

**GENERAL STRUCTURAL NOTES**

**GENERAL:** DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE TYPICAL AND APPLY TO SIMILAR SITUATIONS ELSEWHERE, EXCEPT AS OTHERWISE INDICATED. ADAPT REQUIREMENTS OF DETAILS, SECTIONS, PLANS, AND NOTES AT LOCATIONS WHERE CONDITIONS ARE SIMILAR.

CENTER ALL FOOTINGS AND PIERS UNDER COLUMNS ABOVE UNLESS SPECIFICALLY DIMENSIONED OTHERWISE.

STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH JOB SPECIFICATIONS AND ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND SITE DRAWINGS. CONSULT THESE DRAWINGS FOR SLEEVES, DEPRESSIONS, AND OTHER DETAILS NOT SHOWN ON STRUCTURAL DRAWINGS.

CONTRACTOR SHALL LOCATE ALL BURIED UTILITIES PRIOR TO EXCAVATION FOR BUILDING FOUNDATIONS. THE STRUCTURAL ENGINEER SHALL BE NOTIFIED OF POTENTIAL CONFLICTS BETWEEN FOUNDATIONS AND BURIED UTILITIES.

**CODE REQUIREMENTS:** THE BUILDING STRUCTURE IS DESIGNED IN ACCORDANCE WITH THE 2023 8<sup>th</sup> EDITION OF THE FLORIDA BUILDING CODE. FOLLOW ALL APPLICABLE PROVISIONS FOR ALL PHASES OF CONSTRUCTION. ADDITIONS ARE IN COMPLIANCE WITH THE 2023 EDITION OF THE FLORIDA EXISTING BUILDING CODE.

**DESIGN CRITERIA:** DESIGN WAS BASED ON STRENGTH AND DEFLECTION CRITERIA OF THE 2023 FLORIDA BUILDING CODE. THE FOLLOWING LOADS WERE USED FOR DESIGN, WITH LIVE LOADS REDUCED PER THE 2023 FBC.

SUPERIMPOSED DEAD LOADS:	
FLOORS	20 PSF
ROOF	20 PSF 300 POUND CONCENTRATED

INCLUDES 5 PSF AND A 250 LB POINT LOAD FOR SPRINKLER PIPING.

ROOF LIVE LOAD:	20 PSF
-----------------	--------

FLOOR LIVE LOADS:	
APPARATUS BAY	100 PSF AND 8,000LB POINT LOAD
1ST FLOOR	100 PSF

RAIN LOAD:	
RAIN	30 PSF
RAINFALL INTENSITY	5.0 IN/HR

WIND SPEED (ASCE 7-22)	182 MPH	(141 MPH ALLOWABLE)
RISK CATEGORY	IV	
EXPOSURE	C	
INTERNAL PRESSURE COEFF	+/- 0.18	ENCLOSED

OPENINGS LOCATED WITHIN 30FT OF GRADE SHALL BE PROTECTED FROM WIND BORNE DEBRIS PER MISSILE LEVEL D OF ASTM E1966.

OPENING PROTECTION SHALL COMPLY WITH THE "ENHANCED PROTECTION" OF MISSILE LEVEL E OF ASTM E1966 TABLE 2 REQUIREMENTS.

**FOUNDATIONS:** FOUNDATION DESIGN IS BASED ON AN ASSUMED LOADABLE SOIL BEARING PRESSURE OF 2000 PSF FOR SILTY SAND AND GRAVELS. FOUNDATIONS SHALL BEAR ON COMPETENT NATIVE SOIL OR COMPACTED STRUCTURAL FILL. IF QUESTIONABLE SOILS OR POTENTIALLY UNSTABLE CONDITIONS ARE ENCOUNTERED, A GEOTECHNICAL ENGINEER SHALL BE RETAINED TO INVESTIGATE AND PROVIDE RECOMMENDATIONS.

**SUBMITTALS:** SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO FABRICATION AND CONSTRUCTION REGARDING ALL STRUCTURAL ITEMS INCLUDING THE FOLLOWING:

CONCRETE MIX DESIGNS,  
CONCRETE AND MASONRY REINFORCING.

SHOP DRAWINGS SHALL BE REVIEWED BY THE CONTRACTOR PRIOR TO SUBMITTAL TO THE ARCHITECT/ENGINEER. DRAWINGS SUBMITTED WITHOUT REVIEW WILL BE RETURNED UNCHECKED.

IF THE SHOP DRAWINGS DIFFER FROM OR ADD TO THE DESIGN OF THE STRUCTURAL DRAWINGS, THEY SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT LOCATION. ANY CHANGES TO THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND ARE SUBJECT TO THE REVIEW AND ACCEPTANCE OF THE ENGINEER.

DESIGN DRAWINGS, SHOP DRAWINGS, AND CALCULATIONS FOR THE DESIGN AND FABRICATION OF ITEMS THAT ARE DESIGNED BY OTHERS, INCLUDING:

PREMANUFACTURED WOOD TRUSSES.

SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT LOCATION AND SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO FABRICATION. CALCULATIONS SHALL BE INCLUDED FOR ALL CONNECTIONS TO THE STRUCTURE. CONSIDERING LOCALIZED EFFECTS ON THE STRUCTURAL ELEMENTS INDUCED BY THE CONNECTION LOADS. DESIGN SHALL BE BASED ON THE REQUIREMENTS OF THE 2023 FBC.

SHOP DRAWINGS WILL BE REVIEWED FOR GENERAL COMPLIANCE WITH THE DESIGN INTENT OF THE CONTRACT DOCUMENTS ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY COMPLIANCE WITH THE CONTRACT DOCUMENTS AS TO QUANTITY, LENGTH, ELEVATIONS, DIMENSIONS, ETC. CONTRACTOR SHALL NOT BE RELIEVED FROM RESPONSIBILITY FOR ERRORS OR OMISSIONS IN SHOP DRAWINGS OR MIX DESIGNS BY THE ENGINEER'S REVIEW.

**CONCRETE:** REINFORCED CONCRETE CONSTRUCTION SHALL CONFORM TO THE FBC AND ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE". CONCRETE STRENGTHS SHALL BE VERIFIED BY STANDARD 28-DAY CYLINDER TESTS PER ASTM C39, AND SHALL BE AS FOLLOWS:

$f_c$	USE
3000 PSI	FOUNDATIONS/SLAB ON GRADE
4000 PSI	ALL USES, U.N.O.

CEMENT SHALL CONFORM TO ASTM C150 TYPE 1. FLY ASH CONFORMING TO ASTM C618, TYPE F OR TYPE C, MAY BE USED TO REPLACE UP TO 20% OF THE CEMENT CONTENT, PROVIDED THAT THE MIX STRENGTH IS SUBSTANTIATED BY TEST DATA. COARSE AGGREGATE SHALL CONFORM TO ASTM C33 WITH A MAXIMUM SIZE OF 3/4". FINE AGGREGATE SHALL BE CLEAN, DURABLE, NATURAL SAND CONFORMING TO ASTM C33.

A WATER-REDUCING ADMIXTURE, IF USED, SHALL CONFORM TO ASTM C494 AND USED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. SHALL BE INCORPORATED IN CONCRETE DESIGN MIXES. A HIGH-RANGE WATER-REDUCING ADMIXTURE CONFORMING TO ASTM C494, TYPE F OR G, MAY BE USED IN CONCRETE MIXES, PROVIDING THAT THE SLUMP DOES NOT EXCEED 8".

SLEEVES, OPENINGS, CONDUIT, AND OTHER EMBEDDED ITEMS NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER BEFORE POURING. NO SLEEVE, OPENING, OR INSERT MAY BE PLACED IN BEAMS, JOISTS, OR COLUMNS UNLESS APPROVED BY THE ENGINEER. CONDUITS EMBEDDED IN SLABS SHALL NOT BE LARGER IN OUTSIDE DIMENSION THAN ONE THIRD OF THE THICKNESS OF THE SLAB AND SHALL NOT BE SPACED CLOSER THAN THREE DIAMETERS ON CENTER.

PROVIDE 3/4" CHAMFERS ON ALL EXPOSED CONCRETE EDGES, UNLESS NOTED OTHERWISE. WHERE INDICATED OR REQUIRED, SLOPE CONCRETE SLABS TO DRAINS SHOWN ON PLUMBING AND/OR ARCHITECTURAL DRAWINGS.

