ABBREVIATIONS (NOTE: NOT ALL ABBREVIATIONS USED)

A.B.	ANCHOR BOLT	G.B.	GRADE BEAMS	P.J.	PANEL JOINT
ADJ.	ADJACENT	GA.	GAGE	PAF	POWER ACTUATED
A.F.F.	ABOVE FINISHED FLOOR	GALV.	GALVANIZED		FASTENER
ARCH.	ARCHITECTURAL	H.	HORIZONTAL	PEMB	PRE-ENGINEERED METAL
B.F.F.	BELOW FINISHED FLOOR	HORIZ.	HORIZONTAL		BUILDING
B.O.D.	BOTTOM OF DECK	HSS	HOLLOW STRUCTURAL STEEL	PCF	POUNDS PER CUBIC FOOT
B.O.S.	BOTTOM OF STEEL	H.S.A.	HEADED STUD ANCHOR	PL	PLATE
BLDG.	BUILDING	INSUL.	INSULATION	PLF	POUNDS PER LINEAR FOOT
B0T.	BOTTOM	INT.	INTERIOR	PSF	POUNDS PER SQUARE FOOT
BTWN	BETWEEN	J.B.	JOIST BEARING	PSI	POUNDS PER SQUARE INCH
C.J.	CONSTRUCTION JOINT	JT.	JOINT	QTY.	QUANTITY
CL	CENTERLINE	K	KIPS	RE:	REFER
CLR.	CLEAR	KSF	KIPS PER SQUARE FOOT	REINF.	REINFORCEMENT
CMU	CONCRETE MASONRY UNIT	KSI	KIPS PER SQUARE INCH	REQ'D	REQUIRED
COL.	COLUMN	LBS	POUNDS	S.C.	SAWCUT
CONC.	CONCRETE	LGST	LIGHT GAGE STEEL TRUSS	SCHED.	SCHEDULE
CONN.	CONNECTION	LL	LIVE LOAD	SECT.	SECTION
CONT.	CONTINUOUS	LLH	LONG LEG HORIZONTAL	SHT.	SHEET
D.B.	DECK BEARING	LLV	LONG LEG VERTICAL	SIM.	SIMILAR
D.B.A.	DEFORMING BAR ANCHOR	LONG.	LONGITUDINAL	STD.	STANDARD
DIA.	DIAMETER	L.W.	LIGHT WEIGHT	T&B	TOP AND BOTTOM
DTL	DETAIL	MANUF.	MANUFACTURER	T.O.F.	TOP OF FOOTING
EA.	EACH	MATL.	MATERIAL	T.O.G.B.	TOP OF GRADE BEAM
E.F.	EACH FACE	MAX.	MAXIMUM	T.O.P.	TOP OF PEDESTAL
E.W.	EACH WAY	MECH.	MECHANICAL	T.O.S.	TOP OF STEEL
ELEV.	ELEVATION	MID.	MIDDLE	T.O.W.	TOP OF WALL
EX.	EXISTING	MIN.	MINIMUM	TYP.	TYPICAL
EXP.	EXPANSION	MISC.	MISCELLANEOUS	U.N.O.	UNLESS NOTED OTHERWISE
F.F.E.	FINISH FLOOR ELEVATIONS	NS	NEAR SIDE	V.	VERTICAL
FND.	FOUNDATION	N.T.S.	NOT TO SCALE	VERT.	VERTICAL
FS	FAR SIDE	O.C.	ON CENTER	W.W.R.	WELDED WIRE
FTG.	FOOTING	OPP.HD	OPPOSITE HAND	W/	REINFORCEMENT
		.			WITH

SYMBOLS

@	AT	#	NUMBER
℄	CENTER LINE	X/SY.Y	SECTION "X" ON SHEET "SY.Y"
S͟L	STRUCTURAL LINE	B͟K CHANNEL	BACK OF CHANNEL

STRUCTURAL DESIGN DATA

THE STRUCTURE WAS PREPARED USING THE FOLLOWING DATA:

BUILDING CODE: 2021 ARKANSAS FIRE PREVENTION CODE (AFPC) 2021 IBC

GRAVITY LOADS (REFERENCE: ASCE 7-16)

DEAD LOADS:

ROOF DEAD LOAD	STRUCTURAL AND BLDG. SELF-WEIGHT PLUS ANY MECHANICAL
ROOF AND MEZZANINE COLLATERAL LOAD	5 PSF & 10 PSF RESPECTIVELY
STEEL PLATFORM COLLATERAL LOAD	15 PSF
MEZZANINE FLOOR DEAD LOAD	40 PSF
ROOF EQUIPMENT LOAD	AS SHOWN ON ROOF PLAN IS ANY
SCREW CONVEYOR DEAD LOAD	75 LBS/FT

LIVE LOADS:

ROOF LIVE LOAD	20 PSF (NONREDUCIBLE)
STAIRS AND EXIT WAYS	100 PSF
FIRST FLOOR LIVE LOAD	150 PSF
MEZZANINE LIVE LOAD	100 PSF
SCREW CONVEYOR LIVE LOAD	275 LBS/FT

SNOW LOAD

GROUND SNOW LOAD (Pg)	15 PSF
IMPORTANCE FACTOR (I)	1.1
THERMAL FACTOR (Ct)	1.1
EXPOSURE FACTOR (Ce)	1.0
BALANCED SNOW LOAD (Ps)	12.7 PSF
MINIMUM SNOW LOAD (Pm)	16.5 PSF

LATERAL LOADS (REFERENCE: ASCE 7-16)

WIND LOAD:

BUILDING RISK CATEGORY	III (TABLE 1.5-1)
BASIC WIND SPEED:	115 MPH (3 SECOND GUST)
WIND EXPOSURE CATEGORY	C

SEISMIC:

