A. MAJOR CODES AND STANDARDS

1. INTERNATIONAL BUILDING CODE (IBC 2018)
2. ASCE 7 (Formerly ANSI A58.1) CURRENT EDITION
3. ACI 318-14
4. AISC — ASD 15th Edition.
5. SJI — Specifications Current Edition
6. AWS — Current Edition.
7. ASTM — Current Edition.
8. UL — Current Edition.

B. DESIGN LOADS

1. LIVE LOADS

SLABS ON GRADE	100 psf
STORAGE	125 psf
MECHANICAL ROOMS	150 psf UNLESS OTHERWISE NOTED
ROOF	30 psf + Snow Drift

b. SNOW LOADS

GROUND SNOW LOAD	Pg = 0 psf
SNOW EXPOSURE FACTOR	Ce = 0.9
SNOW IMPORTANCE FACTOR	I = 1.0
THERMAL FACTOR	Ct = 1.0
FLAT ROOF SNOW LOAD	Pf = 0 psf

WIND CONTROLS IN LATERAL DESIGN, VBASE = 105.3 K

c. LATERAL LOADS

I. WIND LOADS

BASIC WIND SPEED	Vult = 160 MPH Vasd = 132 MPH
WIND EXPOSURE	C
CATEGORY	II
WIND BASE SHEAR	105.3k

II. SEISMIC LOADS

SPECTRAL RESPONSE @ SHORT PERIOD	Ss = 0.049	Sds = 0.052
SPECTRAL RESPONSE @ 1-SECOND PERIOD	S1 = 0.028	Sd1 = 0.044
SITE CLASS	D (DEFAULT PER ASCE 7)	
SEISMIC USE GROUP	II	
SEISMIC DESIGN CATEGORY	A	
SEISMIC IMPORTANCE FACTOR	1.0	
SEISMIC FORCE RESISTING SYSTEM	ORDINARY REINF MASONRY WALLS	
RESPONSE MODIFICATION COEFFICIENT	R = 4.0	
DEFLECTION AMPLIFICATION FACTOR	Cd = 2 1/4 (MASONRY)	
DESIGN BASE SHEAR ANALYSIS PROCEDURE	EQUIV. LATERAL FORCE PROCEDURE	
DESIGN BASE SHEAR (SEISMIC CONTROLS)	V = 12.34k	

2. NO PART OF THE BUILDING SHALL BE USED AS A STAGING AREA RESULTING IN A LOAD (UNDER THE LIMITED LOADED AREA) THAT EXCEEDS THE DESIGN

3. FOR THE WIND DESIGN OF THE CLADDING SYSTEMS, THE HIGH PRESSURE CORNER ZONE DIMENSIONS MUST BE CALCULATED BASED ON THE OVERALL BUILDING DIMENSIONS BUT SHALL APPLY TO ALL CORNERS (OUTSIDE AND INTERMEDIATE) OF THE BUILDING.

C. GENERAL

1. ALL DETAILS, SECTIONS, AND NOTES SHOWN ON DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS ELSEWHERE UNLESS OTHERWISE SHOWN.
2. NO CHANGE IN SIZE, DIMENSION, OR POSITION OF STRUCTURAL ELEMENTS SHALL BE MADE, NOR SHALL ANY OPENINGS OR SLEEVES BE PERMITTED THROUGH ANY STRUCTURAL ELEMENT, WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD, UNLESS DETAILED AND SPECIFICALLY NOTED ON THE STRUCTURAL SHOP DRAWINGS. PROVIDE SEPARATE SHOP DRAWINGS INDICATING ALL PENETRATIONS THROUGH STRUCTURAL ELEMENTS FOR APPROVAL, PRIOR TO SUBMISSION OF THE SHOP DRAWINGS FOR THE AFFECTED STRUCTURAL ELEMENTS.
3. CONSULT ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR LOCATIONS AND DIMENSIONS OF CHASES, INSERTS, OPENINGS, SLEEVES, DRIPS, REVEALS, FINISHES, DEPRESSIONS, DOORS, AND OTHER SUCH PROJECT REQUIREMENTS NOT SHOWN ON STRUCTURAL DRAWINGS. ANY SUCH ITEMS SHOWN ON STRUCTURAL DRAWINGS ARE INDICATED FOR INFORMATION ONLY. APPEARANCE OF SAME ON STR. DWGS. IS NOT MEANT TO CONVEY ACTUAL LOCATION OR EXTENT OF WORK.
4. PROVIDE ANY ALTERATIONS AND/OR ADDITIONAL COMPONENTS NEEDED TO ACCOMMODATE THE INSTALLATION OF EQUIPMENT OF ANY NATURE. COORDINATE SUCH WORK WITH THE EQUIPMENT SUPPLIER. INCORPORATE SUCH REFINEMENTS ON THE SHOP DRAWINGS, AND OBTAIN THE EQUIPMENT SUPPLIER'S APPROVAL (CLEARLY DISPLAYED ON SHOP DRAWINGS) PRIOR TO SUBMITTING THE SHOP DRAWINGS TO THE ARCHITECT AND ENGINEER FOR APPROVAL.
5. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING AS REQUIRED TO PROPERLY CONSTRUCT THE BUILDING.
6. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS BEFORE STARTING CONSTRUCTION AND/OR SUBMITTING SHOP DRAWINGS FOR APPROVAL. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT.
7. CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PROTECT EXISTING AND NEW UTILITIES AND SHALL ASSUME FULL RESPONSIBILITY FOR ANY DAMAGE DURING CONSTRUCTION.
8. PROVIDE MINIMUM 4" CONCRETE PADS REINFORCED WITH #3@12" E.W. @ MID DEPTH AT ALL EQUIPMENT SUPPORTED ON SLABS ON GRADE OR ON FRAMED FLOORS (U.O.N.). USE LIGHT WEIGHT CONCRETE FOR ALL THE PADS ON FRAMED FLOORS. PAD SHALL EXTEND MINIMUM 6" ON ALL SIDES OF THE EQUIPMENT.
9. DO NOT SCALE DRAWINGS.
10. PIPES OF 2" DIAMETER OR LESS AND AIR DUCTS MAY BE SUSPENDED DIRECTLY FROM THE COMPOSITE DECK SLAB, WHERE APPLICABLE. ALL HANGERS FOR OTHER MECHANICAL PIPING AND EQUIPMENT SHALL BE CONNECTED TO THE STEEL BEAMS ONLY. ALL PIPE GROUPS SHALL BE SUPPORTED ON TRAPEZES WHICH SHALL BE SUSPENDED FROM STEEL BEAMS OR JOISTS. CONTRACTOR MAY PROVIDE SECONDARY MEMBERS SPANNING BETWEEN STRUCTURAL BEAMS AS NEEDED. U.O.N. ON DRAWINGS, HANGERS SHALL BE LOCATED AS TO KEEP THE EQUIVALENT UNIFORM LOAD UNDER 10 PSF. SHOP DRAWINGS FOR HANGER LAYOUT ABOVE MECHANICAL ROOMS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR APPROVAL.
11. THE WEB AND BOTTOM FLANGE OF STEEL BEAMS SHALL NOT BE USED FOR THE LATERAL SUPPORT OF CLADDING SYSTEMS UNLESS KICKER IS PROVIDED AT THE POINT OF BRACING. THE SLOPE OF THE KICKER SHALL NOT BE STEEPER THAN 2 HORIZONTAL TO 1 VERTICAL.
12. ALL CMU WALLS ON ELEVATED FRAMED FLOORS ARE INDICATED ON THE STRUCTURAL DWGS. NO CMU WALLS ON ELEVATED FRAMED FLOORS SHOULD BE ADDED OR RELOCATED W/O PRIOR APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD.

D. FOUNDATION

1. STRUCTURAL DRAWINGS WERE PREPARED BASED ON THE FINAL GEOTECHNICAL REPORT DATED SEPTEMBER 8, 2021 PROVIDED BY KSM ENGINEERING AND TESTING.
2. THE BUILDING FOUNDATION SYSTEM IS SPREAD FOOTINGS WITH ALLOWABLE BEARING CAPACITY OF 2,500 PSF U.O.N.
3. NO FOOTING SHALL BE PLACED PRIOR TO THE GEOTECHNICAL ENGINEERS' APPROVAL OF THE SOIL BEARING CAPACITY. IF LESSER BEARING VALUE IS ENCOUNTERED AT THE REQUIRED ELEVATION, THE CONTRACTOR SHALL CONTACT THE ARCHITECT/ENGINEER FOR FURTHER DIRECTION PRIOR TO PLACING THE FOUNDATION.
4. FILL UNDER SLABS ON GRADE SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT RECOMMENDATIONS AND NOTES ON THE DRAWINGS. ALL COMPACTION SHALL BE APPROVED BY OWNER'S SITE SOILS ENGINEER.
5. BACKFILL BEHIND MASONRY/CONCRETE WALLS SHALL NOT COMMENCE UNTIL THE WALL HAS ATTAINED 75% OF ITS DESIGN STRENGTH AND THE TOP OF THE WALL IS ADEQUATELY BRACED.
6. IF EXISTING FILL OR OTHER UNSUITABLE MATERIAL IS ENCOUNTERED IT SHALL BE REMOVED AND REPLACED WITH COMPACTED STRUCTURAL FILL OR LEAN CONCRETE

E. CONCRETE

1. ALL CONCRETE SHALL BE CONTROLLED CONCRETE, NORMAL WEIGHT (UNLESS OTHERWISE NOTED) WITH COMPRESSIVE STRENGTH AT 28 DAYS AS FOLLOWS:

SLAB ON GRADE	f'c=	4,000 psi
TYPICAL (UNLESS OTHERWISE NOTED)	f'c=	4,000 psi
GROUT FOR CMU WALLS	f'c=	2,500 psi
EXPOSED TO WEATHER	f'c=	4,500 psi W/C=0.45 MAX

