

C:\p\h\3\4\036\TYECU\PLANS\FWG_2.20_107\4\02025\534-40.PW, 11.mnw

GENERAL NOTES:			
I. DESIGN LOADS:			
A. CODE	IBC 2024 EDITION		
B. ROOFS	ROOF SNOW LOAD - 30 PSF IN AREAS WITHOUT DRIFTING. DRIFTING IS ADDED IN AREAS WHERE APPLICABLE. SNOW EXPOSURE C _e = 1.0 IMPORTANCE FACTOR I _s = 1.1 THERMAL FACTOR C _t = 1.0		
C. ROOF WIND UPLIFT (NET)	WITHIN 10' OF EDGES, RIDGES AND RAKES = 45 PSF		
D. FLOORS	MECHANICAL EQUIPMENT ROOM = 125 PSF		
E. STAIRS	= 100 PSF		
F. WIND	BASIC WIND SPEED = 115 MPH		
G. SEISMIC	DESIGN CATEGORY - II SITE CLASS - C MAPPED SPECTRAL RESPONSE ACCELERATION S _s = 30% G DESIGN SPECTRAL RESPONSE ACCELERATION S ₁ = 20% G S ₁ = 7% G SEISMIC IMPORTANCE FACTOR I _p = 1.0 ANALYSIS PROCEDURE USED: EQUIVALENT LATERAL FORCE METHOD. SEISMIC FORCE RESISTING SYSTEM(S): ORDINARY THINGENTRICALLY BRACED STEEL FRAMES - R = 3.25. SEISMIC RESPONSE COEFFICIENT C _s = 0.04 DESIGN BASE SHEAR V = 0.04W SYSTEM OVERSTRENGTH FACTOR (OMEGA) = 2.0 / 2.5.		
II. REINFORCED CONCRETE:			
A. DESIGN IS BASED ON "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACE 318). CONCRETE WORK SHALL CONFORM TO "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 301).			
B. ALL STRUCTURAL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS. MINIMUM CEMENT CONTENT 600lbs/cy. MAXIMUM W/C = 0.45. TYPE-F FLY ASH IS PERMITTED. COARSE AGGREGATE SHALL HAVE A MINIMUM OF 50% FRACTURED FACES ON A #4 PLUS ROCK.			
C. ALL CONCRETE FOR FLOOR SLABS ON GRADE OR ON STEEL DECK SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3500 PSI AT 28 DAYS. MINIMUM CEMENT CONTENT 517lbs/cy. MAXIMUM W/C = 0.50. TYPE-F FLY ASH IS PERMITTED. COARSE AGGREGATE SHALL HAVE A MINIMUM OF 50% FRACTURED FACES ON A #4 PLUS ROCK.			
D. ALL REINFORCING STEEL SHALL BE DEFORMED BARS OF NEW BILLET STEEL CONFORMING TO A.S.T.M. SPECIFICATION A-615, #4 AND LARGER GRADE 60, (ONLY #3 TIES MAY BE GRADE 40). DO NOT WELD OR REBEND ANY BARS WITH A YIELD POINT GREATER THAN 40,000 PSI.			
E. SLABS ON GRADE SHALL BE REINFORCED AS NOTED ON THE PLAN. LAP BARS 20" AT SPLICES.			
F. CONTROL AND CONSTRUCTION JOINTS SHALL BE LOCATED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ARCHITECT.			
G. AT ALL WALL CORNERS AND INTERSECTIONS PROVIDE CORNER BARS HAVING A CLASS "B" SPICE WITH ADJACENT WALL BARS.			
H. ALL BAR LENGTHS ARE DRAWN TO SCALE UNLESS NOTED. NO SPLICES OF REINFORCEMENT SHALL BE MADE EXCEPT AS DETAILED OR AUTHORIZED BY THE STRUCTURAL ENGINEER. ALL LAP SPLICES TO BE CLASS "B" UNLESS OTHERWISE NOTED.			
