTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT. EXISTING ON SITE MATERIALS SUCH AS THE NEAR-SURFACE FILL SOILS (SILTS AND CLAYS) SHOULD NOT BE USED AS ENGINEERED FILL MATERIAL
- 7. UNLESS NOTED OTHERWISE IN SOILS REPORT, EARTH FILL PLACEMENT SHOULD BE COMPACTED TO A DRY DENSITY OF NOT LESS THAN 95% OF THE STANDARD PROCTER, AND WELL GRADED GRANULAR FILL SHOULD BE COMPACTED TO DRY DENSITY OF NOT LESS THAN 100% OF THE STANDARD PROCTOR. FILL SHALL BE PLACED IN LAYERS NOT EXCEEDING A LOOSE THICKNESS OF 8 INCHES
- 8. FOUNDATION WALL OR GRADE BEAMS HAVING EARTH PLACED ON EACH SIDE SHALL BE FILLED SIMULTANEOUSLY TO MAINTAIN A COMMON ELEVATION
- 9. EXCAVATION FOR THE TOE OF THE RETAINING WALL FOOTINGS MUST BE HAND CLEANED AND CONCRETE PLACED AGAINST THE EARTH FOR THE FULL DEPTH OF THE FOOTING.
- 10. WHEN FOUNDATION WALLS SPAN FROM GROUND FLOOR TO FIRST FLOOR, BOTH GROUND FLOOR SLAB AND FIRST FLOOR SLAB MUST BE IN PLACE BEFORE BACKFILL IS PLACED
- II. CONCRETE FOOTINGS PLACED IN EARTH TRENCHED FORMS SHALL BE FREE OF STANDING WATER AND FROST. CONCRETE FOOTINGS SHALL BE PROTECTED FROM FREEZING FOR A PERIOD OF NOT LESS THAN 5 DAYS.

### CONSTRUCTION AND SAFETY:

- I. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL SAFETY REGULATIONS, PROGRAMS AND PRECAUTIONS RELATED TO ALL WORK ON THIS PROJECT
- 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
- MEANS AND METHODS OF CONSTRUCTION AND ERECTION OF STRUCTURAL MATERIALS ARE SOLELY THE CONTRACTOR'S RESPONSIBILITY
- 4. THE STRUCTURAL DRAWINGS ARE INTENDED TO BE USED IN CONJUNCTION WITH THE DRAWINGS OF OTHER CONSULTANTS AND TRADES. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE VARIOUS REQUIREMENTS.
- 5. NO CHANGES IN SIZE, DIMENSION OR LOCATION, SHALL BE MADE IN ANY STRUCTURAL ELEMENTS WITHOUT WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER
- 6. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO ORDERING MATERIALS OR PROCEEDING WITH NEW WORK IN AREAS AFFECTED BY EXISTING CONDITIONS. STRUCTURAL ENGINEER SHALL BE INFORMED IN WRITING OF CONFLICTS BETWEEN EXISTING AND PROPOSED NEW CONSTRUCTION.
- 7. 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 STRUCTURAL ENGINEER PRIOR TO PROCEEDING WITH AFFECTED WORK.
- 8. DO NOT SCALE THESE DRAWINGS, USE THE DIMENSIONS SHOWN.
- 9. THE CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION LOAD IMPOSED ON THE STRUCTURE. SUCH LOADS SHALL NOT EXCEED THE CAPACITY OF THE STRUCTURE AT ANY TIME.
- IO. THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION AND ANY TEMPORARY BRACING FOR LOADS INDUCED DURING CONSTRUCTION OR SUPPORT REQUIRED TO ACCOMMODATE THE CONTRACTOR'S MEANS AND METHODS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- II. THE CONTRACTOR SHALL INFORM THE STRUCTURAL ENGINEER, CLEARLY AND EXPLICITLY IN WRITING OF ANY DEVIATION OR SUBSTITUTION OF REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL NOT BE RELIEVED OF ANY REQUIREMENTS OF THE CONTRACT DOCUMENTS BY VIRTUE OF THE STRUCTURAL ENGINEER'S REVIEW OF SHOP DRAWINGS, PRODUCT DATA, ETC. UNLESS THE CONTRACTOR HAS CLEARLY AND EXPLICITLY INFORMED THE STRUCTURAL ENGINEER IN WRITING OF ANY DEVIATIONS OR SUBSTITUTIONS AT TIME OF SUBMISSION, AND THE STRUCTURAL ENGINEER HAS GIVEN WRITTEN APPROVAL FOR THE SPECIFIC DEVIATIONS OR SUBSTITUTIONS.
- I. STEEL SHALL CONFORM TO THE "STEEL JOIST INSTITUTE (SJI) STANDARDS AND SPECIFICATIONS".
- 2. STEEL SHALL BE OF WELDING QUALITY. CONFORMING TO THE ASTM SPECIFICATIONS.
- 3. PROVIDE HORIZONTAL BRIDGING IN ACCORDANCE WITH THE SJI SPECIFICATIONS BEFORE JOIST ENDS ARE FIXED OR APPLICATION OF CONSTRUCTION LOADS. BRIDGING ROWS AND ANCHORS SHALL BE IN ACCORDANCE WITH STEEL JOIST INSTITUTE RECOMMENDATIONS.
- . JOISTS SHALL BE WELDED TO SUPPORTING STEEL WORK AT EACH END PER THE SJI SPECIFICATIONS. WELD SIZE AND LENGTH PER THE JOIST SUPPLIER U.N.O. ON THE PLANS.
- ALIGNED.