2. CONCRETE SHALL NOT BE DROPPED THROUGH REINFORCING STEEL SO AS TO CAUSE SEGREGATION OF AGGREGATES. HOPPERS, VERTICAL CHUTES, OR TRUNKS SHALL BE USED IN SUFFICIENT NUMBERS SO THAT THE FREE UNCONFINED FALL OF CONCRETE SHALL NOT EXCEED SIX FEET AND TO ENSURE THAT THE CONCRETE IS KEPT LEVEL AT ALL TIMES.
3. ALL CONCRETE WORK SHALL CONFORM TO THE LATEST APPROVED EDITIONS OF THE APPLICABLE A.C.I. DOCUMENTS.
4. CONCRETE MIX DESIGNS SHALL BE MADE BY AN APPROVED LABORATORY FOR ALL CONCRETE AND SHALL BE SUBMITTED TO THE ARCHITECT AND ENGINEER FOR APPROVAL BEFORE USE.
5. CALCIUM CHLORIDE SHALL NOT BE PERMITTED IN CONCRETE IN ANY FORM.
6. ALL CONCRETE EXPOSED TO WEATHER AND WITHIN 4'-0" OF FINISHED GRADE SHALL BE AIR ENTRAINED 4% - 6%.
7. IT IS NOT PERMISSIBLE TO DELAY THE APPLICATION OF CURING COMPOUND UNTIL THE MORNING AFTER THE CONCRETE IS CAST.
8. BEFORE FRESH CONCRETE IS PLACED AGAINST CONCRETE IN PLACE, THE CONTACT SURFACES OF CONCRETE IN-PLACE SHALL BE THOROUGHLY CLEANED. ALL LAITANCE SHALL BE REMOVED, AND APPLY AN APPROVED CHEMICAL BONDING COMPOUND. WHERE NOTED, SURFACE OF EXISTING CONCRETE SHALL BE ROUGHENED TO A MINIMUM AMPLITUDE OF 1/4".
9. ALL KEYS SHALL BE 1-1/2" DEEP UNLESS OTHERWISE NOTED ON THE DRAWINGS.
10. FOR SLABS ON GRADE, PROVIDE CONTROL OR CONSTRUCTION JOINTS AT A SPACING NOT TO EXCEED 20 FT, OR AS INDICATED ON STRUCTURAL DWGS. SUBMIT SHOP DRAWING INDICATING JOINT LAYOUT FOR ARCHITECT/ENGINEER APPROVAL.
11. CONCRETE CAST ON SLOPED SURFACES SHALL BEGIN AT THE LOWEST ELEVATION AND CONTINUE MONOLITHICALLY TOWARD THE HIGHER ELEVATION UNTIL THE INTENDED POUR IS COMPLETED.
12. PROVIDE 3/4" CHAMFER ON ALL EXPOSED CONCRETE EDGES UNLESS OTHERWISE NOTED.
13. CONDUITS IN CONCRETE SLABS SHALL BE SPACED SUCH THAT THE CENTER TO CENTER DISTANCE BETWEEN CONDUITS IS A MINIMUM OF THREE TIMES THE OUTSIDE DIAMETER OF THE LARGEST CONDUIT.
14. CONDUITS IN CONCRETE SLAB HAVING OUTSIDE DIAMETER LARGER THAN ONE THIRD OF THE SLAB THICKNESS SHALL NOT BE PERMITTED. CONDUITS THAT CROSS EACH OTHER WITHIN THE SLAB SHALL NOT CONSUME MORE THAN ONE THIRD OF THE SLAB THICKNESS AT THE POINT OF INTERSECTION. FOR ELEVATED SLABS WHICH ARE ON A DECK, THICKNESS SHALL BE DEFINED AS THE CLEAR DIM. ABOVE THE RIBS.
15. ALUMINUM CONDUITS WILL NOT BE PERMITTED IN CONCRETE ELEMENTS.
16. LIGHTWEIGHT CONCRETE FILL OF SLAB DEPRESSIONS SHALL BE REINFORCED WITH FIBER REINFORCING.
17. PROVIDE 2 # 4 x 4'-0 AT SLAB MID DEPTH AT ALL RE-ENTRANT CORNERS OF FLOOR SLAB (BOTH ELEVATED & S.O.G.)

F. REINFORCING STEEL

1. ALL REINFORCING STEEL, INCLUDING STIRRUPS AND TIES, SHALL BE HIGH STRENGTH, NEW BILLET STEEL CONFORMING TO ASTM DESIGNATION A-615 GRADE 60 (Fy = 60,000 PSI). ALL REINFORCING TO BE WELDED SHALL CONFORM TO ASTM A-706 GRADE 60.
2. ALL REINFORCING SHALL BE DETAILED, FABRICATED, AND PLACED IN ACCORDANCE WITH ACI-315 "MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES" (LATEST EDITION).
3. U.O.N. ON STRUCTURAL DRAWINGS, PROVIDE MINIMUM CONCRETE PROTECTION FOR REINFORCING, AS FOLLOWS:

CAST AGAINST EARTH	3"
EXPOSED TO EARTH OR WEATHER:	
#5 and smaller bars and W.W.F.	1-1/2"
#6 and larger bars	2"
NOT EXPOSED TO EARTH OR WEATHER:	
SLABS AND WALLS:	
#11 and smaller bars and W.W.F.	3/4"
#14 and larger bars	1-1/2"
BEAMS AND COLUMNS:	1-1/2"

4. WHERE CONSTRUCTION JOINTS ARE PROVIDED, THE REINFORCEMENT SHALL PASS CONTINUOUSLY THROUGH THE JOINT AND ADEQUATE SHEAR TRANSFER REINFORCEMENT SHALL BE PROVIDED.
5. W.W.F. SHALL HAVE ENDS LAPPED ONE FULL PANEL AND SPLICE LACED WITH WIRE.
6. ALL WELDING OF REINFORCING SHALL BE DONE WITH E90XX ELECTRODES IN ACCORDANCE WITH A.W.S. SPECIFICATIONS D1.4 (LATEST EDITION).
7. ANY MECHANICAL SPLICES USED, MUST BE "TENSION-COMPRESSION" TYPE AND SHALL COMPLY WITH ACI 318-99 SECT. 12.14.3, UNLESS OTHERWISE SPECIFICALLY APPROVED BY THE STRUCTURAL ENGINEER. SHOP DRAWINGS SUBMITTED FOR STRUCTURAL ENGINEER'S APPROVAL MUST INDICATE THE USE AND THE TYPE OF ANY MECHANICAL SPLICES USED.

G. MASONRY

1. ALL CONCRETE MASONRY UNITS SHALL BE HOLLOW LIGHT WEIGHT CONFORMING TO ASTM C90, WITH f'm = 2000 PSI MINIMUM STRENGTH U.O.N. AND MORTAR TYPE 'S' OR 'M'. WEIGHT OF UNITS SHALL BE 30 PSF FOR 6" UNITS, 38 PSF FOR 8" UNITS, 47 PSF FOR 10" UNITS AND 55 PSF FOR 12" UNITS. TOLERANCE FOR MASONRY WEIGHTS SHALL BE 2 PSF HIGH OR LOW.
2. PROVIDE GALVANIZED HORIZONTAL JOINT REINFORCEMENT IN FIRST AND SECOND BED JOINTS ABOVE AND BELOW OPENINGS AND IN EVERY OTHER BED JOINT ELSEWHERE. IN REINFORCED MASONRY WALLS, PROVIDE GALVANIZED HORIZONTAL MASONRY REINFORCEMENT AT EVERY OTHER BLOCK COURSE, U.O.N.
3. FILL CMU VOIDS SOLID WITH GROUT AROUND ANCHORS, VERTICAL REBARS AND BOND BEAMS.
4. ALL TOP CONNECTIONS OF MASONRY WALLS TO STRUCTURE MUST BE DETAILED TO PROVIDE A 1" SOFT JOINT FOR INDEPENDENT VERTICAL MOVEMENT OF THE PRIMARY STRUCTURAL MEMBER ABOVE (U.O.N.).
5. ALL HOLLOW MASONRY UNITS BELOW GRADE SHALL BE FILLED SOLID W/ GROUT OR MORTAR.
6. PROVIDE 2-#6 VERTICAL REINFORCEMENT FULL HEIGHT OF WALL AT ALL JAMB LOCATIONS. U.O.N.
7. AT COLUMN LOCATIONS, ANCHOR MASONRY WALLS TO STEEL COLUMNS WITH FLEXIBLE WELD-ON TIES AT A SPACING OF 16"(MAX) ALONG THE HEIGHT OF COLUMN.
8. ALL DOUBLE-WYTHE CMU WALLS SHALL BE TIED TOGETHER WITH LADDER-TYPE HORIZ. JOINT REINFORCING ENGAGING BOTH WYTHES AT 16" O.C. VERT. U.O.N.
9. ALL BEARING MASONRY WALLS AND ALL EXTERIOR MASONRY WALLS SHALL BE REINFORCED WITH #5 BARS AT 32" O.C. ON CENTER LOCATED IN THE CENTER OF THE CMU BACKUP UNLESS NOTED OTHERWISE.
10. ALL CMU BEARING WALL CONSTRUCTION SHALL HAVE FULLY BEDDED MORTAR JOINTS, INCLUDING FACE SHELLS, HEADS AND WEBS.
11. ALL CMU REINFORCING SPLICE MUST BE 48 DIAMETERS LONG.