ALL CONCRETE SHALL BE CURED IMMEDIATELY AFTER FINISHING OPERATIONS.

**REINFORCING STEEL:** REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, FOR DEFORMED BAR AND ASTM A1064 FOR SMOOTH WELDED WIRE FABRIC (WWF), UNLESS OTHERWISE NOTED. REINFORCING STEEL TO BE WELDED SHALL CONFORM TO ASTM A706. REINFORCING STEEL SHALL BE SECURELY TIED IN PLACE WITH #16 ANNEALED IRON WIRE.

ALL DETAILING AND ACCESSORIES SHALL CONFORM TO ACI DETAILING MANUAL SP-66. PROVIDE CHAIRS, SPACERS, BOLSTERS, AND ITEMS IN CONTACT WITH FORMS WITH HOT-DIP GALVANIZED LEGS OR PLASTIC LEGS. ACCURATELY POSITION, SUPPORT, AND SECURE REINFORCEMENT AGAINST DISPLACEMENT BY FORMWORK CONSTRUCTION OR CONCRETE PLACEMENT OPERATIONS. "WET-STICKING" OF REINFORCING IS PROHIBITED.

REQUIRED CONCRETE COVER FOR REINFORCING STEEL (UNLESS NOTED OTHERWISE):

FOOTINGS	3" BOTTOM AND SIDES, 2" TOP
SLABS	3/4"
COLUMNS	1-1/2" TO TIES, 2" TOP
BEAMS	1-1/2" TO STIRRUPS
WALLS	1-1/2"

LAP SPLICE CONTINUOUS VERTICAL OR HORIZONTAL BARS IN CONCRETE MEMBERS IN ACCORDANCE WITH ACI 318-19, FOR CLASS "B" TENSION LAP SPLICES. DO NOT SPLICE CONTINUOUS TOP BARS IN BEAMS AT ENDS OF CLEAR SPANS. DO NOT SPLICE CONTINUOUS BOTTOM BARS IN BEAMS IN CLEAR SPANS BETWEEN SUPPORTS. SHOW ALL SPLICES ON SHOP DRAWINGS. SPLICE LOCATIONS AND METHODS SUBJECT TO APPROVAL OF STRUCTURAL ENGINEER.

AT SLAB RE-ENTRANT CORNERS, PROVIDE (2) #5 X 4'-0" DIAGONAL BARS. AT SLAB AND WALL OPENINGS PROVIDE A MINIMUM OF (2) #5 BARS ALL FOUR SIDES AND DIAGONALLY; EXTEND THESE BARS A LAP DISTANCE OR A MINIMUM OF 24" PAST THE OPENING OR HOOK BARS IF DISCONTINUOUS.

DOWEL ALL WALLS AND COLUMNS TO FOOTINGS WITH BAR SIZE AND SPACING TO MATCH VERTICAL REINFORCING UNLESS OTHERWISE SHOWN.

**SLABS ON GRADE:** PREPARE SUBGRADE AS PER THE RECOMMENDATIONS OUTLINED IN THE GEOTECHNICAL REPORT. CHAIR WIRE FABRIC DURING CONCRETE PLACEMENT TO ENSURE PROPER POSITION IN SLAB. USE VAPOR BARRIER UNDER ALL ENCLOSED INTERIOR SPACES, PER ARCHITECTURAL DRAWINGS.

PLACE CRACK CONTROL JOINTS AS SHOWN ON PLAN OR AT 12 FEET MAXIMUM FOR 4" SLAB, OR 15 FEET MAXIMUM FOR 6" SLAB. JOINT SPACING SHALL NOT EXCEED A 1.5 TO 1 WIDTH TO LENGTH RATIO. CONTRACTOR SHALL SUBMIT A CONTROL JOINT LAYOUT FOR ENGINEER'S AND ARCHITECT'S REVIEW PRIOR TO CONCRETE PLACEMENT. LOCATE CONTROL JOINTS AT COLUMN LINES AND RE-ENTRANT CORNERS TYPICAL. PROVIDE (1) #5 X 4'-0" DIAGONAL BARS AT SLAB RE-ENTRANT CORNERS.

FOR 4" THICK SLABS ON GRADE, PROVIDE 6X6 W1.4XW1.4 WELDED WIRE FABRIC OR 1.5 POUNDS PER CUBIC YARD OF MICRO SYNTHETIC FIBERS (FRC MONO-150 OR EQUAL), UNLESS NOTED OTHERWISE. FOR 6" THICK SLABS ON GRADE, PROVIDE 6X6 W2.9XW2.9 WELDED WIRE FABRIC PLACED 2" BELOW TOP OF SLAB OR 3 POUNDS PER CUBIC YARD OF MACRO SYNTHETIC FIBERS (FORTA FERRO OR EQUAL), UNLESS NOTED OTHERWISE.

**MASONRY WALLS:** MASONRY UNITS SHALL MEET ASTM C90, TYPE 2. ASSEMBLIES SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF  $f_m = 2,000$  PSI. MORTAR SHALL BE TYPE "M" OR "S" AND MEET ASTM C270. GROUT SHALL MEET ASTM C476. GROUT STRENGTHS SHALL BE VERIFIED BY STANDARD 28-DAY TESTS PER ASTM C1018. GROUT SHALL CONSIST OF A MIXTURE OF CEMENTITIOUS MATERIALS AND AGGREGATE TO WHICH SUFFICIENT WATER HAS BEEN ADDED TO CAUSE THE MIXTURE TO FLOW WITHOUT SEGREGATION OF THE CONSTITUENTS. ALL CELLS CONTAINING VERTICAL BARS, BOND BEAMS, AND ALL CELLS BELOW GRADE SHALL BE FILLED WITH GROUT. MAXIMUM HEIGHT OF GROUT POUR ALLOWED IS 4'-0" UNLESS CLEAN-OUT OPENING IS PROVIDED AT BOTTOM OF CELLS TO BE FILLED. LOCATE CLEAN-OUT OPENINGS IN AREAS NOT EXPOSED TO VIEW.

UNLESS NOTED OTHERWISE EIGHT INCH MASONRY WALLS SHALL BE PARTIALLY REINFORCED MASONRY WALL CONSTRUCTION WITH #5 AT 48 INCH O.C. IN GROUT FILLED CELLS. ADD (1) #5 REINFORCING BAR EACH SIDE OF OPENINGS EXCEEDING 3 FEET.

PROVIDE REINFORCING BARS AT CORNERS, INTERSECTIONS, AND EACH SIDE OF OPENINGS. PROVIDE (2) REINFORCING BARS EACH SIDE OF OPENINGS OVER 4 FEET WIDE, AND AS SHOWN ON THE PLANS. PROVIDE HOOKED DOWELS INTO FOOTINGS AND STRUCTURE ABOVE AND/OR BELOW TO PROVIDE CONTINUITY. PROVIDE 9 GAGE GALVANIZED HORIZONTAL JOINT REINFORCING (DUR-O-WAL OR ENGINEER-APPROVED EQUAL) AT 16" O.C. REINFORCING LAPS TO BE 48 BAR DIAMETERS.

DO NOT PLACE CONDUITS, PIPES, ETC., IN CELLS WITH VERTICAL REINFORCING. DO NOT RUN CONDUITS, PIPES, ETC., HORIZONTALLY IN CMU WALLS PARALLEL TO LENGTH OF WALL. WHERE MASONRY WALLS ABUT CONCRETE COLUMNS TO BE PLACED PRIOR TO ERECTION OF MASONRY WALLS, PROVIDE DOVETAIL SLOTS BETWEEN COLUMN AND WALLS AND GROUT THE CMU CELL CONTAINING THE DOVETAIL ANCHORS. OTHERWISE, EXTEND CMU HORIZONTAL JOINT REINFORCING THROUGH CONCRETE COLUMN.