5. NO WELDING SHALL BE DONE UNTIL THE STRUCTURE HAS BEEN PROPERLY

- 6. PROVED SPECIAL DEPTH ENDS, EXTENDED ENDS, OUTRIGGERS, HEADERS, CEILING EXTENSIONS, AND ANCHORS AS REQUIRED BY DRAWINGS AND SPECIFICATIONS.
- DAMAGED, KINKED, OR BENT.
- 8. PROVIDE 8" SOLID MASONRY UNDER MASONRY BEARING ENDS OF STEEL JOIST.
- 9. FOR JOISTS BEARING ON MASONRY PROVIDE A STEEL BEARING PLATE WITH (2) ANCHOR BOLTS (UNLESS NOTED OTHERWISE).
- 10. JOISTS SHALL BEAR A MINIMUM OF 2 1/2" ON STEEL. JOISTS SHALL BEAR A MINIMUM OF 4" ON MASONRY OR CONCRETE.
- II. JOIST MANUFACTURER TO DESIGN JOISTS AND JOIST GIRDERS FOR CONCENTRATED LOADS FROM MECHANICAL EQUIPMENT.
- 12. JOIST MANUFACTURER TO DESIGN JOISTS, UNLESS NOTED ON PLANS, FOR AN UPLIFT OF 12 PSF AND DESIGN JOIST GIRDERS FOR A NET UPLIFT OF 7 PSF. LOADS ARE UNFACTORED (ASD).
- 13. JOISTS SHALL BE STOCKPILED AT THE JOB SITE IN A VERTICAL POSITION RESTING ON THEIR TOP OR BOTTOM CHORDS, AND SHALL BE ADEQUATELY <u>SUPPORTED ON WOOD BLOCKING. KEEP JOISTS FREE FROM MUD AND DIRT.</u>
- FABRICATE PANELS IN ACCORDANCE WITH "SDI SPECIFICATIONS AND COMMENTARY FOR STEEL DECK" SDI PUBLICATION NO.30 a. PRIME PAINTED STEEL: ASTM A1008/A 1008M STRUCTURAL STEEL GR. 33 SHOP PRIMED WITH MANUFACTURES STANDARD BAKED ON RUST INHIBITIVE
  - b. GALVANIZED STEEL SHEET: ASTM A653/A 653M STRUCTURAL STEEL GR. 60 ZINC COATING (G60) @ NON-COMPOSITE DECK
  - c. GALVANIZED STEEL SHEET: ASTM A653/A 653M STRUCTURAL STEEL GR. 50 ZINC COATING (G60) @ COMPOSITE DECK
- 2. STEEL DECK TO CONFORM TO STEEL DECK INSTITUTE SPECIFICATIONS. DECK UNITS TO BE 3-SPAN CONTINUOUS WHEREVER PRACTICABLE
- 3. LAP ROOF DECKING NOT LESS THAN 4 INCHES OVER SUPPORTS AND NOT LESS THAN 2 INCHES FOR FLOOR DECKING.
- 4. ROOF DECK WIDE RIB PROFILE OF DEPTH AND GAUGE INDICATED ON THE DRAWINGS. WELD TO SUPPORTING STEEL AS INDICATED ON PLANS. IF NOT INDICATED ON PLANS USE THE FOLLOWING AS A MINIMUM ATTACHMENT: 5/8" WELDS AT SUPPORTS + #10 SCREWS IN SIDELAPS IN 36/5+3 PATTERN ON NON-COMPOSITE ROOF DECK; 5/8" WELDS + WELDING WASHERS AT SUPPORTS AND #10 SCREWS IN SIDELAPS IN 30/3+1 PATTERN ON NON-COMPOSITE FLOOR DECK. ALL DECK IS TO BE ATTACHED AROUND BUILDING PERIMETER AT 6"o.c.
- 5. DO NOT SUSPEND PIPES, DUCTS, OR CEILING CONSTRUCTION FROM ROOF DECK.
- 6. LIGHT GAGE FRAMING (ie. SOFFITS, SIGNAGE) IS NOT PERMITTED TO BE HUNG FROM THE DECK.