SEISMIC IMPORTANCE FACTOR	Ie = 1.25
SEISMIC RESPONSE COEFFICIENTS	Ss = 0.154g S1 = 0.089g
SITE CLASS	D
SPECTRAL RESPONSE COEFFICIENTS	SDS = 0.164 SD1 = 0.143
SEISMIC DESIGN CATEGORY	C
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE
BASIC SEISMIC-FORCE-RESISTING SYSTEM	
- PRE-ENGINEERED METAL BLDG.	ORDINARY STEEL BRACED FRAME & ORDINARY STEEL MOMENT FRAME (R=3)
- INTERIOR BOILER AND MCC ROOM	ORDINARY MASONRY SHEAR WALLS (R= 2)

GENERAL NOTES

1. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE BUILDING IS FULLY COMPLETED. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE AND TO ENSURE THE SAFETY OF THE BUILDING AND ITS COMPONENT PARTS DURING ERECTION. THIS INCLUDES THE ADDITION OF ANY SHORING, TEMPORARY BRACING, GUYS, OR TIEDOWNS, WHICH MIGHT BE NECESSARY. SUCH MATERIAL SHALL REMAIN THE CONTRACTOR'S PROPERTY AFTER THE COMPLETION OF THE PROJECT.

2. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL APPLICABLE BUILDING CODES, LOCAL ORDINANCES, OSHA, AND CITED STANDARDS AND TESTS DURING ALL PHASES OF CONSTRUCTION.

3. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH DRAWINGS RELATING TO OTHER TRADES SUCH AS CIVIL, MECHANICAL, ELECTRICAL, AND EQUIPMENT DRAWINGS AND SPECIFICATIONS. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING AND COORDINATING DIMENSIONS, CLEARANCES, OPENINGS, PIPE SLEEVES, CURBS, ETC. WITH THE WORK OF OTHER TRADES. CONTRACTOR SHALL INFORM THE ARCHITECT/ENGINEER OF RECORD OF ANY CONFLICTS OR DIMENSIONAL DISCREPANCIES PRIOR TO BIDDING, FABRICATION, AND CONSTRUCTION.

4. PRINCIPAL OPENINGS THROUGH THE FRAMING ARE SHOWN ON THESE DRAWINGS. THE GENERAL CONTRACTOR SHALL EXAMINE THE DRAWINGS FOR REQUIRED OPENINGS, PROVIDE FOR ALL OPENINGS WHETHER SHOWN ON THESE DRAWINGS OR NOT, AND VERIFY SIZE AND LOCATION OF ALL OPENINGS WITH ALL SUB-CONTRACTORS.

5. WORK NOT INDICATED ON A PART OF THE DRAWING BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES SHALL BE REPEATED.

6. ALL DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE SHOWN ON PLANS, SECTIONS, AND DETAILS.

7. THE DETAILS ON THE CONTRACT DRAWINGS SHALL NOT BE REVISED BY THE CONTRACTOR WITHOUT PRIOR APPROVAL BY THE ENGINEER OF RECORD. IF PERMITTED THE REVISED DETAILS AND CALCULATIONS SHALL BE STAMPED BY A LICENSED PROFESSIONAL ENGINEER AND SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL.

8. THE DETAILS DESIGNATED AS "TYPICAL DETAILS" APPLY GENERALLY TO THE DRAWINGS IN ALL AREAS WHERE CONDITIONS ARE SIMILAR TO THOSE DESCRIBED IN THE DETAILS UNLESS NOTED OTHERWISE.

9. MECHANICAL EQUIPMENT LOADINGS ARE BASED ON THE WEIGHTS OF PROVIDED EQUIPMENT INFORMATION. ANY CHANGES IN TYPE, SIZE, OR NUMBER OF PIECES OF EQUIPMENT SHALL BE REPORTED TO THE ARCHITECT/ENGINEER OF RECORD FOR VERIFICATION OF THE ADEQUACY OF THE SUPPORTING MEMBERS PRIOR TO THE PLACEMENT OF SUCH EQUIPMENT.

GENERAL NOTES CONT.

10. REFERENCE TO VARIOUS STANDARDS, TESTS, AND CODES (ASTM, AISC, UL, IFC, ETC.) SHALL BE TAKEN TO MEAN THE LATEST ADOPTED STANDARD OR EDITION AS OF THE DATE OF THE DRAWINGS.

11. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF ALL DIMENSIONS EXISTING AND PROPOSED PRIOR TO START OF CONTRACT AND FABRICATION.

12. DESIGN IS BASED ON THE MEMBER SIZES AND DIMENSIONS SHOWN. CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IF EXISTING MEMBER SIZES AND EXISTING DIMENSIONS ARE NOT THE SAME AS THOSE SHOWN.

13. CONTRACTOR SHALL MAKE NO DEVIATION FROM THE DESIGN DRAWING WITHOUT WRITTEN APPROVAL OF THE ARCHITECT AND/OR ENGINEER.

14. THE CONTRACTOR SHALL ENSURE THAT ALL CONSTRUCTION LOADS DO NOT EXCEED THE DESIGN LIVE LOADS INDICATED ON THE STRUCTURAL DRAWINGS.