CONTROL JOINTS SHALL BE PROVIDED IN ALL CONCRETE MASONRY CONSTRUCTION AT A SPACING NOT TO EXCEED THREE TIMES WALL HEIGHT OR 30'-0" MAXIMUM. COORDINATE LOCATIONS WITH THE ARCHITECTURAL DRAWINGS. HORIZONTAL WALL REINFORCING SHALL BE STOPPED EACH SIDE OF CONTROL JOINTS. SEE ARCHITECTURAL DRAWINGS FOR SEALANT REQUIREMENTS AT CONTROL JOINTS.

USE METAL LATH OR WIRE SCREEN FOR CAVITY CAPS. SHEET METAL, FELT, BUILDING PAPER, OR LIKE MATERIALS ARE PROHIBITED.

PRECAST CONCRETE LINTELS: UNLESS INDICATED OTHERWISE, ALL LINTELS TO BE "U" TYPE PRECAST CONCRETE UNITS EQUAL TO UNITS MANUFACTURED BY CAST-CRETE CORP. AND PRESTRESSED (AND ADDITIONALLY REINFORCED AS REQUIRED) IN ACCORDANCE WITH CAST-CRETE CORP. "DESIGN MANUAL", LATEST EDITION, FOR THE SPAN AND LOADING CONDITION RELATIVE TO LINTEL LOCATION.

LINTEL SIZE IF NOT SHOWN ON THE PLANS SHALL BE 8F8-18 FOR OPENINGS LESS THAN 10 FEET AND 8F16-18/1T FOR OPENINGS 10 FEET TO 20 FEET. PROVIDE 8" MINIMUM BEARING FOR LINTELS UNLESS NOTED OTHERWISE.

**PREFABRICATED WOOD TRUSSES:** DESIGN AND MANUFACTURE IN ACCORDANCE WITH TPI "DESIGN SPECIFICATIONS FOR METAL PLATE CONNECTED WOOD TRUSSES".

TRUSS DESIGNER TO DETERMINE AND ESTABLISH HEIGHT, LENGTH, LOCATION, SPACING, REQUIRED BEARING WIDTH, REACTIONS, AND REQUIRED PERMANENT BRACING FOR EACH TRUSS. COORDINATE WITH ARCHITECTURAL AND MECHANICAL DRAWINGS FOR ADDITIONAL ITEMS INCLUDING AIR HANDLER LOCATIONS, MECHANICAL ROOMS AND DUCT SPACE AND ROUTING.

TRUSS BOTTOM CHORD IS NOT BRACED BY CEILING. DESIGN BOTTOM CHORD TO BE UNBRACED OR PROVIDE BRACING.

PRIOR TO FABRICATION, SUBMIT COMPLETE SHOP DRAWINGS AND CALCULATIONS, SIGNED AND SEALED BY A LICENSED STRUCTURAL ENGINEER, SUBSTANTIATING ALL STRENGTH AND SERVICEABILITY CRITERIA. DESIGN LOADS SHALL BE CLEARLY INDICATED ON SHOP DRAWINGS AND LOADS IMPOSED UPON THE STRUCTURAL SYSTEM.

TRUSSES SHALL BE DESIGNED FOR A 200 LB POINT LOAD AT ANY LOCATION. TRUSS LOADING SHALL BE AS FOLLOWS, IN ADDITION TO LOADS SHOWN ON THE DRAWINGS:

ROOF TRUSS LOADING:	
TOP CHORD LIVE LOAD	20 PSF OR WIND UPLIFT SHOWN ON DRAWINGS
TOP CHORD DEAD LOAD	15 PSF
BOTTOM CHORD LIVE LOAD	10 PSF
BOTTOM CHORD DEAD LOAD	5 PSF
BOTTOM CHORD LIVE LOAD	WIND UPLIFT WHERE EXPOSED (I.E., LANAIS, ENTRIES, PORCHES, BALCONIES, ETC.)

**PLYWOOD:** PLYWOOD PANELS SHALL CONFORM TO THE REQUIREMENTS OF "U.S. PRODUCT STANDARD PS-1 FOR CONSTRUCTION AND INDUSTRIAL PLYWOOD" OR APA PRP-108 PERFORMANCE STANDARDS. UNLESS OTHERWISE NOTED, PANELS SHALL BE APA RATED SHEATHING, EXPOSURE 1, OF THE THICKNESS AND SPAN RATINGS SHOWN ON THE DRAWINGS.

PLYWOOD INSTALLATION SHALL BE IN CONFORMANCE WITH APA RECOMMENDATIONS. ALLOW 1/8" SPACING AT PANEL EDGES, UNLESS OTHERWISE RECOMMENDED BY THE PANEL MANUFACTURER.

ALL SHEATHING SHALL BE INSTALLED WITH FACE GRAIN PERPENDICULAR TO SUPPORTS, EXCEPT AS INDICATED ON THE DRAWINGS. STAGGER ENDS OF ADJACENT PANELS 4'-0".

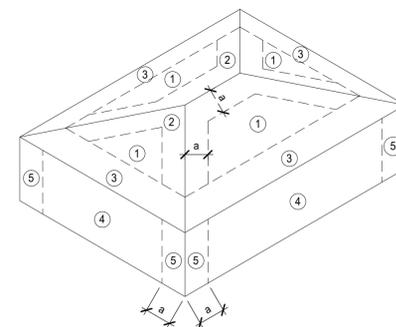
ROOF SHEATHING SHALL BE 5/8" PLYWOOD, BLOCKED, TONGUE-AND-GROOVE, OR HAVE EDGES SUPPORTED BY PLYCLIPS. ATTACH PLYWOOD PANELS TO SUPPORTING MEMBERS WITH 8d RINGSHANK NAILS SPACED 4" ON CENTER ALONG THE PANEL EDGES AND AT 6" ON CENTER ALONG INTERMEDIATE SUPPORTS, UNLESS NOTED OTHERWISE.

**SOFFITS:** SOFFITS SHALL BE CAPABLE OF RESISTING THE DESIGN PRESSURES FOR WALLS SPECIFIED IN THE COMPONENT AND CLADDING CHART. SOFFITS SHALL BE CONSTRUCTED WITH 2x4 AT 24" OC WITH 1/2" PLYWOOD WITH 8d @ 4" OC EDGES AND 6" OC FIELD OR PER FLORIDA PRODUCT APPROVAL.

**STANDARD ABBREVIATIONS**

AB	ANCHOR BOLT	LL	LIVE LOAD
ACI	AMERICAN CONCRETE INSTITUTE	LLH	LONG LEG HORIZONTAL
AFF	ABOVE FINISH FLOOR	LLV	LONG LEG VERTICAL
ALT	ALTERNATE	LRFD	LOAD AND RESISTANCE FACTOR DESIGN
ARCH	ARCHITECT	Lr	ROOF LIVE LOAD
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS	LSH	LONG SIDE HORIZONTAL
ASD	ALLOWABLE STRESS DESIGN	LSL	LONG SLOTTED
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	LSV	LONG SIDE VERTICAL
AWS	AMERICAN WELDING SOCIETY	LW	LIGHTWEIGHT
@	AT	MAX	MAXIMUM
BLDG	BUILDING	MECH	MECHANICAL
BLK	BLOCKING	MEP	MECHANICAL, ELECTRICAL AND PLUMBING
BOT	BOTTOM	MEZZ	MEZZANINE
BP	BASE PLATE	MFR	MANUFACTURER
BRG	BEARING	MIN	MINIMUM
BTWN	BETWEEN	MISC	MISCELLANEOUS
CANT	CANTILEVER	NDS	NATIONAL DESIGN SPECIFICATION FOR
CG	CENTER OF GRAVITY	WOOD	WOOD
CIP	CAST IN PLACE	NOM	NOMINAL
CJ	CONTROL JOINT	NTS	NOT TO SCALE
CL	CENTERLINE	OC	ON CENTER
CLR	CLEAR, CLEARANCE	OPP	OPPOSITE
COL	COLUMN	OWJ	OPEN WEB JOIST
CONC	CONCRETE	PCF	POUNDS PER CUBIC FOOT
CONN	CONNECTION	PCI	PRECAST CONCRETE INSTITUTE
CONT	CONTINUOUS	PL	PLATE
CTR	CENTER	PLF	POUNDS PER LINEAR FOOT
DEG	DEGREES	PSF	POUNDS PER SQUARE FOOT
DIA	DIAMETER	PSI	POUNDS PER SQUARE INCH
DL	DEAD LOAD	PT	PRESSURE TREATED, POST-TENSION
DN	DOWN	REF	REFERENCE
DTL	DETAIL	REINF	REINFORCEMENT
DWG	DRAWING	REQD	REQUIRED
DWL	DOWEL	REV	REVISION
(E)	EXISTING	SDI	STEEL DECK INSTITUTE
EA	EACH	SF	SQUARE FOOT
EF	EACH FACE	SIM	SIMILAR
EJ	EXPANSION JOINT	SOG	SLAB ON GRADE
ELEV	ELEVATOR	SPEC	SPECIFICATION
EQ	EQUAL	SS	STAINLESS STEEL
EW	EACH WAY	SSL	SHORT SLOTTED
		STD	STANDARD
$f_c$	CONCRETE STRENGTH	T&B	TOP AND BOTTOM
FBC	FLORIDA BUILDING CODE	T/REFERENCE	TOP OF REFERENCE
FIN	FINISH	TYP	TYPICAL
FND	FOUNDATION	UNO	UNLESS NOTED OTHERWISE
FTG	FOOTING	VERT	VERTICAL
Fy	YIELD STRENGTH OF STEEL	W/	WITH
		W/O	WITHOUT
GA	GAUGE	WWF	WELDED WIRE FABRIC
GALV	GALVANIZED		
GC	GENERAL CONTRACTOR		
HORIZ	HORIZONTAL		
K	KIPS		
KLF	KIPS PER LINEAR FOOT		
KSF	KIPS PER SQUARE FOOT		
KSI	KIPS PER SQUARE INCH		

LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	BEAM SIZE # OF 3/4" Ø x 4 1/2" HS		CONCRETE TILT PANEL
	CAMBER @ MIDSPAN		STRUCTURAL MASONRY WALL
	UNFACTORED REACTION		STRUCTURAL WOOD WALL
	MOMENT CONNECTION REQUIRED		METAL STUD WALL
	SECTION MARK 1 SIM A101		EARTH FILL
	FOOTING STEP SYMBOL		EARTH UNDISTURBED
	UP DOWN SLOPE IN SLAB		CAST IN PLACE CONCRETE
	STEP IN SLAB ELEVATION		PRECAST CONCRETE
	STEP IN WALL/BEAM		CONCRETE/PRECAST COLUMN TAG - BELOW
	EMBED TAG EBX		CONCRETE/PRECAST COLUMN TAG - THROUGH
	SPAN DIRECTION		CONCRETE/PRECAST COLUMN TAG - ABOVE



ALLOWABLE WIND PRESSURES (PSF)					
ZONE		TRIBUTARY AREA			
		10 SF	50 SF	100 SF	
ROOF	INTERIOR	1	36/-64	25/-47	20/-40
	RIDGE	2	36/-88	25/-60	20/-48
	CORNER	3	36/-88	25/-60	20/-48
OVERHANG	CORNER	3@4	36/-126	25/-92	20/-78
	CORNER	3@5	36/-138	25/-99	20/-83
WALL	INTERIOR	4	48/-52	43/-47	41/-45
	CORNER	5	48/-64	43/-54	41/-50

a = 9.1 ft

THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED USING A DIGITAL SIGNATURE.  
PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.



ST. JAMES CITY FIRE STATION #2  
5051 STRINGFELLOW ROAD  
JAMES CITY, FL 33956



DRAWN BY	ML
CHECKED BY	OC
ISSUED FOR:	
PERMIT/BID	7/18/25

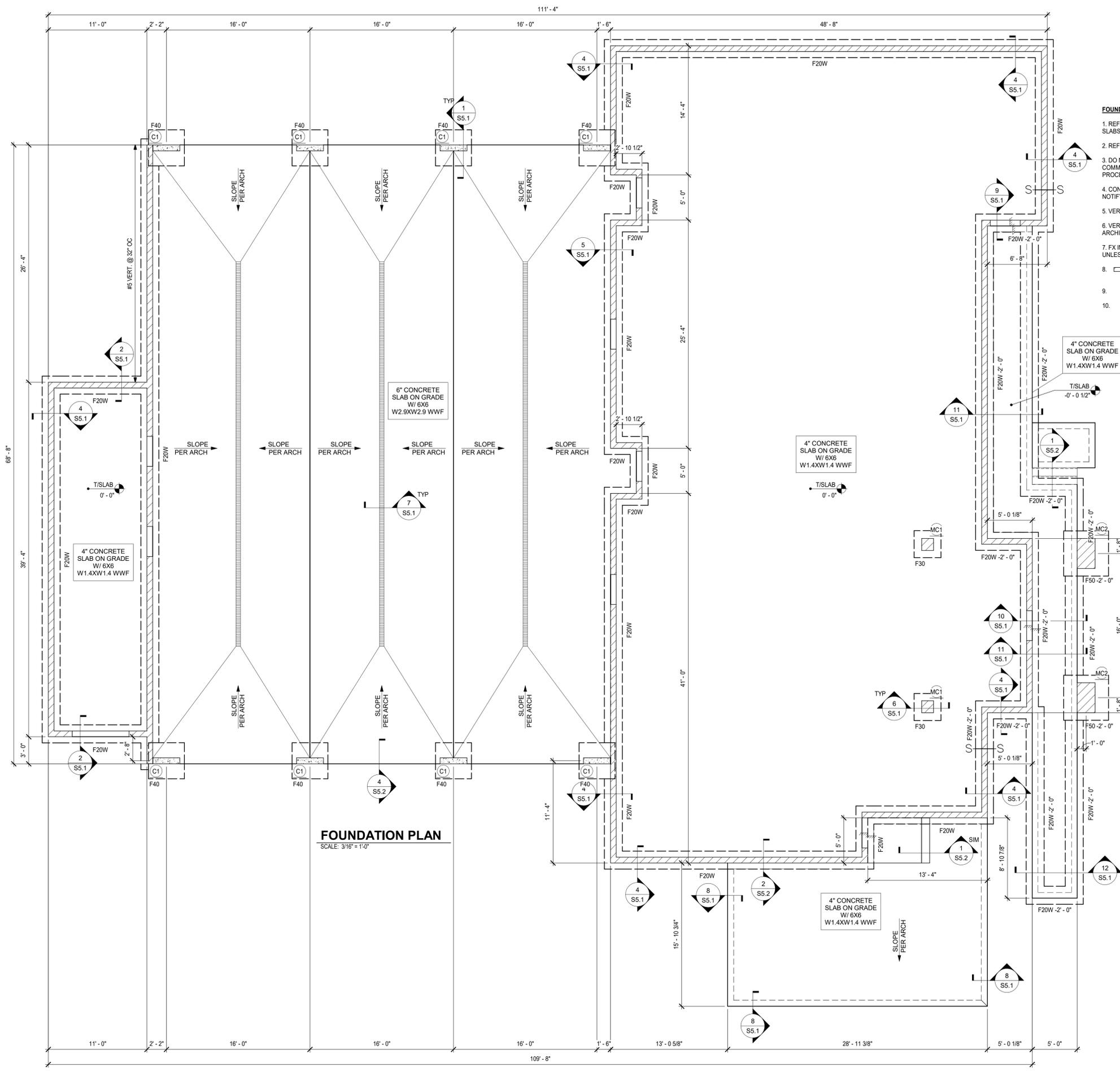


DRAWING NAME:  
GENERAL NOTES

SHEET  
S1.0

D:\Select Structural Dropbox\01 Projects\2024 Projects\24347 SJC Fire Station\Working Drawings\_R25\24347 SJC Fire Station.rvt

D:\Select Structural Dropbox\01 Projects\2024\Projects\24347 S.C. Fire Station\Drawings\Working Drawings\_R25\24347 S.C. Fire Station.rvt