## CONCRETE:

#### STANDARDS

- a. ACI 318 BUILDING CODE REQUIREMENT FOR REINFORCED CONCRETE b. ACI 315 MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED
- CONCRETE STRUCTURES c. ACI 347 RECOMMENDED PRACTICE FOR CONCRETE FRAMEWORK
- d. ACI 304 RECOMMENDED PRACTICE FOR MEASURING, MIXING TRANSPORTING AND PLACING CONCRETEI.5. ACI 309 RECOMMENDED PRACTICE FOR CONSOLIDATION OF CONCRETE (ACI 309-72)
- e. ACI 308 RECOMMENDED PRACTICE FOR CURING CONCRETE
- f. ACI 306 RECOMMENDED PRACTICE FOR COLD WEATHER CONCRETING q. ACI 305 RECOMMENDED PRACTICE FOR HOT WEATHER CONCRETING.
- 2. ALL POURED IN PLACE CONCRETE SHALL BE READY- MIXED AND HAULED IN ACCORDANCE WITH ASTM C94.

LOCATION	28 DAY COMPRESSIN	E SLUMP	ENTRAINED AIR CONTENT	CEMENT CONTENT
EXTERIOR SLABS ON GRADE	4000 psi NORMAL WT. 1½" MAX AGGREGATE	2" TO 3"	4% ±0.5%	6 SACKS WC=0.45
FOOTINGS, WALLS & GRADE BEAMS	3000 psi NORMAL WT. <sup>3</sup> 4" MAX AGGREGATE	2" TO 5"	6% ±1.0%	5.5 SACKS W/C=0.45
INTERIOR SLABS ON GRADE	4000 psi NORMAL MT.	2" TO 4"	2.0% MAX	6 SACKS W/C=0.4