15. DEFERRED SUBMITTALS OF PRE-ENGINEERED SYSTEM DESIGN IS ANTICIPATED AND SHALL INCLUDE SHOP DRAWINGS AND CALCULATIONS SIGNED BY AN ENGINEER REGISTERED IN THE STATE WHERE THE BUILDING IS LOCATED. THESE SUBMITTALS SHALL FIRST BE SUBMITTED TO THE ARCHITECT AND ENGINEER OF RECORD FOR REVIEW AND COORDINATION. FOLLOWING THE COMPLETION OF THE REVIEW AND COORDINATION BY THE ARCHITECT AND ENGINEER OF RECORD, A SUBMITTAL MAY THEN BE MADE TO THE BUILDING DEPARTMENT FOR REVIEW AND APPROVAL, WHICH SHALL INCLUDE A LETTER STATING THAT THE REVIEW AND COORDINATION HAS BEEN PERFORMED AND COMPLETED AND PLANS AND CALCULATIONS FOR THE DEFERRED ITEMS ARE FOUND TO BE ACCEPTABLE. DEFERRED SUBMITTALS ARE REQUIRED FORT, BUT NOT NECESSARILY LIMITED TO THE FOLLOWING ASSEMBLIES:

A) PRE-ENGINEERED METAL BUILDING
B) SELF-SUPPORTING STEEL STAIR FRAMING AND RAILINGS
C) STEEL JOIST
D) INTERIOR DRYER BUILDING STEEL PLATFORMS
E) SCREW CONVEYOR SUPPORTS

16. ANY AND ALL REFERENCES IN THESE PLANS AND SPECIFICATIONS (CONSTRUCTION DOCUMENTS) TO BRANDED PRODUCTS, PROCEDURES OR PATENTED PROCESSES ARE ASSUMED TO CARRY AN IMPLIED STATEMENT OF "OR APPROVED EQUAL" UNLESS SPECIFICALLY NOTED OTHERWISE WITH "NO SUBSTITUTIONS PERMITTED."

EARTHWORK, FOUNDATION & SLAB-ON-GRADE NOTES

1. FOUNDATION DESIGN IS BASED ON SOILS INVESTIGATION AND REPORT BY GTS, INC., DATED DEC. 7, 2023, PREPARED FOR HAWKINS-WEIR ENGINEERS, GTS PROJECT NUMBER: 23-15123.
2. THE BUILDING PAD AND SUBGRADE PREPARATION SHALL BE CONSTRUCTED AS REQUIRED IN THE GEOTECHNICAL REPORT AND AS NOTED AND DETAILED ON THE DRAWINGS.
3. THE SHALLOW FOUNDATIONS MAY BEAR ON APPROVED NATURAL SOILS OR CONTROLLED FILL AFTER COMPLETE REMOVAL AND REPLACEMENT OF TOP 3.5 FEET AND ALL UNSUITABLE SUBGRADE, UNCONTROLLED FILL MATERIAL, AND ANY UNDERGROUND STRUCTURES OUT TO 5 FEET OUTSIDE THE BUILDING FOOTPRINT. SHALLOW FOUNDATION CONSTRUCTED IN THIS MANNER WILL HAVE NET ALLOWABLE BEARING 2,000 PSF FOR CONTINUOUS FOOTINGS AND 2,500 PSF FOR ISOLATED FOOTINGS.
4. GTS, INC. SHALL BE RETAINED FOR CONSTRUCTION OBSERVATION AND CONSTRUCTION MATERIALS TESTING. CLOSE MONITORING OF SUBGRADE PREPARATION WORK IS CONSIDERED CRITICAL TO ACHIEVE FOUNDATION AND SUBGRADE PERFORMANCE.
5. WHEN SUITABLE SUBGRADE IS REACHED THE CONTRACTOR SHALL SCARIFY THE TOP 9". ADJUSTED TO ±2% OPTIMUM MOISTURE, AND RECOMPACT SUBGRADE TO 95% STANDARD (ASTM D698). SUBGRADE SHALL BE TESTED WITH GEOTECHNICAL ENGINEER PRESENT WITH A LOADED, TANDEM- AXLE DUMP TRUCK WITH A MINIMUM GROSS WEIGHT OF 20,000 LBS. UNSUITABLE SOIL SHALL BE REMOVED AND SELECT FILL COMPACTED AT EACH UNSUITABLE SUBGRADE LOCATION.
6. SELECT FILL SHALL BE PLACED AND COMPACTED AS DESCRIBED IN REPORT.
7. SHALLOW FOUNDATIONS MAY BE POURED INTO AN EARTHEN FORMED TRENCH IF SOIL CONDITIONS PERMIT.
8. FOUNDATION WALLS THAT RETAIN EARTH SHALL BE BRACED AGAINST BACK FILLING PRESSURES UNTIL FLOOR SLABS AT TOP AND BOTTOM ARE IN PLACE OR UNTIL THE CONCRETE HAS ATTAINED ITS FULL COMPRESSIVE STRENGTH FOR CANTILEVER WALLS.
9. WHERE FOUNDATION WALLS ARE TO HAVE EARTH PLACED ON EACH SIDE, PLACE FILL SIMULTANEOUSLY SO AS TO MAINTAIN A COMMON ELEVATION ON EACH SIDE OF THE WALL.
10. SLABS ON GRADE SHALL BE PLACED ON TOP OF 15 MIL. VAPOR BARRIER ON 4" OF CLASS 7 BASE COMPACTED TO 95% MODIFIED PROCTOR MAX. DRY DENSITY (ASTM D1557) ON A MINIMUM 4-INCH DRAINAGE FILL (CLEAN ASSHTO No. 57 STONE U.N.O). TO BE COMPACTED WITH VIBRATORY PLATE.
11. CONTRACTOR SHALL PROVIDE AND INSTALL ALL CRIBBING, SHEATHING AND SHORING REQUIRED TO SAFELY RETAIN THE EARTH BANKS. SHORING AND BRACING OF TRENCHES SHALL MEET THE REQUIREMENTS OF OSHA.
12. IN NO CASE SHALL BULLDOZERS OR OTHER HEAVY EQUIPMENT BE PERMITTED CLOSER THAN 8 FEET FROM ANY FOUNDATION WALL.
13. CONTRACTOR SHALL PROTECT ALL UTILITY LINES, ETC. ENCOUNTERED DURING EXCAVATION AND BACKFILLING.
14. ALL UTILITY TRENCHES CUT UNDER BUILDING SLAB OR BUILDING FOUNDATIONS SHALL BE FILLED WITH FLOWABLE FILL UP TO SLAB SUBGRADE.