I. DETAIL ALL REINFORCING AND PROVIDE BAR SUPPORTS IN ACCORDANCE WITH A.C.I. DETAILING MANUAL, LATEST EDITION.			
J. PROVIDE LATERAL SUPPORT FOR WALLS WHILE EARTH BACKFILL IS BEING PLACED AND COMPACTED.			
K. REINFORCEMENT PROTECTION:			
1. CONCRETE POURED AGAINST EARTH	3"		
2. CONCRETE POURED IN FORMS BUT EXPOSED TO WEATHER OR EARTH	2"		
3. WALLS, SLABS AND JOINTS	1"		
4. BEAMS AND COLUMNS	1 1/2"		
L. UNLESS OTHERWISE SHOWN, PLACE 4#x5 WITH 2'-0" PROJECTION AROUND ALL OPENINGS IN CONCRETE WALLS, GRADE BEAMS OR SLABS.			
M. NO HORIZONTAL JOINTS ARE PERMITTED IN SLABS, JOINTS, WALLS OR BEAMS. ANY STOP IN CONCRETE WORK MUST BE MADE AT THE CENTER OF THE SPAN (OR SUPPORT) WITH VERTICAL BULKHEADS AND HORIZONTAL KEYS. UNLESS OTHERWISE SHOWN OR APPROVED, SEE ARCHITECTURAL DRAWINGS FOR CHAMFERS, KERFS, NOSINGS, ETC.			
III. STRUCTURAL STEEL:			
A. STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS, AND CODE OF STANDARD PRACTICE.			
B. ALL WIDE FLANGE SHAPES AND CHANNELS SHALL BE ASTM A572 GR 50. ALL ANGLES AND PLATES SHALL BE A.S.T.M. A36, TUBE SHAPES ASTM A53 GRADE B.			
C. FOR BEAM CONNECTIONS USE FRAMED BEAM CONNECTIONS WITH 3/4" & 7/8" DIA. A-325N BOLTS AS SHOWN IN TABLE II, PART 4 OF THE CURRENT A.I.S.C. MANUAL, UNLESS NOTED OTHERWISE. BOLTS SHALL BE LOAD INDICATOR TYPE. (TWIST OFF BOLTS). SELECT CONNECTIONS TO SUPPORT 60% OF THE TOTAL UNIFORM LOAD CAPACITY IN BENDING FOR EACH BEAM AND SPAN AS SHOWN IN THE A.I.S.C. UNIFORM LOAD CONSTANT TABLES, UNLESS NOTED OTHERWISE ON THE DRAWINGS. IF PLATES OR "WT" CONNECTIONS ARE USED (NOT FRAMED CONNECTIONS) PROVIDE ENOUGH BOLTS TO DEVELOP REACTION IN SINGLE SHEAR.			
D. WELDING SHALL BE DONE BY CERTIFIED WELDERS IN ACCORDANCE WITH AISC AND AWS SPECIFICATIONS AND RECOMMENDATIONS USING E70 XX ELECTRODES.			
E. SEE ARCHITECTURAL DRAWINGS FOR NAILERS, BOLTS, ETC.			
F. ALL COLUMN BASE PLATES SHALL BE GROUTED WITH NON-METALLIC, NON-SHRINK GROUT AS COLUMNS ARE ERECTED.			
IV. LIGHTWEIGHT STEEL FRAMING:			
A. LIGHTWEIGHT STEEL FRAMING MATERIALS SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS:			
1. GALVANIZED STEEL STUDS AND JOISTS:			
a. 12, 14 AND 16 GAGE --- A.S.T.M. A446, GRADE D, MINIMUM YIELD = 50 ksi			
b. 18 AND 20 GAGE --- A.S.T.M. A446, GRADE A, MINIMUM YIELD = 33 ksi			
2. GALVANIZED TRACK, BRIDGING, END CLOSURES, AND ACCESSORIES:			
a. A.S.T.M. A446, GRADE A, MINIMUM YIELD = 33ksi			
B. TRACKS SHALL BE SECURELY ANCHORED TO THE SUPPORTING STRUCTURE AS SHOWN ON THE PLANS. AT TRACK BUTT JOINTS, ABUTTING PIECES OF TRACK SHALL BE SECURELY ANCHORED TO A COMMON STRUCTURAL ELEMENT, OR THEY SHALL BE PROVIDED UNTIL ERECTION IS COMPLETED. HARDENED END BEARING STRATA CAPACITY. RECORD CONCRETE VOLUMES.			
