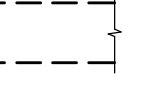
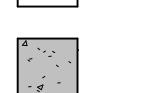
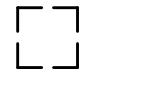
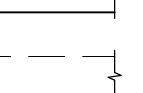
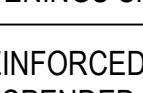
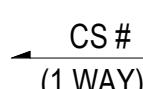
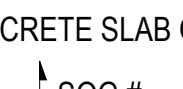
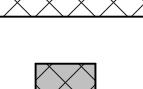
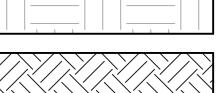
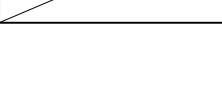


ABBREVIATIONS AND SYMBOLS

ABBREVIATIONS AND SYMBOLS

A/E	ARCHITECT/ENGINEER	FDN	FOUNDATION	PAF	POWDER ACTUATED FASTENER
ABV	ABOVE	FF	FINISHED FLOOR	PRL	PARALLEL
ADDL	ADDITIONAL	FL	FLOOR	PCF	POUNDS PER CUBIC FOOT
ADJ	ADJACENTV	FP	FIREPROOF(ING)	PCI	POUNDS PER CUBIC INCH
AFF	ABOVE FINISHED FLOOR	FS	FAR SIDE	PEMB	PRE-ENGINEERED METAL BUILDING
AHU	AIR HANDLING UNIT	FT	FOOT/FEET	PERM	PERIMETER
ALT	ALTERNATE	FTG	FOOTING	PERP	PERPENDICULAR
APPROX	APPROXIMATE(LY)	GA	GAUGE/GAGE	PJP	PARTIAL JOINT PENETRATION
ARCH	ARCHITECT(URAL)	GALV	GALVANIZED	PL	PLATE
AT	ANTITERRORISM	GB	GRADE BEAM	PLF	POUNDS PER LINEAR FOOT
Avg	AVERAGE	GC	GENERAL CONTRACTOR	PC	PRECAST
AWTS	AUTOMATIC WELDED THREADED STUDS	HORIZ	HORIZONTAL	PREFAB	PREFABRICATED
B PL	BASE PLATE OR BEARING PLATE	HP	HIGH POINT	PSF	POUNDS PER SQUARE FOOT
B/	BOTTOM OF	HSA	HEADED STUD ANCHOR	PSI	POUNDS PER SQUARE INCH
BD	BOARD	HT	HEIGHT	PT	PRE/POST-TENSIONING
BF	BRACED FRAME	I/F	INSIDE FACE	PTW	PRESSURE TREATED WOOD
BFF	BELOW FINISHED FLOOR	ID	INSIDE DIAMETER	PVMT	PAVEMENT
BLDG	BUILDING	IN	INCH(ES)	QTY	QUANTITY
BLK	BLOCK(ING)	INCL	INCLUDE	RAD	RADIUS
BLW	BELOW	INFO	INFORMATION	RE:	REFER TO
BM	BEAM	INT	INTERIOR	REINF	REINFORCEMENT
BOT	BOTTOM	ISO JT	ISOLATION JOINT	REQD	REQUIRED
BRG	BEARING	JST	JOIST	REV	REVISE(ION)
BS	BOTH SIDES	JT	JOINT	RO	ROUGH OPENING
BTWN	BETWEEN	K	KIP(S)	RTU	ROOF TOP UNIT
CC	CENTER TO CENTER	KB	KNEE BRACE	SC	SLIP CRITICAL
CF	CUBIC FOOT OR CUBIC FEET	KCF	KIPS PER CUBIC FEET	SCHED	SCHEDULE
CFMF	COLD-FORMED METAL FRAMING	KLF	KIPS PER LINEAR FOOT	SECT	SECTION
CIP	CAST IN PLACE	KSF	KIPS PER SQUARE FEET	SF	SQUARE FOOT
CJ	CONTROL JOINT/CONSTRUCTION JOINT	KSI	KIPS PER SQUARE INCH	SHT	SHEET
CJP	COMPLETE JOINT PENETRATION	L	LENGTH	SIM	SIMILAR
CL	CENTERLINE	LAT	LATERAL	SL	SLOPE(D) OR SLOPING
CLR	CLEAR OR CLEAR COVER	LBS	POUNDS	SLV	SLEEVE
CMU	CONCRETE MASONRY UNIT	Id	DEVELOPMENT LENGTH	SOG	SLAB ON GRADE
COL	COLUMN	Ldh	HOOK DEVELOPMENT LENGTH	SOD	SLAB ON METAL DECK
CONC	CONCRETE	Lst	LAP SPLICING LENGTH	SP	SPACE(S) OR SPACING
CONN	CONNECTION	Lsc	LAP SPLICING LENGTH	SPEC	SPECIFY OR SPECIFICATIONS
CONST	CONSTRUCTION	LF	LINEAR FOOT	SQ	SQUARE
CONT	CONTINUOUS	LL	LIVE LOAD	SS	STAINLESS STEEL
CONTR	CONTRACTOR	LLH	LONG LEG HORIZONTAL	STD	STANDARD
COORD	COORDINATE	LLV	LONG LEG VERTICAL	STIFF	STIFFENER
CTR	CENTER(ED)	LONG	LONGITUDINAL	STL	STEEL
CY	CUBIC YARD	LP	LOW POINT	STRUCT	STRUCTURAL
db	BAR DIAMETER	LSH	LONG SIDE HORIZONTAL	SUSP	SUSPEND(ED) OR SUSPENSION
DBA	DEFORMED BAR ANCHOR	LSV	LONG SIDE VERTICAL	T&B	TOP AND BOTTOM
DBL	DOUBLE	LWT	LIGHT WEIGHT	T/	TOP OF
DET	DETAIL	MEP	MECHANICAL, ELECTRICAL, & PLUMBING	TEMP	TEMPORARY
DIA	DIAMETER	MATL	MATERIAL	THD	THREAD(ED)
DIAG	DIAGONAL	MAX	MAXIMUM	THK	THICKNESS
DIM	DIMENSION	MCJ	MASONRY CONTROL JOINT	TL	TOTAL LOAD
DL	DEAD LOAD	MECH	MECHANICAL	TRANS	TRANSVERSE
DN	DOWN	MEZZ	MEZZANINE	TRTD	TREATED
DTL	DETAIL	MFR	MANUFACTURE(R)	TYP	TYPICAL
DWG	DRAWING	MID	MIDDLE	UNO	UNLESS NOTED OTHERWISE
DWL	DOWEL	MIN	MINIMUM	VERT	VERTICAL
E/	EDGE OF	MISC	MISCELLANEOUS	VIF	VERIFY IN FIELD
EA	EACH	MULT	MULTIPLE	W	WIDTH
EF	EACH FACE	MO	MASONRY OPENING	W/	WITH
EIFS	EXTERIOR INSULATION FINISH SYSTEM	MTL	METAL	W/C	WATER TO CEMENT RATIO
EJ	EXPANSION JOINT	MWT	MEDIUM WEIGHT	W/O	WITHOUT
ELEC	ELECTRICAL	NF	NEAR FACE	WL	WIND LOAD
ELEV	ELEVATION(S)	NIC	NOT IN CONTRACT	WP	WORKING POINT
EMBED	EMBED(ED)(MENT)	NUM	NUMBER	WT	WEIGHT
ENG	ENGINEER	NOM	NOMINAL	WWR	WELDED WIRE REINFORCEMENT
EOR	ENGINEER OF RECORD	NS	NEAR SIDE	@	AT / AT EACH
EQ	EQUAL	NTS	NOT TO SCALE	(°)	DEGREE
EQUIP	EQUIPMENT	NWT	NORMAL WEIGHT	Ø	DIAMETER
EST	ESTIMATED	O/F	OUTSIDE FACE	#	NUMBER
EW	EACH WAY	OC	ON CENTER	o FD	FLOOR DRAIN
EXCL	EXCLUDE(ING)	OD	OUTSIDE DIAMETER	o RD	ROOF DRAIN
(E)	EXISTING	OPNG	OPENING		
EXP	EXPANSION	OPP	OPPOSITE		
EXT	EXTERIOR	OH	OPPOSITE HAND		
F/	FACE OF	OVH	OVERHEAD		
F/F	FACE TO FACE	OWJ	OPEN WEB STEEL JOIST		

DRAWING LEGEND

DRAWING LEGEND					
GENERAL ANNOTATIONS	CONCRETE CONSTRUCTION	STEEL CONSTRUCTION			
FS# CONC SPREAD FTG TAG	 CONC SPREAD FOOTING	 STEEL COLUMN (W SHAPES)			
FC# CONC CONTINUOUS FTG TAG	 CONC CONTINUOUS FOOTING	 STEEL COLUMN (HSS)			
XC# COLUMN TAG	 CONC WALL	 STEEL COLUMN (HSS ROUND)			
XW# WALL TAG	 FOUNDATION PEDESTAL	 STEEL BEAM / GIRDER			
XB# BEAM TAG	 CONC COLUMN	 STEEL GIRDER TRUSS			
XP# PIER TAG	 CONC COLUMN BELOW	 STEEL JOIST			
'X' = MATERIAL C = CONCRETE M = MASONRY S = STEEL W = WOOD	 CONC PIER	 STEEL TRUSS JOIST			
# = NUMERICAL DESIGNATION	 CONC BEAM	 DRAG STRUT CONNECTION			
REF XX' - YY" ELEVATION CALLOUT (SECTION / DETAILS)	 CONC BEAM/WALL BELOW	 FULLY RESTRAINED MOMENT CONNECTION			
REF XX' - YY" ELEVATION CALLOUT (PLAN)	 CONC LINTEL	 PARTIALLY RESTRAINED MOMENT CONNECTION			
REF = T/OBJECT OR B/OBJECT XX' - YY" = OBJECT ELEVATION FROM DATUM	 OPENING BELOW	 BRACED FRAME (RE: STRUCTURAL ELEVATIONS)			
CHANGE IN TOP OF ELEV	NOTE: AT FLOOR OR ROOF FRAMING PLANS, OPENINGS SHOWN ARE IN WALL BELOW				
SLOPE → START OF SLOPE WHERE SHOWN	REINFORCED CAST-IN-PLACE CONCRETE SUSPENDED SLAB				
PLAN REFERENCE	 CS # (1 WAY)	 CS # (2 WAY)			
TYPICAL (TYP) OR SIMILAR (SIM) DETAIL	CONCRETE SLAB ON GRADE				
Sheet Reference	 SOG #				
Detail, Section or Elevation Reference	MASONRY CONSTRUCTION				
TYPICAL (TYP) OR SIMILAR (SIM) DETAIL	 MASONRY WALL				
Sheet Reference	 MASONRY COLUMN				
GREY TONE DESIGNATES EXISTING CONSTRUCTION	 MASONRY PIER				
BLACK TONE DESIGNATES NEW CONSTRUCTION	 MASONRY LINTEL				
UNLESS NOTED OTHERWISE	NOTE: AT FLOOR OR ROOF FRAMING PLANS, OPENINGS SHOWN ARE IN WALL BELOW				
NEW CONST					
EXIST CONST					
MATERIALS					
	CONCRETE		STEEL		BAR GRATING
	CMU		ALUMINUM		SPECIAL DECK OR FLOOR AREA (SEE PLAN NOTES)
	UNDISTURBED SOIL		SAND		CONTINUOUS WOOD FRAMING
	ENGINEERED OR COMPACTED FILL		BRICK		WOOD BLOCKING OR SHIM
	GRAVEL OR POROUS FILL				

DESIGN CRITERIA

DC-1 BUILDING CODE:

- A. INTERNATIONAL BUILDING CODE (IBC) 2021 AS AMENDED BY
 - 1. UFC 1-200-01 W/ CHANGE 3, DATED 26 FEB 2024
 - 2. UFC 3-301-01 W/ CHANGE 1, DATED 11 APR 2023
- B. EDITION OF ALL REFERENCED STANDARDS NOTED HEREIN ARE AS NOTED IN THE BUILDING CODE.

DC-2 VERTICAL LOADS

A. DEAD LOADS (INCLUDES SELF-WEIGHT)	
1. ROOF	30 PSF
A. MINIMUM (FOR UPLIFT)	12 PSF
B. LIVE LOADS	
1. ROOF (REDUCIBLE PER ASCE 7)	20 PSF MINIMUM
2. FLOORS (REDUCIBLE PER ASCE 7)	
A. TYPICAL GROUND FLOOR	100 PSF
B. HANGARS	200 PSF
C. STORAGE	125 PSF
D. MECHANICAL	150 PSF
C. SNOW LOADS	
1. GROUND SNOW LOAD (P_g)	5 PSF
2. ADDITIONAL SNOW DRIFT AND SLIDING SNOW AS PER APPLICABLE BUILDING CODE REFER TO S-005.	
D. CONSTRUCTION LOADS	20 PSF

DC-3 LATERAL LOADS

DO-3 LATERAL LOADS		
A. RISK CATEGORY		III
B. WIND DESIGN CRITERIA		
1. BASIC DESIGN WIND SPEED (V)		105 MPH
2. ALLOWABLE DESIGN WIND SPEED (V_{asd})		82 MPH
3. EXPOSURE CATEGORY		C
4. INTERNAL PRESSURE COEFFICIENT		
A. PARTIALLY ENCLOSED (FULL WIND SPEED)		+/- 0.55
5. COMPONENTS AND CLADDING		RE: S-005
6. WIND ULTIMATE BASE SHEAR		
A. PLAN EAST/WEST (AREA A,D)		101 K
B. PLAN EAST/WEST (AREA B,C)		125 K
C. PLAN NORTH/SOUTH (AREA A,D)		174 K
D. PLAN NORTH/SOUTH (AREA B,C)		187 K
C. SEISMIC DESIGN CRITERIA		
1. SEISMIC IMPORTANCE FACTOR (I_e)		1.25
2. SITE CLASS		D
3. MAPPED SPECTRAL RESPONSE ACCELERATION		
A. SHORT PERIOD (S_s)		0.724
B. ONE SECOND (S_1)		0.226
4. DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETERS		
A. SHORT PERIOD (S_{DS})		0.589
B. ONE SECOND (S_{D1})		0.324
5. SEISMIC DESIGN CATEGORY		D
6. SEISMIC RESPONSE COEFFICIENT (C_s)		0.123
7. SEISMIC DESIGN BASE SHEAR		
A. PLAN EAST/WEST (AREA A,D)		84 K
B. PLAN EAST/WEST (AREA B,C)		79 K
C. PLAN NORTH/SOUTH (AREA A,D)		84 K
D. PLAN NORTH/SOUTH (AREA B,C)		79 K
8. SEISMIC RESISTING SYSTEM:		
A. STEEL SPECIAL CONCENTRIC BRACED FRAMES		
1. RESPONSE MODIFICATION		$R = 6$
2. DEFLECTION AMPLIFICATION		$C_D = 5$
3. OVERSTRENGTH FACTOR		$\Omega_0 = 2$
9. ANALYSIS METHOD: EQUIVALENT LATERAL FORCE PROCEDURE		

DC-4 FOUNDATION DESIGN CRITERIA

DS 14 FOUNDATION DESIGN CRITERIA

A. FOUNDATION DESIGN IS BASED UPON THE FOLLOWING SOIL PARAMETERS AS PROVIDED IN THE GEOTECHNICAL ENGINEERING REPORT LISTED BELOW:

1. REPORT AGENCY	UES
2. REPORT #	4030.2400199
3. REPORT DATE	2025-04-17

B. NET ALLOWABLE SOIL BEARING PRESSURE

1. SPREAD FOOTINGS	3000 PSF
2. CONTINUOUS FOOTINGS	3000 PSF

C. LATERAL EARTH PRESSURE PARAMETERS

1. SOIL DENSITY	120 PCF
2. ANGLE OF INTERNAL FRICTION	30 DEGREES
3. COEFFICIENT OF FRICTION (μ)	0.36
4. WIND/SEISMIC INCREASE	1/3 INCREASE
5. PASSIVE EARTH PRESSURE (K_p)	3.00

D. MODULUS OF SUB-GRADE REACTION (k_s)

E. MINIMUM BEARING DEPTH

DC-5 ANTITERRORISM (AT) CRITERIA

A. THIS FACILITY HAS BEEN DESIGNED IN ACCORDANCE WITH THE ANTITERRORISM REQUIREMENTS SET FORTH IN UFC 4-010-01, DATED 24 MAY 2024. BUILDING ANTITERRORISM STRUCTURAL DESIGN CRITERIA ARE AS FOLLOWS:

ANTITERRORISM STRUCTURE B. AT FACILITY CRITERIA

B. ATTACHMENT CRITERIA	
1. STANDARD 1:	BUILDING STANDOFF DISTANCE > 50 FT TO PERIMETER
2. STANDARD 2:	UNOBSTRUCTED SPACE
3. STANDARD 5:	PARKING BENEATH BUILDINGS OR ON ROOFTOPS
4. STANDARD 6:	PROGRESSIVE COLLAPSE
5. STANDARD 7:	STRUCTURAL ISOLATION
6. STANDARD 8:	BUILDING OVERHANGS AND BREEZEWAYS
7. STANDARD 9:	EXTERIOR MASONRY WALLS #5@32" OC MAX VERTICAL REINF
8. STANDARD 15:	OVERHEAD MOUNTED ARCH FEATURES
9. STANDARD 19:	RE: DELEGATED DESIGN EQUIPMENT BRACING RF: DELEGATED DESIGN



US Army Corps of Engineers ®

US ARMY CORPS OF ENGINEERS LOS ANGELES DISTRICT		DESIGNED BY: A. VALENCIA	ISSUE DATE: NOVEMBER 13, 2025
		DRAWN BY: R. CARLSON	SOLICITATION NO.: W912PL25RA0012
		CHECKED BY: D. CLAYSON	CONTRACT NO.: W912PL25C0037
		SUBMITTED BY: P. PASZCZUK	SIZE: ANSI D
KORTE CONSTRUCTION 5700 OAKLAND AVE, SUITE 275 ST. LOUIS, MO 63110			

CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2

494137

STRUCTURAL DESIGN CRITERIA, LEGEND, AND
ABBREVIATIONS

SHEET ID
S-001

US Army Corps
of Engineers ®**GENERAL**

G-1 METHODS, PROCEDURES AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING THE NECESSARY PRECAUTIONS TO MAINTAIN THE INTEGRITY OF THE STRUCTURE AT EACH STAGE OF CONSTRUCTION.

G-2 STRUCTURAL ENGINEER WILL NOT BE RESPONSIBLE FOR ACTIVITIES UNDER THE CONTROL OF THE CONTRACTOR SUCH AS CONSTRUCTION SITE SAFETY, MEANS, METHODS AND SEQUENCES OF CONSTRUCTION. STRUCTURAL ENGINEER WILL NOT BE RESPONSIBLE FOR FABRICATION, ERECTION AND CONSTRUCTION REQUIREMENTS AS PRESCRIBED BY OSHA OR OTHER REGULATORY AGENCIES REGARDLESS OF INDICATION IN THESE DOCUMENTS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL SAFETY REGULATIONS, PROGRAMS AND PRECAUTIONS RELATED TO ALL WORK ON THE PROJECT.

G-3 WHERE SUPPORTED SLABS OR ROOFS ARE TO BE USED FOR STAGING OR TEMPORARY CONSTRUCTION LOADS, THE CONTRACTOR MUST VERIFY THAT APPLIED LOADS DO NOT EXCEED THE DESIGN LOADS FOR THE SUPPORTING FLOORS OR ROOFS. DURING AND AFTER CONSTRUCTION, CONTRACTOR AND/OR CONTRACTING OFFICER MUST KEEP LOADS ON THE STRUCTURE WITHIN THE LIMITS OF THE DESIGN LOADS AS NOTED IN THESE DRAWINGS.

G-4 THE STRUCTURAL SYSTEMS SHOWN IN THESE DRAWINGS MUST NOT BE CONSIDERED STABLE UNTIL ALL STRUCTURAL ELEMENTS ARE IN PLACE AND COMPLETED. TEMPORARY BRACING, SHEETING, SHORING, ETC. REQUIRED TO ENSURE THE STRUCTURAL INTEGRITY/STABILITY OF THE EXISTING BUILDINGS, SIDEWALKS, UTILITIES, ETC, DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE CONTRACTOR AND MUST BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER EMPLOYED BY THE CONTRACTOR.

G-5 WHEN NOT SPECIFICALLY INDICATED ON THE STRUCTURAL DRAWINGS, THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING SLEEVE AND BLOCK-OUT REQUIREMENTS FOR PENETRATIONS PRIOR TO FABRICATION OR ERECTION OF THE STRUCTURE. PENETRATIONS OF STRUCTURAL MEMBERS ARE SUBJECT TO APPROVAL BY THE EOR. THE CONTRACTOR IS ALSO RESPONSIBLE FOR DETERMINING ANCHORAGE AND HANGER REQUIREMENTS REQUIRED FOR SUPPORTING EQUIPMENT, FINISHES, UTILITIES ET CETERA NOT INDICATED ON THE STRUCTURAL DRAWINGS.

G-6 CONTRACTOR MUST COORDINATE WITH ALL TRADES THE LOCATIONS AND DIMENSIONS OF ALL OPENINGS THROUGH FLOORS, ROOFS AND WALLS REGARDLESS OF IF THEY ARE SHOWN ON THE STRUCTURAL DRAWINGS.

G-7 THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING DIMENSIONS AND INSTALLATION REQUIREMENTS OF EQUIPMENT WITH THE SUPPORTING STRUCTURE.

G-8 THE STRUCTURAL DRAWINGS ARE SUPPLEMENTARY TO THE ARCHITECTURAL AND OTHER DISCIPLINE DRAWINGS. DO NOT ATTEMPT TO BID NOR CONSTRUCT ANY PORTION OF THIS PROJECT WITHOUT CONSULTING OTHER DISCIPLINES' DRAWINGS WITHIN THIS PROJECT. ALL CONFLICTS OR OMISSIONS, INCLUDING DIMENSIONS, BETWEEN THE VARIOUS ELEMENTS OF THE STRUCTURAL DRAWINGS AND/OR SPECIFICATIONS MUST BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER BEFORE PROCEEDING WITH ANY WORK INVOLVED. IN CASE THERE IS A CONFLICT BETWEEN DRAWINGS, SUBMIT A REQUEST FOR INFORMATION, AND PROCEED AS DIRECTED BY THE ENGINEER. ANY WORK DONE BY THE CONTRACTOR AFTER DISCOVERY OF SUCH DISCREPANCY WITHOUT OFFICIAL DIRECTION WILL BE DONE AT THE CONTRACTOR'S RISK.

G-9 FIREPROOFING, IF REQUIRED, OF STRUCTURAL ELEMENTS IS NOT SHOWN ON THE STRUCTURAL DRAWINGS. REFER TO THE SPECIFICATIONS, FIRE PROTECTION DRAWINGS AND/OR ARCHITECTURAL DRAWINGS.

G-10 IN CASE OF CONFLICT BETWEEN THE GENERAL NOTES, SPECIFICATIONS, DRAWINGS, OR WITHIN THESE DOCUMENTS, THE MOST STRINGENT REQUIREMENTS AS DETERMINED BY THE ENGINEER WILL GOVERN.

G-11 WORK NOT INDICATED ON A PART OF THE DRAWINGS, BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING LOCATIONS, IS TO BE REPEATED.

G-12 TYPICAL DETAILS ARE GENERALLY NOT REFERENCED ON THE DRAWINGS AND WILL APPLY IN AREAS WHERE CONDITIONS ARE SIMILAR AS DESCRIBED IN THE DETAILS. THE CONTRACTOR MUST IDENTIFY, COORDINATE AND APPLY THESE DETAILS AS NEEDED. TYPICAL DETAILS MAY BE REFERENCED ON PLANS OR DETAILS TO CLARIFY OR IDENTIFY A PARTICULAR CONDITION. THE PRESENCE OF SUCH A REFERENCE DOES NOT ALTER THE OBLIGATION OF THE CONTRACTOR TO APPLY THE DETAIL(S) AS NEEDED EVEN IF THEY ARE NOT REFERENCED.

G-13 THE STRUCTURAL DOCUMENTS HAVE BEEN DRAWN TO SCALE AS INDICATED ON THESE DRAWINGS. THIS IS TO CONFIRM GENERAL GEOMETRIC TOLERANCES TO THE GREATEST EXTENT POSSIBLE. HOWEVER, SOME COMPONENTS MAY NOT BE DRAWN TO SCALE TO REFLECT DESIGN INTENT. IF DIMENSIONAL INFORMATION IS NOT INDICATED AND/OR PROVIDED, THE ENGINEER MUST BE NOTIFIED IN WRITING. DO NOT SCALE DRAWINGS.

CONSTRUCTION ADMINISTRATION

CA-1 CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL SIZES, DIMENSIONS, AND ELEVATIONS ON SUBMITTALS AS RELATED TO DESIGN DOCUMENTS PRIOR TO DELIVERY TO THE ENGINEER FOR REVIEW.

CA-2 PREPARATION OF SHOP DRAWING SUBMITTALS FOR STRUCTURAL ELEMENTS WILL REQUIRE INFORMATION (I.E. DIMENSIONS, ETC.) FOUND IN THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND OTHER DISCIPLINE DRAWINGS. CONTRACTOR IS TO FURNISH SUFFICIENT INFORMATION, INCLUDING PROJECT SPECIFICATIONS, TO THE SUB-CONSULTANT CREATING THE SHOP DRAWING SUBMITTAL TO ALLOW FOR A COMPETE SUBMITTAL.

CA-3 SHOP DRAWINGS:

- A. SHOP DRAWINGS FOR MATERIALS MUST BE SUBMITTED TO THE ENGINEER AND CONTRACTING OFFICER FOR REVIEW PRIOR TO THE START OF FABRICATION OR COMMENCEMENT OF WORK.

B. SHOP DRAWINGS MUST BE CHECKED AND STAMPED BY THE CONTRACTOR PRIOR TO SUBMISSION. THE CONTRACTOR'S STAMP OF APPROVAL WILL CONSTITUTE CERTIFICATION THAT HE HAS VERIFIED FIELD MEASUREMENTS, CONSTRUCTION CRITERIA, MATERIALS AND SIMILAR DATA AND HAS CHECKED EACH DRAWING FOR COMPLETENESS, COORDINATION, AND COMPLIANCE WITH THE CONTRACT DOCUMENTS. SHOP DRAWINGS SUBMITTED WITHOUT THE CONTRACTOR'S STAMP AND REVIEW WILL BE RETURNED WITHOUT REVIEW BY THE ENGINEER.

C. REPRODUCTION OF ANY PORTION OF THE STRUCTURAL CONTRACT DRAWINGS FOR SUBMITTAL AS SHOP DRAWINGS IS PROHIBITED. SUBMITTALS PROVIDED THAT INCLUDE REPRODUCTION OF THE CONTRACT DRAWINGS WILL BE RETURNED WITHOUT REVIEW BY THE ENGINEER.

D. CHANGES TO SHOP DRAWINGS THAT ARE RE-SUBMITTED MUST BE CLOUDED OR SOMEHOW INDICATE THAT A CHANGE HAS BEEN MADE TO PREVIOUSLY ISSUED AND REVIEWED DRAWINGS. REVISED SHOP DRAWINGS PROVIDED WITHOUT CLOUDS OR CHANGES INDICATED WILL BE RETURNED WITHOUT REVIEW BY THE ENGINEER.

E. THE CONTRACTOR IS TO PROVIDE THE ENGINEER AND CONTRACTING OFFICER WITH WRITTEN NOTICE OF DEVIATIONS OF ANY TYPE FROM THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS. THE NOTICE MUST BE RECEIVED PRIOR TO SHOP DRAWING SUBMITTAL. THE CONTRACTOR REMAINS LIABLE FOR ANY DEVIATION UNLESS REVIEWED BY THE ENGINEER AND CONTRACTING OFFICER AND ACKNOWLEDGED IN WRITING, PRIOR TO THE RECEIPT OF THE SHOP DRAWINGS.

F. CONTRACTOR IS NOT RELIEVED OF ANY REQUIREMENT OF THE CONTRACT DOCUMENTS BY VIRTUE OF ENGINEER OR CONTRACTING OFFICER REVIEW OF SUBMITTALS.

G. REVIEW OF SUBMITTALS BY THE ENGINEER IS FOR GENERAL COMPLIANCE WITH THE CONTRACT DOCUMENTS ONLY AND IS NOT INTENDED AS APPROVAL.

CA-4 UNLESS NOTED OTHERWISE, ALLOW 10 BUSINESS DAYS FOR THE ENGINEER'S REVIEW.

CA-5 A QUALIFIED TESTING AGENCY MUST PERFORM TESTS AND SPECIAL INSPECTIONS. UPON COMPLETION OF WORK, THE TESTING AGENCY MUST FURNISH A CERTIFICATE OF COMPLIANCE, SIGNED BY THE PROFESSIONAL ENGINEER RESPONSIBLE FOR MANAGEMENT OF THE AGENCY. THE PROFESSIONAL ENGINEER MUST BE REGISTERED IN THE UNITED STATES.

FOUNDATIONS

F-1 FOUNDATIONS HAVE BEEN DESIGNED AND MUST BE CONSTRUCTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT FOR THIS PROJECT AS LISTED IN THE DESIGN CRITERIA WHICH IS CONSIDERED AS THE BASIS OF FOUNDATION DESIGN. CONTRACTOR IS RESPONSIBLE FOR REVIEWING AND UNDERSTANDING REQUIREMENTS SET FORTH WITHIN THE REPORT AS THEY APPLY TO THIS FOUNDATION DESIGN. THE STRUCTURAL ENGINEER IS NOT LIABLE OR RESPONSIBLE FOR THE ACCURACY OF RECOMMENDATIONS PRESENTED WITHIN THE GEOTECHNICAL REPORT.

F-2 FOUNDATIONS MUST BE PLACED ON A MINIMUM OF 30" LAYER OF COMPAKTED SELECT FILL AND A 6" LAYER OF SCARIFIED RE-COMPAKTED SUBGRADE, CONFORMING TO RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL REPORT (MAXIMUM FILL LIFT = 8").

F-3 THE CONTRACTOR IS TO RETAIN THE SERVICES OF A PROFESSIONAL GEOTECHNICAL ENGINEER, SUBJECT TO THE APPROVAL OF THE CONTRACTING OFFICER, TO VERIFY THAT THE MATERIAL ON WHICH FOUNDATIONS BEAR HAS AT LEAST THE CAPACITY AS NOTED IN THE DESIGN CRITERIA. PRIOR TO PLACING CONCRETE, AND AFTER COMPAKTION OF SUBGRADE, ALL FOUNDATION EXCAVATIONS SHALL BE INSPECTED AND TESTED WHICH MUST INCLUDE IN PLACE DENSITY TESTING. IF THE SUBGRADE HAS LESS THAN THE STATED ALLOWABLE BEARING CAPACITY, THE WEAK SUBGRADE SHALL BE REMOVED, RECOMPACTED, AND RETESTED UNTIL IT IS SATISFACTORY AT NO ADDITIONAL COST TO THE OWNER. CONCRETE PLACEMENT SHALL NOT PROCEED UNTIL THE SUBGRADE MEETS THE MINIMUM DENSITY REQUIREMENTS OF THE SPECIFICATIONS AND THE GEOTECHNICAL REPORT, WHICHEVER IS MORE STRINGENT.

F-4 EXTERIOR FOUNDATIONS ARE TO BEAR BELOW THE MINIMUM BEARING DEPTH FROM FINISHED GRADE GIVEN IN DESIGN CRITERIA GENERAL NOTE DC-4. INTERIOR FOUNDATIONS TO BEAR THE MINIMUM BEARING DEPTH OR AS INDICATED. FINAL BEARING ELEVATIONS MAY VARY TO SUIT SUBSURFACE SOIL CONDITIONS OR BELOW GRADE UTILITIES. NOTIFY THE ENGINEER AND CONTRACTING OFFICER OF ANY CHANGES. PROVIDE FOUNDATION STEPS AS NECESSARY.

F-5 NO BACKFILLING AGAINST WALLS IS ALLOWED UNTIL THE SLABS AT THE TOP AND BOTTOM HAVE BEEN PLACED OR ADEQUATE SHORING HAS BEEN PROVIDED. WALLS AND GRADE BEAMS HAVING BACKFILL AGAINST BOTH SIDES ARE TO HAVE BACKFILL PLACED ON BOTH SIDES UNIFORMLY SO AS NOT TO EXCEED AN 8" DIFFERENTIAL.

F-6 FOUNDATION DRAINAGE, INSULATION AND/OR WATERPROOFING IS NOT SHOWN OR SPECIFIED WITHIN THE STRUCTURAL PORTION OF THE CONSTRUCTION DOCUMENTS. REFERENCE OTHER PORTIONS OF THE CONSTRUCTION DOCUMENTS FOR DRAINAGE, INSULATION AND/OR WATERPROOFING, OR ITEMS ASSOCIATED WITH OTHER DISCIPLINES.

REINFORCED CONCRETE

C-1 REINFORCED CONCRETE WORK MUST BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE (ACI) "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE - ACI 318" AND THE "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS- ACI 301."

C-2 MAXIMUM MIX DESIGN W/C RATIO MUST NOT BE EXCEEDED. APPROVED ADMIXTURES SUCH AS PLASTICIZERS OR SUPERPLASTICIZERS MAY BE USED ON SITE TO INCREASE SLUMP AND FLOWABILITY AS REQUIRED FOR PLACEMENT. REFER TO ACI 311.5 FOR DOCUMENTATION REQUIREMENTS AND IBC CHAPTER 1703 FOR INSPECTION REQUIREMENTS.

C-3 CAST-IN-PLACE CONCRETE MUST HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH (f_c) AS INDICATED ON THE CONCRETE MIX DESIGN TABLE.

C-4 THE STRUCTURE SUPPORTING ELEVATED FLOORS IS DESIGNED TO HAVE AN INITIAL (PRE-COMPLETE) DEFLECTION OF NOT MORE THAN $\frac{1}{4}$ IN. DUE TO THE WEIGHT OF THE CONCRETE SLAB. THE CONTRACTOR MUST TAKE THIS DEFLECTION INTO ACCOUNT WHEN DETERMINING THE AMOUNT OF CONCRETE NECESSARY TO OBTAIN A LEVEL FLOOR AND MONITOR DEFLECTION DURING CONCRETE PLACEMENT.

C-5 REINFORCEMENT AND EMBEDDED ITEMS:

- A. PROVIDE STANDARD HOOKS ON BARS TERMINATING AT A CONCRETE FACE UNLESS NOTED SUCH AS AT EDGES OF OPENINGS, SLAB EDGES, EXPANSION JOINTS, ENDS OF BEAMS AND ENDS OF WALLS.

B. SEE CONCRETE REINFORCEMENT DEVELOPMENT LENGTH AND SPLICE TABLE FOR ALL REQUIRED DEVELOPMENT AND SPLICE LENGTHS.

C. PROVIDE ADEQUATE CONCRETE COVER IN ACCORDANCE WITH THE REQUIREMENTS AS SET FORTH BY ACI 318 AND AS PROVIDED WITHIN THE CONCRETE COVER TABLE IN THE SPECIFICATIONS.

D. HOOKED BARS TO HAVE STANDARD ACI HOOKS UNLESS NOTED OTHERWISE. UNLESS NOTED OTHERWISE, HOOKS CAN BE ORIENTED AS REQUIRED.

E. CONTINUOUS REINFORCING BARS MUST BE TURNED AND LAPPED AT CORNERS AND INTERSECTIONS OF WALLS AND FOOTINGS.

F. WELDING OF REINFORCEMENT IS PROHIBITED, UNLESS NOTED OTHERWISE AND MUST CONFORM TO ASTM A706.

G. PROVIDE EMBEDS (INCLUDING ANCHORS), AS REQUIRED, FOR ALL SUPPORTING NON-STRUCTURAL ELEMENTS INCLUDING BUT NOT LIMITED TO HAND RAILS, CANOPIES, WINDOW WASHING DAVITS, MISCELLANEOUS STEEL, ETC. REFER TO ARCHITECTURAL AND MEP DRAWINGS FOR ADDITIONAL INFORMATION.

C-6 CONCRETE SLABS MUST BE CURED BY METHOD COMPATIBLE WITH SPECIFIED FLOOR FINISH. WHERE ACCEPTABLE USE A LIQUID MEMBRANE-CURING COMPOUND AT THE MANUFACTURERS RECOMMENDED COVERAGE.

C-7 CONCRETE SLAB CONTROL JOINT PLACEMENT AND LAYOUT PER GC AND SUBMITTED AS SHOP DRAWING FOR REVIEW.

C-8 SLEEVES, INSERTS, MECHANICAL OPENINGS, CONDUITS, PIPES, RECESSES, DEPRESSIONS, CURBS AND OTHER EMBEDDED ITEMS MUST BE PROVIDED AS SHOWN ON THE ARCHITECTURAL, MECHANICAL, FIRE PROTECTION, PLUMBING AND ELECTRICAL DRAWINGS AND BY EQUIPMENT MANUFACTURERS. INSTALLATION OF THESE ITEMS MUST BE COORDINATED AND PROVIDED FOR PRIOR TO PLACING CONCRETE.

C-9 OPENINGS IN CONCRETE SLABS AND/OR CONCRETE WALLS MUST HAVE ADDITIONAL REINFORCEMENT PER THE TYPICAL DETAILS. NO PENETRATIONS ARE PERMITTED THROUGH ANY CONCRETE BEAM, JOIST, COLUMN, PIER OR JAMB WITHOUT THE ENGINEER'S WRITTEN APPROVAL. PENETRATIONS MUST BE RE-Routed AS REQUIRED AT THESE LOCATIONS.

C-10 PENETRATIONS THROUGH CONCRETE SLABS AND/OR CONCRETE WALLS MUST BE PLACED DURING CONSTRUCTION OF THE WALL WITH THE APPROPRIATE SLEEVE.

C-11 REFER TO CONCRETE TABLES ON S-004 FOR ADDITIONAL INFORMATION.

POST-INSTALLED ANCHORS

PI-1 ALL ADHESIVE OR MECHANICAL ANCHORS MUST BE INSTALLED, INCLUDING HOLE DRILLING, DRILL BIT TYPE, PREPARATION, AND CLEANING IN ACCORDANCE WITH AN APPROVED INDEPENDENT EVALUATION REPORT (ICC-ES, IAPMO, OR APPROVED EQUAL), THE PROJECT DRAWINGS AND SPECIFICATIONS, AND IN ACCORDANCE WITH ALL MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII).

PI-2 POST-INSTALLED ANCHORS HAVE BEEN DESIGNED WITH HILTI ANCHORS (NOTED BELOW) AS THE BASIS OF DESIGN. PROVIDE APPROPRIATE ANCHOR WITH SIZE AND FINISH AS NOTED AND EQUIVALENT SHEAR AND TENSION CAPACITIES AFTER MODIFICATION DUE TO EMBODIMENT, SPACING AND EDGE DISTANCES. OTHER AVAILABLE MANUFACTURERS INCLUDE SIMPSON, ITW RED HEAD AND DEWALT.

- A. EXPANSION ANCHORS: KWIK BOLT 3
- B. SCREW ANCHORS: KH-EZ SCREW ANCHOR
- C. ADHESIVE ANCHORS
 - 1. CONCRETE: HIT HY-200
 - 2. GROUTED CMU: HIT HY-270
- D. SCREEN TUBE ANCHORS: HIT HY-270

PI-3 SUBSTITUTION REQUEST FOR ALTERNATIVE PRODUCTS MUST BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER PRIOR TO THE USE. SUBSTITUTION REQUEST MUST INCLUDE AN APPROVED INDEPENDENT EVALUATION REPORT (ICC-ES, IAPMO OR APPROVED EQUAL) AND SUPPORTING CALCULATIONS INDICATING COMPLIANCE WITH DESIGN INTENT. SUBSTITUTIONS MUST BE EVALUATED FOR THEIR COMPLIANCE WITH RELEVANT BUILDING CODES FOR SEISMIC USES, LOAD RESISTANCE, INSTALLATION CATEGORY, AND AVAILABILITY OF COMPREHENSIVE INSTALLATION INSTRUCTIONS. ADHESIVE ANCHOR EVALUATIONS MUST CONSIDER INSTALLED SUBSTITUTION ANCHORS IN CONCRETE MUST BE SUITABLE FOR USE IN CRACKED CONCRETE APPLICATIONS.

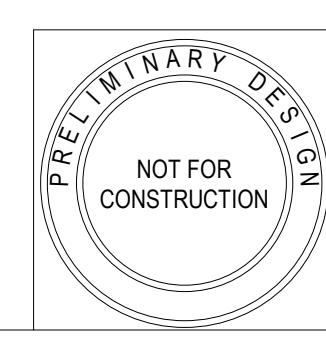
PI-4 DO NOT DISTURB, MAKE ATTACHMENTS, OR APPLY LOAD TO ADHESIVE ANCHORS PRIOR TO THE FULL CURE OF THE ADHESIVE. ADHESIVE ANCHORS MUST NOT BE FULLY LOADED UNTIL CONCRETE HAS REACHED 28-DAY DESIGN STRENGTH.

PI-5 CONCRETE TEMPERATURE AT THE TIME OF INSTALLATION MUST BE MONITORED BY THE CONTRACTOR. CONTRACTOR MUST COMPLY WITH ALL MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS RELATIVE TO SUBSTRATE TEMPERATURE.

