GENERAL STRUCTURAL NOTES

DESIGN CRITERIA

D1 ALL WORK SHALL CONFORM TO AT LEAST THE MINIMUM STANDARDS OF THE FLORIDA BUILDING CODE, EIGHTH EDITION (2023)

D2 DESIGN LOADS PER FLORIDA BLDG. CODE,
SEE PLAN SHEETS FOR FLOOR AND ROOF DESIGN LOADS
WIND DESIGN PER ASCE 7-22
V=200 MPH (3 SECOND ULTIMATE GUST); Vservice = 155 MPH
RISK CATEGORY IV, EXPOSURE C, ENCLOSED BUILDING
h = 29'-0"; H = 32'-0"
qh (ult) = 99.6 PSF; qh (asd) = 59.9 PSF
a = 10'-3"
SEE THIS SHEET FOR WALL CLADDING PRESSURES AND FOR ROOF UPLIFT PRESSURES

D3 FOUNDATION DESIGN RECOMMENDATIONS:
FOUNDATIONS ARE DESIGNED FOR AN ALLOWABLE BEARING CAPACITY OF 3000 PSF PER THE FINAL REPORT AND RECOMMENDATIONS PREPARED BY UES DATED OCTOBER 3, 2025.
GC TO FAMILIARIZE THEMSELVES WITH THE REPORT AND RECOMMENDATIONS FOR PREPARING THE BUILDING PAD.

D4 TO THE BEST OF THE ENGINEER'S KNOWLEDGE. THE STRUCTURAL PLANS AND SPECIFICATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE LATEST EDITION.

GENERAL

G1 THE GENERAL CONTRACTOR SHALL REVIEW AND DETERMINE THAT DIMENSIONS ARE COORDINATED BETWEEN ARCHITECTURAL AND STRUCTURAL DRAWINGS PRIOR TO FABRICATION OR START OF CONSTRUCTION.

G2 THE GENERAL CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, THE WORK PERSONS, AND OTHER PEOPLE DURING CONSTRUCTION. HE SHALL SUPERVISE AND DIRECT THE WORK AND BE RESPONSIBLE FOR ALL CONSTRUCTION.

G3 NO STRUCTURAL MEMBER SHALL BE CUT, NOTCHED OR OTHERWISE REDUCED IN STRENGTH.

G4 THE GENERAL CONTRACTOR SHALL COORDINATE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR ANCHORED, EMBEDDED, SUPPORTED ITEMS WHICH AFFECT THE STRUCTURAL DRAWINGS AND NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES.

G5 ALL WINDOWS, DOORS, AND LOUVERS SHALL BE INSTALLED PER THEIR DADE COUNTY PRODUCT APPROVAL REQUIREMENTS.

G6 SUBMIT SHOP DRAWINGS IN ELECTRONC FORM FOR APPROVAL, PAPER COPIES WILL NOT BE REVIEWED. FINAL SEALED SHOP DRAWINGS AND CALCULATIONS TO BE SUBMITTED IN PRINTED FORM FOR SUBMISSION TO THE BUILDING DEPARTMENT AFTER INCORPORATING ALL COMMENTS FROM THE A/E DESIGN TEAM.

SLAB ON GRADE

S1 REFER TO THE GEOTECHNICAL REPORTS NOTED ABOVE FOR PROPER PREPARATION OF THE SUBGRADE FOR THE PROJECT.

S2 CONTROL JOINTS / SAW JOINTS FOR THE SLAB ON GRADE SHALL BE SPACED NO FARTHER THAN 16' ON CENTER IN BOTH DIRECTIONS. THE PANELS SHALL BE CLOSE TO SQUARE. SUBMIT A PROPOSED JOINT PLAN FOR A/E APPROVAL.

CONCRETE AND REINFORCING

C1 CONCRETE WORK SHALL CONFORM TO ACI CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318-19)

C2 ALL CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH & PROPERTIES AS FOLLOWS:

		SLUMP	MAX. W/C
TILT-UP PANELS	4000 PSI	5±1"	0.55
FOUNDATIONS	3000 PSI	5±1"	0.58
FLOORS	4000 PSI	5±1"	0.54

C3 CONCRETE MIX DESIGN SUBMITTALS MUST INCLUDE THE AREA IN WHICH THE CONCRETE IS TO BE PLACED (e.g. FOUNDATIONS, SLAB-ON-GRADE, FILLED CELLS, COLUMNS, etc.). FAILURE TO DO SO WILL CAUSE DELAY AND/OR REJECTION OF SUBMITTALS.

C4 REBARS SHALL CONFORM TO ASTM-615 GRADE 60. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185.

C5 MIMIMUM COVER FOR REINFORCING SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED. REFER TO A.S5.0 FOR TILT-UP PANELS.

FOOTINGS	3"
SLABS ON GRADE	1 1/2" FROM TOP
BEAMS	1 1/2" (ON TIES)
COLUMNS	1 1/2" (ON TIES)

C6 SPLICES AND ANCHORAGE OF REINFORCING SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED.

WELDED WIRE FABRIC	6"
ALL OTHER	SEE LAP TABLE

C7 REINFORCEMENT IN WALLS, FOOTINGS AND BEAMS SHALL BE CONTINUOUS AND LAPPED AS SHOWN ON NOTE M11. HOOK AND LAP ALL CORNER AND INTERSECTING BARS. (SEE TYPICAL DETAILS)

C8 TERMINATE ALL DISCONTINUED ELEVATED SLAB TOP BARS WITH A 180 DEGREE STANDARD HOOK UNLESS OTHERWISE NOTED.

C9 CONTINUOUS TOP BARS SHALL BE SPLICED AT MIDSPAN, CONTINUOUS BOTTOM BARS SHALL BE SPLICED AT CENTER-LINE OF SUPPORTS (OR AS SHOWN ON TYPICAL DETAILS).

C10 AT CHANGES IN DIRECTION OF CONCRETE WALLS, STRIP FOOTINGS AND GRADE BEAMS PROVIDE CORNER BARS AT SAME SIZE AND SPACING AS HORIZONTAL BARS. (REFER TO B/S4.0)

C11 SUBMIT CONCRETE MIX DESIGN FOR APPROVAL.

STRUCTURAL STEEL

SS1 GENERAL CONTRACTOR SHALL ENGAGE A CERTIFIED TESTING AGENCY TO PERFORM INDUSTRY STANDARD INSPECTIONS TO ENSURE CONFORMANCE WITH PLANS AND SPECIFICATIONS (IF PROVIDED). SUBMIT REPORTS TO ARCHITECT AND ENGINEER.

SS2 STEEL WORK SHALL CONFORM TO THE AISC "SPECIFICATIONS" FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL BUILDINGS", LATEST EDITION.

SS3 STEEL TUBING SHALL CONFORM TO ASTM A500 GRADE C.

SS4 STRUCTURAL W, C AND MC SHAPES SHALL BE TO ASTM A992, Fy=50KSI. OTHER SHAPES, Ls, PLATES SHALL BE TO ASTM A572, GR. 50 ALL STRUCTURAL STEEL SHALL BE DOMESTICALLY PRODUCED.

SS5 BRACE AND MAINTAIN ALL STEEL IN ALIGNMENT UNTIL OTHER PARTS OF CONSTRUCTION NECESSARY FOR PERMANENT SUPPORT ARE COMPLETED. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING TEMPORARY SHORING AS REQUIRED FOR THE STABILITY OF THE STEEL FRAME UNTIL ALL STRUCTURAL ELEMENTS HAVE BEEN COMPLETED AND BUILDING IS ENCLOSED.

SS6 ALL WELDING SHALL CONFORM TO THE REQUIREMENTS OF "THE STANDARD CODE FOR WELDING IN BUILDING CONSTRUCTION" OF THE AMERICAN WELDING SOCIETY. WELDING ELECTRODES SHALL BE E70XX-LOW HYDROGEN FOR SHEAR AND METAL ARC WELDING. ALL WELDING TO BE PERFORMED BY CERTIFIED WELDERS.

SS7 GROUT FOR COLUMN BASE PLATES AND PRESET BEARING PLATES SHALL BE NON-SHRINK, NON-METALLIC GROUT. (5000 PSI MIN)

SS8 SUBMIT SHOP DRAWINGS INDICATING ALL SHOP AND ERECTION DETAILS INCLUDING PROFILES, SIZES, SPACING AND LOCATIONS OF STRUCTURAL MEMBERS, CONNECTION ATTACHMENTS, FASTENERS, LOADS AND TOLERANCES.

SS9 ALL WELDED CONN. SHALL BE 1/4" FILLET ALL AROUND, UNO. ALL BOLTED CONN. SHALL BE 3/4"DIA. A325 BOLTS, UNO.

SS10 ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED. GALVANIZE MEMBERS TO ASTM A123/A123M; PROVIDE SPECIAL HIGH GRADE GALVANIZED COATING PER ASTM B6. MINIMUM COATING THICKNESS IS 1.25 OZ / SQUARE FT FOR ALL SURFACES

EXPANSION ANCHORS

EA1. CARBON STEEL EXPANSION ANCHORS SHALL HAVE A ONE PIECE ANCHOR BODY WITH A LENGTH IDENTIFICATION CODE. THE ANCHORS SHALL HAVE AN EXPANSION MECHANISM WHICH CONSISTS OF A PAIR OF INTERLOCKING INDEPENDENT WEDGES. CARBON STEEL COMPONENTS SHALL BE PLATED ACCORDING TO ASTM SPECIFICATION B 633. EXPANSION ANCHORS MUST MEET THE DESCRIPTION IN FEDERAL SPECIFICATION FF-S-325 FOR CONCRETE EXPANSION ANCHORS.

EA2. EXPANSION ANCHORS SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS.

EA3. EXPANSION ANCHORS SHALL HAVE A MINIMUM ULTIMATE TENSILE AND SHEAR LOADS (LBS) AS SHOWN IN SCHEDULE BELOW:

DIA.	EMBEDMENT (IN)	MIN. EDGE DIST./ MIN. SPACING	f`c=3,000 psi		f`c=4,000 psi		INSTALLATION TORQUE (ft/lbs)
			TENSILE	SHEAR	TENSILE	SHEAR	
1/2"	2 1/4" 3 1/2" 6"	6 3/4"	4925 8000 8650	7360 9200 9200	5450 9000 9500	7360 9200 9200	65
5/8"	2 3/4" 4" 7"	8"	7000 10670 13000	11500 14200 14200	8000 12350 14000	11500 14200 14200	110
3/4"	3 1/4" 4 3/4" 8"	11 1/4"	8700 15500 18500	15500 19200 19200	10000 18000 22000	15500 19200 19200	235
1"	4 1/2" 6" 9"	13 1/2"	15200 22500 28750	28500 34500 34500	17500 26500 32500	30500 34500 34500	450

EXTERIOR LIGHT GAGE METAL FRAMING

MS1 DESIGN OF LIGHT GAGE METAL FRAMING AND THEIR CONNECTIONS TO THE SUPPORTING STRUCTURE IS A DELEGATED ITEM FOR THIS PROJECT. ALL STUD SIZES SHOWN SHALL BE USED FOR BID PURPOSES BUT THE FINAL DESIGN OF THE METAL FRAMING ELEMENTS SHALL BE BY THE SPECIALTY ENGINEER OF RECORD.

MS2 MINIMUM GAGE OF MATERIAL SHALL BE 18 GAGE WHERE SHEATHING IS ATTACHED. (I.E. SOFFIT STUDS, ROOF STUDS, ETC.), ALL MATERIAL TO BE GALVANIZED G90.

MS3 SPECIALTY ENGINEER SHALL HAVE A MINIMUM OF 5 YEARS EXPERIENCE IN SIMILAR STRUCTURAL DESIGNS.

MS4 PLANS SHALL SHOW ALL PERMINENT BRACING AND BLOCKING REQUIREMENTS.

MS5 SEE NOTE G6 ON THIS SHEET REGARDING SUBMISSION REQUIREMENTS.

TILT-UP PANELS

TU1 ALL PANELS ARE VIEWED FROM THE INSIDE
PANEL THICKNESS SHALL BE AS INDICATED IN THE SCHEDULE. SPECIAL ATTENTION MUST BE GIVEN THE LOCATION AND PLACEMENT OF THE REINFORCING

TU2 REFER TO THE ARCHITECTURAL DRAWINGS FOR FINISH REQUIREMENTS, CHAMFERS, REVEALS, ETC.

TU3 PANELS SHALL NOT BE LIFTED UNTIL THE CONCRETE HAS ATTAINED THE MINIMUM MODULUS OF RUPTURE AND COMPRESSIVE STRENGTH AS REQUIRED BY THE LIFTING ENGINEER.

TU4 THE CONTRACTOR SHALL PROVIDE DESIGN FOR THE LIFT INSERTS AND ANY ADDITIONAL REINFORCING STEEL REQUIRED FOR THE LIFTING OPERATION. HOWEVER NO ADDITIONAL REINFORCING SHALL BE ADDED WITHOUT THE EXPRESSED APPROVAL OF THE ENGINEER. THE DESIGNERS OF THE LIFTING INSERTS MUST CONSIDER THE REINFORCING ALREADY PRESENT IN THE PANELS AS INDICATED IN THIS SET OF CONSTRUCTION DRAWINGS.

TU5 THE CONTRACTOR SHALL CHECK ALL PANEL DIMENSIONS, PLATE LOCATIONS, AND DETERMINE THE LOCATIONS OF ALL OPENINGS REQUIRED. NO PANEL WORK SHALL BE PERFORMED WITHOUT THE CONTRACTOR'S APPROVAL OF ALL THE ABOVE. THE CONTRACTOR IS INDICATING THAT HE HAS REVIEWED THE ABOVE AND APPROVES OF THE PANEL DRAWINGS FOR ACCURACY BY THE COMMENCEMENT OF PANEL CONSTRUCTION IF FORMAL STAMPED APPROVAL HAS NOT BEEN INDICATED ON THOSE DRAWINGS.

TU6 MISCELLANEOUS OPENINGS MAY BE REQUIRED FOR FIRE LINES, PLUMBING, SANITARY LINES, ELECTRICAL CONDUITS, ETC. CORE DRILLING AFTER ERECTION OF THE PANELS MUST HAVE THE APPROVAL OF THE ARCHITECT AND ENGINEER PRIOR TO PERFORMING THE WORK.

TU7 THE REINFORCING STEEL SUPPLIER SHALL PROVIDE SHOP DRAWINGS INDICATING ALL THE NECESSARY INFORMATION REQUIRED TO ACCURATELY POSITION THE REBAR AS INDICATED. ENSURE CHAIRS, BOLSTERS OR OTHER MEANS OF SUPPORTING THE BARS ARE PROVIDED AND ACCURATELY DETAILED.

STEEL JOISTS

SJ1 GENERAL CONTRACTOR SHALL ENGAGE A CERTIFIED TESTING AGENCY TO PERFORM INDUSTRY STANDARD INSPECTIONS TO ENSURE CONFORMANCE WITH PLANS AND SPECIFICATIONS (IF PROVIDED). SUBMIT REPORTS TO ARCHITECT AND ENGINEER.

SJ2 ALL DESIGN, FABRICATION AND ERECTION OF STEEL JOISTS AND BRIDGING SHALL BE IN STRICT ACCORDANCE WITH THE CURRENT SPECIFICATIONS OF STEEL JOIST INSTITUTE AND RECOMMENDED CODE OF STANDARD PRACTICE.

SJ3 THE ENDS OF ALL BRIDGING LINES TERMINATING AT WALLS OR BEAMS SHALL BE ANCHORED TO THE WALL OR BEAM.

SJ4 ALL STEEL JOISTS ARE TO BE CAMBERED AS SPECIFIED BY SJI.

SJ5 PROVIDE BOTTOM AND/OR TOP CHORD EXTENSIONS AS SHOWN ON DRAWINGS.

SJ6 UNLESS NOTED OTHERWISE, MINIMUM JOIST BEARING SHALL BE 2 1/2" ON A STEEL MEMBER OR EMBED PLATE.

SJ7 BRIDGING SHALL BE FURNISHED AND INSTALLED TO MEET THE SIZE AND SPACING REQUIREMENTS OF THE SJI STANDARD SPECIFICATIONS FOR OPEN WEB STEEL JOISTS. ALL BRIDGING AND BRIDGING ANCHORS SHALL BE COMPLETELY INSTALLED BEFORE CONSTRUCTION LOADS ARE PLACED ON THE JOISTS. THE LAST TWO JOIST SPACES IN A LINE OF BRIDGING SHALL BE "X" TYPE. ALL JOISTS 40'-0" OR LONGER REQUIRE A ROW OF BOLTED BRIDGING TO BE IN PLACE BEFORE SLACKENING OF HOISTING LINES. OTHER JOISTS REQUIRE SIMILAR BRIDGING CONSULT LATEST SJI SPECIFICATIONS.

SJ8 ALL HANGERS TO SUPPORT MECHANICAL EQUIPMENT, ETC. TO BE SUPPORTED BY THE BOTTOM CHORD OF JOISTS SHALL BE LOCATED AT THE PANEL POINT OF THE JOIST. IF HANGERS MUST BE LOCATED BETWEEN PANEL POINTS, PROVIDE JOIST STIFFENERS. L1 1/2 x 1 1/2 x 3/16 JOIST STIFFENERS MUST BE INSTALLED FROM HANGER TO OPPOSITE CHORD PANEL POINT BEFORE LOAD IS APPLIED.

SJ9 CONTRACTOR TO FURNISH BAR JOIST CERTIFICATIONS SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE SAME STATE AS THE PROJECT LOCATION.

SJ10 FOR NET UPLIFT SEE NET UPLIFT PLAN ON SHEET S1.02 PROVIDE UPLIFT BRIDGING.

SJ11 ALL SPRINKLER AND ROOF DRAIN PIPES MUST BE SUPPORTED NO FURTHER THAN 3" FROM THE JOIST TOP CHORD PANEL POINTS. THIS WILL BE STRICTLY ENFORCED. WHEN PIPES ARE PERPENDICULAR TO JOISTS, HANGERS SHALL BE PROVIDED EVERY OTHER JOIST (APPROX 10'-0" OC). WHEN PIPES ARE PARALLEL TO JOISTS, TWO CASES EXIST. FIRST, PIPES THAT ARE 4" AND LESS MAY BE SUPPORTED BY A SINGLE JOIST WITH HANGERS NOT TO EXCEED 10'-0" OC. SECOND, PIPES THAT ARE LARGER THAN 4" MUST BE CENTERED BETWEEN TWO JOISTS AND SUPPORTED FROM L4x4x5/16 ANGLE BEARING ON JOIST TOP CHORD PANEL POINTS WITH SPACING NOT TO EXCEED 10'-0" OC. GENERAL CONTRACTOR SHALL COORDINATE THESE REQUIREMENTS WITH THE APPROPRIATE TRADES.

SJ12 ALL ITEMS SUSPENDED FROM JOISTS (i.e. CATWALKS, BALCONIES, OPERABLE PARTITIONS, etc...) SHALL BE INSTALLED AFTER DEAD LOAD HAS BEEN APPLIED.

JOIST BRIDGING NOTES:

JB1 BRIDGING STANDARD WITH THE MANUFACTURER AND COMPLYING WITH THE STEEL JOIST INSTITUTE STANDARD SPECIFICATIONS LOAD TABLES AND WEIGHT TABLES OF THE LATEST ADOPTION SHALL BE USED FOR BRIDGING ALL JOISTS FURNISHED BY THE MANUFACTURER. POSITIVE ANCHORAGE SHALL BE PROVIDED AT THE ENDS OF EACH BRIDGING ROW AT BOTH TOP AND BOTTOM CHORDS. SEE SHEET S1.01 FOR SAMPLE OF BRIDGING REQUIREMENTS AS PUBLISHED IN THE VULCRAFT 2017 MANUAL.

JB2 FOR "K" AND "LH" SERIES JOISTS HORIZONTAL BRIDGING IS RECOMMENDED FOR SPANS UP TO AND INCLUDING 60 FEET EXCEPT WHERE THE STEEL JOIST INSTITUTE STANDARD SPEC LOAD TABLES & WEIGHT TABLES REQUIRE BOLTED DIAGONAL BRIDGING FOR ERECTION STABILITY.

JB3 "LH" AND "DLH" SERIES JOISTS EXCEEDING 60 FEET IN LENGTH SHALL HAVE BOLTED DIAGONAL BRIDGING FOR ALL ROWS.

JB4 REFER TO SJI SECTION 6 IN THE "K" SERIES SPECIFICATIONS AND SECITON 105 IN THE "LH" AND "DLH" SERIES SPECIFICATIONS FOR ERECTION STABILITY REQUIREMENTS.

JB5 REFER TO APPENDIX E FOR OSHA STEEL JOIST ERECITON STABILITY REQUIREMENTS.

JB6 HORIZONTAL BRIDGING SHALL CONSISTS OF CONTINUOUS HORIZONTAL STEEL MEMBERS. THE l/r RATIO FOR HORIZONTAL BRIDGING SHALL NOT EXCEED 300.

JB7 DIAGONAL CROSS BRIDGING CONSISTING OF ANGLES OR OTHER SHAPES CONNECTED TO THE TOP AND BOTTOM CHORDS, OF "K", "LH" AND "DLH" SERIES JOISTS SHALL BE USED WHEN REQUIRED BY THE APPLICABLE STEEL JOIST INSTITUTE STANDARD SPECIFICATIONS LOAD TABLES AND WEIGHT TABLES OF LATEST ADOPTION.

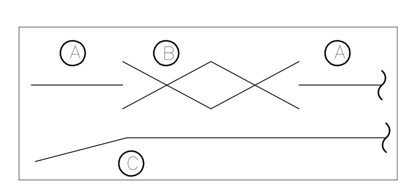
JB8 DIAGONAL BRIDGING, WHEN USED, SHALL HAVE AN l/r RATIO < 200.

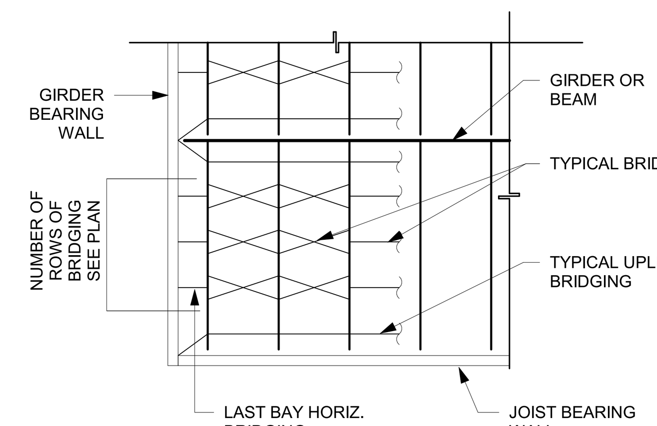
JB9 WHEN BOLTED DIAGONAL ERECTION BRIDGING IS REQUIRED, THE FOLLOWING SHALL APPLY:
A. THE BRIDGING SHALL BE INDICATED ON THE JOIST LAYOUT PLAN
B. THE JOIST LAYOUT PLAN SHALL BE THE EXCLUSIVE INDICATOR FOR THE PROPER PLACEMENT OF THIS BRIDGING.
C. SHOP INSTALLED BRIDGING CLIPS, OR FUNCTIONAL EQUIVALENT SHALL BE PROVIDED WHERE THE BRIDGING BOLTS TO THE STEEL JOISTS.
D. WHEN TWO PIECES OF BRIDGING ARE ATTACHED TO THE STEEL JOIST BY A COMMON BOLT, THE NUT THAT SECURES THE FIRST PIECE OF BRIDGING SHALL NOT BE REMOVED FROM THE BOLT FOR THE ATTACHMENT OF THE SECOND PIECE.
E. BRIDING ATTACHMENTS SHALL NOT PROTRUDE ABOVE THE TOP CHORD OF THE STEEL JOISTS.

JB10 PROVIDE UPLIFT BRIDGING AT FIRST BOTTOM CHORD PANEL POINT EACH END OF JOIST. REFER TO SECTION A/S1.00 FOR UPLIFT BRIDGING CONNECITON DETAILS.

JB11 DO NOT WELD BRIDGING TO JOIST WEB MEMBERS. DO NOT HANG ANY MECHANICAL, ELECTRICAL, PLUMBING, ETC. FROM BRIDGING.