**FOUNDATION PLAN**  
SCALE: 3/16" = 1'-0"

**FOUNDATION PLAN NOTES:**

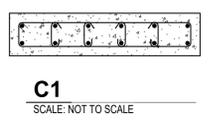
- REFER TO ARCHITECTURAL DRAWINGS FOR VAPOR BARRIER REQUIREMENTS, SLOPES, STEPS, AND DRAIN LOCATIONS IN FLOOR SLABS.
- REFER TO GEOTECHNICAL RECOMMENDATIONS FOR SUBGRADE COMPACTION AND DRAINAGE REQUIREMENTS.
- DO NOT SCALE DRAWINGS. VERIFY/COORDINATE ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS BEFORE COMMENCING CONSTRUCTION. NOTIFY THE STRUCTURAL ENGINEER AND ARCHITECT OF RECORD OF ANY DISCREPANCIES BEFORE PROCEEDING WITH CONSTRUCTION.
- CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS PRIOR TO COMMENCING CONSTRUCTION. NOTIFY THE ENGINEER OF RECORD OF ANY DISCREPANCIES.
- VERIFY/COORDINATE THE LOCATION OF ALL UNDERGROUND PIPING WITH THE FOUNDATION.
- VERIFY/COORDINATE EDGE OF SLAB DETAILS AT EXTERIOR DOORS, SILL HEIGHTS AND DETAILS OF WALL OPENINGS WITH ARCHITECTURAL DRAWINGS.
- FX INDICATES FOOTING TYPE, REFER TO FOOTING SCHEDULE ON THIS SHEET. X-X' INDICATES TOP OF FOOTING ELEVATION, -1'-4" UNLESS NOTED OTHERWISE.
- INDICATES 8" CMU WALLS W/ #5 VERTICALS AT 32" OC MAX. AND AT CORNERS, INTERSECTIONS AND BOTH SIDES OF OPENINGS, UNLESS NOTED OTHERWISE.
- INDICATES MASONRY COLUMN TYPE, REFER TO COLUMN SCHEDULE ON THIS SHEET.
- INDICATES CONCRETE COLUMN TYPE, REFER TO COLUMN SCHEDULE ON THIS SHEET.

WALL FOUNDATION SCHEDULE				
MARK	WIDTH	THICKNESS	REINFORCEMENT	COMMENTS
F20W	2'-0"	1'-0"	(3) #5 CONT. BOT	
F20W-M	2'-0"	1'-4"	(3) #5 CONT. BOT	MONOLITHIC W/ SLAB

PAD FOUNDATION SCHEDULE					
MARK	WIDTH	LENGTH	THICKNESS	REINFORCEMENT	COMMENTS
F1	<varies>	5'-0 5/128"	1'-0"	#5 @ 12" OC EW T&B	ELEVATOR PIT FOOTING
F30	3'-0"	3'-0"	1'-4"	(4) #5 EW BOT	90 DEGREE HOOKED ENDS
F40	4'-0"	4'-0"	1'-4"	(5) #5 EW BOT	90 DEGREE HOOKED ENDS
F50	5'-0"	5'-0"	1'-4"	(6) #5 EW BOT	90 DEGREE HOOKED ENDS
F8050	8'-0"	5'-0"	2'-0"	#5 @ 8" OC EW T&B	

CONCRETE COLUMN SCHEDULE				
MARK	DIMENSIONS	REINFORCEMENT		COMMENTS
		VERTICALS	TIES	
C1	8" x 3'-0"	(12) #6	#3 @ 8" OC	W/ INTERMEDIATE CROSSTIES

CMU COLUMN SCHEDULE				
MARK	DIMENSIONS	REINFORCING		COMMENTS
		VERTICALS	TIES	
MC1	1'-4" x 1'-4"	(4) #6	#3 @ 8" OC	CMU PILASTER
MC2	3'-4" x 2'-0"	(8) #6	#3 @ 8" OC	CMU PILASTER
MC3	1'-0" x 1'-0"	(4) #5	#3 @ 8" OC	CMU PILASTER



**ST. JAMES CITY FIRE STATION #2**  
5051 STRINGFELLOW ROAD  
JAMES CITY, FL 33956

**CASTELLANOS + TRAMONTE ARCHITECTS**

1228 LAFAYETTE STREET SUITE #1 CAPE CORAL, FLORIDA 33904  
(239) 549-0997

DRAWN BY	ML
CHECKED BY	OC
ISSUED FOR:	
PERMIT/BID	7/18/25

ARCHITECT/ENGINEER STAMP

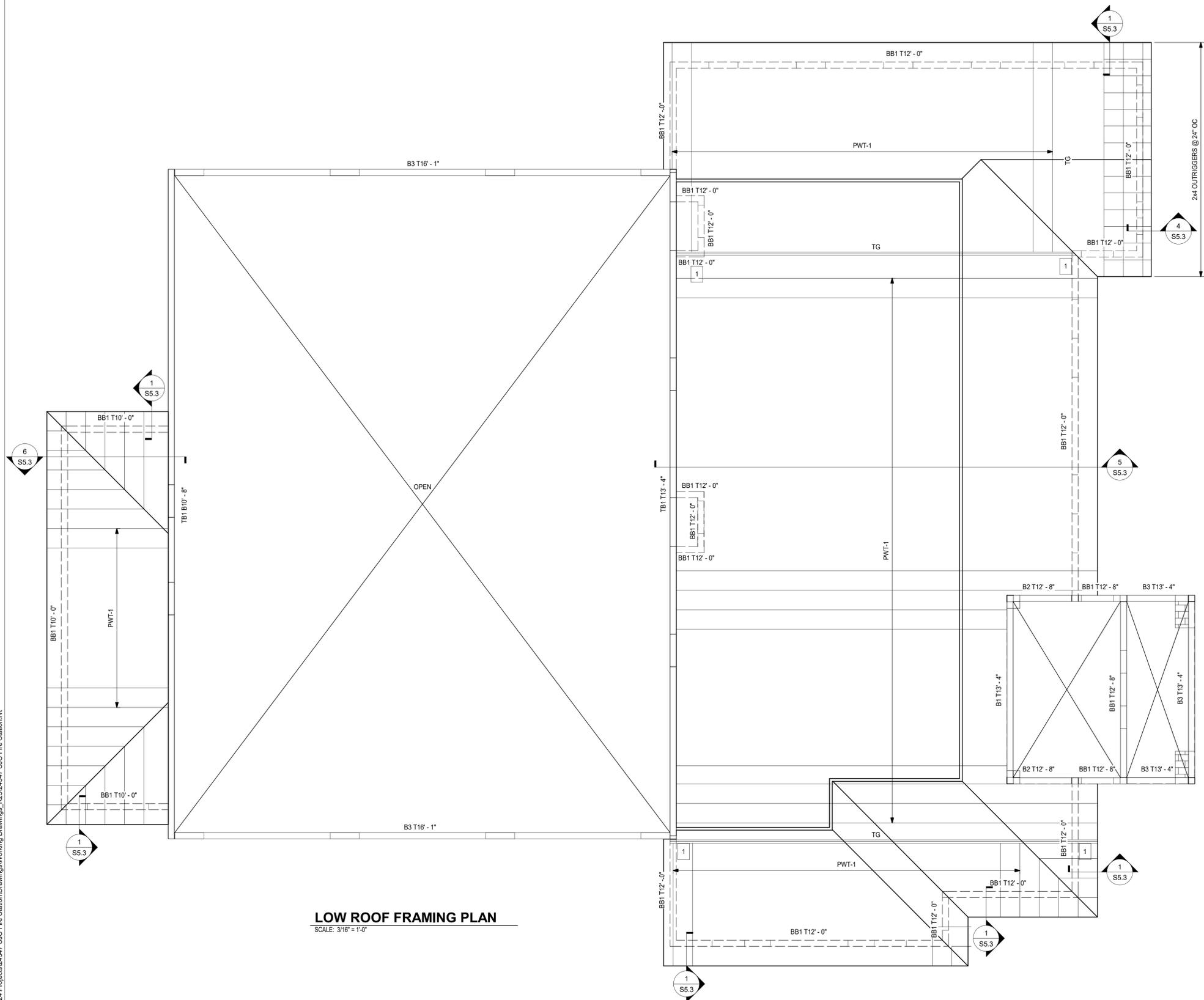
ESPA HASANBAS PERKULIN  
LICENSE  
No. 95683  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER  
07/25/2025

DRAWING NAME:  
FOUNDATION PLAN

rtm  
engineering consultants

SHEET  
**S2.0**

D:\Select Structural Dropbox\01 Projects\2024 Projects\24347 SJC Fire Station\Drawings\Working Drawings\_R25\24347 SJC Fire Station.rvt