DESIGNED BY:	A. VALENCIA	ISSUE DATE:	NOVEMBER 13, 2025
DRAWN BY:	R. CARLSON	SOLICITATION NO.:	W912PL25-R-0012
CHECKED BY:	D. CLAYSON	CONTRACT NO.:	W912PL25-C0037
SUBMITTED BY:	P. PASZCZUK	SIZE:	ANSI D
US ARMY CORPS OF ENGINEERS		KORTE CONSTRUCTION	
LOS ANGELES DISTRICT		5700 OAKLAND AVE SUITE 275 ST. LOUIS, MO 63110	

CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

GENERAL STRUCTURAL NOTES



SHEET ID

S-002

US Army Corps
of Engineers ®

P	PI-6	INSTALLATION OF ADHESIVE ANCHORS HORIZONTALLY OR UPWARDLY INCLINED TO SUPPORT SUSTAINED TENSION LOADS MUST BE PERFORMED BY PERSONNEL CERTIFIED BY AN APPLICABLE CERTIFICATION PROGRAM. CERTIFICATION MUST INCLUDE WRITTEN AND PERFORMANCE TEST IN ACCORDANCE WITH THE ACI/RSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM, OR APPROVED EQUIVALENT, IN ACCORDANCE WITH ACI. PROOF OF CURRENT CERTIFICATION MUST BE SUBMITTED TO THE ENGINEER AND CONTRACTING OFFICER FOR APPROVAL PRIOR TO INSTALLATION. CONTINUOUS SPECIAL INSPECTION IS REQUIRED FOR THESE ANCHORS.	J-2	DESIGN ALL JOISTS, INCLUDING SLOPE, CAMBER AND BEARING ENDS. PROVIDE ALL BRIDGING LOCATIONS AND LAYOUTS. ALL DESIGNS MUST BE IN ACCORDANCE WITH SJI SPECIFICATIONS WITH A MAXIMUM DEFLECTION OF TL/180 AND LL/240.
N	PI-7	IF REINFORCING IS ENCOUNTERED DURING DRILLING, THAT HOLE IS TO BE ABANDONED. DO NOT DAMAGE REINFORCING TO MAINTAIN STRUCTURAL INTEGRITY OF SUBSTRATE COMPONENT. FILL ABANDONED HOLES WITH NON-SHRINK GROUT AND CONTACT THE STRUCTURAL ENGINEER FOR NEW LOCATIONS AND FURTHER INSTALLATION INSTRUCTIONS.	J-3	STEEL JOISTS ARE TO BE DESIGNED FOR ALL LOADS INDICATED AS WELL AS WIND UPLIFT AS SHOWN ON SHEET S-005.
M	PI-8	POST-INSTALLED ANCHORS TO BE GALVANIZED WHERE EXPOSED TO EXTERIOR AND/OR CORROSIVE ENVIRONMENTS UNLESS THE ANCHOR IS OTHERWISE PROTECTED.	J-4	PROVIDE BRIDGING, BOTTOM CHORD EXTENSIONS AND ASSOCIATED ANCHORAGE IN ACCORDANCE WITH SJI REQUIREMENTS. BRIDGING, BOTTOM CHORD EXTENSIONS AND ASSOCIATED ANCHORAGE IS BY THE JOIST MANUFACTURER UNLESS NOTED OTHERWISE. WHERE ERECTION BRIDGING IS REQUIRED, HAVE IN PLACE A ROW OF BOLTED BRIDGING BEFORE RELEASING HOIST LINES.
L	PI-9	SUBSTITUTION OF POST-INSTALLED ANCHORS FOR EMBEDDED ANCHORS SHOWN ON THE DRAWINGS IS NOT PERMITTED.	J-5	BOTTOM CHORD EXTENSIONS TO BE INSTALLED AS REQUIRED BY OSHA AND THE STEEL JOIST SUPPLIER. DO NOT FULLY CONNECT EXTENSIONS TO THE SUPPORTING STRUCTURE UNTIL APPLICABLE DEAD LOAD HAS BEEN APPLIED.
K			J-6	STEEL JOIST MANUFACTURER IS TO PROVIDE ADDITIONAL BOTTOM CHORD BRIDGING FOR UPLIFT LOADS.
J			J-7	PROVIDE ANCHORS AND FASTENERS REQUIRED FOR INSTALLATION OF JOISTS, BRIDGING AND BOTTOM CHORD EXTENSIONS.
H			J-8	STEEL JOISTS ARE TO BE EQUALLY SPACED IN BAYS UNO. DO NOT EXCEED JOIST SPACING INDICATED ON THE DRAWINGS.
G			J-9	JOIST SEATS HAVE BEEN ASSUMED TO BE AS LISTED BELOW, UNO. MODIFICATIONS TO THE STRUCTURE FOR ALTERNATE DEPTHS MUST BE COORDINATED BY THE GENERAL CONTRACTOR. A. ALL SERIES: 5"
F			J-10	HANGERS SUPPORTING MECHANICAL, ELECTRICAL OR OTHER EQUIPMENT ARE TO BE PLACED AT JOIST PANEL POINTS (WELDING NOT PERMITTED) AND APPLIED LOADS ARE TO BE COORDINATED WITH STEEL JOIST MANUFACTURER. DO NOT SUSPEND EQUIPMENT FROM BRIDGING OR METAL DECK.
E			J-11	STEEL JOIST MANUFACTURER TO VERIFY SIZE, LOCATION AND WEIGHT OF SUPPORTED MECHANICAL UNITS AND ASSOCIATED OPENINGS PRIOR TO FABRICATION.
D				
C				
B				
A				
STRUCTURAL STEEL				
	S-1	STRUCTURAL STEEL WORK IS TO BE DETAILED AND CONSTRUCTED IN ACCORDANCE WITH THE FOLLOWING STANDARD(S): A. THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) 360 "SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS" B. THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) 341 "SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS"		
	S-2	PRIOR TO FABRICATION, THE STEEL FABRICATOR IS TO SUBMIT TO THE CONTRACTING OFFICER FOR REVIEW SHOP DRAWINGS SHOWING ERECTION PLANS, PIECE DRAWINGS, AND CONNECTION DETAILS.		
	S-3	STRUCTURAL STEEL FABRICATOR IS TO PROVIDE FOR VERTICAL AND HORIZONTAL FIELD ADJUSTMENT OF SUPPORT ASSEMBLIES.		
	S-4	STEEL BEAMS ARE TO BE EQUALLY SPACED IN BAYS UNLESS OTHERWISE NOTED.		
	S-5	FABRICATE AND INSTALL BEAMS WITH NATURAL CAMBER UP UNLESS CAMBER IS NOTED ON THE DRAWINGS.		
	S-6	STRUCTURAL STEEL FRAMES AND TRUSSES ARE TO BE SECURELY BRACED UNTIL FLOOR SLABS, ROOF DECKS AND SHEAR WALLS HAVE BEEN INSTALLED AND BECOME CAPABLE OF STABILIZING THE FRAMES.		
	S-7	UNLESS OTHERWISE NOTED, STRUCTURAL STEEL CONNECTIONS TO BE SHOP WELDED AND FIELD BOLTED.		
	S-8	BOLTED CONNECTIONS: A. BOLTS, TYPICAL: 3/4" MINIMUM DIAMETER ASTM F 3125 GR. A325N UNO WITH MATCHING WASHERS AND HEAVY HEX NUTS. BOLTS MUST BE INSTALLED IN A SNUG TIGHT CONDITION WHICH IS ACHIEVED WHEN CONNECTED PARTS ARE IN FIRM CONTACT. B. DO NOT REUSE ANY BOLTS, NUTS, AND/OR WASHERS. C. DO NOT APPLY ANY WELD TO BOLTS, NUTS, OR WASHERS UNO.		
	S-9	WELDED CONNECTIONS: A. USE E70XX ELECTRODES UNLESS OTHERWISE INDICATED ON THE DRAWINGS. E60XX MAY BE USED FOR WELDING COLD-FORMED STEEL DECKS AND FRAMING. B. WELDING OF DEFORMED BAR ANCHORS AND/OR HEADED STUD ANCHORS IS TO BE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. C. FILLET WELD SIZES NOT DESIGNATED MUST BE THE SAME AS THE THINNEST CONNECTED PARTS OR 1/8-INCH FILLET WELD ALL AROUND.		
	S-10	SUBSTITUTION OF POST-INSTALLED ANCHORS FOR EMBEDDED ANCHORS SHOWN ON THE DRAWINGS IS NOT PERMITTED.		
	S-11	PAINT AND PROTECTION: A. EXPOSED STRUCTURAL STEEL TO RECEIVE PAINTED FINISH TO BE SHOP CLEANED AND PRIME PAINTED IN ACCORDANCE WITH SPECIFICATION SECTION 05 12 00 PART 2 - PRODUCTS. REFERENCE ARCHITECTURE FOR FINISH PAINT SYSTEMS. B. EXPOSED STRUCTURAL STEEL FOR SCREEN WALLS, EQUIPMENT PLATFORMS, LOOSE ANGLE LINTELS ETC, TO BE HOT DIPPED GALVANIZED PER ASTM A 123 C. GALVANIZED FASTENERS AND ACCESSORIES TO BE HOT DIPPED GALVANIZED PER ASTM A 153/A 153M. D. PROVIDE MINIMUM 3" CONCRETE COVER FOR STEEL BELOW GRADE.		
MISCELLANEOUS STEEL				
	MS-1	COORDINATE ALL MISCELLANEOUS STEEL ITEMS WITH STRUCTURAL STEEL NOTES.		
	MS-2	PRIOR TO FABRICATION, THE STEEL FABRICATOR IS TO SUBMIT THE FOLLOWING TO THE CONTRACTING OFFICER FOR REVIEW: A. SHOP DRAWINGS SHOWING ERECTION PLANS, PIECE DRAWINGS, AND CONNECTION DETAILS.		
	MS-3	MANUFACTURE STEEL GRATING IN ACCORDANCE WITH THE "METAL BAR GRATING MANUAL" AS PUBLISHED BY THE NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS: A. STEEL FOR GRATING TO CONFORM TO ASTM A 1011/A 1011M. GRATING TO BE TYPE W-19-6 (1" x 3/16") WITH GALVANIZED FINISH. B. ALUMINUM FOR GRATING TO CONFORM TO ASTM B221. GRATING TO BE TYPE AS NOTED WITH MILL FINISH, UNO.		
OPEN WEB STEEL JOISTS				
	J-1	DESIGN, FABRICATION AND ERECTION OF OPEN WEB STEEL JOISTS MUST CONFORM TO THE STEEL JOIST INSTITUTE (SJI) "STANDARD SPECIFICATIONS AND LOAD TABLES FOR STEEL JOISTS AND JOIST GIRDERS."		
METAL DECK				
	D-1	METAL DECK MUST BE DETAILED IN ACCORDANCE WITH THE STEEL DECK INSTITUTE (SDI) "DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS AND ROOF DECKS".		
	D-2	DECK UNITS HAVE BEEN DESIGNED TO BE A MINIMUM OF THREE (3) SPANS CONTINUOUS WITH LAPS PLACED OVER SUPPORTS.		
	D-3	REFER TO ROOF DECK SCHEDULE ON S-603 WHICH INCLUDES DEPTH PROFILE, THICKNESS, AND ATTACHMENT.		
LIGHT GAGE STEEL FRAMING				
	LG-1	STRUCTURAL MEMBERS MUST BE DESIGNED IN ACCORDANCE WITH THE AMERICAN IRON AND STEEL INSTITUTE (AISI) "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" (LATEST EDITION).		
	LG-2	STRUCTURAL MEMBERS TO BE FORMED FROM CORROSION RESISTANT STEEL CONFORMING TO ASTM A 653/A 653M WITH MINIMUM YIELD STRESS (Fy) ACCORDING TO STRUCTURAL PERFORMANCE.		
	LG-3	LIGHT GAGE MEMBERS AND DETAILS SHOWN ON THE ARCHITECTURAL OR STRUCTURAL DRAWINGS ARE FOR BID PURPOSES ONLY. STRUCTURAL STUD AND/OR JOIST FRAMING MEMBERS AND CONNECTIONS ARE TO BE ENGINEERED BY THE MANUFACTURER. DESIGN CALCULATIONS AND SHOP DRAWINGS INDICATING JAMBS, POSTS, HEADERS, BRACING AND PIECES NECESSARY FOR CONSTRUCTION MUST BE SUBMITTED TO THE CONTRACTING OFFICER FOR REVIEW. DESIGN CALCULATIONS ARE TO BE PREPARED BY OR UNDER THE SUPERVISION OF A PROFESSIONAL ENGINEER REGISTERED IN THE UNITED STATES AND BEARING THE SEAL OF THAT PROFESSIONAL ENGINEER.		
	LG-4	MAXIMUM STUD SPACING TO BE 16" ON CENTER WITH DOUBLED STUDS (MINIMUM) AT EACH SIDE OF OPENINGS.		
	LG-5	FRAMING COMPONENTS ARE TO BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS OR AS AN ANGULAR FIT AGAINST ABUTTING MEMBERS.		
	LG-6	FIELD CUTTING OF STUDS MUST BE DONE BY SAWING OR SHEARING, TORCH CUTTING OF COLD-FORMED MEMBERS IS UNACCEPTABLE.		
	LG-7	FASTENING OF COMPONENTS IS TO BE WITH SELF-DRILLING SCREWS OR WELDING. WELDING OF STUDS MUST COMPLY WITH AWS D1.3/D1.3M. WELDS TO BE TOUCHED-UP WITH ZINC-RICH PAINT. SCREWS AND WELDS TO BE OF SUFFICIENT SIZE TO ENSURE THE STRENGTH OF THE CONNECTION. WIRE TYING OF COMPONENTS IS NOT PERMITTED.		
	LG-8	LIGHT GAGE STEEL FRAMING MEMBERS ARE TO BE SECURELY ATTACHED TO THE STRUCTURE WHERE INDICATED ON THE DRAWINGS OR APPROVED SHOP DRAWINGS. FASTENERS TO BE COMPATIBLE WITH THE STRUCTURAL MEMBERS. POWDER DRIVEN FASTENERS ARE NOT ACCEPTABLE FOR STRUCTURAL APPLICATIONS.		
	LG-9	PROVIDE VERTICAL SLIDE TRACKS, OR SLIDE CLIPS, WHERE INDICATED ON THE DRAWINGS OR OTHERWISE REQUIRED TO ALLOW FOR VERTICAL STRUCTURAL MOVEMENTS. MAXIMUM EXPECTED STRUCTURE LIVE LOAD DEFLECTION IS L/360 AT FLOORS AND L/240 AT ROOFS.		
	LG-10	REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION, INCLUDING SHEATHING TYPE, FINISHES, OPENINGS, LOCATIONS ETC.		
GENERAL STRUCTURAL NOTES				
CREECH AIR FORCE BASE, CLARK COUNTY, NV DISASTER RELIEF PROGRAM (DRP) - PHASE 2 494137				
GENERAL STRUCTURAL NOTES				
SHEET ID				
S-003				
PRELIMINARY DESIGN NOT FOR CONSTRUCTION				

CONCRETE REINFORCING DEVELOPMENT AND LAP SPLICE TABLE



DEVELOPMENT LENGTH LAP SPLICE LENGTH HOOK DEVELOPMENT LENGTH

 $f_c = 4500 \text{ PSI}$

BAR SIZE	#3	#4	#5	#6	#7	#8	#9	#10	#11
ld (TOP BARS)	18	24	30	35	51	59	66	74	82
ld (OTHER BARS)	14	18	23	27	40	45	51	57	64
lsp (TOP BARS)	24	32	39	46	67	77	86	97	107
lsp (OTHER BARS)	18	24	30	35	51	59	66	74	82
ldh	12	12	12	14	17	19	21	24	27

 $f_c = 5000 \text{ PSI}$

BAR SIZE	#3	#4	#5	#6	#7	#8	#9	#10	#11
ld (TOP BARS)	17	23	28	34	49	56	63	71	78
ld (OTHER BARS)	13	17	22	26	38	43	48	54	60
lsp (TOP BARS)	23	30	37	45	64	73	82	93	102
lsp (OTHER BARS)	17	23	28	34	49	56	63	71	78
ldh	12	12	12	14	16	18	20	23	25

NOTES:

- LENGTHS SHOWN ARE IN INCHES.
- LENGTHS SHOWN ABOVE ARE FOR SINGLE REINFORCING BARS WITH MAXIMUM YIELD STRENGTH OF 60KSI.
- LENGTHS SHOWN ASSUME CLEAR SPACING OF BARS ARE AT LEAST 2 TIMES BAR DIAMETER AND CLEAR COVER OF AT..
- LENGTHS SHOWN ABOVE ARE FOR NORMAL WEIGHT CONCRETE. FOR LIGHT WEIGHT CONCRETE, MULTIPLY VALUES BY...
- FOR EPOXY COATED BARS, MULTIPLY VALUES BY 1.5.
- WHEN SPLICING BARS OF DIFFERENT SIZES, USE SPLICE LENGTH FOR LARGER BAR.
- SPLICES (LAPS) OF REINFORCING BARS MUST BE CLASS 'B' TENSION LAPS PER ACI 318, UNLESS NOTED OTHERWISE.
- lsp VALUES ABOVE TO BE DIVIDED BY 1.3 FOR CLASS 'A' SPLICE.
- TOP BARS ARE HORIZONTAL REINFORCING BARS WITH 12 INCHES OR MORE OF FRESH CONCRETE IS PLACED BELOW.
- OTHER BARS ARE ANY REINFORCING BARS THAT DO NOT MEET QUALIFICATION FOR TOP BARS.

ELEMENT	$f_c (\text{PSI})$, WEIGHT	EXPOSURE CLASS (NOTES 1 & 2)
FOOTINGS	4500, NW	F0, S2, W0, C1
FOUNDATION (STEM) WALLS	4500, NW	F1, S2, W0, C1
ADMIN INTERIOR SLAB ON GRADE	4500, NW	F0, S2, W0, C0
HANGAR BAY INTERIOR SLAB ON GRADE	5000, NW	F0, S2, W0, C1
EXTERIOR SLABS	4500, NW	F1, S2, W0, C1
LEVELING GROUT	5000, NW	

NOTES:

- EXPOSURE CLASS INDICATES THE SEVERITY OF THE ANTICIPATED EXPOSURE OF CONCRETE MEMBERS, IN ACCORDANCE WITH ACI 318, CHAPTER 18.
- PROVIDE TYPE V OR EQUIVALENT SULFATE RESISTANT CEMENT (AS APPROVED BY THE ENGINEER) IN ALL CONCRETE.
- CONCRETE STRENGTH, f_c , IS THE COMPRESSIVE STRENGTH AT 28 DAYS UNLESS NOTED OTHERWISE.
- NORMAL WEIGHT (NW) CONCRETE SHALL HAVE A DRY DENSITY OF 145 ± 4 PCF, UNO. LIGHTWEIGHT CONCRETE (LW) MUST HAVE A DRY DENSITY OF 115 ± 5 PCF UNO.
- MIX DESIGNS MUST BE IN ACCORDANCE WITH ACI 301.
- WHERE CONCRETE IS EXPOSURE CLASS F3, RESTRICTIONS ON MAXIMUM FLY ASH AND/OR OTHER CEMENTITIOUS MATERIALS APPLY. REFER TO ACI 318, TABLE 26.4.2.2(B) FOR REQUIREMENTS.
- AIR CONTENT FOR F1 EXPOSURE MUST BE BETWEEN 4.5% TO 6% UNLESS APPROVED OTHERWISE BY THE ENGINEER. THERE IS NO AIR CONTENT REQUIREMENT FOR THE F0 EXPOSURE CONCRETE.
- MAXIMUM W/C RATIO MUST NOT BE EXCEEDED. APPROVED ADMIXTURES SUCH AS PLASTICIZERS MAY BE USED ON SITE.
- CONCRETE FLEXURAL STRENGTH OF HANGAR BAY SOG WILL BE 550 PSI MIN AND 650 PSI MAX AT 90 DAYS.

MASONRY STRENGTH TABLE

ELEMENT	SPECIFIED COMPRESSIVE STRENGTH
CONCRETE MASONRY	$f_m = 2000 \text{ PSI}$
GROUT FOR CONCRETE MASONRY	$f_g \geq f_m (2000 \text{ PSI MINIMUM})$

NOTES:

- PROVIDE MEDIUM WEIGHT HOLLOW CONCRETE MASONRY UNITS FOR GENERAL USE UNLESS OTHERWISE NOTED.
- MORTAR FOR CONCRETE MASONRY MUST BE TYPE S AT EXTERIOR WALLS AND TYPE N AT INTERIOR WALLS.

MASONRY REINFORCING SPLICE TABLE

BAR SIZE	SINGLE REINFORCING			DOUBLE REINFORCING		
	8" CMU	10" CMU	12" CMU	8" CMU	10" CMU	12" CMU
#3	12	12	12	13	13	13
#4	13	12	12	22	22	22
#5	19	16	13	35	35	35
#6	37	29	24	54	54	54
#7	-	40	33	-	63	63
#8	-	-	50	-	-	72

NOTES:

- LAP SPLICE LENGTHS ARE IN INCHES.
- LAP SPLICES IN REINFORCED MASONRY MUST HAVE MINIMUM LENGTHS AS DEFINED ABOVE UNLESS NOTED OTHERWISE.
- TABULATED VAULES ARE CALCULATED IN ACCORDANCE WITH TMS 402/602-16 CHAPTER 6.
- SPLICE AND DEVELOPMENT LENGTHS ARE THE SAME VALUE FOR HORIZONTAL AND VERTICAL BARS.
- SINGLE REINFORCING IS A SINGLE BAR CENTERED IN CMU BLOCK CELL, DOUBLE REINFORCING IS TWO BARS IN A CMU BLOCK CELL WITH 2 INCH MINIMUM CLEAR COVER FROM OUTSIDE FACE OF BLOCK.
- TABULATED VALUES BASED ON UNCOATED REINFORCEMENT WITH A YEILD STRENGTH, $F_y = 60 \text{ KSI}$
- TABULATED VALUES BASED ON MASONRY COMPRESSIVE STRENGTH, $f_m = 2000 \text{ PSI}$



US Army Corps of Engineers ®

DATE

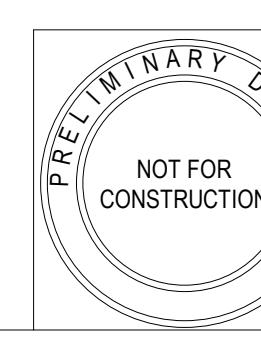
DESIGNED BY:	A. VALENCIA
DRAWN BY:	R. CARLSON
CHECKED BY:	D. CLAYSON
SUBMITTED BY:	
SIZE:	

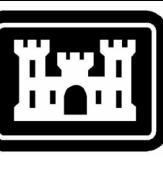
US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT
SOLICITATION NO.: W912PL25R0012
CONTRACT NO.: W912PL25C0037
KORTE CONSTRUCTION
5700 OAKLAND AVE, SUITE 275
ST. LOUIS, MO 63110

CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137
GENERAL STRUCTURAL NOTES

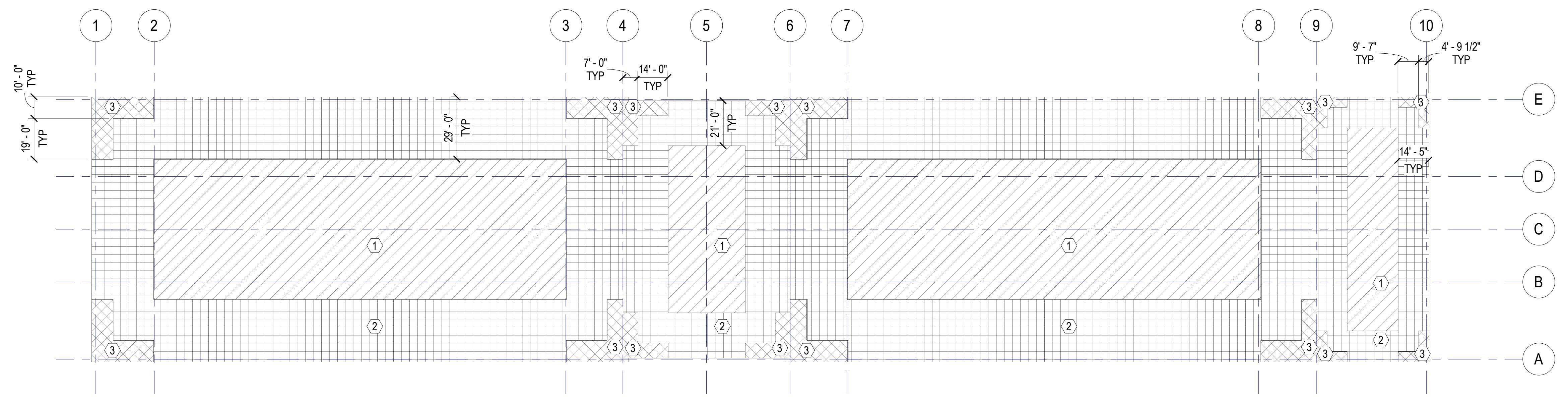
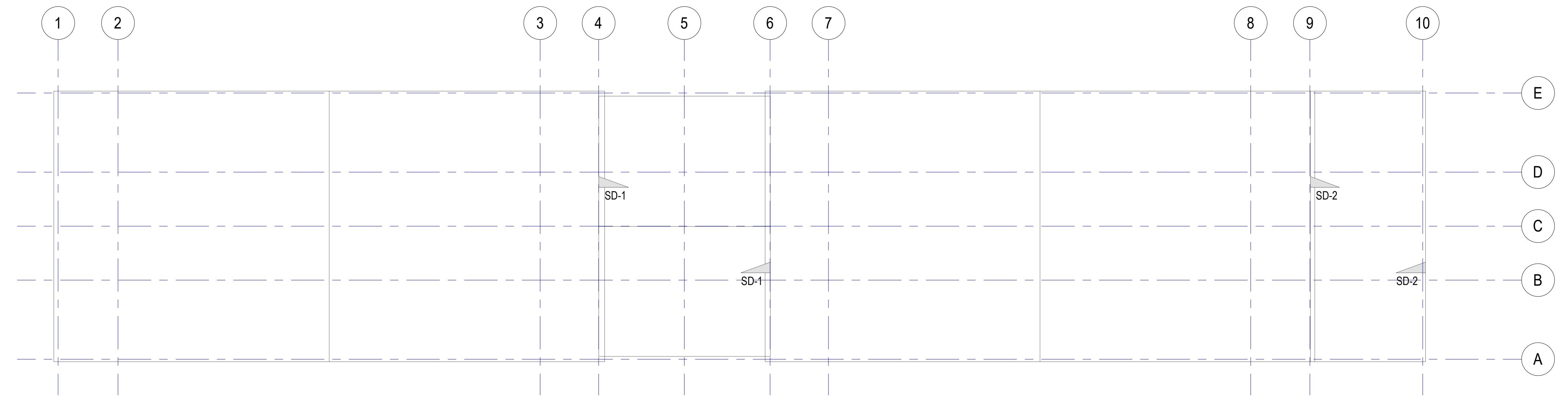
PRELIMINARY DESIGN
NOT FOR CONSTRUCTION
ANSI D
SHEET ID

S-004

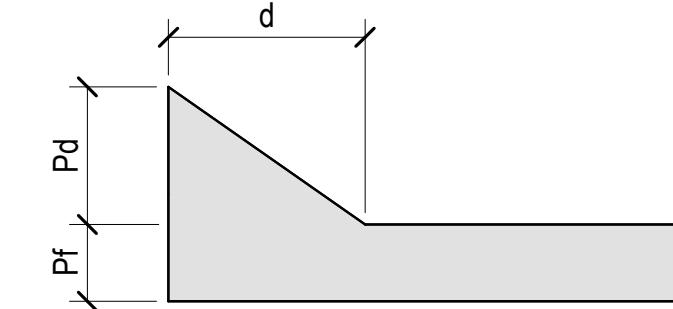


US Army Corps
of Engineers ®

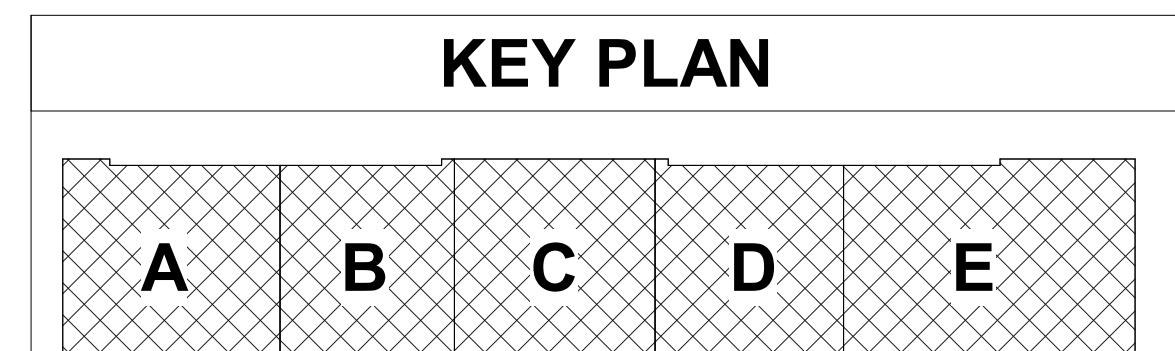
DATE



SNOW DRIFT LOAD KEY			
MARK	SURCHAGE LOAD (Pd)	DRIFT WIDTH (d)	BALANCED SNOW LOAD (Pf)
SD-1	41.8 psf	10 ft	21 psf
SD-2	29.9 psf	23 ft	3.9 psf

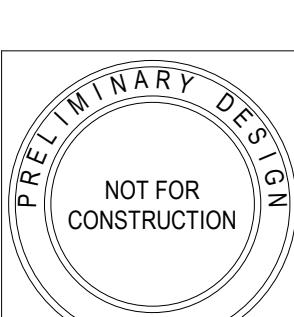
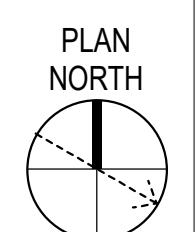


WIND LOAD MAP KEY						
MARK	PATTERN	USAGE	WIND LOAD (psf)			500 ft ²
			50 ft ²	100 ft ²	500 ft ²	
①	Diagonal Hatching	INTERIOR ROOF ZONE (ZONE 1)	-50.8 23.0	-47.6 23.0	-40.1 23.0	
②	Horizontal Hatching	ROOF END ZONE (ZONE 2)	-67.0 23.0	-60.1 23.0	-50.5 23.0	
③	Cross-hatching	ROOF END ZONE (ZONES 3)	-77.9 23.0	-69.7 23.0	-50.5 23.0	

CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

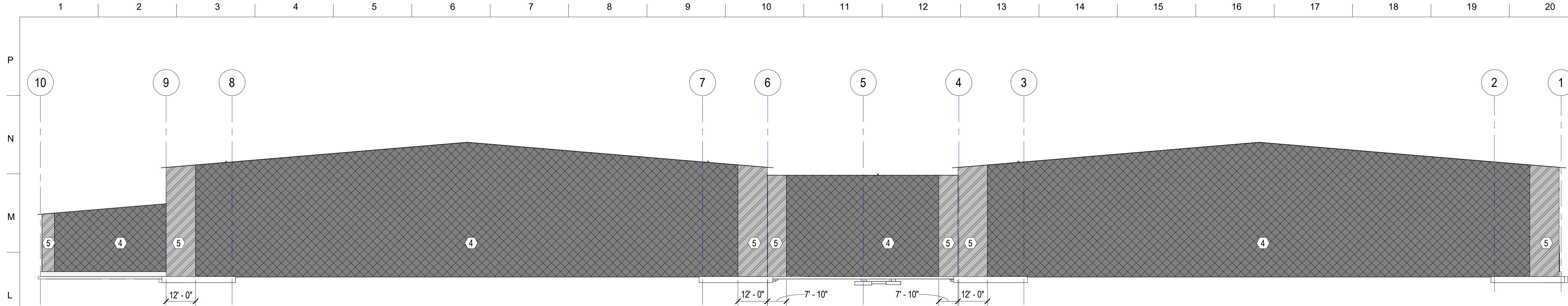
LOADING PLANS

1" = 30'-0" 0 15' 30' 60' 90'

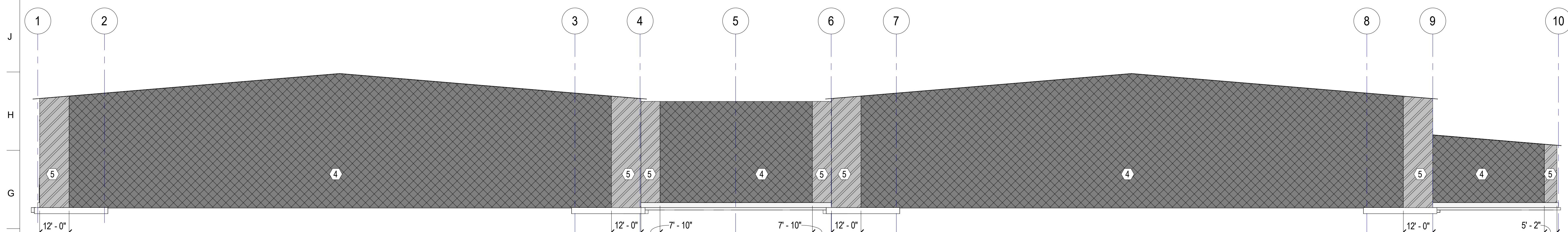


SHEET ID

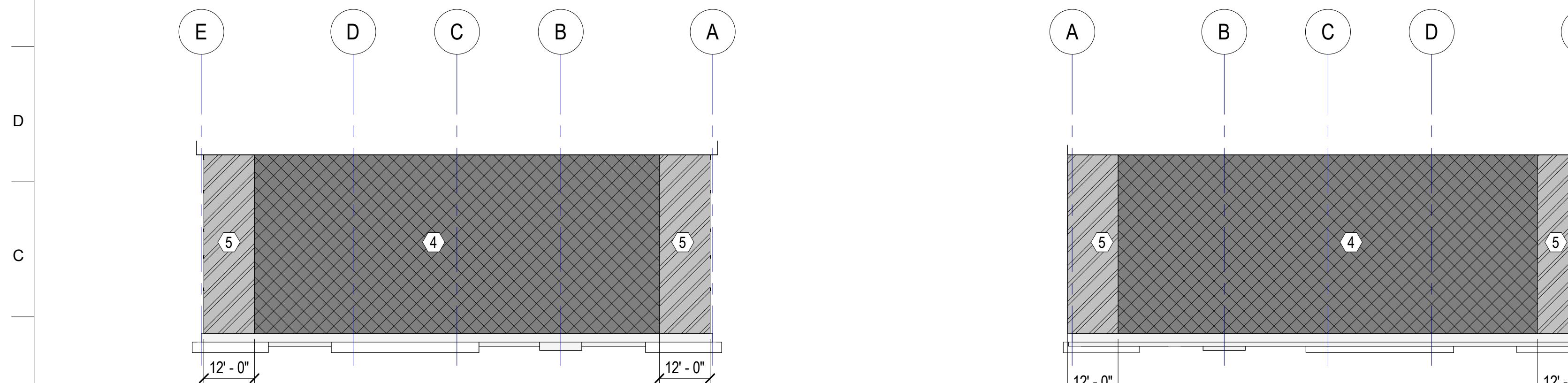
S-005



K1 WIND LOAD ELEVATION - NORTH FACE
3/64" = 1'-0"



F1 WIND LOAD ELEVATION - SOUTH FACE
3/64" = 1'-0"



B1 WIND LOAD ELEVATION - WEST FACE
3/64" = 1'-0"

B7 WIND LOAD ELEVATION - EAST FACE
3/64" = 1'-0"

WIND LOAD MAP KEY					
MARK	PATTERN	USAGE	WIND LOAD (psf)		
			10 ft ²	100 ft ²	200 ft ²
④	█	INTERIOR WALL ZONE (ZONE 4)	-39.9 +37.5	-35.8 +33.4	-34.5 +32.2
⑤	▨	EXTERIOR WALL ZONE (ZONE 5)	-46.9 +37.5	-38.6 +33.4	-36.2 +32.2

CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
49137

WIND LOADING ELEVATIONS

SHEET ID

S-006

PRELIMINARY DESIGN

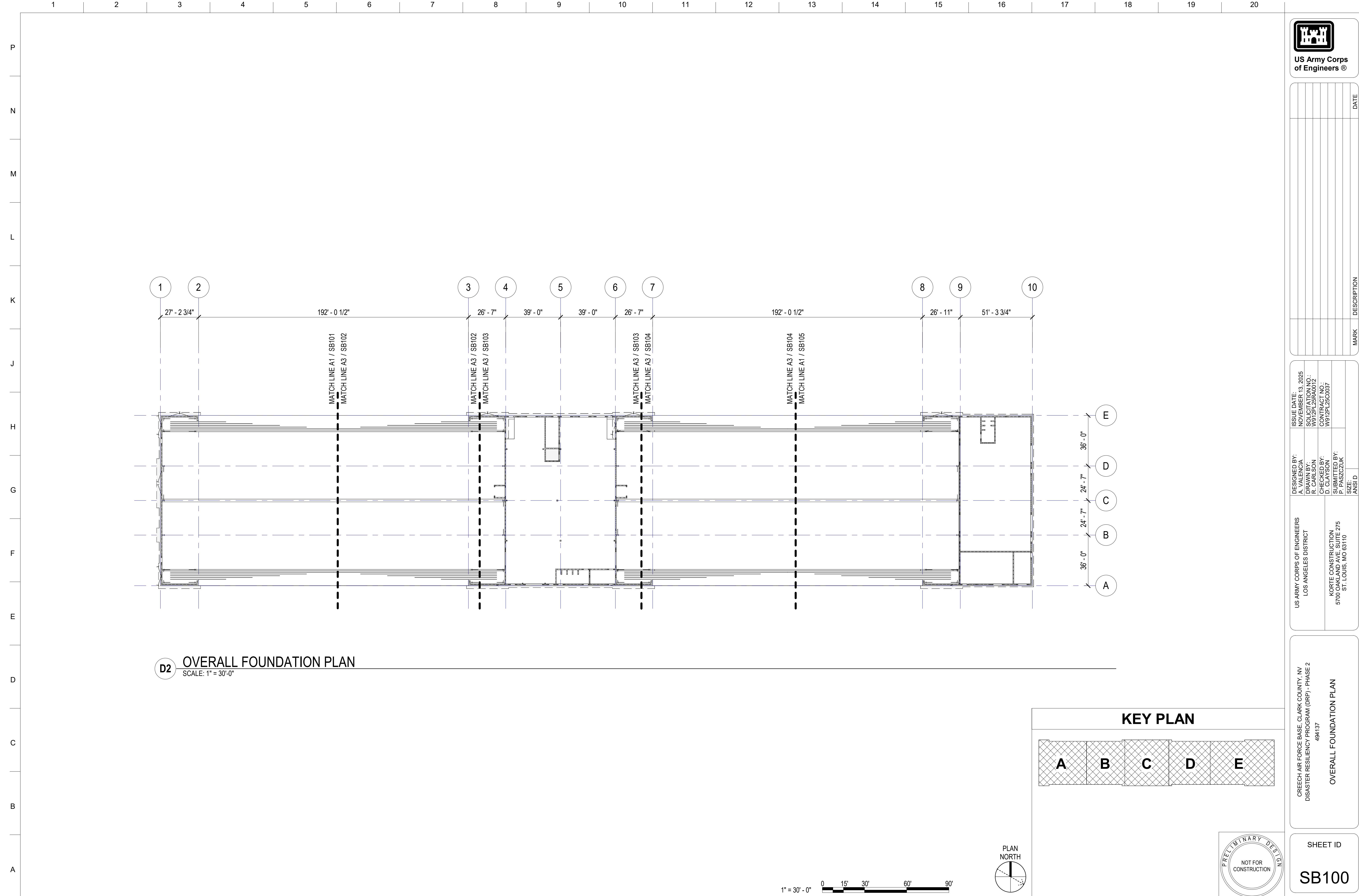
NOT FOR CONSTRUCTION

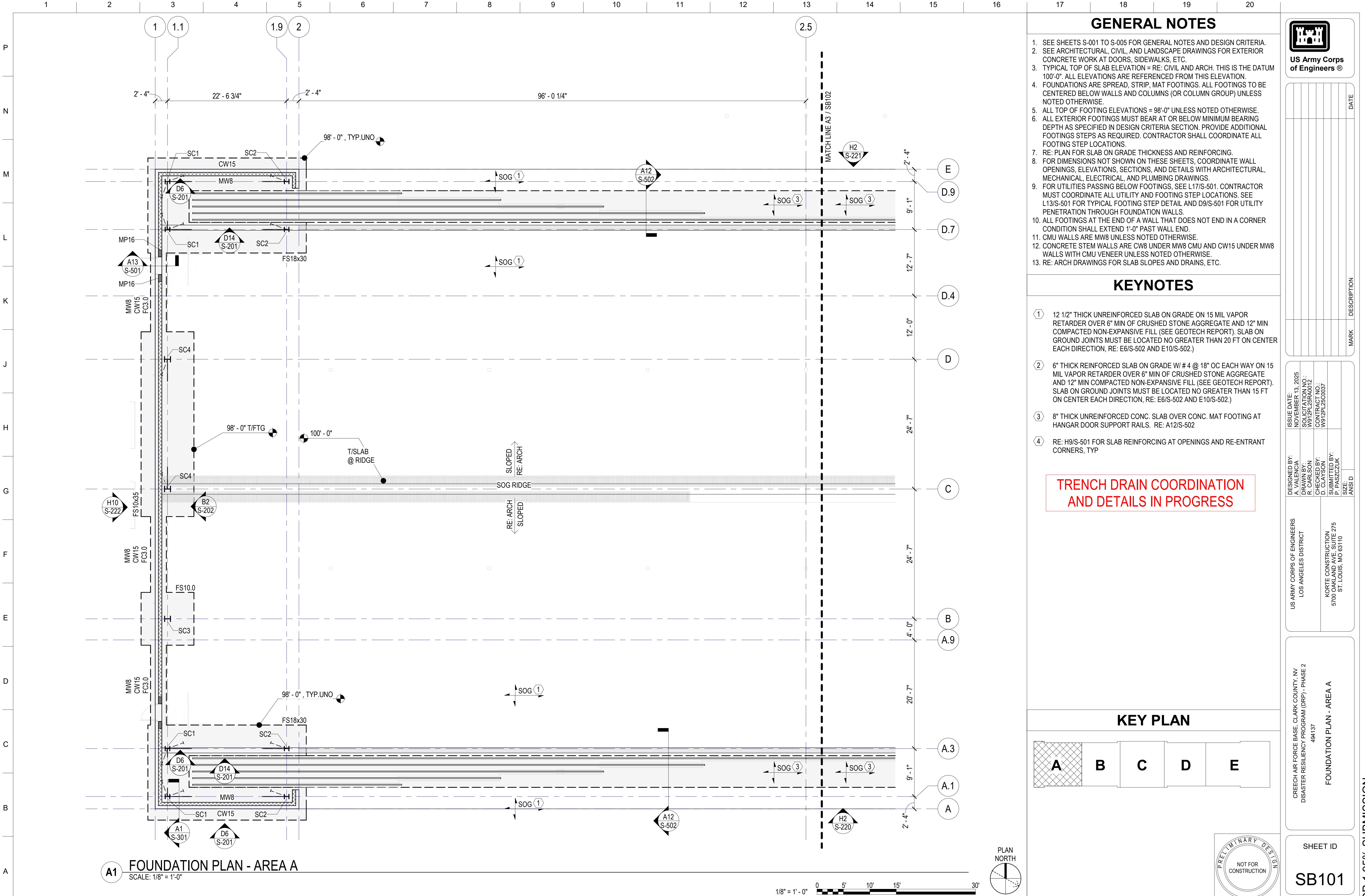


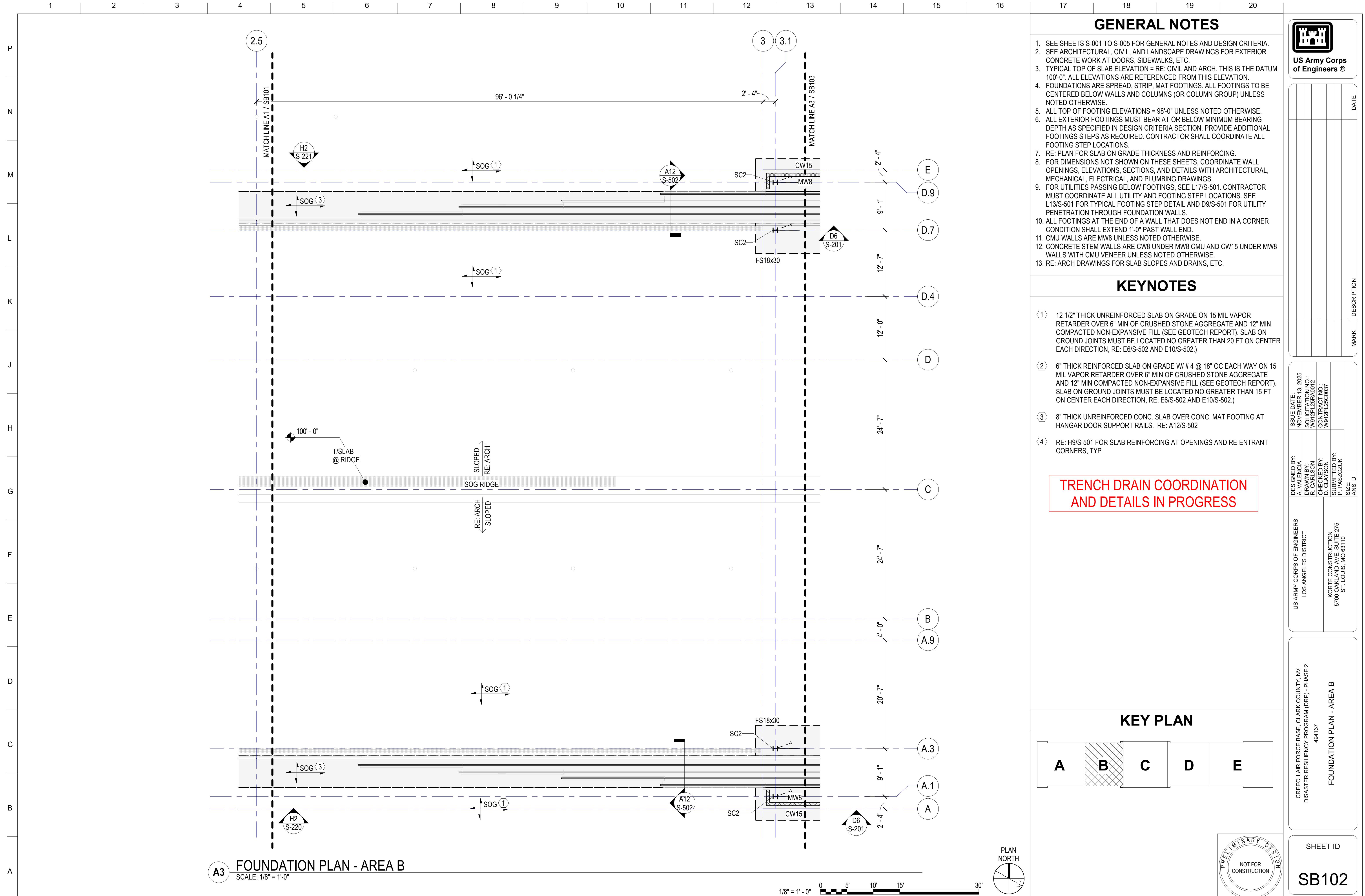
US Army Corps
of Engineers ®

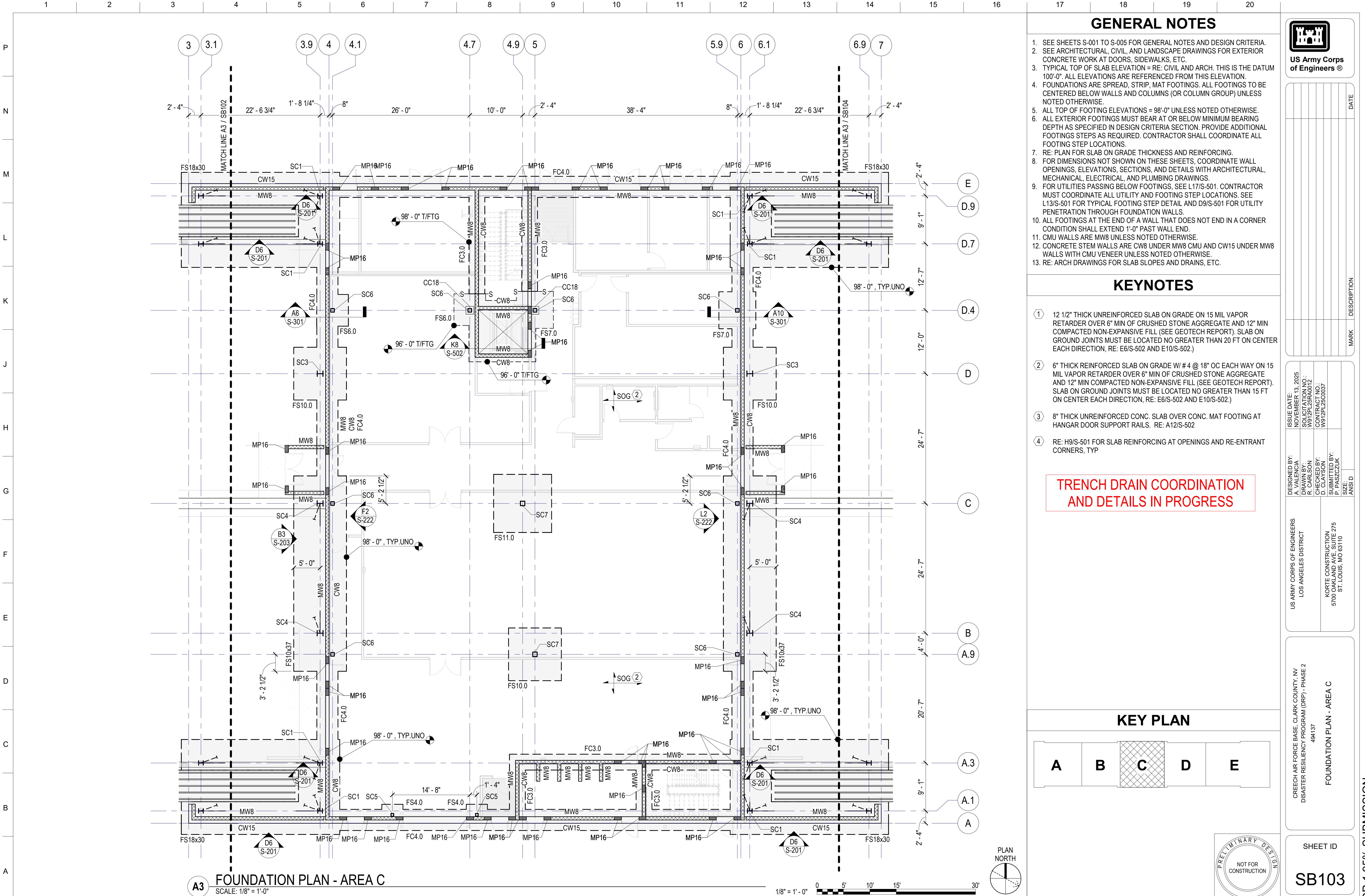
DATE

3/64" = 1'-0" 0 5' 10' 20' 40' 80'









P

N

4

114

11

1

—

11

1

D

C

B

GENERAL NOTES

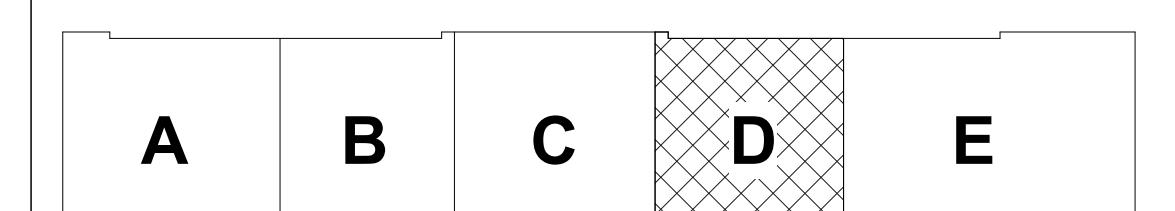
1. SEE SHEETS S-001 TO S-005 FOR GENERAL NOTES AND DESIGN CRITERIA.
2. SEE ARCHITECTURAL, CIVIL, AND LANDSCAPE DRAWINGS FOR EXTERIOR CONCRETE WORK AT DOORS, SIDEWALKS, ETC.
3. TYPICAL TOP OF SLAB ELEVATION = RE: CIVIL AND ARCH. THIS IS THE DATUM 100'-0". ALL ELEVATIONS ARE REFERENCED FROM THIS ELEVATION.
4. FOUNDATIONS ARE SPREAD, STRIP, MAT FOOTINGS. ALL FOOTINGS TO BE CENTERED BELOW WALLS AND COLUMNS (OR COLUMN GROUP) UNLESS NOTED OTHERWISE.
5. ALL TOP OF FOOTING ELEVATIONS = 98'-0" UNLESS NOTED OTHERWISE.
6. ALL EXTERIOR FOOTINGS MUST BEAR AT OR BELOW MINIMUM BEARING DEPTH AS SPECIFIED IN DESIGN CRITERIA SECTION. PROVIDE ADDITIONAL FOOTINGS STEPS AS REQUIRED. CONTRACTOR SHALL COORDINATE ALL FOOTING STEP LOCATIONS.
7. RE: PLAN FOR SLAB ON GRADE THICKNESS AND REINFORCING.
8. FOR DIMENSIONS NOT SHOWN ON THESE SHEETS, COORDINATE WALL OPENINGS, ELEVATIONS, SECTIONS, AND DETAILS WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS.
9. FOR UTILITIES PASSING BELOW FOOTINGS, SEE L17/S-501. CONTRACTOR MUST COORDINATE ALL UTILITY AND FOOTING STEP LOCATIONS. SEE L13/S-501 FOR TYPICAL FOOTING STEP DETAIL AND D9/S-501 FOR UTILITY PENETRATION THROUGH FOUNDATION WALLS.
10. ALL FOOTINGS AT THE END OF A WALL THAT DOES NOT END IN A CORNER CONDITION SHALL EXTEND 1'-0" PAST WALL END.
11. CMU WALLS ARE MW8 UNLESS NOTED OTHERWISE.
12. CONCRETE STEM WALLS ARE CW8 UNDER MW8 CMU AND CW15 UNDER MW8 WALLS WITH CMU VENEER UNLESS NOTED OTHERWISE.
13. RE: ARCH DRAWINGS FOR SLAB SLOPES AND DRAINS, ETC.