- PORTLAND CEMENT SHALL CONFORM TO ASTM C150 TYPE NORMAL WEIGHT AGGREGATE SHALL CONFORM TO ASTM C 33 #67 WATER REDUCING AGENT SHALL CONFORM TO (ASTM C494 TYPE A OR D). AIR RETAINING AGENT SHALL CONFORM TO (ASTM C260).
- 3. ALL INGREDIENTS MUST BE COMPATIBLE WITH EACH OTHER AND ALL OTHER INGREDIENTS IN THE CONCRETE. FINE AGGREGATES SHALL BE CLEAN, HARD, DURABLE AND FREE OF DELETERIOUS SUBSTANCES. COARSE AGGREGATES SHALL BE CLEAN, HARD AND DURABLE WITHOUT FLAT OR ELONGATED PIECES.
- 4. PREPARE TEST CYLINDERS FOR EACH DAY'S POUR OF EACH CONCRETE MIXTURE EXCEEDING 5 CUBIC YARDS, BUT LESS THAN 25 CUBIC YARDS, PLUS ONE SET FOR EACH ADDITIONAL 50 CUBIC YARDS. TEST ONE AT 7 DAYS AND 2 IN 28 DAYS PER ASTM C39. SUBMIT ALL TEST REPORTS TO THE ARCHITECT AND ENGINEER.
- 5. FORMS SHALL BE PLYWOOD IN GOOD CONDITION, APPLY A FORM RELEASE AGENT TO ALL FORMS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
- 6. REFER TO ARCHITECTURAL DRAWINGS FOR CONCRETE FINISHES AND CONFORM TO THE REQUIREMENTS SPECIFIED. REQUEST SUCH SPECIFICATION FROM THE ARCHITECT/STRUCTURAL ENGINEER
- UNLESS NOTED OTHERWISE IN PROJECT SPECIFICATIONS FINISHING TOLERANCE SHALL BE WITHIN CLASS B IN ACCORDANCE WITH ACI 301 AND CONSIDERATION SHALL BE GIVEN TO SEQUENCING OF CONCRETE PLACEMENT TO FACILITATE CONTROL OF FINISH ELEVATIONS.
- 8. ALL CONSTRUCTION JOINTS AND POUR STRIPS SHOWN ON THE DRAWINGS SHALL BE INCORPORATED INTO THE STRUCTURE UNLESS THEIR ELIMINATION IS APPROVED BY THE STRUCTURAL ENGINEER.
- 9. TOLERANCE FOR ANCHOR BOLTS SUPPORT ANGLES AND OTHER EMBEDDED ITEMS SHALL BE PER THE ACI CODE OF STANDARD PRACTICE SECTION 7.5
- IO. BASE PLATES, ANCHOR BOLTS, SUPPORT ANGLES AND OTHER EMBEDDED ITEMS EXPOSED TO EARTH OR GRANULAR FILL SHALL BE COVERED WITH A MINIMUM OF 3" OF CONCRETE
- II. PIPES SLEEVES OR SLOTS SHALL NOT RUN THROUGH CONCRETE UNLESS SIZE AND LOCATION HAVE BEEN SHOWN ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER.
- 12. THE ARCHITECTURAL AND MECHANICAL DRAWINGS MUST BE REFERRED TO FOR ALL MECHANICAL FLOOR REQUIREMENTS AND THE VARIOUS TRADES ARE RESPONSIBLE FOR THE PLACING OF SLEEVES, OUTLET BOXES, ANCHORS ETC., THAT MAY BE REQUIRED.
- 13. CONCRETE SHALL BE PLACED IN A TIMELY MANNER TO AVOID THE FORMATION OF COLD JOINTS. CONCRETE WALLS AND COLUMNS SHALL BE VIBRATED.
- 14. UNLESS SHOWN OTHERWISE ALL SLAB-ON-GRADE CONSTRUCTION SHALL HAVE CONTROL JOINTS AT APPROX.. 15'-0"o.c. IN BOTH DIRECTIONS