CONCRETE MATERIAL

1. MINIMUM CONCRETE STRENGTH AT 28 DAYS:
   - A. CLASS A: CONCRETE FILL & PIPE ENCASEMENT f'c = 2500 PSI
   - B. CLASS B: CONCRETE SIDEWALKS & PAVEMENT f'c = 3,500 PSI
   - C. CLASS C: STRUCTURAL CONCRETE f'c = 4,000 PSI
2. ALL CONCRETE SHALL BE NORMAL WEIGHT (DENSITY=145 PCF) AND SHALL BE IN ACCORDANCE WITH THE CAST-IN-PLACE CONCRETE SPECIFICATIONS.
3. ALL EXPOSED CORNERS OF CONCRETE SHALL HAVE 1" CHAMFER, UNLESS NOTED OTHERWISE.
4. CONSTRUCTION JOINTS SHALL NOT BE PLACED AT LOCATIONS OTHER THAN THOSE SHOWN ON THE DRAWINGS WITH OUT THE PRIOR WRITTEN APPROVAL OF THE ENGINEER.
5. BLOCKOUTS IN THE CONCRETE FORMWORK SHALL NOT BE ALLOWED WITHOUT THE PRIOR WRITTEN APPROVAL OF THE ENGINEER.
6. THE CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGNS FOR REVIEW A MINIMUM OF ONE WEEK PRIOR TO PLACEMENT OF ANY CONCRETE. THE CONCRETE MIX DESIGNS SHALL INCLUDE ALL STRENGTH DATA NECESSARY TO SHOW COMPLIANCE WITH THE PROJECT SPECIFICATIONS FOR EITHER THE TRIAL BATCH OR FIELD EXPERIENCE METHOD.
7. CONTRACTOR SHALL SUBMIT DRAWINGS SHOWING INTENDED POURING SEQUENCE AND LOCATION OF CONSTRUCTION JOINTS TO THE ARCHITECT/ENGINEER FOR APPROVAL. ALL CONSTRUCTION JOINTS IN THE CONCRETE WALLS SHALL HAVE DUMBBELL TYPE WATERSTOP UNLESS DETAILED OTHERWISE.
8. HORIZONTAL CONSTRUCTION JOINTS SHALL BE PERMITTED ONLY WHERE SHOWN ON THE STRUCTURAL DRAWINGS. HORIZONTAL OR NEAR HORIZONTAL JOINTS SHALL BE PREPARED BY ROUGHENING THE SURFACE IN AN APPROVED MANNER SO THAT THE AGGREGATE IS EXPOSED UNIFORMLY, LEAVING NO LAITANCE, LOOSENED PARTICLES OR DAMAGED CONCRETE.

STRUCTURAL STEEL NOTES

1. STEEL SHALL CONFORM TO THE FOLLOWING GRADES:

ALL CHANNELS, ANGLES, PLATES, ETC. (U.N.O.)	A36
ALL WIDE FLANGES (U.N.O.)	A992 (FY=50 KSI)
STRUCTURAL TUBE	A500, GRADE C (FY=50 KSI)
STEEL PIPE	A53 (FY=35 KSI)
ANCHOR RODS	F1554, GRADE 55, SUPP. 1
BOLTS	F3125 Grade A325-N (U.N.O.)
WELD ELECTRODES	E70XX

2. THE DESIGN OF STRUCTURAL STEEL IS BASED ON THE AISC MANUAL OF STEEL CONSTRUCTION ALLOWABLE STRENGTH DESIGN.

3. ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE AISC CODE OF STANDARD PRACTICE (2016 EDITION), EXCEPT AS MODIFIED IN THESE NOTES AND THE PROJECT SPECIFICATIONS.

4. ALL STRUCTURAL STEEL SHALL BE CLEANED OF OIL, GREASE,DIRT, RUST, LOOSE MILL SCALE, ETC. AND ALL OTHER FOREIGN MATERIALS AND SHALL BE HOT DIPPED GALVANIZED WITH FINISH OF 3.9 MILL MINIMUM THICKNESS. GALVANIZING SHALL BE DONE IN ACCORDANCE WITH ASTM A123/A. ALL BOLTS SHALL BE HOT DIPPED GALVANIZED OR 304 STAINLESS STEEL WHERE ONE OR MORE MEMBERS ARE GALVANIZED. PROVIDE ALL REQUIRED VENTING HOLES FOR HOT-DIP GALVANIZING PROCESS. ALL STEEL EMBEDDED IN CONCRETE SHALL BE COAL TAR EPOXY COATED.

5. ALL WELDING SHALL BE PREFORMED BY CERTIFIED WELDERS IN ACCORDANCE WITH AWS SPECIFICATIONS LATEST EDITIONS. WELDING SHALL BE INSPECTED AND TESTED AS NOTED IN THE SPECIFICATIONS. FIELD WELDING WILL BE PERMITTED ONLY WHERE SHOWN ON THE DRAWINGS. COLD GALVANIZE ALL FIELD WELDS.

6. STRUCTURAL STEEL CONTRACTOR SHALL VERIFYING ALL EXISTING, AND PROPOSED DIMENSIONS SHOWN ON STRUCTURAL DRAWINGS PRIOR TO FABRICATION. IN CASE OF CONFLICTS, THE ARCHITECT/ENGINEER IS TO BE NOTIFIED AND WILL PROVIDE THE CONTRACTOR WITH CORRECT ELEVATIONS AND DIMENSIONS.