KEYNOTES

- 1 12 1/2" THICK UNREINFORCED SLAB ON GRADE ON 15 MIL VAPOR RETARDER OVER 6" MIN OF CRUSHED STONE AGGREGATE AND 12" MIN COMPACTED NON-EXPANSIVE FILL (SEE GEOTECH REPORT). SLAB ON GROUND JOINTS MUST BE LOCATED NO GREATER THAN 20 FT ON CENTER EACH DIRECTION, RE: E6/S-502 AND E10/S-502.)
- 2 6" THICK REINFORCED SLAB ON GRADE W/ # 4 @ 18" OC EACH WAY ON 15 MIL VAPOR RETARDER OVER 6" MIN OF CRUSHED STONE AGGREGATE AND 12" MIN COMPACTED NON-EXPANSIVE FILL (SEE GEOTECH REPORT). SLAB ON GROUND JOINTS MUST BE LOCATED NO GREATER THAN 15 FT ON CENTER EACH DIRECTION, RE: E6/S-502 AND E10/S-502.)
- 3 8" THICK UNREINFORCED CONC. SLAB OVER CONC. MAT FOOTING AT HANGAR DOOR SUPPORT RAILS. RE: A12/S-502
- 4 RE: H9/S-501 FOR SLAB REINFORCING AT OPENINGS AND RE-ENTRANT CORNERS, TYP

TRENCH DRAIN COORDINATION AND DETAILS IN PROGRESS

KEY PLAN



494137
FOUNDATION PLAN - AREA D
CLARK COUNTY, NW
CH AIR FORCE BASE, CLARK COUNTY, NW
ER RESILIENCY PROGRAM (DRP) - PHASE

U.S. AIR FORCE BASE RESILIENCY PLAN

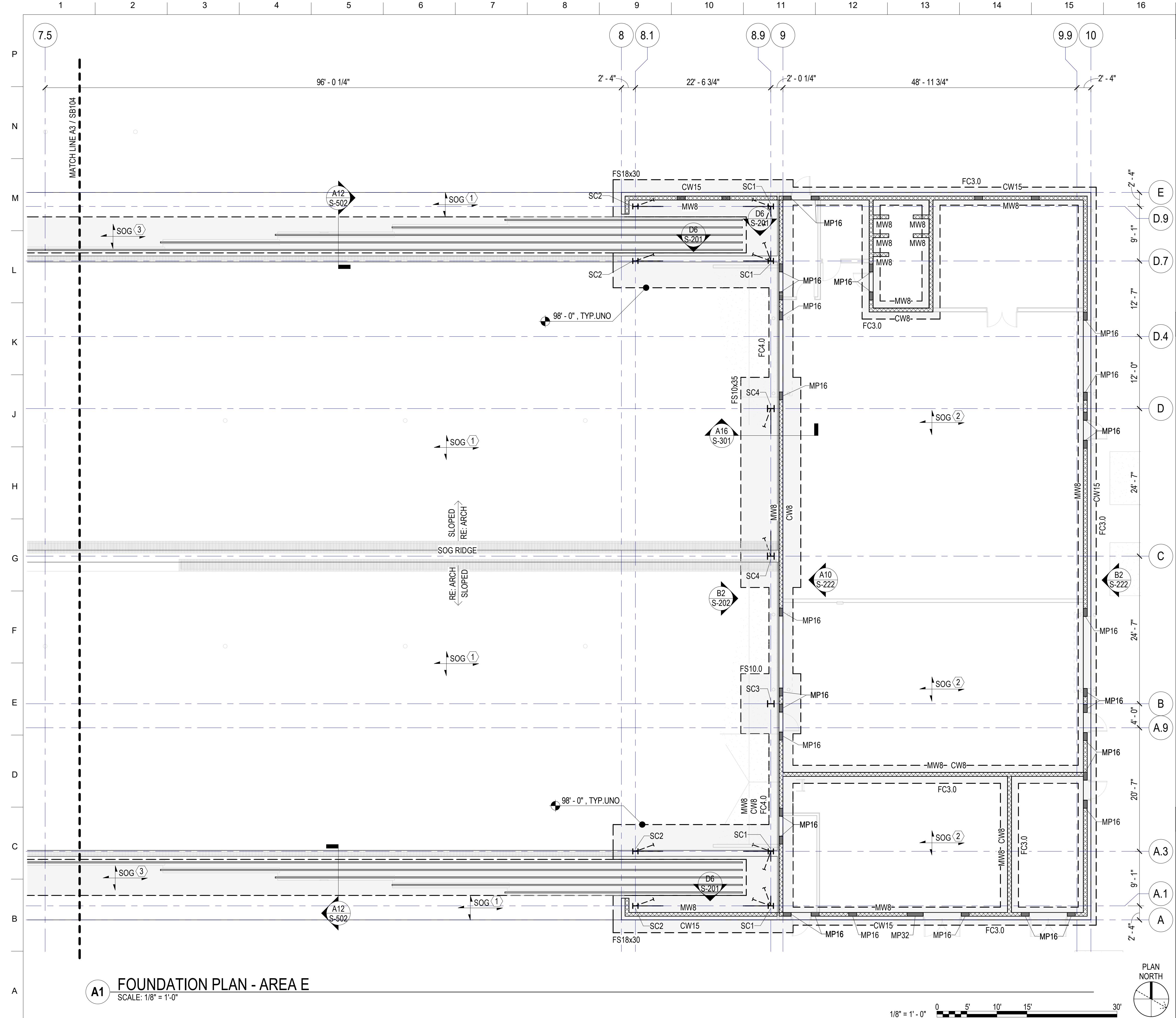
1000

SB10

DP-1 95% SUBMISSION

— 1 —

DP



GENERAL NOTES



US Army Corps
of Engineers ®

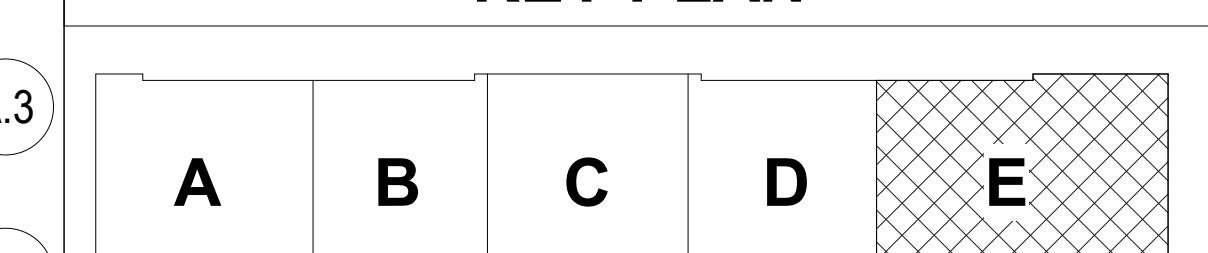
1. CONTRACTOR IS RESPONSIBLE FOR THE CONSTRUCTION SEQUENCE FOR ALL STRUCTURAL ELEMENTS IN THE PROJECT. CONTRACTOR IS RESPONSIBLE TO PROVIDE ANY SHORING OR BRACING AS NEEDED UNTIL STRUCTURE IS COMPLETE.
2. ALL BEAM-TO-COLUMN CONNECTIONS SHALL BE SINGLE SHEAR TAB CONNECTIONS UNLESS NOTED OTHERWISE. SEE TYPICAL STEEL-TO-STEEL CONNECTION SCHEDULE.
3. CONTRACTOR TO COORDINATE ALL ROOF EDGES AND OPENINGS. OPENINGS LESS THAN 6" IN ALL DIRECTIONS ARE NOT SHOWN IN STRUCTURAL DRAWINGS. RE: L1-L17/S-511 FOR PLACEMENT CRITERIA.
4. RE: SHEETS S-001 – S-005 FOR GENERAL NOTES AND DESIGN CRITERIA.
5. RE: SHEETS S-511 - S-513 FOR TYPICAL ROOF FRAMING DETAILS.
6. RE: SHEETS S-601 - S-602 FOR SCHEDULES.

KEYNOTES

- ① 12 1/2" THICK UNREINFORCED SLAB ON GRADE ON 15 MIL VAPOR RETARDER OVER 6" MIN OF CRUSHED STONE AGGREGATE AND 12" MIN COMPACTED NON-EXPANSIVE FILL (SEE GEOTECH REPORT). SLAB ON GROUND JOINTS MUST BE LOCATED NO GREATER THAN 20 FT ON CENTER EACH DIRECTION, RE: E6/S-502 AND E10/S-502.)
- ② 6" THICK REINFORCED SLAB ON GRADE W/ # 4 @ 18" OC EACH WAY ON 15 MIL VAPOR RETARDER OVER 6" MIN OF CRUSHED STONE AGGREGATE AND 12" MIN COMPACTED NON-EXPANSIVE FILL (SEE GEOTECH REPORT). SLAB ON GROUND JOINTS MUST BE LOCATED NO GREATER THAN 15 FT ON CENTER EACH DIRECTION, RE: E6/S-502 AND E10/S-502.)
- ③ 8" THICK UNREINFORCED CONC. SLAB OVER CONC. MAT FOOTING AT HANGAR DOOR SUPPORT RAILS. RE: A12/S-502
- ④ RE: H9/S-501 FOR SLAB REINFORCING AT OPENINGS AND RE-ENTRANT CORNERS, TYP

TRENCH DRAIN COORDINATION AND DETAILS IN PROGRESS

KEY PLAN



REEDSHEATH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE I
494137

SHEET

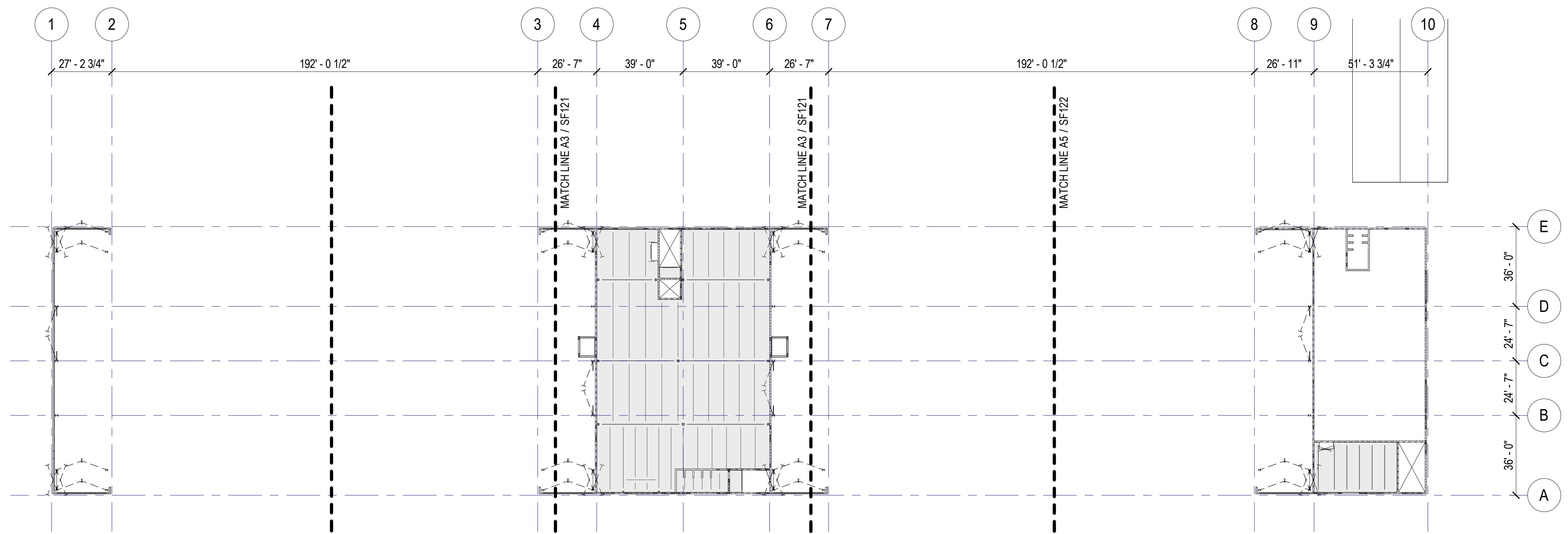
SP10

SB105

DD 10500 GUARDIAN

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

P
N
M
L
K
J
H
G
F
E
D
C
B
A

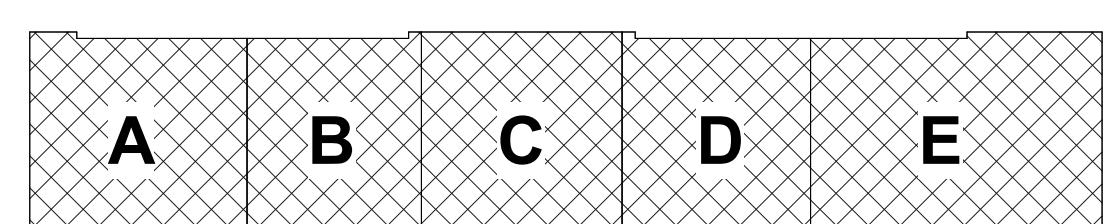


D1) OVERALL SECOND AND MEZZANINE FLOOR FRAMING PLAN
1" = 30'-0"

1" = 30'-0" 0 15' 30' 60' 90'



KEY PLAN



CZECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137
OVERALL SECOND AND MEZZANINE FLOOR
FRAMING PLAN



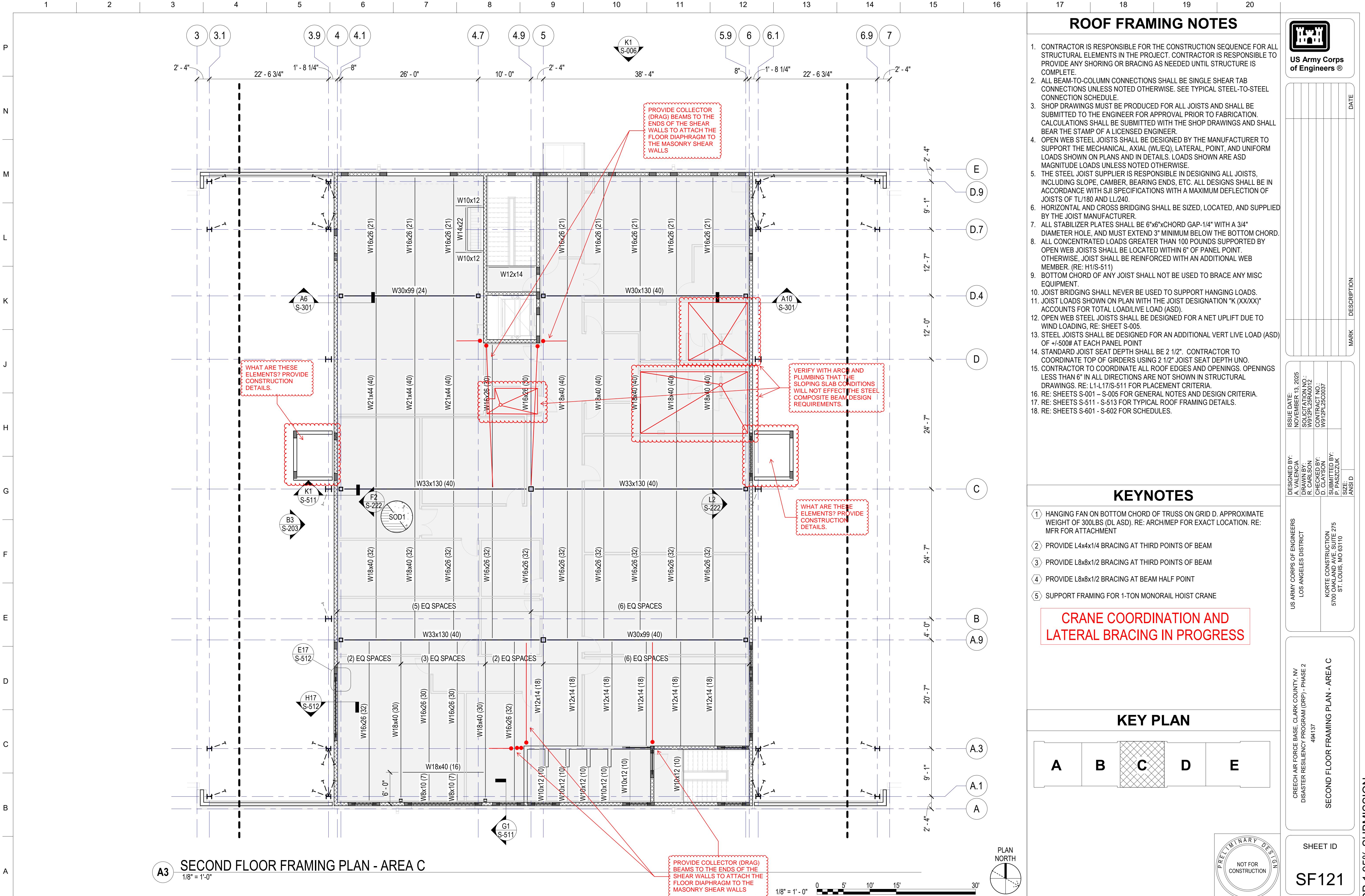
SHEET ID
SF120

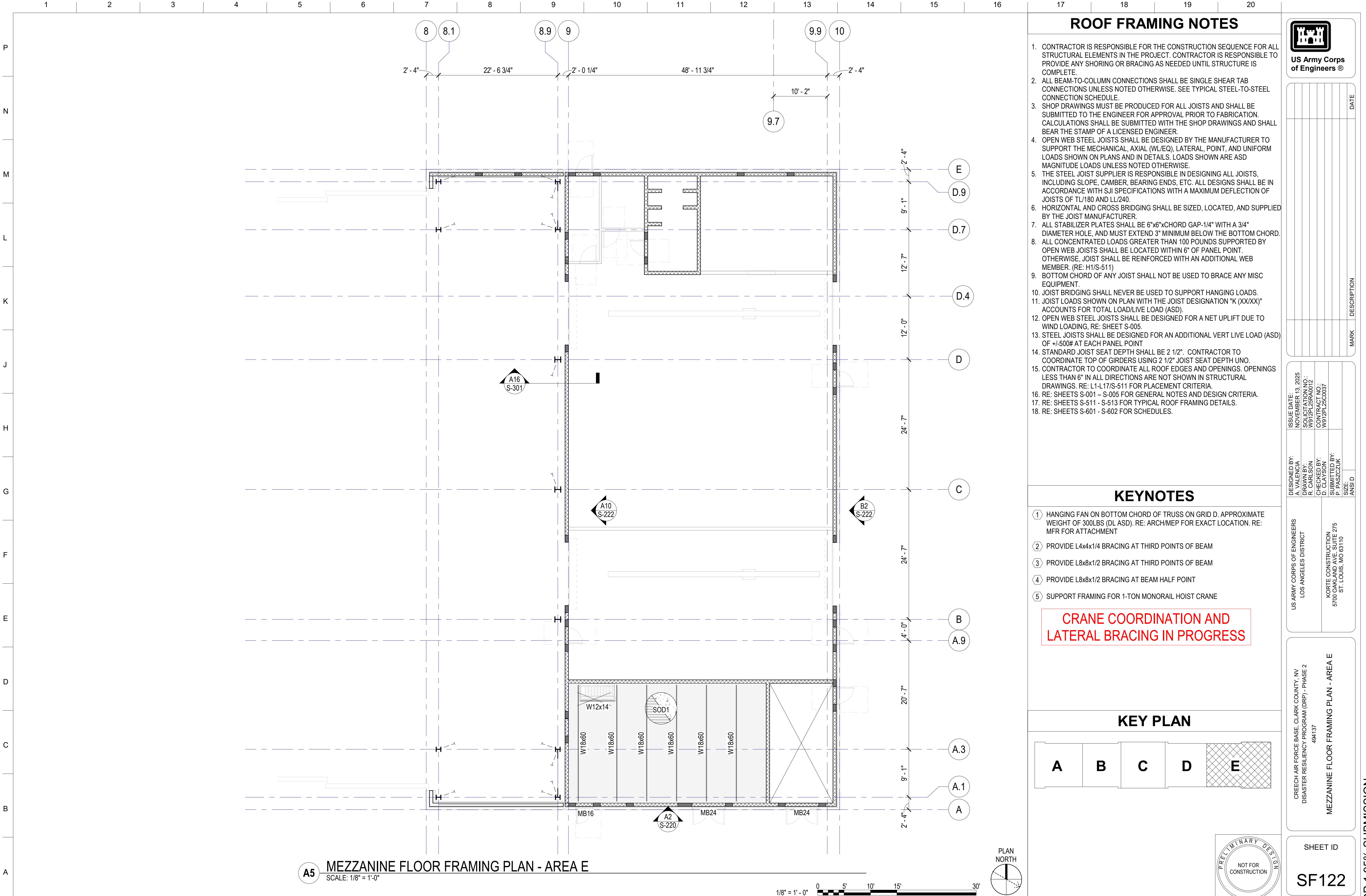


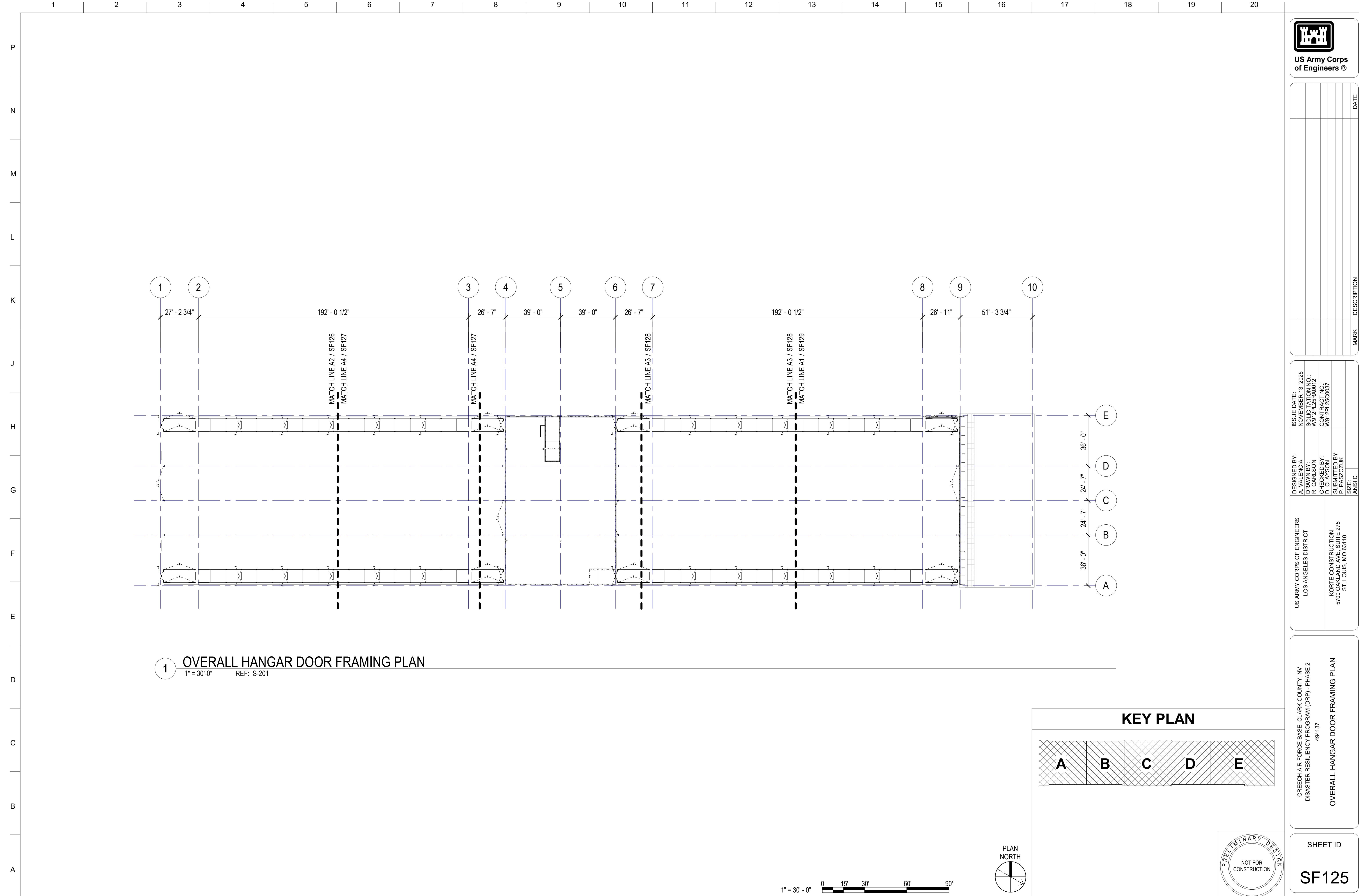
US Army Corps
of Engineers ®

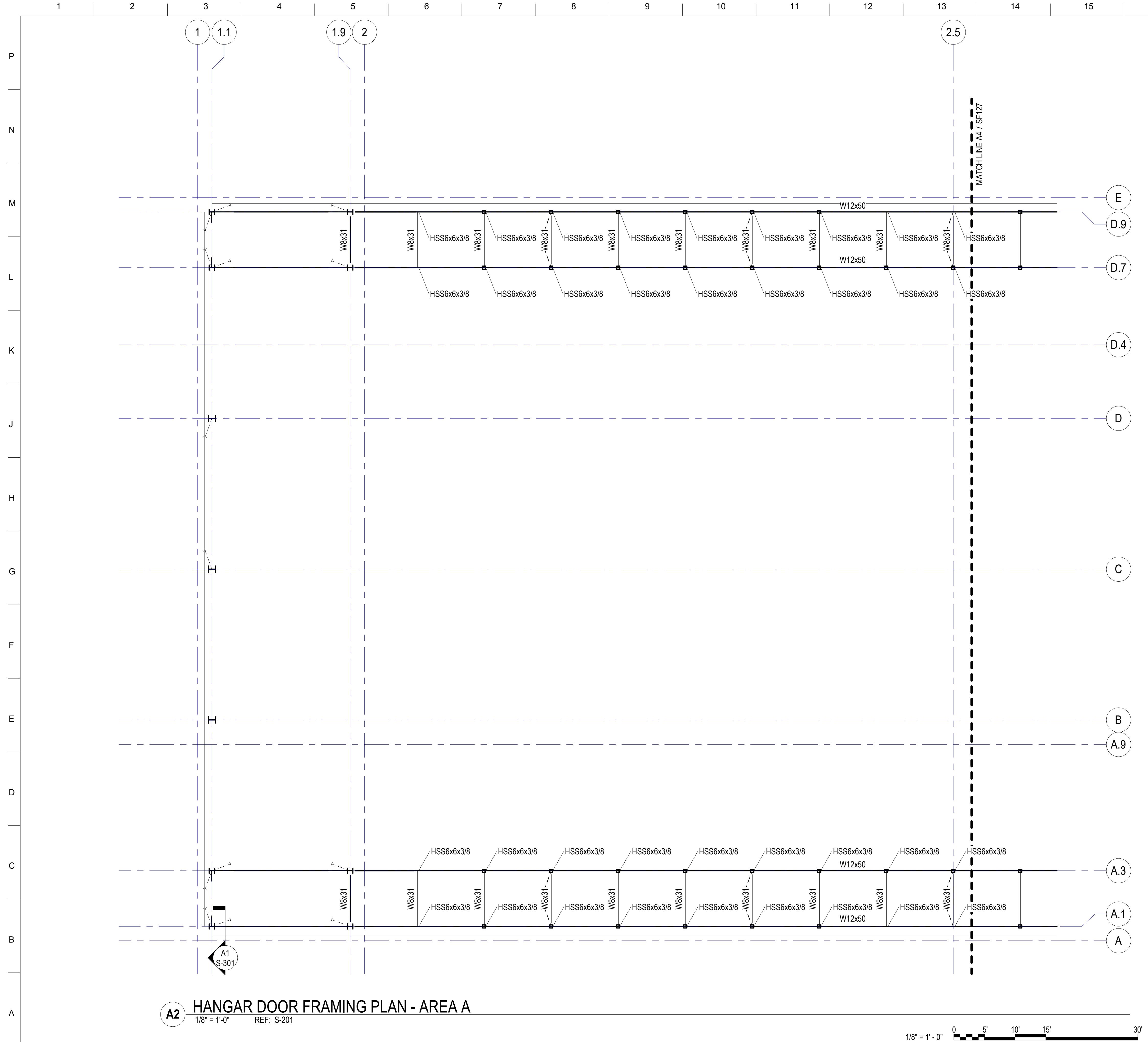
DATE

DP-1 95% SUBMISSION



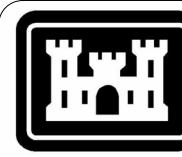






FRAMING NOTES

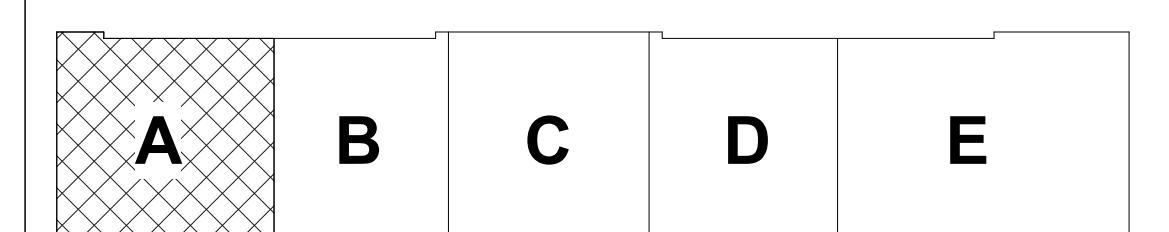
1. CONTRACTOR IS RESPONSIBLE FOR THE CONSTRUCTION SEQUENCE FOR ALL STRUCTURAL ELEMENTS IN THE PROJECT. CONTRACTOR IS RESPONSIBLE TO PROVIDE ANY SHORING OR BRACING AS NEEDED UNTIL STRUCTURE IS COMPLETE.
2. ALL BEAM-TO-COLUMN CONNECTIONS SHALL BE SINGLE SHEAR TAB CONNECTIONS UNLESS NOTED OTHERWISE. SEE TYPICAL STEEL-TO-STEEL CONNECTION SCHEDULE.
3. CONTRACTOR TO COORDINATE ALL ROOF EDGES AND OPENINGS. OPENINGS LESS THAN 6" IN ALL DIRECTIONS ARE NOT SHOWN IN STRUCTURAL DRAWINGS. RE: L1-L17/S-511 FOR PLACEMENT CRITERIA.
4. RE: SHEETS S-001 – S-005 FOR GENERAL NOTES AND DESIGN CRITERIA.
5. RE: SHEETS S-511 - S-513 FOR TYPICAL ROOF FRAMING DETAILS.
6. RE: SHEETS S-601 - S-602 FOR SCHEDULES.



US Army Corps of Engineers ®

US ARMY CORPS OF ENGINEERS LOS ANGELES DISTRICT	DESIGNED BY: A. VALENCIA	ISSUE DATE: NOVEMBER 13, 2025
	DRAWN BY: R. CARLSON	SOLICITATION NO.: W912PL25RA0012
	CHECKED BY: D. CLAYSON	CONTRACT NO.: W912PL25C0037
	KORTE CONSTRUCTION 5700 OAKLAND AVE, SUITE 275 ST. LOUIS, MO 63110	SUBMITTED BY: P. PASZCZUK
	SIZE: ANSID	

KEY PLAN

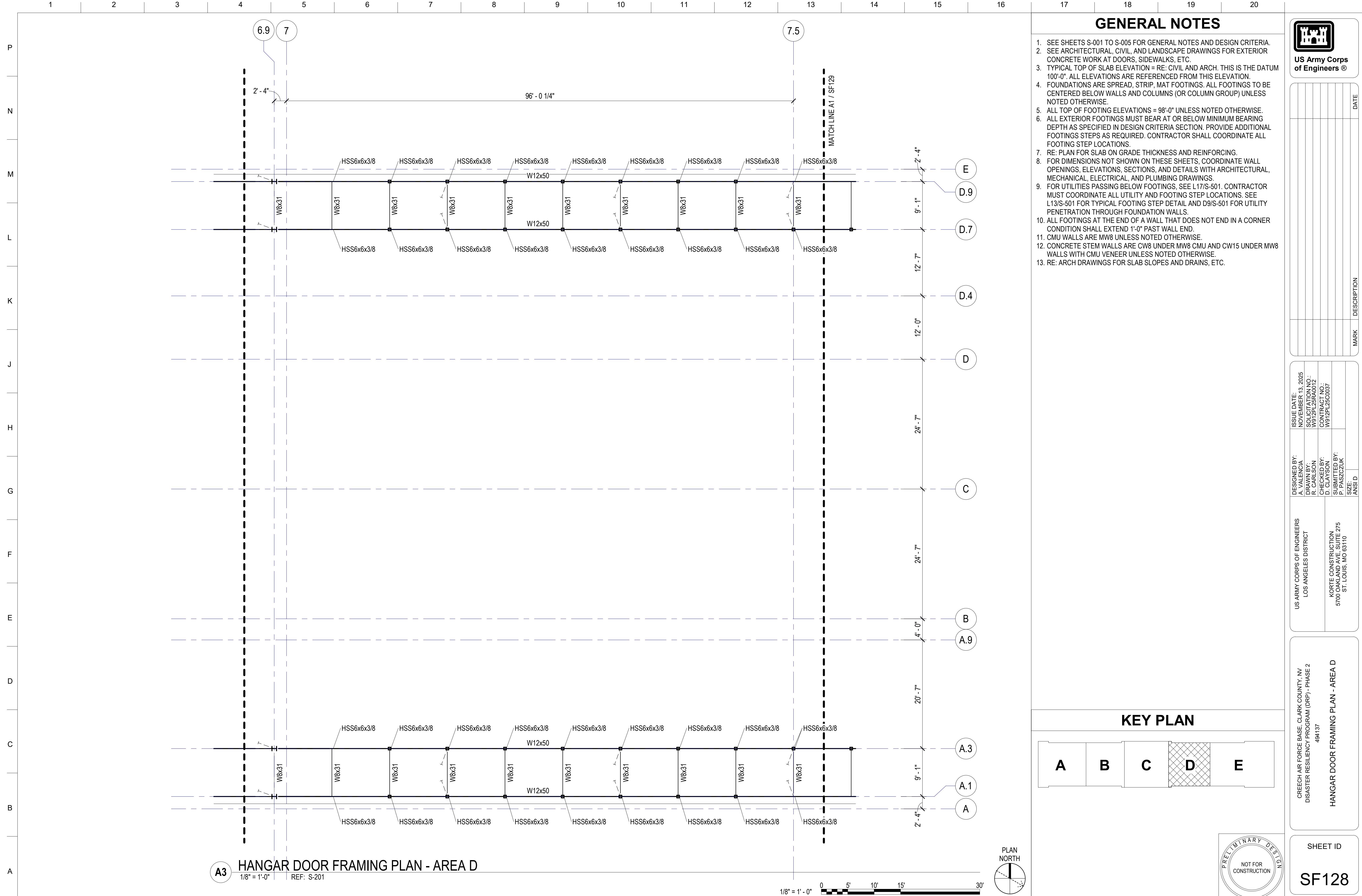


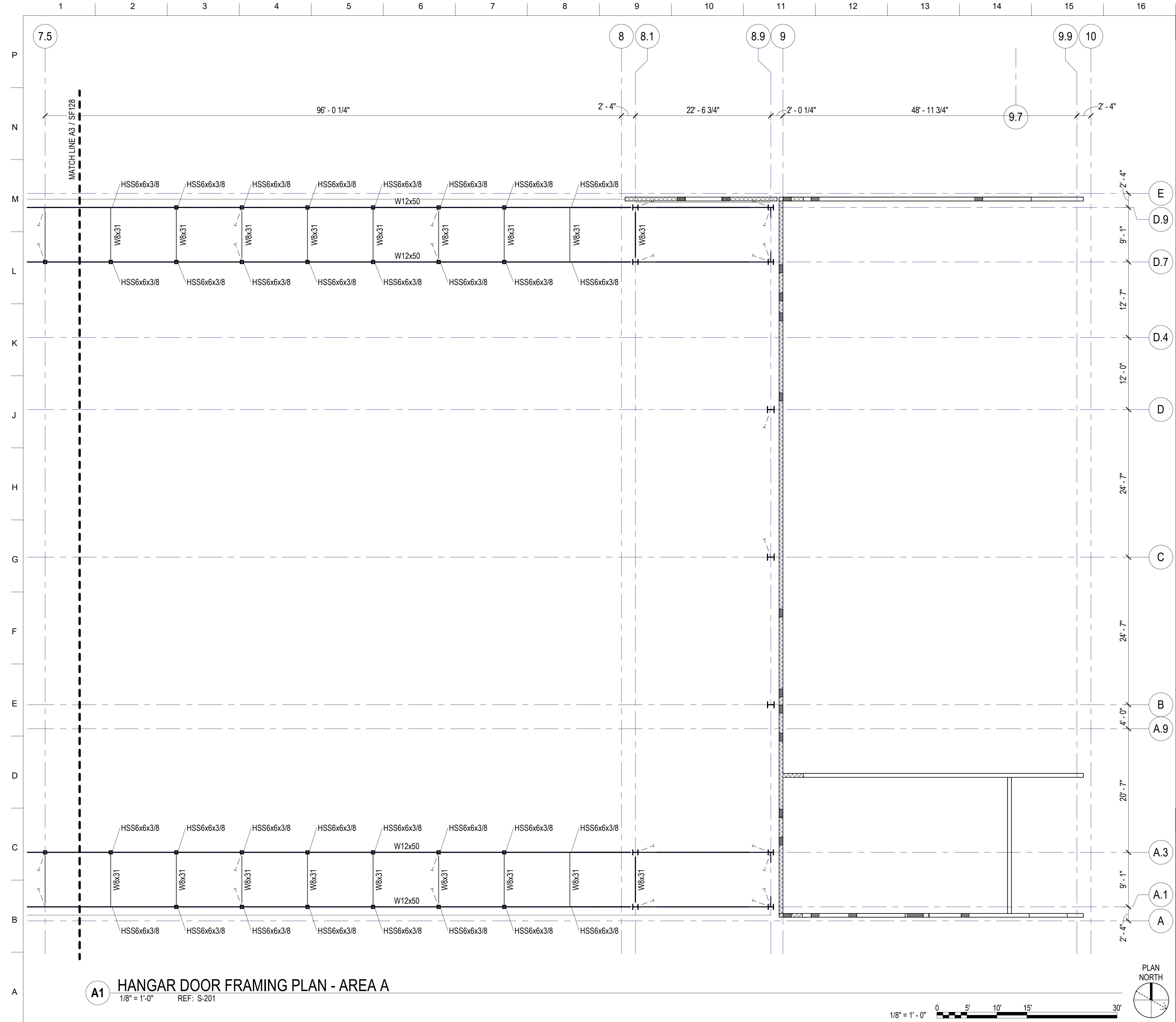
**CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2**

EECH A

SF126

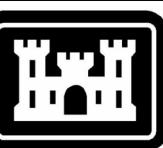
DP-1 95% SUMMARY





GENERAL NOTES

1. CONTRACTOR IS RESPONSIBLE FOR THE CONSTRUCTION SEQUENCE FOR ALL STRUCTURAL ELEMENTS IN THE PROJECT. CONTRACTOR IS RESPONSIBLE TO PROVIDE ANY SHORING OR BRACING AS NEEDED UNTIL STRUCTURE IS COMPLETE.
2. ALL BEAM-TO-COLUMN CONNECTIONS SHALL BE SINGLE SHEAR TAB CONNECTIONS UNLESS NOTED OTHERWISE. SEE TYPICAL STEEL-TO-STEEL CONNECTION SCHEDULE.
3. CONTRACTOR TO COORDINATE ALL ROOF EDGES AND OPENINGS. OPENINGS LESS THAN 6" IN ALL DIRECTIONS ARE NOT SHOWN IN STRUCTURAL DRAWINGS. RE: L1-L17/S-511 FOR PLACEMENT CRITERIA.
4. RE: SHEETS S-001 – S-005 FOR GENERAL NOTES AND DESIGN CRITERIA.
5. RE: SHEETS S-511 - S-513 FOR TYPICAL ROOF FRAMING DETAILS.
6. RE: SHEETS S-601 - S-602 FOR SCHEDULES.