H. STRUCTURAL STEEL

1. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS:
   ALL W SHAPES: ASTM A-992 GRADE 50 (FY=50 KSI).
   ALL CHANNELS, ANGLES & PLATES: ASTM A-36.
   ALL STEEL HSS: ASTM A-500 GRADE C.
   ALL PIPES: A-500 GRADE B.
   MILL TEST REPORTS FOR ALL ELEMENTS MUST BE SUBMITTED TO THE ARCHITECT AND ENGINEER FOR THE RECORD.
5. WELDING ELECTRODES SHALL CONFORM TO ASTM SPECIFICATIONS E-70XX.
7. ALL EXPOSED TO WEATHER STEEL, INCLUDING BUT NOT LIMITED TO; ALL MASONRY SHELF ANGLES, ROOF MOUNTED MECH. EQUIP. AND SCREEN SHALL BE HOT DIP GALVANIZED.
8. BASE PLATES, BEAMS, COLUMNS, AND HARDWARE EXPOSED TO SOIL SHALL BE COVERED WITH A MINIMUM OF 3" OF CONCRETE PRIOR TO BACKFILL.
9. FABRICATE AND ERECT BEAMS WITH THE NATURAL AND MILL CAMBER UP.
10. SPLICING OF STRUCTURAL STEEL MEMBERS WHERE NOT DETAILED IS PROHIBITED.
11. NO FINAL BOLTING OR WELDING SHALL BE DONE UNTIL AS MUCH OF THE STRUCTURAL FRAMING AS WILL BE STIFFENED THEREBY HAS BEEN PROPERLY ALIGNED.
12. ALL TEMPORARY ERECTION BRACING AND TIE RODS SHALL REMAIN IN PLACE UNTIL ALL STRUCTURAL MEMBERS ARE PROPERLY ALIGNED AND CONNECTED AND SHALL NOT BE REMOVED WITHOUT WRITTEN APPROVAL OF ARCHITECT, ENGINEER AND OWNER.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF ALL ERECTION PROCEDURES AND SEQUENCES.
14. REFER TO MASONRY NOTES FOR ANY ACCESSORIES REQUIRED TO BE ATTACHED TO STEEL MEMBERS FOR ANCHORING MASONRY.

I. LINTELS

1. ALL OPENINGS IN WALLS AND PARTITIONS ARE TO BE PROVIDED WITH LINTELS. LINTELS SHALL BE STRUCTURAL STEEL OR PRECAST CONCRETE AS DIRECTED.
2. ALL LINTELS SHALL HAVE A 8" MINIMUM BEARING UNLESS OTHERWISE NOTED ON DRAWINGS AND SHALL BE SET IN FULL BED OF MORTAR.
3. CONTRACTOR SHALL SHORE ALL LINTELS AS REQUIRED TO PREVENT ROTATION DURING CONSTRUCTION AND SHALL PAY PARTICULAR ATTENTION TO ECCENTRICALLY LOADED LINTELS.
4. CONTRACTOR SHALL COORDINATE SIZE, TYPE AND LOCATION OF LINTEL WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
5. ALL BEAM LINTELS LARGER THAN W 8 BEAMS TO HAVE ADJUST MASONRY ANCHORS ON EACH FACE OF WEBS SPACED AT 16" o/c.

J. STEEL DECK

1. ALL STEEL DECK CONSTRUCTION SHALL CONFORM TO SDI REQUIREMENTS AND STANDARD SPECIFICATIONS.
2. ALL STEEL DECK SHALL BE CONTINUOUS OVER A MINIMUM OF THREE SPANS U.O.N.
3. ROOF STEEL DECK
   a. 1 1/2" ROOF DECK SHALL BE G90 GALVANIZED STEEL DECK WITH MINIMUM PROPERTIES AS FOLLOWS: 1 1/2"x20 Ga. TYPE B., Ip = 0.22 in4, In = 0.24 in4, Sp = 0.25 in3, Sn = 0.26 in3.
   b. 1 1/2" ROOF DECK CONNECTIONS TO SUPPORTS TO BE 3/4" PUDDLE WELD ON 36/9 PATTERN.
   c. ROOF DECK SIDELAP CONNECTIONS TO BE #12 TEK @ 12" O.C. MAX.
   d. 3" ROOF DECK SHALL BE G90 GALVANIZED STEEL DECK WITH MINIMUM PROPERTIES AS FOLLOWS: 3"x20 Ga. TYPE N., I = 0.806 in4, Sp = 0.448 in3, Sn = 0.476 in3.
   e. 3" ROOF DECK CONNECTIONS TO SUPPORTS TO BE 3/4" PUDDLE WELD ON 36/7 PATTERN.

K. OPEN WEB STEEL JOISTS - IF USED

1. FABRICATION AND ERECTION OF ALL STEEL JOISTS SHALL CONFORM TO STEEL JOIST INSTITUTE STANDARD SPECIFICATIONS IN ALL RESPECTS.
2. STEEL JOIST SUPPLIER SHALL BE A MEMBER OF THE STEEL JOIST INSTITUTE.
3. PROVIDE AND INSTALL BRIDGING IN ACCORDANCE WITH STEEL JOIST INSTITUTE STANDARDS. WHERE BRIDGING IS INTERRUPTED BY DUCTS, LIGHT FIXTURES, ETC., PROVIDE THE BRIDGING ON EACH SIDE OF THE INTERRUPTION.
4. PROVIDE BOT. CHORD EXTENSIONS FOR CEILING WHERE REQUIRED.
5. ALL ROOF JOISTS SHALL BE DESIGNED FOR A NET UPLIFT OF 15 PSF. ADD ADDITIONAL ROWS OF BRIDGING AS REQUIRED.

L. SHOP DRAWINGS

1. SHOP DRAWINGS FOR ALL STRUCTURAL ELEMENTS SHOWN ON THE CONTRACT DOCUMENTS MUST BE SUBMITTED BY THE CONTRACTOR AND REVIEWED BY THE ENGINEER. IF A CONTRACTOR OR OWNER FAILS TO SUBMIT THE SHOP DRAWINGS, DUNLAP ENGINEERING, INC., WILL NOT BE RESPONSIBLE FOR THE STRUCTURAL CERTIFICATION AND DESIGN OF THE PROJECT. CONTRACTOR MUST SUBMIT FOR A/E REVIEW SHOP DRAWINGS AND SUBMITTALS FOR ALL REINF. AND MODIFICATION OF EXISTING STRUCTURE.
2. SHOP DRAWINGS SHALL BE SUBMITTED IN PDF FORMAT ALONG WITH (1) PAPER SET PRINTED AT THE CONTRACTORS EXPENSE.
3. AT THE TIME OF SHOP DRAWING SUBMISSION, THE CONTRACTOR SHALL INFORM THE ENGINEER IN WRITING OF ANY DEVIATIONS OR OMISSIONS FROM THE CONTRACT DOCUMENTS.
4. THE GENERAL CONTRACTOR / CONSTRUCTION MANAGER SHALL REVIEW ALL SHOP DRAWINGS BEFORE SUBMITTING TO ENGINEER, MAKE ALL CORRECTIONS AS HE DEEMS NECESSARY AND SHALL CERTIFY ON EACH DRAWING AS FOLLOWS:
   "I CERTIFY THAT THE CONTRACT DOCUMENT REQUIREMENTS HAVE BEEN MET AND ALL DIMENSIONS, CONDITIONS, AND QUANTITIES ARE VERIFIED AS SHOWN AND/OR AS CORRECTED ON THIS DRAWING."
   SIGNED..................(FOR CONTRACTOR).........
5. REPRODUCTION OF STRUCTURAL DRAWINGS FOR USE AS SHOP DRAWINGS SHALL NOT BE PERMITTED.
6. CONTRACTOR SHALL ALLOW A MINIMUM PERIOD OF 10 WORKINGS DAYS REVIEW OF STRUCTURAL SHOP DRAWINGS BY THE STRUCTURAL ENGINEER.

M. TESTING AND INSPECTION

1. INSPECTION FOR ALL STRUCTURAL PORTIONS OF THE PROJECT SHALL BE PROVIDED AS REQUIRED BY THE APPLICABLE BUILDING CODE.
2. THE OWNER'S TESTING AGENCY SHALL PERFORM ALL INSPECTIONS AND TESTING.
3. THE ENGINEER MAY VISIT THE SITE TO PROVIDE CONSTRUCTION ASSISTANCE OR TO GENERALLY OBSERVE THE PROGRESS OF CONSTRUCTION. SUCH VISITS ARE NOT TO BE CONSTRUED AS MEETING THE AFORESAID INSPECTION REQUIREMENTS UNLESS THE ENGINEER SPECIFICALLY STATES SO IN WRITING.
4. ALL CONCRETE WORK SHOWN ON THESE DRAWINGS AND SPECIFIED IN THE SPECIFICATIONS SHALL BE INSPECTED IN ACCORDANCE WITH ACI-318 (LATEST EDITION). COPIES OF FIELD REPORTS, CONCRETE MIXES, CYLINDER TESTS, AND OTHER DATA SHALL BE SENT TO THE ARCHITECT, ENGINEER, AND OWNER.