JB12 BRIDGING LEGEND FOR PLAN BELOW:
(A) HORIZONTAL BRIDGING ATTACHED TO TOP & BOTTOM CHORD
(B) BOLTED OR WELDED CROSS BRIDGING AS SHOWN
(C) SINGLE LINE HORIZONTAL UPLIFT BRIDGING

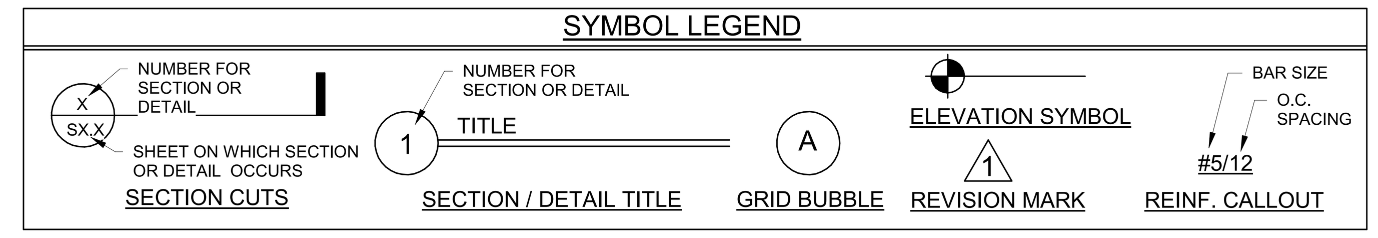




STRUCTURAL ABBREVIATIONS

AB	ANCHOR BOLT	EJ	EXPANSION JOINT	OPP	OPPOSITE
ABV	ABOVE	ENG	ENGINEER	PAF	POWDER ACTUATED FASTENERS
A.C.I.	AMERICAN CONCRETE INSTITUTE	EL	ELEVATION	PERP	PERPENDICULAR
ADD'L	ADDITIONAL	EQ	EQUAL	PC	PRECAST
AFF	ABOVE FINISH FLOOR	EQ SP	EQUAL SPACE(S) (ING)	PL	PLATE
AGGR	AGGREGATE	ES	EACH SIDE	PLYWD	PLYWOOD
A.I.S.C.	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	EW	EACH WAY	PNL	PANEL
A.I.S.I.	AMERICAN IRON AND STEEL INSTITUTE	EXT	EXTERIOR	PSF	POUNDS PER SQUARE FOOT
AL	ALUMINUM	F/	FACE OF	PSI	POUNDS PER SQUARE INCH
ALT	ALTERNATE	FD	FLOOR DRAIN	PTN	PARTITION
ARCH	ARCHITECTURAL)	FDN	FOUNDATION	R	RADIUS
A.S.T.M.	AMERICAN SOCIETY OF TESTING MATERIALS	FIN	FINISH	REF	REFERENCE
A.W.S.	AMERICAN WELDING SOCIETY	FL	FLOOR	REINF	REINFORCE(D) (ING)
B/	BOTTOM OF	FLG	FLANGE	REQ	REQUIRE
BB	BOND BEAM	FS	FAR SIDE	REQ'D	REQUIRED
BLDG	BUILDING	FT	FOOT	RF	ROOF
BLW	BELOW	FTG	FOOTING	RTN	RETURN
BM	BEAM	GA	GAGE, GAUGE	RW	RETAINING WALL
BOT	BOTTOM	GALV	GALVANIZE	SCH	SCHEDULE
BP	BASE PLATE	GB	GRADE BEAM	SE	SLAB EDGE
BRDG	BRIDGING	GC	GENERAL CONTRACTOR	SECT	SECTION
BRG	BEARING	GLB	GLU-LAM BEAM	SHT	SHEET
BRK	BRICK	GR	GRADE	SIM	SIMILAR
BS	BOTH SIDES	HC	HOLLOW CORE	SJ	SAWCUT JOINT
BTJ	BOLTED TIE JOIST	HK	HOOK	SJI	STEEL JOIST INSTITUTE
BTWN	BETWEEN	HORIZ	HORIZONTAL	SL	SLOPE
C/C	CENTER TO CENTER	HP	HIGH POINT	SP	SPACE(S)
CANT	CANTILEVER	HS	HEADED STUD	SPECS	SPECIFICATIONS
CB	CONCRETE BEAM	ID	INSIDE DIAMETER	SQ	SQUARE
CC	CONCRETE COL	IF	INSIDE FACE	SS	STAINLESS STEEL
CIP	CAST IN PLACE	INT	INTERIOR	STD	STANDARD
CJ	CONSTRUCTION JOINT OR CONTROL JOINT	JST	JOIST	STL	STEEL
CL	CENTERLINE	K	KIP	STR	STRENGTH
CLR	CLEAR(ANCE)	KO	KNOCK OUT	STRL	STRUCTURAL
CM	CONCRETE MASONRY	LG	LONG	SW	SHEAR WALL
CMU	CONCRETE MASONRY UNIT	LL	LIVE LOAD	SYMM	SYMMETRICAL
COL	COLUMN	LLH	LONG LEG HORIZONTAL	SYP	SOUTHERN YELLOW PINE
CONC	CONCRETE	LLV	LONG LEG VERTICAL	TB	TIE BEAM
CONN	CONNECTION	LNTL	LINTEL	T&B	TOP & BOTTOM
CONT	CONTINUOUS	LSL	LONG SLOTTED HOLES	TC	TIE COLUMN
CONTR	CONTRACTOR	LONG	LONGITUDINAL	TDS	TURN DOWN SLAB
CSK	COUNTER SINK	LP	LOW POINT	TEMP	TEMPERATURE
CTR	CENTER	MAS	MASONRY	THK	THICK
CTR'D	CENTERED	MAX	MAXIMUM	THNS	THICKEN SLAB
DIA	DIAMETER	MBM	METAL BUILDING MFR	TOP'G	TOPPING
DL	DEAD LOAD	MC	MOMENT CONNECTION	TYP	TYPICAL
DN	DOWN	MCJ	MASONRY CONTROL JT	T/	TOP OF
DTL	DETAIL	MECH	MECHANICAL	UNO	UNLESS NOTED OTHERWISE
DWG	DRAWING	MEZZ	MEZZANINE	VERT	VERTICAL
DWL	DOWEL	MFR	MANUFACTURE(ER)	WF	WALL FOOTING
EA	EACH	MIN	MINIMUM	WO	WINDOW OPENING (MASONRY)
EE	EACH END	MO	MASONRY OPENING	WP	WORKING POINT
EF	EACH FACE	MS	METAL STUD	WS	WATERSTOP
		MTL	METAL	WWF	WELDED WIRE FABRIC
		NS	NEAR SIDE	W/	WITH
		NTS	NOT TO SCALE		
		OA	OVERALL		
		OC	ON CENTER		
		OD	OUTSIDE DIA.		
		OF	OUTSIDE FACE		
		OPNG	OPENING		

SYMBOL LEGEND



WALL WIND PRESSURES - SERVICE

OPENING AREA	POSITIVE WIND PRESSURE	NEGATIVE ZONE 4 PRESSURE	NEGATIVE ZONE 5 PRESSURE
10 SF	54.9 PSF	-59.5 PSF	-73.3 PSF
20 SF	52.5 PSF	-57.1 PSF	-68.4 PSF
35 SF	50.5 PSF	-55.1 PSF	-64.5 PSF
50 SF	49.3 PSF	-53.9 PSF	-62.0 PSF
75 SF	47.9 PSF	-52.4 PSF	-59.1 PSF
100 SF	46.9 PSF	-51.4 PSF	-57.1 PSF
150 SF	45.4 PSF	-50.0 PSF	-54.2 PSF
200 SF	44.4 PSF	-49.0 PSF	-52.2 PSF
350 SF	42.5 PSF	-47.0 PSF	-48.3 PSF
500 SF	41.2 PSF	-45.8 PSF	-45.8 PSF

LOADS PER ASCE 7-16 DESIGN PARAMETERS - SEE NOTE D2 FOR "a" DIMENSION PRESSURES SHOWN ARE SERVICE LOAD PRESSURES = 0.6 * ULTIMATE

CLASS B TENSION LAP SPLICES

BAR SIZE	F'c 3000 PSI	F'c 4000 PSI	F'c 5000 PSI
#3	32"	28"	25"
#4	43"	37"	33"
#5	53"	46"	41"
#6	64"	55"	50"
#7	93"	81"	72"
#8	107"	92"	83"
#9	120"	104"	93"
#10	136"	117"	105"
#11	151"	130"	117"

LAP LENGTHS SHOWN ARE FOR WORST CASE CLASS B TENSION LAPS

CLIENT

CITY OF RIVIERA BEACH
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CONTRACTOR/DEVELOPER

CORE CONSTRUCTION
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West Palm Beach
FL 33409
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REGISTRATION

MARK JOHNSON LICENSE NO. 51983 STATE OF FLORIDA PROFESSIONAL ENGINEER

DRAWING HISTORY

№.	DATE	DESCRIPTION
A	04/04/2025	100% Design Development
B	07/22/2025	50% Construction Documents
C	09/18/2025	90% Construction Documents
D	10/14/2025	90% Construction Documents / Permit Set

JOHNSON STRUCTURAL GROUP

PROJECT STATUS
90% CDs / PERMIT SET

DATE OF ISSUE
10/14/2025

PROJECT NAME
RIVIERA BEACH POLICE DEPARTMENT EVIDENCE AND FIRE RANGE

PROJECT LOCATION
2125 AVENUE S.
RIVIERA BEACH, FL 33404

PROJECT NUMBER
JSG #24115

SHEET TITLE
STRUCTURAL NOTES & SCHEDULES

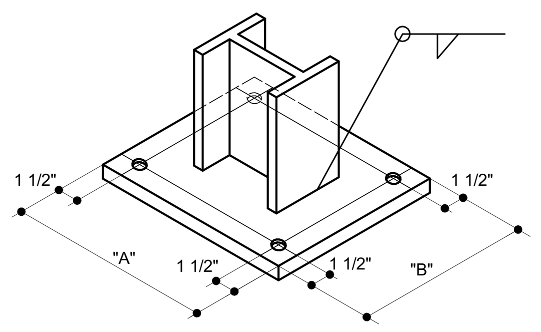
SHEET NUMBER
S1.0E

FILE NAME: C:\JSG\JSG C Drive\24115- Riviera Beach Police\Revit 2024\24115 RBPD_EFR_S_R24_Clear Span.rvt
DATE STAMP: 10/23/2025 11:51:05 AM

STEEL COLUMN / BASE PLATE SCHEDULE							
COLUMN SIZE	Base Plate			Anchor Bolt		Cap Plate	Remarks
	A	B	T	E	D		
HSS10X10X1/4	16"	16"	1"	8"	3/4"	1"	HSS-Hollow Structural Section-Column
2							
W10X33	16"	16"	1"				W-Wide Flange-Column
1							
W12X65							W-Wide Flange-Column
1							
Grand total: 4							

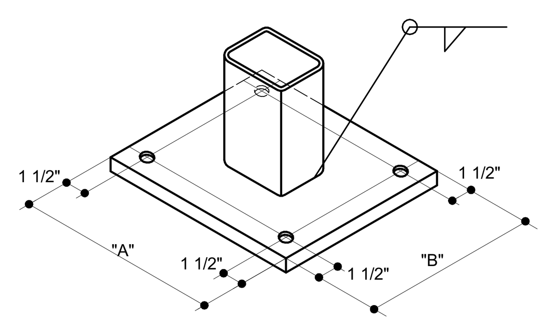
FOUNDATION SCHEDULE - PAD FOOTINGS					
MARK	SIZE			REINFORCING	
	LENGTH	WIDTH	DEPTH	LONGITUDINAL	TRANSVERSE
F1	7' - 0"	5' - 0"	1' - 0"	(6) #5 BOTT.	(8) #5 BOTT.
F2	7' - 0"	6' - 0"	1' - 6"	(8) #5 T&B	(7) #5T&B
F3	8' - 0"	4' - 0"	1' - 3"	(5) #5 BOTT.	(8) #5 BOTT.
F50	5' - 0"	5' - 0"	1' - 0"	(6) #5 BOTT.	(6) #5 BOTT.
F60	6' - 0"	6' - 0"	1' - 6"	(8) #5 BOTT.	(8) #5 BOTT.
F60A	6' - 0"	6' - 0"	1' - 6"	(8) #5 T&B	(8) #5 T&B
F70	7' - 0"	7' - 0"	1' - 6"	(9) #5 BOTT.	(9) #5 BOTT.
F76	7' - 6"	7' - 6"	1' - 6"	(10) #5 BOTT.	(10) #5 BOTT.
F80	8' - 0"	8' - 0"	2' - 0"	(10) #6 BOTT.	(10) #6 BOTT.
F80A	8' - 0"	8' - 0"	2' - 0"	(10) #6 T&B	(10) #6 T&B
Grand total: 13					

FOUNDATION SCHEDULE - WALL FOOTINGS				
MARK	SIZE		REINFORCING	
	WIDTH	FND THICKNESS	LONGITUDINAL	TRANSVERSE
WF20	2' - 0"	1' - 0"	(3) #5 BOTTOM	#5 AT 16" O.C. BOTT.
WF26	2' - 6"	1' - 0"	(3) #5 BOTTOM	#5 AT 16" O.C. BOTT.
WF30	3' - 0"	1' - 0"	(4) #5 BOTT.	#5 AT 14" O.C. BOTT.
WF36	3' - 6"	1' - 0"	(4) #5 BOTT.	#5 AT 14" O.C. BOTT.
WF40	4' - 0"	1' - 6"	(5) #5 T & B	#5 AT 12" O.C. T&B
WF66	6' - 6"	1' - 6"	(8) #5 T & B	#5 AT 9" O.C. T&B
Grand total: 21				



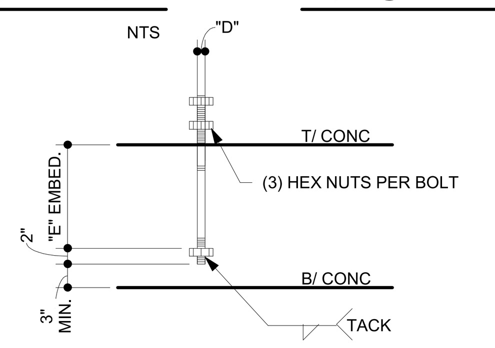
BASE PLATE DETAIL

NTS



BASE PLATE DETAIL

NTS



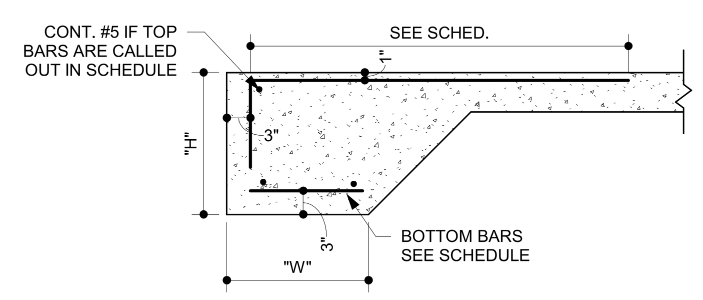
BOLTS TO BE F1554 GRADE 36 UNLESS NOTED OTHERWISE

ANCHOR BOLT DETAIL

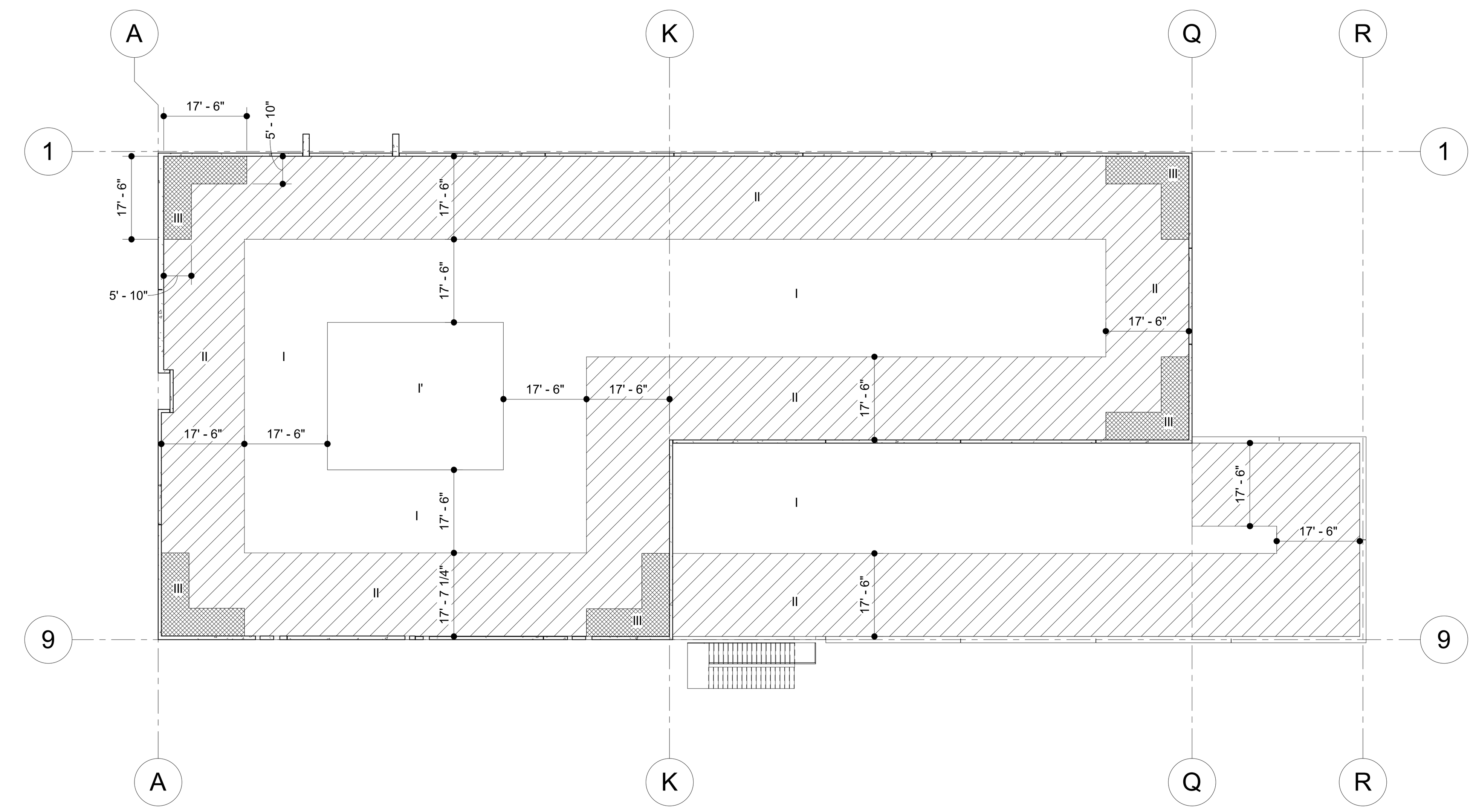
NTS

TURN DOWN SLAB SCHEDULE

MARK	SIZE OF TDS	BOTTOM REINFORCEMENT	TOP REINFORCEMENT
TDS10	CONT. x 12"W x 16"H	(2) #5 CONT. & #5 AT 18" TRANS	
TDS16	CONT. x 18"W x 24"H	(2) #5 CONT. & #5 AT 18" TRANS	#4 x 4'-0" + HOOK AT 18" O.C.



TURN DOWN SLAB DETAIL



1 ROOF UPLIFT PLAN

1" = 20'-0"

EVIDENCE UPLIFT PLAN SERVICE

ZONE	*ROOF JOISTS	*JOIST GIRDERS	ROOFING
I'	-29.5 PSF	-21.2 PSF	-54.9 PSF
I	-60.0 PSF	-38.8 PSF	-95.6 PSF
II	-80.4 PSF	-47.3 PSF	-126 PSF
III	-80.4 PSF	-47.3 PSF	-172 PSF
IV			

* GROSS UPLIFT PRESSURE SHOWN
LOADS PER ASCE 7-22 DESIGN PARAMETERS: 0.6h = 17'-6", 0.2h = 5'-10"
PRESSURES SHOWN ARE SERVICE LOAD PRESSURES = 0.6 * ULTIMATE

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CLIENT

City of Riviera Beach
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1481 West 15 Street
Riviera Beach, FL 33404

ARCHITECT

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CONTRACTOR/DEVELOPER

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REGISTRATION

MARK JOHNSON
LICENSE
NO. 51983
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

DRAWING HISTORY

No.	DATE	DESCRIPTION
A	04/04/2025	100% Design Development
B	07/22/2025	50% Construction Documents
C	09/18/2025	90% Construction Documents
D	10/14/2025	90% Construction Documents / Permit Set

ARCHITECTURE

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EMAIL: mark@johnsonstructural.com
WWW.JOHNSONSTRUCTURAL.COM

PROJECT STATUS

90% CDs / PERMIT SET

DATE OF ISSUE

10/14/2025

PROJECT NAME

RIVIERA BEACH POLICE DEPARTMENT EVIDENCE AND FIRE RANGE

PROJECT LOCATION

2125 AVENUE S.
RIVIERA BEACH, FL 33404

PROJECT NUMBER

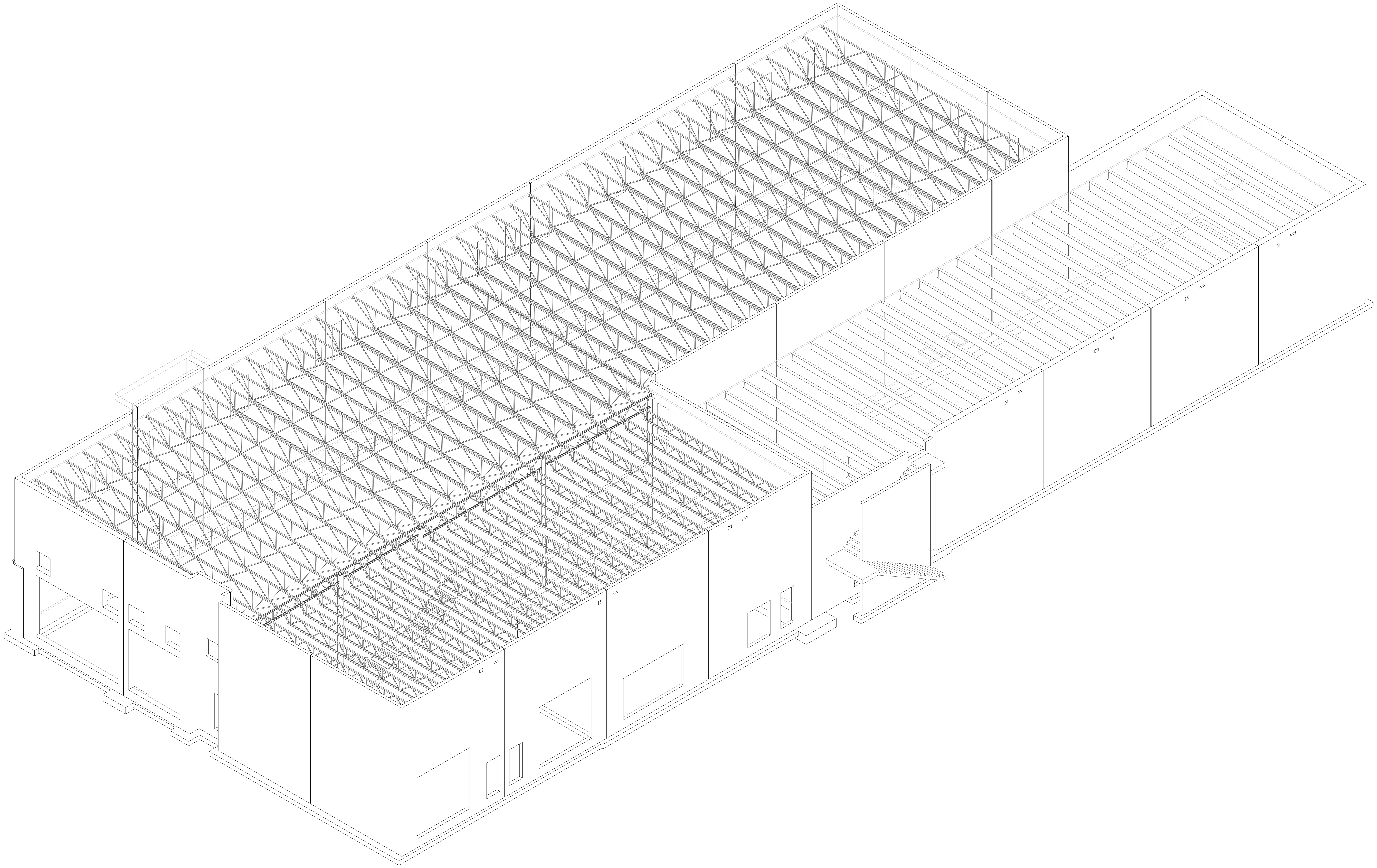
JSG #24115

SHEET TITLE

SCHEDULES

SHEET NUMBER

S1.1E



1 BUILDING ISOMETRIC 1

FILE NAME: C:\USG\JSG C Drive\24115- Riviera Beach Police\Revit 2024\24115 RBPD_EFR_S_R24_Clear Span.rvt
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J2 ARCHITECTURE

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DATE OF ISSUE

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RIVIERA BEACH POLICE DEPARTMENT EVIDENCE AND FIRE RANGE

PROJECT LOCATION

2125 AVENUE S.
RIVIERA BEACH, FL 33404

PROJECT NUMBER

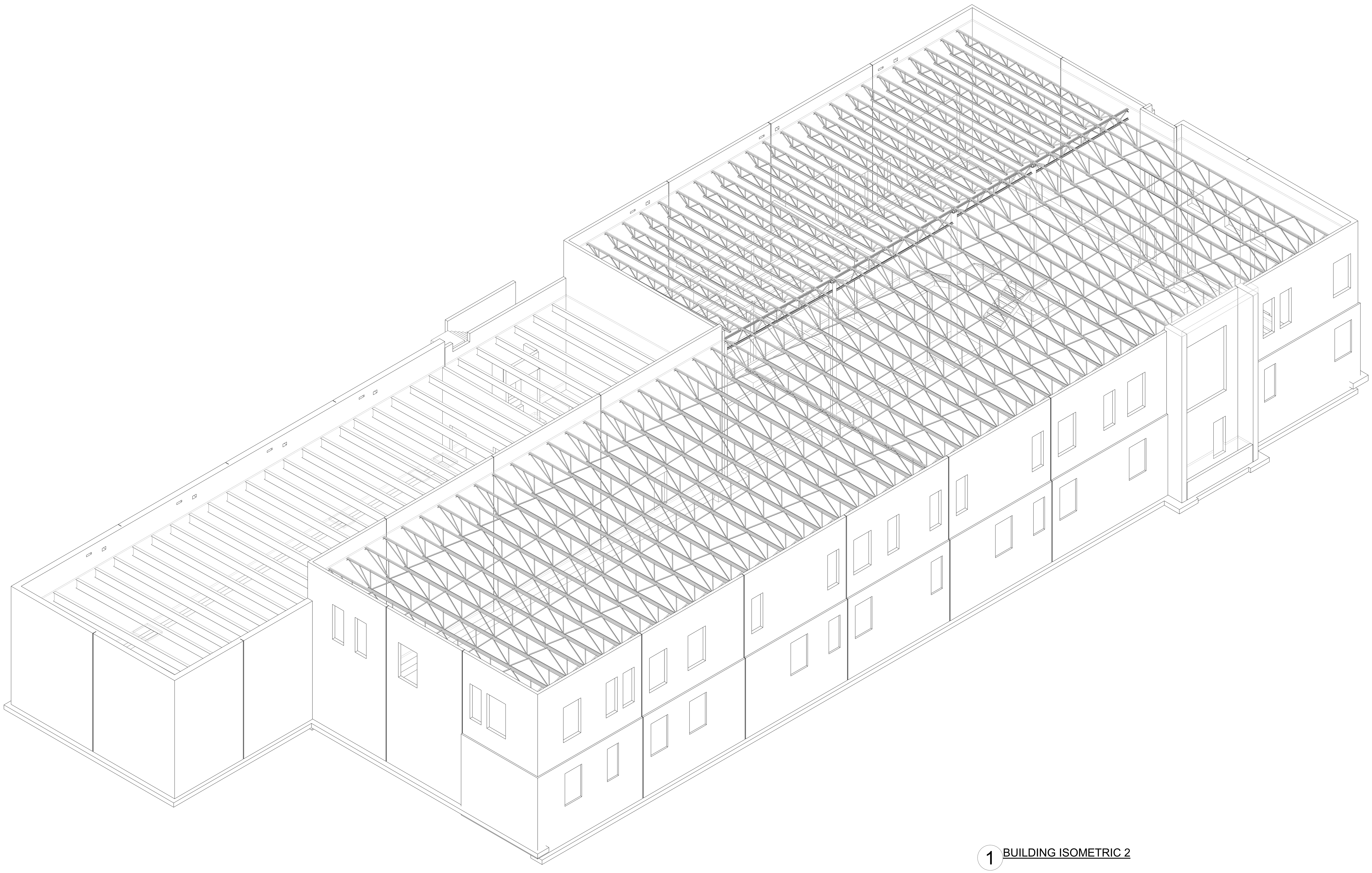
JSG #24115

SHEET TITLE

BUILDING ISOMETRICS

SHEET NUMBER

S1.2E



1 BUILDING ISOMETRIC 2

FILE NAME: C:\JSG\JSG C Drive\24115- Riviera Beach Police\Revit 2024\24115 RBPD_EFR_S_R24_Clear Span.rvt
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PROJECT STATUS
90% CDs / PERMIT SET