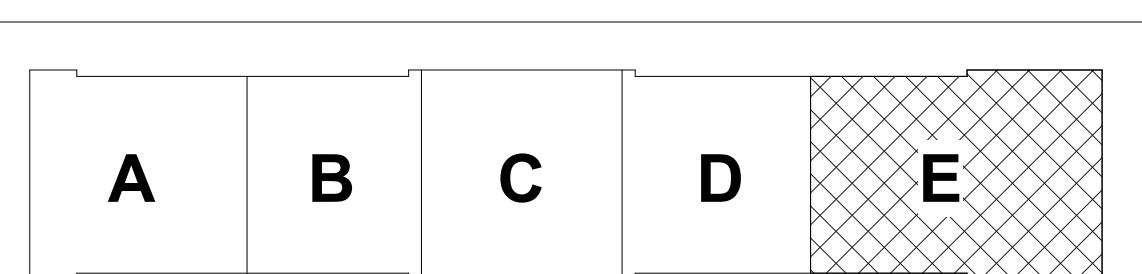


US Army Corps
of Engineers®

DATE

US ARMY CORPS OF ENGINEERS LOS ANGELES DISTRICT		KORTE CONSTRUCTION 5700 OAKLAND AVE, SUITE 275 ST. LOUIS, MO 63110	
A. VALENCIA	DRAWN BY: R. CARLSON	NOVEMBER 13, 2025	SOLICITATION NO.: W912PL25RA0012
CHECKED BY: D. CLAYSON	SUBMITTED BY: P. PASZCZUK	CONTRACT NO.: W912PL25C0037	
SIZE: ANSI D			MARK
			DESCRIPTION

KEY PLAN



CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2

494137

HANGAR DOOR FRAMING PLAN - AREA E

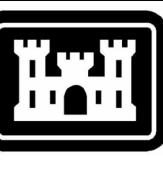
9

SHEET ID

SF129

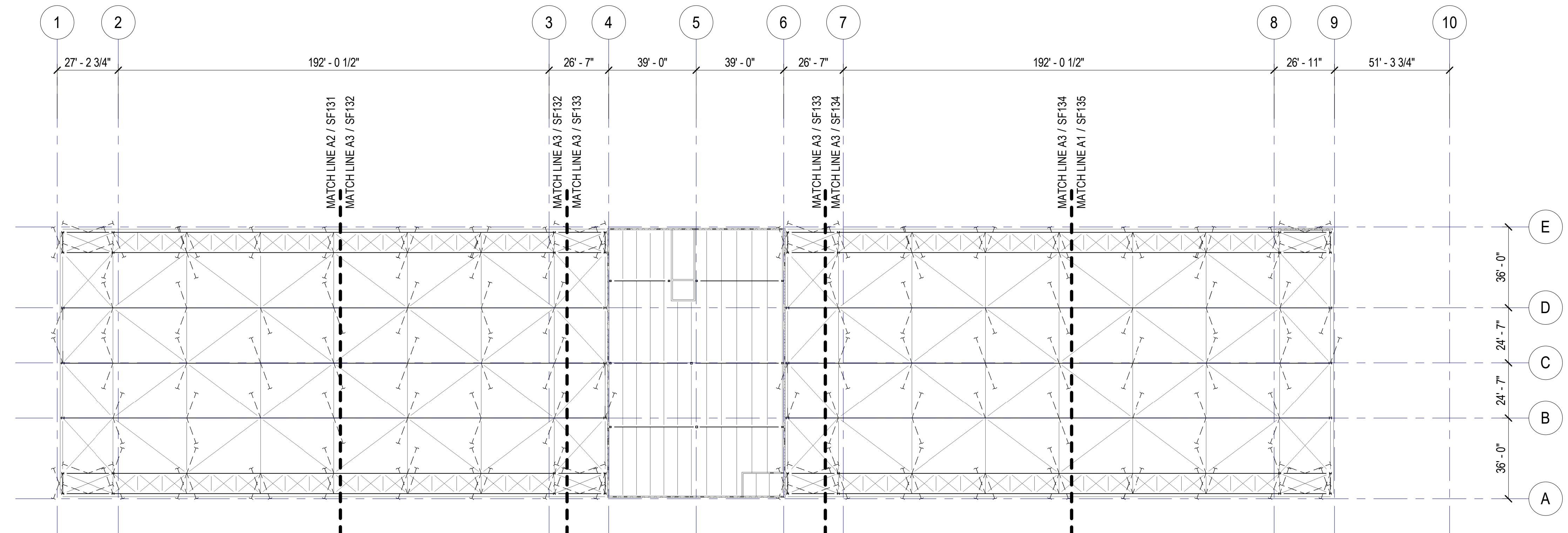
DD 1 0500 SUDMISSION

1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20



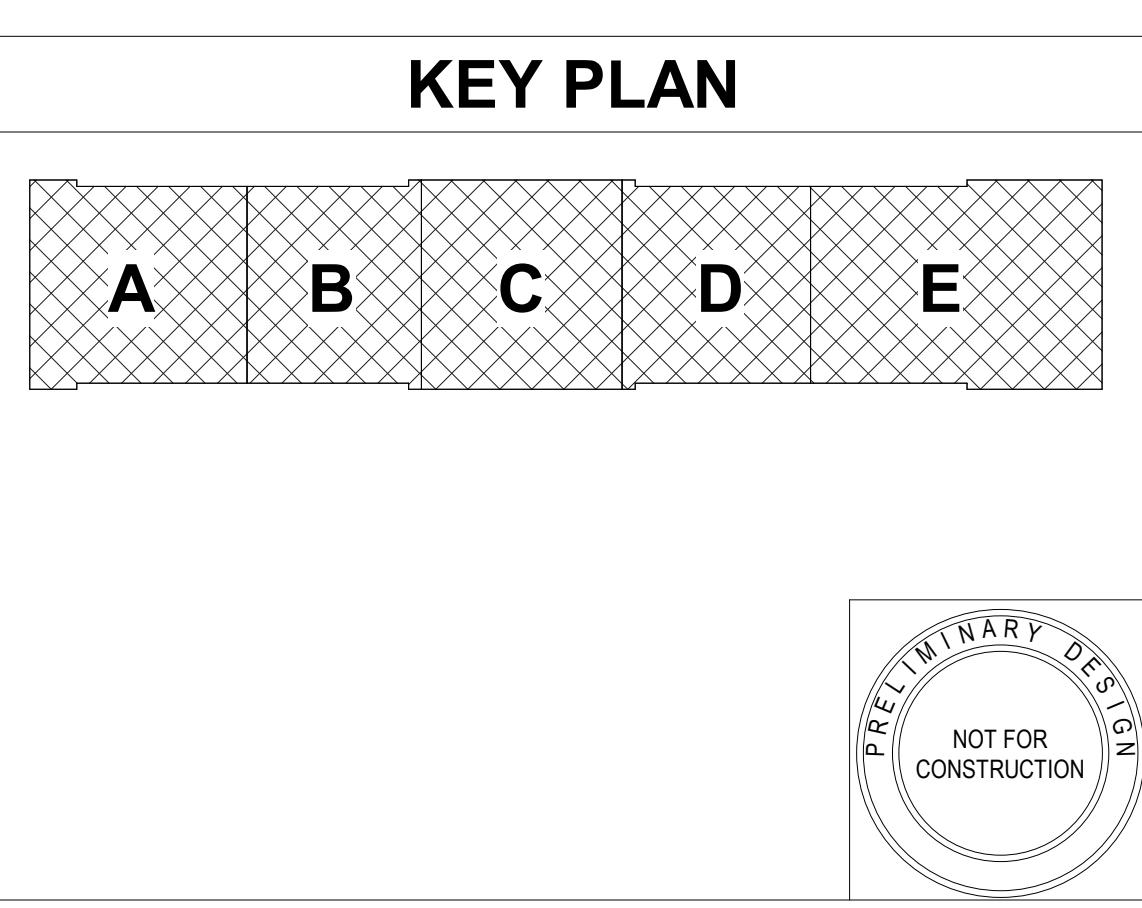
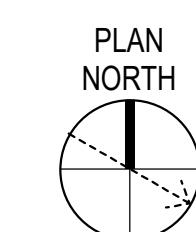
US Army Corps
of Engineers ®

P
N
M
L
K
J
H
G
F
E
D
C
B
A



D3 OVERALL BOTTOM CHORD FRAMING PLAN
SCALE: 1" = 30'-0"

1" = 30'-0" 0 15' 30' 60' 90'

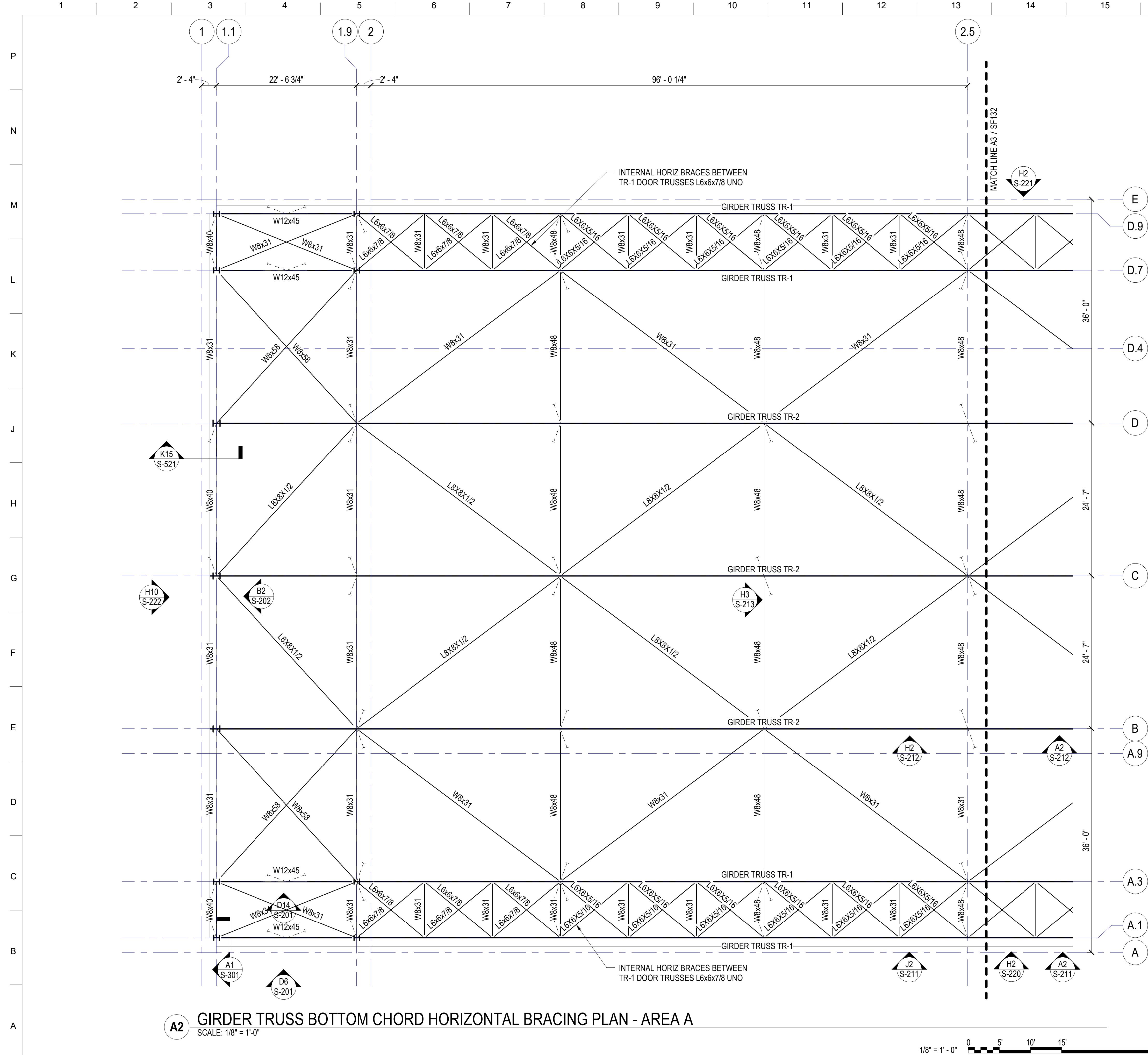


SHEET ID
SF130
Preliminary Design
NOT FOR CONSTRUCTION
N9137

CZECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137
OVERALL BOTTOM CHORD FRAMING PLAN

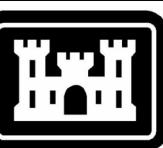
DP-1 95% SUBMISSION

DATE



FRAMING NOTES

1. CONTRACTOR IS RESPONSIBLE FOR THE CONSTRUCTION SEQUENCE FOR ALL STRUCTURAL ELEMENTS IN THE PROJECT. CONTRACTOR IS RESPONSIBLE TO PROVIDE ANY SHORING OR BRACING AS NEEDED UNTIL STRUCTURE IS COMPLETE.
2. ALL BEAM-TO-COLUMN CONNECTIONS SHALL BE SINGLE SHEAR TAB CONNECTIONS UNLESS NOTED OTHERWISE. SEE TYPICAL STEEL-TO-STEEL CONNECTION SCHEDULE.
3. CONTRACTOR TO COORDINATE ALL ROOF EDGES AND OPENINGS. OPENINGS LESS THAN 6" IN ALL DIRECTIONS ARE NOT SHOWN IN STRUCTURAL DRAWINGS. RE: L1-L17/S-511 FOR PLACEMENT CRITERIA.
4. RE: SHEETS S-001 – S-005 FOR GENERAL NOTES AND DESIGN CRITERIA.
5. RE: SHEETS S-511 - S-513 FOR TYPICAL ROOF FRAMING DETAILS.
6. RE: SHEETS S-601 - S-602 FOR SCHEDULES.



US Army Corps
of Engineers®

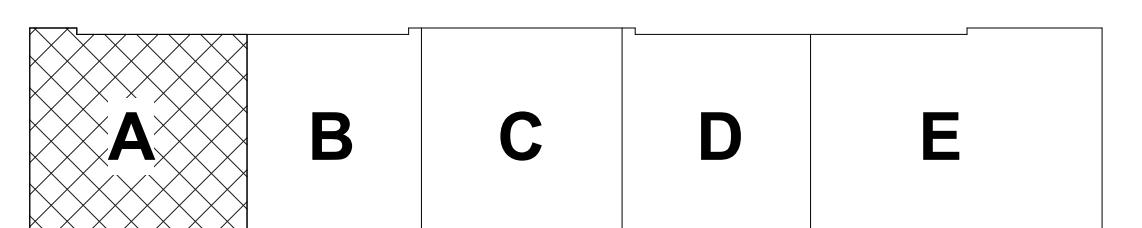
DATE

KEYNOTES

- ① PROVIDE L4x4x1/4 BRACING AT THIRD POINTS OF BEAM, RE: K15/S-521
- ② PROVIDE L2x2x1/4 BRACING AT THIRD POINTS OF BEAM, RE: K10/S-521
- ③ PROVIDE L8x8x1/2 BRACING AT THIRD POINTS OF BEAM, RE: E4/S-521
- ④ PROVIDE L8x8x1/2 BRACING AT BEAM HALF POINT, RE: E4/S-521 (SIM)
- ⑤ PROVIDE L8x8x1/2 BRACING AT THIRD POINTS OF BEAM, RE: A12/S-213

US ARMY CORPS OF ENGINEERS LOS ANGELES DISTRICT	DESIGNED BY: A. VALENCIA
	DRAWN BY: R. CARLSON
	CHECKED BY: D. CLAYSON
	SUBMITTED BY: P. PASZCZUK
	SIZE: ANSI D
KORTE CONSTRUCTION 5700 OAKLAND AVE, SUITE 275 ST. LOUIS, MO 63110	

KEY PLAN



CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2

494137

OTTOM CHORD FRAMING PLAN - AREA A

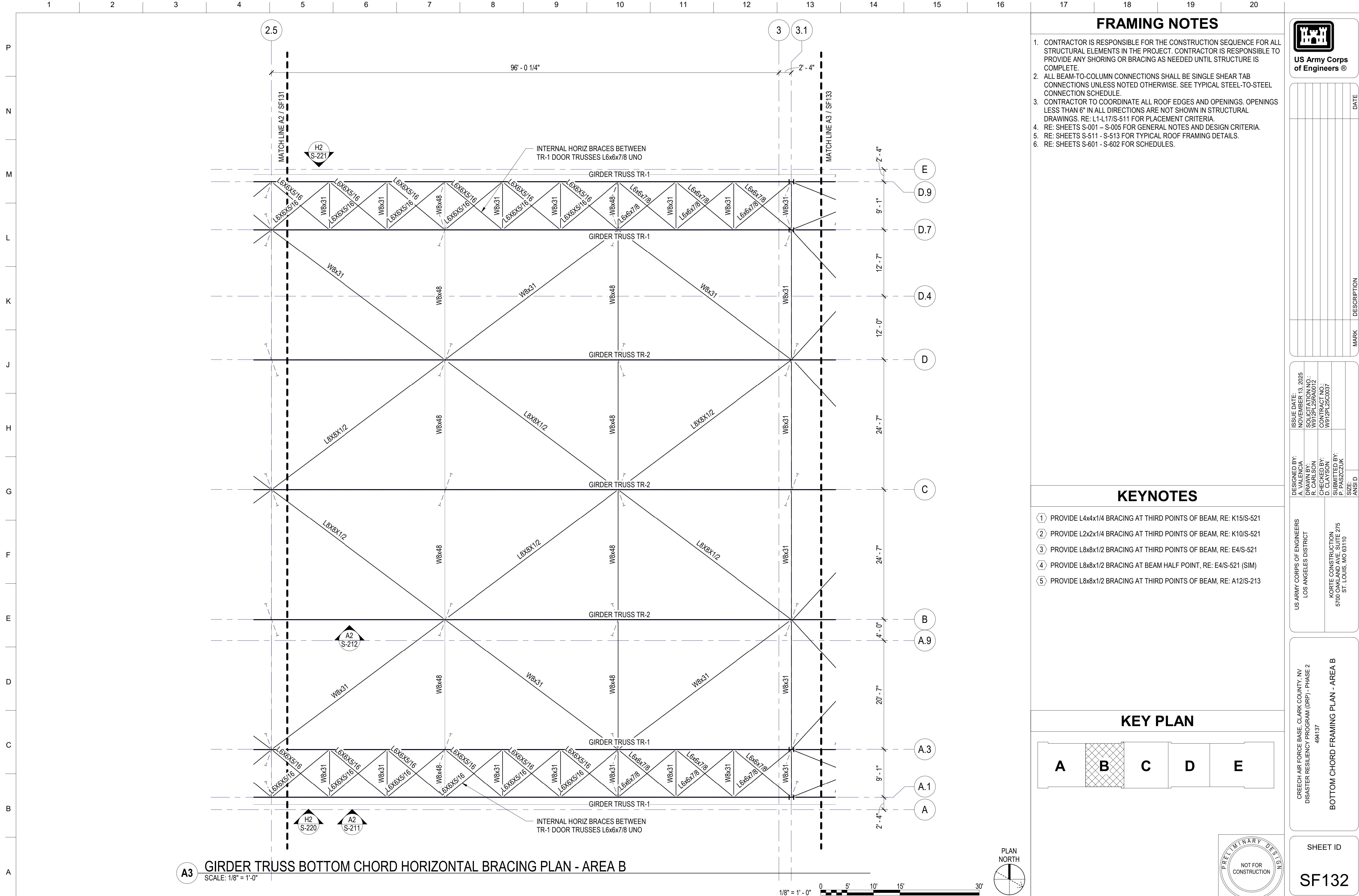
DD 1000/ CHILDREN

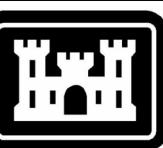
SHEET ID

SF131

SF131

2





US Army Corps
of Engineers®

DATE

FRAMING NOTES

CONTRACTOR IS RESPONSIBLE FOR THE CONSTRUCTION SEQUENCE FOR ALL STRUCTURAL ELEMENTS IN THE PROJECT. CONTRACTOR IS RESPONSIBLE TO PROVIDE ANY SHORING OR BRACING AS NEEDED UNTIL STRUCTURE IS COMPLETE.

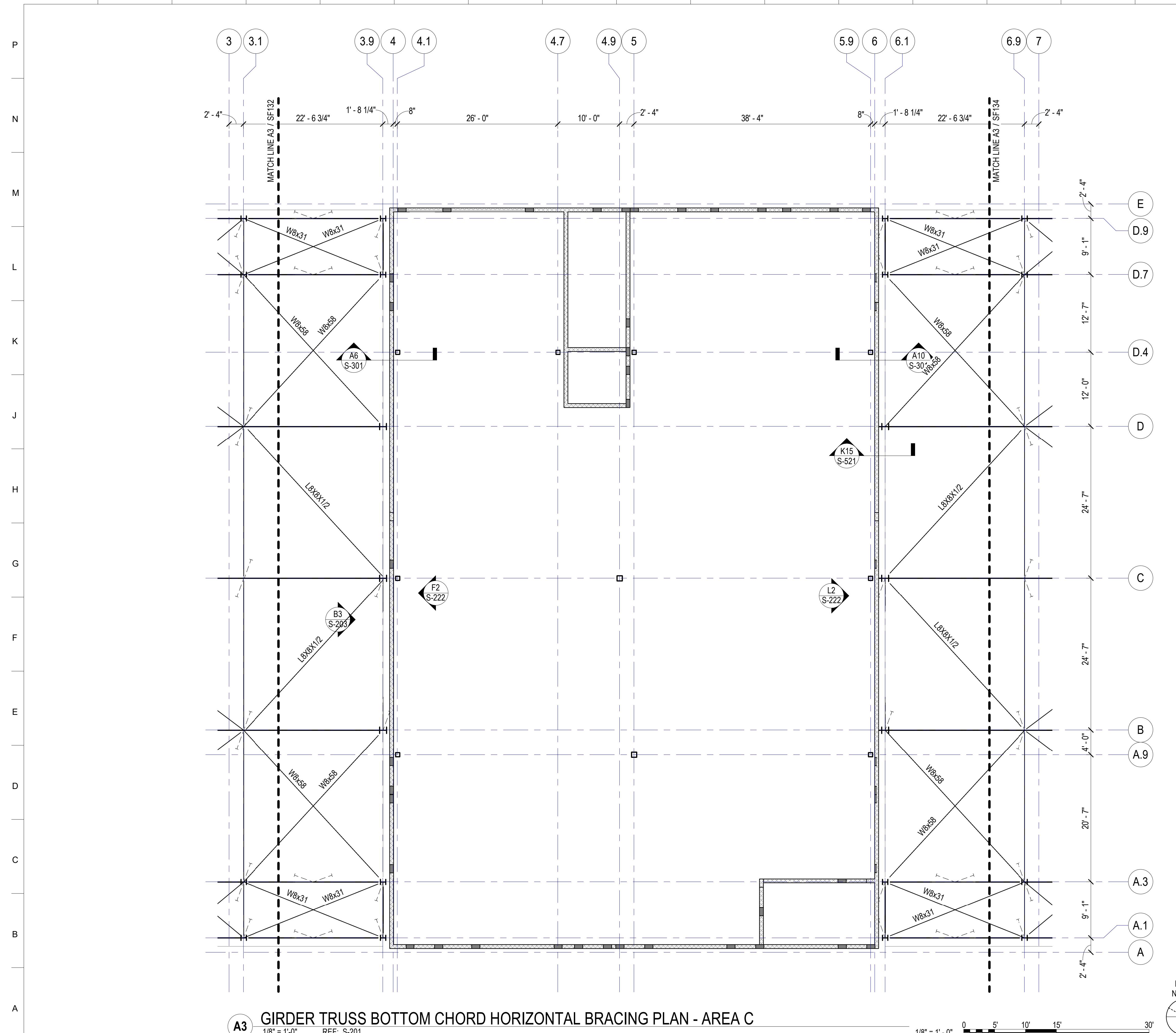
ALL BEAM-TO-COLUMN CONNECTIONS SHALL BE SINGLE SHEAR TAB CONNECTIONS UNLESS NOTED OTHERWISE. SEE TYPICAL STEEL-TO-STEEL CONNECTION SCHEDULE.

CONTRACTOR TO COORDINATE ALL ROOF EDGES AND OPENINGS. OPENINGS LESS THAN 6" IN ALL DIRECTIONS ARE NOT SHOWN IN STRUCTURAL DRAWINGS. RE: L1-L17/S-511 FOR PLACEMENT CRITERIA.

RE: SHEETS S-001 – S-005 FOR GENERAL NOTES AND DESIGN CRITERIA.

RE: SHEETS S-511 - S-513 FOR TYPICAL ROOF FRAMING DETAILS.

RE: SHEETS S-601 - S-602 FOR SCHEDULES.



KEYNOTES

- › PROVIDE L4x4x1/4 BRACING AT THIRD POINTS OF BEAM, RE: K15/S-521
- › PROVIDE L2x2x1/4 BRACING AT THIRD POINTS OF BEAM, RE: K10/S-521
- › PROVIDE L8x8x1/2 BRACING AT THIRD POINTS OF BEAM, RE: E4/S-521
- › PROVIDE L8x8x1/2 BRACING AT BEAM HALF POINT, RE: E4/S-521 (SIM)
- › PROVIDE L8x8x1/2 BRACING AT THIRD POINTS OF BEAM, RE: A12/S-213

KORTE CONSTRUCTION
100 OAKLAND AVE, SUITE 275
ST. LOUIS, MO 63110

BOTTOM CHORD FRAMING PLAN

494137

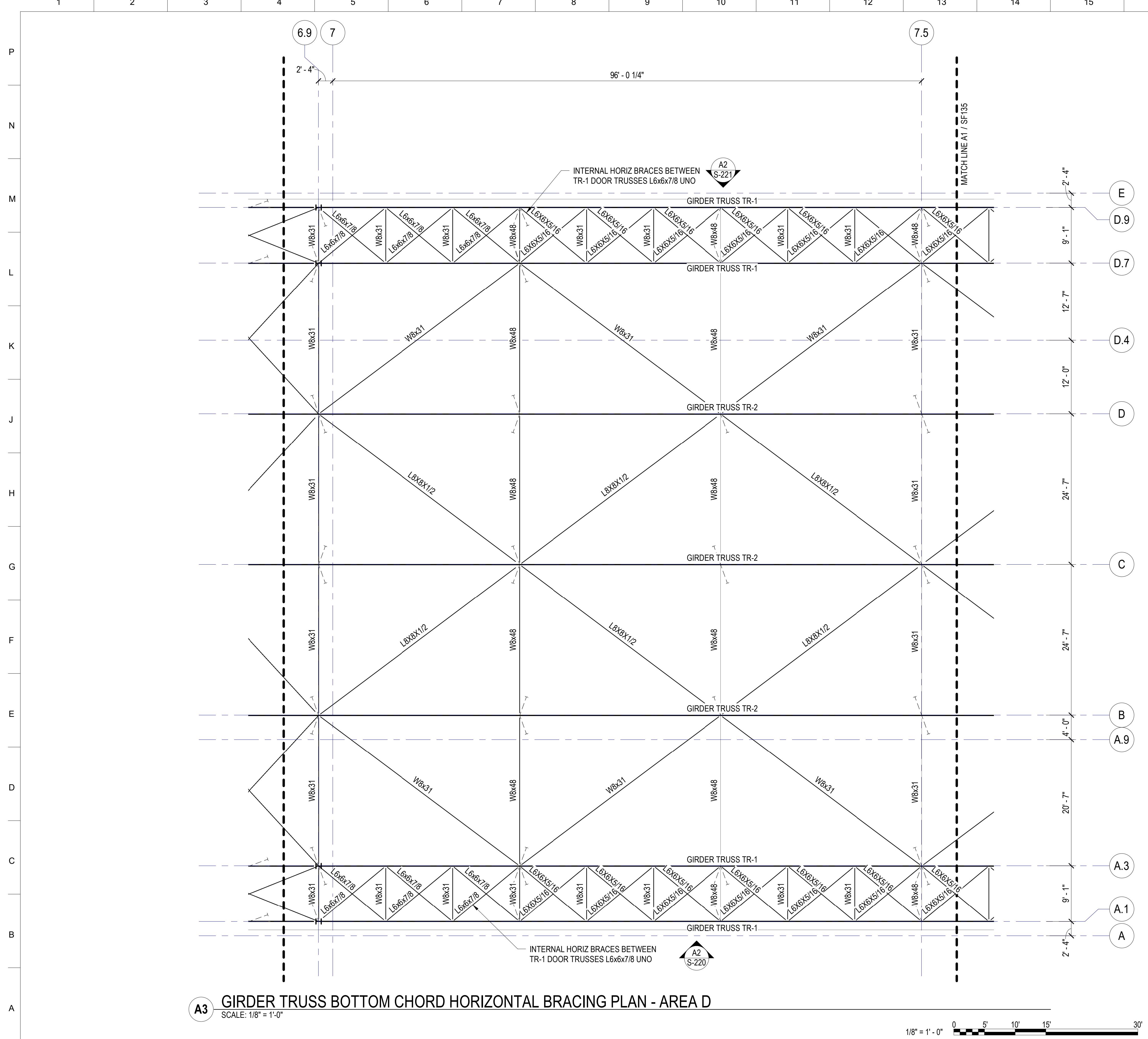
DISASTER RESILIENCY PROGRAM (DR)

CLARK AIR FORCE BASE, CLARK CO

SHEET ID

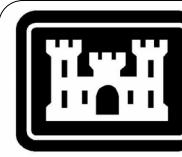
SF133

DP-1 95% SUMMARY



FRAMING NOTES

1. CONTRACTOR IS RESPONSIBLE FOR THE CONSTRUCTION SEQUENCE FOR ALL STRUCTURAL ELEMENTS IN THE PROJECT. CONTRACTOR IS RESPONSIBLE TO PROVIDE ANY SHORING OR BRACING AS NEEDED UNTIL STRUCTURE IS COMPLETE.
2. ALL BEAM-TO-COLUMN CONNECTIONS SHALL BE SINGLE SHEAR TAB CONNECTIONS UNLESS NOTED OTHERWISE. SEE TYPICAL STEEL-TO-STEEL CONNECTION SCHEDULE.
3. CONTRACTOR TO COORDINATE ALL ROOF EDGES AND OPENINGS. OPENINGS LESS THAN 6" IN ALL DIRECTIONS ARE NOT SHOWN IN STRUCTURAL DRAWINGS. RE: L1-L17/S-511 FOR PLACEMENT CRITERIA.
4. RE: SHEETS S-001 – S-005 FOR GENERAL NOTES AND DESIGN CRITERIA.
5. RE: SHEETS S-511 - S-513 FOR TYPICAL ROOF FRAMING DETAILS.
6. RE: SHEETS S-601 - S-602 FOR SCHEDULES.



US Army Corps of Engineers ®

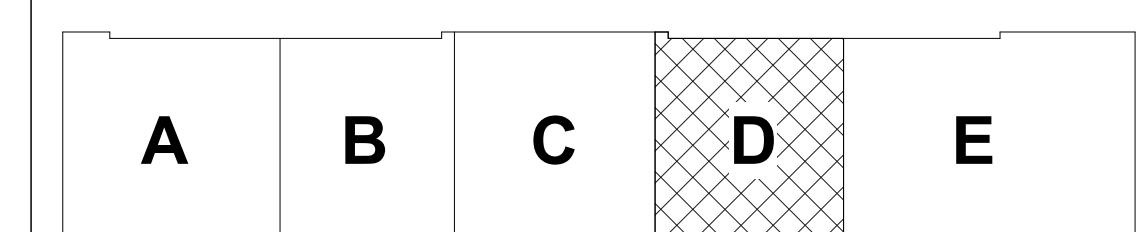
DATE

KEYNOTES

- 1 PROVIDE L4x4x1/4 BRACING AT THIRD POINTS OF BEAM, RE: K15/S-521
- 2 PROVIDE L2x2x1/4 BRACING AT THIRD POINTS OF BEAM, RE: K10/S-521
- 3 PROVIDE L8x8x1/2 BRACING AT THIRD POINTS OF BEAM, RE: E4/S-521
- 4 PROVIDE L8x8x1/2 BRACING AT BEAM HALF POINT, RE: E4/S-521 (SIM)
- 5 PROVIDE L8x8x1/2 BRACING AT THIRD POINTS OF BEAM, RE: A12/S-213

US ARMY CORPS OF ENGINEERS LOS ANGELES DISTRICT	DESIGNED BY: A. VALENCIA DRAWN BY: R. CARLSON CHECKED BY: D. CLAYSON	ISSUE DATE: NOVEMBER 13, 2025 SOLICITATION NO.: W912PL25RA0012 CONTRACT NO.: W912PL25C0037
KORTE CONSTRUCTION 5700 OAKLAND AVE, SUITE 275 ST. LOUIS, MO 63110	SUBMITTED BY: P. PASZCZUK	SIZE: ANSID

KEY PLAN



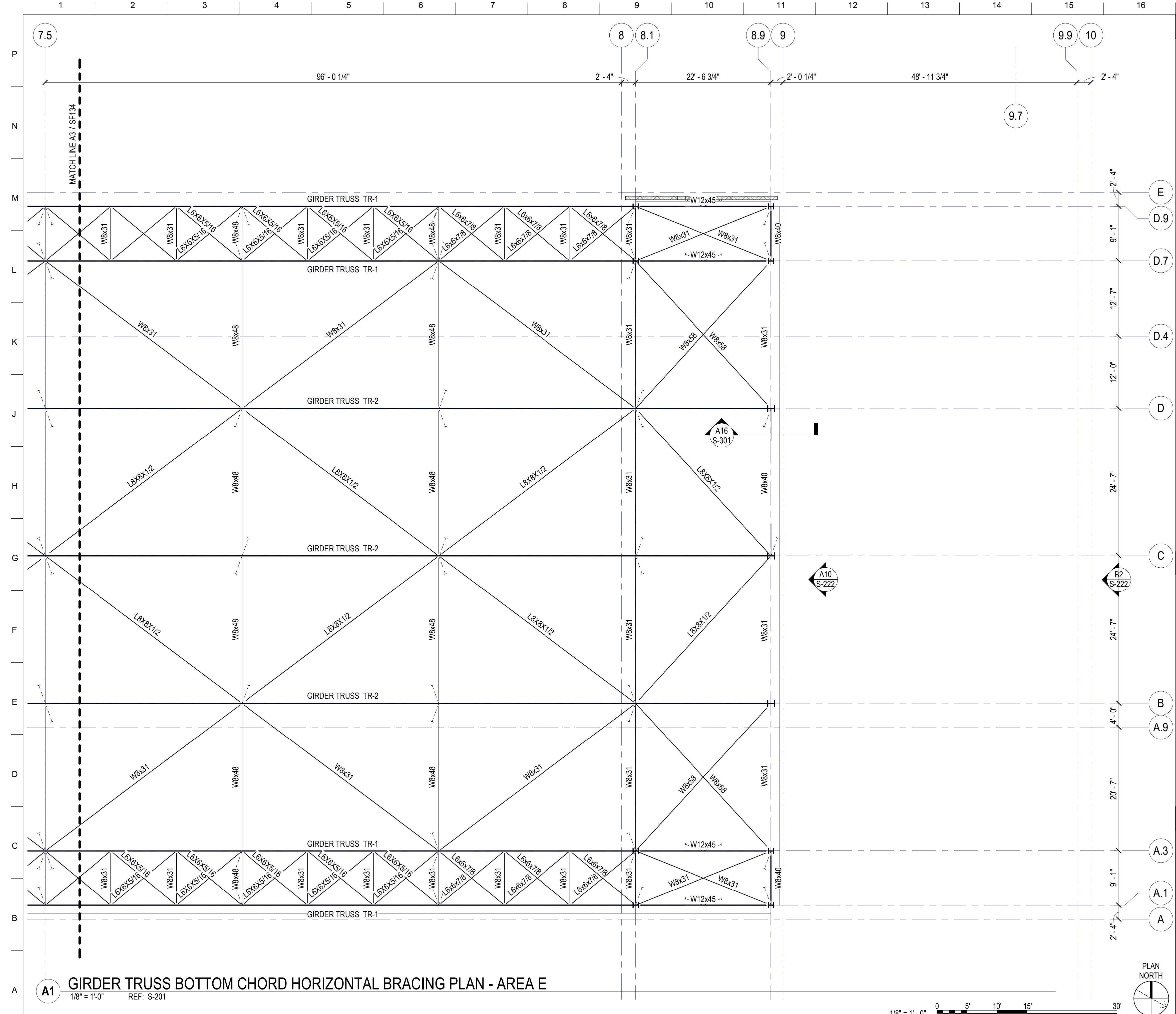
CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

BOTTOM CHORD FRAMING PLAN - AREA D

DD 1 050/ COMMISION

SHEET ID
SF134

1



FRAMING NOTES

- CONTRACTOR IS RESPONSIBLE FOR THE CONSTRUCTION SEQUENCE FOR ALL STRUCTURAL ELEMENTS IN THE PROJECT. CONTRACTOR IS RESPONSIBLE TO PROVIDE ANY SHORING OR BRACING AS NEEDED UNTIL STRUCTURE IS COMPLETE.
- ALL BEAM-TO-COLUMN CONNECTIONS SHALL BE SINGLE SHEAR TAB CONNECTIONS UNLESS NOTED OTHERWISE. SEE TYPICAL STEEL-TO-STEEL CONNECTION SCHEDULE.
- CONTRACTOR TO COORDINATE ALL ROOF EDGES AND OPENINGS. OPENINGS LESS THAN 6" IN ALL DIRECTIONS ARE NOT SHOWN IN STRUCTURAL DRAWINGS. RE: L1-L17/S-511 FOR PLACEMENT CRITERIA.
- RE: SHEETS S-001 – S-005 FOR GENERAL NOTES AND DESIGN CRITERIA.
- RE: SHEETS S-511 - S-513 FOR TYPICAL ROOF FRAMING DETAILS.
- RE: SHEETS S-601 - S-602 FOR SCHEDULES.



US Army Corps of Engineers®

DATE

KEYNOTES

- ① PROVIDE L4x4x1/4 BRACING AT THIRD POINTS OF BEAM, RE: K15/S-521
- ② PROVIDE L2x2x1/4 BRACING AT THIRD POINTS OF BEAM, RE: K10/S-521
- ③ PROVIDE L8x8x1/2 BRACING AT THIRD POINTS OF BEAM, RE: E4/S-521
- ④ PROVIDE L8x8x1/2 BRACING AT BEAM HALF POINT, RE: E4/S-521 (SIM)
- ⑤ PROVIDE L8x8x1/2 BRACING AT THIRD POINTS OF BEAM, RE: A12/S-213



111

2

RE

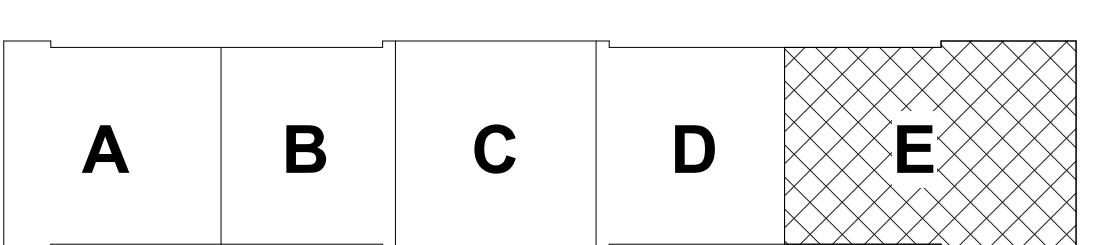
- A

NUC -

LA

37

KEY PLAN



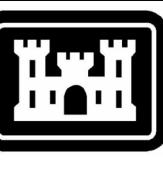
CREECH AIR FORCE BASE
DISASTER RESILIENCY PROGRAM
49413
BOTTOM CHORD FRAM

SHEET ID

SF135

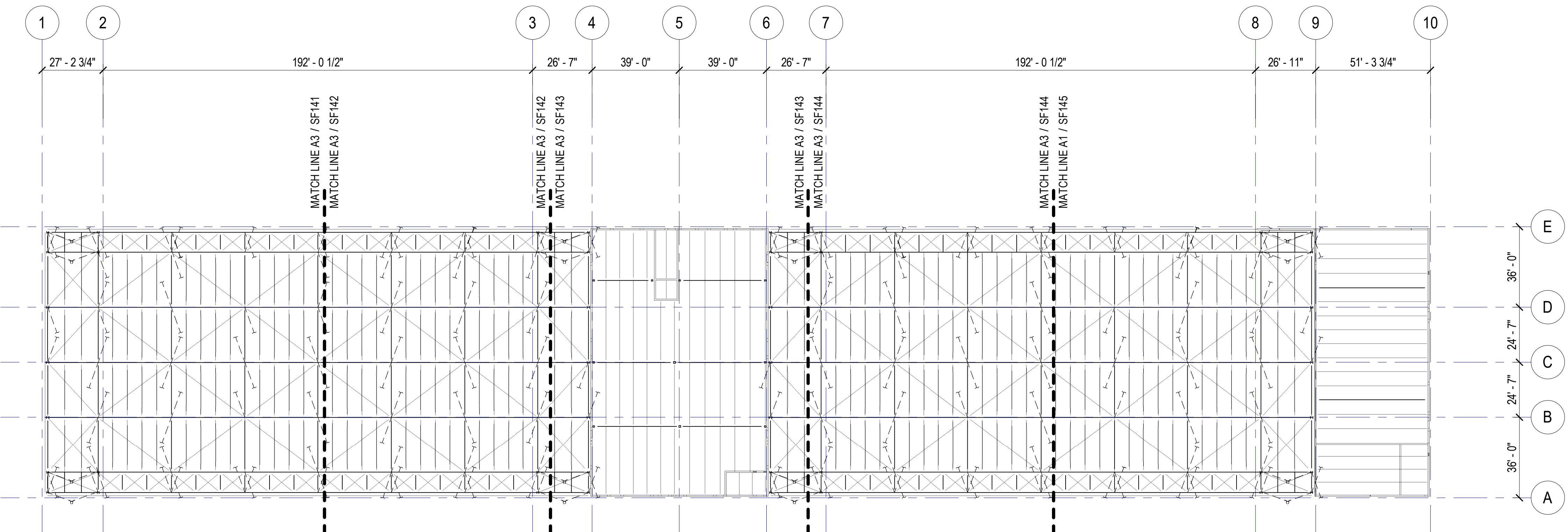
1 of 100

1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20



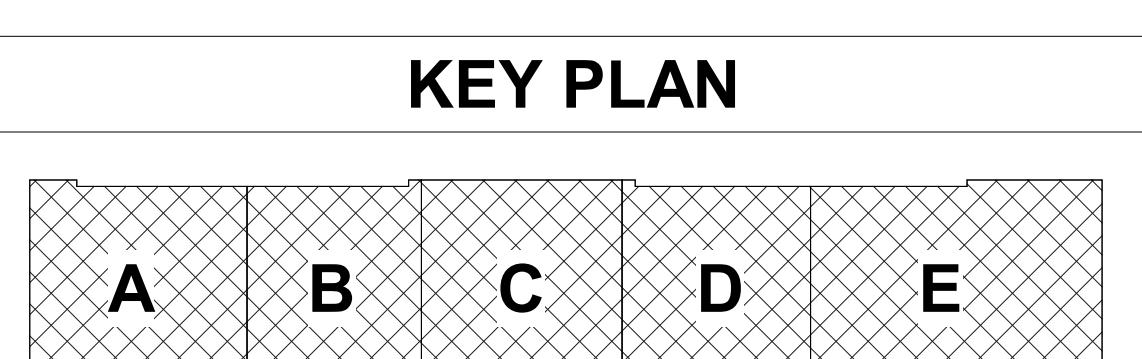
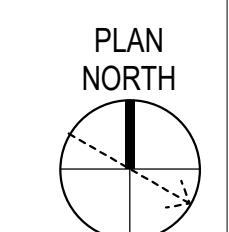
US Army Corps
of Engineers ®

P
N
M
L
K
J
H
G
F
E
D
C
B
A



E3 OVERALL ROOF FRAMING PLAN
SCALE: 1" = 30'-0"

1" = 30'-0" 0 15' 30' 60' 90'



CZECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

OVERALL ROOF FRAMING PLAN

SHEET ID
N91
Preliminary Design
NOT FOR CONSTRUCTION
SF140

DP-1 95% SUBMISSION

DATE

MARK DESCRIPTION

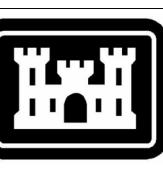
ANSI D

SIZE:

11x17

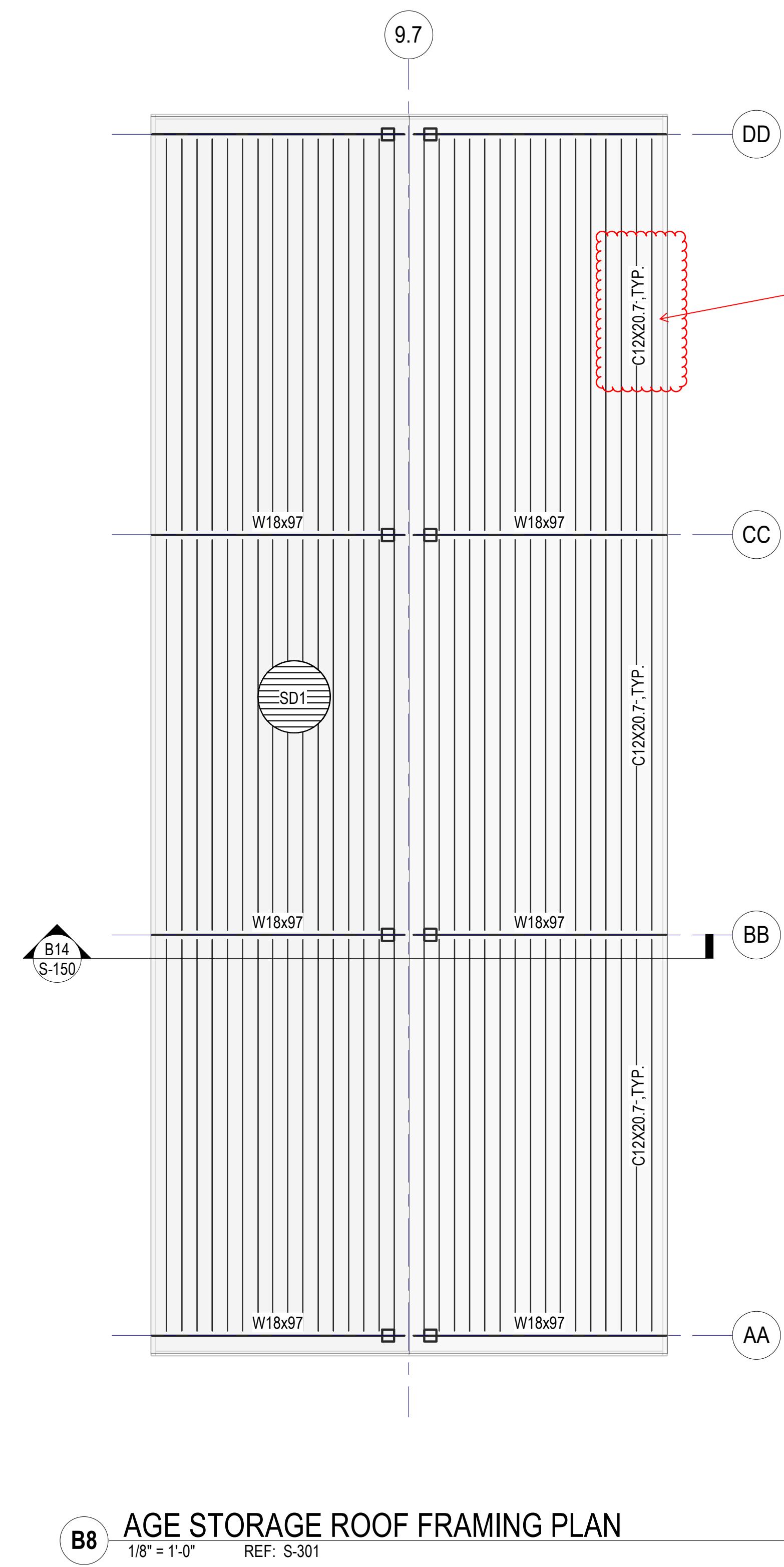
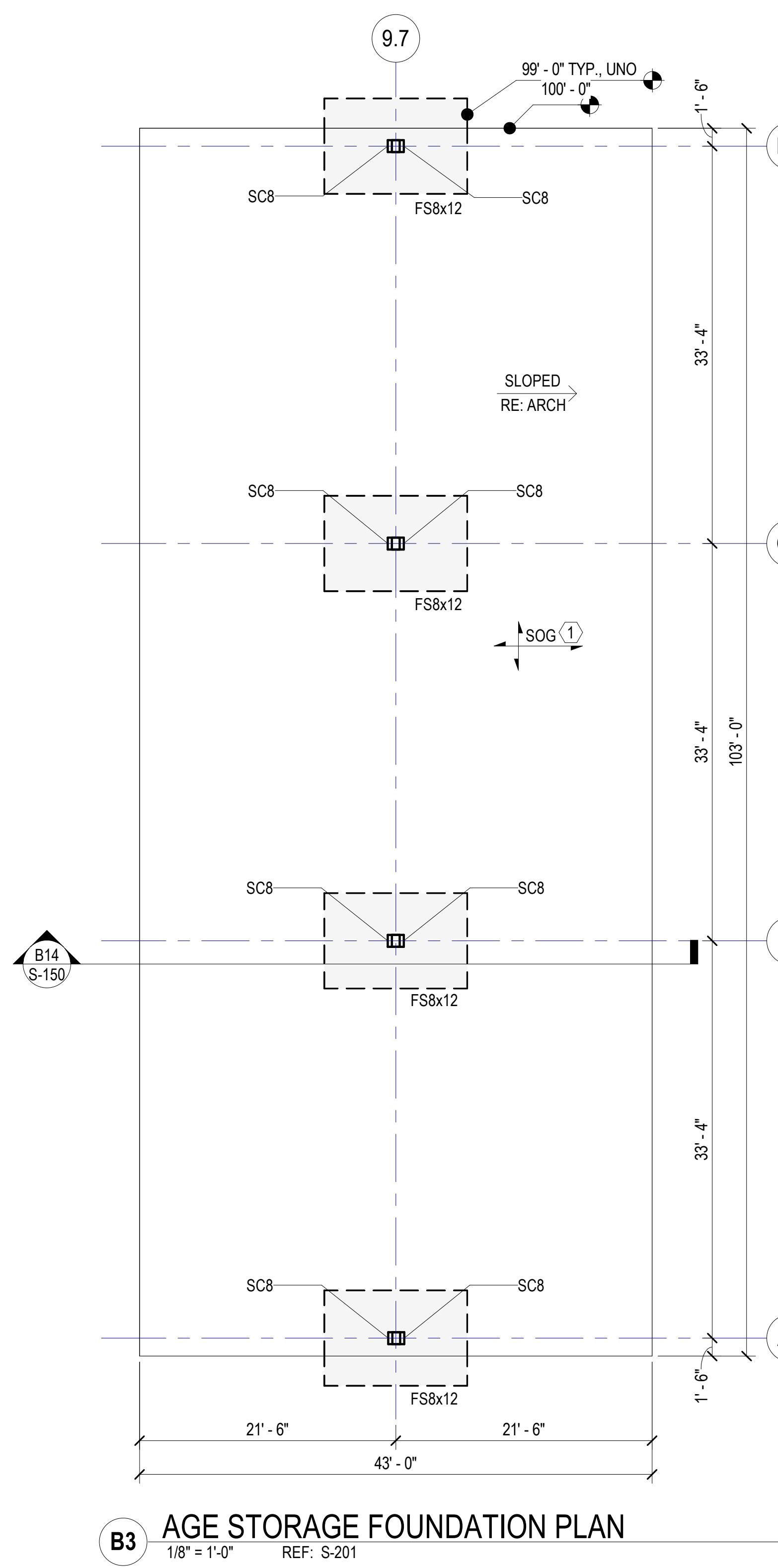
INCHES

MM



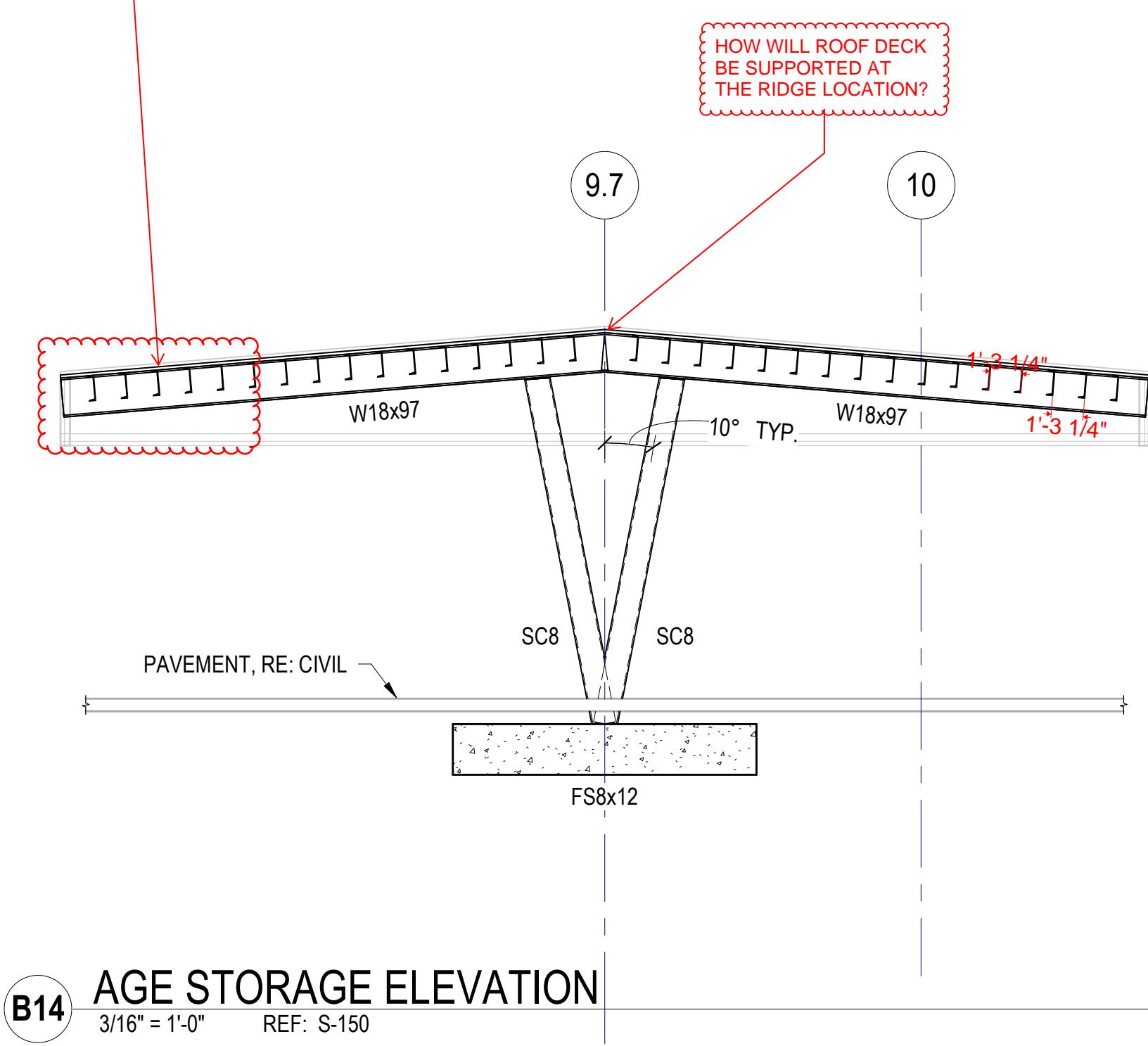
US Army Corps
of Engineers ®

DATE



ARE THE C12X20.7
STEEL CHANNELS
SUPPOSED TO BE
SPACED AT 15" ON
CENTER AS SHOWN IN
SECTION B14? VERIFY
THAT SPACING IS
CORRECT.