**LOW ROOF FRAMING PLAN**  
SCALE: 3/16" = 1'-0"

**ROOF FRAMING PLAN NOTES**

1. REFER TO ARCHITECTURAL DRAWINGS FOR ROOF SLOPES AND ACCESS HATCH LOCATIONS.
2. COORDINATE LOCATION OF MECHANICAL EQUIPMENT AND OPENINGS NOT SHOWN ON PLAN.
3. BX INDICATES CONCRETE BEAM TYPE, REFER TO CONCRETE BEAM SCHEDULE ON THIS SHEET.
4. TX-'X' INDICATES TOP OF BEAM ELEVATION.
5. PWT-1 INDICATES PRE-ENGINEERED WOOD ROOF TRUSSES @ 24" OC. PROVIDE 5/8" PLYWOOD WITH 10d RINGSHANK NAILS AT 4" OC AT PANEL EDGES AND 6" OC AT INTERMEDIATE SUPPORTS, UNLESS NOTED OTHERWISE.
6. TG INDICATES PRE-ENGINEERED WOOD TRUSS GIRDER.
7. 1 INDICATES UPLIFT ANCHOR. REFER TO ANCHOR SCHEDULE ON THIS SHEET.
8. PROVIDE CONTINUOUS UNINTERRUPTED ROOF SHEATHING UNDER OVER-BUILDS.

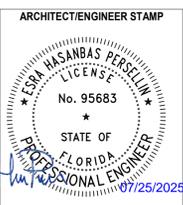
CONCRETE BEAM SCHEDULE						
MARK	WIDTH	DEPTH	REINFORCEMENT			COMMENTS
			TOP	MID	BOT	
B1	7 5/8"	2'-0"	(2) #7	-	(4) #7	#3 @ 10" OC BOT REIN IN (2) LAYERS
B2	7 5/8"	1'-4"	(2) #6	-	(2) #6	#3 @ 8" OC
B3	7 5/8"	2'-0"	(2) #7	-	(2) #7	#3 @ 10" OC
BB1	7 5/8"	1'-4"	(2) #5	-	(2) #5	(2) COURSE BOND BEAM
TB1	7 5/8"	1'-4"	(2) #5	-	(2) #5	#3 @ 48" OC

TRUSS ANCHOR SCHEDULE			
MARK	ANCHOR TYPE	UPLIFT CAPACITY	COMMENTS
1	VG1	4940#	(2) PLY USE W/ HDU FOR WOOD

ST. JAMES CITY FIRE STATION #2  
5051 STRINGFELLOW ROAD  
JAMES CITY, FL 33956

**CASTELLANOS + TRAMONTE ARCHITECTS**  
1228 LAFAYETTE STREET SUITE #1 CAPE CORAL, FLORIDA 33904  
(239) 549-0997

DRAWN BY	ML
CHECKED BY	OC
ISSUED FOR:	
PERMIT/BID	3/28/25

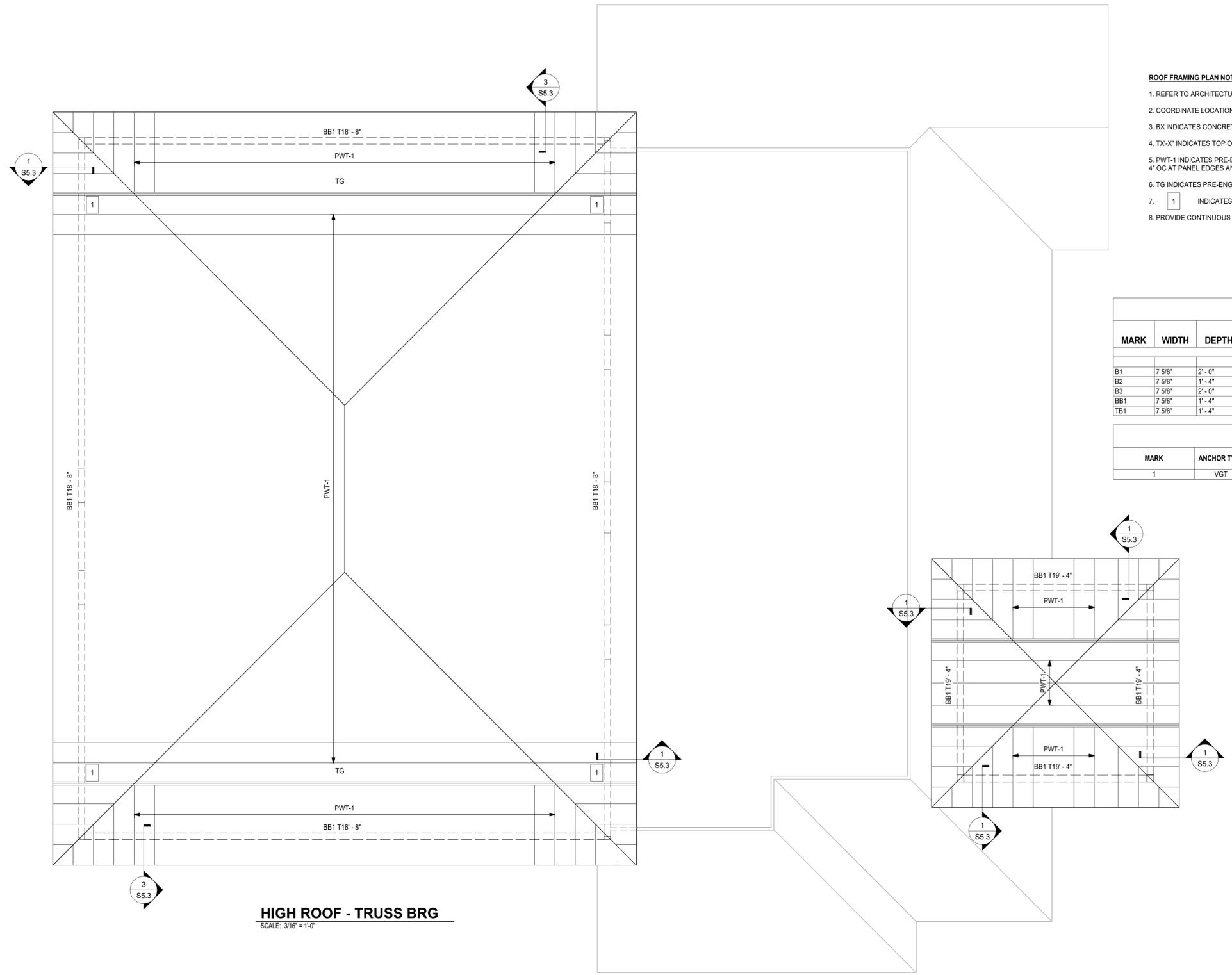


DRAWING NAME:  
LOW ROOF FRAMING PLAN



SHEET  
**S3.0**

D:\Select Structural Dropbox\01 Projects\2024 Projects\24347 SJC Fire Station\Drawings\Working Drawings\_R25\24347 SJC Fire Station.rvt



**HIGH ROOF - TRUSS BRG**  
SCALE: 3/16" = 1'-0"

- ROOF FRAMING PLAN NOTES**
1. REFER TO ARCHITECTURAL DRAWINGS FOR ROOF SLOPES AND ACCESS HATCH LOCATIONS.
  2. COORDINATE LOCATION OF MECHANICAL EQUIPMENT AND OPENINGS NOT SHOWN ON PLAN.
  3. BX INDICATES CONCRETE BEAM TYPE, REFER TO CONCRETE BEAM SCHEDULE ON THIS SHEET.
  4. TX-'X' INDICATES TOP OF BEAM ELEVATION.
  5. PWT-1 INDICATES PRE-ENGINEERED WOOD ROOF TRUSSES @ 24" OC. PROVIDE 5/8" PLYWOOD WITH 10d RINGSHANK NAILS AT 4" OC AT PANEL EDGES AND 6" OC AT INTERMEDIATE SUPPORTS, UNLESS NOTED OTHERWISE.
  6. TG INDICATES PRE-ENGINEERED WOOD TRUSS GIRDER.
  7. 1 INDICATES UPLIFT ANCHOR. REFER TO ANCHOR SCHEDULE ON THIS SHEET.
  8. PROVIDE CONTINUOUS UNINTERRUPTED ROOF SHEATHING UNDER OVER-BUILDS.