C. SPLICES IN AXIALLY LOADED STUDS SHALL NOT BE PERMITTED UNLESS APPROVED BY STRUCTURAL ENGINEER.			
D. LIGHTWEIGHT STEEL FRAMING COMPONENTS SHALL BE WELDED TOGETHER USING WELDS AND PROCEDURES CONFORMING TO THE A.W.S. SPECIFICATION FOR WELDING SHEET STEEL IN STRUCTURES. E70 OR E60 ELECTRODES MAY BE USED.			
E. STUDS AT OPENINGS AND AT ENDS OF X-BRACING STRAPS SHALL BE WELDED TOGETHER WITH 1/8" FILLET WELDS x 2" LONG AT 12"oc EACH SIDE UNLESS OTHERWISE NOTED.			
V. STEEL JOISTS:			
A. STEEL JOISTS SHALL CONFORM TO THE REQUIREMENTS OF STANDARD SPECIFICATIONS OF THE STEEL JOIST INSTITUTE, LATEST EDITION.			
B. JOISTS SHALL BEAR A MINIMUM ON BLOCK AND 2 1/2" ON STEEL BEAMS OR PLATES (EXCEPT DLH JOISTS) WHICH SHALL BEAR ON BLOCK AND ON STEEL BEAMS. WELD JOISTS TO (ANGLES), (BEAMS) AND PLATES IN (MASONRY) AND/OR (PRECAST PANELS).			
C. PROVIDE BRIDGING AS NOTED ON THE PLANS.			
D. SKEWED END PLATES, SLOPED BEARINGS BOLSTERS, STEEL JOIST BEARINGS ARE TO BE PROVIDED BY STEEL JOIST MANUFACTURER.			
E. SEE I.-C. FOR WIND UPLIFT.			
F. NO FIELD ALTERATIONS OF JOISTS TO BE MADE WITHOUT APPROVAL OF STRUCTURAL ENGINEER.			
G. STANDARD HEADERS SHALL BE DESIGNED AND SUPPLIED BY STEEL JOIST MANUFACTURER BASED ON THE LIVE LOADS NOTED ABOVE AND SUPERIMPOSED DEAD LOADS. JOISTS SUPPORTING HEADERS SHALL BE DESIGNED ACCORDINGLY.			
VI. STEEL DECK:			
A. ALL STEEL DECK SHALL BE ERECTED IN ACCORDANCE WITH DECK MANUFACTURER'S SUGGESTED SPECIFICATION OR AS NOTED ON THE PLANS.			
B. STEEL DECK BY OTHER MANUFACTURER'S MAY BE SUPPLIED IN LIEU OF THAT SHOWN PROVIDED SECTION PROPERTIES ARE EQUAL TO OR GREATER THAN THOSE SPECIFIED, IF APPROVED BY THE STRUCTURAL ENGINEER.			
C. GENERAL CONTRACTOR SHALL PROVIDE ANGLES 3x3x1/4 - 4 SIDES OF ALL OPENINGS THRU DECK GREATER THAN 12", WELD TO TOP CHORDS OF JOISTS AND TO ANGLES TO SUPPORT EDGE OF DECK.			