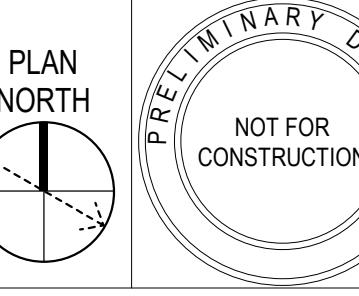
**CONNECTION
DETAILS IN
PROGRESS**



CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

AGE STORAGE PLAN & ELEVATION

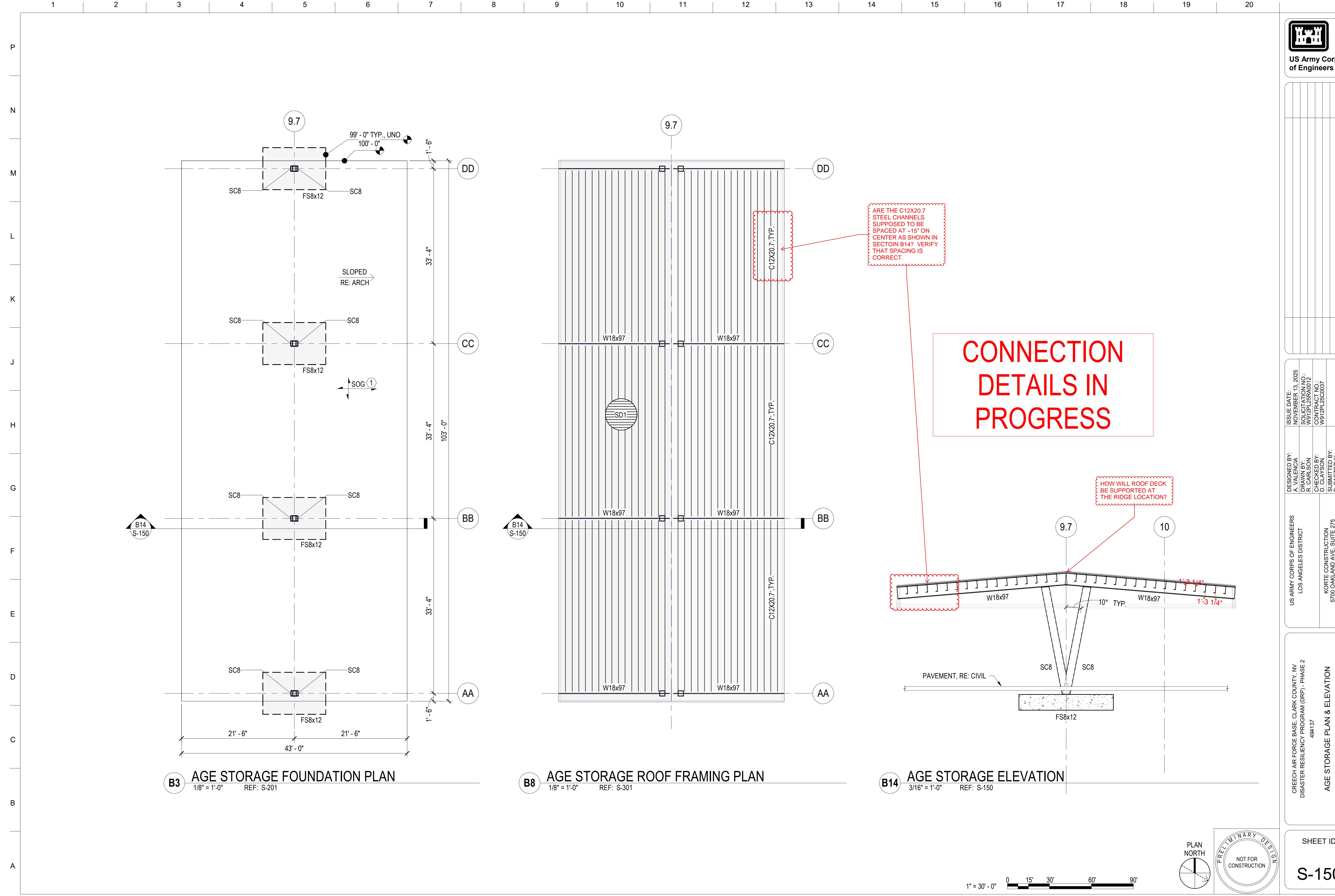
DP-1 95% SUBMISSION

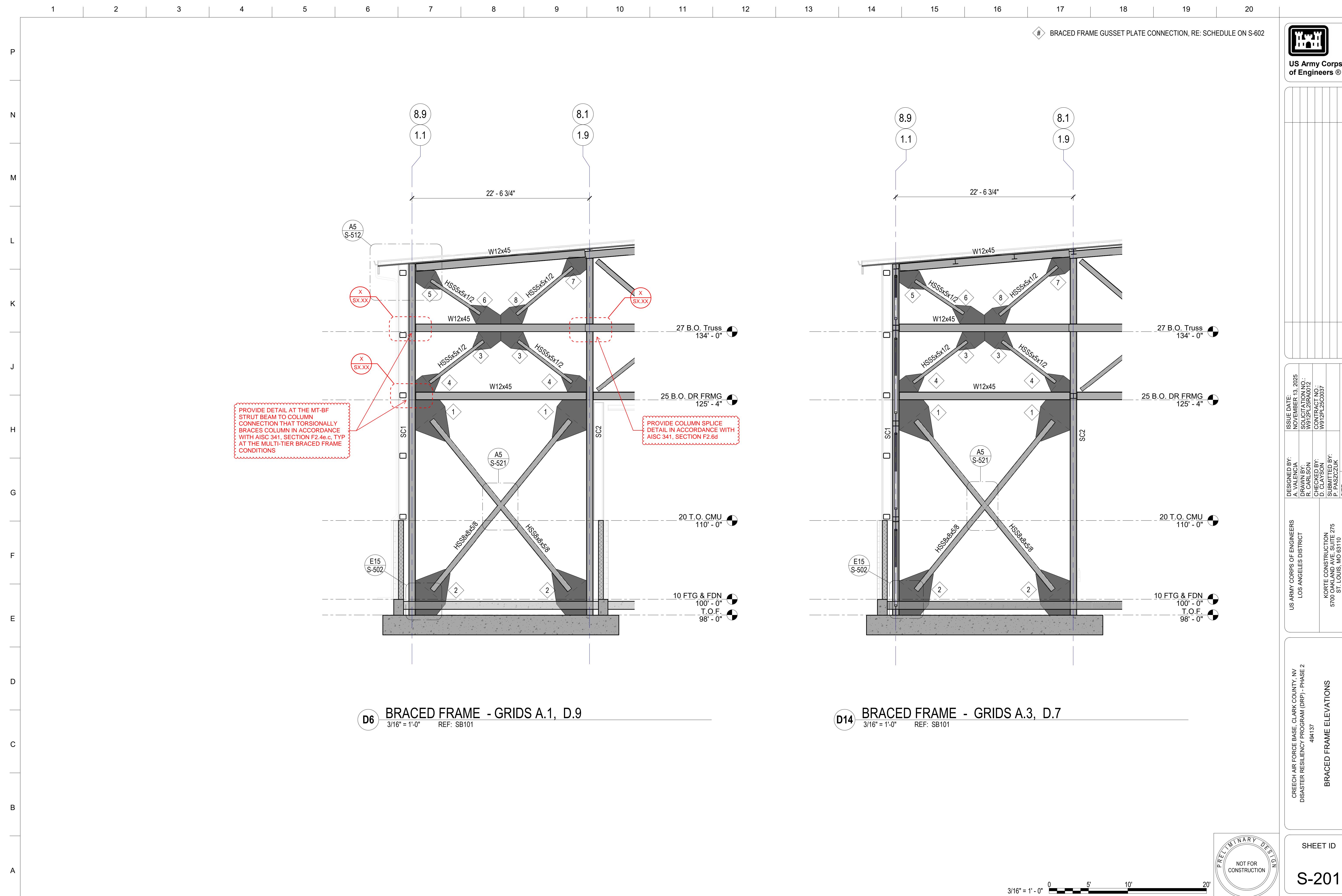


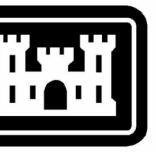
SHEET ID
S-150

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

DATE







**U.S. Army Corps
of Engineers®**

DATE

BRACED FRAME GUSSET PLATE CONNECTION, RE: SCHEDULE ON S-602

P

N

M

L

K

J

H

G

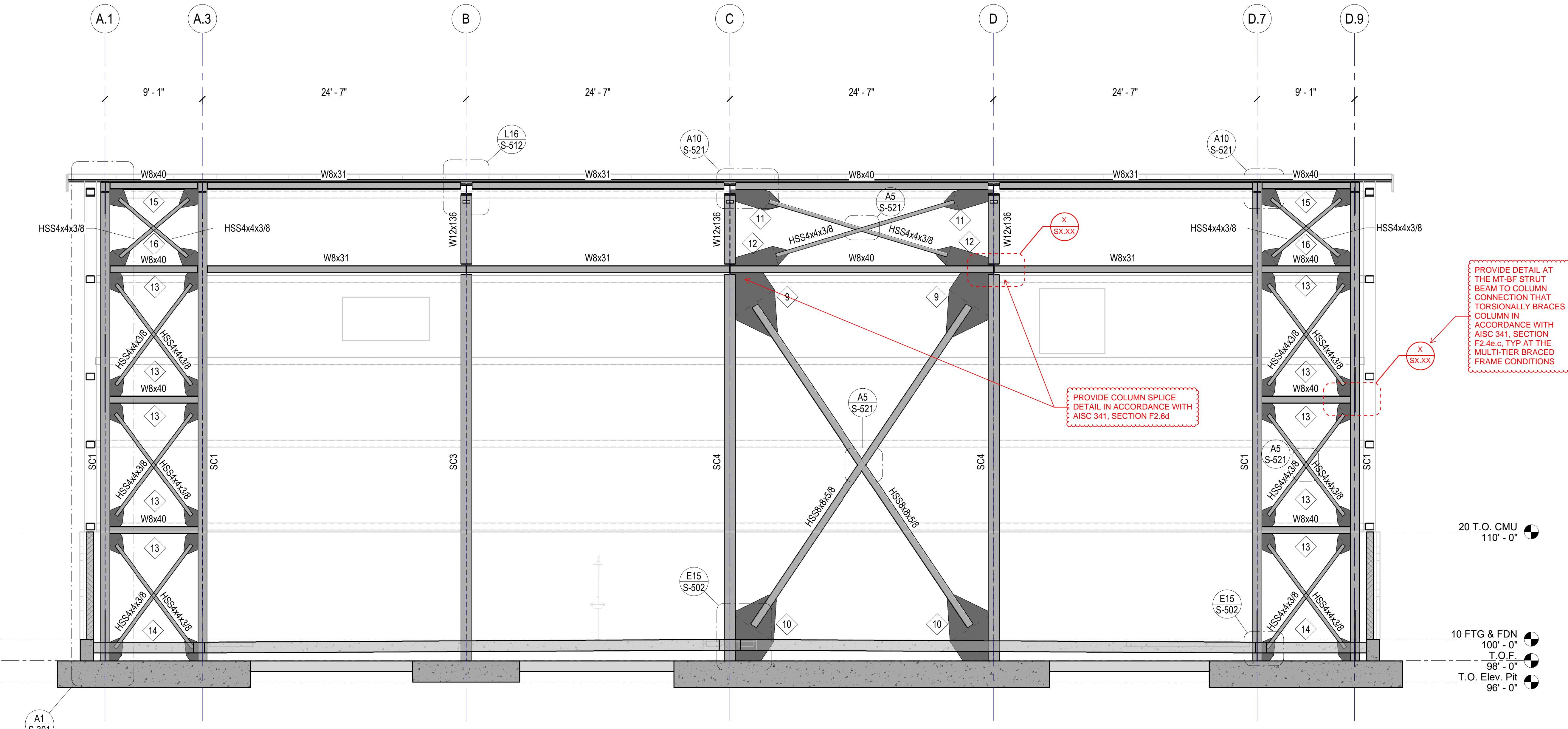
۲

L

D

1

1



BRACED FRAME ELEVATION - GRIDS 1.1, 8

B2 3/16" = 1'-0" REF: SB1

SCHOOL OF THE AMERICAN RENAISSANCE

CHICAGO, ILLINOIS
DISASTER RESILIENCY PROGRAM (DRP) - PHASE I
BRACED FRAME ELEVATIONS
494137

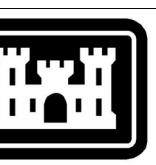
□

SHEET ID

S 20

S-202

DP-1 95% SUBMISSION

US Army Corps
of Engineers ®

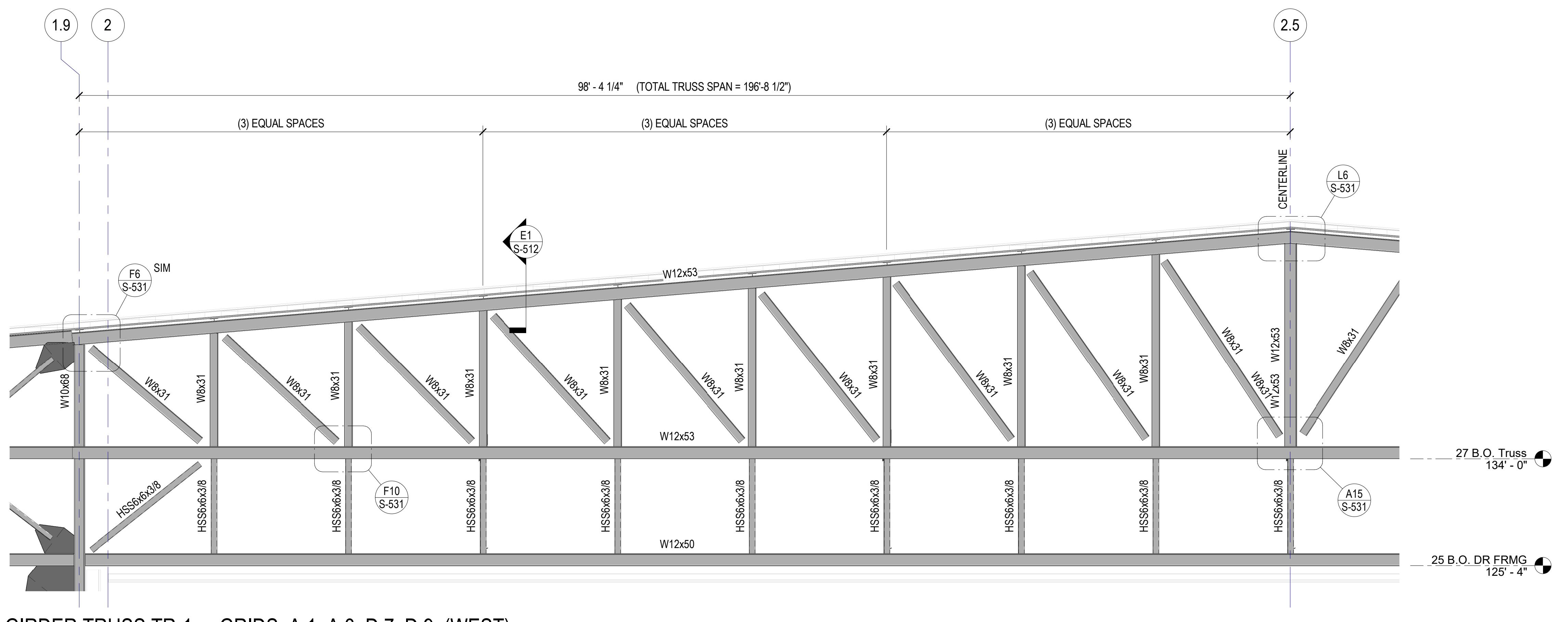
DATE

W12x53

S-211

DP-1 95% SUBMISSION

98'-4 1/4" (TOTAL TRUSS SPAN = 196'-8 1/2")



DATE

W12x53

SHEET ID

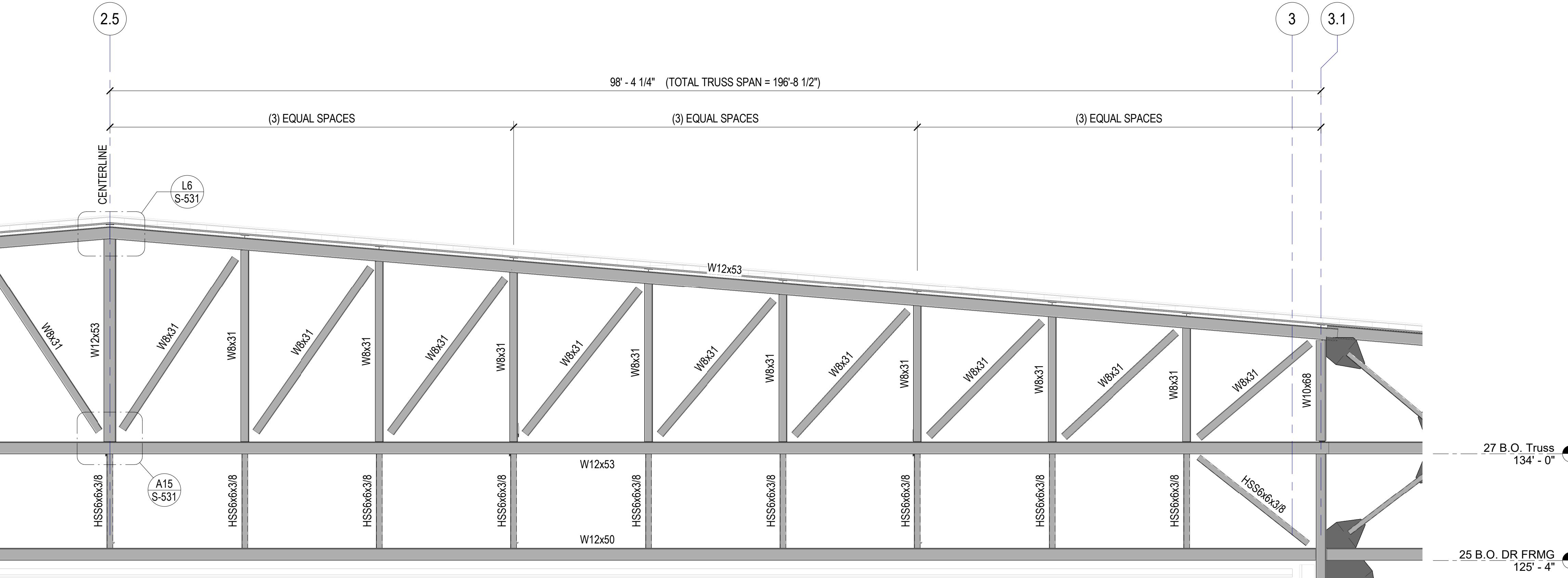
PRELIMINARY DES
NOT FOR CONSTRUCTION

N.9.1

CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

GIRDER TRUSS ELEVATIONS

S-211

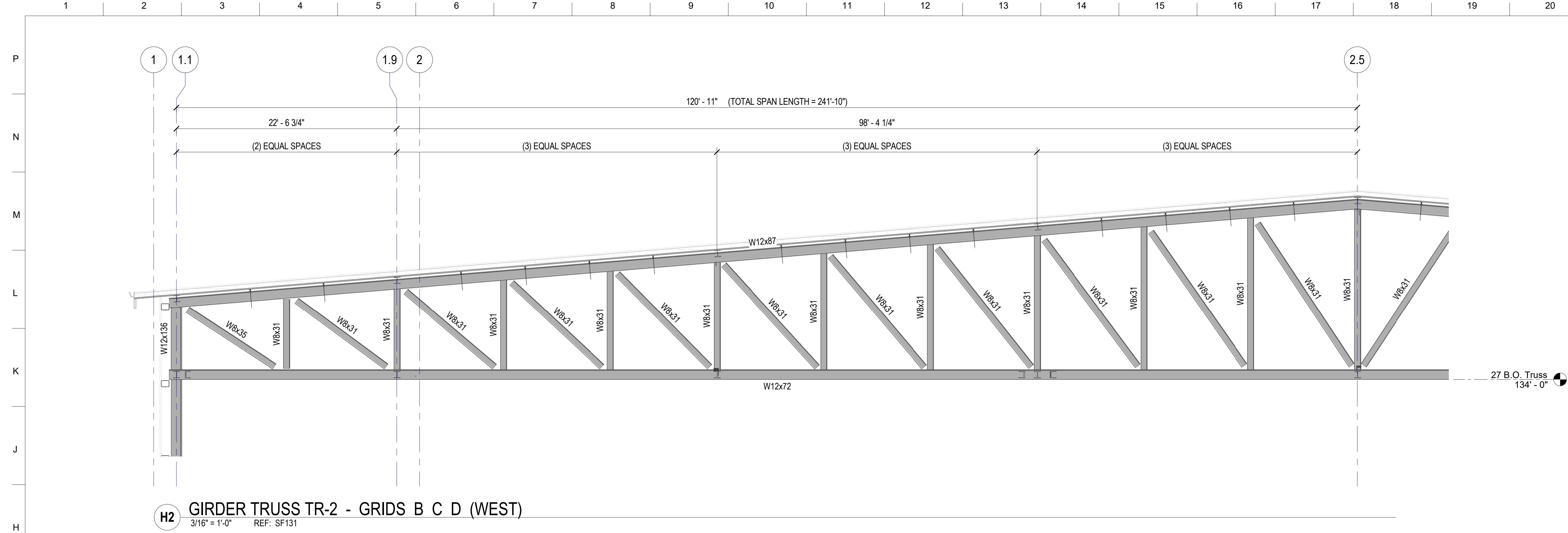


S-211

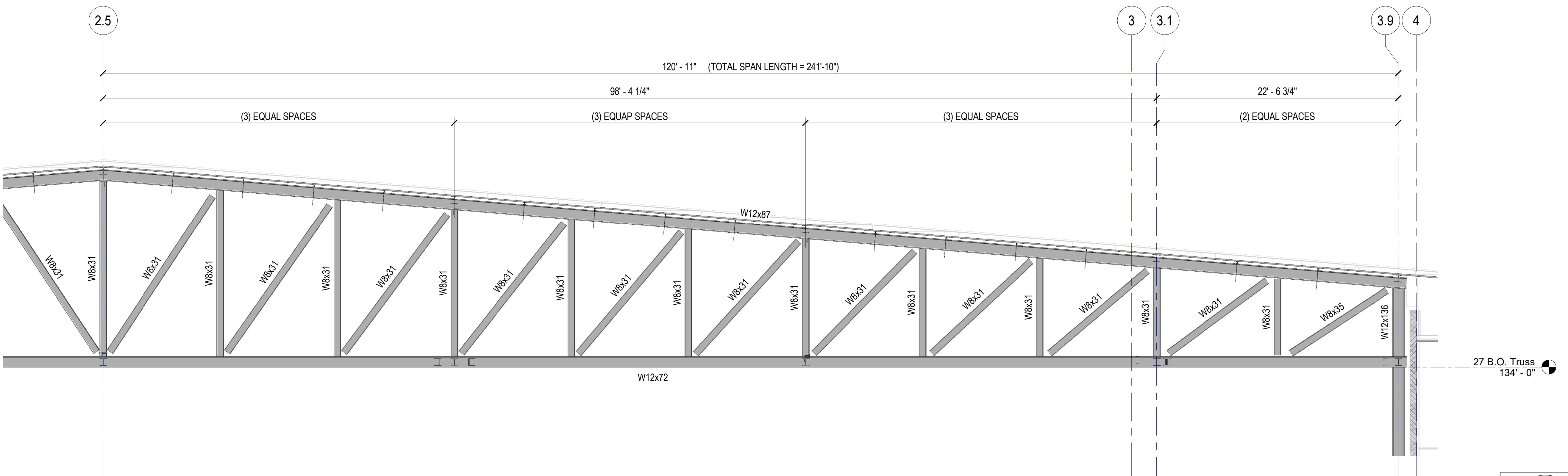
3/16" = 1'-0" 0 5' 10' 20'

DATE

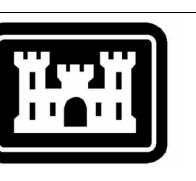
N.9.1



H2 GIRDER TRUSS TR-2 - GRIDS B C D (WEST)
3/16" = 1'-0" REF: SF131



A2 GIRDER TRUSS TR-2 - GRIDS B C D (EAS)
3/16" = 1'-0" REF: SF131



U.S. Army Corps Engineers ®

NOVEMBER 13, 2025	
SOLICITATION NO.:	
W912PL25RA0012	
CONTRACT NO.:	
W912PL25C0037	

US ARMY CORPS OF ENGINEERS	A. VALENCIA
LOS ANGELES DISTRICT	DRAWN BY: R. CARLSON
	CHECKED BY: D. CLAYSON
	SUBMITTED BY: P. PASZCZUK
	SIZE: ANSI D
KORTE CONSTRUCTION 5700 OAKLAND AVE, SUITE 275 ST. LOUIS, MO 63110	

CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2

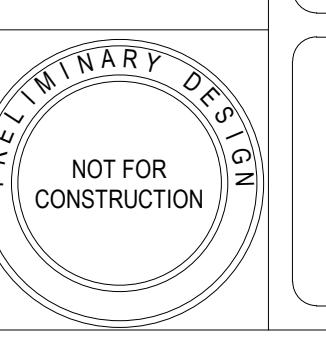
494137

GIRDER TRUSS ELEVATIONS

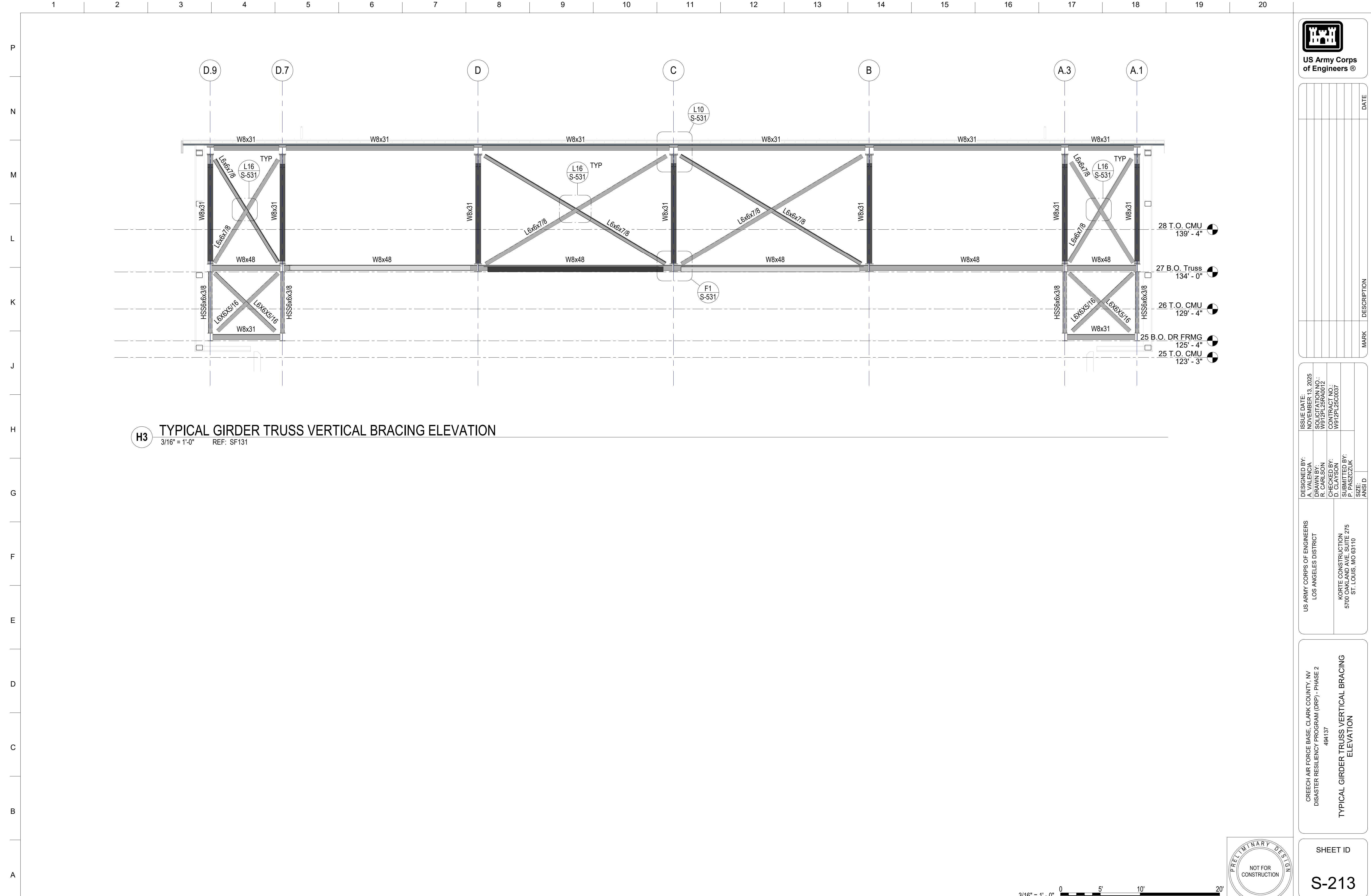
SHEET ID

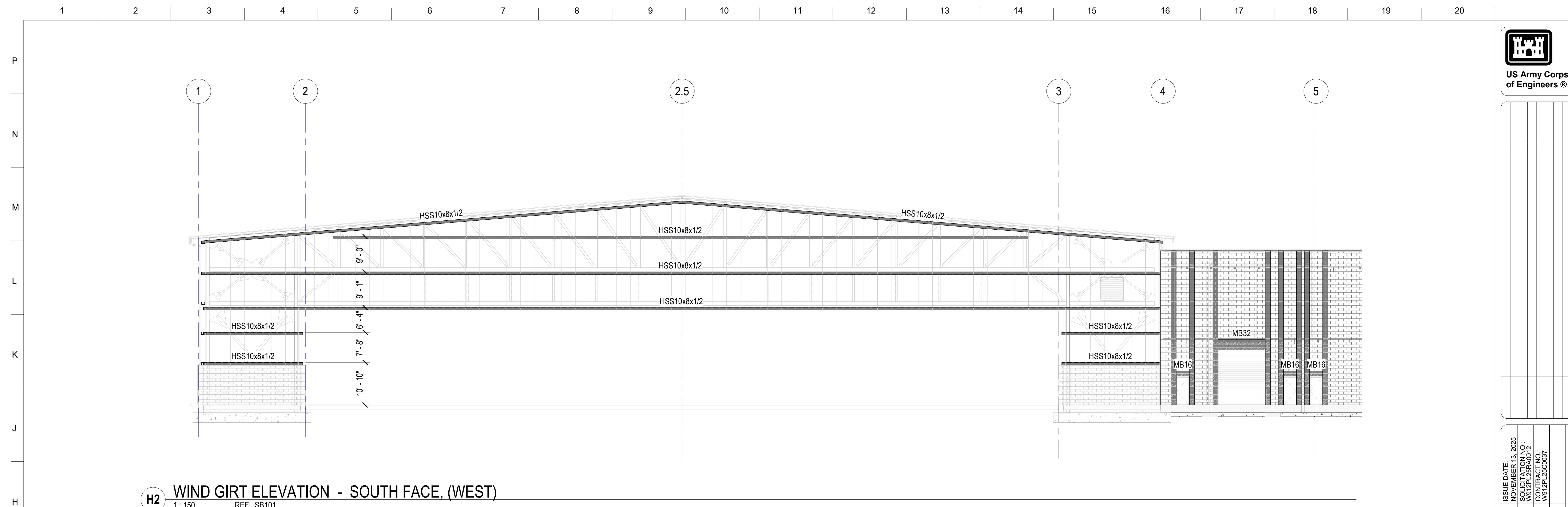
S 212

S-212



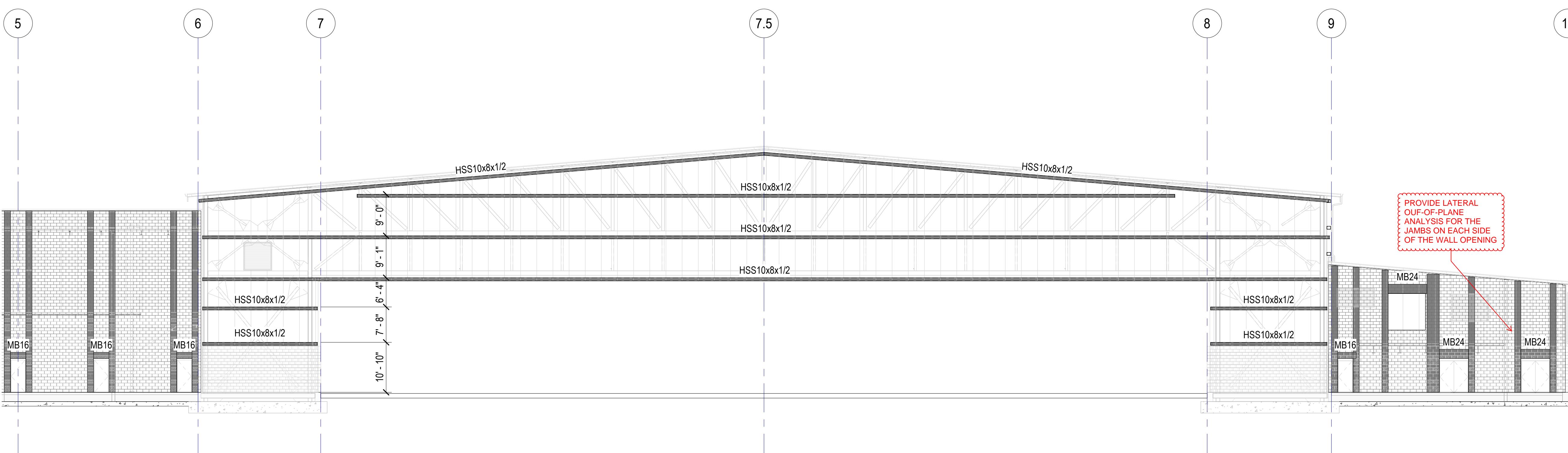
S-212





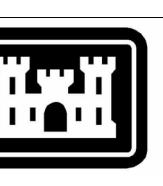
H2 WIND GIRT ELEVATION - SOUTH FACE, (WEST)

1:150 REF: SB101



A2 WIND GIRT ELEVATION - SOUTH FACE, (EAST)

1:150 REF: SB103



US Army Corps
of Engineers ®

DATE

DESIGNED BY:
A. VALENCIA
DRAWN BY:
R. CARLSON
CHECKED BY:
D. CLAYSON
SUBMITTED BY:
P. PASZCZUK
SIZE: ANS D

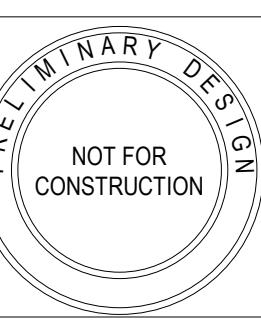
ISSUE DATE: NOVEMBER 13, 2025
SOLICITATION NO.: W912PL25-R-0012
CONTRACT NO.: W912PL25-C-0037

US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT
KORTE CONSTRUCTION
5700 OAKLAND AVE, SUITE 275
ST. LOUIS, MO 63110

CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

WIND GIRT ELEVATIONS

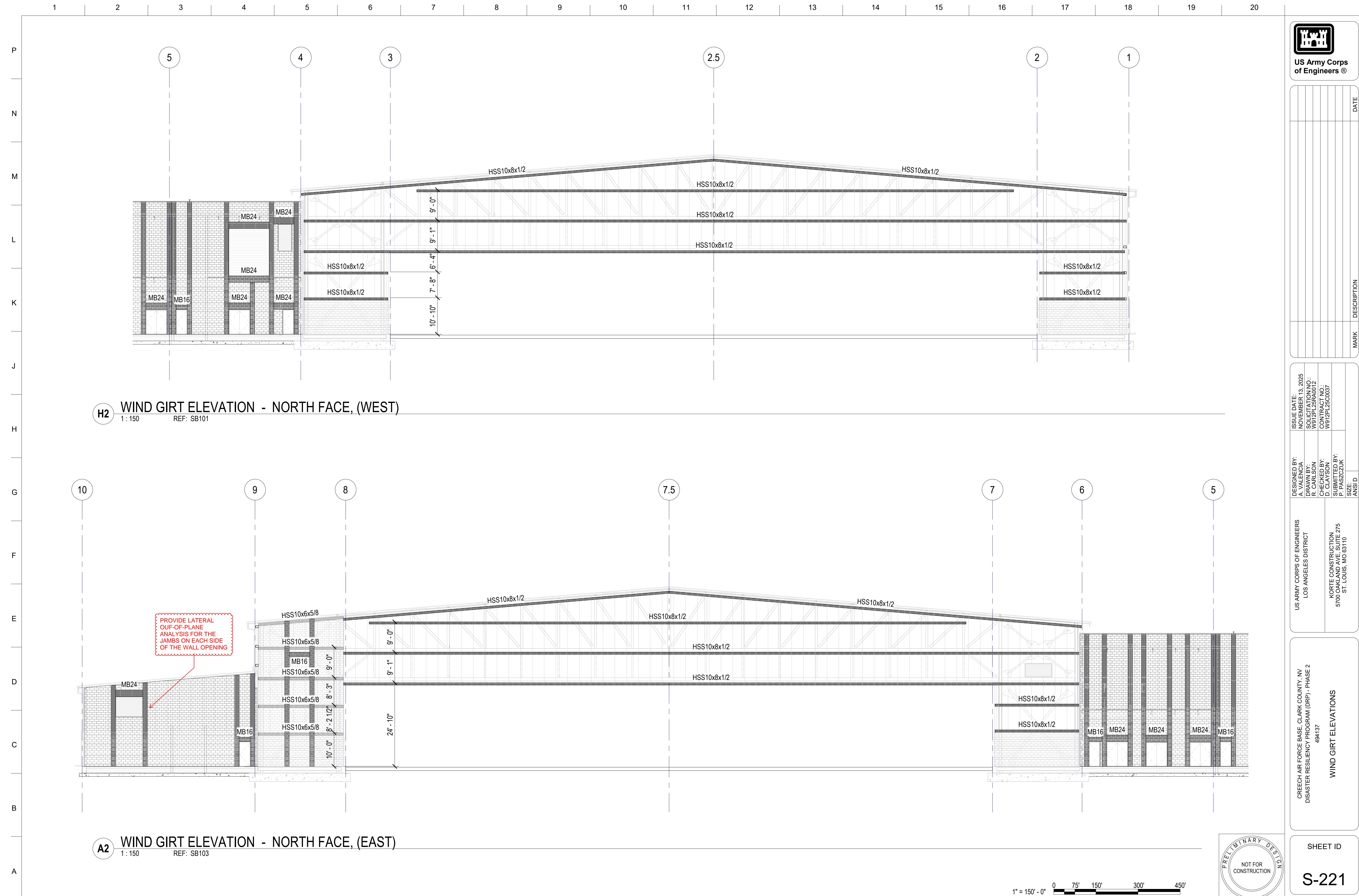
DP-1 95% SUBMISSION

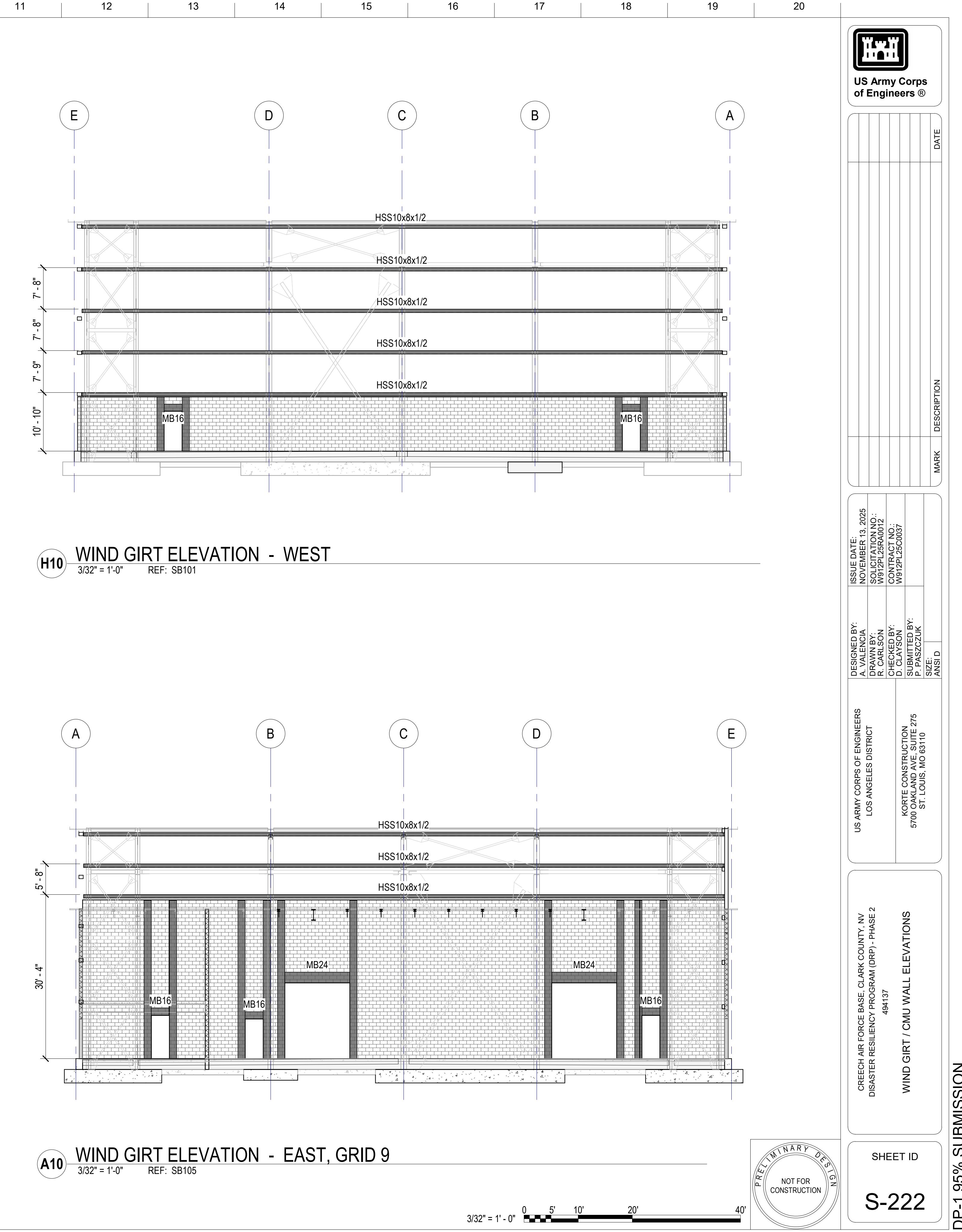
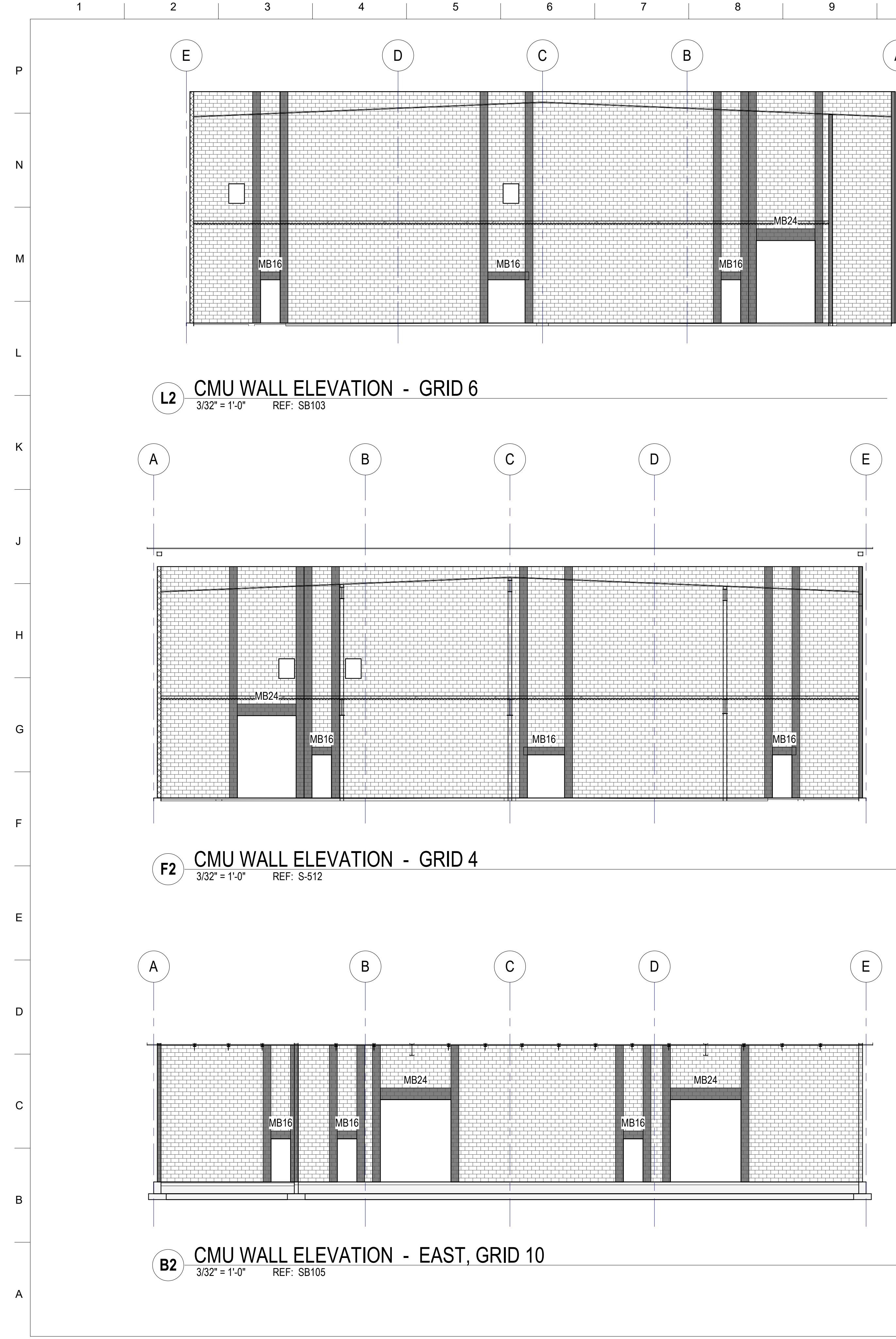