DATE OF ISSUE
10/14/2025

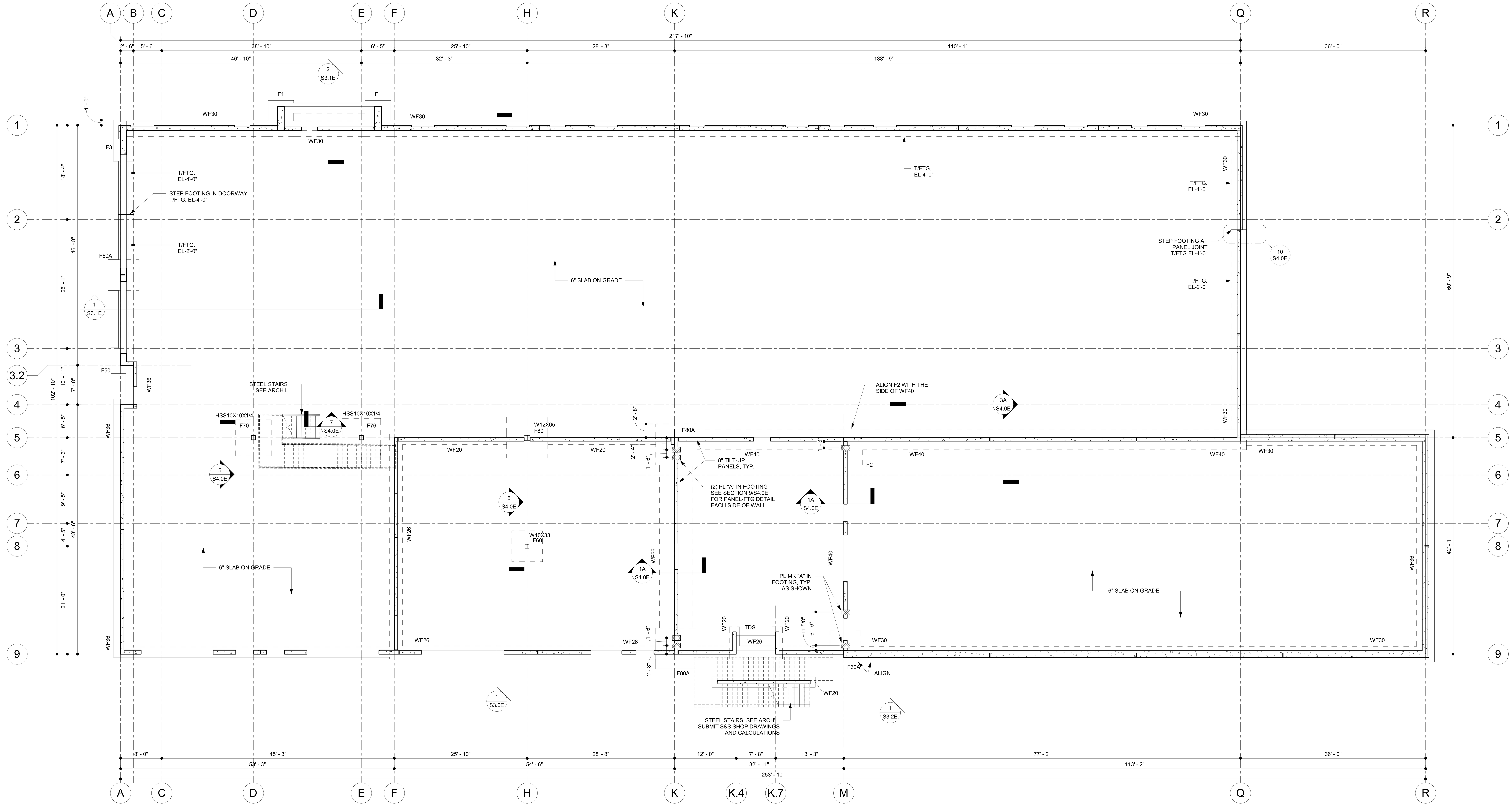
PROJECT NAME
RIVIERA BEACH POLICE DEPARTMENT EVIDENCE AND FIRE RANGE

PROJECT LOCATION
2125 AVENUE S.
RIVIERA BEACH, FL 33404

PROJECT NUMBER
JSG #24115

SHEET TITLE
BUILDING ISOMETRICS

SHEET NUMBER
S1.3E



1 FOUNDATION PLAN
1/8" = 1'-0"

FOUNDATION PLAN NOTES:

1. FLOOR SLAB TO BE 6" THICK CONCRETE REINFORCED WITH 6x6 W2.1xW2.1 WWF OVER 15 MIL VAPOR BARRIER ON COMPACTED TERMITE TREATED SUBGRADE. TYPICAAL THROUGHOUT
2. SEE SLAB ON GRADE DETAILS FOR PLACEMENT OF REINFORCEMENT AND JOINT DETAILS.
3. T/SLAB EL +0'-0" U.N.O. (REFERENCE ONLY). SEE CIVIL FOR ACTUAL ELEVATION.
4. T/WALL FOOTINGS TYPICAL EL -2'-0"
5. ALL EXTERIOR PANELS ALLOW FOR A 3/4" DEEP RECESS (i.e. THICKNESS = STRUCTURAL THICKNESS + 3/4" INCH) U.N.O. SEE PANEL REINFORCEMENT SHEETS FOR INDIVIDUAL PANEL THICKNESSES.
6. ALL TILT-UP PANELS ARE VIEWED FROM THE INSIDE OF THE BUILDING OR FROM THE NON-FINISHED FACE.
7. ALL FOOTINGS ARE CENTERED BENEATH BEARING WALLS AND COLUMNS.
8. SEE SHEET S5.0E FOR PANEL REINFORCING EMBEDDED ITEMS AND JOINT DETAILS.
9. SEE SHEET S1.1E FOR FOUNDATION AND STEEL COLUMN SCHEDULES
10. PROVIDE 6" HOUSEKEEPING PAD AT MECHANICAL EQUIPMENT REINFORCED WITH 6x6 W1.4xW1.4 WWF. HOUSEKEEPING PAD TO BE 6" WIDER THAN EQUIPMENT SUPPORTED. COORDINATE WITH MEP.

CLIENT

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PROJECT STATUS
90% CDs / PERMIT SET

DATE OF ISSUE
10/14/2025

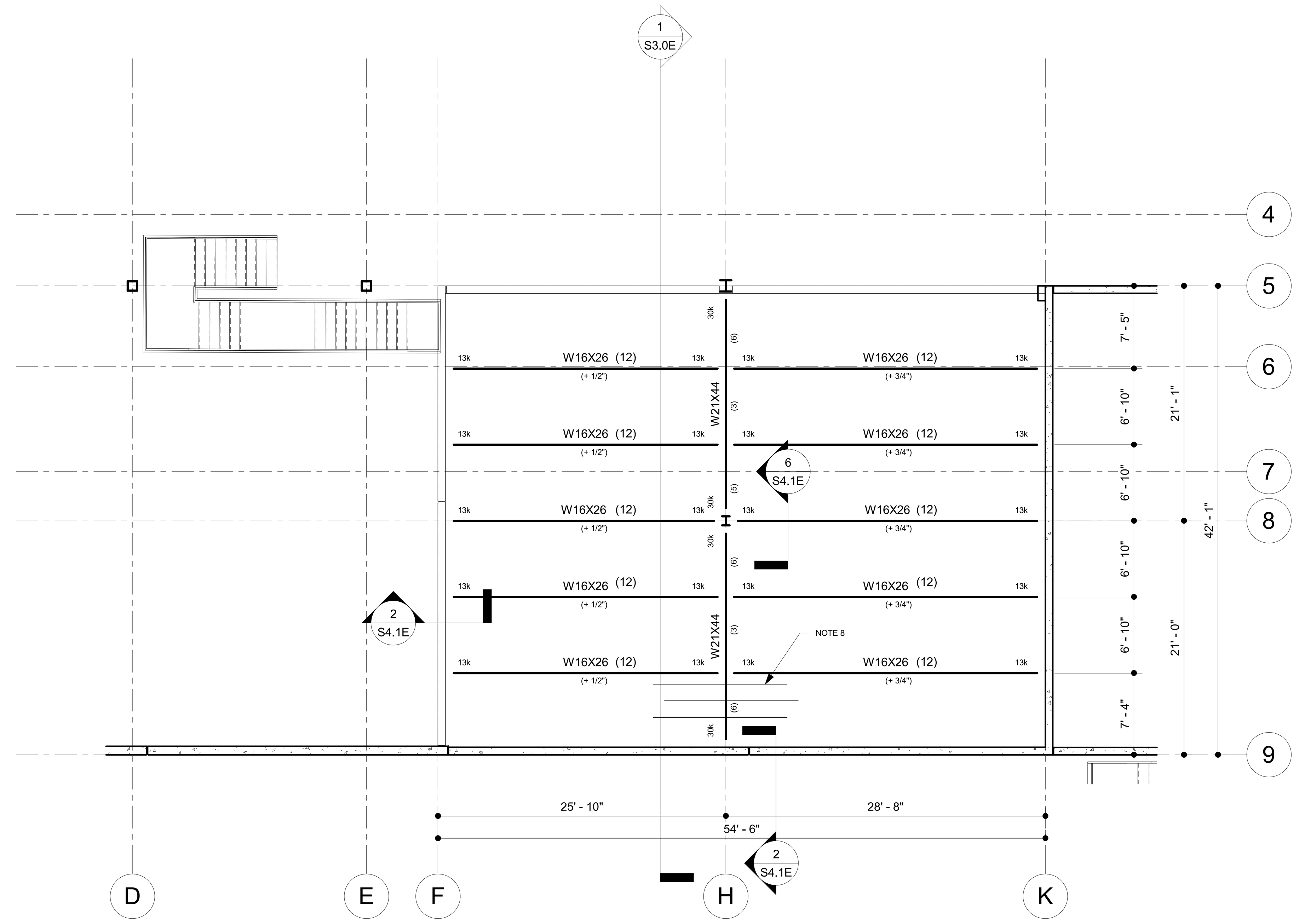
PROJECT NAME
RIVIERA BEACH POLICE DEPARTMENT EVIDENCE AND FIRE RANGE

PROJECT LOCATION
2125 AVENUE S.
RIVIERA BEACH, FL 33404

PROJECT NUMBER
JSG #24115

SHEET TITLE
FOUNDATION PLAN

SHEET NUMBER
S2.0E



1 MEZZANINE PLAN
1/8" = 1'-0"

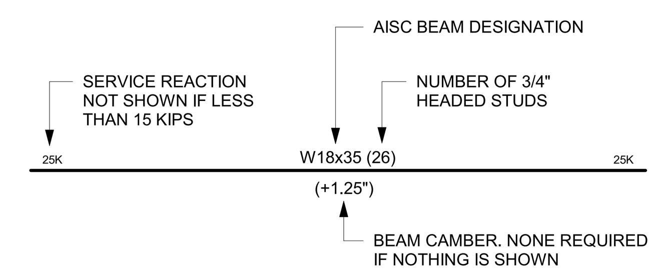
MEZZANINE DESIGN LOADS

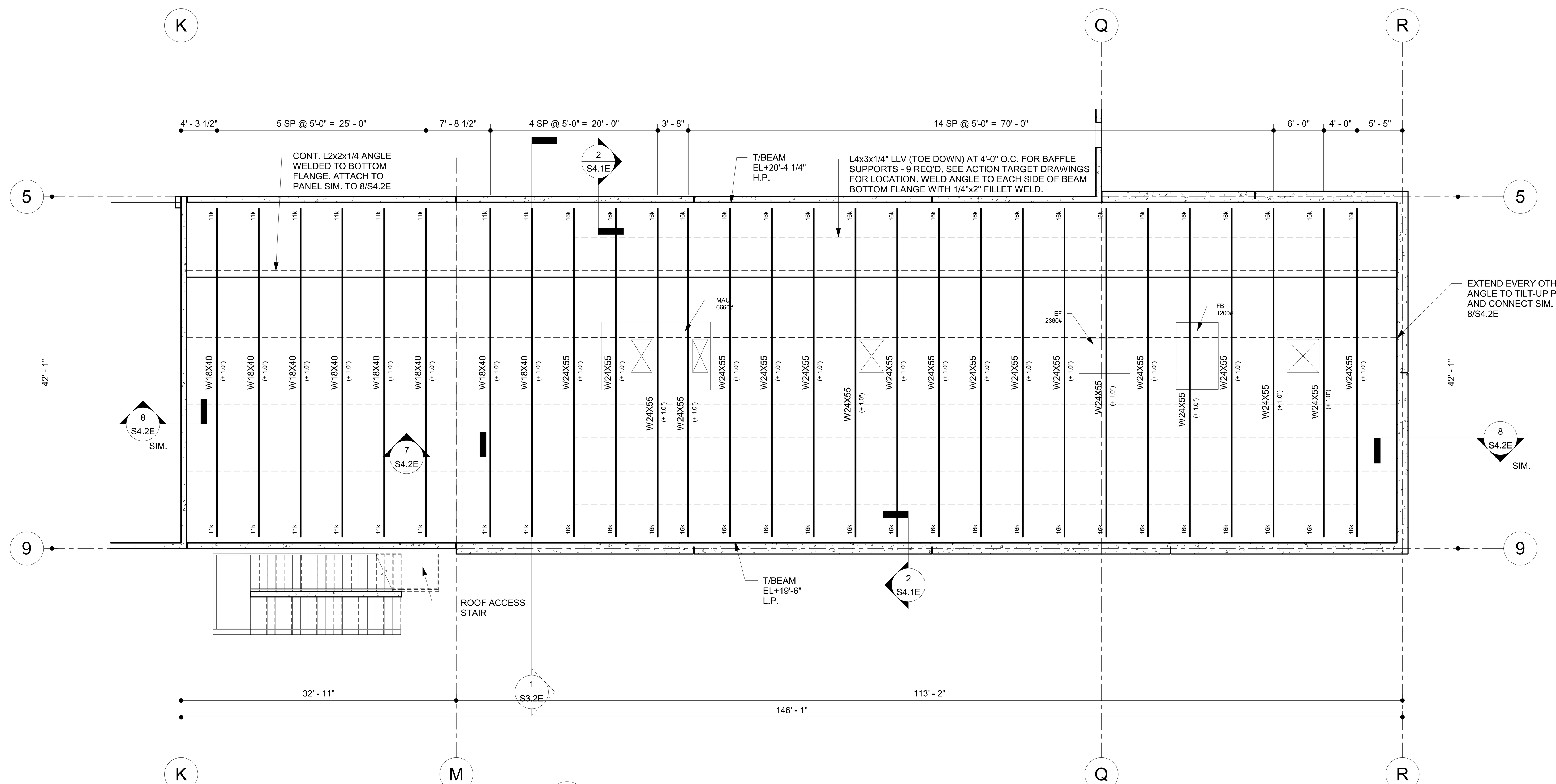
LIVE LOAD OFFICE:	80 PSF
LIVE LOAD AT STAIRS: OR CONCENTRATED LOAD ON TREADS:	100 PSF 300 #
MISC. DEAD LOAD THROUGHOUT:	10 PSF
SYSTEM WEIGHT (3" CONCRETE & 3" DECK):	57 PSF

FLOOR LIVE LOAD REDUCTION PER FLORIDA BUILDING CODE SECTION 1607.10 WITH MAXIMUM 20% FOR GIRDERS AND 30% FOR COLUMNS AND FOOTINGS.

MEZZANINE FLOOR FRAMING NOTES:

1. FLOOR SYSTEM SHALL BE 3" NORMAL WEIGHT CONCRETE ON 3", 20GA GALVANIZED G60 VULCRAFT VLI COMPOSITE METAL DECK. (6" TOTAL THICKNESS).
2. T/FINISHED FLOOR EL. + 14'-0"
3. T/BEAM = EL +13-6"
4. REINFORCE DECK WITH 6x6 W1.4xW1.4 WELDED WIRE FABRIC CHAIRED 1.5" BELOW TOP OF SLAB.
5. FLOOR IS DESIGNED AS AN UNSHORED COMPOSITE BEAM SYSTEM. ATTACH METAL DECK TO TOP FLANGE OF BEAMS USING HEADED STUDS IN ACCORDANCE WITH SDI 36/4 PATTERN WITH (4) #12 TEK SIDELAP SCREWS. PROVIDE 5/8" DIA PUDDLE WELDS AT 12" O.C. ALONG PERIMETER ANGLE.
6. ALL STEEL BEAMS TO BE A992, Fy = 50 KSI
7. ALL REACTIONS ARE SHOWN AS SERVICE REACTIONS. IF BEAM REACTION IS NOT SHOWN ON PLAN, ASSUME A MINIMUM 12 KIP SERVICE REACTION
8. PROVIDE #4 BARS AT 18" O.C. TOP AT GIRDERS. ALTERNATELY STAGGER BARS 12" FROM THE GIRDER CENTERLINE. SEE PLAN FOR BAR LENGTHS.
9. PROVIDE 6" HOUSEKEEPING PAD AT MECHANICAL EQUIPMENT REINFORCED WITH 6x6 W1.4xW1.4 WWF. HOUSEKEEPING PAD TO BE 6" WIDER THAN EQUIPMENT SUPPORTED. COORDINATE WITH MEP.





2 RANGE ROOF FRAMING PLAN
1/8" = 1'-0"

ROOF DESIGN LOADS

DESIGN LIVE LOAD	DESIGN DEAD LOAD	1" DECK + 3" CONCRETE	SHOOTING RANGE BAFFLES
30 PSF	25 PSF	45 PSF	WEIGHT INCL.

ROOF FRAMING NOTES:

1. ROOF SYSTEM TO BE 3" CONCRETE ON 1.0C-32 22 GAGE, GRADE 80 NON-COMPOSITE METAL DECK, 4" TOTAL THICKNESS, ON STEEL BEAMS SPACED AS SHOWN. ATTACH METAL DECK TO BEAMS WITH 5/8" PUDDLE WELDS 1 PER RIB. PROVIDE 5/8" PUDDLE WELDS AT 4" ON CENTER PARALLEL TO THE DECK SPAN AT EDGE SUPPORTS. USE #10 TEK SIDELAP SCREWS AT 24" O.C. MAX SPACING.
2. REINFORCE DECK WITH 6x6 10x10 WWF CHAIRED MID HEIGHT OF SLAB.
3. W24x55 BEAMS HAVE TAKEN INTO ACCOUNT THE WEIGHT OF THE HANGING BAFFLE SYSTEM BELOW FOR THE RANGE. DESIGN BASED ON ACTION TARGET DESIGN DRAWINGS SHEET Z102.
4. T/STEEL BEAMS EL+ 19'-6", THROUGHOUT
5. SEE PLAN FOR TOP OF PARAPET ELEVATIONS
6. SEE STRUCTURAL NOTE SHEET S1.0E FOR STRUCTURAL STEEL NOTES. SEE SHEET S1.1E FOR SCHEDULES.
7. SEE SECTIONS FOR FRAMING DETAILS
8. SEE PLAN FOR TOP OF BEAM ELEVATIONS
9. SEE SHEET S1.1E FOR ROOF UPLIFT PLAN.

CLIENT

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REGISTRATION

MARK JOHNSON LICENSE NO. 51983 STATE OF FLORIDA PROFESSIONAL ENGINEER

JOHNSON STRUCTURAL GROUP

DRAWING HISTORY

№.	DATE	DESCRIPTION
A	04/04/2025	100% Design Development
B	07/22/2025	50% Construction Documents
C	09/18/2025	90% Construction Documents
D	10/14/2025	90% Construction Documents / Permit Set

PROJECT STATUS
90% CDs / PERMIT SET

DATE OF ISSUE
10/14/2025

PROJECT NAME
RIVIERA BEACH POLICE DEPARTMENT EVIDENCE AND FIRE RANGE

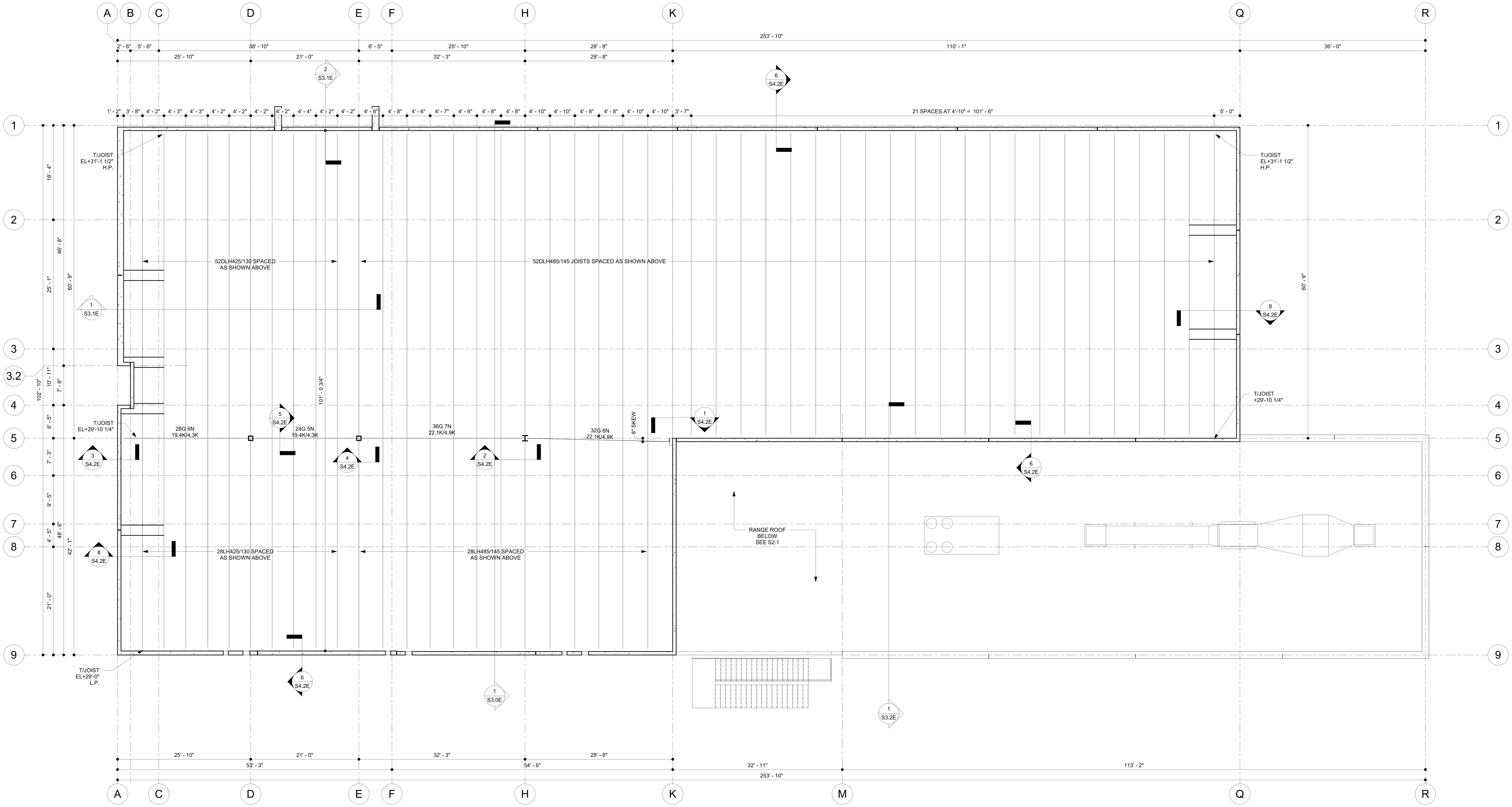
PROJECT LOCATION
2125 AVENUE S.
RIVIERA BEACH, FL 33404

PROJECT NUMBER
JSG #24115

SHEET TITLE
MEZZANINE PLAN AND FIRING RANGE ROOF FRAMING PLAN

SHEET NUMBER
S2.1E

FILE NAME: C:\JSG\JSG C Drive\24115- Riviera Beach Police\Revit 2024\24115 RBPD_EFR_S_R24_Clear Span.rvt
DATE STAMP: 10/23/2025 2:09:20 PM



1 EVIDENCE ROOF FRAMING PLAN
1/8" = 1'-0"

ROOF DESIGN LOADS			
JOIST DESIGN LIVE LOAD	JOIST GIRDER LIVE LOAD	DESIGN DEAD LOAD	1" DECK + 3" CONCRETE
30 PSF	20 PSF	25 PSF	45 PSF

ROOF FRAMING NOTES:

1. ROOF SYSTEM TO BE 3" CONCRETE ON 1.0C-32 22 GAGE, GRADE 80 NON-COMPOSITE METAL DECK, 4" TOTAL THICKNESS, ON BAR JOISTS SPACED AS SHOWN. ATTACH METAL DECK TO JOISTS WITH 5/8" PUDDLE WELDS 1 PER RIB + 1 EVERY OTHER RIB. PROVIDE 5/8" PUDDLE WELDS AT 2.5" ON CENTER PARALLEL TO THE DECK SPAN AT EDGE SUPPORTS. USE #10 TEK SIDELAP SCREWS AT 24" O.C. MAX SPACING.
2. REINFORCE DECK WITH 6X6 10X10 WWF CHAIRED MID HEIGHT OF SLAB.
3. T/JOIST EL + 29'-0" THROUGHOUT
4. SEE PLAN FOR TOP OF PARAPET ELEVATIONS
5. SEE STRUCTURAL NOTE SHEET S1.0E FOR STRUCTURAL STEEL NOTES. SEE SHEET S1.1E FOR SCHEDULES.
6. SEE SECTIONS FOR FRAMING DETAILS
7. SEE PLAN FOR TOP OF BEAM ELEVATIONS
8. SEE SHEET S1.1E FOR ROOF UPLIFT PLAN.