N. POST INSTALLED ADHESIVE ANCHORS IN CONCRETE OR MASONRY

1. DEWALT PURE 110+ — ICC-ES-ESR-3298 (CONCRETE & MASONRY)
2. DEWALT AC100+ GOLD — ICC-ES-ESR-2582 (CONCRETE & MASONRY)
3. DEWALT AC200+ — ICC-ES-ESR-4027 (CONCRETE)
4. DEWALT PE1000+ — ICC-ES-ESR-2583 (CONCRETE & MASONRY)

O. POST INSTALLED MECHANICAL ANCHORS IN CONCRETE OR MASONRY

1. DEWALT POWER-STUD + SD1 — ICC-ES-ESR-2966 (MASONRY)
2. DEWALT POWER-STUD + SD1 — ICC-ES-ESR-2818 (CONCRETE)
3. DEWALT POWER-STUD + SD2 — ICC-ES-ESR-2502 (CONCRETE)

P. ABBREVIATIONS

A.B.	=	Anchor Bolt	L.W.	=	Long Way
ADD'L	=	Additional	MAX.	=	Maximum
ARCH.	=	Architectural	MECH.	=	Mechanical
AESS	=	Architecturally exposed structural steel	MIL.	=	Millimeter
			MIN.	=	Minimum
			NO.	=	Number
BAL.	=	Balance	NTS	=	Not to Scale
BM.	=	Beam	O.C. or O/C	=	On Center
BOT.	=	Bottom	O.F.	=	Near Face
B.O.D.	=	Bottom of Deck	OPNG.	=	Opening
C.J.	=	Control Joint	P.C.	=	Precast Concrete
C.L.	=	Centerline	P.J.F	=	Premolded Joint Filler
CA	=	Column above	PL.	=	Plate
C.C.	=	Center to Center	R	=	Radius
CL.	=	Clear	REINF.	=	Reinforce(ment)
COL.	=	Column	REQ'D.	=	Required
CONC.	=	Concrete	SCHED.	=	Schedule
CONT.	=	Continuous	SECT.	=	Section
DET.	=	Detail	SIM.	=	Similar
DIA.	=	Diameter	S.O.G.	=	Slab On Grade
DWG.	=	Drawing	S.S.	=	Stainless Steel
DWLS	=	Dowels	ST.	=	Steel
EA.	=	Each	STD.	=	Standard
E.F.	=	Each Face	STIFF.	=	Stiffener
E.J.	=	Expansion Joint	S.W.	=	Short Way
EL.	=	Elevation	SYM.	=	Symmetrical
E.W.	=	Each Way	T&B	=	Top & Bottom
E.O.S.	=	Edge Of structural Slab	T.O.F.	=	Top of Footing
EXP.	=	Expansion	T.O.SL.	=	Top of Structural Slab
FIN.	=	Finished	T.O.ST.	=	Top of Steel Beam
FL.	=	Floor	T.O.W.	=	Top of Structural Wall
HORIZ.	=	Horizontal	TYP.	=	Typical
H.D.G.	=	Hot Dip Galvanized	U.O.N.	=	Unless Otherwise Noted
I.F.	=	Inside Face	VERT.	=	Vertical
JT.	=	Joint	V.I.F.	=	Verify in Field
L.L.H.	=	Long Leg Horizontal	W.P.	=	Working Point
L.L.V.	=	Long Leg Vertical	W.W.F.	=	Welded Wire Fabric

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TOYOTA

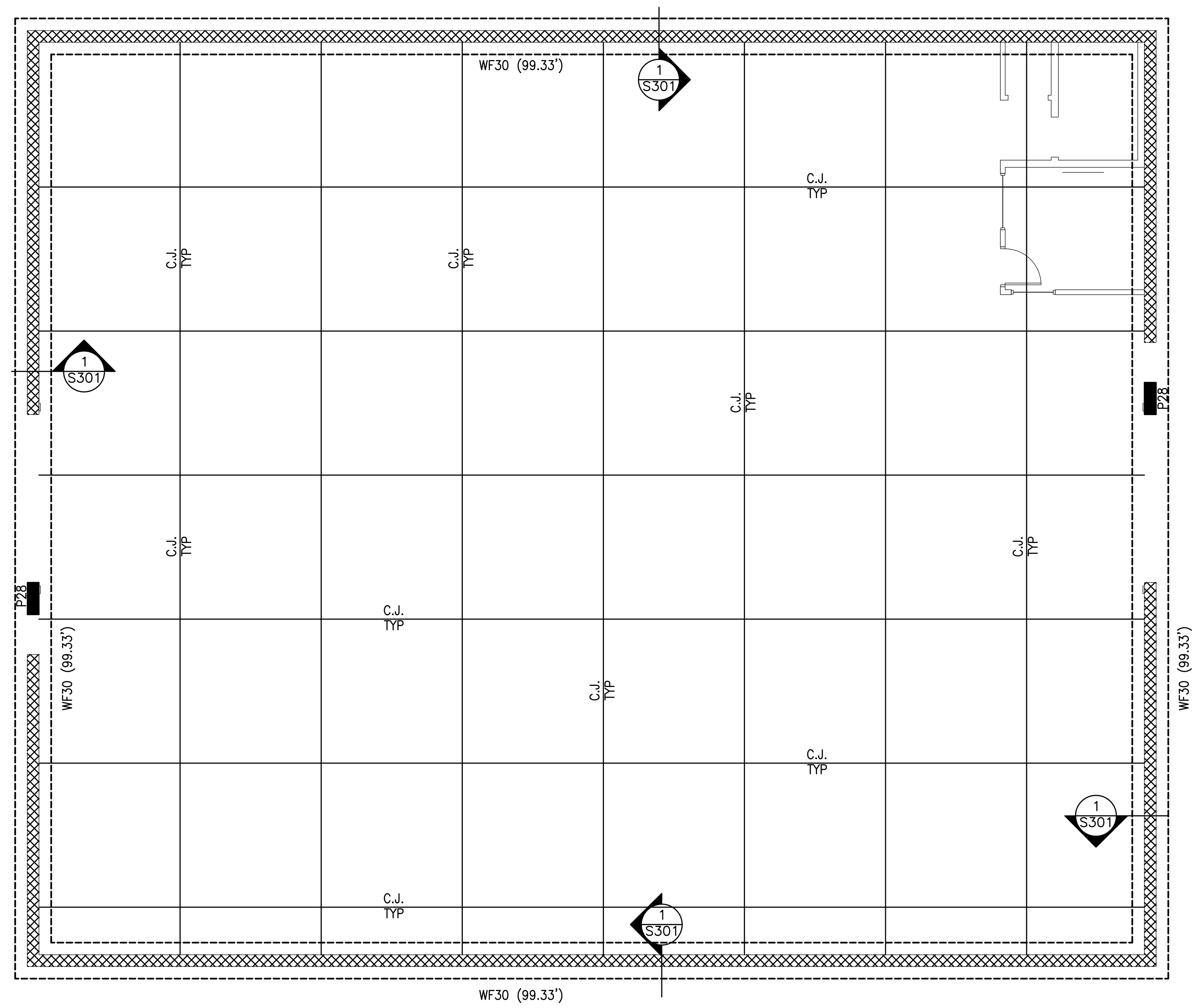
I certify that these documents were prepared or approved by me, and that I am a duly licensed architect under the laws of the State of Florida, license number: AR97071; expiration date: February 28, 2022.

No.	Issue / Revision	Date
	Bid Set	10-04-2021

Drawn By:	NRO
Checked By:	MWD
Plot Date:	October 8, 2020

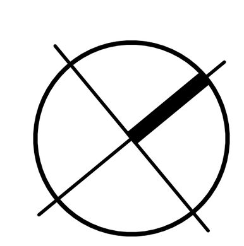
Sheet Number
S100
Sheet Title
GENERAL NOTES

Project Number	File Name
DEI 221021	



WALL FOOTING SCHEDULE				
TYPE	SIZE		TRANSVERSE	HORIZONTAL
	W	D		
WF30	3'-0"	12"	#5 @ 12" O/C	(2) #5 CONT

USE WF30
U.N.O.



FOUNDATION PLAN

SCALE: 1/8" = 1'-0"

1. SLAB ON GRADE TO BE 5" THICK CONCRETE REINF W/ 6 X 6 X W2.9 X W2.9 WWM, OVER 10 MIL VAPOR BARRIER.
2. TOP OF SLAB ELEVATION = 100.00' (DATUM.)
3. ELEVATION TOP OF FOOTING NOTED (XXX.XX') IN PLAN
4. SLAB CONTROL JOINTS NOTED C.J. IN PLAN. SEE DETAIL A/S301.

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No.	Issue / Revision	Date
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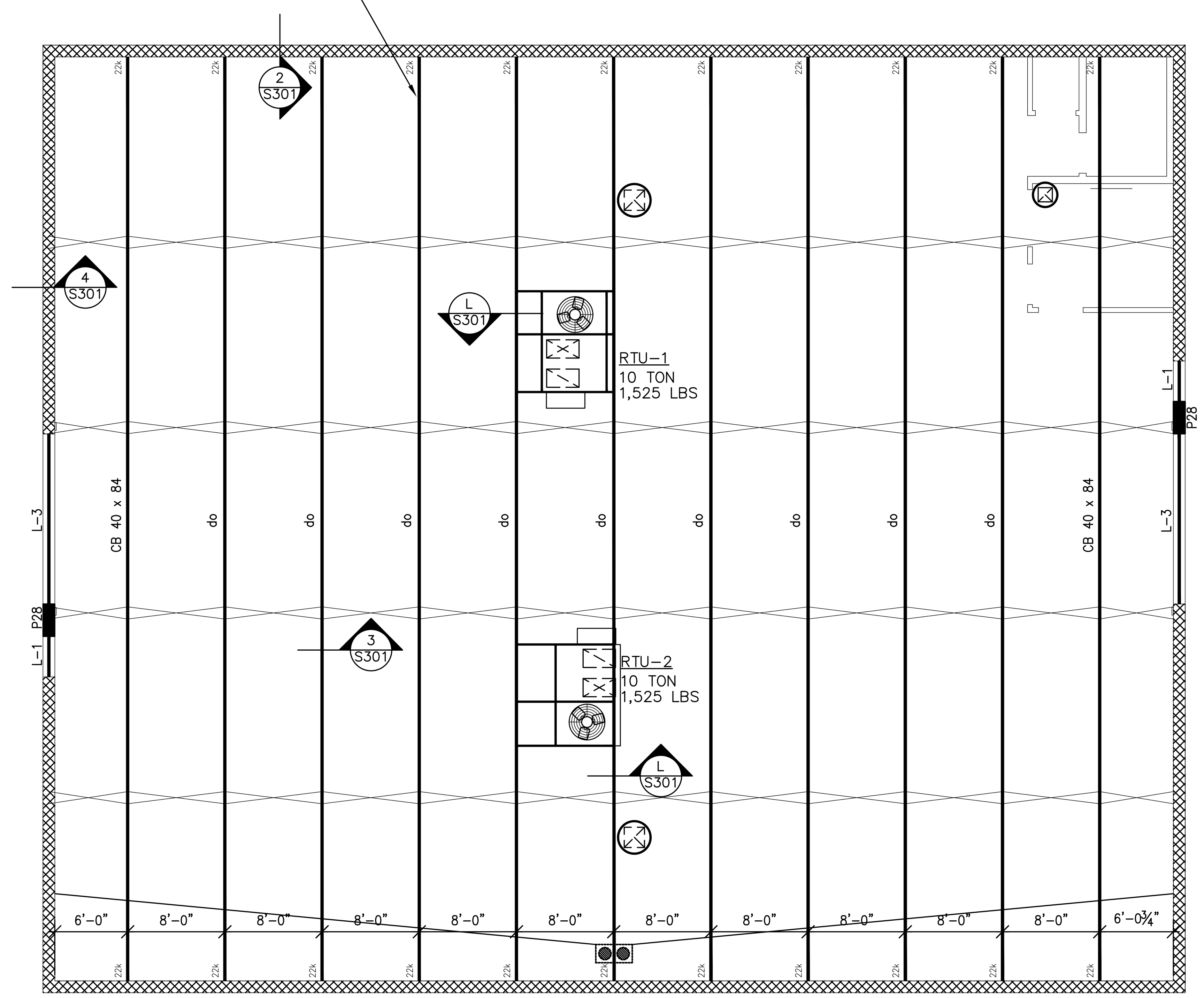
Plot Date: October 8, 2020