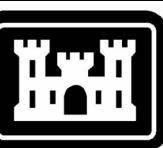
SHEET ID

S-220

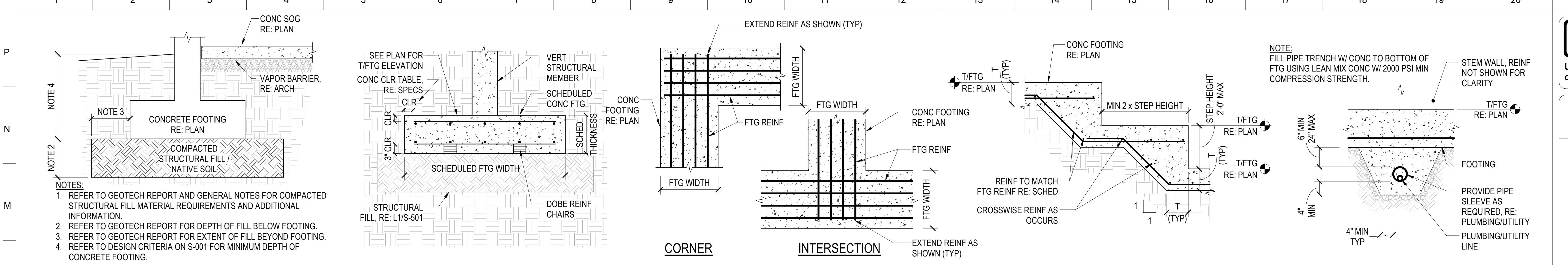
1" = 150' - 0" 0 75' 150' 300' 450'





US Army Corps
of Engineers ®

DATE



L1 TYP CONCRETE FOOTING PLACEMENT

NTS

L5 TYP FOOTING REINF

NTS

L9 TYP FOOTING CORNER REINF

NTS

L13 TYP STEPPED FOOTING DETAIL

NTS

L17 TYP SLEEVED PIPE UNDER CONT FTG

NTS

RE: ARCH FOR LOCATION AND EXTENT

T/SOG RE: PLAN

6" MAX

1'-0" MIN

DEFORMED BAR REINFORCEMENT

CONT BAR TO MATCH SOG REINF

ALL AROUND DEVELOP OR LAP AROUND CORNER

CONC SOG RE: PLAN

T/SLAB RE: PLAN

1'-0" MIN

DOWELS TO MATCH SOG REINF

AT LOCATIONS WHERE NO SLAB JOINT OCCURS, PLACE (2) #4 x 4'-0" CENTERED ON THE CORNER AND PLACED IN THE MIDDLE OF THE SLAB

CJ

PLAN VIEW

CJ

CJ

CJ

AT LOCATIONS WHERE NO SLAB JOINT OCCURS AND/OR AT THE CORNERS OF ALL SLAB ELEV CHANGES, PLACE (2) #4 x 4'-0" CENTERED ON THE CORNER AND PLACED IN THE MIDDLE OF THE SLAB

CJ

CJ

CJ

CJ

#4 @ 24" OC, DOWEL INTO SLAB

USING HILTI HY-200A OR APPROVED EQUIVALENT W/ 4" MIN EMBED, TYP

APPLY BONDING AGENT

(FOLLOW MFRS REQUIREMENTS)

#4 @ 8" OC EW

6" MIN (TYP)

#4 @ 12" OC EA WAY

T/SOG RE: PLAN

4" MIN

SOG RE: PLAN

#4 @ 24" OC, DOWEL INTO SLAB

USING HILTI HY-200A OR APPROVED EQUIVALENT W/ 4" MIN EMBED, TYP

APPLY BONDING AGENT

(FOLLOW MFRS REQUIREMENTS)

#4 @ 12" OC EW

4" MIN

6" MIN (TYP)

#4 @ 12" OC EA WAY

T/SOG RE: PLAN

4" MIN

SOG RE: PLAN

#4 @ 12" OC EW

6" MIN

#4 @ 12" OC EA WAY

T/SOG RE: PLAN

4" MIN

SOG RE: PLAN

#4 @ 12" OC EW

#4 @ 12" OC EA WAY

T/SOG RE: PLAN

4" MIN

SOG RE: PLAN

#4 @ 12" OC EW

6" MIN (TYP)

#4 @ 12" OC EA WAY

T/SOG RE: PLAN

4" MIN

SOG RE: PLAN

#4 @ 12" OC EW

6" MIN

#4 @ 12" OC EA WAY

T/SOG RE: PLAN

#4 @ 12" OC EA WAY

T/SOG RE: PLAN

4" MIN

SOG RE: PLAN

#4 @ 12" OC EW

6" MIN (TYP)

#4 @ 12" OC EA WAY

T/SOG RE: PLAN

4" MIN

SOG RE: PLAN

#4 @ 12" OC EW

6" MIN

#4 @ 12" OC EA WAY

T/SOG RE: PLAN

4" MIN

SOG RE: PLAN

#4 @ 12" OC EW

6" MIN (TYP)

#4 @ 12" OC EA WAY

T/SOG RE: PLAN

4" MIN

SOG RE: PLAN

#4 @ 12" OC EW

6" MIN

#4 @ 12" OC EA WAY

T/SOG RE: PLAN

4" MIN

SOG RE: PLAN

#4 @ 12" OC EW

6" MIN (TYP)

#4 @ 12" OC EA WAY

T/SOG RE: PLAN

4" MIN

SOG RE: PLAN

#4 @ 12" OC EW

6" MIN (TYP)

#4 @ 12" OC EA WAY

T/SOG RE: PLAN

4" MIN

SOG RE: PLAN

#4 @ 12" OC EW

6" MIN (TYP)

#4 @ 12" OC EA WAY

T/SOG RE: PLAN

4" MIN

SOG RE: PLAN

#4 @ 12" OC EW

6" MIN (TYP)

#4 @ 12" OC EA WAY

T/SOG RE: PLAN

4" MIN

SOG RE: PLAN

#4 @ 12" OC EW

6" MIN (TYP)

#4 @ 12" OC EA WAY

T/SOG RE: PLAN

4" MIN

SOG RE: PLAN

#4 @ 12" OC EW

6" MIN (TYP)

#4 @ 12" OC EA WAY

T/SOG RE: PLAN

4" MIN

SOG RE: PLAN

#4 @ 12" OC EW

6" MIN (TYP)

#4 @ 12" OC EA WAY

T/SOG RE: PLAN

4" MIN

SOG RE: PLAN

#4 @ 12" OC EW

6" MIN (TYP)

#4 @ 12" OC EA WAY

T/SOG RE: PLAN

4" MIN

SOG RE: PLAN

#4 @ 12" OC EW

6" MIN (TYP)

#4 @ 12" OC EA WAY

T/SOG RE: PLAN

4" MIN

SOG RE: PLAN

#4 @ 12" OC EW

6" MIN (TYP)

#4 @ 12" OC EA WAY

T/SOG RE: PLAN

4" MIN

SOG RE: PLAN

#4 @ 12" OC EW

6" MIN (TYP)

#4 @ 12" OC EA WAY

T/SOG RE: PLAN

4" MIN

SOG RE: PLAN

#4 @ 12" OC EW

6" MIN (TYP)

#4 @ 12" OC EA WAY

T/SOG RE: PLAN

4" MIN

SOG RE: PLAN

#4 @ 12" OC EW

6" MIN (TYP)

#4 @ 12" OC EA WAY

T/SOG RE: PLAN

4" MIN

SOG RE: PLAN

#4 @ 12" OC EW

6" MIN (TYP)

#4 @ 12" OC EA WAY

T/SOG RE: PLAN

4" MIN

SOG RE: PLAN

#4 @ 12" OC EW

6" MIN (TYP)

#4 @ 12" OC EA WAY

T/SOG RE: PLAN

4" MIN

SOG RE: PLAN

#4 @ 12" OC EW

6" MIN (TYP)

#4 @ 12" OC EA WAY

T/SOG RE: PLAN

4" MIN

SOG RE: PLAN

#4 @ 12" OC EW

6" MIN (TYP)

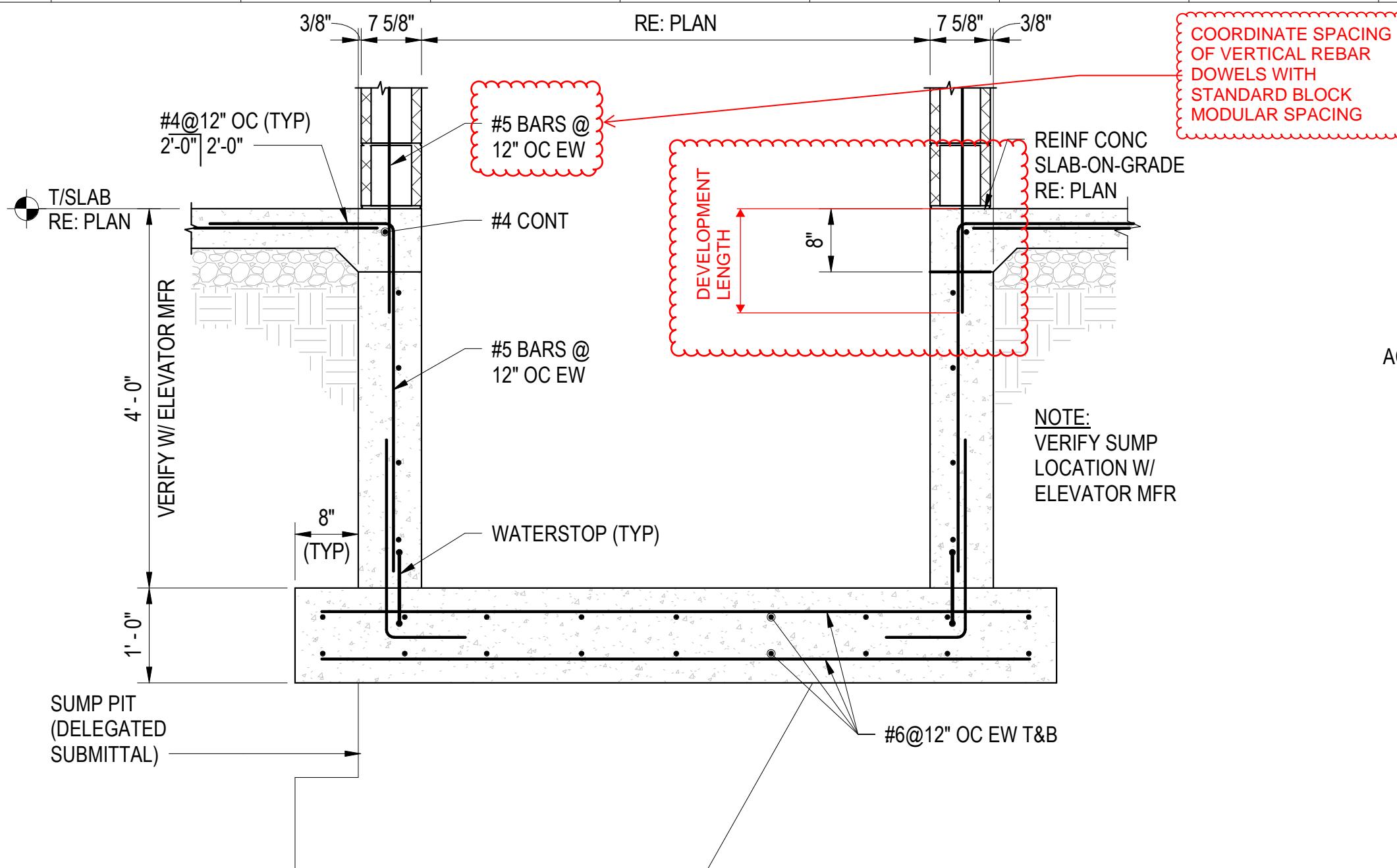
#4 @ 12" OC EA WAY

T/SOG RE: PLAN

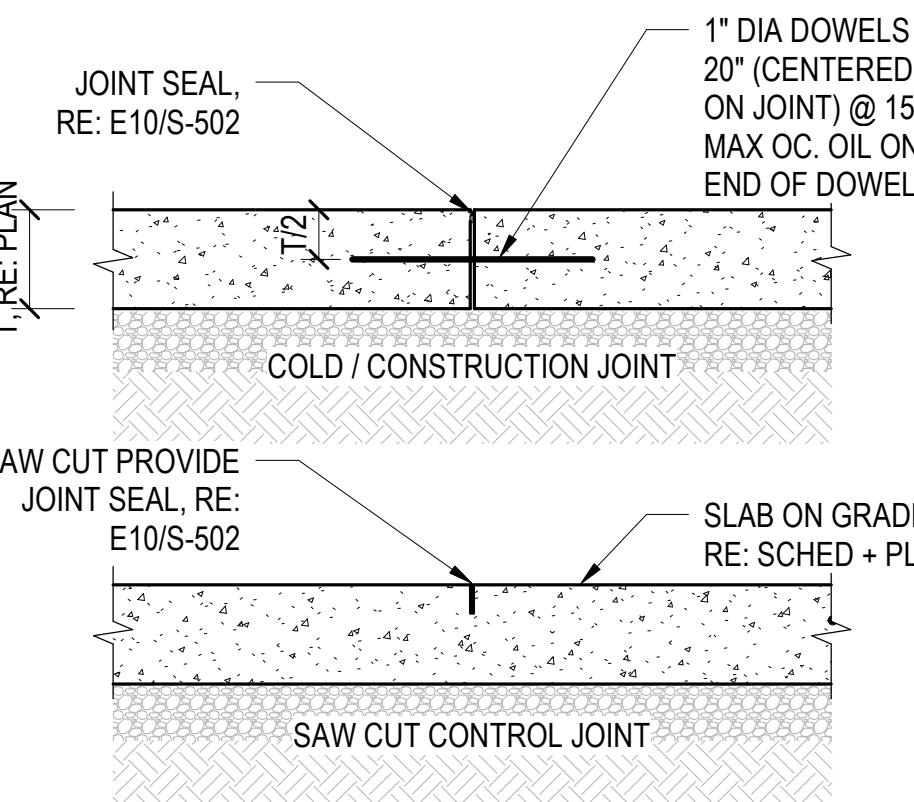
4" MIN

SOG RE: PLAN

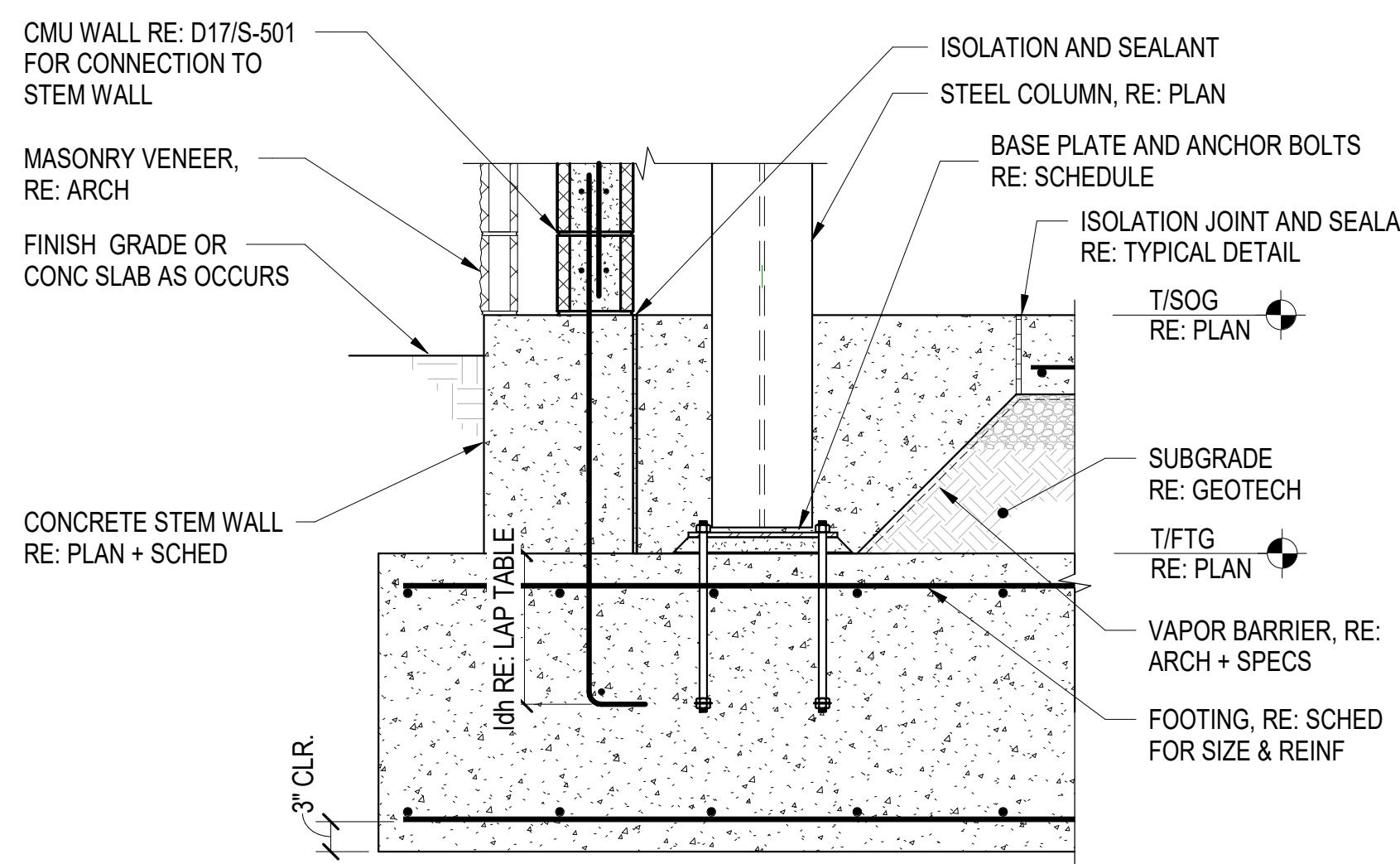
TRENCH DRAIN AND COVER PLATE DETAIL IN PROGRESS



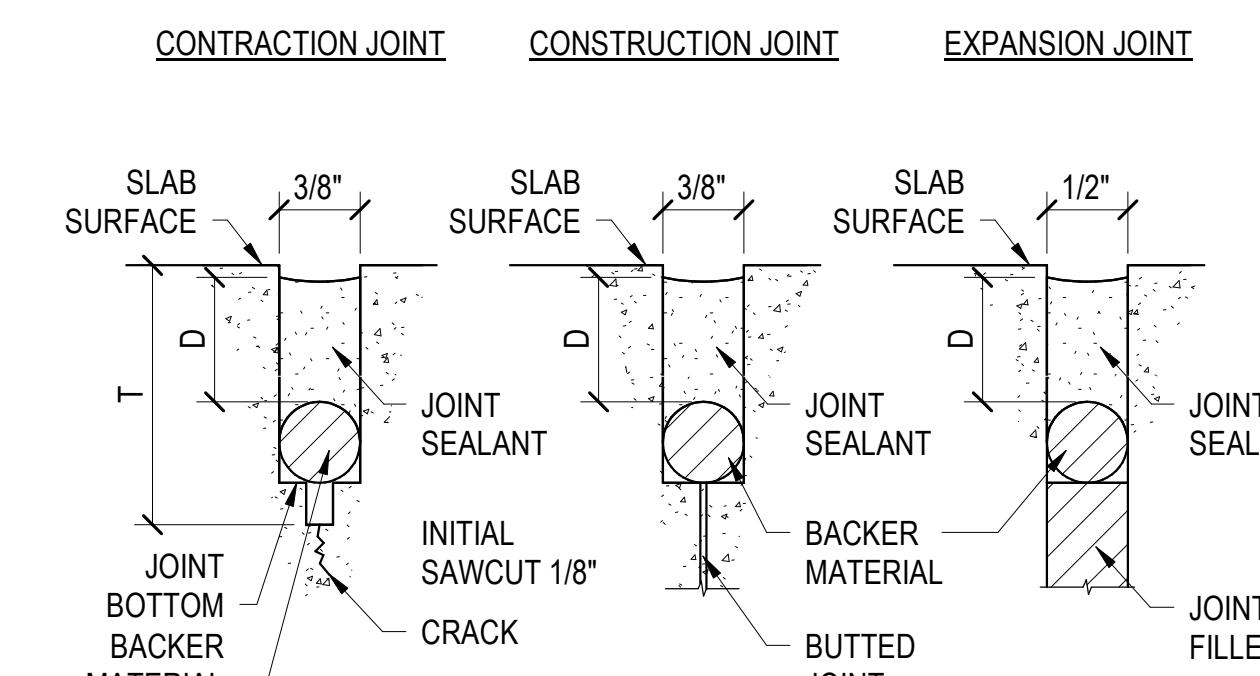
K8 ELEVATOR PIT
NTS REF: SB10



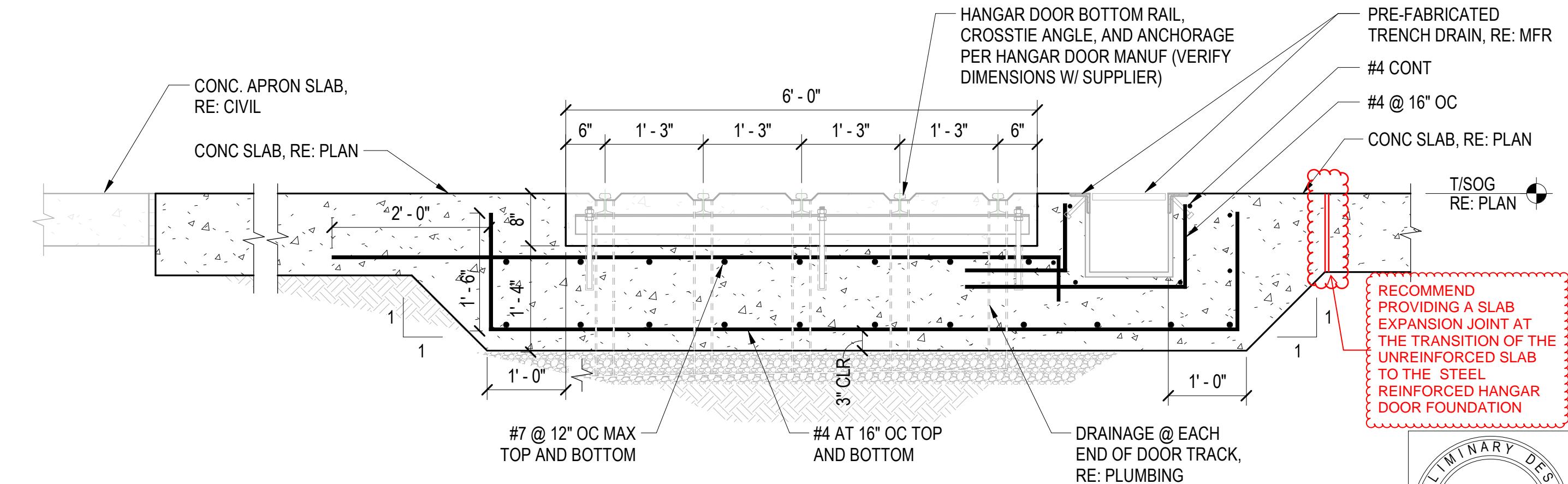
E6 TYP SOG JOINTS NTS



A5 TYP. EXTERIOR FOOTING DETAIL

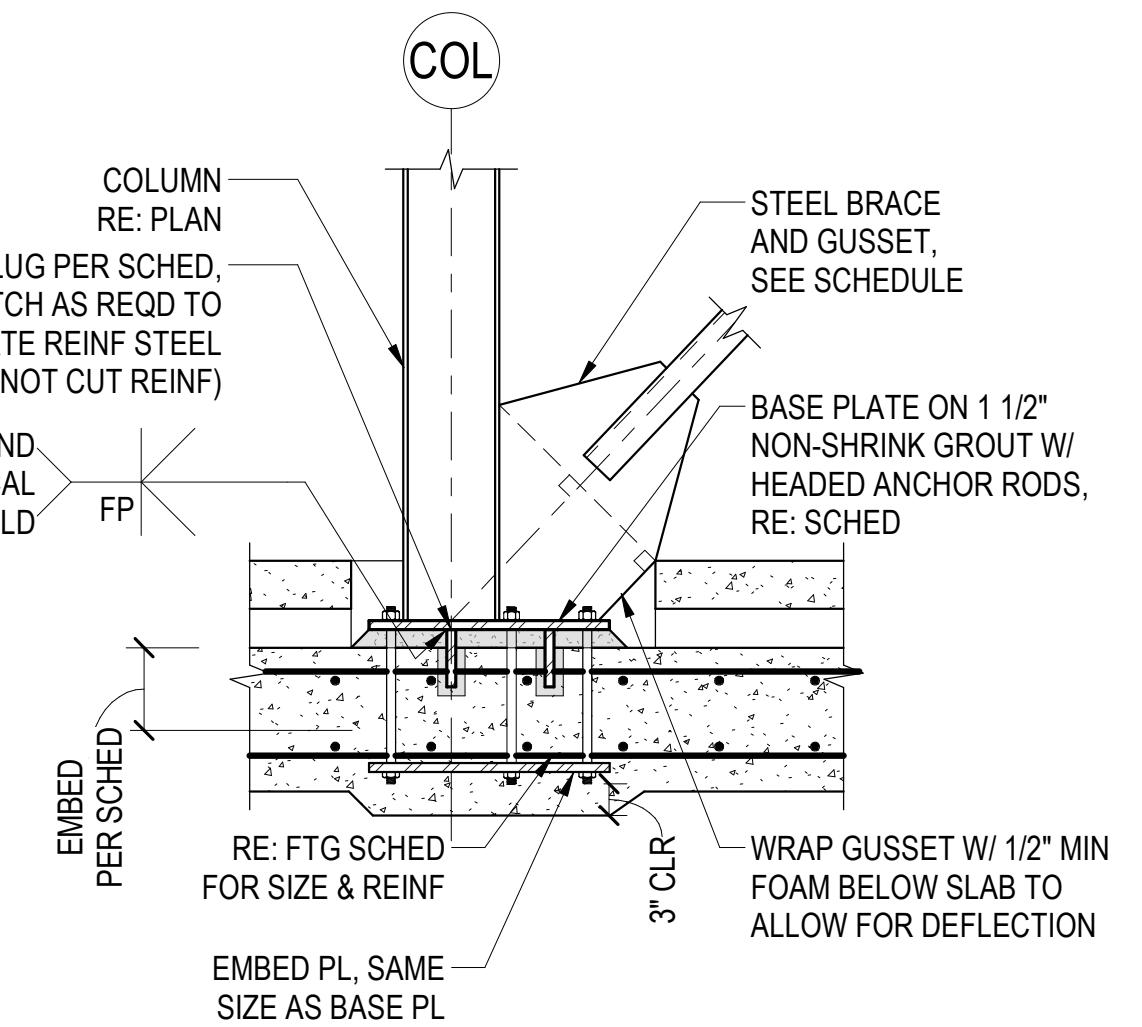


E10 TYP JOINT SEALANT @ CONC SOC NTS

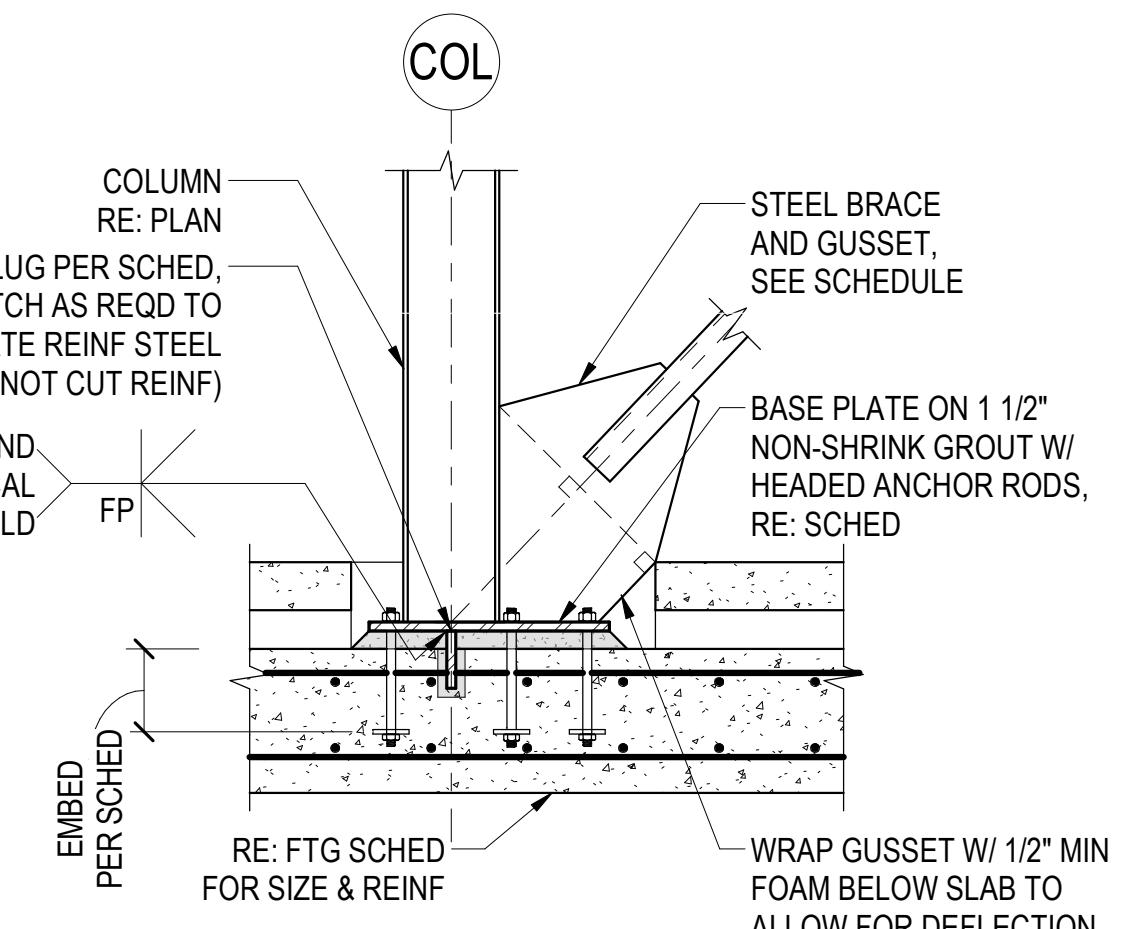


A12 HANGAR DOOR SUPPORT RAILS AND FOUNDATION

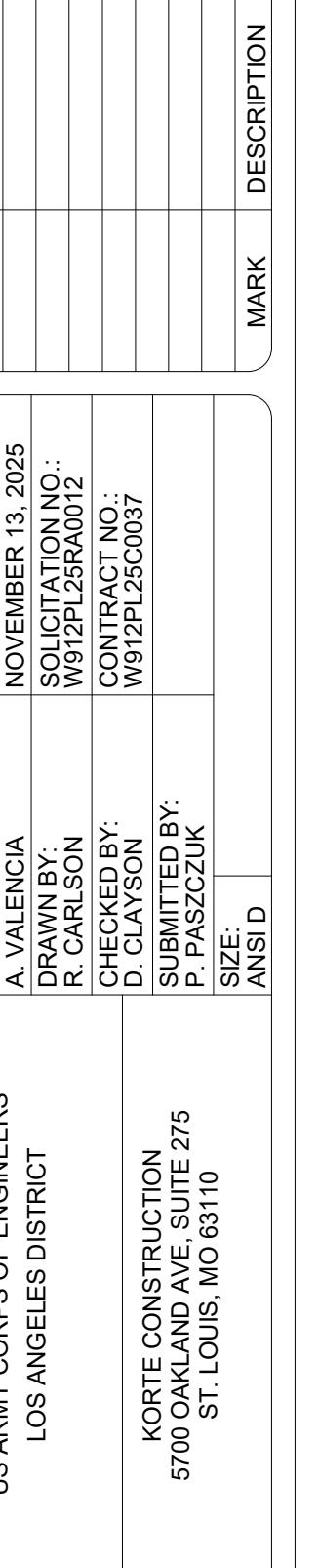
NTS REF: SB101



K15 BRACED FRAME @ FOOTING W/ EMBED PLATE
NTS



E15 TYP BRACED FRAME @ FOOTING DETAIL
NTS REF: S-201



AIR FORCE BASE, CLARK COUNT
RESILIENCY PROGRAM (DRP) - P
494137

AIR FORCE BASE, CLARK COUNT
RESILIENCY PROGRAM (DRP) - P
494137

SHEET ID

S-502

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

P N M L K J H G F E D C B A

US Army Corps of Engineers ®

USE THIS DETAIL FOR HOLES CUTTING INTO MORE THAN: 3 ADJACENT WEBS FOR 6" AND 8" MODULE DECK OR 2 ADJACET WEBS FOR 12" MODULE DECK

PRIOR TO CONCRETE POUR, SMALL OPENINGS SHOULD BE BLOCKED OUT AND FLOOR DECK LEFT INTACT. HOLES LESS THAN 6" IN DIAMETER AND CUTTING NO MORE THAN 1 WEB NEED NO REINFORCING. AFTER THE CONCRETE HAS CURED, THE BLOCKOUT CAN BE REMOVED AND THE FLOOR DECK IN THE AREA OF THE HOLE REMOVED.

NOTES:

1. ANGLES SHALL BE PLACED ON TOP OF THE DECK
2. IF DIMENSION 'A' IS GREATER THAN 4X01, 4X02, OR 32" (WHICHEVER IS LARGER), THEN THERE IS NO RESTRICTION ON DIMENSION 'B'.
3. IF DIMENSION 'B' IS GREATER THAN 4X01, 4X02, OR 32" (WHICHEVER IS LARGER), THEN THERE IS NO RESTRICTION ON DIMENSION 'A'.
4. IF DIMENSIONS 'A' AND 'B' ARE LESS THAN 4X01, 4X02, OR 32" (WHICHEVER IS LARGER), THE OPENING GROUP WILL BE CONSIDERED AS A SINGLE HOLE, AND MUST BE REINFORCED AS REQUIRED FOR THE LARGER OPENING.

USE THIS DETAIL FOR LARGER HOLES, RECTANGULAR OR SQUARE

PRIOR TO CONCRETE POUR, SMALL OPENINGS SHOULD BE BLOCKED OUT AND FLOOR DECK LEFT INTACT. HOLES LESS THAN 6" IN DIAMETER AND CUTTING NO MORE THAN 1 WEB NEED NO REINFORCING. AFTER THE CONCRETE HAS CURED, THE BLOCKOUT CAN BE REMOVED AND THE FLOOR DECK IN THE AREA OF THE HOLE REMOVED.

NOTES:

1. IF THE OPENING OR GROUP OF OPENINGS OCCURS IN ONE DECKING UNIT, THE OPENING OR OPENING GROUP MAY BE CUT PRIOR TO POURING OF CONCRETE.
2. IF THE OPENING OR GROUP OF OPENINGS CUTS THROUGH TWO DECKING UNITS, THE DECKING SHALL NOT BE CUT UNTIL CONCRETE HAS BEEN PLACED AND CURED. AT THE TIME OF POURING, SUITABLE SLEEVES OR BULKHEADS SHALL BE PLACED AROUND THE OPENING.
3. WHEN THE MAX DIMENSION OF AN OPENING OR OPENING GROUP EXCEEDS 24", PROVIDE W8X10 HEADER BEAMS BELOW THE DECK AT ALL SIDES.

K1 TYP. COMPOSITE DESK EDGE AT CMU
REF: SF121

H5 TYP ROOF JOIST ON EDGE GIRDER
REF: SF121

G1 TYP. COMPOSITE DESK EDGE AT CMU
REF: SF121

CONNECTION DETAILS IN PROGRESS

D5 TYP ROOF JOIST ON GIRDER
REF: SF121

A5 TYP ROOF OPENING SUPPORT
REF: SF121

NOTE:

1. WELD THE STEEL ROOF DECK TO THE ANGLE FRAME.
2. PRE-ENGINEERED ADJUSTABLE FRAMES MAY BE USED IN LIEU OF WELDED ANGLES IF APPROVED BY EOR.

H9 TYPICAL OPENINGS IN COMPOSITE DECK
REF: SF121

H10 TYPICAL OPENINGS IN COMPOSITE DECK
REF: SF121

NOTES:

1. A MAXIMUM OF ONE BLOCK (1'-4") BETWEEN VERTICAL WALL REINFORCING LOCATIONS MAY BE SLEEVED FOR UTILITY PENETRATIONS.
2. DO NOT PLACE OR ENCROACH UPON CELLS CONTAINING VERTICAL WALL REINFORCING.