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JOHNSON STRUCTURAL GROUP

PROJECT STATUS
90% CDs / PERMIT SET

DATE OF ISSUE
10/14/2025

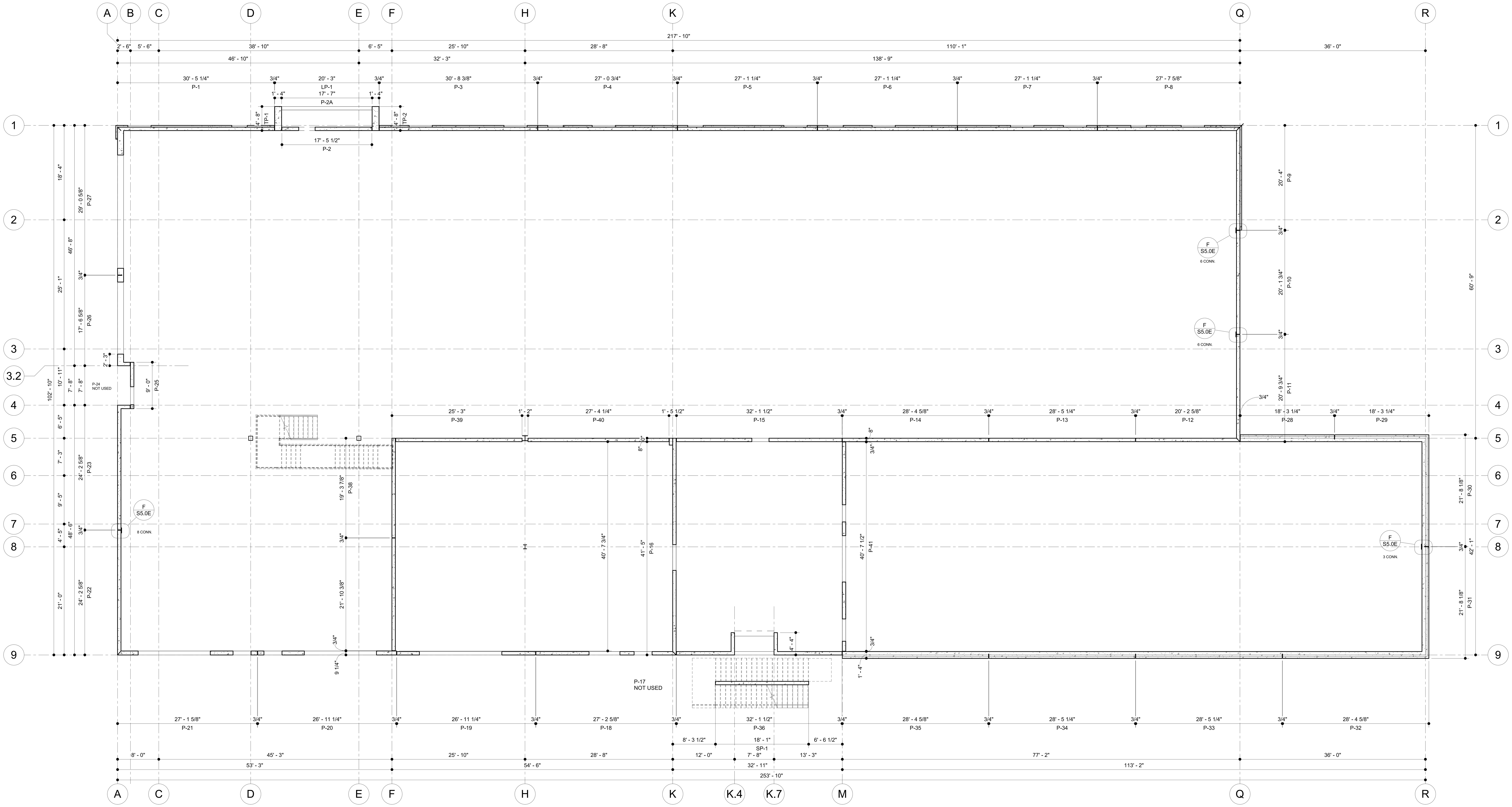
PROJECT NAME
RIVIERA BEACH POLICE DEPARTMENT EVIDENCE AND FIRE RANGE

PROJECT LOCATION
2125 AVENUE S.
RIVIERA BEACH, FL 33404

PROJECT NUMBER
JSG #24115

SHEET TITLE
EVIDENCE STORAGE HIGH ROOF FRAMING PLAN

SHEET NUMBER
S2.2E



1 PANEL LAYOUT PLAN
1/8" = 1'-0"

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RIVIERA BEACH, FL 33404

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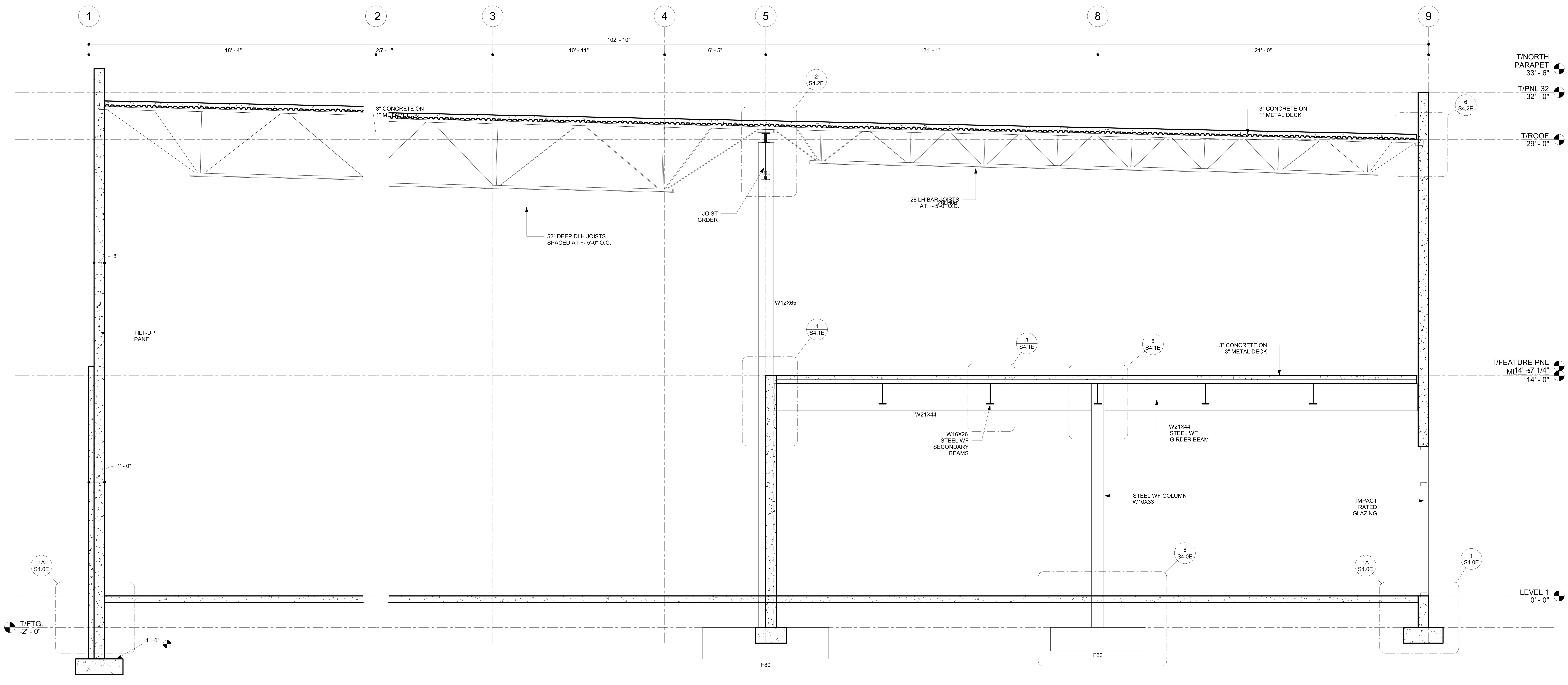
JSG #24115

SHEET TITLE
PANEL LAYOUT PLAN

SHEET NUMBER
S2.3E

FILE NAME: C:\USG\JSG C Drive\24115- Riviera Beach Police\Revit 2024\24115 RBPD_EFR_S_R24_Clear Span.rvt
DATE STAMP: 10/23/2025 11:51:13 AM



1 BUILDING TRANSVERSE SECTION THROUGH MEZZANINE

3/8" = 1'-0"

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DATE STAMP: 10/23/2025 11:51:15 AM

CLIENT

CITY OF Riviera Beach
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Riviera Beach, FL 33404

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REGISTRATION

MARK JOHNSON
LICENSE
NO. 51983
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

DRAWING HISTORY

№.	DATE	DESCRIPTION
A	04/04/2025	100% Design Development
B	07/22/2025	50% Construction Documents
C	09/18/2025	90% Construction Documents
D	10/14/2025	90% Construction Documents / Permit Set

ARCHITECTURE

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PROJECT STATUS

90% CDs / PERMIT SET

DATE OF ISSUE

10/14/2025

PROJECT NAME

RIVIERA BEACH POLICE DEPARTMENT EVIDENCE AND FIRE RANGE

PROJECT LOCATION

2125 AVENUE S.
RIVIERA BEACH, FL
33404

PROJECT NUMBER

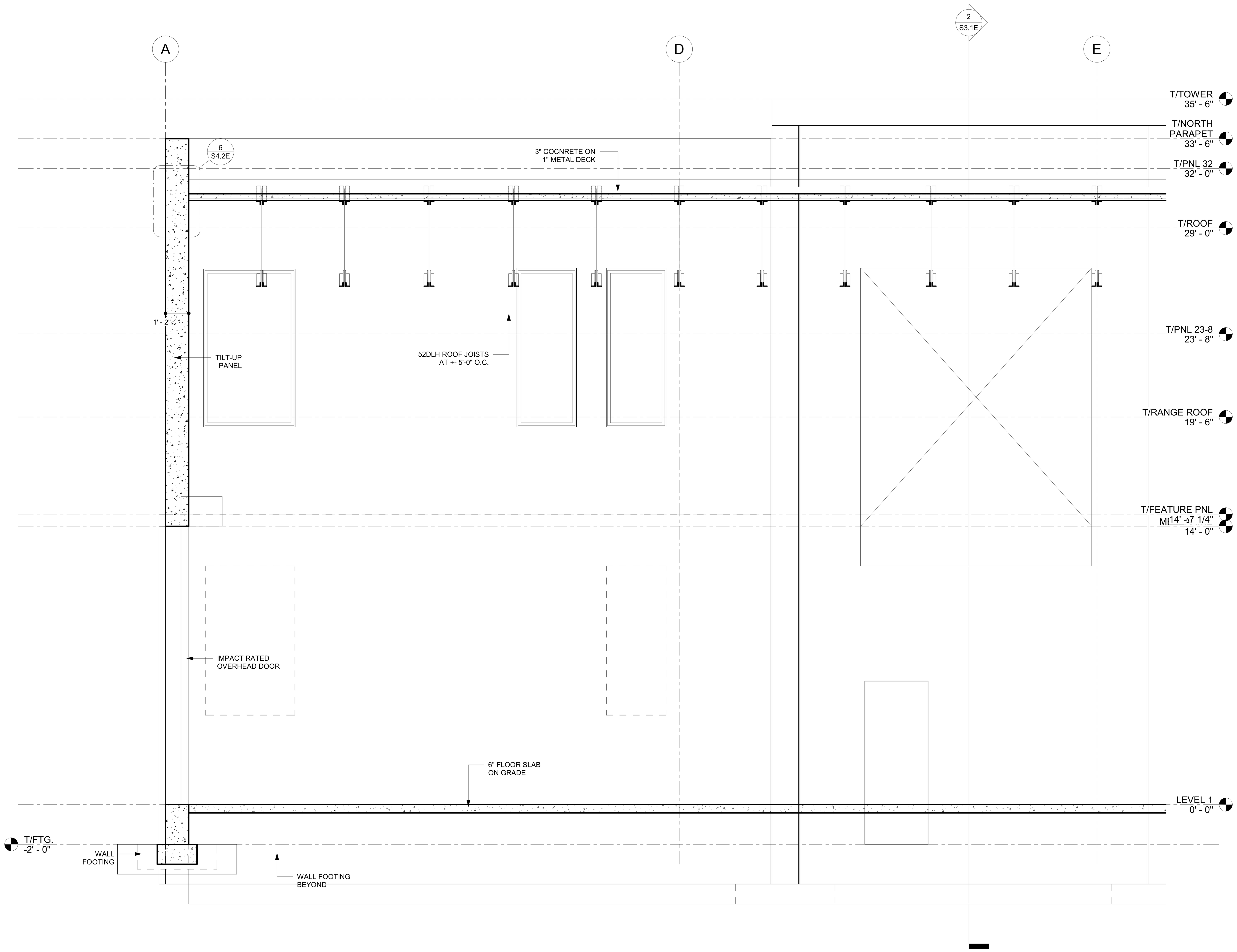
JSG #24115

SHEET TITLE

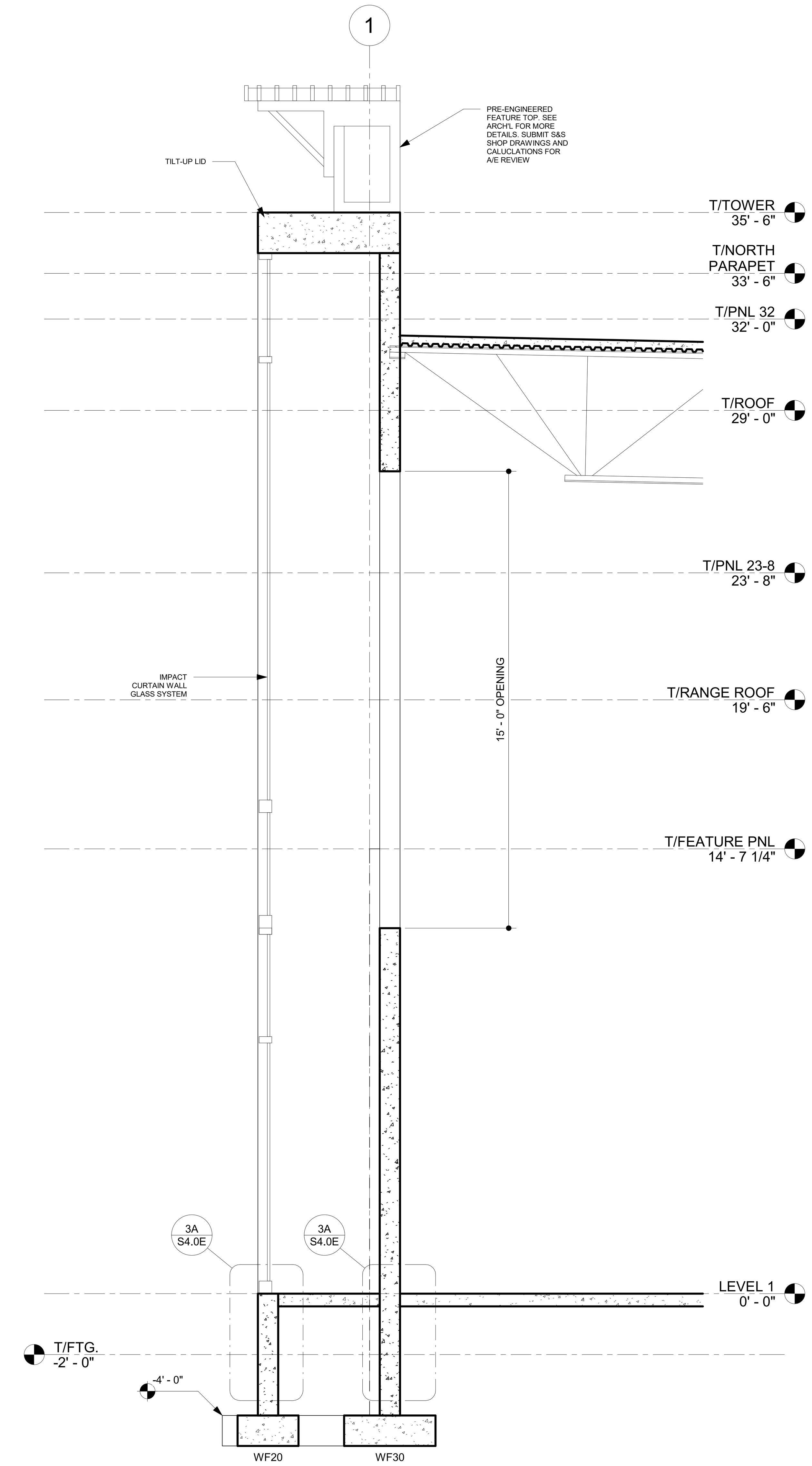
BUILDING SECTIONS

SHEET NUMBER

S3.0E



1 BUILDING PARTIAL SECTION
3/8" = 1'-0"



2 SECTION THROUGH TOWER FEATURE
3/8" = 1'-0"

CLIENT

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RIVIERA BEACH, FL 33404

PROJECT NUMBER
JSG #24115

SHEET TITLE
BUILDING SECTIONS

SHEET NUMBER
S3.1E

FILE NAME: C:\USG\JSG C Drive\24115- Riviera Beach Police\Revit 2024\24115 RBPD_EFR_S_R24_Clear Span.rvt
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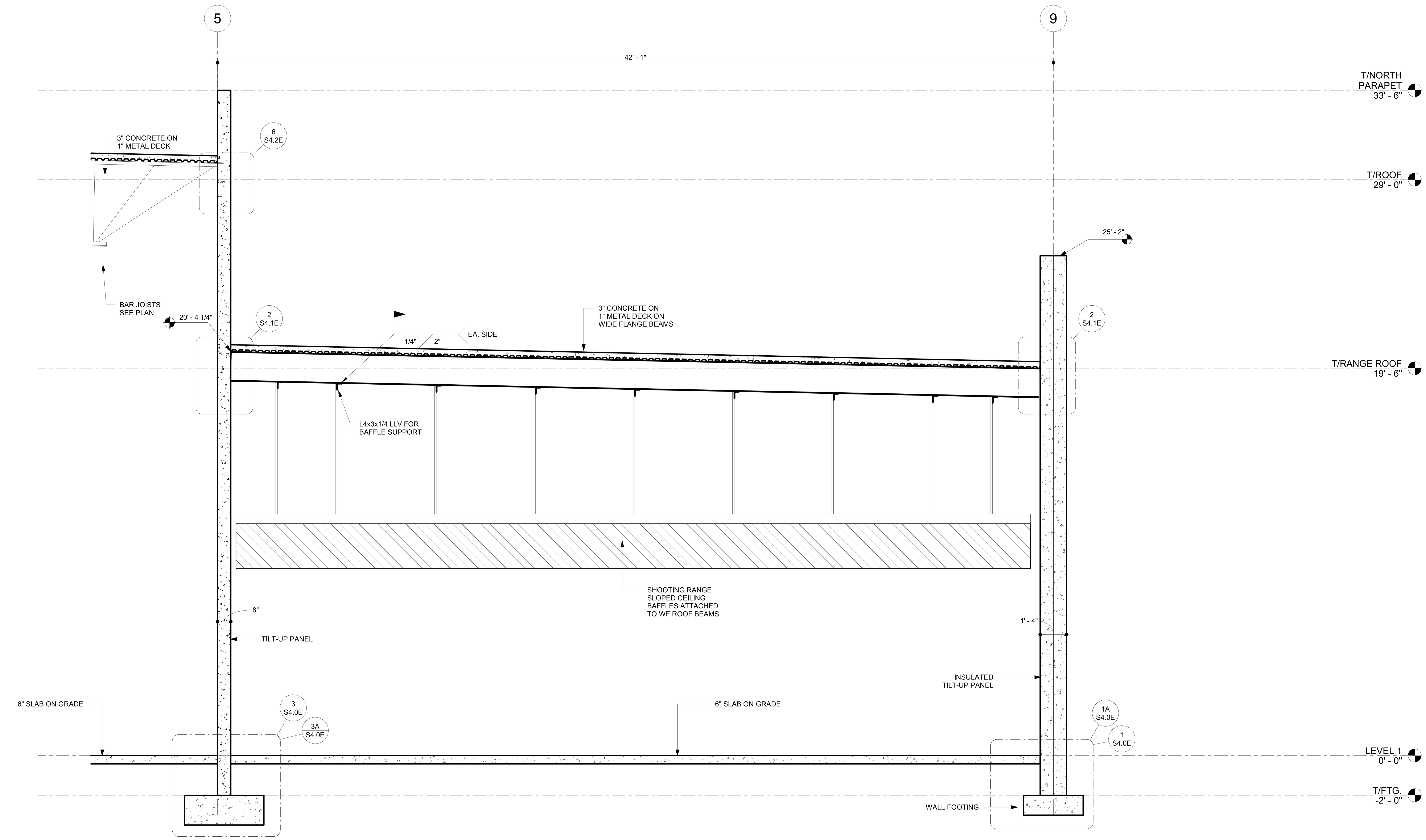

1 SECTION THROUGH RANGE
3/8" = 1'-0"

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J2 ARCHITECTURE

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PROJECT STATUS
90% CDs / PERMIT SET

DATE OF ISSUE
10/14/2025

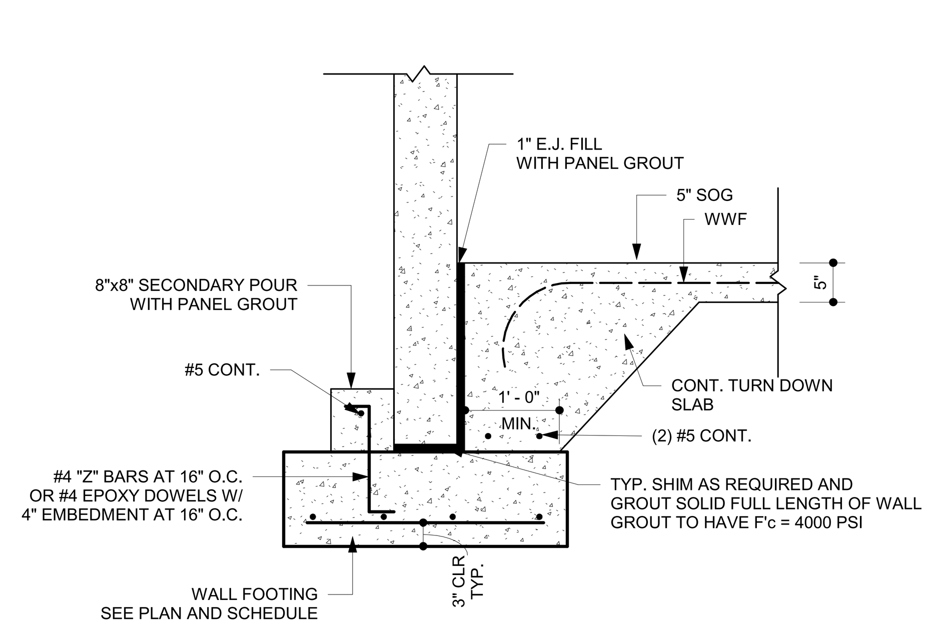
PROJECT NAME
RIVIERA BEACH POLICE DEPARTMENT EVIDENCE AND FIRE RANGE

PROJECT LOCATION
2125 AVENUE S.
RIVIERA BEACH, FL 33404

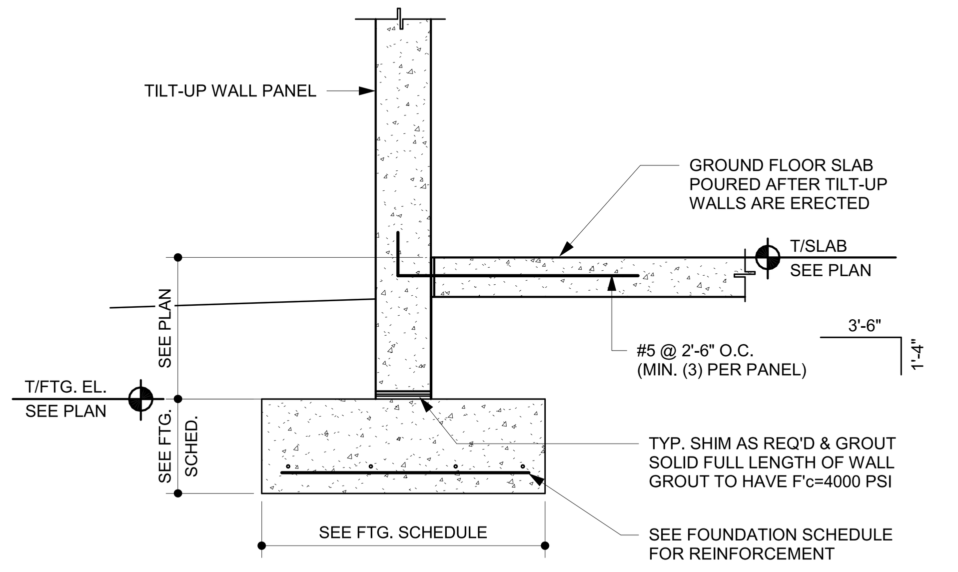
PROJECT NUMBER
JSG #24115

SHEET TITLE
BUILDING SECTIONS

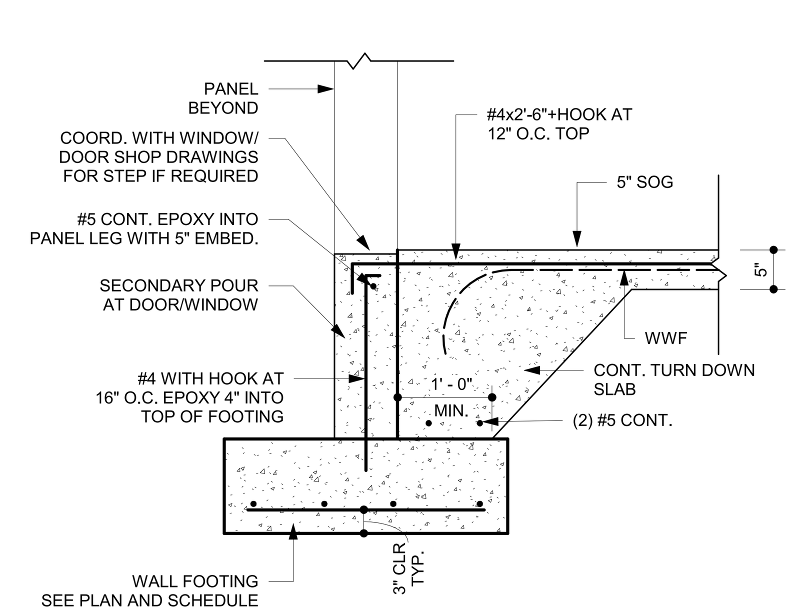
SHEET NUMBER
S3.2E



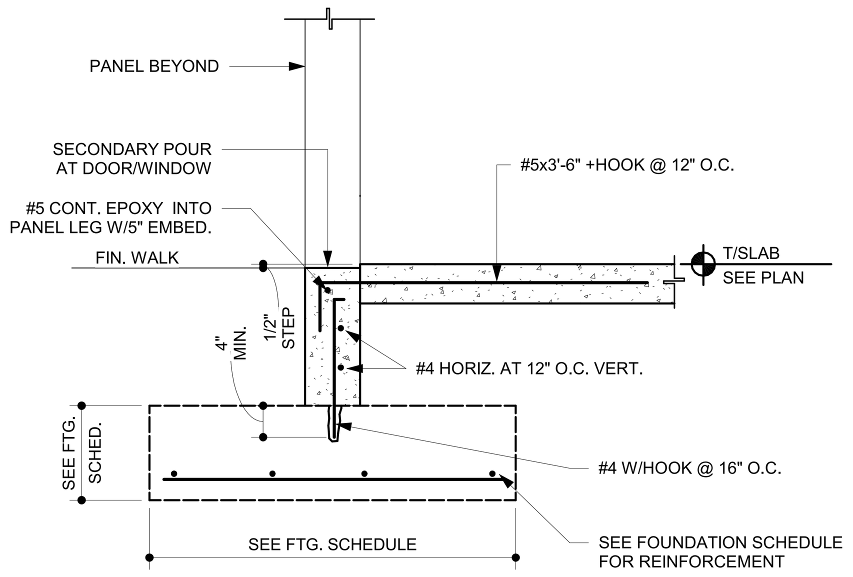
1 SECTION AT WALL FOOTING - TDS
3/4" = 1'-0"



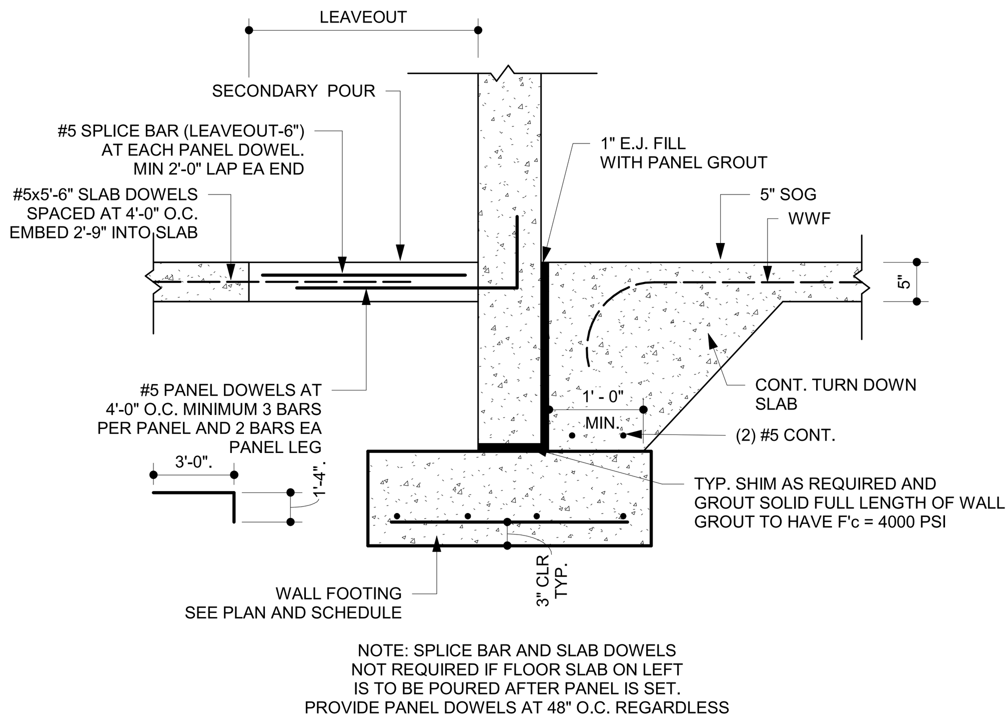
1A SECTION AT WALL FOOTING - LEAVEOUT
3/4" = 1'-0"