CONCRETE BEAM SCHEDULE							
MARK	WIDTH	DEPTH	REINFORCEMENT			STIRRUPS	COMMENTS
			TOP	MID	BOT		
B1	7 5/8"	2'-0"	(2) #7	-	(4) #7	#3 @ 10" OC	BOT REINF IN (2) LAYERS
B2	7 5/8"	1'-4"	(2) #6	-	(2) #6	#3 @ 8" OC	-
B3	7 5/8"	2'-0"	(2) #7	-	(2) #7	#3 @ 10" OC	-
BB1	7 5/8"	1'-4"	(2) #5	-	(2) #5	-	(2) COURSE BOND BEAM
TB1	7 5/8"	1'-4"	(2) #5	-	(2) #5	#3 @ 48" OC	-

TRUSS ANCHOR SCHEDULE			
MARK	ANCHOR TYPE	UPLIFT CAPACITY	COMMENTS
1	VGT	4940#	(2) PLY USE W/ HDU FOR WOOD

ST. JAMES CITY FIRE STATION #2  
5051 STRINGFELLOW ROAD  
JAMES CITY, FL 33956

**CASTELLANOS + TRAMONTE ARCHITECTS**  
1228 LAFAYETTE STREET SUITE #1 CAPE CORAL, FLORIDA 33904  
(239) 549-0997

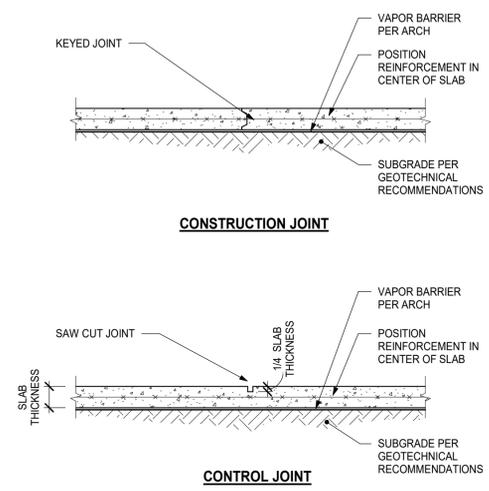
DRAWN BY	ML
CHECKED BY	OC
ISSUED FOR:	
PERMIT/BID	7/18/25



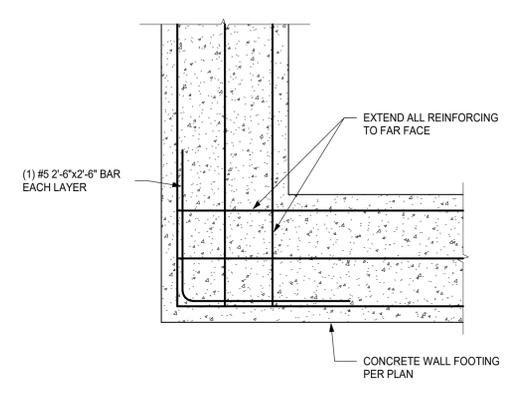
DRAWING NAME:  
HIGH ROOF FRAMING PLAN



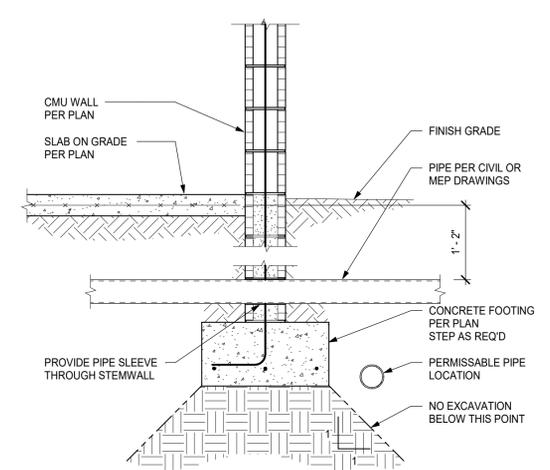
SHEET  
**S4.0**



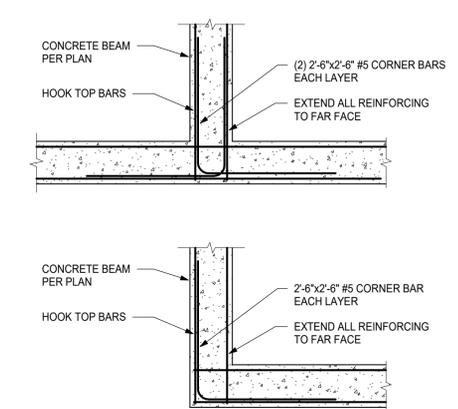
**1 TYPICAL SLAB ON GRADE JOINTS**  
SCALE: NOT TO SCALE



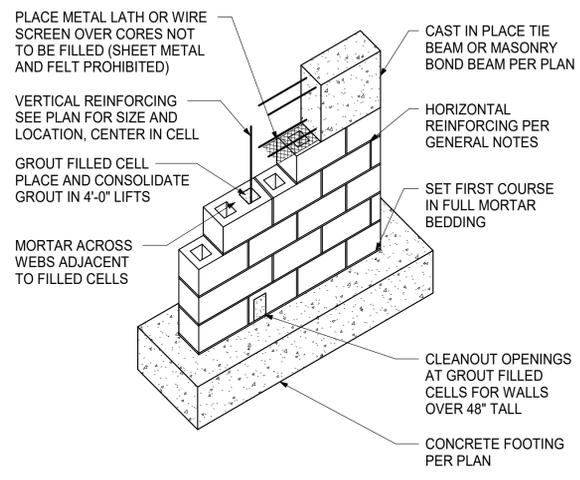
**2 TYPICAL FOOTING CORNER**  
SCALE: NOT TO SCALE



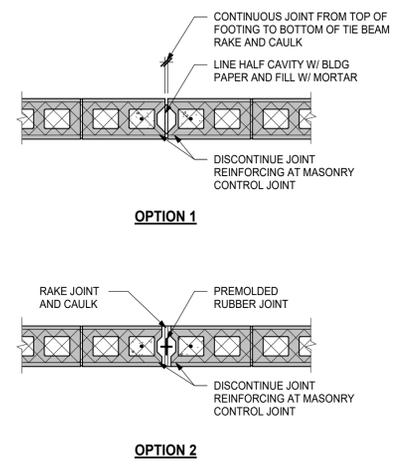
**3 TYPICAL PIPE THROUGH STEMWALL**  
SCALE: 3/4" = 1'-0"



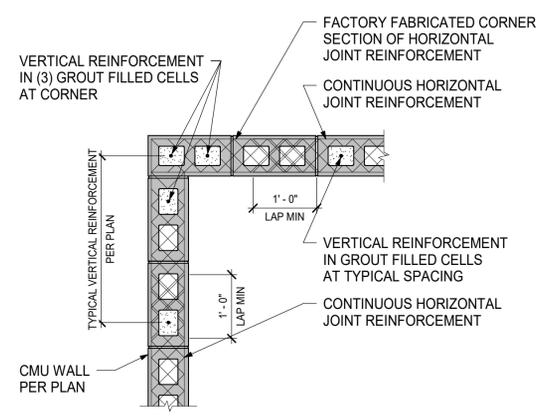
**4 TYPICAL BEAM INTERSECTION**  
SCALE: NOT TO SCALE



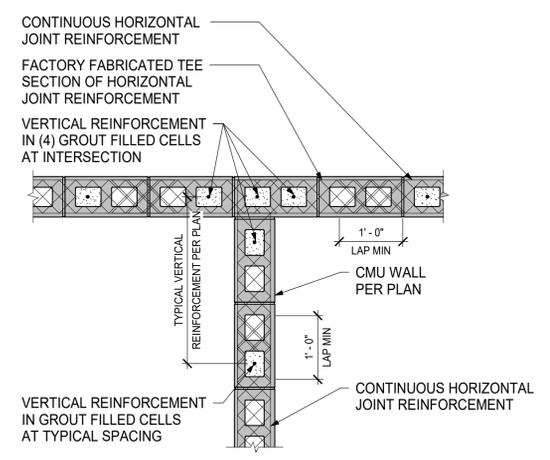
**5 TYPICAL MASONRY WALL CONSTRUCTION.**  
SCALE: 1/2" = 1'-0"