## REINFORCING STEEL

- I. REINFORCING BARS ARE TO BE DOMESTIC NEW BILLET STEEL CONFORMING TO ASTM A615-GRADE 60 STEEL INCLUDING STIRRUPS AND TIES U.N.O. REINFORCING WHICH IS REQUIRED TO BE WELDED SHALL CONFORM TO ASTM A706. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185
- 2. ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS AND THEIR SUPPORT IN THE FORMS WITH ACCESSORIES MUST FOLLOW THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI 315-LATEST)
- 3. CONCRETE COVER OVER PRIMARY REINFORCING, TIES AND STIRRUPS SHALL BE AS FOLLOWS:

FOOTING: SLABS ON GRADE: 1 1/2" WALL EXPOSED: WALL NOT EXPOSED: 3/4"

BEAMS AND COLUMNS: 1 1/2" ALL BARS INCLUDING TEMPERATURE BARS ARE TO EXTEND WITHIN 3" OF THE OUTER FACES OF THE MEMBER INTO WHICH THEY FRAME.

4. WELDED WIRE FABRIC MUST LAP 8" AT SIDES AND 8" AT ENDS AND BE WIRED TOGETHER

5. 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 DI.4) NO OTHER REINFORCING MAY BE WELDED WITH THE APPROVAL OF THE STRUCTURAL ENGINEER. TACK WELDING OF ANY REINFORCING IS STRICTLY PROHIBITED

- 6. DOWELS IN WALL FOOTINGS TO BE EQUIVALENT IN SIZE AND NUMBER TO VERTICAL BARS. DOWELS MUST BE IN POSITION BEFORE PLACING CONCRETE, PUSHING BARS INTO FRESHLY POURED CONCRETE IS NOT ACCEPTABLE
- 7. PROVIDE THE FOLLOWING ADDITIONAL REINFORCING UNLESS OTHERWISE CALLED FOR ON STRUCTURAL PLANS: A. CORNER BARS AT ALL CORNERS AND INTERSECTIONS OF CONCRETE WALLS AND FOOTINGS TO MATCH HORIZONTAL REINFORCING. WHERE WALL
  - B. PROVIDE #4 SLAB DOWELS AT 12" CENTERS AT DOORS UNLESS NOTED

HORIZONTALLY AT 1'-0" CC WITH (3)- #3 VERTICAL SUPPORT BARS

HAS NO OUTSIDE REINFORCING PROVIDE #4 CORNER BARS SPACED

- C. BARS AT OPENING IN SLAB AND WALLS. PROVIDE BARS WITH AREA EQUAL TO INTERRUPTED REINFORCING. PLACE 1/2" AT EACH SIDE OF OPENING. PROVIDE (2)- #5 BARS, EACH FACE, AT ALL SIDES OF OPENING, EXTEND BARS 2'-O" BEYOND OPENING.
- D. CONTINUOUS HORIZONTAL REINFORCEMENT SHALL BE PROVIDED AT TOP AND BOTTOM OF ALL WALLS UNLESS OTHERWISE NOTED ON PLAN 8" WALL: (I) #4 AT TOP AND BOTTOM 10" TO 12" WALL: (2) #5 AT TOP AND BOTTOM 12" WALL OR LARGER: (3) #6 AT TOP AND BOTTOM
- ADDITIONAL CONTINUOUS HORIZONTAL AND VERTICAL REINFORCEMENT SHALL BE PROVIDED IN WALLS, UNLESS OTHERWISE NOTED ON PLAN 8" WALL: (1) #4 AT 12"cc 10" TO 12" WALL: (1) #4 AT 16"cc EACH FACE 12" WALL OR LARGER: (1) #4 AT 12"cc EACH FACE
- 8. THE STRUCTURAL ENGINEER SHALL BE NOTIFIED FOR INSPECTION OF REBAR PLACEMENT.