H11 PENETRATION THROUGH MASONRY WALL
REF: SF121

A9 TYP COMPOSITE FLOOR SLAB EDGE
REF: SF121

A13 CMU STEEL GIRT
REF: SF121

A17 TYP ROOF OPENING < 12" DIAMETER
REF: SF121

FRAMING DETAILS

US ARMY CORPS OF ENGINEERS LOS ANGELES DISTRICT
KORTE CONSTRUCTION 5700 OAKLAND AVE SUITE 275 ST. LOUIS, MO 63110

DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

CREECH AIR FORCE BASE, CLARK COUNTY, NV

DATE



US Army Corps of Engineers ®

DATE

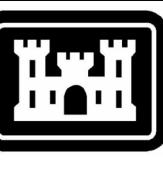
ISSUE DATE: NOVEMBER 13, 2025
SOLICITATION NO.: W912PL25-R-0012
CONTRACT NO.: W912PL25-C-0037

DESIGNED BY: A. VALENICA
DRAWN BY: R. CARLSON
CHECKED BY: D. CLAYSON
SUBMITTED BY: P. PASZCZUK
SIZE: ANSI D

DP-1 95% SUBMISSION

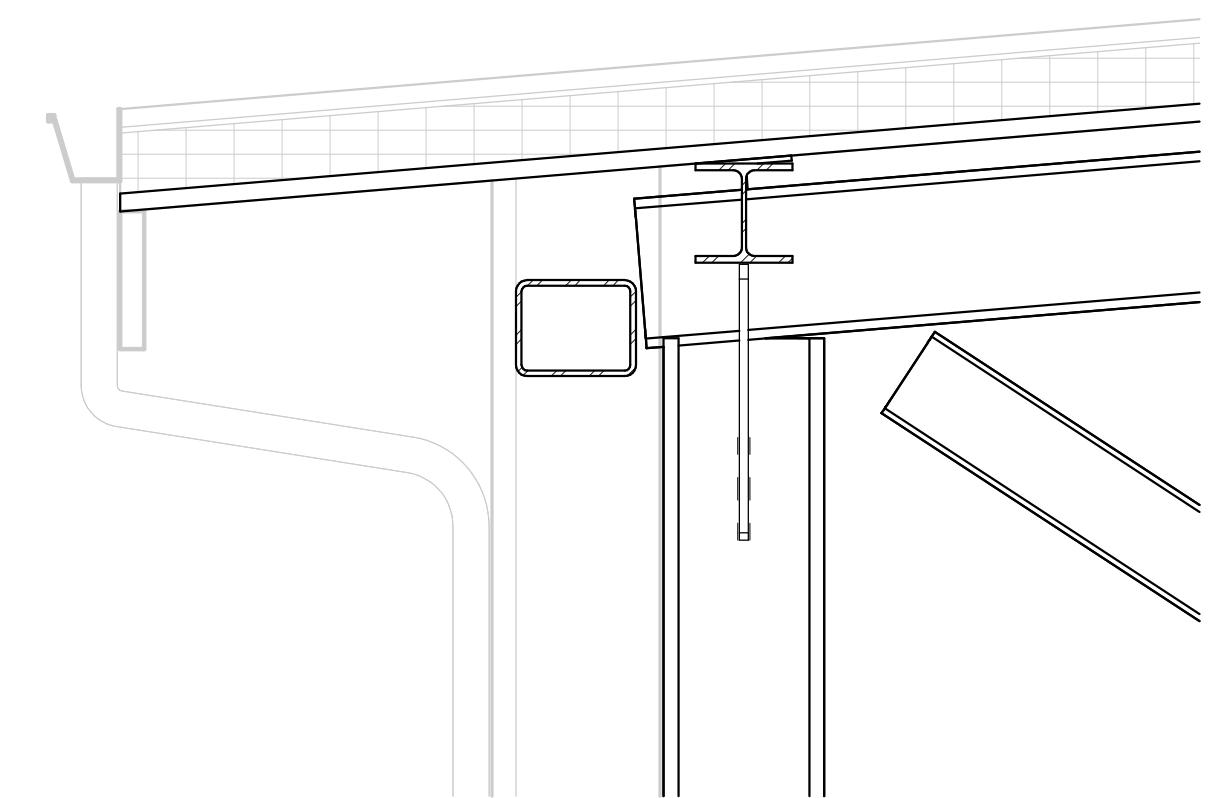
SHEET ID

S-511

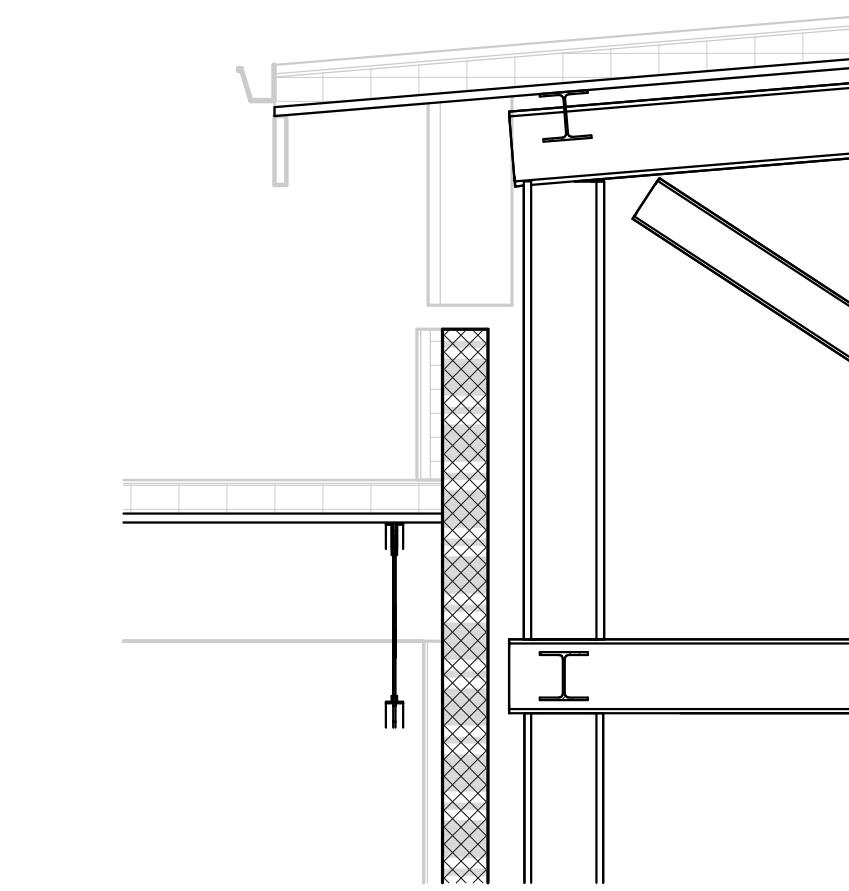
US Army Corps
of Engineers ®

DATE

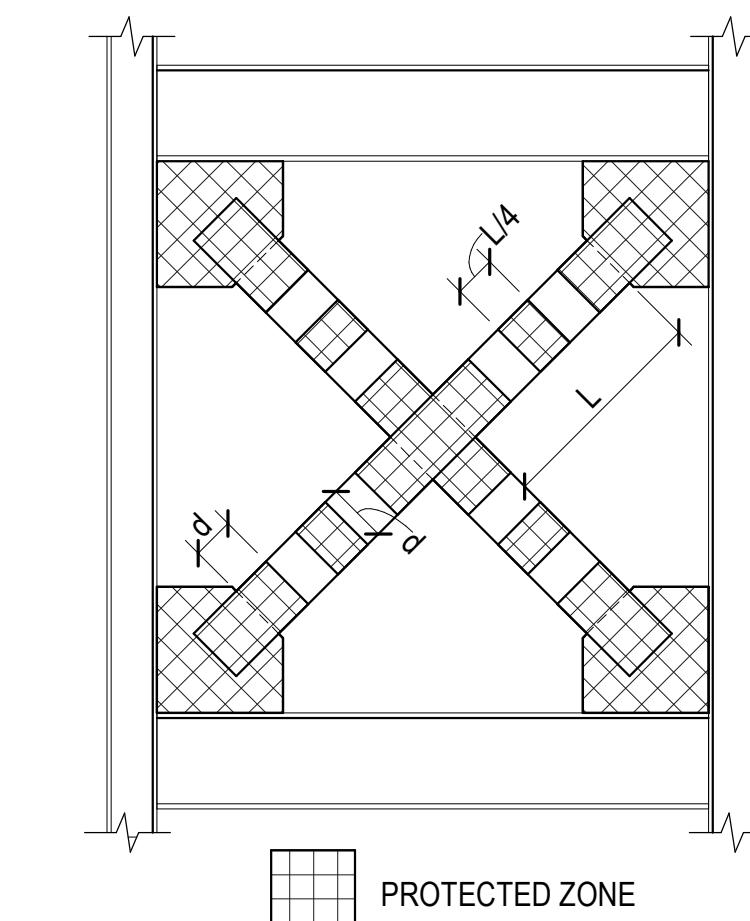
CONNECTION DETAILS AND LATERAL BRACING DETAILS IN PROGRESS



K10 Section 36
3/4" = 1'-0" REF: SF141



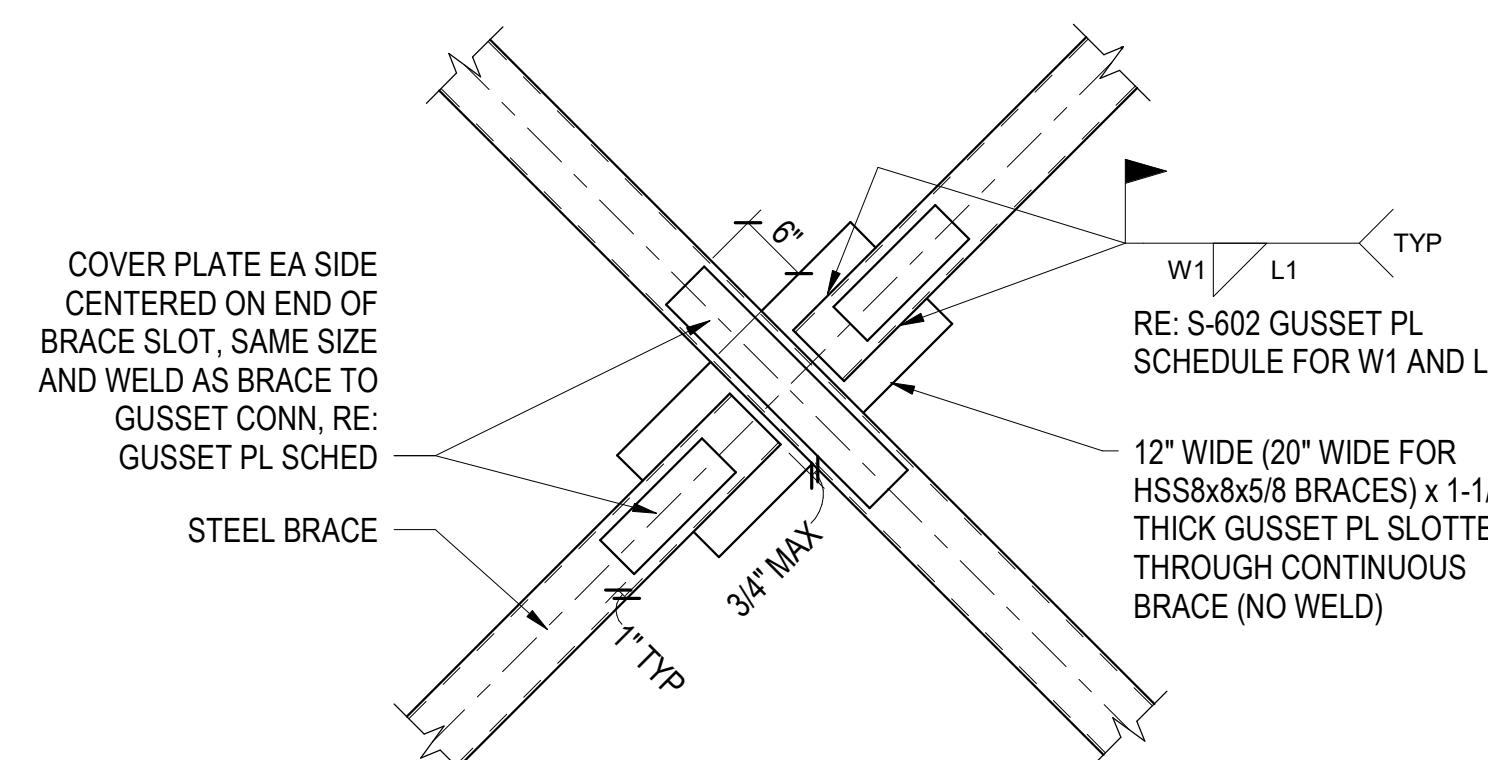
K15 Section 34
3/8" = 1'-0" REF: SF131



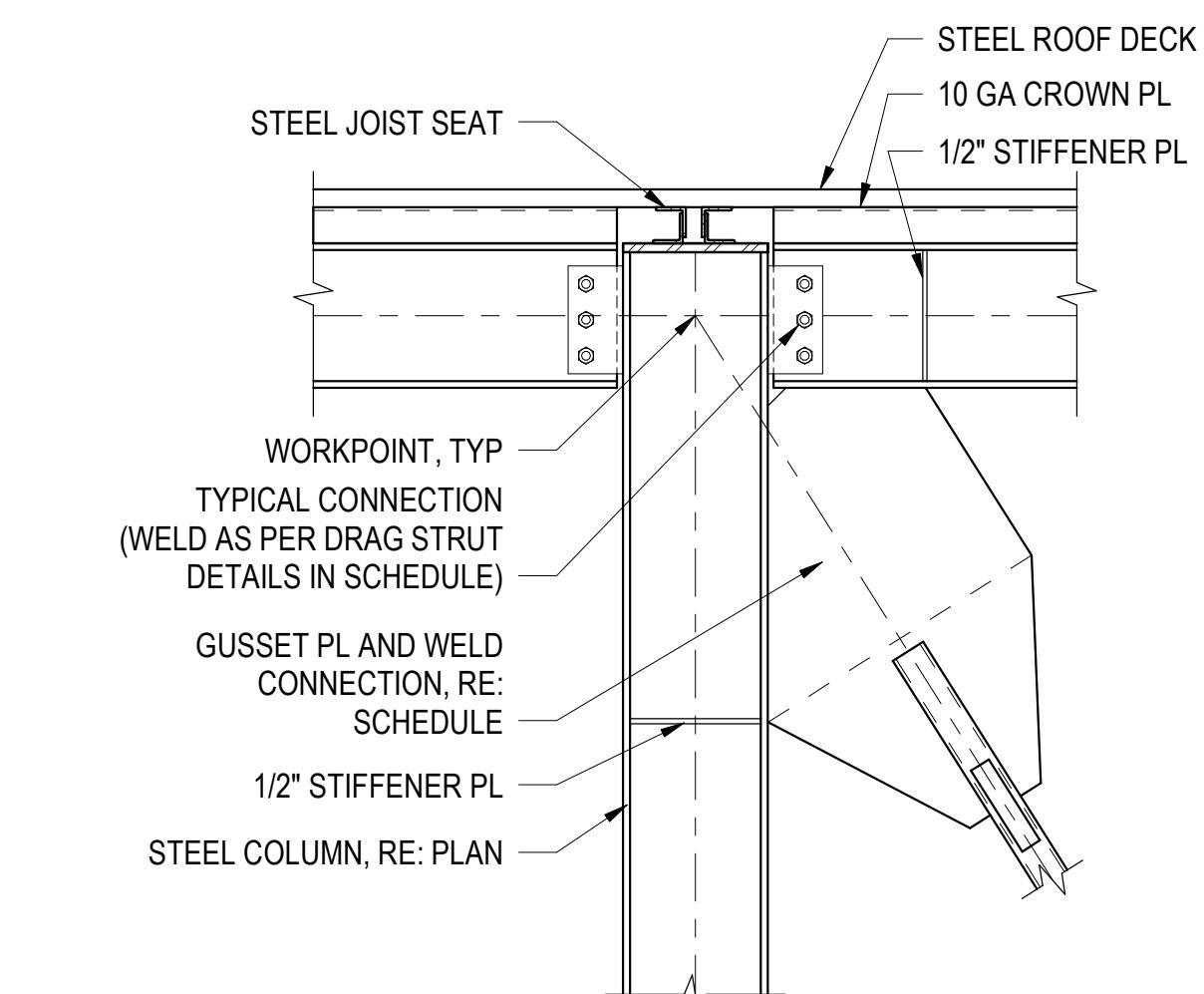
E10 PROTECTED ZONE OF X-BRACED FRAME
NTS

NOTES:

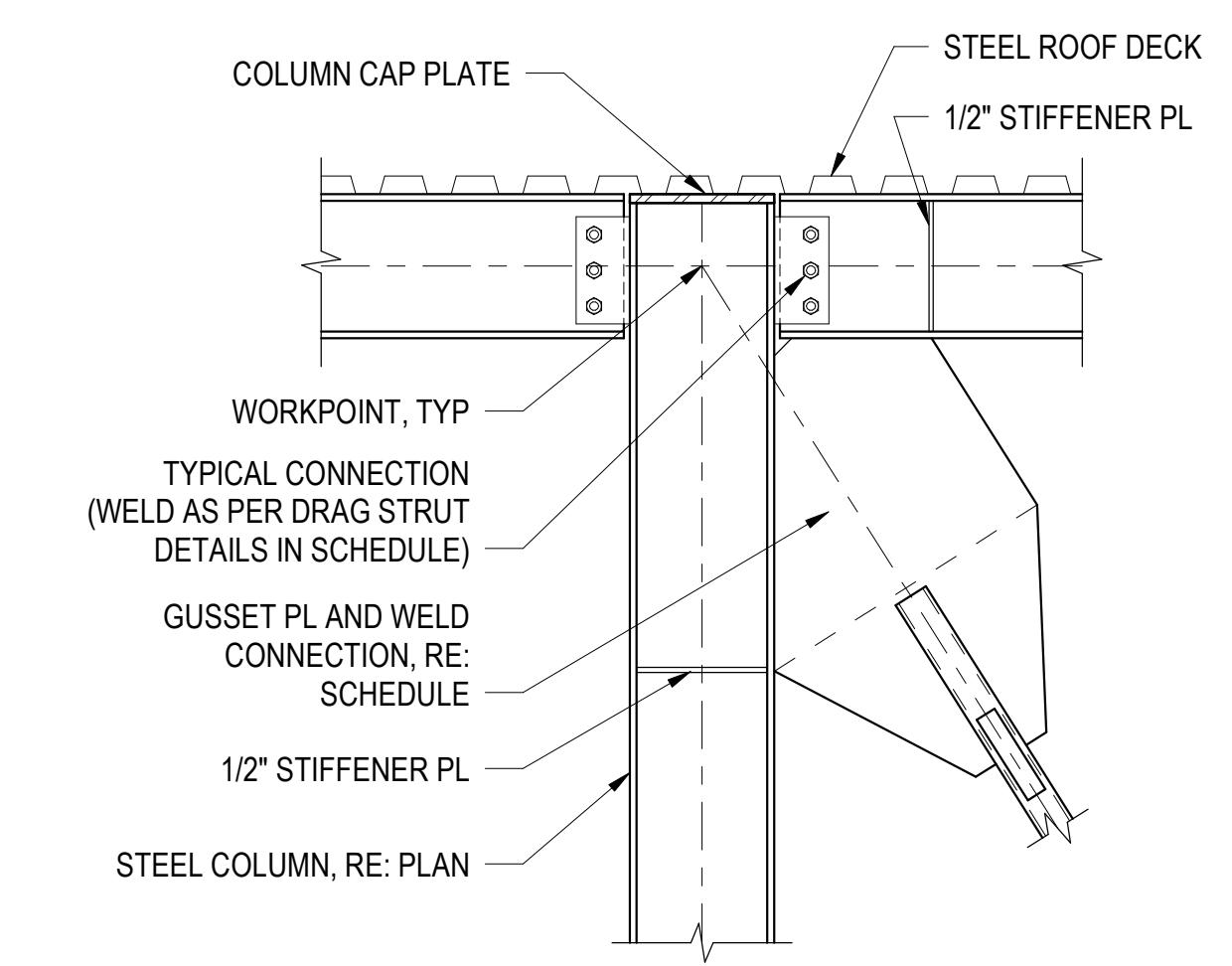
1. DISCONTINUITIES RESULTING FROM FABRICATION AND ERECTION PROCEDURES AND FROM OTHER ATTACHMENTS ARE PROHIBITED IN THE REGION OF A MEMBER OR A CONNECTION ELEMENT DESIGNATED AS A PROTECTED ZONE.
2. WELDED STEEL HEADED STUD ANCHORS AND OTHER CONNECTIONS ARE PERMITTED IN PROTECTED ZONES.
3. WITHIN THE PROTECTED ZONE, HOLES, TACK WELDS, ERECTION AIDS, AIR-ARC GOUGING, AND UNSPECIFIED THERMAL CUTTING FROM FABRICATION OR ERECTION OPERATIONS SHALL BE REPAIRED AS REQUIRED BY THE ENGINEER OF RECORD (EOR).
4. STEEL HEADED STUD ANCHORS SHALL NOT BE PLACED ON BEAM FLANGE WITHIN THE PROTECTED ZONE.
5. ARC SPOT WELDS AS REQUIRED TO ATTACH DECKING ARE PERMITTED.
6. DECKING ATTACHMENTS THAT PENETRATE THE BEAM FLANGE SHALL NOT BE PLACED ON BEAM FLANGES WITHIN THE PROTECTED ZONE, EXCEPT POWER-ACTUATED FASTENERS UP TO 0.18 IN (4.6 MM) DIAMETER ARE PERMITTED.
7. WELDED, BOLTED, OR SCREWED ATTACHMENTS OR POWER-ACTUATED FASTENERS FOR PERIMETER EDGE ANGLES, EXTERIOR FACADES, PARTITIONS, DUCT WORK, PIPING, OR OTHER CONSTRUCTION SHALL NOT BE PLACED WITHIN THE PROTECTED ZONE. EXCEPTION: OTHER ATTACHMENTS ARE PERMITTED WHERE DESIGNATED OR APPROVED BY THE EOR.
8. PROTECTED ZONES BE PERMANENTLY MARKED BY THE FABRICATOR AND RE-MARKED BY THE OWNER'S DESIGNATED REPRESENTATIVE IF THOSE MARKINGS ARE OBSCURED IN THE FIELD, SUCH AS BY APPLICATION OF FIREPROOFING.



A5 TYP X-BRACE INTERSECTION DETAIL
NTS REF: S-201



A10 TYP BRACED FRAME ROOF CONNECTION
NTS REF: S-202



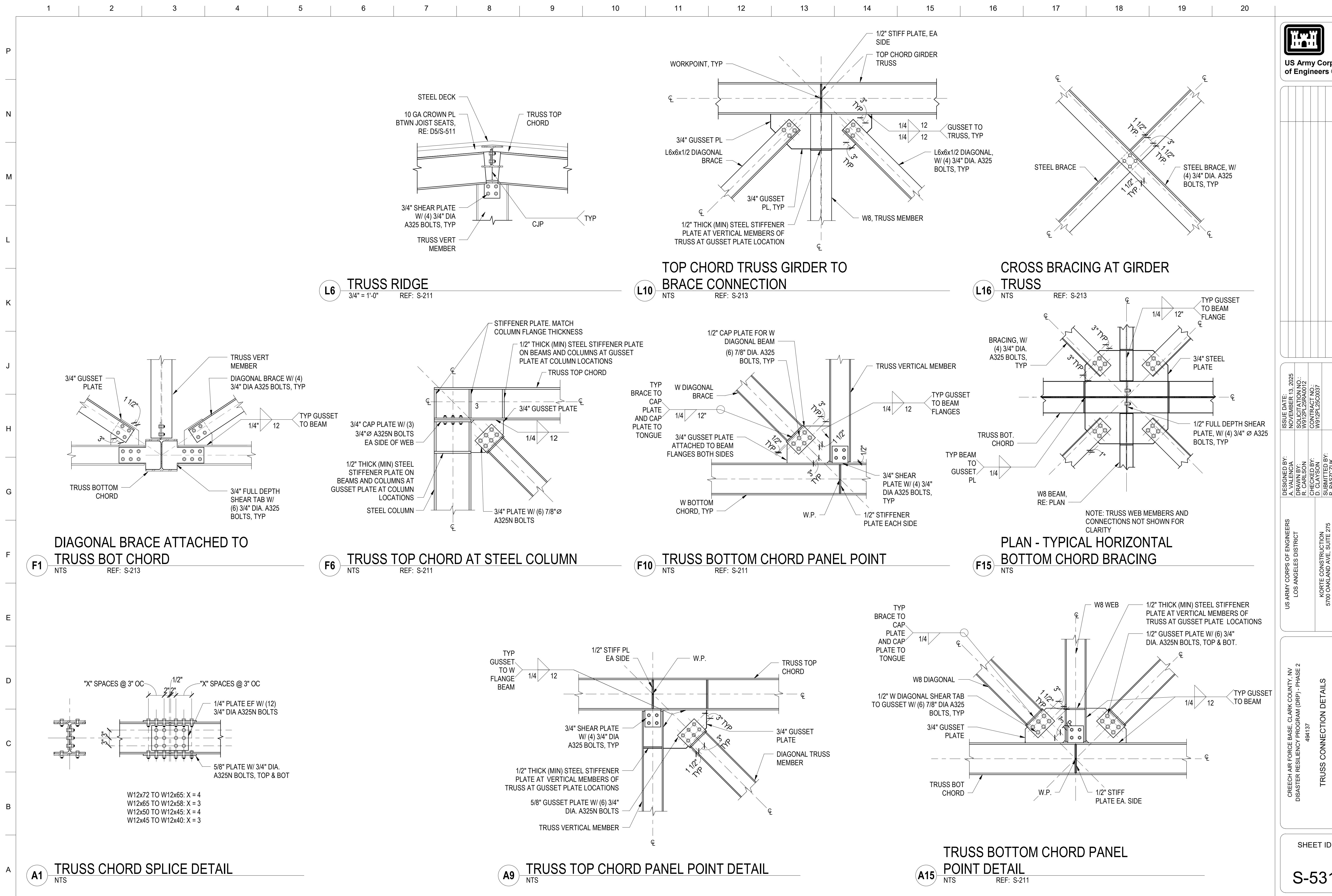
A15 TYP BRACED FRAME ROOF CONNECTION
NTS REF: S-203

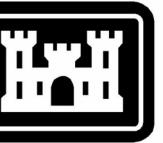
CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
49137

BRACED FRAME DETAILS

SHEET ID

S-521

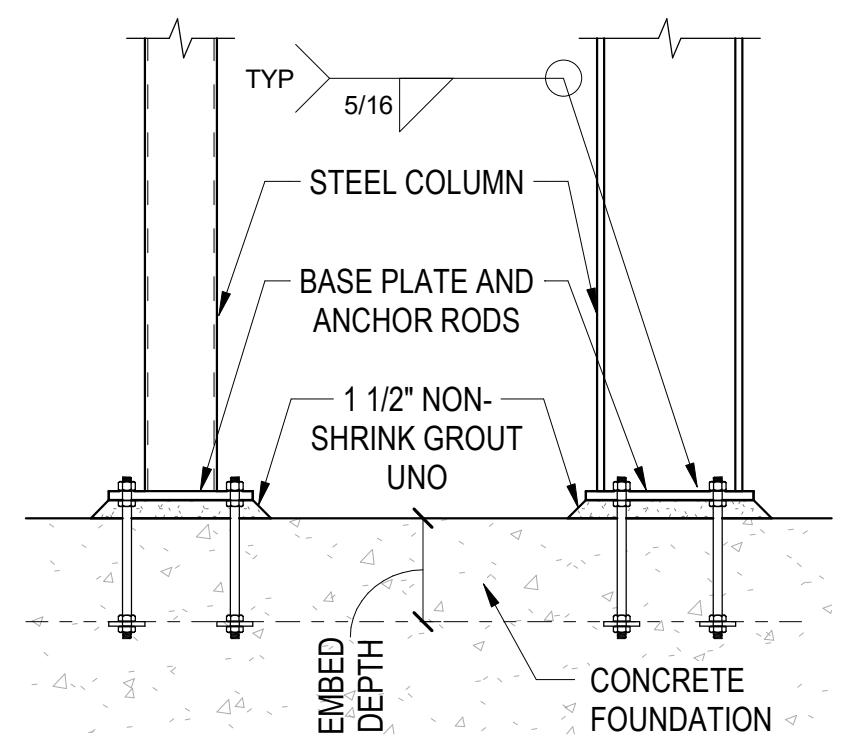


US Army Corps
of Engineers ®

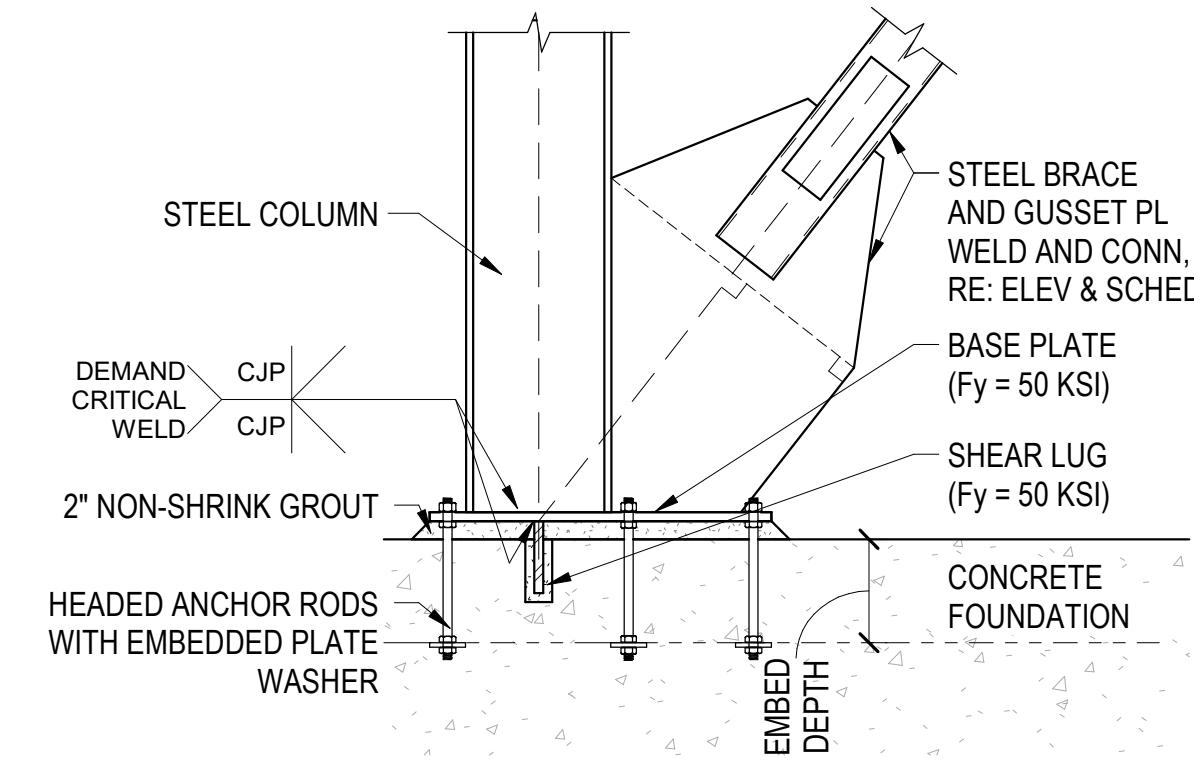
DATE

STEEL BRACED FRAME COLUMN & BASE PLATE SCHEDULE

COLUMN MARK	Structural Shape	BASE PLATE					ANCHOR ROD		SHEAR LUG		NOTES	
		TYPE	THICKNESS	"M" DIM	"N" DIM	"A" DIM	"P" DIM	DIA.	EMBED	THICKNESS	DEPTH	
SC1	W10x68	LWC	1 7/8"	48"	20"	2 1/2"	30"	1 1/2"	28"	2 3/4"	8 1/2"	GR. 105 ANCHORS
SC2	W10x68	LWB	1 3/4"	48"	20"	2 1/2"	N/A	1 1/2"	28"	2 3/4"	8 1/2"	GR. 105 ANCHORS
SC3	W12x120	WA	3/4"	14"	14"	2"	N/A	3/4"	12"	N/A	N/A	
SC4	W12x136	LWA	1 7/8"	45"	20"	2 1/2"	N/A	1 1/2"	28"	2 3/4"	8 1/2"	GR. 105 ANCHORS
SC5	HSS6x6x1/4	HB	3/4"	12"	8"	1 1/2"	N/A	3/4"	9"	N/A	N/A	
SC6	HSS8x8x1/2	HA	3/4"	14"	14"	1 1/2"	N/A	3/4"	9"	N/A	N/A	
SC7	HSS10x10x1/2	HA	3/4"	16"	16"	1 1/2"	N/A	3/4"	9"	N/A	N/A	
SC8	HSS12x12x5/8	HA	3/4"	18"	18"	1 1/2"	N/A	1"	12"	N/A	N/A	



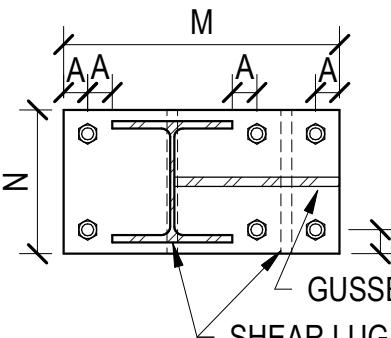
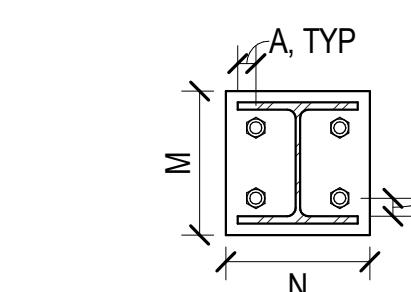
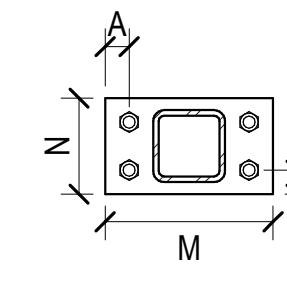
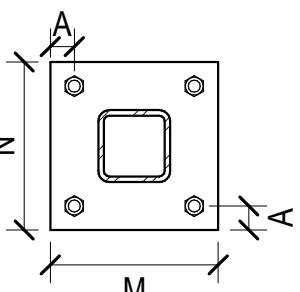
TYPICAL COLUMN BASE CONDITION



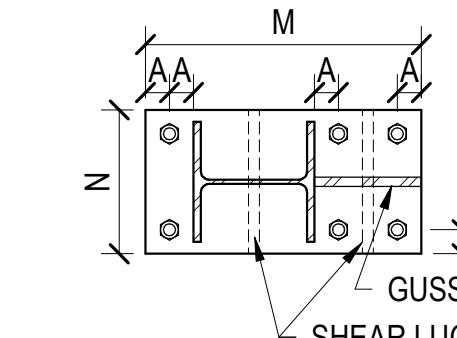
TYPICAL BRACED FRAME COLUMN BASE CONDITION

NOTES:

- ALL BASE PLATES AND SHEAR LUGS MUST BE ASTM A572 GR50 STEEL, TYP UNO
- ALL ANCHOR RODS MUST BE ASTM F-1554 GR55 MIN UNO. THEY MUST BE HEADED ANCHOR RODS W/ 3"x3"x3/8" PLATE WASHERS WITH DOUBLE NUTS OR EMBED PLATE EMBEDDED IN CONCRETE AT THE EMBEDMENT DEPTH SPECIFIED, TYP UNO.
 - ALL ANCHOR RODS MUST HAVE HARDENED WASHERS AND NUTS, WITH FULL HEIGHT OF EXTENSIONS THREADED
 - WASHERS MUST CONFORM TO AISC STEEL CONSTRUCTION MANUAL TABLE 14-2
 - C. BASE PLATE HOLES MAY INCREASE PER AISC STEEL CONSTRUCTION MANUAL TABLE 14-2
- ALL BASE PLATES MUST BEAR ON MIN 1 1/2" THICK (2" THICK AT BRACED FRAMES) 5000 PSI NON-SHRINK GROUT AND MUST HAVE LEVELING NUTS, TYP UNO
- ALL BASE PLATES MUST BE WELDED TO THE COLUMN WITH A 1/4" FILLET WELD ALL AROUND, TYP UNO
- ALL ANCHOR RODS MUST BE SET IN PLACE WITH A TEMPLATE. THEY MUST BE PLACED PLUMB AND AT THE CORRECT DEPTH AND EXTENSION
- THE WIDTH OF ALL SHEAR LUGS IS THE SAME AS THE 'N' DIMENSION SHOWN IN BASE PLATE TYPES
- NOTCH SHEAR LUGS AS REQ'D TO ACCOMMODATE REINF STEEL
- SEE THE STRUCTURAL GENERAL NOTES FOR ADDITIONAL INFORMATION



*PROVIDE EMBED PLATE, RE: K15/S-502



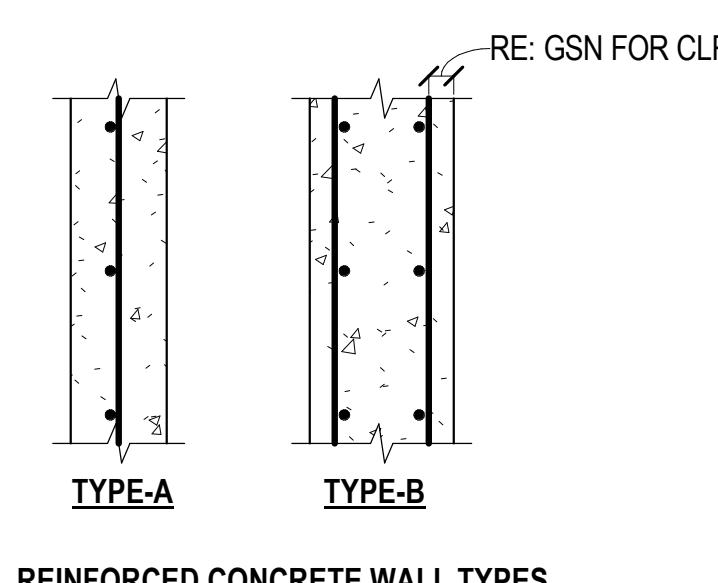
*PROVIDE EMBED PLATE, RE: K15/S-502

CONCRETE WALL SCHEDULE

MARK	WIDTH	TYPE	WALL REINFORCING		NOTES
			HORIZONTAL	VERTICAL	
CW8	8"	TYPE A	#5 @ 12" OC	#5 @ 12" OC	
CW15	1' - 3"	TYPE B	#5 @ 12" OC EF	#5 @ 12" OC EF	

NOTES:

- SEE TYPICAL DETAILS FOR REINFORCING AT CORNERS, INTERSECTIONS, AND OPENINGS.
- PROVIDE DOWELS WITH STANDARD HOOKS AND/OR PROPER LAP LENGTH TO THE STRUCTURE ABOVE AND BELOW WITH SIZE AND SPACING TO MATCH THE VERT REINF IN THE WALL, TYP UNO.
- THE LAP SPLICE LENGTH OF VERT REINF MUST BE AS SHOWN IN THE CONCRETE REINF DEVELOPMENT AND LAP SPLICE TABLE IN THE GENERAL NOTES. ADJUST HEIGHT OF EACH LIFT AS REQUIRED.
- WHEN A SINGLE CURTAIN OF REINF IS SPECIFIED, PLACE THE VERT REINF IN THE CENTER OF THE WALL, TYP UNO.
- AT TOP AND BTM OF WALL, INCLUDING ALL DECK BEARING ELEVATIONS, PROVIDE (2) #5 CONT IN ADDITION TO SCHEDULED REINFORCING.
- ALL HORIZONTAL REINF MUST TERMINATE AT ENDS OF WALLS AND ALL JAMBS WITH A STANDARD 180 DEGREE HOOK. END OF WALL IS DEFINED AS ANY WALL SEGMENT THAT EITHER CHANGES DIRECTION AND/OR CHANGES TO A DIFFERENT WALL TYPE.
- SEE GENERAL STRUCTURAL NOTES FOR ALL OTHER REQUIREMENTS.



REINFORCED CONCRETE WALL TYPES

FOOTING SCHEDULE

MARK	WIDTH	LENGTH	THICK	TRANSVERSE REINFORCING		LONGITUDINAL REINFORCING		NOTES
				NO.	SIZE	NO.	SIZE	
FS3.0	3' - 0"	3' - 0"	1' - 0"	(4)	#5	(4)	#5	
FS4.0	4' - 0"	4' - 0"	1' - 0"	(5)	#5	(5)	#5	
FS6.0	6' - 0"	6' - 0"	1' - 4"	(7)	#6	(7)	#6	
FS7.0	7' - 0"	7' - 0"	1' - 6"	(8)	#6	(8)	#6	TOP & BOTTOM
FS8x12	8' - 0"	12' - 0"	2' - 0"	(13)	#7	(9)	#7	TOP & BOTTOM
FS10.0	10' - 0"	10' - 0"	2' - 0"	(11)	#7	(11)	#7	TOP & BOTTOM
FS10x35	10' - 0"	35' - 0"	2' - 6"	(36)	#8	(11)	#8	TOP & BOTTOM
FS10x37	10' - 0"	37' - 0"	2' - 6"	(38)	#8	(11)	#8	TOP & BOTTOM
FS11.0	11' - 0"	11' - 0"	2' - 0"	(12)	#7	(12)	#7	TOP & BOTTOM
FS18x30	18' - 0"	30' - 0"	2' - 6"	(31)	#8	(19)	#8	TOP & BOTTOM
FC3.0	3' - 0"	CONT	1' - 0"	(4)	#5	--	--	#5 @ 12" OC
FC4.0	4' - 0"	CONT	1' - 0"	(5)	#6	--	--	#5 @ 12" OC

NOTES:

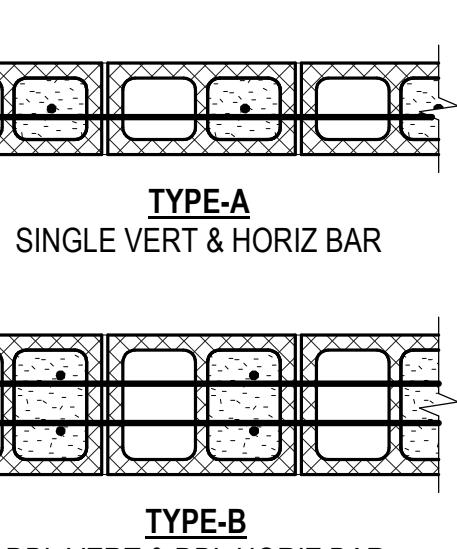
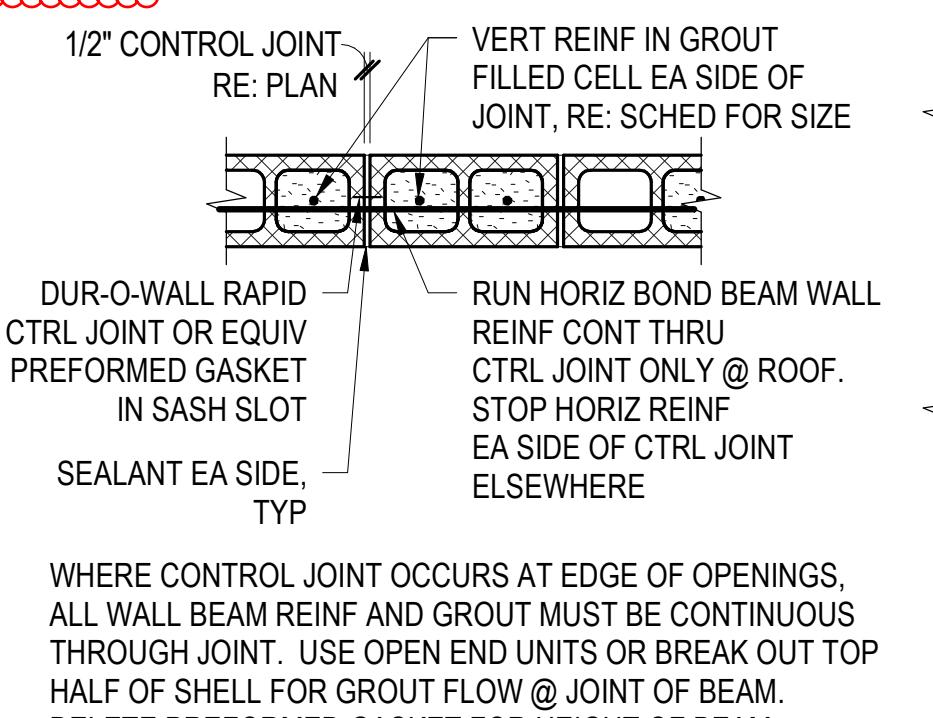
- ALL FOOTINGS MUST BEAR ON PROPERLY PREPARED MATERIAL. SEE FOUNDATION SECTION OF THE STRUCTURAL GENERAL NOTES.
- ALL FOOTINGS MUST BE CENTERED BELOW THE WALL AND/OR COLUMN ABOVE, TYP UNO.
- ALL EARTH FORMED FOOTINGS MUST HAVE REQUIRED CONCRETE COVER FOR REINFORCEMENT PER THE CONCRETE COVER TABLE.
- ALL EXTERIOR FOOTINGS MUST BEAR BELOW THE EFFECTS OF FROST. SEE THE DESIGN CRITERIA SECTION OF THE STRUCTURAL GENERAL NOTES FOR MINIMUM BEARING DEPTH.
- PROVIDE MINIMUM COVER FOR ALL REINFORCING PER THE STRUCTURAL GENERAL NOTES AND/OR THE CONCRETE COVER SCHEDULE.
- PLACE ALL FOOTING REINFORCING IN BOTTOM OF FOOTING WITH 3" CLEAR CONCRETE COVER, TYP UNO.
- PLACE TRANSVERSE REINFORCING NEAREST EARTH AND LONGITUDINAL REINFORCING ON TOP OF TRANSVERSE REINFORCING.
- PLACE TOP REINFORCING IF NOTED ON SCHEDULE. AS A MINIMUM, ALL FOOTINGS GREATER THAN OR EQUAL TO 18" IN THICKNESS REQUIRE #6 @ 12" OC EA WAY IN THE TOP OF FOOTING UNLESS THE SCHEDULE PROVIDES MORE STRINGENT REQUIREMENTS.
- EXTEND CONTINUOUS FOOTINGS 12" MINIMUM PAST EDGE OF WALL, UNLESS OTHERWISE NOTED ON PLANS.
- REINFORCING IN CONTINUOUS FOOTINGS MUST PASS THROUGH INTERSECTING SPOT FOOTINGS.
- ALL REINFORCING FOR SPOT FOOTINGS AND MAT FOOTINGS AT BRACED FRAMES AND MOMENT FRAMES MUST HAVE A 90 DEGREE HOOK AT EA END.
- PROVIDE DOWELS WITH STANDARD HOOKS FROM FOOTINGS TO ANY REINFORCED ELEMENT ABOVE WITH SIZE AND SPACING TO MATCH VERTICAL REINFORCING IN THE ELEMENT ABOVE.
- ANY INCREASE IN THE SIZE OF FOOTINGS SHOWN MAY REQUIRE ADDITIONAL REINFORCING. COORDINATE WITH THE ENGINEER OF RECORD.
- PENETRATIONS THROUGH FOOTINGS ARE NOT ALLOWED WITHOUT PRIOR WRITTEN APPROVAL FROM THE ENGINEER OF RECORD.
- ALL CONTINUOUS FOOTINGS MUST BE FC2.0 MINIMUM, AND ALL SPOT FOOTINGS MUST BE FS3.0 MINIMUM UNO ON PLANS.
- SEE THE STRUCTURAL GENERAL NOTES FOR ADDITIONAL INFORMATION.

MASONRY WALL SCHEDULE

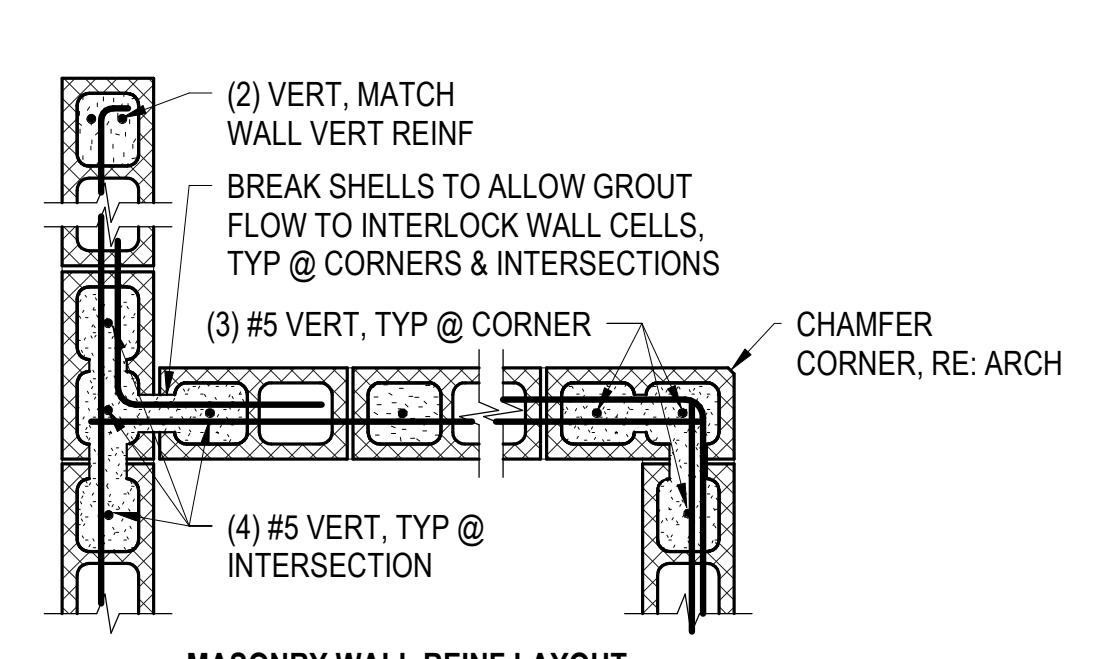
MARK	WIDTH	TYPE	WALL REINFORCING		NOTES
			HORIZONTAL	VERTICAL	
MW8	8"	A	#5 @ 48" OC	#5 @ 32" OC	

NOTES:

- SEE TYPICAL DETAILS FOR REINFORCING AT CORNERS, INTERSECTIONS, AND OPENINGS.
- GROUT ALL CELLS SOLID THAT CONTAIN REINFORCING, EMBEDS, AND/OR BOLTS, TYP.
- DO NOT SOLID GROUT WALLS UNO.
- ALL MASONRY BELOW GRADE MUST BE GRouted SOLID.
- LAY ALL BLOCK IN RUNNING BOND, TYP UNO.
- HORIZONTAL WALL REINF MUST CONTINUE THROUGH LINTELS. WHERE BOTH HORIZ WALL AND LINTEL REINF OCCUR IN THE SAME COURSE, USE THE LARGER REINFORCEMENT ONLY.
- ALL HORIZ REINF MUST TERMINATE AT ENDS OF WALL AND JAMBS WITH STANDARD 180 DEG HOOKS. PLACE ADDITIONAL VERT BAR IN CENTER OF WALL IF NECESSARY.
- PROVIDE SCHEDULED BOUNDARY COLUMNS AT END OF WALLS. SEE TYP MASONRY ELEVATION.
- AT TOP AND BOTTOM OF WALL PROVIDE (2) #5 CONT IN ADDITION TO SCHEDULED REINFORCING.
- AT ALL DECK AND JOIST EMBED LOCATIONS, PROVIDE (2) #5 CONT IN ADDITION TO SCHEDULED REINFORCING.
- PROVIDE DOWELS WITH STANDARD HOOKS AND/OR PROPER LAP LENGTH TO THE STRUCTURE ABOVE AND BELOW WITH SIZE AND SPACING TO MATCH THE VERT REINF IN THE WALL, TYP UNO.
- THE LAP SPLICE LENGTH OF VERT REINF MUST BE AS SHOWN IN THE MASONRY REINF LAP SPLICE TABLE IN THE GENERAL NOTES. ADJUST HEIGHT OF EACH LIFT AS REQUIRED.
- WHEN A SINGLE CURTAIN OF REINF IS SPECIFIED, PLACE THE VERT REINF IN THE CENTER OF THE WALL, TYP UNO.
- WHEN A DOUBLE CURTAIN OF REINF IS SPECIFIED, PLACE EACH CURTAIN AT THE FACE OF THE WALL WITH THE VERT REINF CLOSEST TO THE SHELL WITH A CLEAR DISTANCE BETWEEN 1/2" AND 1" TO THE INSIDE FACE OF THE SHELL.
- ALL WALLS MUST INCLUDE LADDER TYPE JOINT REINF SPACED AT 16" OC VERTICALLY WITH AT LEAST TWO WIRES OF W1.7 (GALVANIZED).
- SEE GENERAL STRUCTURAL NOTES FOR ALL OTHER REQUIREMENTS.