Sheet Number
S101
Sheet Title
FOUNDATION PLAN

Project Number DEI 221021
File Name

BID ALTERNATE:
CONTRACTOR TO PROVIDE ALTERNATE PRICING FOR 44 LH 13 JOISTS AT 6'–0" o/c SPACING WITH 1.5" 22GA TYPE B DECK. ADDITIONAL BRIDGING FOR UPLIFT AS REQUIRED



LINTEL SCHEDULE

MARK	SIZE	REMARKS
L–1	L4 x 3½ x 5⁄16" FOR EACH 4" THICKNESS OF WALL	FOR OPENINGS UP TO 5'–0"
L–2	L6 x 3½ x 5⁄16" FOR EACH 4" THICKNESS OF WALL	FOR OPENINGS 5'–1" TO 10'–0"
L–3	W 10 x 22 + 5⁄16" SUS. PLATE W/ ¼" HANGERS AT 24" o/c	AS SHOWN
P	8" PRECAST CONC. WITH #5 T + B FOR EACH 4" WYTHE OF MAS.	AS SHOWN

ALL OPENINGS IN WALLS AND PARTITIONS ARE TO BE PROVIDED WITH LINTELS. LINTELS SHALL BE STRUCTURAL STEEL OR PRECAST CONCRETE AS DIRECTED . ALL LINTELS SHALL HAVE A 8" MINIMUM BEARING UNLESS OTHERWISE NOTED ON DRAWINGS AND SHALL BE SET IN FULL BED OF MORTAR. CONTRACTOR SHALL SHORE ALL LINTELS AS REQUIRED TO PREVENT ROTATION DURING CONSTRUCTION AND SHALL PAY PARTICULAR ATTENTION TO ECCENTRICALLY LOADED LINTELS. CONTRACTOR SHALL COORDINATE SIZE, TYPE AND LOCATION OF LINTEL WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.

ALL BEAM LINTELS LARGER THAN W 8 BEAMS TO HAVE ADJUST MASONRY ANCHORS ON EACH FACE OF WEBS SPACED AT 16" o/c.

ALL EXTERIOR LINTEL TO BE HOT DIPPED GALVANIZED STEEL

ROOF FRAMING PLAN

SCALE: 1/8" = 1'–0"

1. ROOF DECK TO BE 3", 20 GA., TYPE B, GALV. METAL DECK W/ MIN. PROPERTIES: Smin=0.448 in3, Imin= 0.806 in4. USE DECK WELD PATTERN 36/7 AT ALL BOUNDARY EDGES
2. TOP OF JOIST BEARING NOTED IN PLAN ARE TAKEN FROM DATUM ELEVATION.

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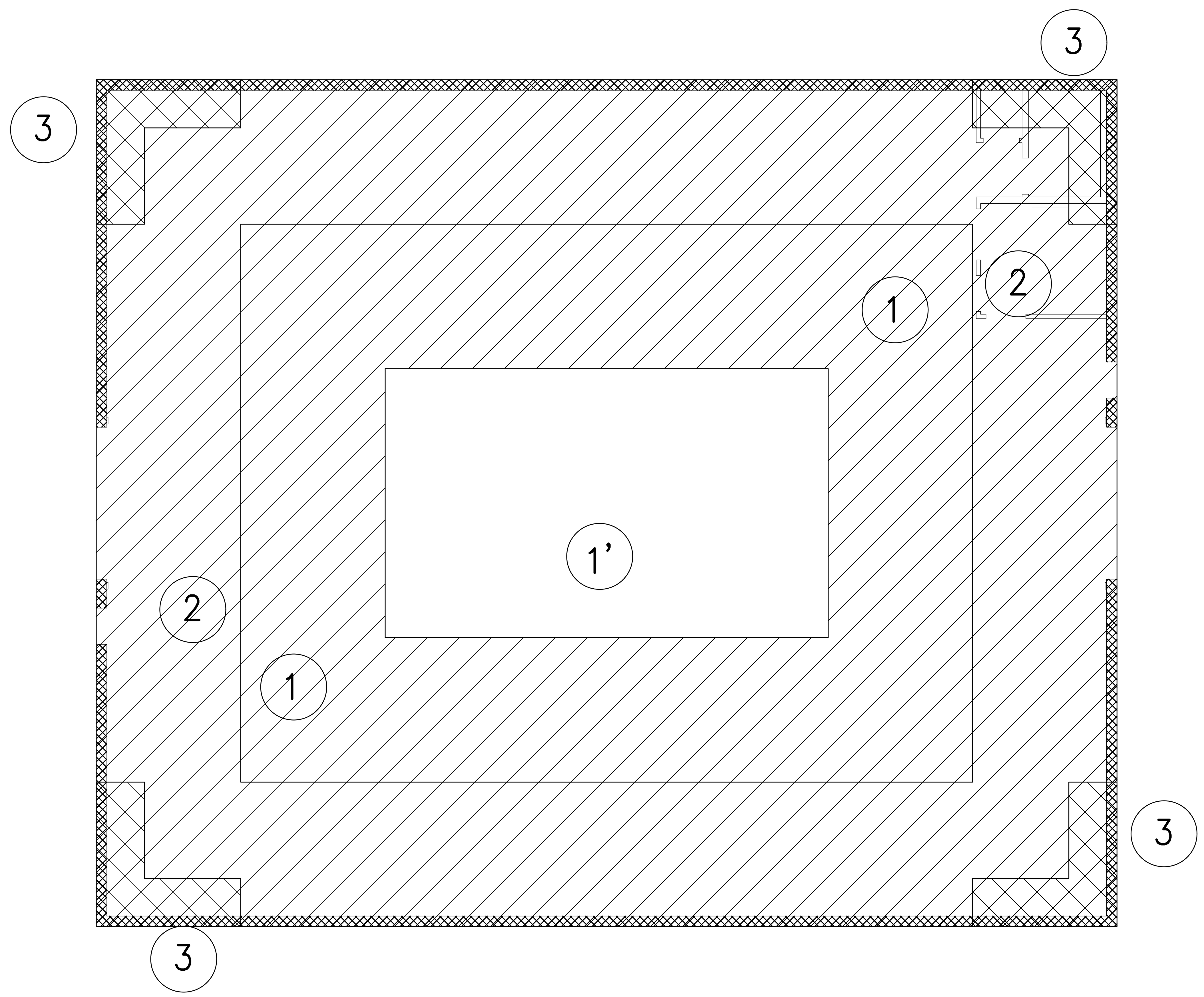
S201

Sheet Title
ROOF FRAMING PLAN

Project Number DEI 221021
File Name



ASCE-7 ROOF LOADS/ZONES

NORTH

SCALE : 1/16" = 1'-0"

ASCE-7 DESIGN WIND ROOF PRESSURE *

ZONE	PRESSURE (PSF)	
	POSITIVE (+)	NEGATIVE (–)
1 / (FIELD)	+20.7	–80.2
1'	+20.7	–58.9
2	+20.7	–106.5
3	+20.7	–126.8

* BASED ON ALLOWABLE V-ULT SPEED OF 160 M.P.H.
* ALL DESIGN VALUES SHALL BE MULTIPLIED BY 1.40 PER ASCE7-16 SECTION 28.5.3

ROOF OVERHANG NET DESIGN PRESSURE *

ZONE	EFF. WINDED AREA (SF.)	PRESSURE (PSF) NEGATIVE (–)
2	10	–66
2	20	–64
2	50	–63
2	100	–62
3	10	–108
3	20	–85
3	50	–54
3	100	–31

* BASED ON ALLOWABLE V-ULT SPEED OF 160 M.P.H.
* ALL DESIGN VALUES SHALL BE MULTIPLIED BY 1.40 PER ASCE7-16 SECTION 28.5.3

COMPONENTS & CLADDING PRESSURES *

	ZONE	EFF. WINDED AREA (SF.)	PRESSURE (PSF)	
			POSITIVE (+)	NEGATIVE (–)
WALLS	4	10	+46.1	–50.0
WALLS	4	20	+44.0	–47.9
WALLS	4	50	+41.2	–45.1
WALLS	4	100	+39.2	–43.1
WALLS	5	10	+46.1	–61.7
WALLS	5	20	+44.0	–57.5
WALLS	5	50	+41.2	–52.0
WALLS	5	100	+39.2	–47.9
ROOF	1	10	+18.7	–73.4
ROOF	1	20	+17.6	–68.5
ROOF	1	50	+16.0	–62.1
ROOF	1	100	+14.8	–57.3
ROOF	1	10	+18.7	–42.1
ROOF	1	20	+17.6	–42.1
ROOF	1	50	+16.0	–42.1
ROOF	1	100	+14.8	–42.1
ROOF	2	10	+18.7	–96.8
ROOF	2	20	+17.6	–90.6
ROOF	2	50	+16.0	–82.3
ROOF	2	100	+14.8	–76.1
ROOF	3	10	+18.7	–131.9
ROOF	3	20	+17.6	–119.5
ROOF	3	50	+16.0	–103.0
ROOF	3	100	+14.8	–90.6

* BASED ON ALLOWABLE V-ULT SPEED OF 160 M.P.H.
* ALL DESIGN VALUES SHALL BE MULTIPLIED BY 1.40 PER ASCE7-16 SECTION 30.4.2
* ALL DELEGATED DESIGN SHALL USE THE APPLICABLE COMPONENTS AND CLADDING WIND PRESSURES AS SHOWN ABOVE.