D. PUDDLE WELDS BETWEEN STEEL DECK AND SUPPORTS SHALL BE 5/8" DIA. MINIMUM, AND HAVE GOOD FUSION TO THE SUPPORTING STRUCTURE. WELDING MACHINE POWER SETTINGS REQUIRED ARE USUALLY WELL BELOW THOSE NEEDED FOR STRUCTURAL STEEL SHAPES. THE SETTINGS FOR DECK SHOULD BE SUCH THAT BURN-OFF RATES ARE BETWEEN 0.15 & 0.25 INCHES PER SECOND. USE E60XX OR E70XX 5/32" RODS. THE TIME REQUIRED PER WELD MAY VARY BETWEEN 3 TO 6 SECONDS OR MORE DEPENDING ON THE PROPERTIES OF PARTS BEING WELDED. HEAVIER SUBSTRATA REQUIRES MORE WELDING TIME BUT INCREASED POWER SETTINGS MAY BURN OUT THE DECK FASTER THAN THE ELECTRODE MATERIAL CAN BE DEPOSITED. SHOT-DOWN FASTENERS ARE ACCEPTABLE AS NOTED ON THE PLANS.			
E. WELDED DECK SHALL BE RE-WELDED USING WELDING WASHERS AT THOSE LOCATIONS WHERE AN INITIAL WELD FAILS.			
VII. SHOP DRAWINGS:			
A. CONSTRUCTION DOCUMENTS ARE COPYRIGHTED AND SHALL NOT BE COPIED FOR USE AS ERECTION PLANS OR SHOP DETAILS.			
B. ALL SHOP AND ERECTION DRAWINGS SHALL BE CHECKED AND STAMPED BY THE GENERAL CONTRACTOR PRIOR TO SUBMISSION FOR STRUCTURAL ENGINEER'S REVIEW. UNCHECKED SUBMITTALS WILL BE RETURNED WITHOUT REVIEW. FURNISH DIGITAL FILES (PDF) OF SHOP AND ERECTION DRAWINGS FOR REINFORCING STEEL, STRUCTURAL STEEL, STEEL JOISTS, STEEL DECK, PLANT FABRICATED WOOD JOISTS, WOOD TRUSSES GLUED-LAMINATED TIMBER AND PRECAST CONCRETE TO THE STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION.			
C. SUBMIT IN A TIMELY MANNER TO PERMIT TEN (10) WORKING DAYS FOR REVIEW BY STRUCTURAL ENGINEER.			
D. THE GENERAL CONTRACTOR AND HIS SUBCONTRACTORS SHALL SUBMIT IN WRITING ANY REQUESTS TO MODIFY THE PLANS OR SPECIFICATIONS. SHOP DRAWINGS, SUBMITTED FOR REVIEW DO NOT CONSTITUTE "IN WRITING" UNLESS SPECIFIC SUGGESTED CHANGES ARE CLEARLY MARKED. IN ANY EVENT, SUCH CHANGES BY MEANS OF THE SHOP DRAWING SUBMITTAL PROCESS BECOME THE RESPONSIBILITY OF THE ONE INITIATING SUCH CHANGE.			
VIII. FIELD VERIFICATION OF EXISTING CONDITIONS:			
A. CONTRACTOR SHALL THOROUGHLY INSPECT AND SURVEY EXISTING STRUCTURE TO VERIFY CONDITIONS WHICH AFFECT THE WORK SHOWN ON THE DRAWINGS. CONTRACTOR SHALL REPORT ANY VARIATIONS OR DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING.			
IX. STRUCTURAL ERECTION AND BRACING REQUIREMENTS:			
A. THE STRUCTURAL DRAWINGS ILLUSTRATE THE COMPLETED STRUCTURE WITH ELEMENTS IN THEIR FINAL POSITIONS, PROPERLY SUPPORTED AND BRACED. THESE CONSTRUCTION DOCUMENTS CONTAIN TYPICAL AND REPRESENTATIVE DETAILS TO ASSIST THE CONTRACTOR. DETAILS SHOWN APPLY AT ALL SIMILAR CONDITIONS UNLESS OTHERWISE INDICATED. ALTHOUGH DUE DILIGENCE HAS BEEN APPLIED TO MAKE THE DRAWINGS AS COMPLETE AS POSSIBLE, NOT EVERY DETAIL IS ILLUSTRATED, NOR IS EVERY EXCEPTIONAL CONDITION ADDRESSED. ALL PROPRIETARY CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ALL WORK SHALL BE ACCOMPLISHED IN A WORKMANLIKE MANNER AND IN ACCORDANCE WITH THE 2024 IBC AND LOCAL CODES AND ORDINANCES.			
B. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL WORK, INCLUDING LAYOUT AND DIMENSION VERIFICATION, MATERIALS COORDINATION, SHOP DRAWING REVIEW, AND THE WORK OF SUBCONTRACTORS, ANY DISCREPANCIES OR OMISSIONS DISCOVERED IN THE COURSE OF THE WORK SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT FOR RESOLUTION. CONTINUATION OF WORK WITHOUT NOTIFICATION OF DISCREPANCIES RELIEVES THE ARCHITECT AND STRUCTURAL ENGINEER FROM ALL CONSEQUENCES.			
C. UNLESS OTHERWISE SPECIFICALLY INDICATED, THE DRAWINGS DO NOT DESCRIBE METHODS OF CONSTRUCTION. THE CONTRACTOR, IN THE PROPER SEQUENCE, SHALL PROVIDE PROPER SHORING AND BRACING AS MAY BE REQUIRED DURING CONSTRUCTION TO ACHIEVE THE FINAL COMPLETED STRUCTURE. THE CONTRACTOR, IN THE PROPER SEQUENCE, SHALL PERFORM OR SUPERVISE ANY WORK NECESSARY TO ACHIEVE THE FINAL COMPLETED STRUCTURE. SUCH WORK SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR EXCAVATION, FORMWORK, SCAFFOLDING, SAFETY DEVICES AND PROGRAMS OF ALL KINDS, SUPPORT AND BRACING OR CRANES AND OTHER ERECTION EQUIPMENT. DO NOT PLACE BACKFILL AGAINST BASEMENT OR RETAINING WALLS UNTIL SUPPORTING SLABS AND FLOOR FRAMING ARE IN PLACE AND SECURELY ANCHORED, UNLESS ADEQUATE BRACING IS PROVIDED. THE STRUCTURAL STEEL FRAME IS "NON-SELF-SUPPORTING" PER AISC CODE OF STANDARD PRACTICE. TEMPORARY BRACING SHALL REMAIN IN PLACE UNTIL ALL FLOORS, WALLS, ROOFS AND ANY OTHER SUPPORTING ELEMENTS ARE IN PLACE. THE ARCHITECT AND STRUCTURAL ENGINEER BEAR NO RESPONSIBILITY FOR THE ABOVE ITEMS, AND OBSERVATION VISITS TO THE SITE DO NOT IN ANY WAY INCLUDE INSPECTION OF THEM.			
D. WHERE PERIODIC OR CONTINUOUS INSPECTION IS REQUIRED BY THESE DOCUMENTS BY THE ABOVE ITEMS, AND OBSERVATION VISITS TO THE SITE DO NOT IN ANY WAY INCLUDE INSPECTION OF THEM.			
X. FOUNDATIONS:			
A. ALLOWABLE SOIL PRESSURE USED IN DESIGN: 30,000 PSF END BEARING			
B. PIERS SHALL BE DRILLED A MINIMUM OF 5 FEET INTO THE SOUND BEDROCK AND SHALL HAVE A MINIMUM TOTAL LENGTH OF 15 FEET.			
C. ALL PIERS SHALL BE REINFORCED THEIR FULL LENGTH AS SHOWN ON THE DRAWINGS.			
D. PIER HOLES SHALL BE THOROUGHLY CLEANED AND DEWATERED AND SHALL BE INSPECTED BY A REPRESENTATIVE OF A GEOTECHNICAL ENGINEERING FIRM PRIOR TO CONCRETE PLACEMENT. THE TOP PORTION OF ALL PIERS SHALL NOT BE ALLOWED TO HAVE "MUSHROOM" TOPS. CONTRACTOR SHALL PROVIDE FORMS THAT MATCH PIER DIAMETERS OR THE TOP 2'-0" (MINIMUM) OF PIERS IF TOP DIAMETER OF PIER AT GROUND SURFACE INCREASES 6" OR MORE DUE TO LOOSE SOIL SLOUGHING.			