7. NO CHANGE IN SIZE OR POSITION OF THE STRUCTURAL ELEMENTS SHALL BE MADE: HOLES, SLOTS, CUTS, ETC., ARE NOT PERMITTED THROUGH ANY MEMBER UNLESS THEY ARE DETAILED ON THE APPROVED SHOP DRAWINGS. FINAL BOLTING OR WELDING SHALL NOT BE PERFORMED UNTIL THE STRUCTURE HAS BEEN PROPERLY ALIGNED.

8. THE TEMPORARY BRACES FOR THE STEEL ERECTION SHALL BE DESIGNED FOR LATERAL LOADS AS REQUIRED BY THE LOCAL OR NATIONAL BUILDING CODES FOR LOADS BEING TRANSMITTED TO THE STEEL FRAME FROM THE PARTIALLY COMPLETED BUILDING AND CLADDING.

9. CONTRACTOR SHALL COMPLY WITH THE OSHA SAFETY STANDARDS FOR STEEL ERECTION FOR THE ERECTION OF THE BUILDING FRAME.

10. SPLICING OF STRUCTURAL STEEL MEMBERS WHERE NOT DETAILED IS PROHIBITED WITHOUT PRIOR APPROVAL.

11. THE MINIMUM PLATE THICKNESS SHALL BE 1/4", THE MINIMUM BOLT DIAMETER SHALL BE 3/4", THE MINIMUM WELD SHALL HAVE A 3/16" THICK THROAT CONTINUOUS AND THE MINIMUM CONNECTION SHALL BE TWO BOLTS, U.N.O.

12. PROVIDE SHOP DRAWINGS FOR REVIEW AND APPROVAL OF ENGINEER OF RECORD.

13. ALL COLUMN BEARING PLATES SHALL HAVE ROLLED OR GAS CUT EDGES. MINIMUM EDGE DISTANCE TO CENTER OF BOLT HOLE, SPACING OF HOLES, AND SIZES OF HOLES SHALL BE AS PER AISC MANUAL UNLESS NOTED OTHERWISE.

14. PER THE AISC MANUAL THE STEEL CONSTRUCTION, ANCHOR ROD HOLES IN BASE PLATES AND WASHERS SHALL BE THE FOLLOWING U.N.O.:

ANCHOR ROD Ø	MAX. HOLE SIZE IN BASE PL	WASHER SIZE	MIN. WASHER THICK.	MAX HOLE SIZE IN WASHER
¾"	1-5/16"	2"	1/4"	13/16"
1"	1-13/16"	3"	3/8"	1-1/16"
1¼"	2-1/16"	3"	1/2"	1-5/16"