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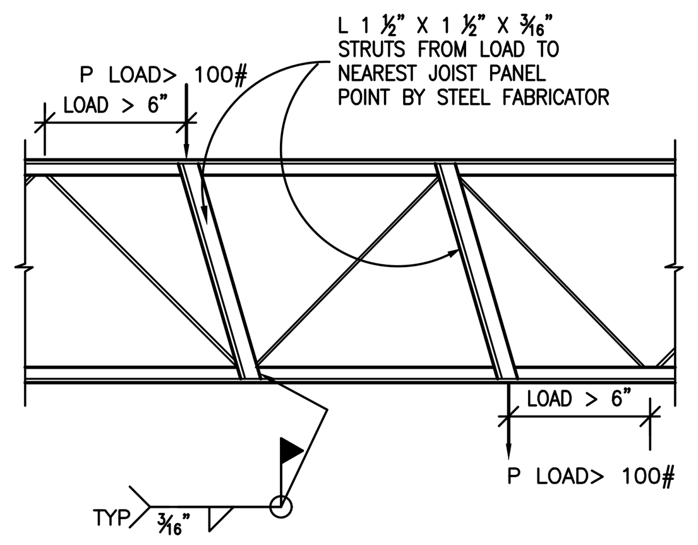
Sheet Number
S202

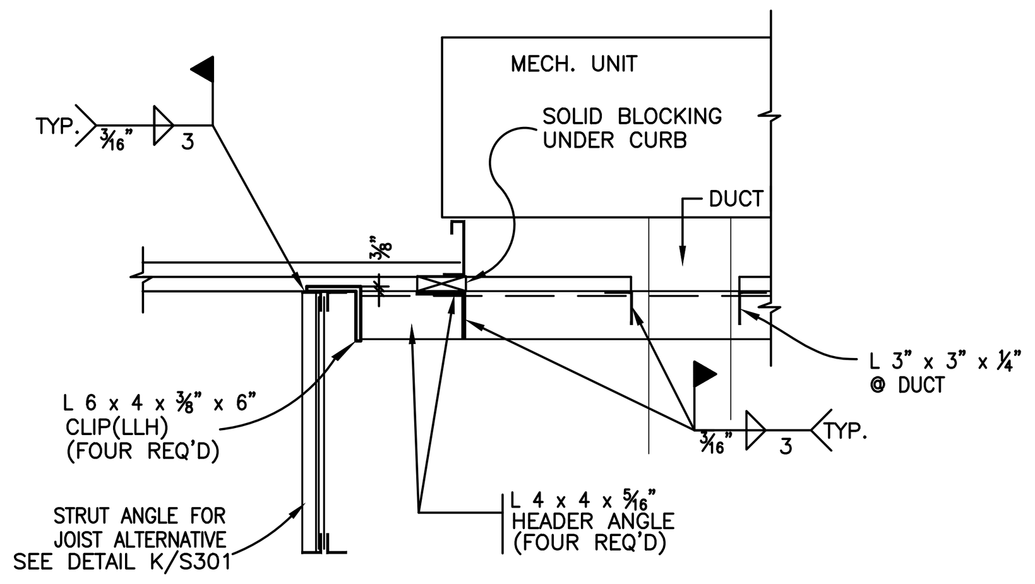
Sheet Title
ASCE ROOF LOAD ZONES

Project Number DEI 221021

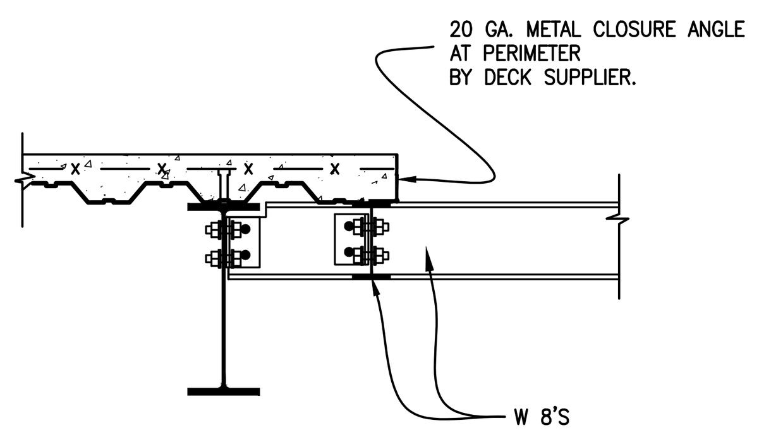
File Name



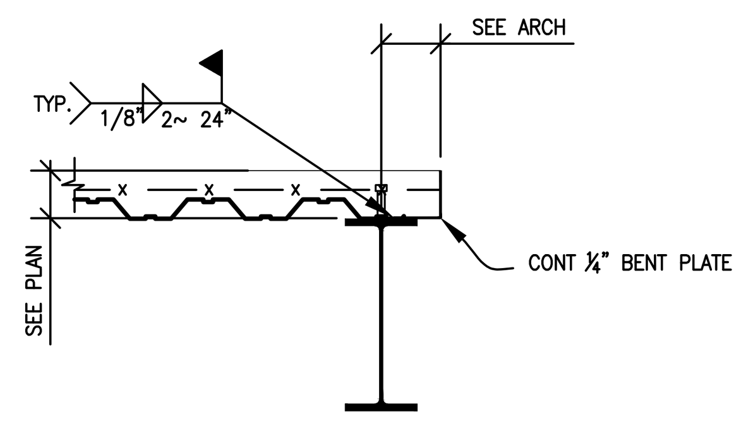
K / S301 DETAIL ~ N.T.S.
JOIST REINF. @ CONCENTRATED LOADS



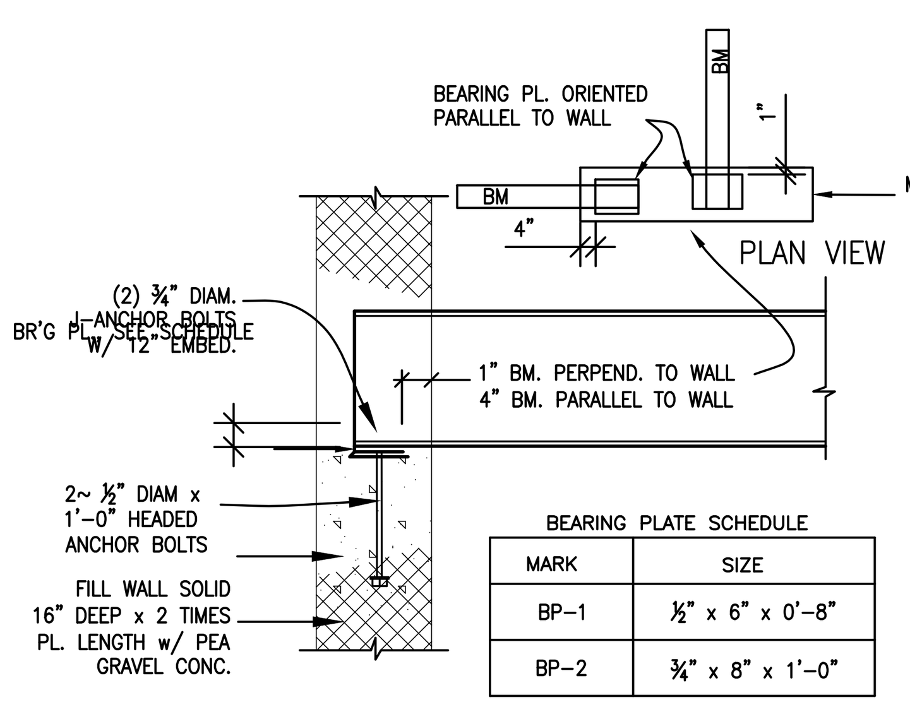
L / S301 DETAIL ~ N.T.S.
TYPICAL ROOF TOP UNIT SUPPORT



I / S301 DETAIL ~ N.T.S.
TYPICAL FLOOR OPENING



J / S301 DETAIL ~ N.T.S.
TYPICAL EDGE OF FLOOR

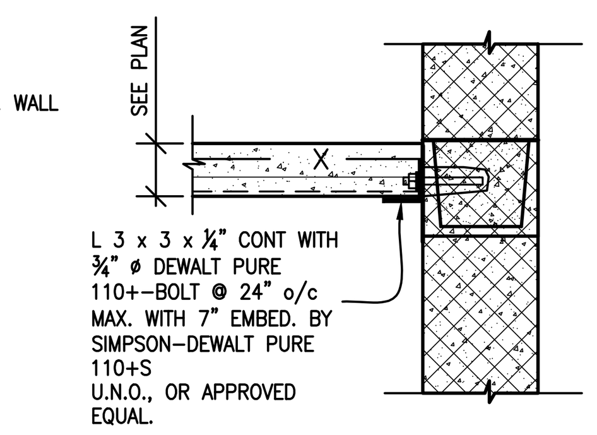


BEARING PLATE SCHEDULE

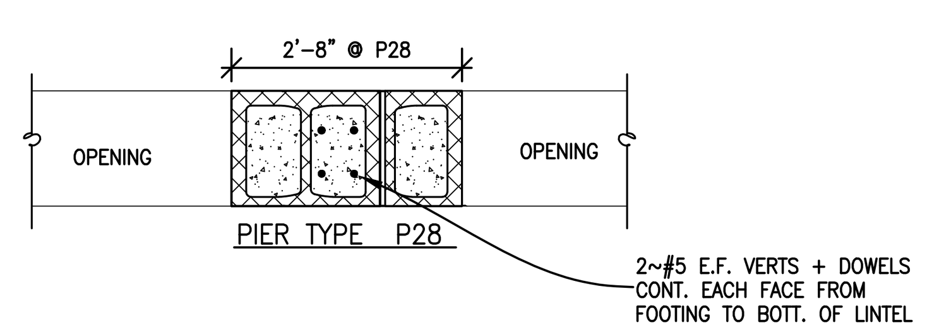
MARK	SIZE
BP-1	½" x 6" x 0'-8"
BP-2	¾" x 8" x 1'-0"

ALL STEEL BEAMS TO HAVE BEARING PLATES. USE BP-1 U.N.O.