E. ALL EXTERIOR GRADES ADJACENT TO THE BUILDING SHOULD BE SLOPED TO DRAIN AWAY FROM THE FOUNDATION IN ALL DIRECTIONS. ALL ROOF DOWNSPOUTS AND DRAINS SHOULD DISCHARGE WELL BEYOND THE LIMITS OF ALL BACKFILL AND NOT BE ALLOWED TO POND ADJACENT TO THE BUILDING.			
F. A COPY OF THE GEOTECHNICAL REPORT IS AVAILABLE FOR REVIEW IN THE APPENDIX OF THE PROJECT MANUAL.			
XI. EXPLANATION OF SECTION DESIGNATION:			
SECTION 2 230	STRUCTURAL SHEET WHERE SECTION IS DRAWN		
XII. SPECIAL INSPECTION PROGRAM			
THE OWNER SHALL EMPLOY INSPECTORS AND SPECIAL INSPECTORS AS REQUIRED DURING CONSTRUCTION TO PROVIDE INSPECTIONS OF THE ITEMS OF WORK LISTED. THESE INSPECTORS SHALL BE QUALIFIED PERSON(S) WHO DEMONSTRATE COMPETENCE IN EACH PARTICULAR TYPE OF CONSTRUCTION TO THE SATISFACTION OF THE LOCAL BUILDING OFFICIAL AND THE RESPECTIVE GOVERNING CODE.			
ITEM OF CONSTRUCTION:			
A. FOOTINGS AND FOUNDATIONS, 2024 IBC SECTION 1705.6. REQUIRED VERIFICATION AND INSPECTION OF SOILS			
VERIFICATION AND INSPECTION TASK	INSPECTION FREQUENCY		
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	PERIODIC		
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	PERIODIC		
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	PERIODIC		
4. VERIFY USE OF PROPER FILL MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	CONTINUOUS		
5. PRIOR TO PLACEMENT OF FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	PERIODIC		
B. CAST-IN-PLACE DEEP FOUNDATIONS, 2024 IBC SECTION 1705.8. REQUIRED VERIFICATION AND INSPECTION OF CAST-IN-PLACE DEEP FOUNDATION ELEMENTS	INSPECTION FREQUENCY		
1. OBSERVE DRILLING OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH ELEMENT.	CONTINUOUS		
2. VERIFY PLACEMENT LOCATIONS AND PLUMBNESS, CONFIRM ELEMENT DIAMETERS, LENGTHS, EMBEDMENT INTO BEDROCK AND ADEQUATE END-BEARING STRATA CAPACITY. RECORD CONCRETE VOLUMES.	CONTINUOUS		
3. FOR CONCRETE ELEMENTS, PERFORM ADDITIONAL INSPECTIONS IN ACCORDANCE WITH IBC SECTION 1705.3. (ITEM "C" BELOW)			
C. CONCRETE CONSTRUCTION, 2024 IBC SECTION 1705.3. REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION	INSPECTION FREQUENCY REF. STANDARDS		
1. INSPECTION OF REINFORCING STEEL, INCLUDING PLACEMENT.	PERIODIC	ACI 318: 3.5, 7.1 - 7.7; IBC: 1913.4	
2. INSPECTION OF ANCHORS CAST IN CONCRETE.	PERIODIC	ACI 318: 8.1.3, 21.2.8; IBC: 1908.5, 1909.1	
3. INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS.	PERIODIC	ACI 318: 3.8.6, 8.1.3, 21.2.8; IBC: 1909.1	
4. VERIFYING USE OF REQUIRED MIX DESIGN.	PERIODIC	ACI 318: Ch. 4, 5.2-5.4; IBC: 1904.2, 1910.2, 1910.3	
5. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	CONTINUOUS	ASTM C172, C31 ACI 318: 5.6, 5.8 IBC: 1910.10	
6. INSPECTION OF CONCRETE PLACEMENT			
FOR PROPER APPLICATION TECHNIQUES.			