- I. STRUCTURAL STEEL SHALL COMPLY WITH THE FOLLOWING: a. AISC "SPECIFICATIONS FOR STRUCTURAL STEEL FOR BUILDINGS ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN
- a. ASIC CODE OF STANDARD PRACTICE" WITH THE DELETION OF THE FOLLOWING SENTENCE FROM PARAGRAPH 4.2.1: "THIS APPROVAL CONSTITUTES THE OWNER'S ACCEPTANCE OF ALL RESPONSIBILITY FOR THE DESIGN ADEQUACY OF ANY DETAIL CONFIGURATION OF CONNECTIONS DEVELOPED BY THE FABRICATOR AS PART OF HIS PREPARATION FOR THESE SHOP DRAWINGS"
- 2. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING GRADES: CHANNELS, ANGLES, PLATES, ETC. (U.N.O.): ASTM A36

W SHAPES: ASTM A992 GR. 50 STEEL PIPE: ASTM A53, TYPE S, GR. B, Fu=35 STRUCTURAL TUBE (HSS): ASTM A500, GR. B, Fy=46 ANCHOR BOLTS: ASTM FI554 ASTM A325 BOLTS:

3. GALVANIZED FINISHES: ZINC COATING BY HOT DIPPED PROCESS ASTM AI23 a. GALVANIZE ALL EXTERIOR LINTELS AND SHELF ANGLES

E70XX

4. BOLTED CONNECTIONS

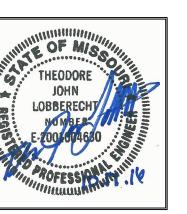
WELDING ELECTRODES:

- a. MOMENT OR BRACING MEMBER CONNECTIONS. OVERSIZED AND LONG SLOTTED HOLES ARE PERMITTED
- b. BEARING -TYPE CONNECTION WITH A325-N OR A429-N BOLTS SHALL BE USED TO ALL OTHER BOLTED CONNECTIONS. OVERSIZED AND LONG-SLOTTED HOLES ARE NOT PERMITTED.
- 6. WELDED CONNECTIONS
- a. ALL WELDING SHALL BE IN ACCORDANCE WITH THE "STRUCTURAL WELDING CODE STEEL" AWS DLI OF THE AMERICAN WELDING SOCIETY b. ELECTRODES FOR WELDING SHALL COMPLY WITH THE REQUIREMENTS OF THE AWS CODE.
- 7. ALL WELDING WILL BE MADE ONLY BY OPERATORS WHO HAVE BEEN PREVIOUSLY QUALIFIED BY TESTS, AS PRESCRIBED IN THE "STANDARD QUALIFICATIONS PROCEDURE" OF THE AMERICAN WELDING SOCIETY.
- 8. BOLTING IN COMBINATION WITH WELDING SHALL NOT BE CONSIDERED AS SHARING THE STRESS AND WELDS SHALL BE PROVIDED TO CARRY THE ENTIRE STRESS FOR WHICH THE CONNECTION IS DESIGNED. 9. 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 STRUCTURAL ENGINEER. 10. DO NOT USE GAS CUTTING TORCHES IN THE FIELD FOR CORRECTING
- FABRICATION ERRORS IN THE PRIMARY STRUCTURAL FRAMING. II. PROVIDE FULL HEIGHT SOLID MASONRY UNDER BEARING ENDS OF ALL
- STRUCTURAL STEEL. BEAMS AND LINTELS TO BEAR MINIMUM 8" ON MASONRY. 12. PROVIDE ANCHOR BOLTS (3/4" x 1'-4") AT BEARING ENDS AT ALL STRUCTURAL STEEL BEARING ON CONCRETE AND MASONRY.
- 13. ALL STRUCTURAL STEEL MUST BE PROTECTED BY 3" OF CONCRETE WHERE EARTH WOULD OTHERWISE BE IN CONTACT WITH STEEL.



SUE DATE: 10/17/16 16102 **S1.1** GENERAL **NOTES** 

REVISION No.