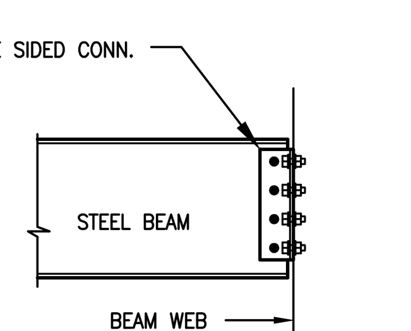
F / S301 DETAIL ~N.T.S.
TYP. BEAM BEARING ON MASONRY



G / S301 SECTION ~ N.T.S.
TYP FLOOR DECK AT CONC. WALL PARALLEL CONDITION



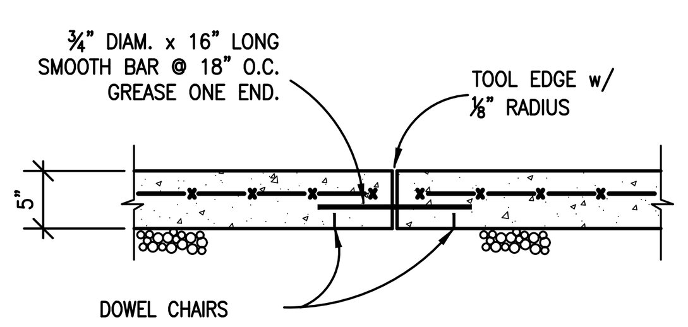
H / S301 DETAIL ~¾" = 1'-0"
MASONRY REINFORCING AT PIERS



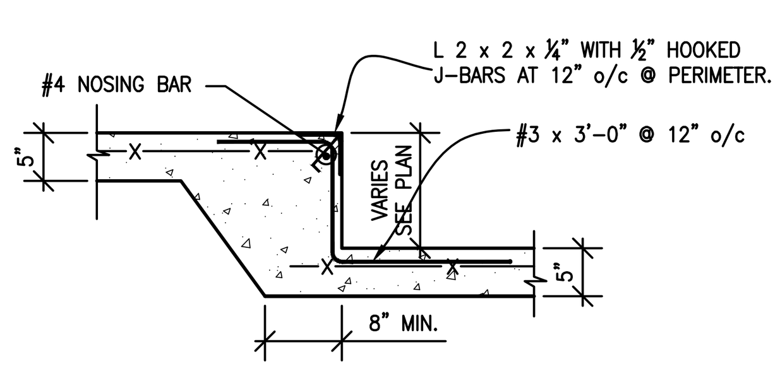
BEAM TO BEAM CONNS SHALL BE DESIGNED FOR LOADS INDICATED IN PLAN USING 1"⌀, 7/8"⌀ OR ¾"⌀ A325 BOLTS.

WHERE NO REACTIONS ARE INDICATED USE (2) ¾"⌀ A325 BOLTS.

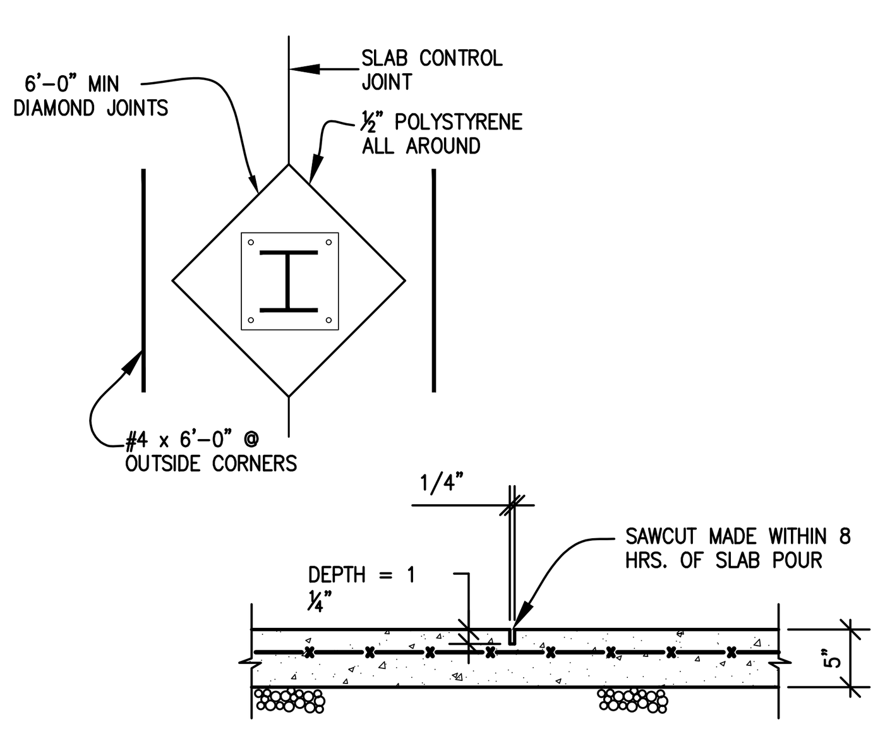
C / S301 DETAIL ~N.T.S.
BEAM TO BEAM CONNECTIONS



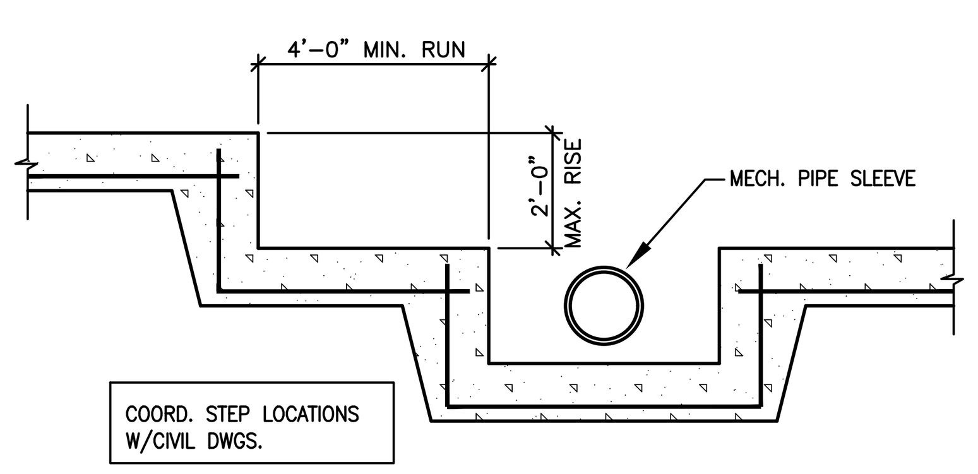
D / S301 DETAIL ~ N.T.S.
TYP. SLAB CONSTRUCTION JOINTS



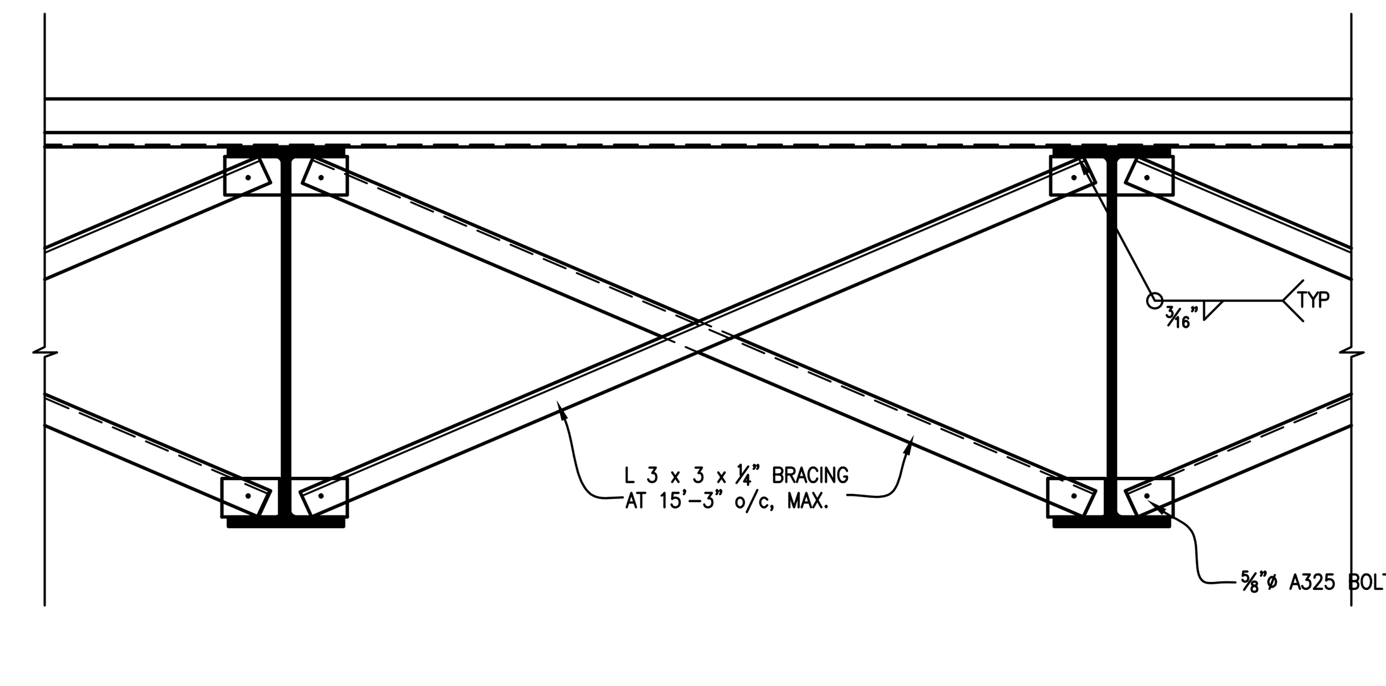
E / S301 DETAIL ~¾" = 1'-0"
RECESSED SLAB