CONTINUOUS	ACI 318: 5.9, 5.10 IBC: 1913.6, 1913.7, 1913.8		
7. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	PERIODIC	ACI 318: 5.11 - 5.13 IBC: 1910.9	
8. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSION OF THE CONCRETE MEMBER BEING FORMED.	PERIODIC	ACI 318: 6.1.1	
D. STRUCTURAL STEEL, 2024 IBC SECTION 1705.2. SPECIAL INSPECTION SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC 360. ITEMS IDENTIFIED BELOW REPRESENT A PARTIAL/SUMMARIZED LIST OF THE INSPECTION REQUIREMENTS AND ARE NOT MEANT TO SUPERSEDE THE REQUIREMENTS OF AISC 360 AND ITS ASSOCIATED REFERENCES. REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION	VERIFICATION AND INSPECTION INSPECTION FREQUENCY REF. STANDARDS		
1. MATERIAL VERIFICATION OF STRUCTURAL STEEL:			
a. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.	PERIODIC	ASTM STANDARDS	
b. MANUFACTURERS CERTIFIED TEST REPORTS.		ASTM STANDARDS	
2. INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE WITH APPROVED CONSTRUCTION DOCUMENTS:	PERIODIC	ASTM STANDARDS	
a. DETAILS SUCH AS BRACING AND STIFFENING.		ASTM STANDARDS	
b. MEMBER LOCATIONS		ASTM STANDARDS	
c. APPLICATION OF JOINT DETAILS AT EACH CONNECTION.		ASTM STANDARDS	
d. HEADED ANCHOR STUD APPLICATION		ASTM STANDARDS	
3. MATERIAL VERIFICATION OF HIGH STRENGTH BOLTS, NUTS AND WASHERS:			
a. MANUFACTURERS CERTIFICATE OF COMPLIANCE REQUIRED.		ASTM STANDARDS	
b. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS:	PERIODIC	ASTM STANDARDS	
c. CORRECT FASTENER SELECTION (LENGTH, TYPE, GRADE, THREAD EXCLUSION) FOR JOINT DETAILS:	PERIODIC	ASTM STANDARDS	
4. INSPECTION OF HIGH STRENGTH BOLTING FOR STRUCTURAL STEEL:			
a. PROPER BOLTING PROCEDURES UTILIZED ACCORDING TO AISC RCSC SPECIFICATION.	PERIODIC	ASTM STANDARDS	
b. FASTENERS PLACED IN ALL HOLES IN PROPER POSITION AND ALIGNMENT WITH TENSION MECHANISM COMPLETED.	PERIODIC	ASTM STANDARDS	
5. VERIFICATION OF WELD MATERIALS AND PROCEDURES:			
a. WELDING PROCEDURE SPECIFICATIONS AVAILABLE.		ASTM STANDARDS	
b. MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE.		ASTM STANDARDS	
c. MATERIAL IDENTIFICATION:	PERIODIC	ASTM STANDARDS	
6. INSPECTION OF WELDING FOR STRUCTURAL STEEL:			
a. FIT-UP OF MEMBERS TO BE WELDED INCLUDING JOINT GEOMETRY, ALIGNMENT, PREPARATION, TACKING, BACKING, AND FINISH.	PERIODIC	ASTM STANDARDS	
b. PROPER WELDING PROCEDURES AND TECHNIQUES FOLLOWED.	PERIODIC	ASTM STANDARDS	
c. SIZE, LENGTH AND LOCATION OF WELDS IN ACCORDANCE WITH CONTRACT DOCUMENTS.	COMPLETE	ASTM STANDARDS	
d. VISUAL ACCEPTANCE CRITERIA MET FOR ALL WELDED JOINTS.	COMPLETE	ASTM STANDARDS	