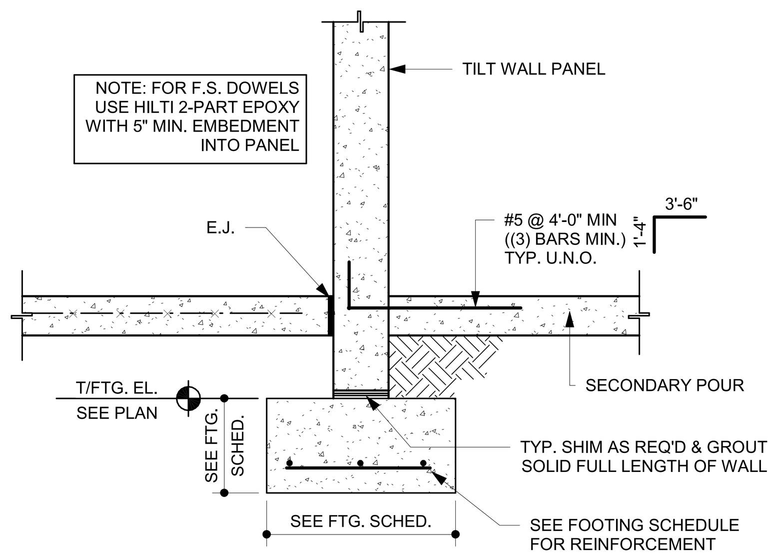
2 SECTION AT EXT. DOOR - TDS
3/4" = 1'-0"



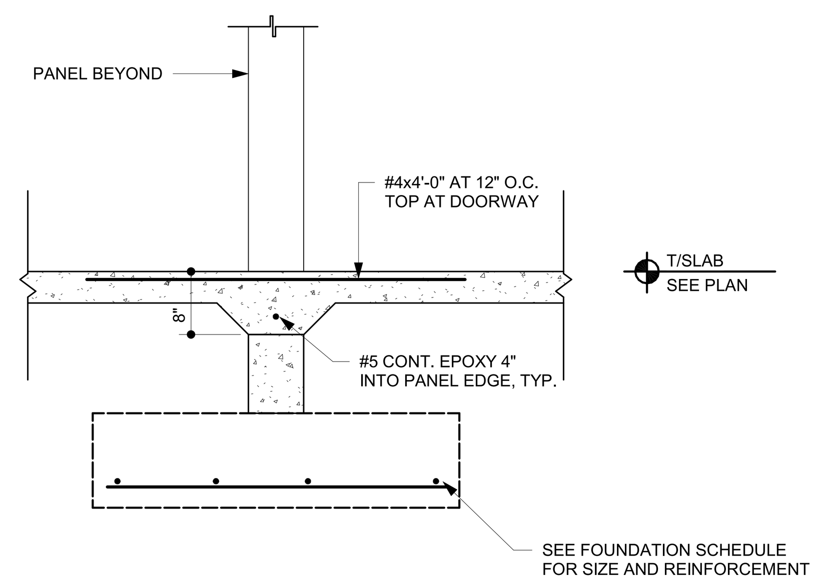
2A SECTION AT EXT. DOOR - LEAVEOUT
3/4" = 1'-0"



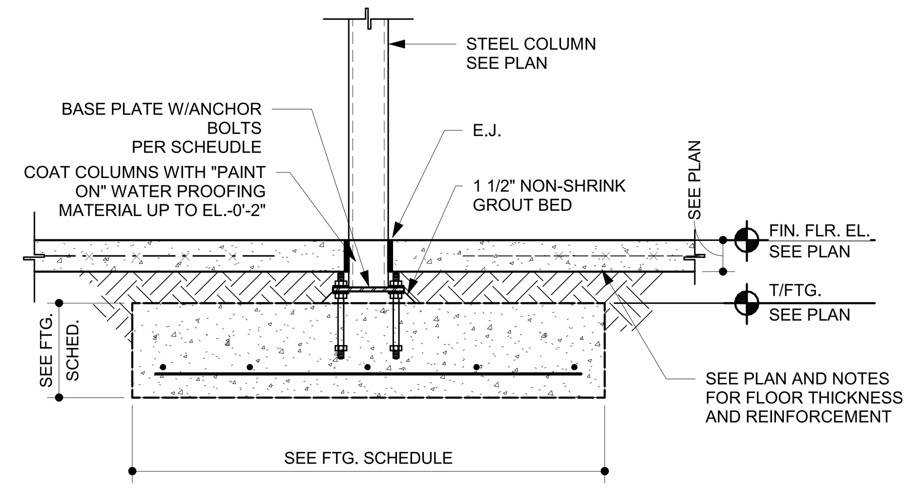
3 SECTION AT INTERIOR TILT WALL - TDS
3/4" = 1'-0"



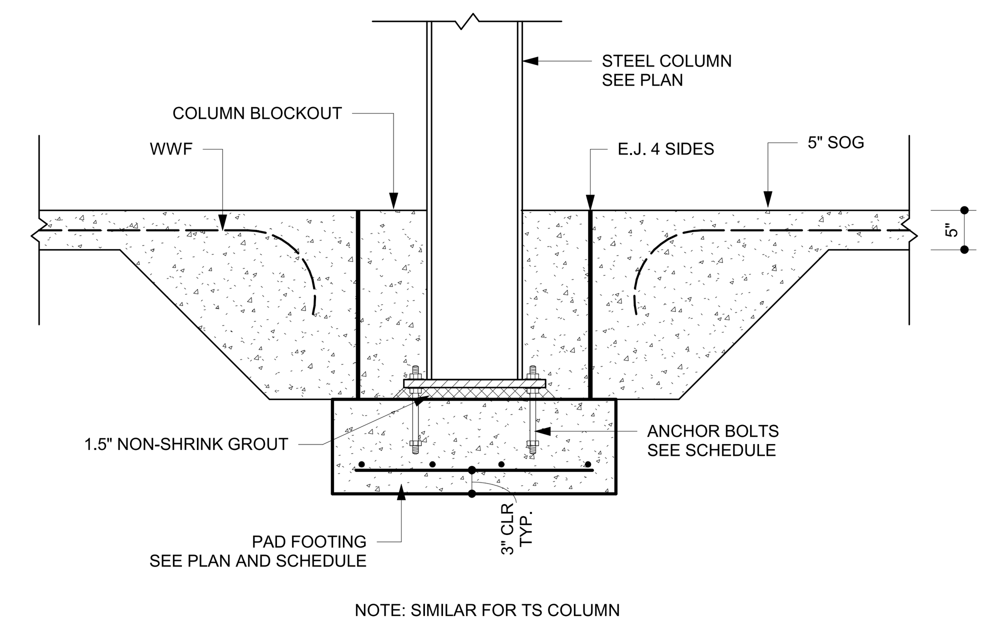
3A SECTION AT INTERIOR TILT WALL - LEAVEOUT
3/4" = 1'-0"



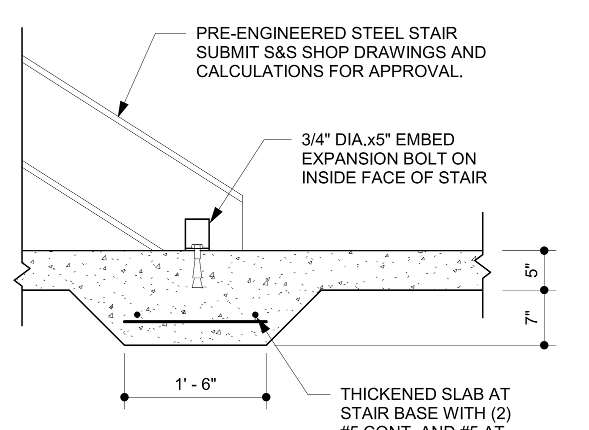
4 SECTION AT INTERIOR DOOR
3/4" = 1'-0"



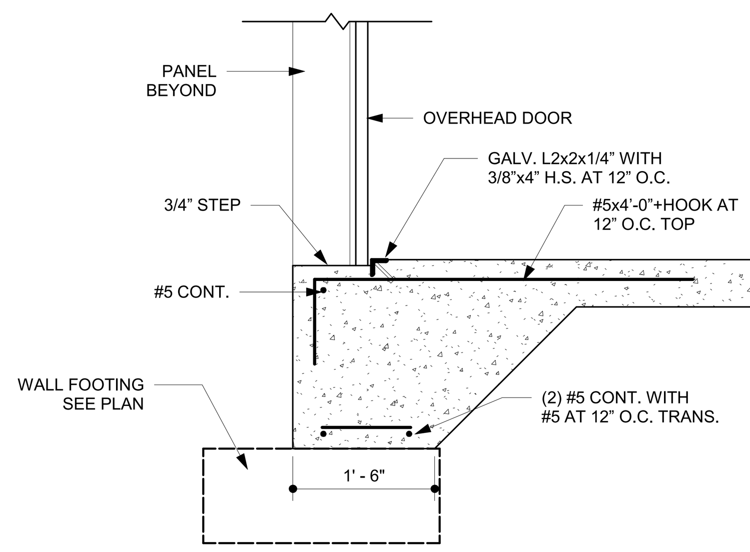
5 SECTION AT STEEL TS COLUMN
3/4" = 1'-0"



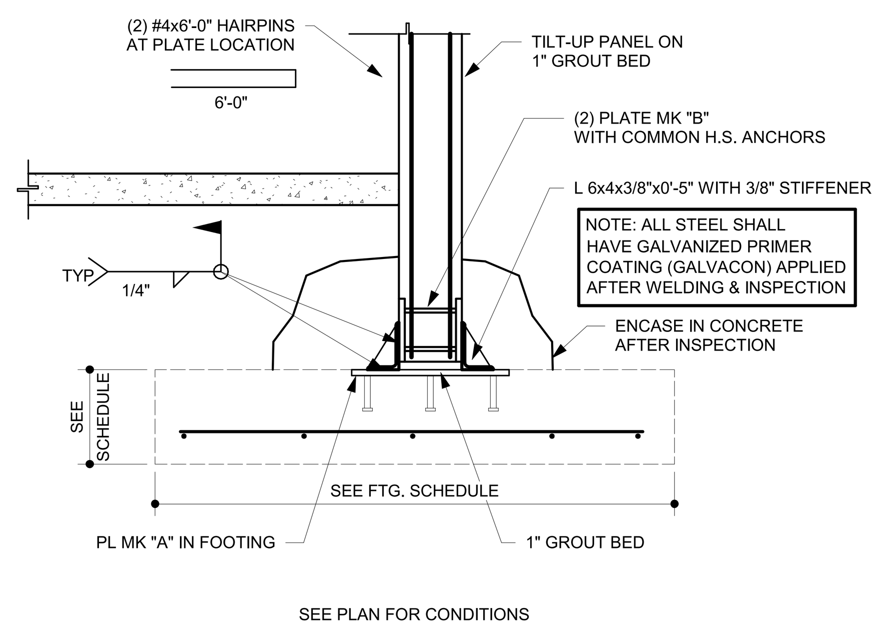
6 SECTION AT STEEL WF COLUMN
3/4" = 1'-0"



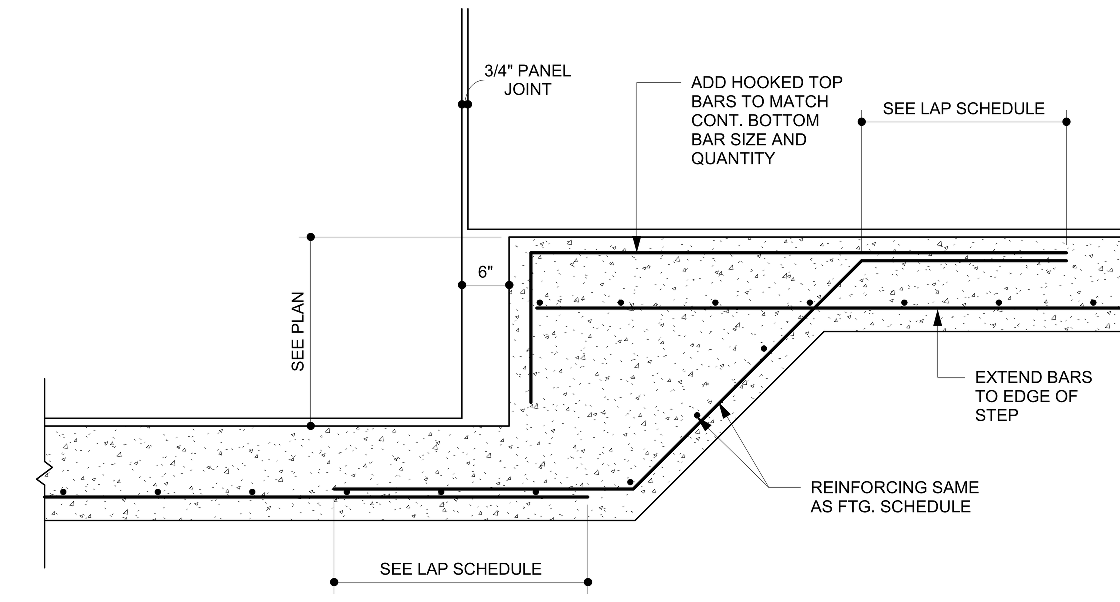
7 SECTION AT STEEL STAIR LANDING
3/4" = 1'-0"



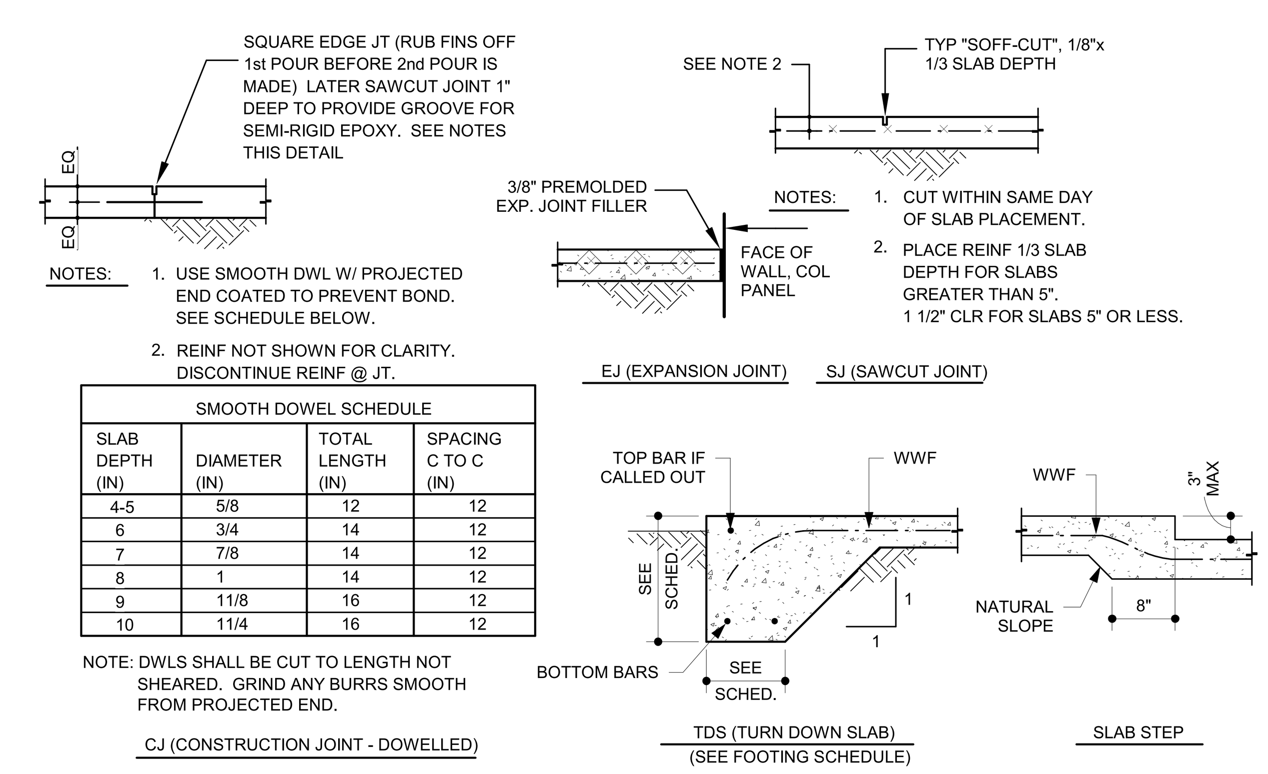
8 SECTION AT OVERHEAD DOOR
3/4" = 1'-0"



9 PANEL TO FOOTING CONN 2
3/4" = 1'-0"



10 SECTION AT FOOTING STEP
3/4" = 1'-0"



SMOOTH DOWEL SCHEDULE

SLAB DEPTH (IN)	DIAMETER (IN)	TOTAL LENGTH (IN)	SPACING C TO C (IN)
4-5	5/8	12	12
6	3/4	14	12
7	7/8	14	12
8	1	14	12
9	11/8	16	12
10	11/4	16	12

NOTE: DWLS SHALL BE CUT TO LENGTH NOT SHEARED. GRIND ANY BURRS SMOOTH FROM PROJECTED END.

CJ (CONSTRUCTION JOINT - DOWELLED)

A SLAB ON GRADE DETAILS
3/4" = 1'-0"

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J2 ARCHITECTURE

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PROJECT STATUS
90% CDs / PERMIT SET

DATE OF ISSUE
10/14/2025

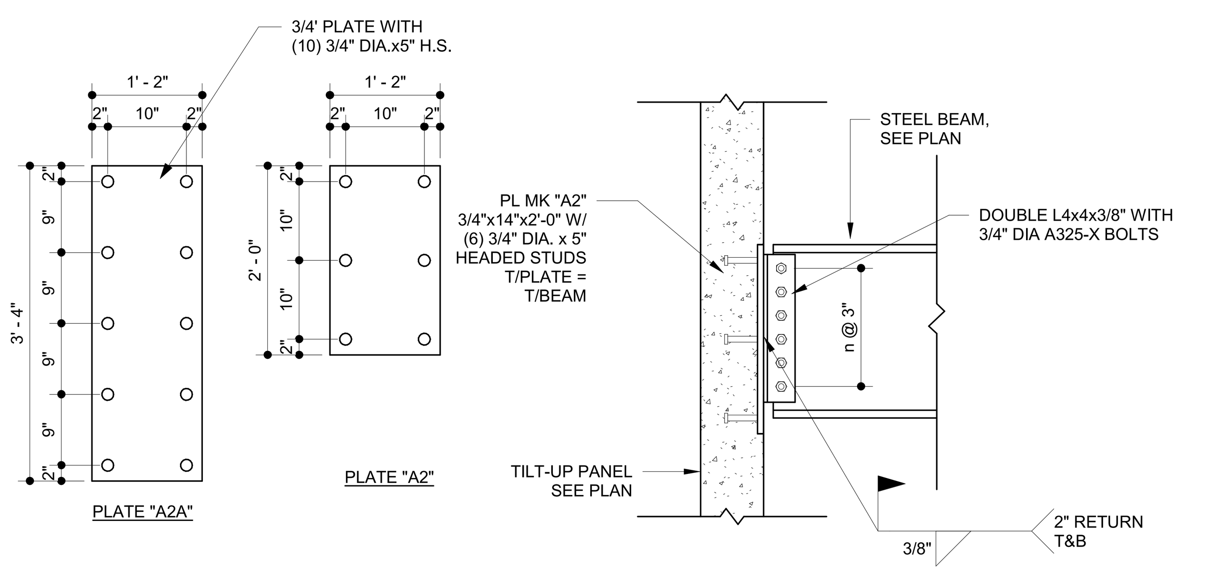
PROJECT NAME
RIVIERA BEACH POLICE DEPARTMENT EVIDENCE AND FIRE RANGE

PROJECT LOCATION
2125 AVENUE S.
RIVIERA BEACH, FL 33404

PROJECT NUMBER
JSG #24115

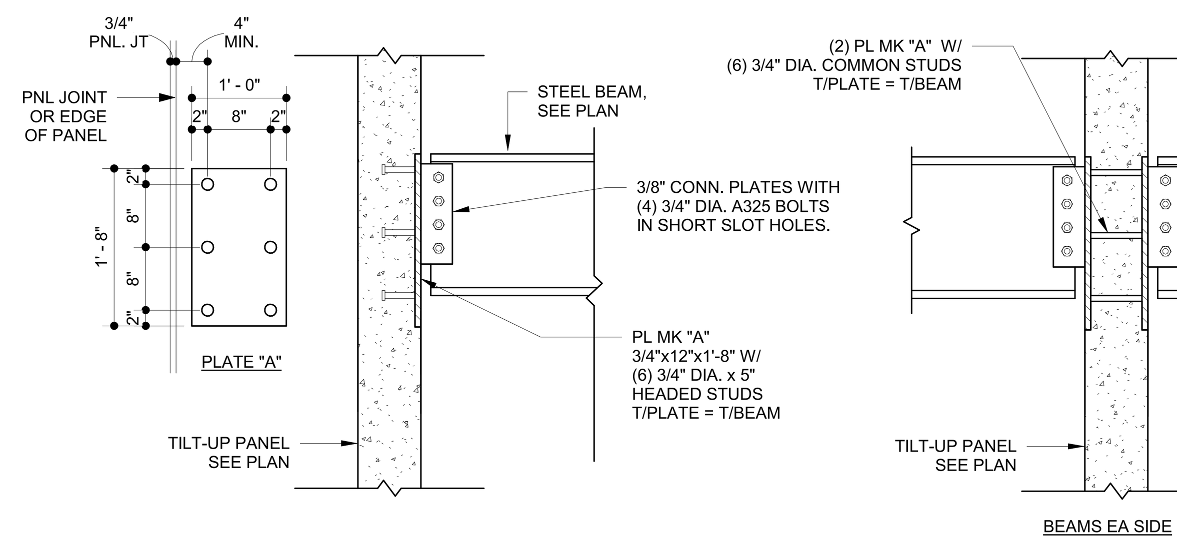
SHEET TITLE
STRUCTURAL DETAILS

SHEET NUMBER
S4.0E



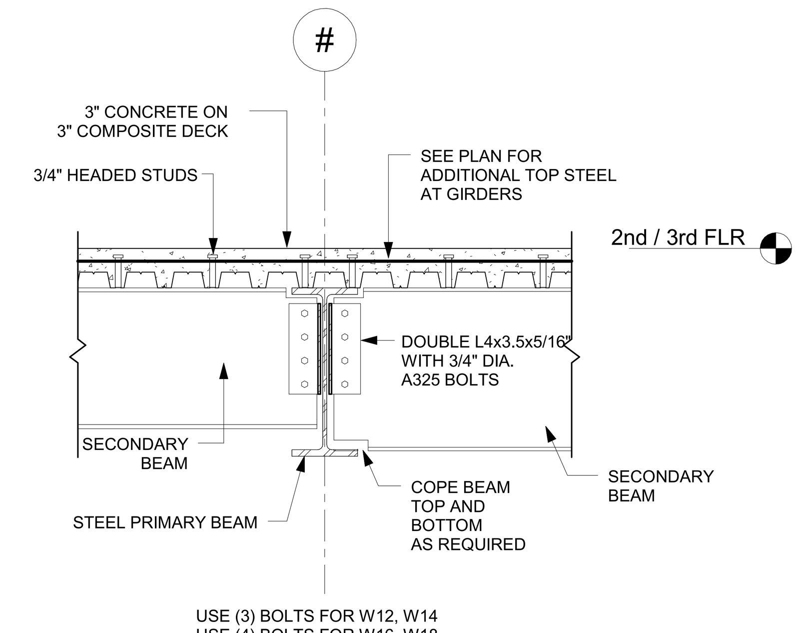
NOTES: USE THIS CONNECTION FOR PRIMARY GIRDER BEAMS FOR REACTIONS >=41 KIPS AND <60 KIPS
USE PLATE "A2A" FOR REACTIONS > 60 KIPS AND <= 90 KIPS
USE 5 BOLTS FOR W18 BEAM
USE 6 BOLTS FOR W21 AND W24 BEAMS

1 SECTION AT PRIMARY BEAM TO WALL
3/4" = 1'-0"



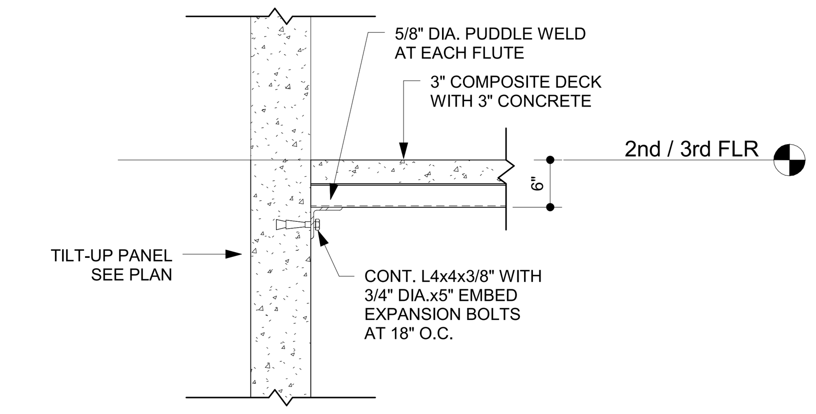
NOTE: USE THIS CONNECTION FOR REACTIONS EQUAL TO OR LESS THAN 40 KIPS FIELD AND
30 KIPS AT THE EDGE. THIS CONNECTION ALSO APPLIES FOR BEAMS AT A SKEW TO WALL