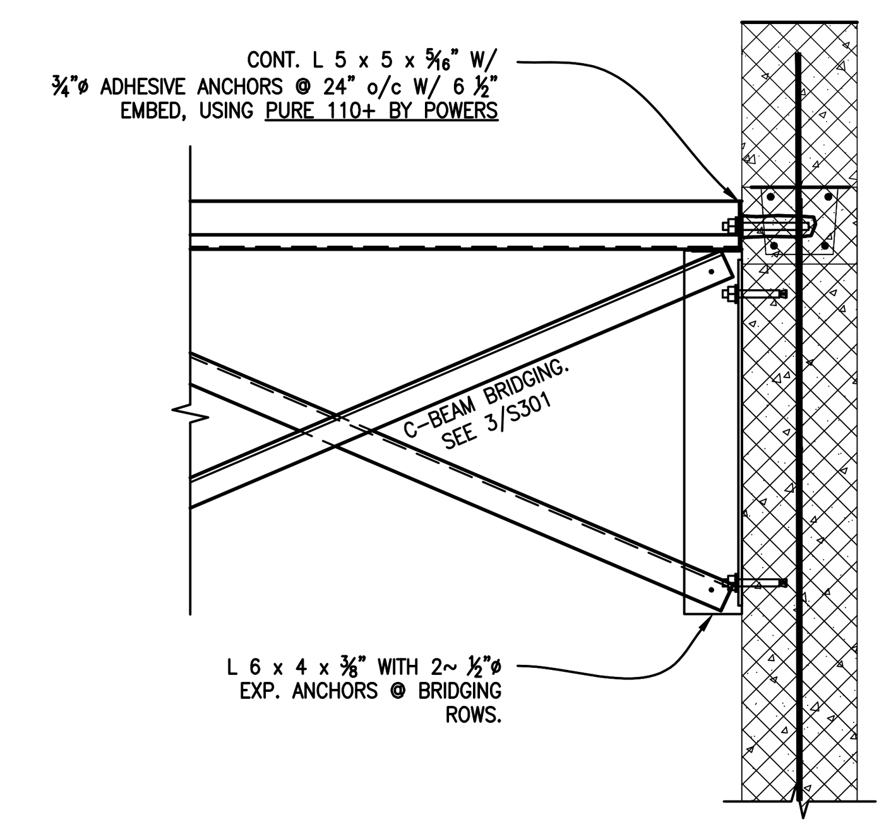
A / S301 DETAIL ~N.T.S.
TYP. SLAB CONTROL JOINTS



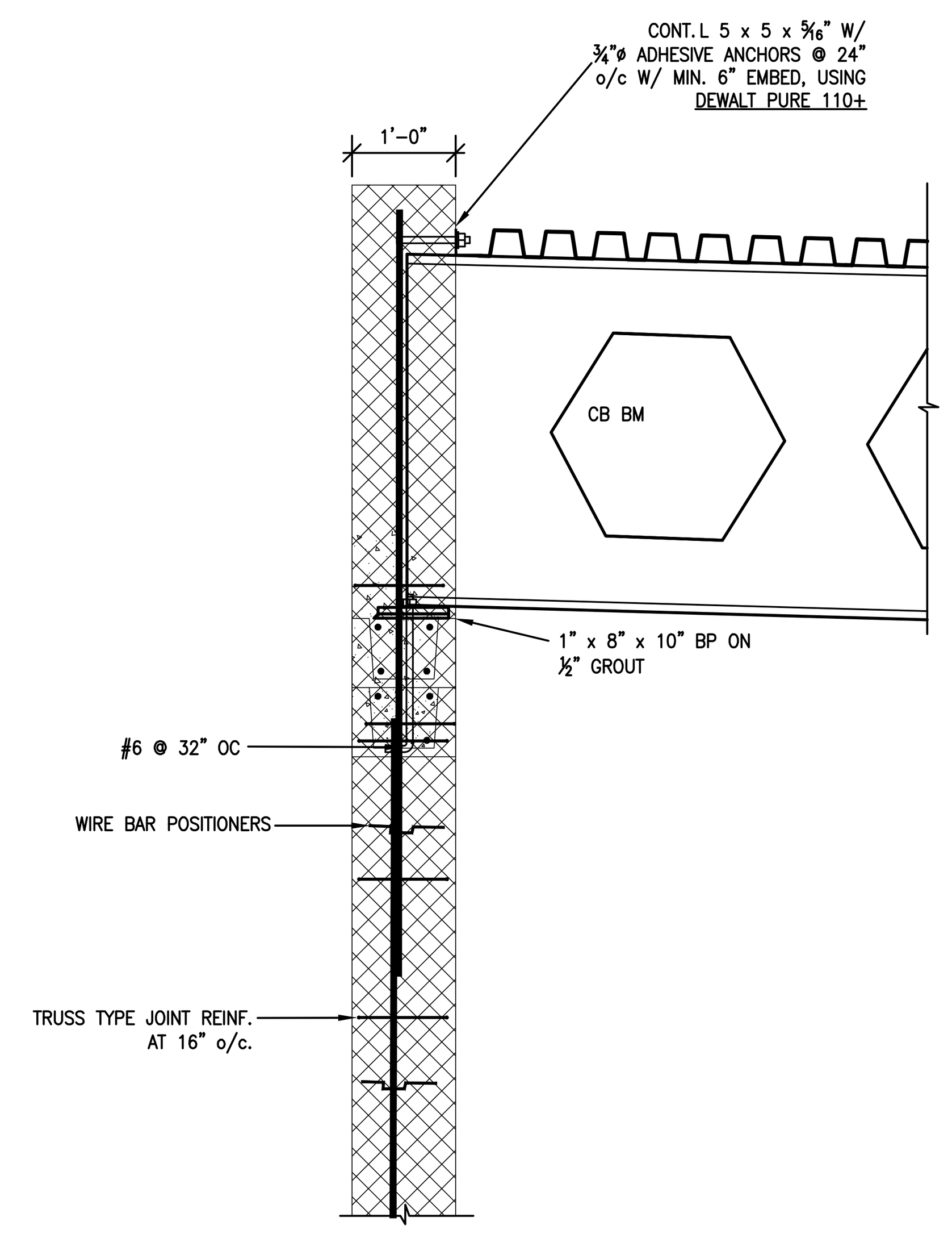
B / S301 DETAIL ~N.T.S.
TYP. EXTERIOR STEP FOOTING AS REQ'D TO PASS UNDER PIPES



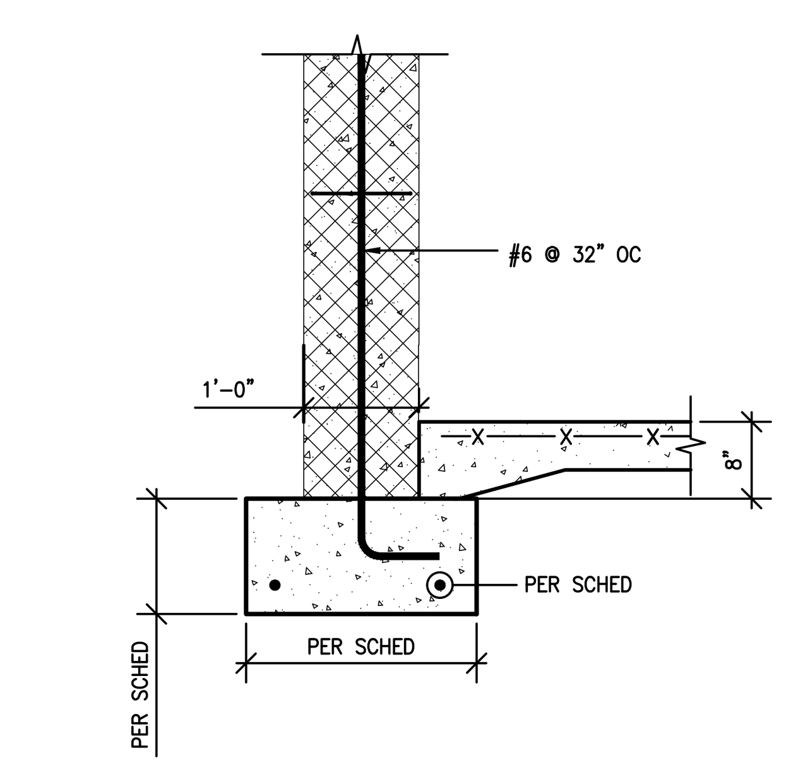
3 / S301 SECTION ~¾" = 1'-0"
C-BEAM BRIDGING



4 / S301 SECTION ~¾" = 1'-0"
EDGE OF DECK @ CMU



2 / S301 SECTION 3/4" = 1'-0"
JOISTS BRG ON CMU AT SHOP



1 / S301 SECTION ~¾" = 1'-0"
EXTERIOR MASONRY WALL FOUNDATION

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S301

Sheet Title
TYPICAL DETAILS & GEN. NOTES

Project Number DEI 221021
File Name