STEEL JOISTS AND JOIST GIRDERS NOTES

1. ALL STEEL JOISTS SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR OPEN WEB STEEL JOISTS", 'K-SERIES', OR THE "STANDARD SPECIFICATIONS FOR LONG SPAN STEEL JOISTS", 'LH-SERIES', AND JOIST GIRDERS WITH THE STANDARD SPECIFICATIONS FOR JOIST GIRDERS, AS APPLICABLE, OF THE STEEL JOIST INSTITUTE (SJI).
2. ALL STEEL JOISTS AND JOIST GIRDERS SHALL BE DESIGNED BY THE JOIST MANUFACTURER. THE MANUFACTURER'S ENGINEER SHALL BE RESPONSIBLE FOR THE DESIGN, ADEQUACY, AND SAFETY OF ALL STEEL JOISTS AND JOIST GIRDERS. ALL SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY THE MANUFACTURER'S ENGINEER, LICENSED WITH THE ENGINEER'S SEAL AFFIXED FOR THE STATE WHERE THE STRUCTURE IS LOCATED.
3. EXCEPT WHERE ADDITIONAL AND/OR SPECIFIC DESIGN LOADS ARE SPECIFIED ON THE STRUCTURAL DRAWINGS, STEEL JOISTS SHALL BE DESIGNED AS SIMPLY SUPPORTED, UNIFORMLY LOADED TRUSSES WITH THE TOP CHORD BRACED AGAINST LATERAL BUCKLING. THE UNIFORM DESIGN LOAD SHALL BE THE TOTAL SAFE UNIFORMLY DISTRIBUTED LOAD AS SHOWN IN THE SJI STANDARD LOAD TABLE, OR INDICATED ON THE DRAWINGS. JOIST DESIGNER SHALL COMBINE ASD DESIGN LOADS AS SHOWN UNDER STRUCTURAL DESIGN DATA, LOAD DESIGNATION AND LOADS PROVIDED IN JOIST TABLES, AND ANY MECHANICAL UNIT LOADING TO ARRIVE AT THE MAXIMUM LIVE AND TOTAL LOAD FOR EACH JOIST SHOWN ON FRAMING PLAN WHERE APPLICABLE. THE JOIST DESIGN SHALL ALSO INCLUDE A MAXIMUM OF 1-200# POINT LOADS ON THE TOP OR BOTTOM CHORD AT ANY LOCATION WITHOUT ADDITIONAL WEB REINFORCING.
4. ALL ITEMS SUCH AS MECHANICAL, EQUIPMENT, DUCT WORK, PIPES, CEILING SUPPORTS, FIXTURES, DISPLAYS, ETC., WHICH ARE TO BE SUPPORTED BY, OR HUNG FROM, STEEL JOISTS OR JOIST GIRDERS SHALL BE FRAMED WITH AUXILIARY FRAMING TO THE PANEL POINTS OF THE STEEL JOIST OR GIRDER WHEN THE CONCENTRATED LOAD EXCEEDS 150LBS. METHODS OF FRAMING THAT INDUCE BENDING IN THE STEEL JOIST OR GIRDER CHORDS OR WEB MEMBERS WILL NOT BE PERMITTED.
5. ADDITIONAL DESIGN LOADS FROM ARCHITECTURAL FEATURES, ROOF TOP EQUIPMENT, OR ANY OTHER CONCENTRATED LOADS SHOWN ON THE DRAWINGS, SHALL BE CONSIDERED AS COLLATERAL LOADS. THESE LOADS SHALL BE CONSIDERED IN THE DESIGN OF THE JOISTS AND JOIST GIRDERS, IN ADDITION TO THE SPECIFIED UNIFORM AND PANEL LOADS. COORDINATE WITH THE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR LOCATIONS AND WEIGHTS OF ALL EQUIPMENT. WHERE SUCH LOADS DO NOT OCCUR AT THE PANEL POINTS OF THE JOISTS OR JOIST GIRDERS, AUXILIARY FRAMING SHALL BE ADDED, OR THE TOP CHORD SHALL BE DESIGNED FOR THE EFFECTS OF THE LOAD WHERE APPLICABLE.
6. EXCEPT WHERE ADDITIONAL AND/OR SPECIFIC DESIGN LOADS ARE SPECIFIED ON THE STRUCTURAL DRAWINGS, STEEL JOIST GIRDERS SHALL BE DESIGNED AS SIMPLY SUPPORTED PRIMARY MEMBERS, WITH ALL LOADS EQUAL IN MAGNITUDE AND EVENLY SPACED ALONG THE JOIST GIRDER TOP CHORD (UNLESS NOTED OTHERWISE).
7. ALL ROOF JOISTS AND JOIST GIRDERS, UNLESS NOTED OTHERWISE, SHALL BE DESIGNED TO SUPPORT THE ROOF LIVE WITHOUT EXCEEDING L/360 AND A TOTAL DESIGN LOAD (INCLUDING ROOF LIVE, DESIGN SNOW, DESIGN RAIN, ETC.) WITHOUT EXCEEDING A DEFLECTION OF L/240.
8. STEEL JOIST BRIDGING SHOWN ON THE DRAWINGS IS FOR ILLUSTRATIVE PURPOSES ONLY. ALL STEEL JOIST BRIDGING SHALL BE PROVIDED IN ACCORDANCE WITH THE SJI SPECIFICATION, AND SHALL BE SPECIFIED BY THE JOIST MANUFACTURER. ALL BRIDGING AND BRIDGING ANCHORS SHALL BE INSTALLED, AND STEEL JOIST ENDS FIXED, PRIOR TO THE APPLICATION OF ANY LOADS. BRIDGING THAT TERMINATES AT, OR IS INTERRUPTED BY, STRUCTURAL STEEL BEAMS, OR CONCRETE WALLS SHALL BE ATTACHED THERETO. THE JOIST MANUFACTURER MUST COORDINATE BRIDGING LOCATIONS TO AVOID INTERFERENCE WITH ALL MECHANICAL, ELECTRICAL, AND FIRE PROTECTION EQUIPMENT.
9. NO LOADS SHALL BE PLACED ON ANY JOIST GIRDER UNTIL THE STEEL JOISTS BEARING ON THE GIRDER ARE IN PLACE, AND FASTENED TO THE GIRDER AS SPECIFIED.
10. THE JOIST MANUFACTURER SHALL DESIGN ALL ROOF JOISTS AND JOIST GIRDERS, AND SHALL DESIGN AND SPECIFY ALL REQUIRED ADDITIONAL BRIDGING AND/OR BRACING, FOR MINIMUM NET FACTORED UPLIFT FORCES OF 15 PSF AND 20 PSF WITHIN SEVEN FEET OF THE ROOF EDGE, U.N.O.
11. ALL JOIST GIRDERS SHALL BE PROPORTIONED SUCH THAT THEY CAN BE ERECTED WITHOUT BRIDGING.
12. UNLESS NOTED OTHERWISE, K-SERIES JOISTS SHALL BE ATTACHED TO SUPPORTING STEEL MEMBERS, OR STEEL BEARING PLATES, WITH (2)-3" LONG 3/16" FILLET WELDS (ONE EACH SIDE).
13. UNLESS NOTED OTHERWISE, LH-SERIES JOISTS AND JOIST GIRDERS SHALL BE ATTACHED TO SUPPORTING STEEL MEMBERS, OR STEEL BEARING PLATES, WITH (2)-3" LONG ¼" FILLET WELDS (ONE EACH SIDE).
14. STEEL JOIST AT COLUMN CENTERLINES SHALL BE BOLTED TO THE SUPPORTING STEEL MEMBER WITH TWO ERECTION BOLTS, ½"Ø FOR K-SERIES JOISTS & ¾"Ø FOR LH-SERIES JOISTS. WHERE STEEL JOISTS DO NOT SPACE TO COLUMN CENTER LINES, USE BOLTED CONNECTIONS FOR THE STEEL JOIST CLOSEST TO THE CENTER LINE. WHERE THE DRAWINGS INDICATE THAT THE JOIST SEAT IS TO BE WELDED TO THE SUPPORTING STEEL, THE BOLTS PROVIDED ARE FOR ERECTION ONLY AND MAY BE REMOVED AFTER THE WELDS ARE COMPLETED.
15. STEEL JOISTS AT COLUMN CENTER LINES SHALL BE PROVIDED WITH 6"SQ. x ½" KNIFE PLATE AT THE BOTTOM CHORD, WELDED TO THE COLUMN, FOR STABILIZATION. DO NOT WELD THE JOIST CHORD TO THE PLATE.
16. STEEL JOIST GIRDERS AT COLUMN CENTERLINES SHALL BE BOLTED TO THE STRUCTURAL STEEL COLUMN WITH (2)-¾"Ø BOLTS AND SHALL BE PROVIDED WITH A 8" SQUARE X 1" KNIFE PLATE AT THE BOTTOM CHORD, WELDED TO THE COLUMN, FOR STABILIZATION. DO NOT WELD THE JOIST GIRDER CHORD TO THE PLATE UNLESS NOTED OTHERWISE.
17. HOLES IN STEEL JOIST CHORDS WILL NOT BE PERMITTED, EXCEPT FOR BOLTED CONNECTIONS AT THE BEARING END OF THE STEEL JOIST, OR WHERE SPECIFIED ON THE DRAWINGS AND SPECIFICALLY DESIGNED FOR BY THE JOIST MANUFACTURER.
18. ALL DAMAGED JOISTS AND JOIST GIRDERS SHALL BE REPAIRED OR REPLACED. THE ENGINEER-OF-RECORD SHALL BE THE SOLE JUDGE AS TO WHETHER A JOIST, OR JOIST GIRDER, CAN BE REPAIRED OR MUST BE REPLACED. ALL REPAIRS TO JOISTS SHALL BE DESIGNED AND SPECIFIED BY THE JOIST SUPPLIER'S ENGINEER.
19. JOIST SEATS TO HAVE A MINIMUM PLATE THICKNESS OF 3/16".
20. ALL NECESSARY JOIST TOP CHORD EXTENSIONS SHALL BE "R" TYPE, MEETING OR EXCEEDING THE LOAD CAPACITY OF THE JOIST, U.N.O.
21. ALL JOIST & JOIST GIRDERS SHALL BE PAINTED WITH RED OR GRAY PRIMER. FINAL FINISH TO BE VERIFIED WITH ARCHITECTURAL.