e. INSPECTION CRITERIA FOR WELDED JOINTS BASED ON WELD SIZE/TYPE:		ASTM STANDARDS	
1. CP & PP GROOVE WELDS.	CONTINUOUS	ASTM STANDARDS	
2. MULTIPASS FILET WELDS.	CONTINUOUS	ASTM STANDARDS	
3. SINGLE PASS FILET WELDS > 5/16".	PERIODIC	ASTM STANDARDS	
4. SINGLE PASS FILET WELDS < 5/16".	PERIODIC	ASTM STANDARDS	
5. HEADED ANCHOR STUDS.	PERIODIC	ASTM STANDARDS	
E. STEEL CONSTRUCTION OTHER THAN STRUCTURAL STEEL, 2024 IBC SECTION 1705.2.2 & 1705.2.3. REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION OTHER THAN STRUCTURAL STEEL			
1. MATERIAL VERIFICATION OF COLD-FORMED STEEL DECK:			
a. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.	PERIODIC	ASTM STANDARDS	
b. MANUFACTURERS CERTIFIED TEST REPORTS.	PERIODIC	ASTM STANDARDS	
2. MATERIAL VERIFICATION OF OPEN-WEB STEEL JOISTS:			
a. IDENTIFICATION MARKINGS TO CONFORM TO STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.	PERIODIC	ASTM STANDARDS	
b. JOIST SIZE, DEPTH, LAYOUT AND ALIGNMENT IN ACCORDANCE WITH CONTRACT DOCUMENTS.	PERIODIC	ASTM STANDARDS	
c. BOLTED CONNECTIONS NEAR COLUMNS COMPLETED AS INDICATED IN JOIST LAYOUT DOCUMENTS.	PERIODIC	ASTM STANDARDS	
3. INSPECTION OF WELDING:			
a. COLD-FORMED STEEL DECK:	PERIODIC	ASTM STANDARDS	
1) FLOOR AND ROOF DECK WELDS:	PERIODIC	ASTM STANDARDS	
b. STEEL JOISTS:	PERIODIC	ASTM STANDARDS	
1) LENGTH, SIZE, LOCATION MEETING REQUIREMENTS AND DETAILS OF CONTRACT DOCUMENTS	PERIODIC	ASTM STANDARDS	
F. FRAMING INSPECTION, 2024 IBC SECTION 110.3.4.			
1. INSPECTION OF WALL AND ROOF FRAMING SHALL BE MADE AFTER THE ROOF DECK OR SHEATHING, ALL FRAMING, FIRE-BLOCKING AND BRACING ARE IN PLACE AND PIPES, CHIMNEYS, AND VENTS TO BE CONCEALED ARE COMPLETE AND THE ROUGH ELECTRICAL, PLUMBING, HEATING WIRES, PIPES AND DUCTS ARE APPROVED.			
2. ALL INSTALLATIONS ARE TO ADHERE TO PROJECT CONTRACT DOCUMENTS AND DETAILS.			

STRUCTURAL ABBREVIATIONS

∠	ANGLE
@	AT
Ø	DIAMETER
□	SQUARE
°	DEGREES
±	PLUS/MINUS
C	CONTROL JOINT
CL	CENTERLINE
PL	PLATE
ALT.	ALTERNATE
APPROX.	APPROXIMATE
ARCH.	ARCHITECT
BLDG	BUILDING
BRG	BEARING
BTM	BOTTOM
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONT.	CONTINUOUS
D.A.Ø.	DOUBLE ANCHOR STUD
DBL	DOUBLE
DET	DETAIL
DIM	DIMENSION
D.L.	DEAD LOAD
DRAIN	DRAINAGE
E.A.	EACH
ELEV.	ELEVATION
ELEC.	ELECTRICAL
EQ	EQUAL
EXIST	EXISTING
EXPL.	EXPANSION
FT	FOOTING
FT	FEET
F.V.	FIELD VERIFY
GALV	GALVANIZED
GR	GRADE BEAM
H.A.Ø.	HEADED ANCHOR STUD
HORIZ.	HORIZONTAL
ID	INSIDE DIAMETER
I.E.	INVERT ELEVATION
IN	INCHES
J.D.	JOINT BEARING
K	KIPS
L.D.	LIVE LOAD
L.L.H.	LONG LEG HORIZONTAL
L.L.V.	LONG LEG VERTICAL
LONG	LONGITUDINAL
MAX.	MAXIMUM
MECH.	MECHANICAL
MEZZ	