2 SECTION AT SECONDARY BEAM TO WALL
3/4" = 1'-0"

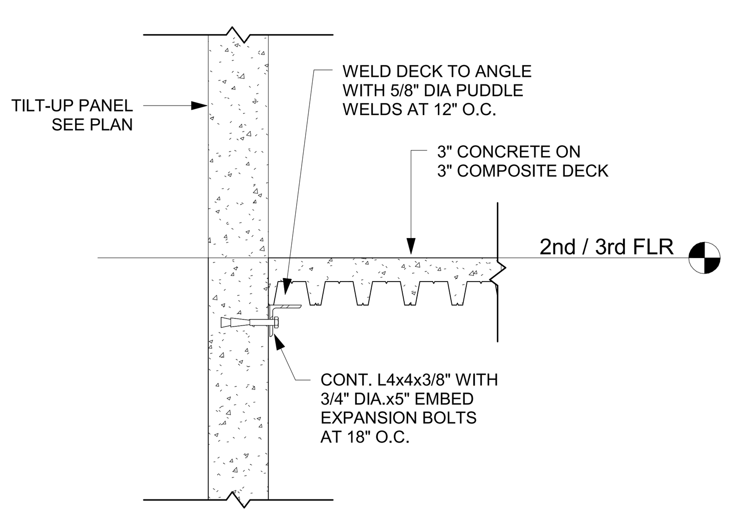


USE (3) BOLTS FOR W12, W14
USE (4) BOLTS FOR W16, W18
USE (5) BOLTS FOR W21, W24

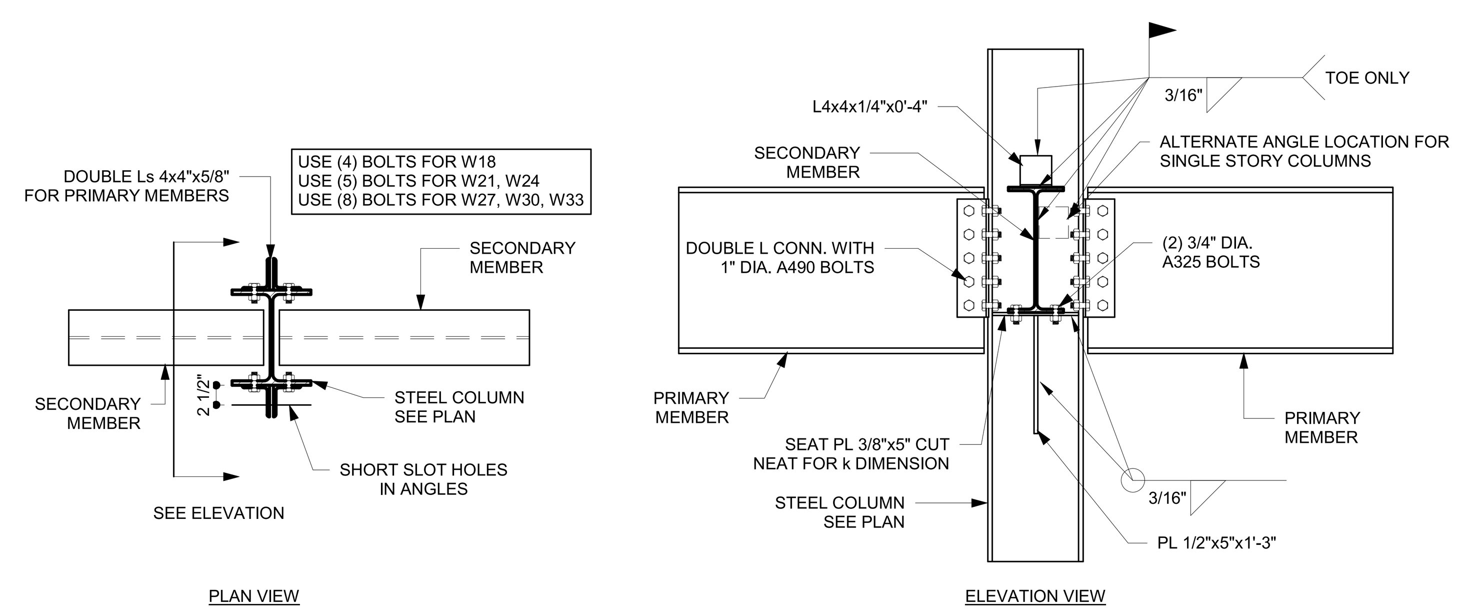
3 SECTION AT BEAM TO BEAM
3/4" = 1'-0"



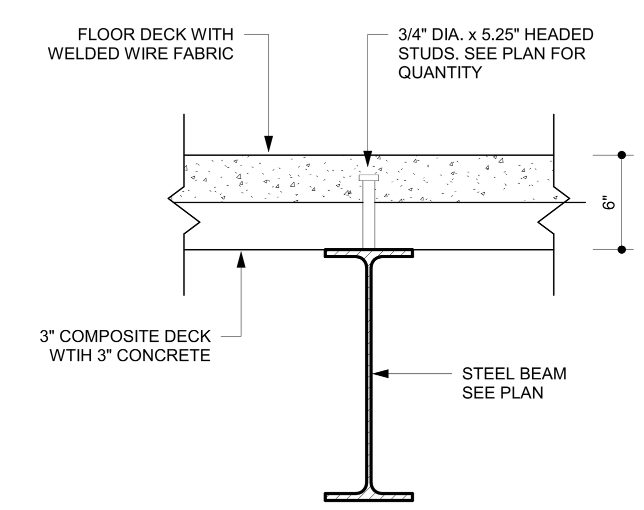
4 SECTION AT FLOOR DECK BEARING
3/4" = 1'-0"



5 SECTION AT FLOOR PARALLEL TO WALL
3/4" = 1'-0"



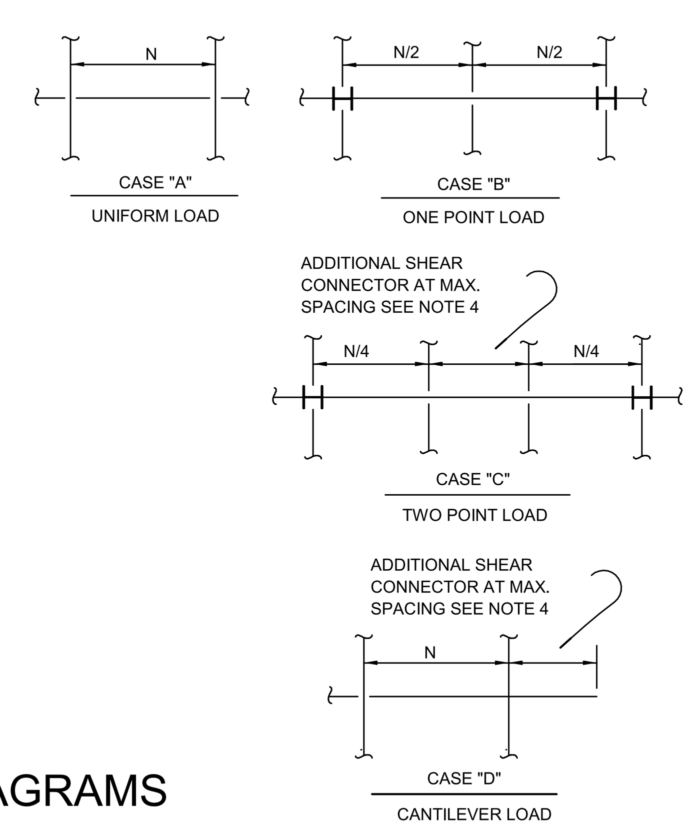
6 SECTION AT WF COLUMN TO BEAM CONNECTION
3/4" = 1'-0"



7 SECTION AT TYPICAL DECK BEARING
1 1/2" = 1'-0"

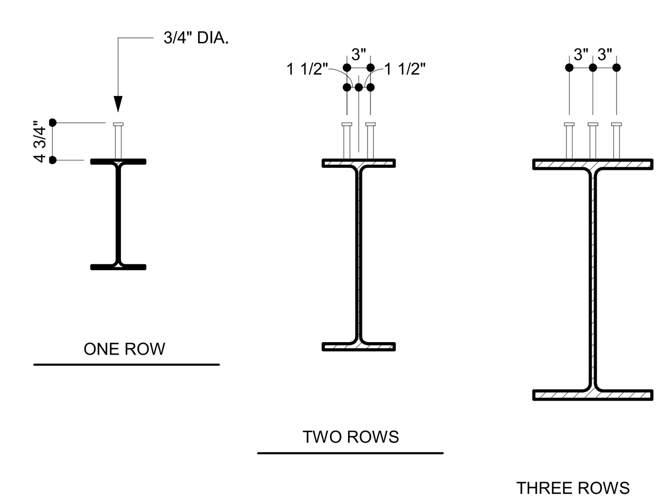
NOTES:
1. CONDUITS NEED TO BE LIMITED TO A MAXIMUM 1" OUTSIDE DIAMETER
2. CONDUIT SHALL BE WIRE TIED TO 3/4" CHAIRS SET ON THE TOP FLUTES
3. CONDUIT SHALL NOT BE RUN IN THE "VALLEY" OF THE FLUTES
4. GANGIN OF 2 CONDUITS IS PERMITTED. NO MORE THAN 2 ARE PERMITTED TO BE GANGED TOGETHER
5. SPAACE CONDUIT RUNS MINIMUM 18 INCHES APART THROUGHOUT THE RUN
6. DO NOT CROSS CONDUIT RUNS. NO OVERLAPPING PERMITTED
7. DO "HOME RUNS" TO MEP ROOMS

CONDUITS IN DECK



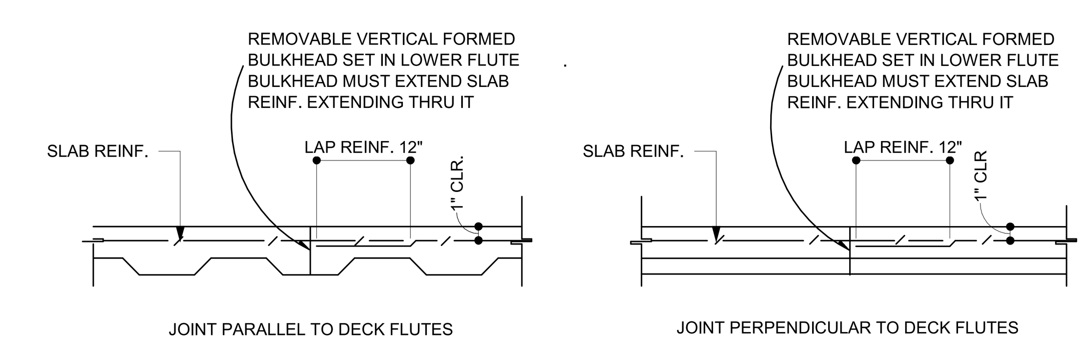
NOTES:
1. N=SPECIFIED NUMBER OF SHEAR CONNECTORS. REFER TO PLAN
2. UNLESS NOTED OTHERWISE ON PLAN OR IN THE COMPOSITE BEAM SCHEDULE, SHEAR CONNECTORS SHALL BE DISTRIBUTED ALONG THE ENTIRE LENGTH OF THE BEAM AS SHOWN ON DETAILS ABOVE.
3. FOR GIRDERS, PROVIDE NUMBER OF SHEAR CONNECTORS (NSC) WITHIN THAT BAY AS SPECIFIED ON PLANS.
4. REFER TO GENERAL NOTED FOR SHEAR CONNECTOR DIAMETER AND LENGTH
5. MAXIMUM SPACING OF SHEAR CONNECTORS SHALL BE AS FOLLOWS:
   A. BEAMS PERPENDICULAR TO DECK SPAN = 18 INCHES
   B. BEAMS PARALLEL TO DECK SPAN = 24 INCHES
   C. CHANNELS OR TUBES = 18 INCHES
6. WHERE STEEL DECK CORRUGATIONS DO NOT ALLOW FOR AN EVEN SPACING OF SHEAR CONNECTORS WITH ONE STUD IN EACH FLUTE, ADDITIONAL STUDS IN A SECOND ROW (AND THIRD ROW WHERE REQUIRED) SHALL BE PLACED SUCH THAT THE HIGHEST DENSITY OF SHEAR CONNECTORS OCCURS NEAR THE BEAM SUPPORT.
7. WHERE THE SPECIFIED NUMBER OF SHEAR CONNECTORS IS LESS THEN THE BEAM SPAN LENGTH DIVIDED BY THE MAXIMUM SPACING (SEE NOTE 4), ADDITIONAL SHEAR CONNECTORS SHALL BE PROVIDED SUCH THAT THE MAXIMUM SPACING IS NOT EXCEEDED AT ANY LOCATION IN THE SPAN
8. SUBMIT SHOP DRAWINGS SHOWING PLACEMENT OF SHEAR CONNECTORS FOR ENGINEER'S APPROVAL
9. PUDDLE WELDS MUST BE USED SUCH THAT WELDING (INCLUDING SHEAR STUDS) OF DECK TO ALL BEAMS DOES NOT EXCEED 12 INCHES ON CENTER ANYWHERE.

SHEAR CONNECTOR PLACEMENT DIAGRAMS
COMPOSITE METAL DECK



NOTES:
1. SHEAR CONNECTORS IN ONE ROW SHALL BE PLACED DIRECTLY OVER THE BEAM WEB
2. SUBMIT SHOP DRAWINGS SHOWING PLACEMENT OF SHEAR CONNECTORS FOR THE ENGINEER'S APPROVAL
3. PLACE STUD IN A SINGLE ROW WHERE SPACING REQUIREMENTS PERMIT.
4. STUDS SHALL BE PLACED IN TWO ROWS OR THREE ROWS ONLY WHERE REQUIRED IN ORDER TO PLACE THE TOTAL NUMBER OF STUDS. SEE TYPICAL DETAILS AND SHEAR CONNECTOR PLACEMENT DIAGRAMS
5. PROVIDE MINIMUM 1" SPACING FROM EDGE OF FLANGE TO CENTERLINE OF STUD

TYPICAL DETAIL
SHEAR CONNECTOR SPACING CRITERIA



NOTES:
1. CONSTRUCTION JOINTS SHALL BE LOCATED NO CLOSER THAN 5'-0" FROM THE CENTER LINE OF THE NEAREST GIRDER
2. AT CONTRACTOR'S OPTION, PRE-FORMED PERMANENT METAL SHEAR KEY MAY BE USED WITH SLAB REINFORCEMENT STOPPING EACH SIDE AND #3 DOWELSx2'-0" CENTERED AT 18" O.C.

TYPICAL DETAIL
CONCRETE SLAB ON METAL DECK
CONSTRUCTION JOINT

A COMPOSITE BEAM DETAILS
3/4" = 1'-0"

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JOHNSON STRUCTURAL GROUP

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90% CDs / PERMIT SET

DATE OF ISSUE
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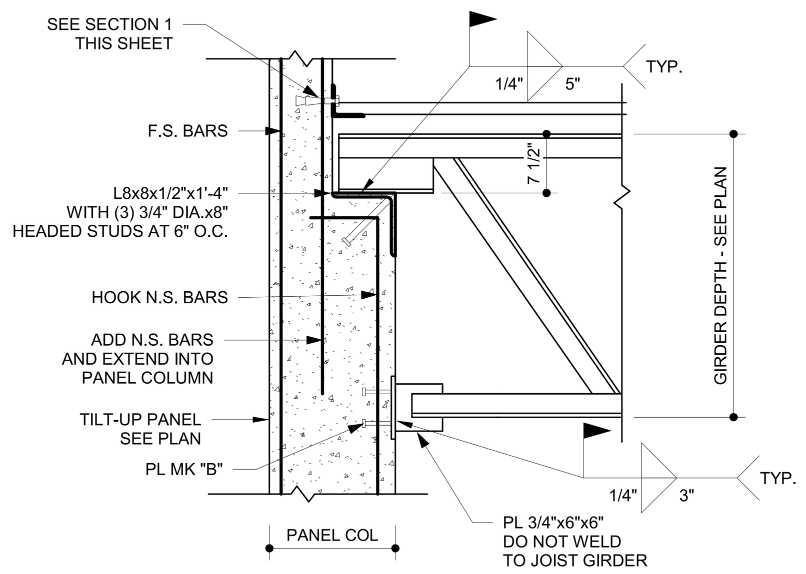
RIVIERA BEACH POLICE DEPARTMENT EVIDENCE AND FIRE RANGE

PROJECT LOCATION
2125 AVENUE S.
RIVIERA BEACH, FL 33404

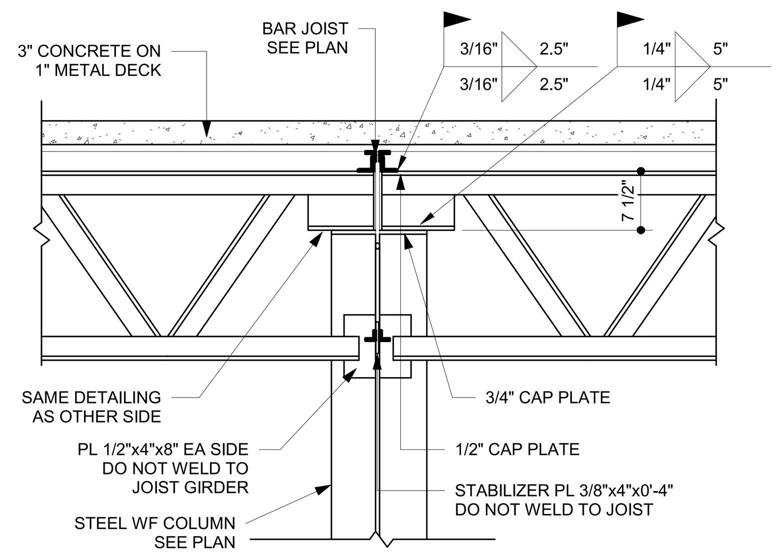
PROJECT NUMBER
JSG #24115

SHEET TITLE
FLOOR FRAMING DETAILS

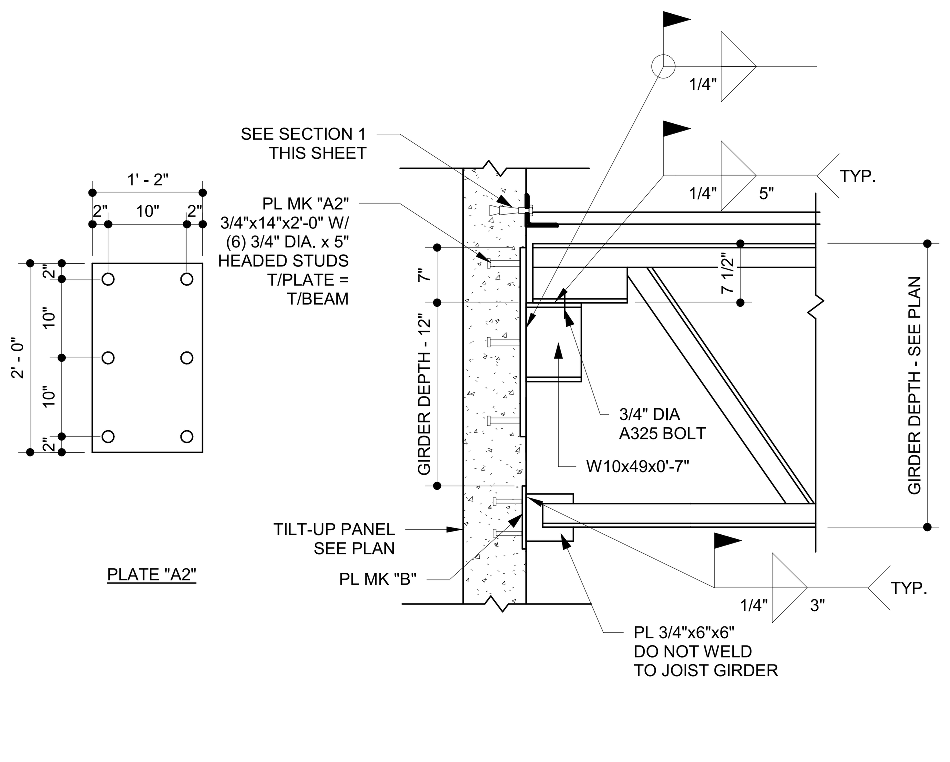
SHEET NUMBER
S4.1E



1 SECTION AT JOIST GIRDER TO PANEL COLUMN
3/4" = 1'-0"

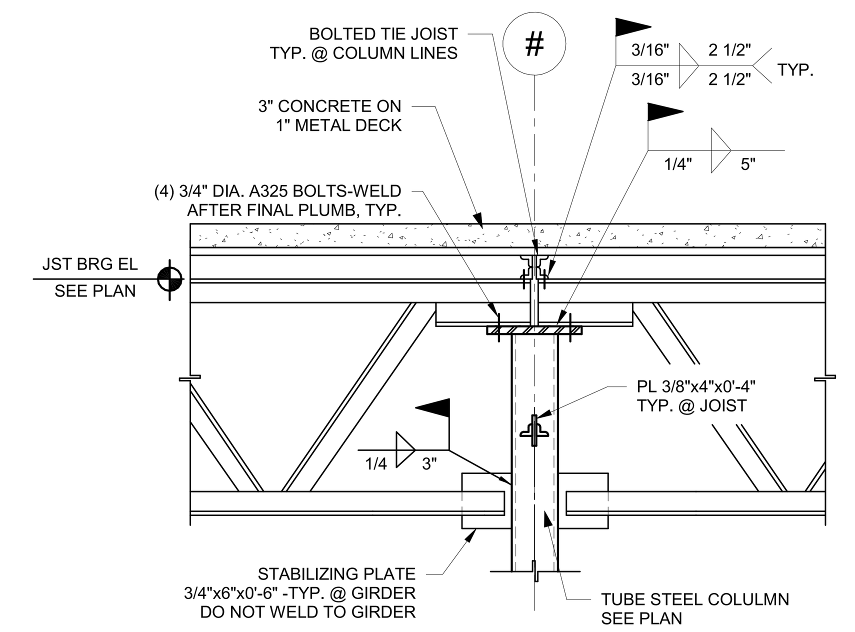


2 SECTION AT WF COL TO ROOF GIRDERS 2
3/4" = 1'-0"

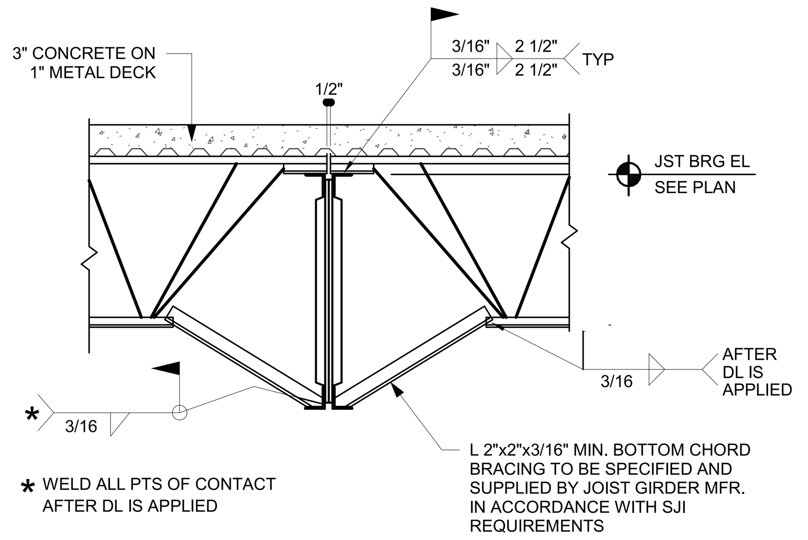


NOTE: SEE PANEL REINFORCEMENT DETAILS FOR ADDITIONAL STEEL AT GIRDER LOCATIONS. USE A2 PLATE WITH COMMON STUDS FOR JOIST GIRDERS EA SIDE OF WALL

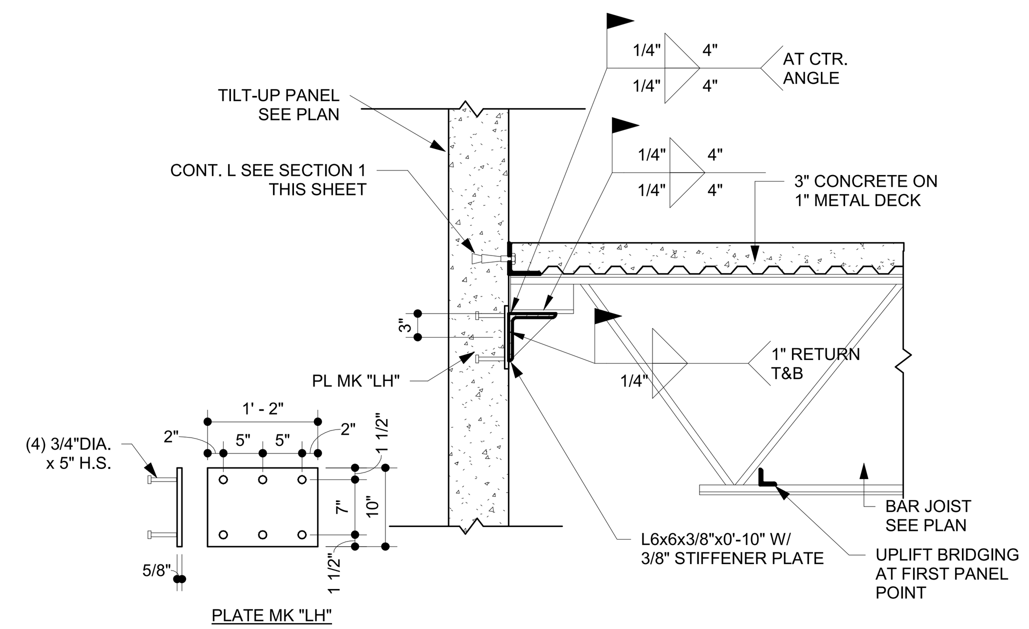
3 SECTION AT JOIST GIRDER TO WALL
3/4" = 1'-0"



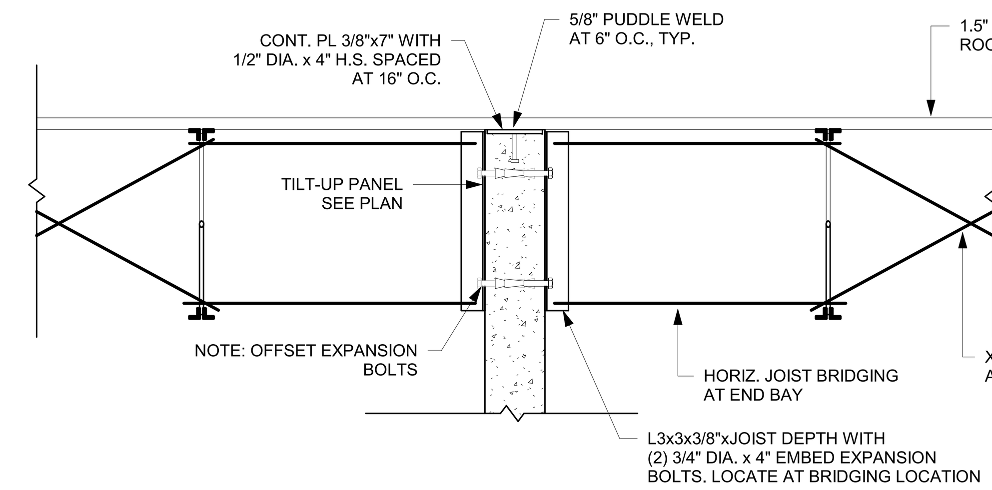
4 SECTION AT JOIST GIRDER TO TS COL 3+1
3/4" = 1'-0"