MASONRY WALL TYPES

CZECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
49137

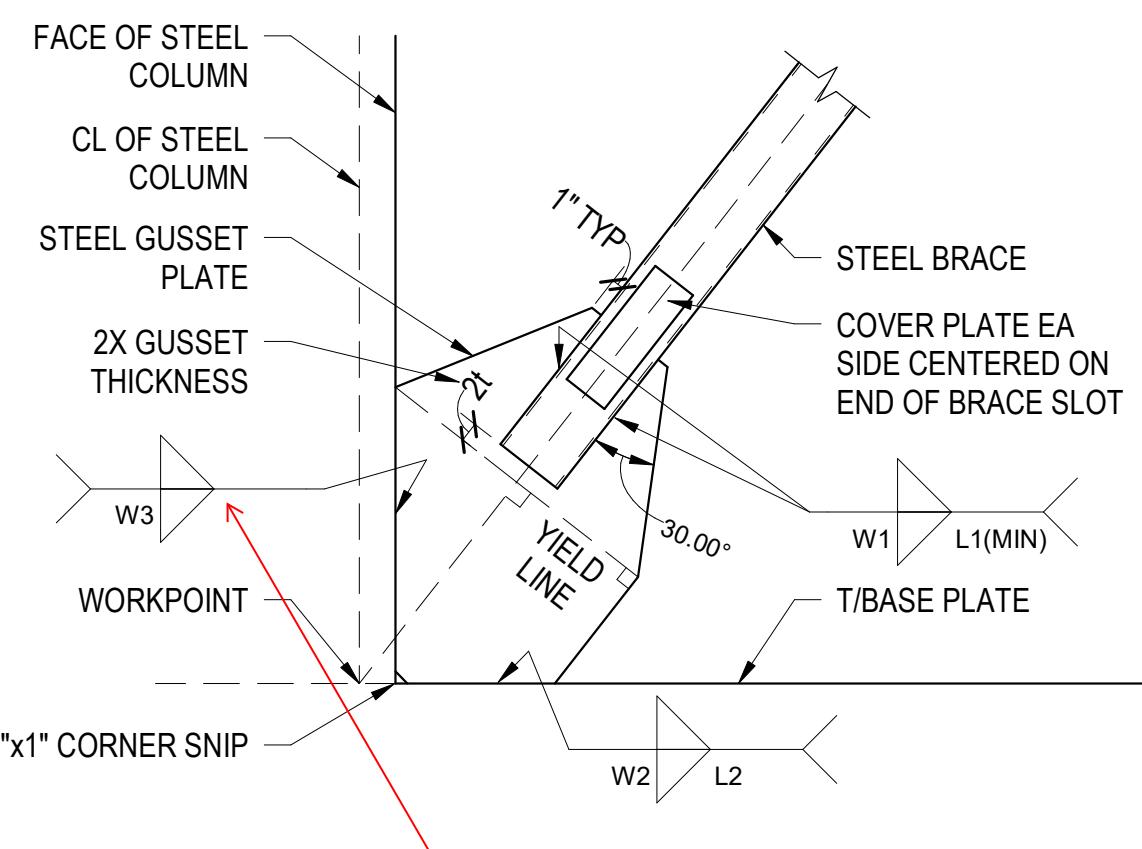
STRUCTURAL SCHEDULES	SHEET ID
PRELIMINARY DESIGN NOT FOR CONSTRUCTION	
S-601	

US Army Corps
of Engineers ®

DATE

STEEL GUSSET PLATE CONNECTION SCHEDULE

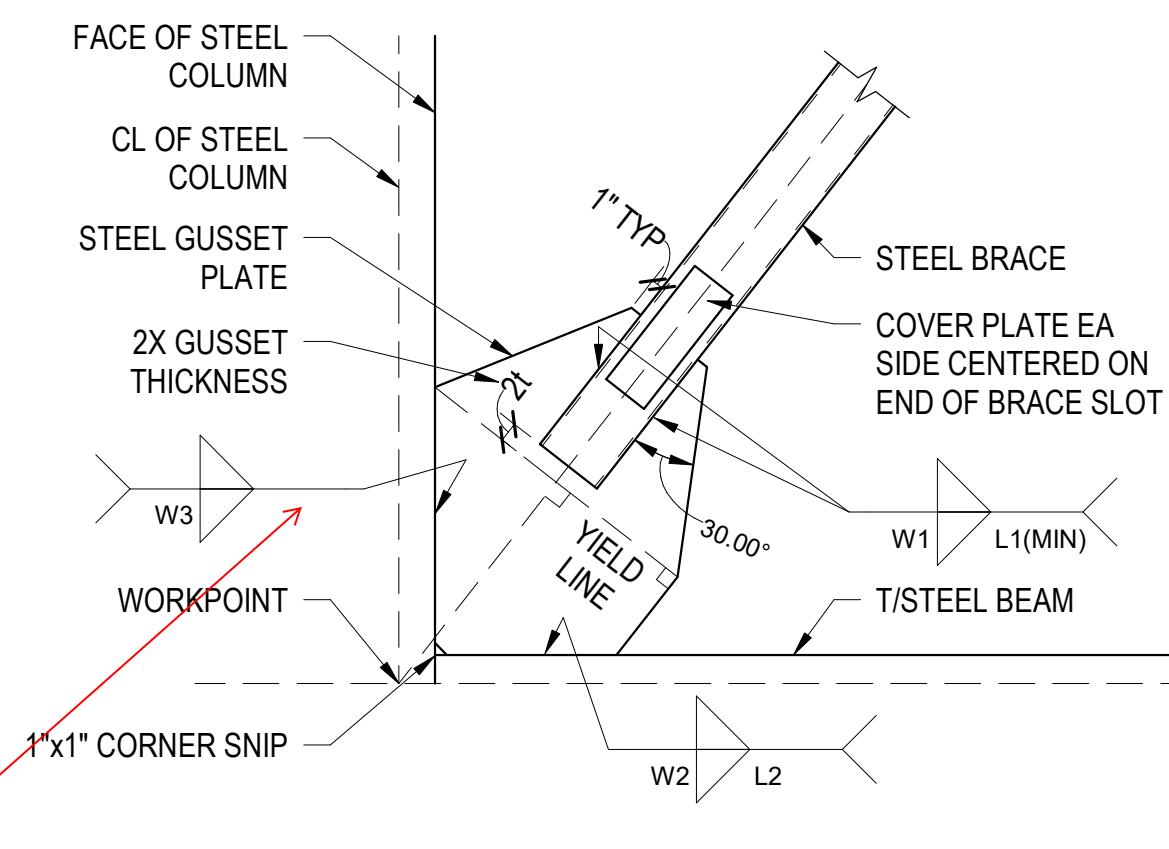
MARK	GUSSET PLATE THICKNESS	GEOMETRY AND WELDING INFORMATION				COVER PLATE INFO		NOTES
		W1 SIZE	L1 LENGTH	W2 SIZE	L2 LENGTH	W3 SIZE	PLATE SIZE	
1	1"	5/16	3'-3"	7/16	3'-1"	7/16	1/2"x4"x1'-0"	1/4
2	1"	5/16	3'-3"	7/16	2'-8"	7/16	1/2"x4"x1'-0"	1/4
3	7/8"	5/16	1'-7"	5/16	2'-10"	3/8	1/2"x4"x1'-0"	1/4
4	7/8"	5/16	1'-7"	5/16	2'-5"	3/8	1/2"x4"x1'-0"	1/4
5	7/8"	5/16	1'-7"	5/16	2'-5"	3/8	1/2"x4"x1'-0"	1/4
6	7/8"	5/16	1'-7"	5/16	3'-1"	3/8	1/2"x4"x1'-0"	1/4
7	7/8"	5/16	1'-7"	5/16	2'-3"	3/8	1/2"x4"x1'-0"	1/4
8	7/8"	5/16	1'-7"	5/16	2'-8"	3/8	1/2"x4"x1'-0"	1/4
9	7/8"	5/16	3'-3"	7/16	3'-1"	3/8	1/2"x5"x1'-0"	1/4
10	7/8"	5/16	3'-3"	7/16	2'-10"	7/16	1/2"x5"x1'-0"	1/4
11	3/4"	5/16	1'-0"	1/4	3'-2"	1/4	1/2"x5"x1'-0"	1/4
12	3/4"	5/16	1'-0"	1/4	4'-3"	1/4	1/2"x5"x1'-0"	1/4
13	3/4"	5/16	1'-0"	3/8	1'-5"	3/8	1/2"x5"x1'-0"	1/4
14	3/4"	5/16	1'-0"	5/16	1'-1"	3/8	1/2"x5"x1'-0"	1/4
15	3/4"	5/16	1'-0"	5/16	1'-8"	5/16	1/2"x5"x1'-0"	1/4
16	3/4"	5/16	1'-0"	5/16	1'-10"	5/16	1/2"x5"x1'-0"	1/4



NOTES:

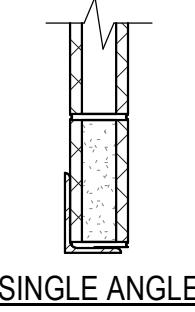
1. RE-BRACED FRAME ELEVATIONS FOR MARKED LOCATIONS OF EACH GUSSET ASSEMBLY.
2. ALL GUSSET PLATES MUST BE A572 GRADE 50 STEEL.
3. ALL COVER PLATES MUST BE A572 GRADE 50 STEEL.
4. AT CONTRACTOR'S OPTION, FILLET WELDS MAY BE REPLACED WITH CJP WELDS SO LONG AS REQUIRED TESTING IS PERFORMED PER GOVERNING BUILDING CODE.
5. YIELD LINE SHOULD EXACTLY INTERSECT WITH COLUMN FACE OR BASE PLATE/BEAM FACE DEPENDING ON THE GEOMETRY.
6. LENGTH L1 IS A MINIMUM WELD LENGTH. USE LENGTH L2 AS A BASELINE TO ESTABLISH THE YIELD LINE.
7. PLACE 1/2" THICK FOAM EACH SIDE OF GUSSET PLATE WHEN CONCRETE POURS AROUND GUSSET PLATE.

ALSO IDENTIFY THE LENGTH OF WELD ALONG THE VERTICAL GUSSET PLATE INTERFACE. ONLY IDENTIFYING THE HORIZONTAL "L2" WELD LENGTH DOESN'T FULLY DEFINE THE GUSSET PLATE GEOMETRY REQUIREMENTS TO PROPERLY ESTABLISH THE 2T YIELD (FOLD) LINE.



VENEER LINTEL SCHEDULE

LOOSE LINTEL SCHEDULE FOR NON-LOAD BEARING MASONRY WALLS	
OPENING WIDTH	WALL THICKNESS
UP TO 4'-0"	4" WALL
4'-0" TO 6'-0"	L4x3 1/2x5/16 LLV
6'-0" TO 8'-0"	L5x3 1/2x5/16 LLV
8'-0" TO 12'-0"	L6x3 1/2x5/16 LLV
12'-0" TO 16'-0"	L8x6x5/8 LLV



NOTES:

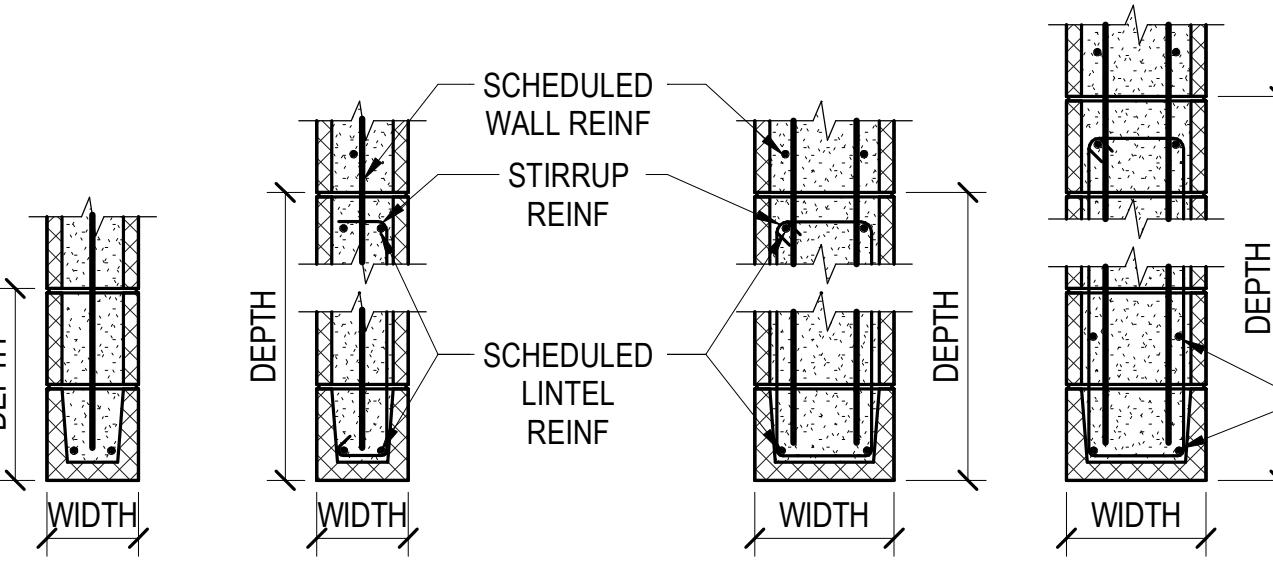
1. RE: STRUCTURAL, ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR OPENING SIZE AND LOCATION.
2. CONNECT ALL DOUBLE ANGLES BACK TO BACK AT 2'-0" OC MAXIMUM SPACING.
3. PROVIDE 6" MINIMUM BEARING AT FIRST FULL MASONRY CELL AT EACH END OF LOOSE LINTEL.
4. FOR OPENINGS 6'-0" AND WIDER, FULLY GROUT FIRST FULL CELL EACH SIDE OF OPENING FOR FULL HEIGHT OF WALL.
5. FOR OPENINGS LESS THAN 6'-0" WIDE, FULLY GROUT FIRST FULL CELL EACH SIDE OF OPENING FOR MINIMUM HEIGHT OF 8", BUT NOT LESS THAN THE FULL CELL HEIGHT, BELOW LINTEL BEARING ELEVATION.
6. FULLY GROUT ALL CELLS WHERE LOOSE LINTELS ARE LOCATED.
7. ANGLES IN EXTERIOR WALLS ARE TO BE GALVANIZED.

MASONRY LINTEL SCHEDULE

MARK	WIDTH	DEPTH	TYPE	LINTEL REINFORCING		NOTES
				HORIZONTAL	STIRRUPS	
MB16	7 5/8"	1'-4"	A	(2) #5	N/A	
MB24	7 5/8"	2'-0"	A	(2) #6 T+B	N/A	
MB32	7 5/8"	2'-8"	A	(2) #5	N/A	

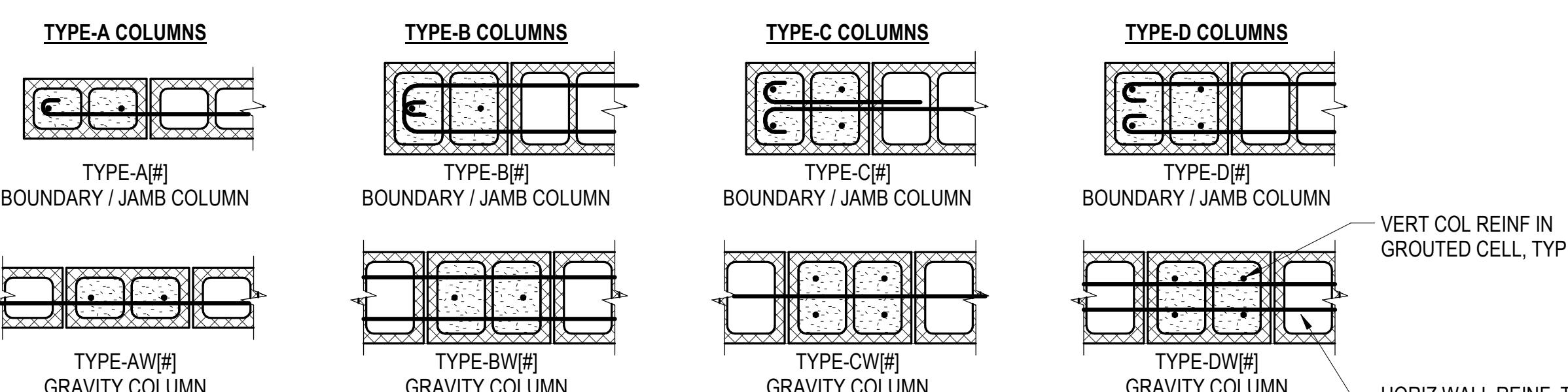
NOTES:

1. LINTELS MUST BE OF THE SAME MATERIAL AND WIDTH AS THE WALL IN WHICH THEY ARE CONSTRUCTED.
2. LINTELS MUST BE GROUTED MONOLITHICALLY WITH THE SUPPORTING WALL AND COLUMNS.
3. GROUT LINTELS SOLID FOR DEPTH SHOWN IN THE SCHEDULE, PLUS AS PER DETAILS, STRUCTURAL NOTES, AND/OR WALL SCHEDULE.
4. EXTEND HORIZONTAL REINFORCING 48 BAR DIAMETERS MIN BEYOND THE EDGE OF ALL OPENINGS. PROVIDE A 90° STANDARD HOOK WHERE THIS CANNOT BE ACCOMPLISHED.
5. NO DUCTS, OPENINGS, OR PENETRATIONS WILL OCCUR THROUGH BEAMS UNO.
6. REINFORCING INDICATED IN LINTEL SCHEDULE IS IN ADDITION TO WALL HORIZ AND VERT REINFORCING.
7. SEE GENERAL STRUCTURAL NOTES FOR ALL OTHER REQUIREMENTS.



MASONRY LINTEL TYPES

MARK	SIZE	TYPE	COLUMN REINFORCING		NOTES
			VERTICAL	TIES	
MP16	8x16	A2	#5 EA CELL	N/A	
MP32	8x32	A4	#6 EA CELL	N/A	



NOTES:

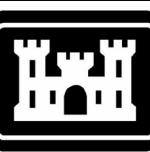
1. DESIGNATION "TYPE A[#]" WHERE "A" EQUALS THE WALL TYPE IN WHICH THE COLUMN/JAMB OCCURS AND WHERE [#] EQUALS THE NUMBER OF VERTICALLY GROUTED CELLS CONTAINING REINFORCING.
2. HORIZONTAL WALL REINF MUST RUN CONTINUOUS THROUGH MASONRY COLUMNS.
3. GROUT ALL REINFORCED CELLS AND VOIDS SOLID.
4. MASONRY COLUMN REINF MUST EXTEND FULL HEIGHT FROM MARK ON PLAN DOWN TO FOUNDATION AND TERMINATE WITH A STANDARD 90° HOOK. FOR CONC FOUNDATION WALL HEIGHTS OVER 50", VERT MASONRY REINF MUST DOWEL 4" MIN INTO FOUNDATION WALL.
5. NUMBER OF VERT BARS IS TOTAL NUMBER OF BARS.
6. SEE ARCHITECTURAL DRAWINGS FOR SPECIAL COURSING ARRANGEMENTS.
7. ALL TIES MUST TERMINATE WITH A STANDARD MASONRY HOOK.
8. SEE MASONRY REINFORCING SPLICE LENGTH TABLES FOR REINF LAP LENGTHS.
9. SEE GENERAL STRUCTURAL NOTES FOR ALL OTHER REQUIREMENTS.

CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

STRUCTURAL SCHEDULES

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION
SHEET ID

S-602

US Army Corps
of Engineers ®

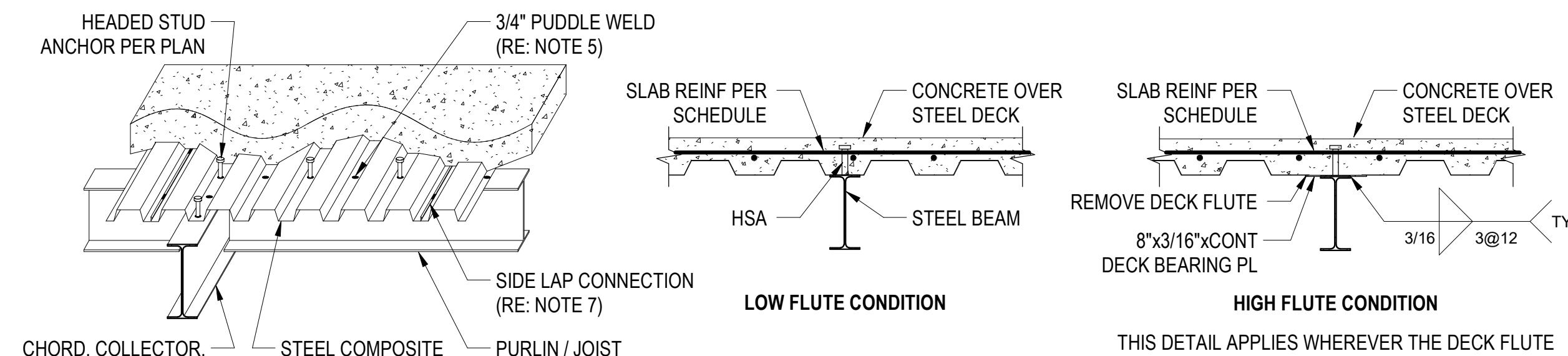
DATE

STEEL COMPOSITE DECK SCHEDULE

MARK	STEEL DECK			CONCRETE FILL		TOTAL DECK THICKNESS	COMMENTS
	PROFILE	GAUGE	FINISH	WEIGHT	REINF		
SD01	W2 W/ 4 1/2" NW CONC	20 GA	G60	145 PSF NW	#4 @ 18" OC EA WAY	6 1/2"	

NOTES:

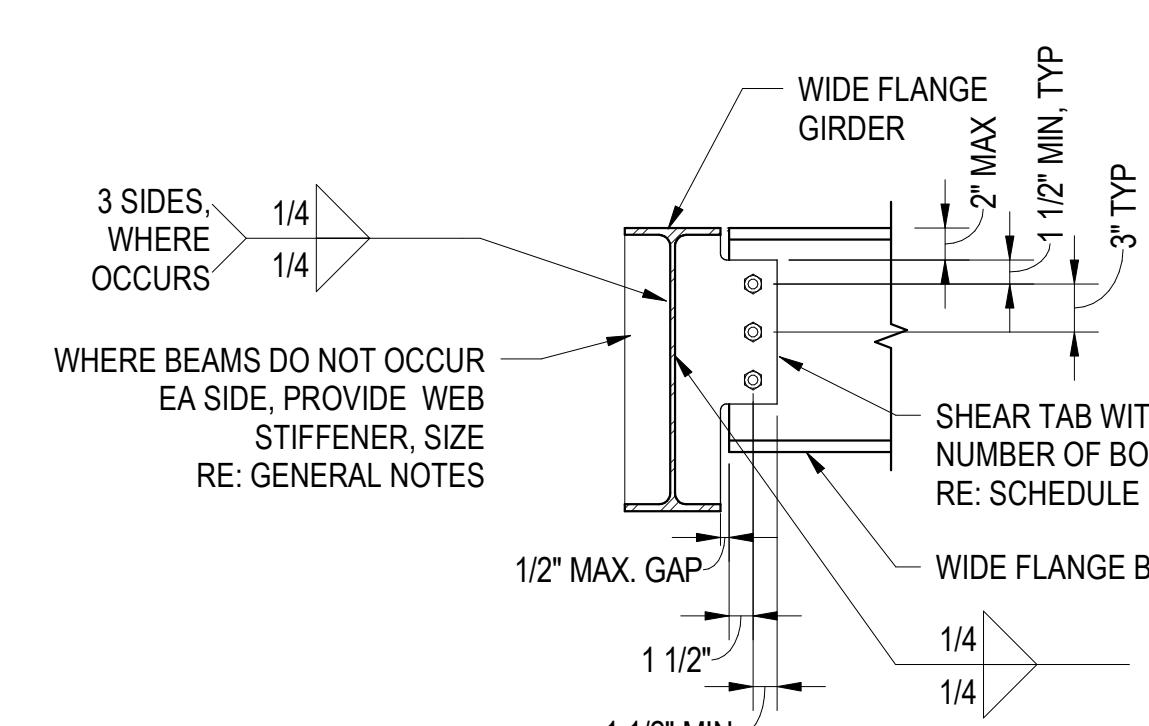
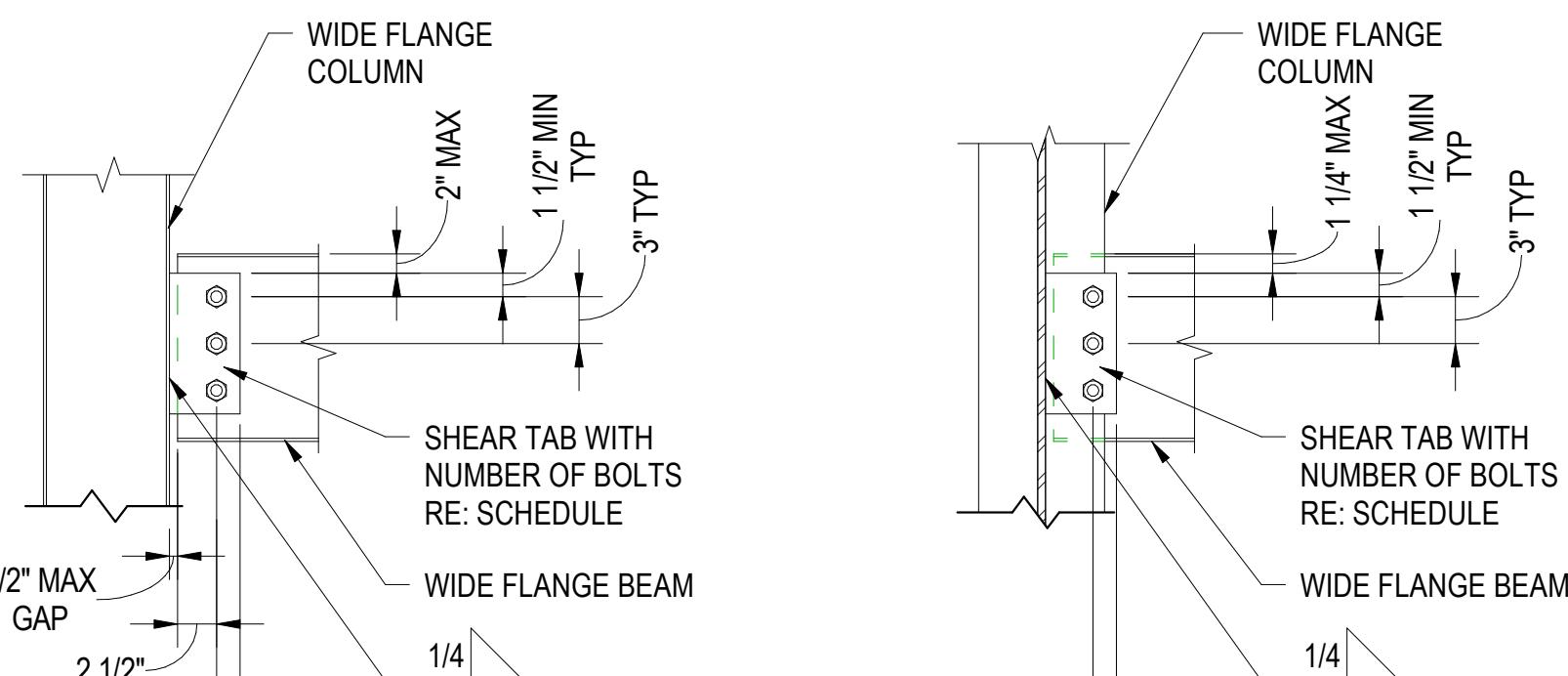
1. STEEL FLOOR DECK MUST COMPLY WITH THE LATEST REQUIREMENTS OF THE STEEL DECK INSTITUTE (SDI).
2. WHEN FIRE PROOFING IS TO BE USED, DECK MUST BE COATED WITH SPECIAL PAINT IN ORDER TO PROPERLY RECEIVE FIRE PROOFING.
3. ALL DECK MUST BE INSTALLED WITH INTERLOCKING SIDE SEAMS, AND MUST BE CRIMPED PRIOR TO CONNECTING.
4. ALL DECK MUST BE 3-SPAN CONTINUOUS MINIMUM. CONTRACTOR MUST CONTACT ENGINEER AND PROVIDE OPTIONS WHEN 3-SPAN IS NOT POSSIBLE.
5. FLOOR DECK MUST BE WELDED TO SUPPORTING FRAME MEMBERS WITH 3/4" DIAMETER PUDDLE WELDS IN A (3/6/4) TYPE WELD PATTERN AND AT 12" OC AT ALL PERIMETERS AND 12" OC AT OTHER SUPPORTS PARALLEL TO CORRUGATIONS.
6. WHEN STUDS WELD THROUGH THE FLOOR DECK TO THE BEAMS BELOW, THEY MAY TAKE THE PLACE OF DESIGNATED PUDDLE WELDS.
7. ATTACH INTERLOCKING SEAMS WITH BUTTON PUNCH AT 18" OC OR 1 1/2" LONG TOP SEAM WELDS AT 24" OC. SIDE SEAMS MUST BE CRIMPED BEFORE WELDING.
8. MINIMUM DECK BEARING MUST BE 2".
9. ICC REPORT MUST BE SUBMITTED TO SHOW A MINIMUM ALLOWABLE DIAPHRAGM SHEAR VALUE OF XXXX LBS/FT FOR A 8'-0" DECK SPAN.
10. ALL DECK DESIGNATED AS G60 OR G90 IS GALVANIZED DECK.
11. CONCRETE SLAB ON STEEL FLOOR DECK MUST BE REINFORCED AS INDICATED IN THE SCHEDULE. REINFORCING IS TO BE PLACED 1 1/2" BELOW THE TOP OF THE SLAB.
12. GENERAL CONTRACTOR TO FOLLOW MANUFACTURER GUIDELINES FOR ALL DECK, CONNECTION, ATTACHMENTS, ETC.
13. FOR FINAL FINISH SEE ARCHITECT DRAWINGS AND SPECIFICATIONS.
14. RE: PLAN FOR NUMBER AND SIZE OF STUDS REQUIRED AT EACH BEAM. MAXIMUM STUD SPACING AT 12" OC.



STEEL COMPOSITE DECK FASTENING PATTERN TO SUPPORT

TYPICAL COMPOSITE STEEL DECK CONNECTION

TYPICAL STEEL-TO-STEEL CONNECTION SCHEDULE	
BEAM SIZE	NUMBER OF BOLTS
W8	(2) 3/4" DIA
W10	(2) 3/4" DIA
W12	(3) 3/4" DIA
W14	(3) 3/4" DIA
W16	(4) 3/4" DIA
W18	(5) 3/4" DIA
W21	(5) 3/4" DIA
W24	(6) 7/8" DIA
W27	(7) 7/8" DIA
W30	(8) 7/8" DIA
W33	(9) 7/8" DIA
W36	(10) 7/8" DIA
W40	(11) 7/8" DIA
W44	(12) 7/8" DIA



NOTES:

1. BEAM TOP OF STEEL AS SHOWN ON PLAN.
2. SEE PLANS FOR BEAM AND/OR COLUMN SIZES.
3. AT BRACED FRAMES, SEE BRACED FRAME ELEVATIONS/DETAILS FOR ALL STEEL SIZES AND CONNECTIONS.
4. ALL BOLTS SHALL BE A325-N UNLESS NOTED OTHERWISE.
5. ALL SHEAR TABS SHALL BE 3/8" UNLESS NOTED OTHERWISE.
6. DECK NOT SHOWN, SEE PLANS FOR FLOOR AND/OR ROOF STRUCTURE.
7. PROVIDE STANDARD OR HORIZONTAL SHORT SLOTTED HOLES IN SHEAR TAB.
8. FOR SHEAR TABS WELDED TO WIDE FLANGE OR HSS COLUMNS WITH 3/16" WALLS, USE 5/16" SHEAR PLATES.
9. FOR CONNECTIONS DESIGNATED AS DOUBLE-ANGLE CONNECTIONS, USE L5x3 ANGLES ON EACH SIDE OF THE BEAM INSTEAD OF A SHEAR PLATE. FOLLOW THE ANGLE SIZE AND SUPPORTING CONNECTION DETAILS SHOWN ON THE STEEL EMBED SCHEDULE. AT CONTRACTOR'S OPTION, DOUBLE-ANGLE CONNECTIONS CAN BE ALL BOLTED IN LIEU OF WELDING ANGLES TO SUPPORTING MEMBERS AS SHOWN ON THE EMBED SCHEDULE. IF ALL BOLTED, USE THE SAME NUMBER OF 3/4" BOLTS AND SPACING AS SHOWN ON THE SHEAR TABS OF THE STEEL CONNECTION SCHEDULE.

BEAMS MARKED WITH SEISMIC DRAG STRUT CONNECTION ARE CONNECTED SIMILAR TO THOSE SHOWN ABOVE BUT THE SHEAR TAB OR ANGLE SHALL BE WELDED TO THE BEAM WEB WITH A 3-SIDED 1/4" FILLET WELD.

STEEL DECK SCHEDULE

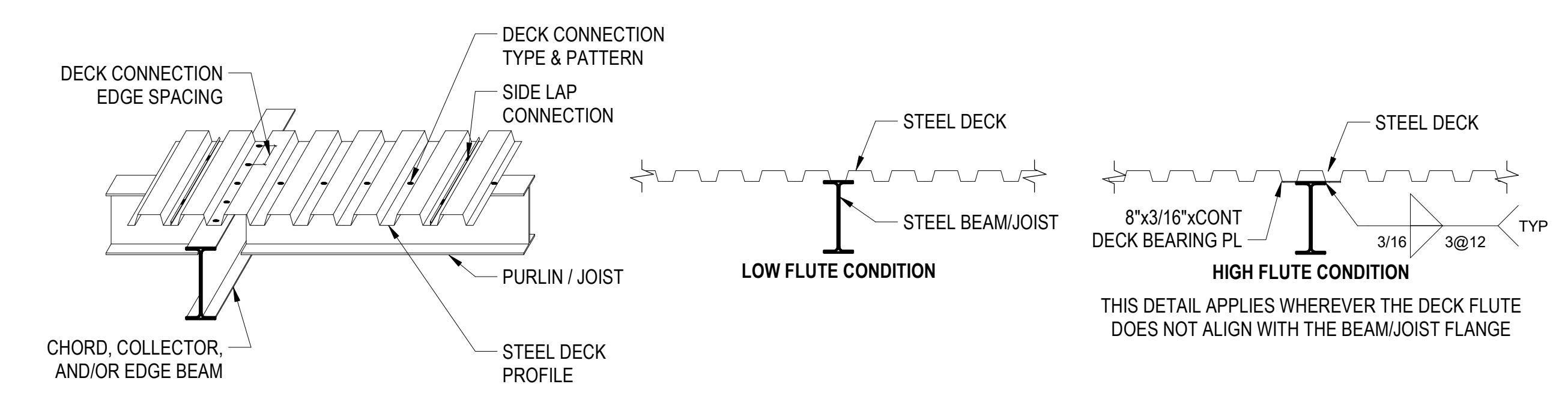
MARK	STEEL DECK			DECK CONNECTION			SIDE LAP CONNECTION	DECK PERFORMANCE
	PROFILE	GAUGE	FINISH	TYPE	PATTERN	EDGE SPACING		
SD1	1 1/2" PLB-36	20	G60	HILTI X-HSN24 PAF	36/7	6" OC	VSC2	8" OC

NOTES:

1. STEEL ROOF DECK MUST COMPLY WITH THE LATEST REQUIREMENTS OF THE STEEL DECK INSTITUTE (SDI).
2. WHEN FIRE PROOFING IS TO BE USED, DECK MUST BE COATED WITH SPECIAL PAINT IN ORDER TO PROPERLY RECEIVE FIRE PROOFING.
3. ALL DECK MUST BE INSTALLED WITH INTERLOCKING SIDE SEAMS, AND MUST BE CRIMPED PRIOR TO CONNECTING.
4. MINIMUM SHEAR DENOTED IN SCHEDULE REPRESENTS THE MINIMUM ALLOWABLE DECK SHEAR FOR A 6'-0" SPAN REQUIRED FOR APPLICATION IN THIS PROJECT.
5. ALL DECK MUST BE 3-SPAN CONTINUOUS MINIMUM. CONTRACTOR MUST CONTACT ENGINEER AND PROVIDE OPTIONS WHEN 3-SPAN IS NOT POSSIBLE.
6. MINIMUM DECK BEARING MUST BE 2".
7. DO NOT SUPPORT ANY HANGING LOADS FROM STEEL ROOF DECK.
8. ALL DECK DESIGNATED AS G60 OR G90 IS GALVANIZED DECK.
9. GENERAL CONTRACTOR TO FOLLOW MANUFACTURER GUIDELINES FOR ALL DECK, CONNECTION, ATTACHMENTS, ETC.
10. FOR FINAL FINISH SEE ARCHITECT DRAWINGS AND SPECIFICATIONS.

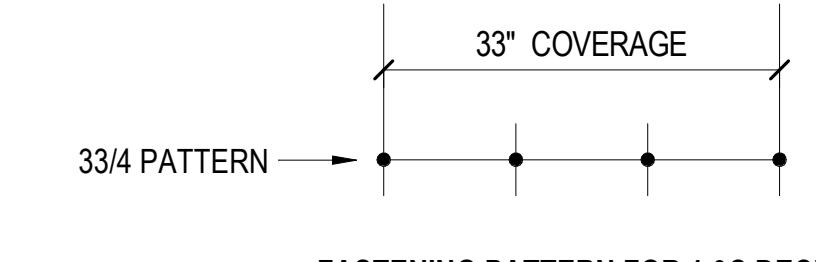
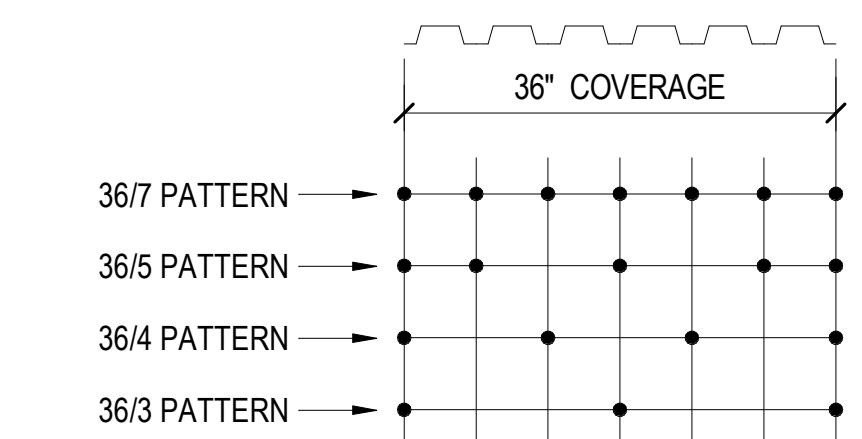
LEGEND:

ASW = 3/4" ARC SPOT WELD (PUDDLE WELD)
 BTN = BUTTON PUNCH (3/16")
 PIN = PIN CONNECTIONS (POWDER ACTUATED FASTENER)
 SCR = #10 SCREW
 TBD = DECK CONNECTION AND SIDELAP SPACING TO BE DETERMINED BY CONTRACTOR TO MEET THE MINIMUM ALLOWABLE SHEAR AND FLEXIBILITY REQUIREMENTS LISTED IN SCHEDULE. CONTRACTOR TO SUBMIT ICC REPORT.
 TSW = TOP SEAM WELD (1 1/2" IN LENGTH MINIMUM)
 VSC2 = VERCOR PUNCHLOCK II SYSTEM
 VST = VERCOR SHEARTRANZ II-42 SYSTEM

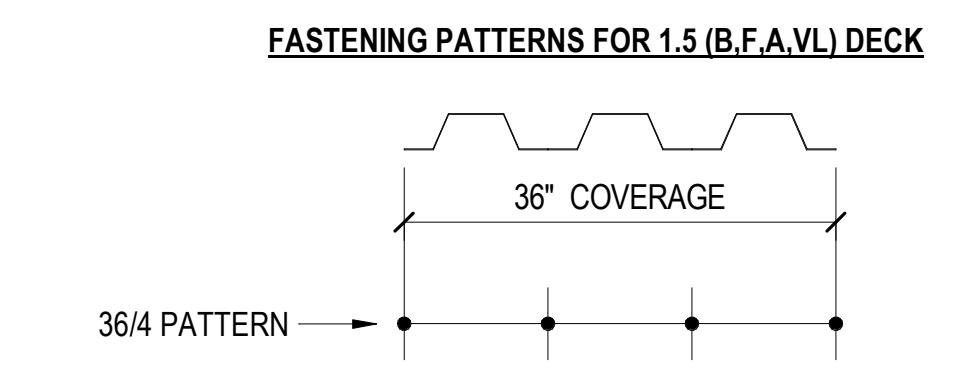


STEEL DECK FASTENING PATTERN TO SUPPORT

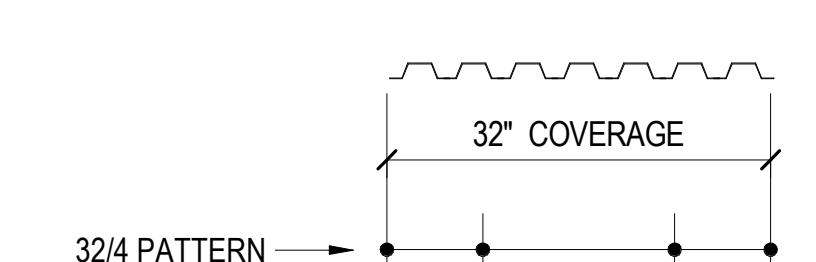
CHORD / COLLECTOR DECK CONNECTION



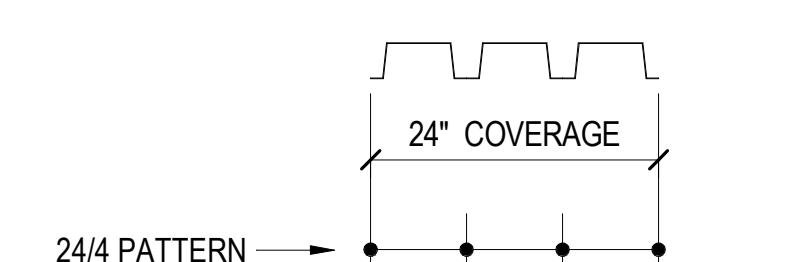
FASTENING PATTERN FOR 1.0C DECK



FASTENING PATTERN FOR 2VL AND 3VL DECK



FASTENING PATTERN FOR 1.3C DECK



FASTENING PATTERN FOR 3N DECK

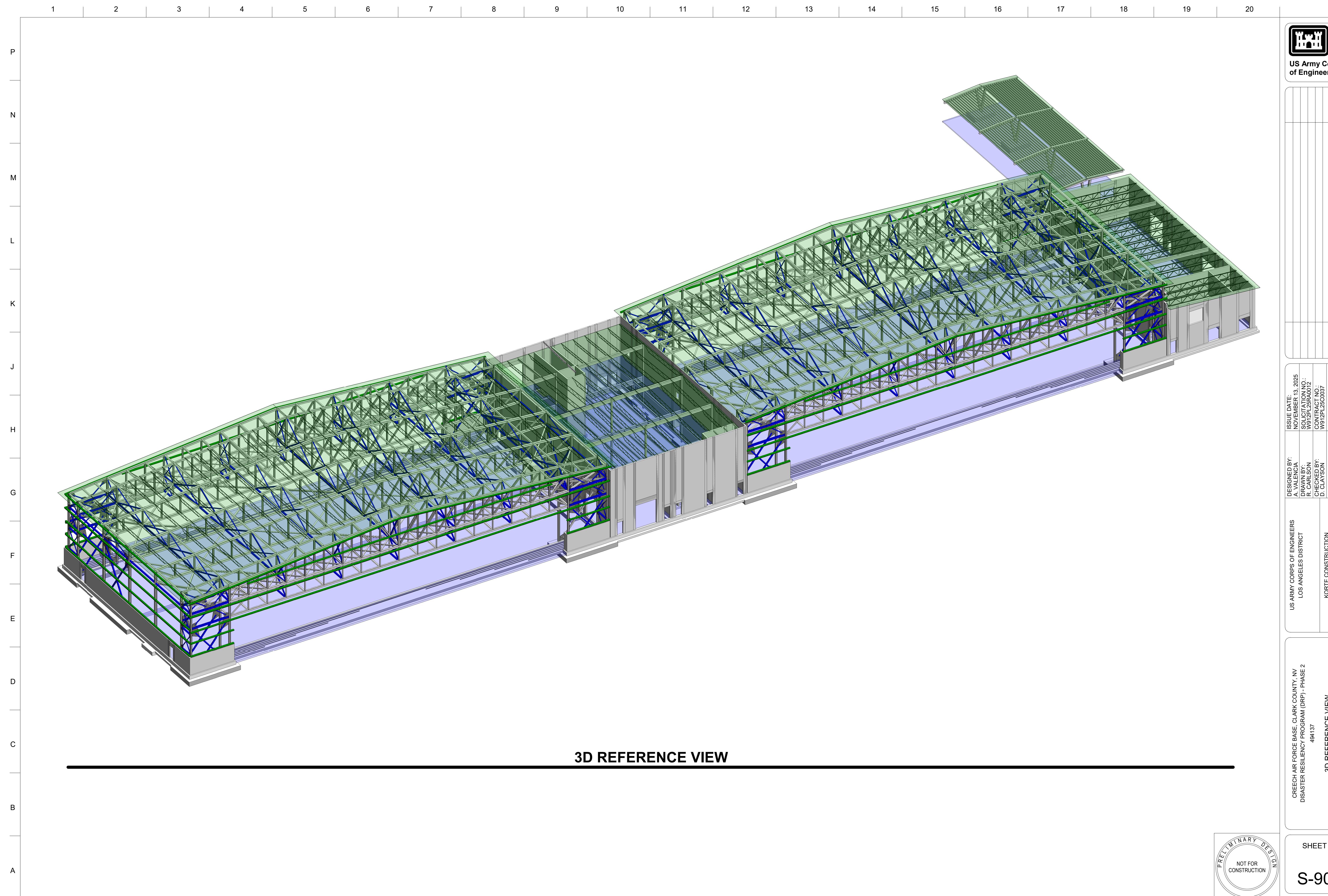
ISSUE DATE: NOVEMBER 13, 2025
 SOLICITATION NO.: W912PL25-R-0012
 CONTRACT NO.: W912PL25-C-0037
 SIZE: ANSI D

DESIGNED BY: J. CORSON
 DRAWN BY: R. CARLSON
 CHECKED BY: D. CLAYSON
 SUBMITTED BY: P. PASZCZUK
 SIZE: ANSI D
 LOS ANGELES DISTRICT
 KORTE CONSTRUCTION
 5700 OAKLAND AVE, SUITE 275
 ST. LOUIS, MO 63110

CREECH AIR FORCE BASE, CLARK COUNTY, NV
 DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
 49137
 STRUCTURAL SCHEDULES

SHEET ID

S-603



US Army Corps
of Engineers ®

DATE

DESIGNED BY: ISSUE DATE: NOVEMBER 13, 2025
A. VALENCIA
DRAWN BY: R. CARLSON
CHECKED BY: D. CLAYSON
SUBMITTED BY: P. PASZCZUK
SIZE: ANSI D

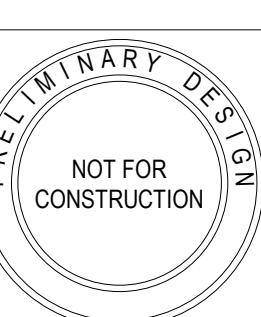
US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT
KORTE CONSTRUCTION
5700 OAKLAND AVE, SUITE 275
ST. LOUIS, MO 63110

CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

3D REFERENCE VIEW

SHEET ID

S-901



DP-1 95% SUBMISSION