CONCRETE REINFORCING STEEL

1. DESIGN OF THE REINFORCED CONCRETE IS IN CONFORMANCE TO ACI 318-2011.
2. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, UNLESS NOTED OTHERWISE. ALL WELDED REINFORCING BARS SHALL CONFORM TO ASTM A706.
3. ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185. WIRE FABRIC SHALL BE SUPPLIED IN SHEETS. ROLLED FABRIC WILL NOT BE ACCEPTED. WIRE FABRIC SHALL BE PLACED AT THE MID-DEPTH OF THE SLAB. WIRE FABRIC SHALL BE SUPPORTED ON CONTINUOUS HIGH CHAIRS SPACED NOT MORE THAN 4 FEET O.C.
4. ALL REINFORCING SHALL BE DETAILED, FABRICATED, AND PLACED IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN CONCRETE INSTITUTE DETAILING MANUAL. ALL DOWELS ARE TO BE TIED IN PLACE. IF ANY DOWELS ARE 'STABBED' AFTER THE CONCRETE HAS BEEN PLACED, THE CONCRETE SHALL BE REMOVED AND REPLACED.
5. ALL REINFORCING SHALL BE SUPPORTED IN FORMS, SPACED WITH NECESSARY ACCESSORIES AND SHALL BE SECURELY WIRED TOGETHER WHILE PLACING CONCRETE, IN ACCORDANCE WITH THE LATEST EDITION OF THE CRSI "MANUAL OF STANDARD PRACTICE". ADDITIONAL BARS OR STIRRUPS SHALL BE PROVIDED BY THE CONTRACTOR TO FURNISH SUPPORT FOR ALL BARS.
6. MINIMUM CONCRETE COVER, UNLESS NOTED OTHERWISE:

UNFORMED SURFACE IN CONTACT WITH THE GROUND	3 IN.
FORMED SURFACES EXPOSED TO EARTH OR WEATHER:	
#6 BARS AND LARGER	2 IN.
#5 BARS AND SMALLER	1½ IN.
FORMED SURFACES NOT EXPOSED TO EARTH OR WEATHER:	
BEAMS, GIRDERS AND COLUMNS	1½ IN.
SLABS, WALLS AND JOISTS:	
#11 BARS AND SMALLER	¾ IN.
#14 AND #18 BARS	1½IN.

7. ALL BASE PLATES, ANCHOR BOLTS, SUPPORT ANGLES, ETC., WHICH ARE BELOW GRADE SHALL BE COVERED WITH A MINIMUM OF 3" OF CONCRETE AND COLD TAR EPOXY COATED.
8. PIPES OR CONDUITS PLACED IN FOUNDATION AND SLABS SHALL NOT BE SPACED CLOSER THAN 3 DIAMETERS ON CENTERS. PIPES AND CONDUITS PLACED IN SLAB SHALL NOT HAVE AN OUTSIDE DIAMETER LARGER THAN 1/3 OF SLAB THICKNESS. ALUMINUM CONDUITS SHALL NOT BE PLACED IN CONCRETE. NO CONDUIT SHALL BE PLACED WITHIN 24" OF COLUMN FACE.
9. LOCATION OF SLOTTED INSERTS, WELD PLATES AND ALL OTHER ITEMS TO BE EMBEDDED IN CONCRETE SHALL BE COORDINATED WITH PRECAST MANUFACTURER, ARCHITECTURAL AND MECHANICAL DRAWINGS.
10. PROVIDE CORNER BARS AT ALL FOOTING AND WALL INTERSECTIONS AND SLAB CORNERS
WITH REINFORCEMENT OF LIKE KIND AND OF A LENGTH TO LAP REINFORCEMENT ACCORDING TO TABLE BELOW.
11. ALL LAP SPLICES SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE, UNLESS NOTED OTHERWISE. WHERE CLASSES ARE NOT CALLED OUT ON DRAWINGS, USE CLASS "B" SPLICES.