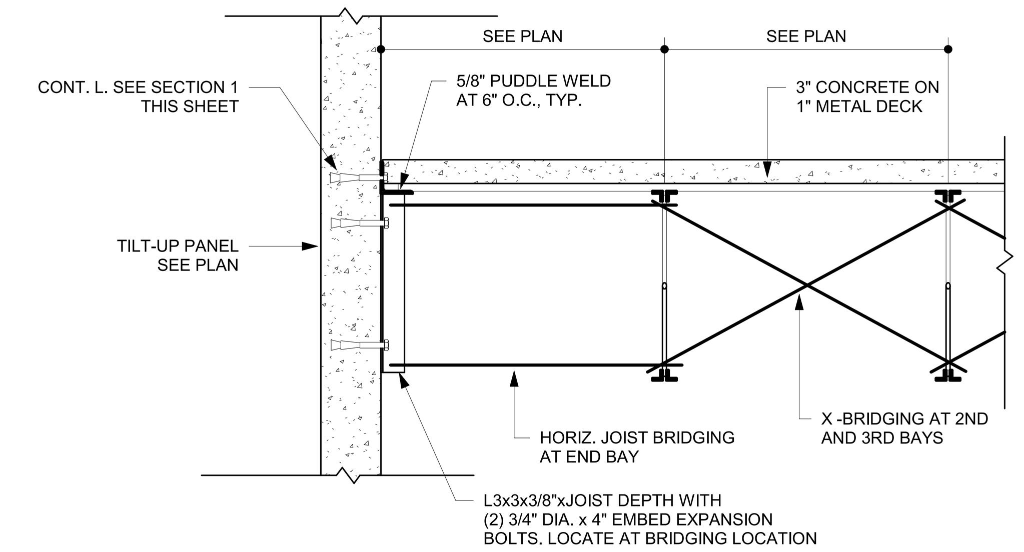
5 SECTION AT JOIST TO GIRDER 3+1
3/4" = 1'-0"



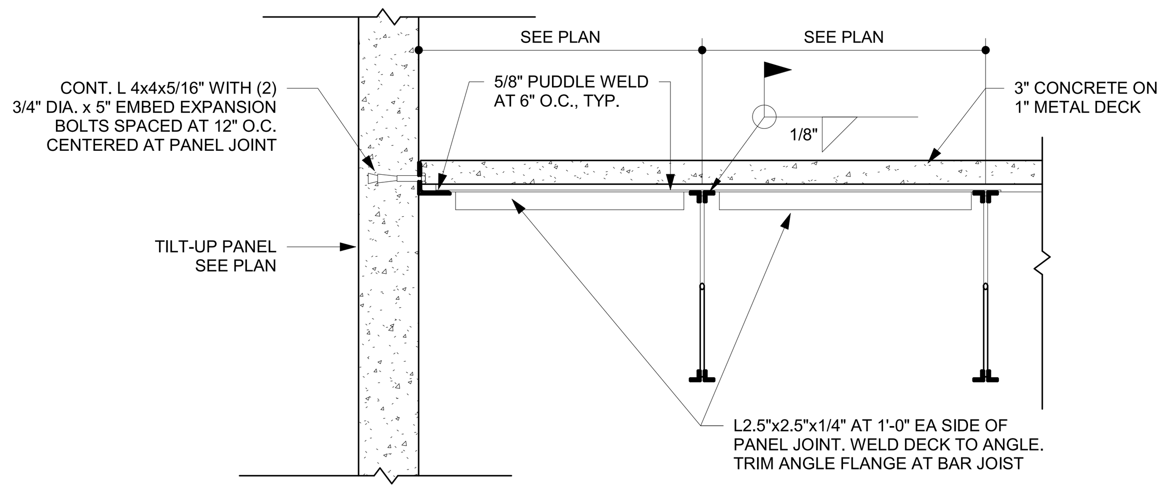
6 SECTION AT LH JOIST BEARING 3+1
3/4" = 1'-0"



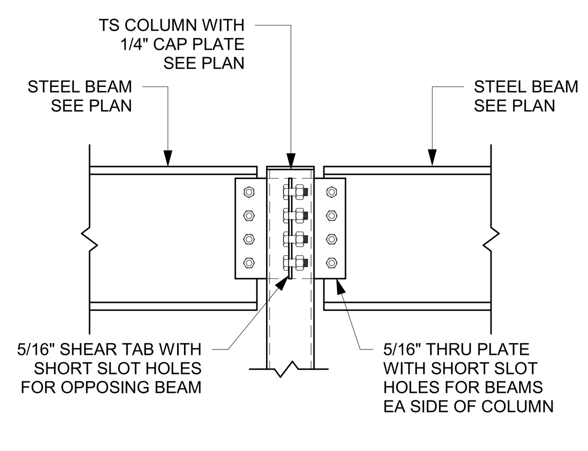
7 SECTION AT DECK OVER PANEL
3/4" = 1'-0"



8 SECTION AT BRIDGING 3+1
3/4" = 1'-0"

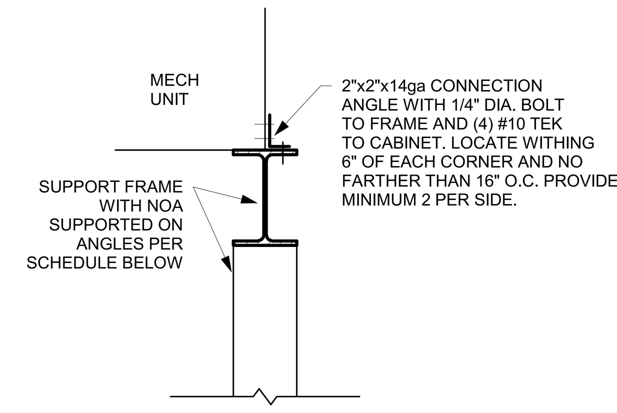


9 SECTION AT PANEL JOINT 3+1
3/4" = 1'-0"



NOTE: PROVIDE 4 BOLTS FOR REACTIONS <= 40 KIPS
PROVIDE 5 BOLTS FOR REACTIONS <= 50 KIPS

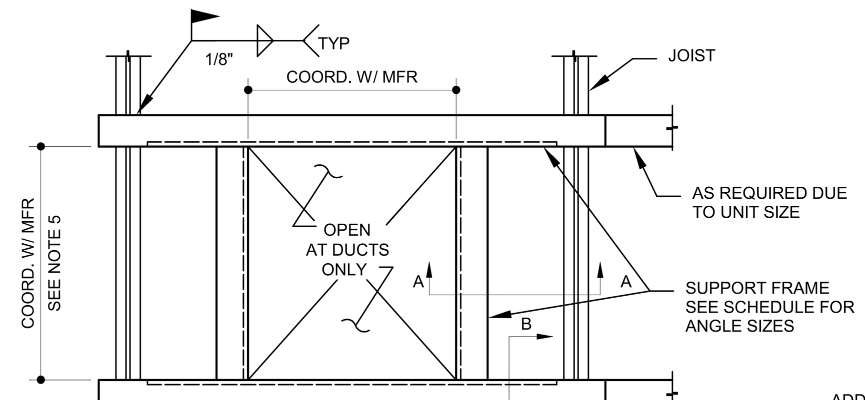
10 SECTION AT BEAM TO TS COLUMN
3/4" = 1'-0"



AT CONDENSER FRAME

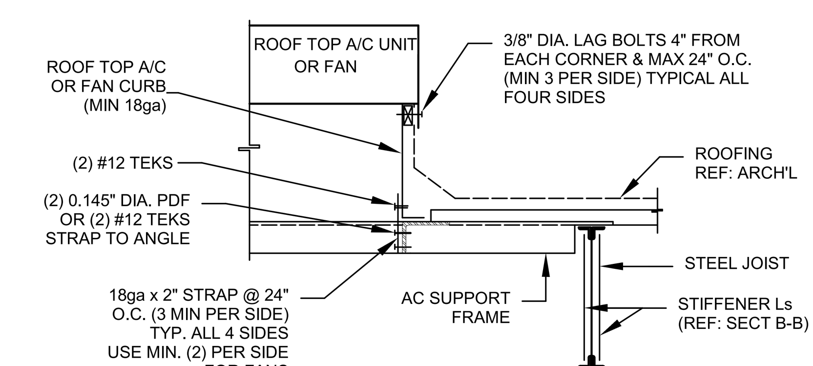
ROOF TOP UNIT FRAME SCHEDULE

UNIT WEIGHT	ANGLE SIZE	
0 - 675 lbs	L4x3x1/4	LLH
676 - 1500 lbs	L4x3 1/2x5/16	LLH
1501 - 3000 lbs	L6x4x3/8	LLH
3001 - 6000 lbs	L6x6x3/8	

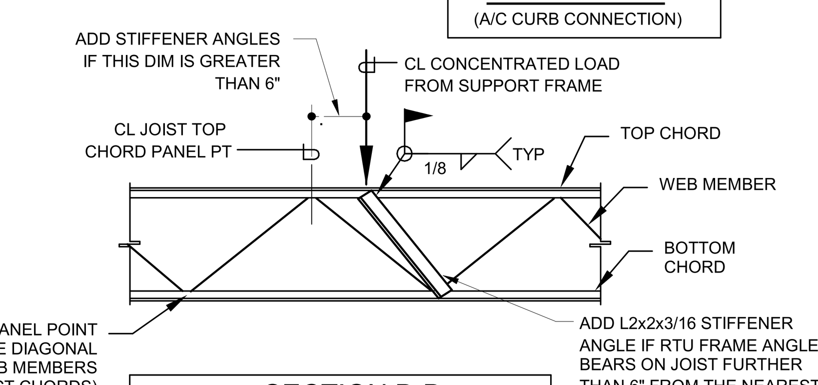


PLAN @ NEW

NOTES:
1. VERIFY ALL DIM'S & DETAILS W/ MECH CONTR BEFORE FABRICATION.
2. A/C UNIT TOTAL WEIGHT-SEE PLAN FOR WEIGHT AND FRAME SCHEDULE FOR ANGLE FRAME SIZE.
3. PROVIDE L3x3x1/4 FRAME AT ALL OPNGS GREATER THAN 12" ON ANY SIDE.
4. THE ANGLE FRAME SHALL BE PROVIDED SO THAT THE ENTIRE PERIMETER OF THE RTU CURB IS SUPPORTED.
5. PROVIDE INTERMEDIATE ANGLE SUPPORTS IF THIS DISTANCE EXCEEDS 6'-0"



SECTION A-A
(A/C CURB CONNECTION)



SECTION B-B
(CONCENTRATED LOAD REINFORCING)

A MECH ROOF SUPPORT DETAILS
3/4" = 1'-0"

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PROJECT STATUS
90% CDs / PERMIT SET

DATE OF ISSUE
10/14/2025

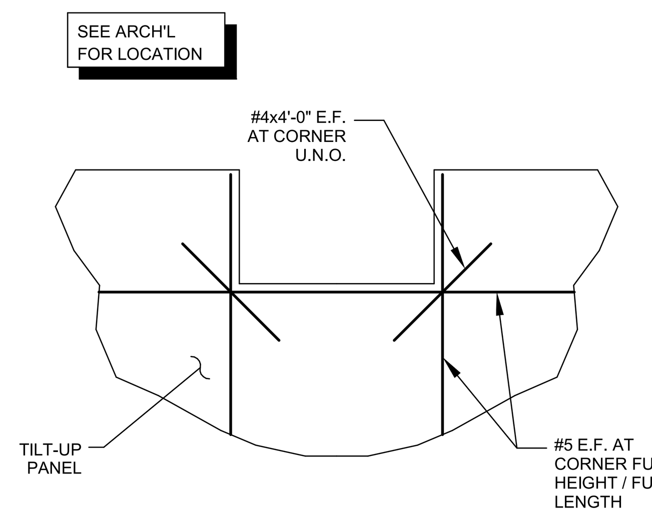
PROJECT NAME
RIVIERA BEACH POLICE DEPARTMENT EVIDENCE AND FIRE RANGE

PROJECT LOCATION
2125 AVENUE S.
RIVIERA BEACH, FL 33404

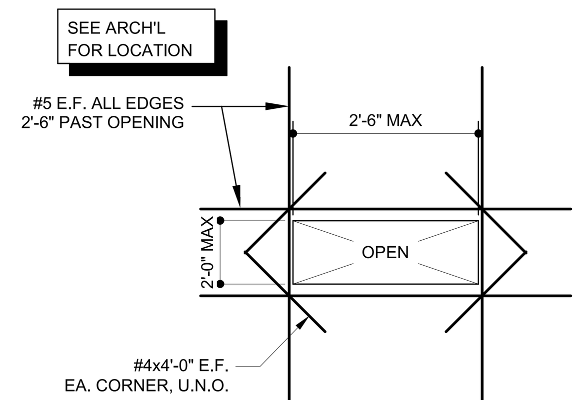
PROJECT NUMBER
JSG #24115

SHEET TITLE
ROOF FRAMING DETAILS

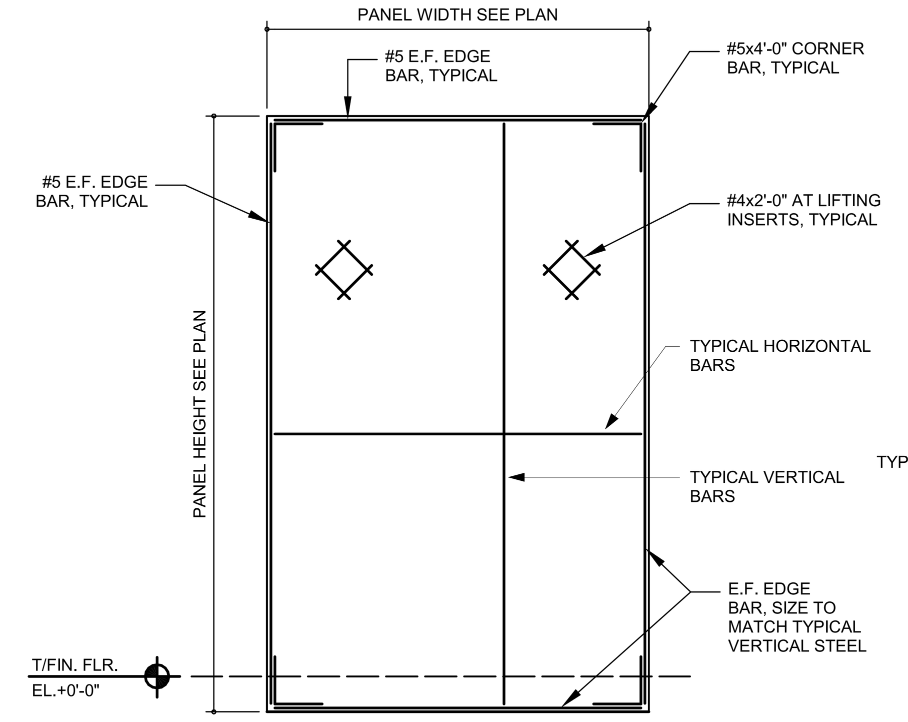
SHEET NUMBER
S4.2E



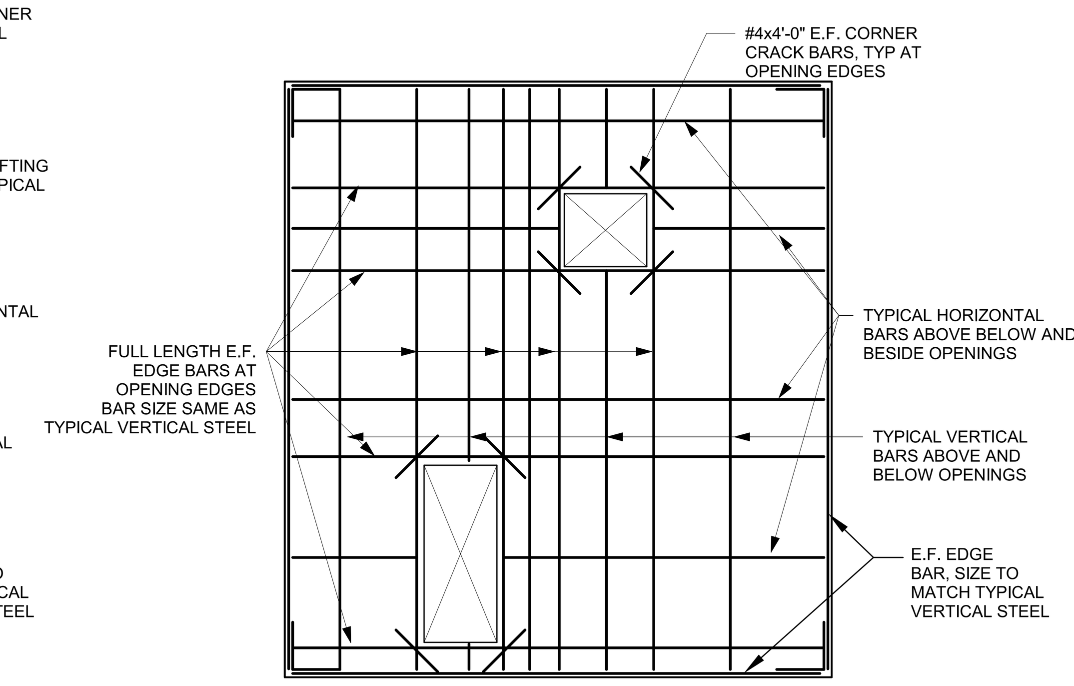
1 NOTCH REINFORCEMENT
SCALE:N.T.S.



2 TYP. SCUPPER/SMALL MECH
SCALE:N.T.S.



TYPICAL PANEL DETAILS

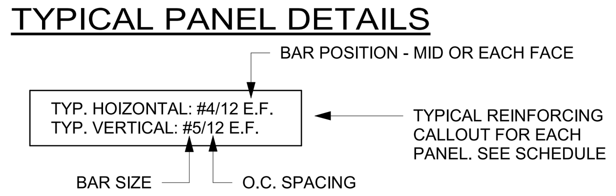


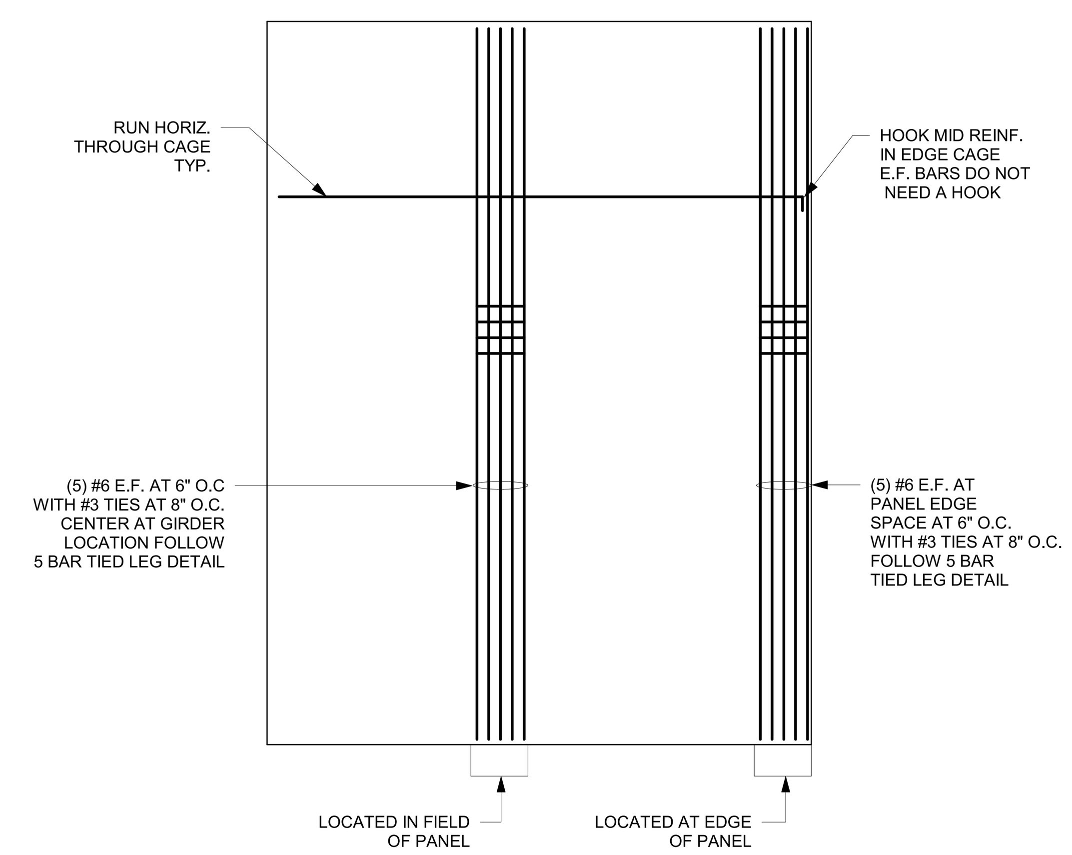
TYPICAL PANEL DETAILS

PANEL REINFORCING SCHEDULE

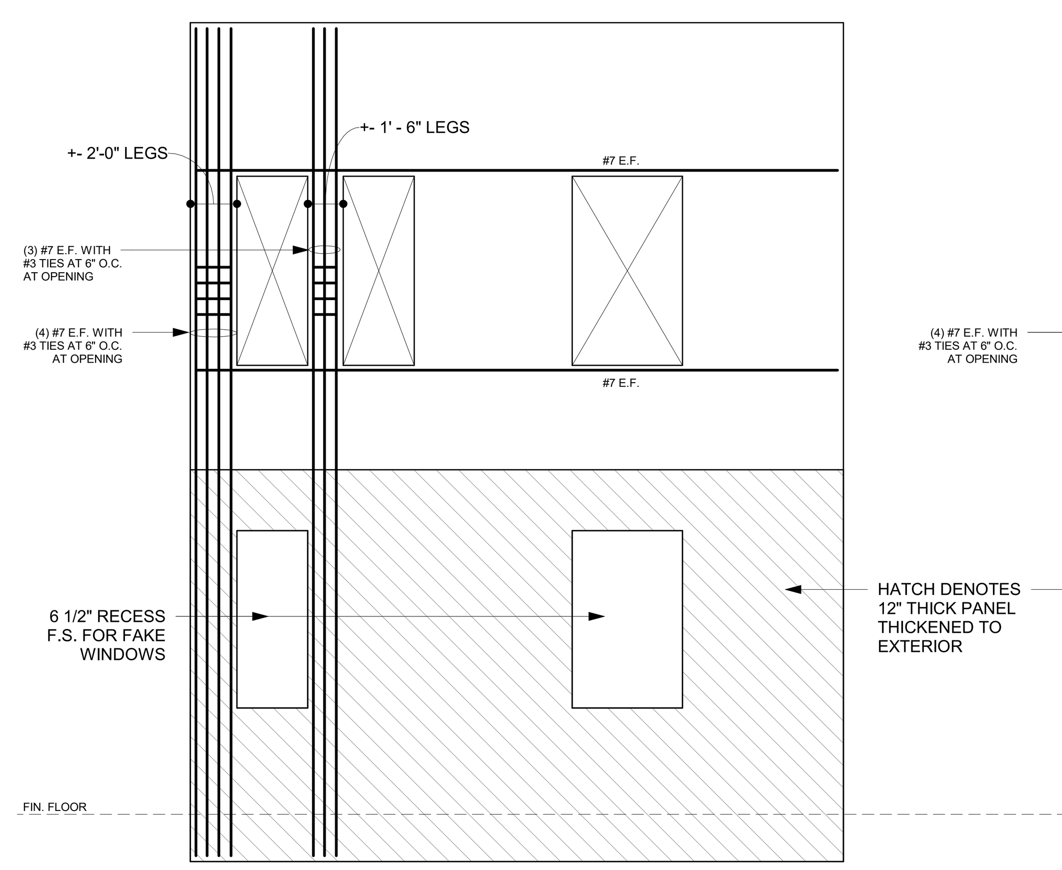
PANEL NUMBERS	THICKNESS	TYPICAL REINFORCEMENT VERTICAL	TYPICAL REINFORCEMENT HORIZONTAL	NOTES
P-1, P-3 THRU P-8	8.00" / 12.00"	#7/12 E.F.	#4/12 E.F.	SEE S5.0E FOR ADD. BARS
P-2	8.00"	#6/12 E.F.	#4/12 E.F.	
LP-1	16.00"	#5/10 E.F.	#5/10 E.F.	HOOK LONG BOTTOM BARS
TP-1, TP-2	16.00"	(5) #7 E.F.	#3 TIES @ 10" O.C.	TIED COLUMN CAGE
P-9 (8"/12"), P-10, P-11	8.00"	#6/10 E.F.	#4/12 E.F.	SEE S5.1E FOR ADD. BARS
P-22, P-23, P-25	8.00"	#6/10 E.F.	#4/12 E.F.	(2) #6 E.F. VERT W/ #3 TIES AT 6" O.C. AT OPN'G AT MAN DOOR LEG FOR PANEL P-25. ADD GIRDER CAGE FOR PANEL P-23
P-16, P-41	8.00"	#5/10 MID	#4/12 MID	SEE S5.1E FOR ADD. BARS
P-2A, P-12 THRU P-15, P-18, P-19 P-37 THRU P-40, SP-1	8.00"	#5/12 MID	#4/12 MID	ADD GIRDER CAGE FOR PANEL P-19
P-28, P-29, P-32 THRU P-35	8.00"+4.00"	#5/12 MID	#4/12 MID	
P-30, P-31	8.00"+4.00"	#6/10 MID	#4/12 MID	
P-36	8.00"	#6/10 MID	#4/12 MID	
P-20, P-21	9.25"			SEE S5.1E FOR REINF.
P-26, P-27	14.00"			SEE S5.1E FOR REINF.

8.00" + 4.00" ARE INSULATED PANELS WITH AN 8" MAIN STRUCTURAL WYTHE, 4" OF THERMOMASS INSULATION, AND A 4.00" THICK FACING LAYER. THE FACING LAYER TO BE REINFORCED WITH 6x6 W2.9xW2.9 WWF CHAIRED MID-HEIGHT OF WYTHE. REFER TO THE THERMOMASS WEB SITE FOR ADDITIONAL INFORMATION.

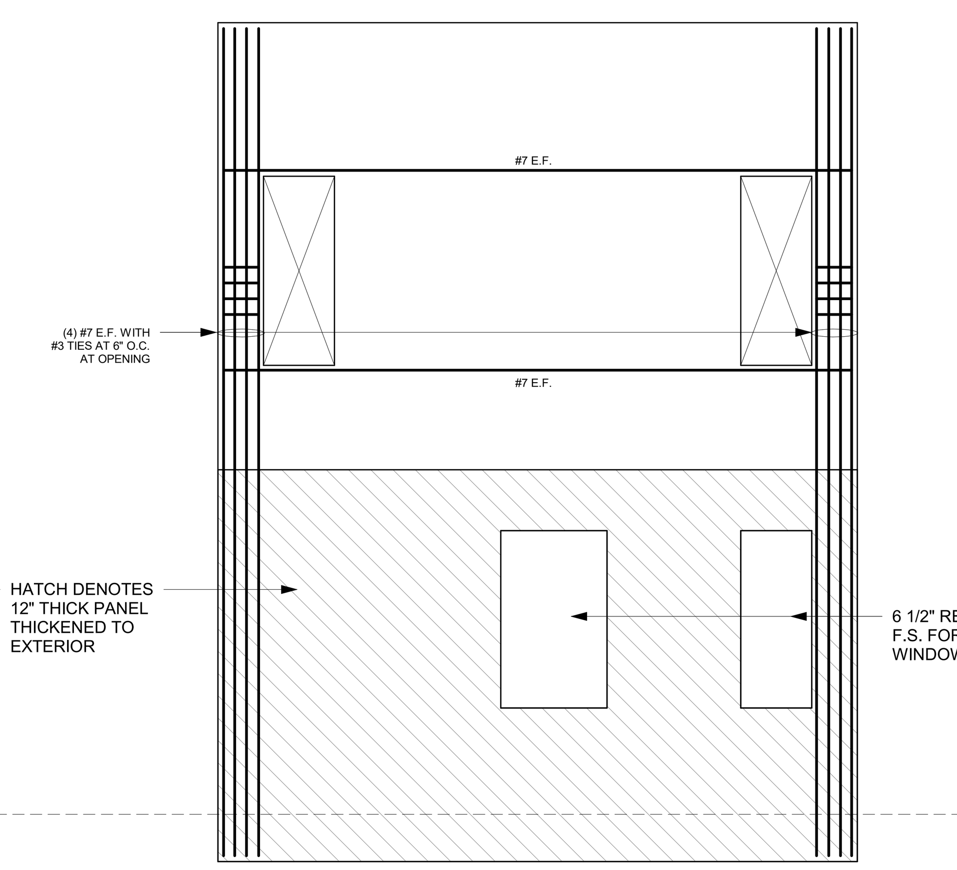




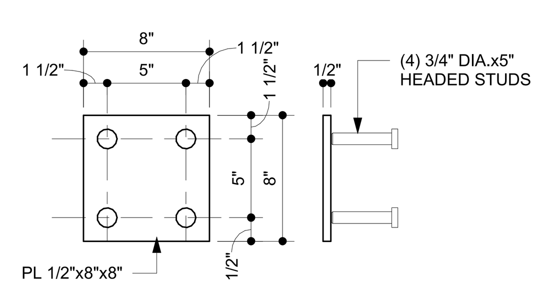
TYPICAL GIRDER REINFORCEMENT DETAILS



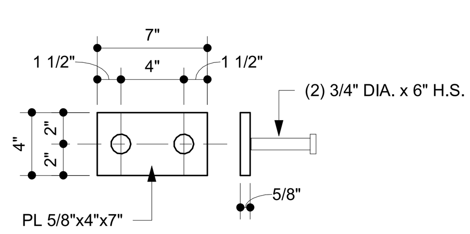
P-1, P-3, P-5, P-7, P-8



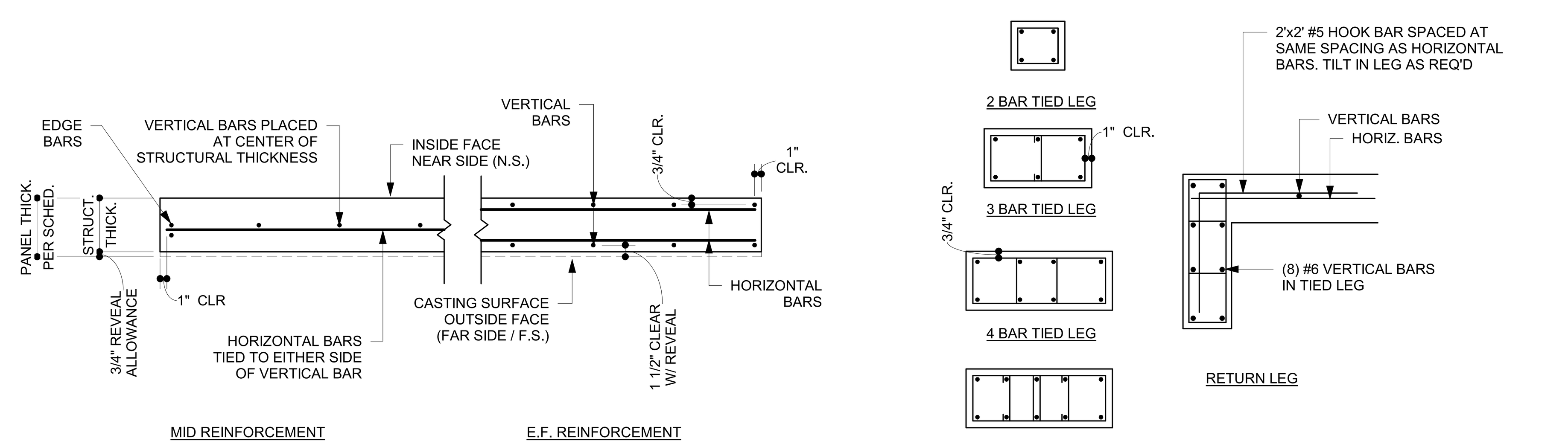
P-4,P-6



PL MK "B"

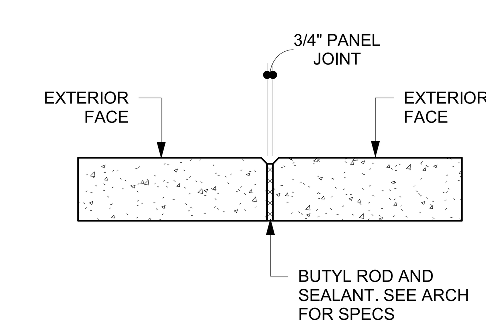


PL MK "D"

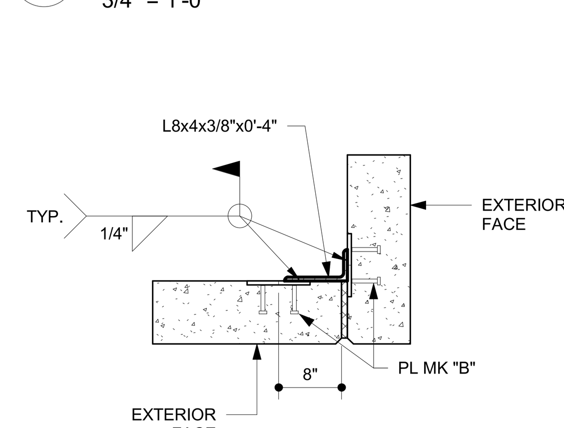


A REINFORCEMENT PLACEMENT DIAGRAM
3/4" = 1'-0"

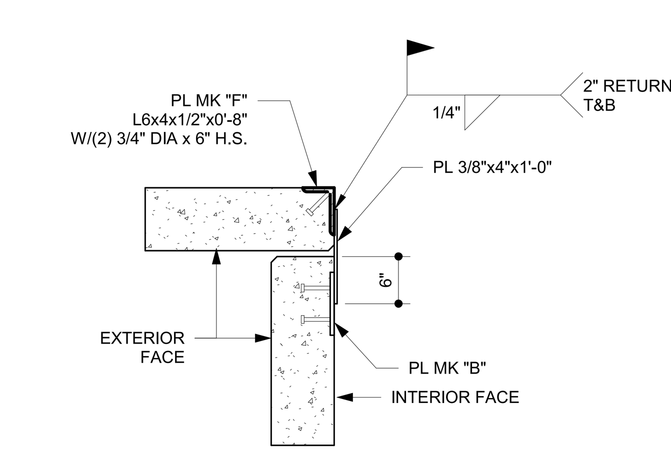
PROVIDE MINIMUM TWO (4) CONNECTIONS PER LEVEL BETWEEN PANELS AT INSIDE BUTT, OUTSIDE BUTT, AND MITER CORNERS ONLY, U.N.O. ON PLAN (DETAILS C, D, AND E BELOW). PROVIDE DETAIL F ONLY WHERE INDICATED ON PLAN. LOCATE CONNECTIONS AT 2'-0" A.F.F. (GROUND) AND AT 2'-0" BELOW SECOND FLOOR OR ROOF TRUSS BEARING TYPICAL U.N.O. RECESS ALL PLATES 3/4" AT ALL LOCATIONS EXCEPT FOR THE GUN RANGE AREA. IF CALLOUT DOES NOT SPECIFY SPACING, SPACE CONNECTIONS EQUALLY BETWEEN FLOORS. RECESS ALL EMBED CONNECTIONS EXPOSED TO WEATHER 3/4" AND PATCH AFTER INSPECTION



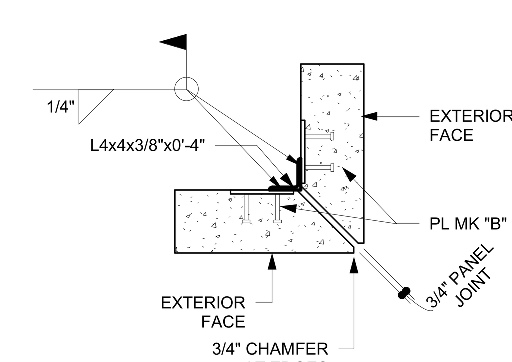
B TYPICAL PANEL JOINT
3/4" = 1'-0"



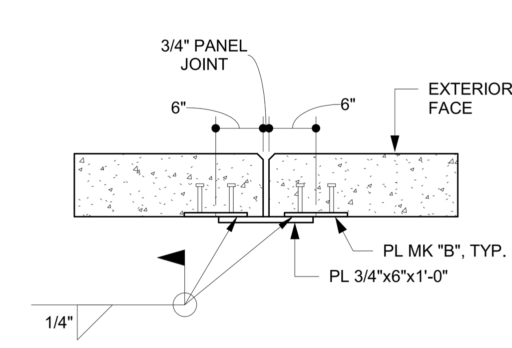
C OUTSIDE BUTT JOINT
3/4" = 1'-0"



D INSIDE BUTT JOINT
3/4" = 1'-0"



E MITER CORNER
3/4" = 1'-0"



F PANEL-PANEL CONNECTION
3/4" = 1'-0"

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J2 ARCHITECTURE

JOHNSON STRUCTURAL GROUP

PROJECT STATUS
90% CDs / PERMIT SET

DATE OF ISSUE
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RIVIERA BEACH POLICE DEPARTMENT EVIDENCE AND FIRE RANGE

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2125 AVENUE S.
RIVIERA BEACH, FL 33404

PROJECT NUMBER
JSG #24115

SHEET TITLE
PANEL DETAILS

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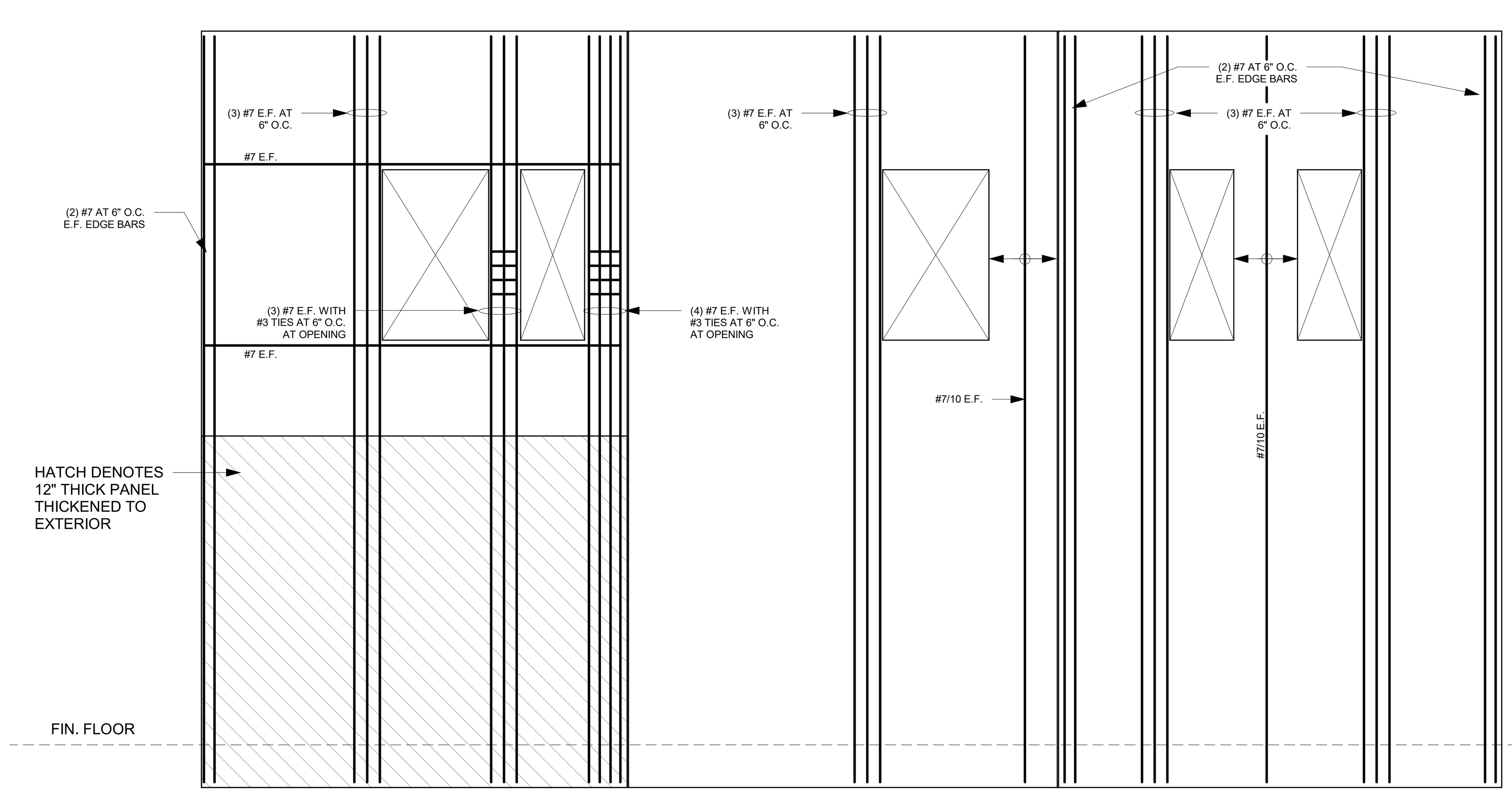
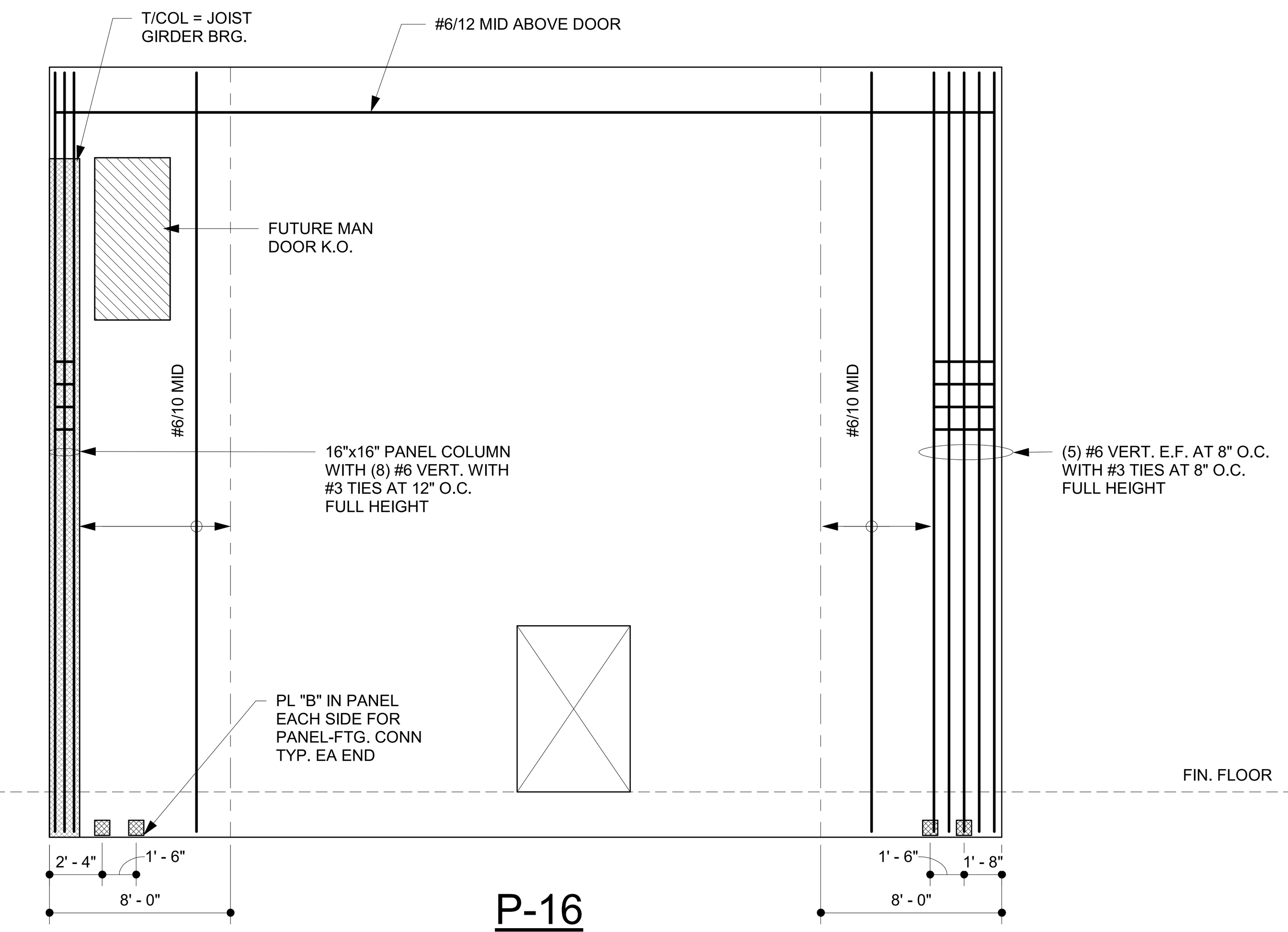
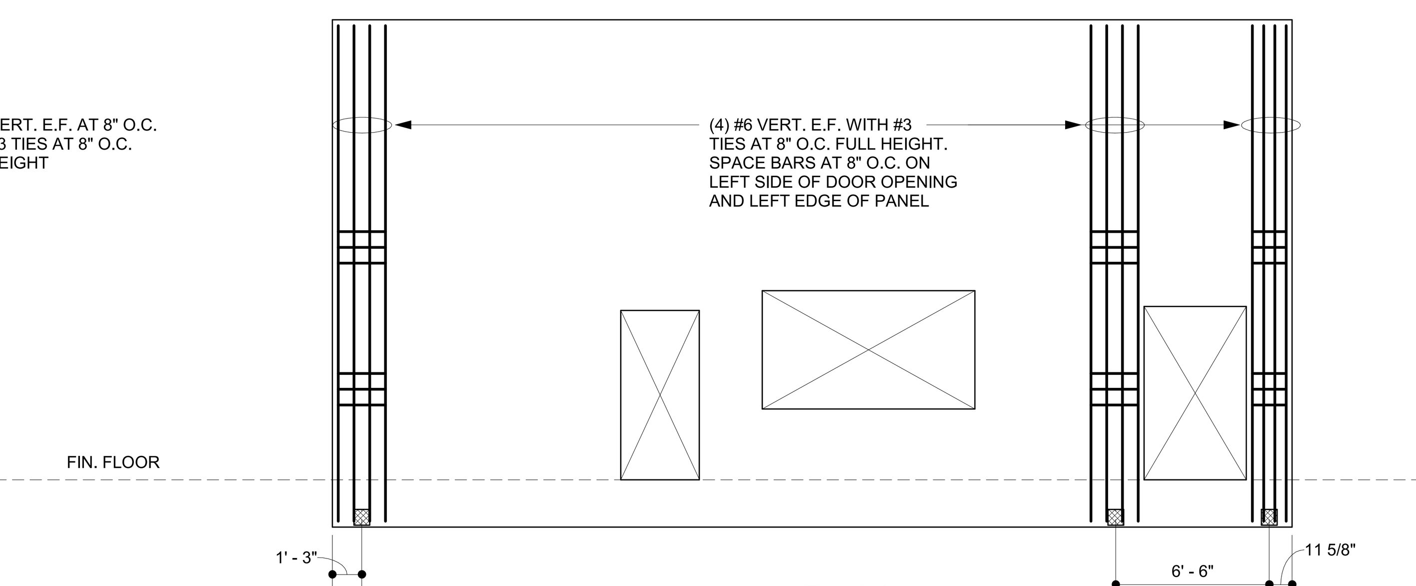
S5.0E



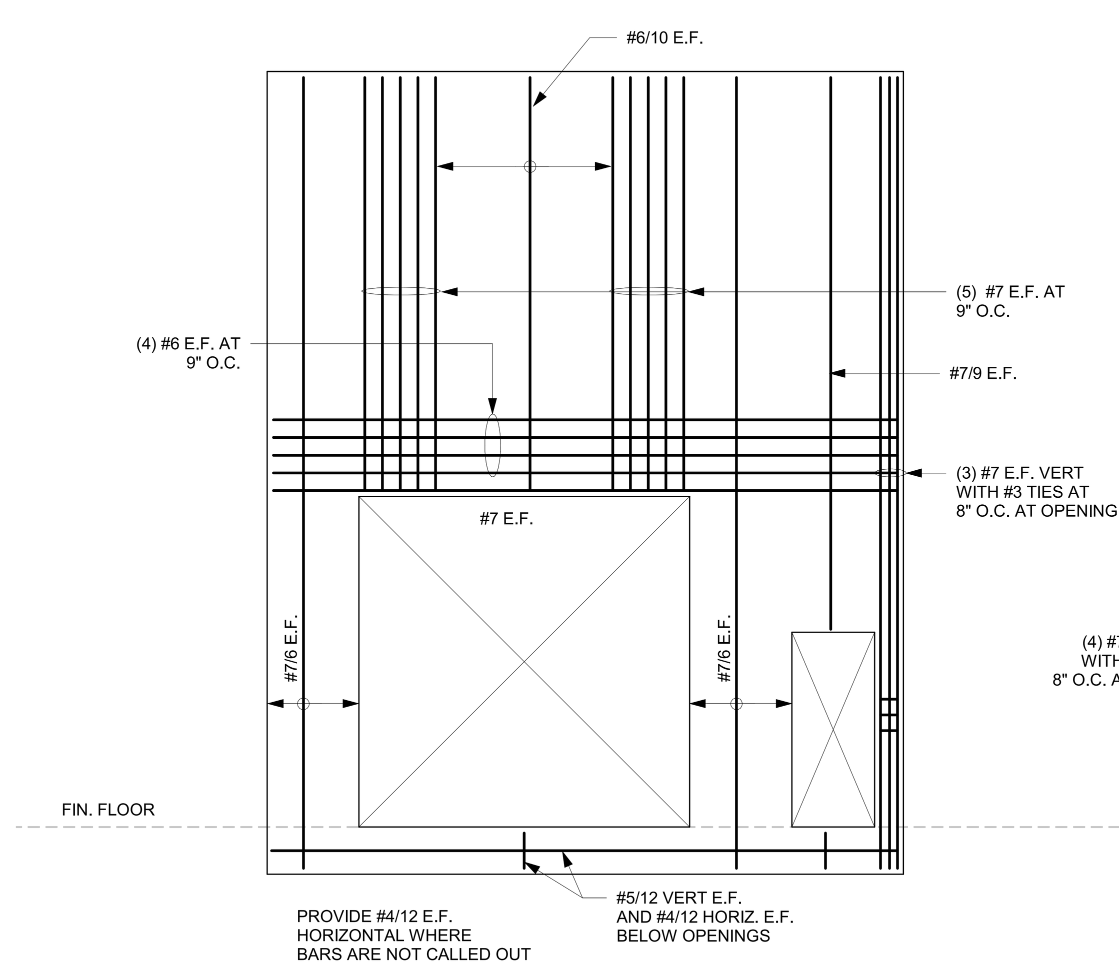
P-9 P-10 P-11



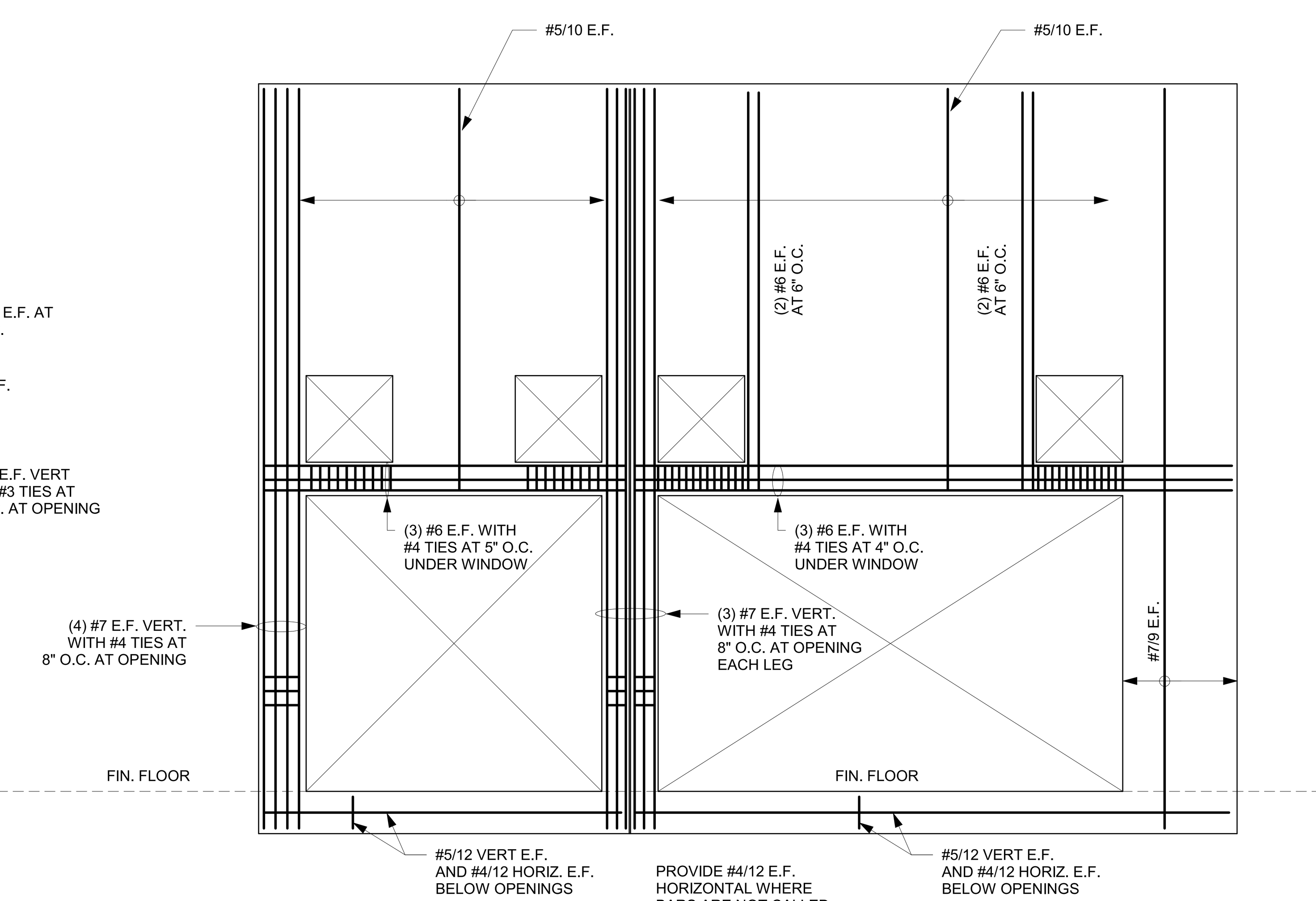
P-16



P-41



P-20, P-21 MIRROR



P-26 P-27

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ARCHITECTURE

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SHEET TITLE

PANEL DETAILS

SHEET NUMBER

S5.1E