BAR SIZE	TENSION SPLICE (IN.)				COMPRESSION SPLICES (IN.)
	TOP BARS		OTHER BARS		
	CLASS A	CLASS B	CLASS A	CLASS B	
#3	16	21	12	16	12
#4	21	28	16	21	15
#5	27	35	21	27	19
#6	35	46	27	35	23
#7	48	62	37	48	26
#8	63	82	48	63	30
#9	80	104	61	80	34
#10	101	131	78	101	38
#11	125	162	96	125	42

ADHESIVE ANCHOR NOTES

1. CONCRETE ADHESIVE SHALL BE A HIGH STRENGTH, TWO PART EPOXY ADHESIVE SUPPLIED IN SINGLE CARTRIDGES SEPARATING THE RESIN FROM THE HARDENER, AND CAPABLE OF DISPENSING AN ACCURATELY PROPORTIONED ADHESIVE MIXTURE. ANCHORING ADHESIVE SHALL BE HIT-HY 270 CARTRIDGE FOR ANCHORAGE INTO CMU AND HIT-HY 500 V3 CARTRIDGE FOR ANCHORAGE INTO CONCRETE BY HILTI CORPORATION OR APPROVED EQUAL.
2. THE CONTRACTOR SHALL ADHERE TO THE ANCHORING ADHESIVE MANUFACTURER'S RECOMMENDATIONS REGARDING STORAGE, TEMPERATURE, APPLICATION TEMPERATURE, APPLICATION TIME, INITIAL AND FINAL CURE TIME, AND ANY PRODUCT EXPIRATION DATES.
3. DRILL THE HOLE WITH HAMMER DRILL W/ CARBIDE TIPPED DRILL BIT OR HILTI TE-CD OR TE-YD HOLLOW DRILL BIT DIAMETER BASED ON THE FOLLOWING: #4 REBAR - ⅝"Ø BIT, #5 REBAR - ¾"Ø BIT, #6 REBAR - ⅞"Ø BIT, ½"Ø ANCHOR - 9/16"Ø BIT, ⅝:"Ø ANCHOR - ¾"Ø BIT, ¾"Ø ANCHOR - ⅞"Ø BIT, ⅞"Ø ANCHOR - 1"Ø BIT, 1"Ø ANCHOR - 1⅛" BIT. MINIMUM EMBEDMENT LENGTH OF REBAR AND ANCHORS SHALL BE AS IDENTIFIED IN THE PLANS.
4. CLEAN THE DRILLED HOLE BY BLOWING THE HOLE 4 TIMES WITH COMPRESSED AIR (90 PSI MINIMUM); BRUSH THE HOLE 4 TIMES (FULL DEPTH) AND BLOW THE HOLE 4 ADDITIONAL TIMES WITH COMPRESSED AIR (90 PSI MINIMUM).
5. MARK THE EMBEDMENT LENGTH ON THE REBAR OR ANCHOR BOLT PRIOR TO INSTALLATION.
6. WASTE THE ANCHORING ADHESIVE UNTIL A CONSISTENT COLOR IS DISPENSED. FILL THE HOLE WITH ADHESIVE FROM THE BOTTOM OF THE HOLE UPWARDS UNTIL THE HOLE IS APPROXIMATELY 2/3 FULL.
7. POST-INSTALLED ANCHORS AND/OR REINFORCING BAR INSTALLATION SHALL BE PERFORMED BY PERSONNEL TRAINED TO INSTALL THE SYSTEM PER THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII), AS INCLUDED IN THE ANCHOR PACKAGING. THE CONTRACTOR SHALL ARRANGE FOR A MANUFACTURER'S REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING FOR POST-INSTALLED ANCHORS AND/OR REINFORCING BARS. THE STRUCTURAL ENGINEER OF RECORD MUST RECEIVE DOCUMENTED CONFIRMATION PRIOR TO THE COMMENCEMENT OF INSTALLING THE ANCHORS AND/OR BARS THAT ALL OF THE CONTRACTOR'S PERSONNEL WHO WILL INSTALL POST-INSTALLED REINFORCING BARS HAVE BEEN TRAINED TO INSTALL THE SYSTEM PER THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII).
8. INSTALL THE REBAR OR ANCHOR TO ITS REQUIRED EMBEDMENT LENGTH.

SUBMITTAL PROCEDURES

1. TRANSMIT SUBMITTALS SUFFICIENTLY IN ADVANCE OF RELATED CONSTRUCTION ACTIVITIES TO AVOID UNNECESSARY DELAY. THE STRUCTURAL ENGINEER FOR THIS PROJECT MAY WITHHOLD ACTION ON A SUBMITTAL REQUIRING COORDINATION WITH OTHER SUBMITTALS UNTIL ALL RELATED SUBMITTALS ARE RECEIVED.
2. SHOP DRAWINGS SHALL BE SUBMITTED IN 'PDF' ELECTRONIC FORMAT. THE SHOP DRAWINGS WILL BE REVIEWED, MARKED UP, AND RETURNED IN 'PDF' ELECTRONIC FORMAT.

SEISMIC NOTE

I hereby certify that the structural load carrying members of this building structure have been designed in accordance with Arkansas Act 1100 1991.
John Riordan, P.E.
Arkansas Registration No. 14516

1"
ONE INCH AT FULL SIZE IF NOT ONE INCH SCALE ACCORDINGLY

DATE
REVISION

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 14516
JOHN M. RIORDAN
8/30/2024

HAWKINS WEIR ENGINEERS, INC.
CSE CORNERSTONE STRUCTURAL ENGINEERING, INC.

ROGERS POLLUTION CONTROL FACILITY (PCF) SOLIDS HANDLING IMPROVEMENTS, PHASE II
Rogers, Arkansas

DRYER BUILDING STRUCTURAL NOTES

ROGERS WATER UTILITIES

DATE:	AUGUST 2024
SCALE:	As indicated
DESIGNED BY:	JMR
DRAWN BY:	TPL
HWEI NO.:	2020043
FILENAME:	SA-01

SHEET NO.
SA-01