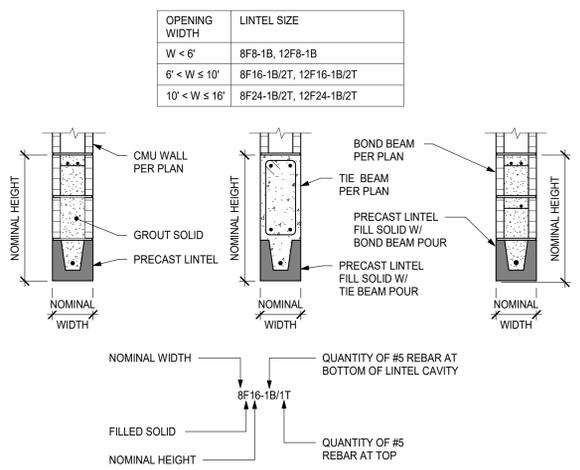
**6 MASONRY CONTROL JOINT**  
SCALE: 3/4" = 1'-0"



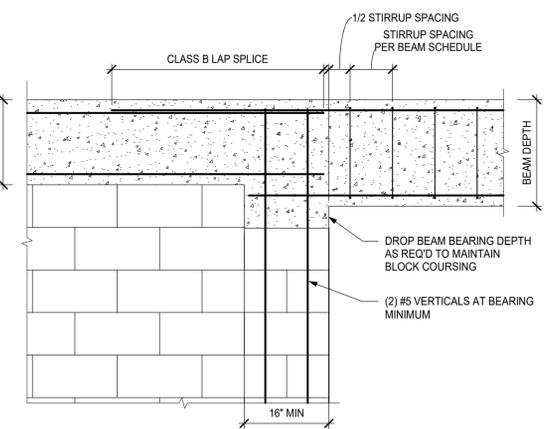
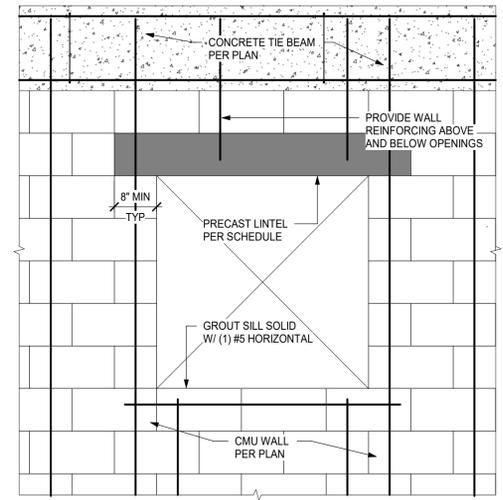
**7 TYPICAL CMU WALL CORNER**  
SCALE: 3/4" = 1'-0"



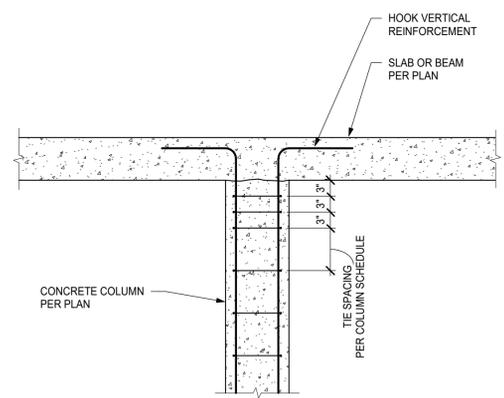
**8 TYPICAL CMU WALL INTERSECTION**  
SCALE: 3/4" = 1'-0"



**9 TYPICAL CMU WALL OPENING & PRECAST LINTEL SCHEDULE**  
SCALE: NOT TO SCALE



**10 TYPICAL CONCRETE BEAM BEARING**  
SCALE: NOT TO SCALE



**11 CONCRETE COLUMN TERMINATION**  
SCALE: NOT TO SCALE

ST.  
ST. JAMES CITY FIRE STATION #2  
5051 STRINGELLOW ROAD  
JAMES CITY, FL 33956

**CASTELLANOS + TRAMONTE ARCHITECTS**  
1228 LAFAYETTE STREET SUITE #1 CAPE CORAL, FLORIDA 33904  
(239) 549-0997  
AA 26003303

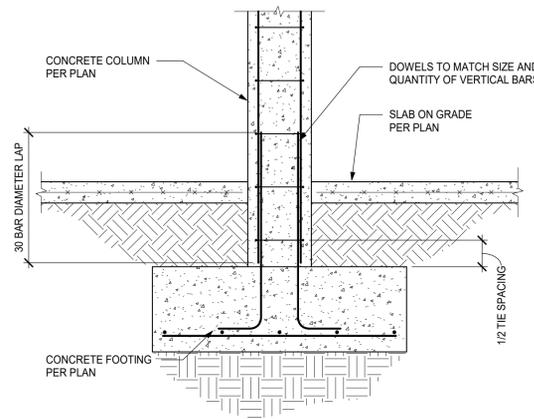
DRAWN BY	ML
CHECKED BY	OC
ISSUED FOR:	
PERMIT/BID	7/18/25

ARCHITECT/ENGINEER STAMP  
ESRA HASANBAS PERKULIN  
LICENSE  
No. 95683  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER  
07/25/2025

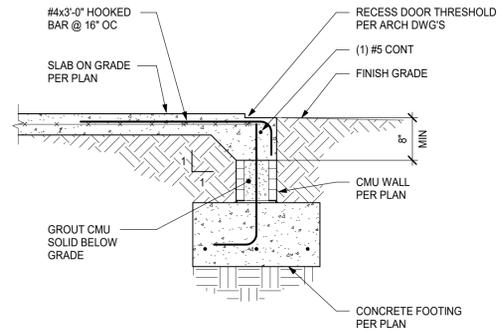
DRAWING NAME:  
TYPICAL DETAILS

SHEET  
**S5.0**

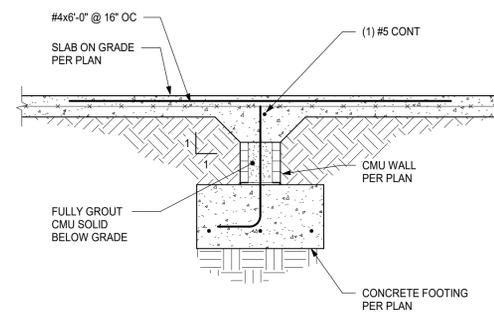




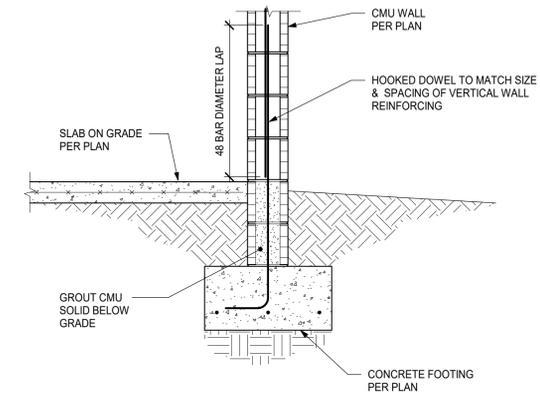
**1 CONCRETE COLUMN FOUNDATION**  
SCALE: 3/4" = 1'-0"



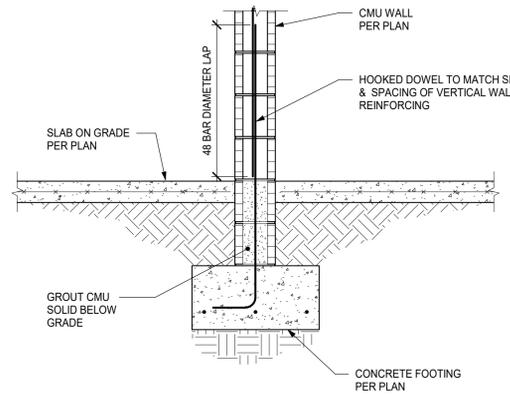
**2 STEMWALL AT DOOR THRESHOLD**  
SCALE: 3/4" = 1'-0"



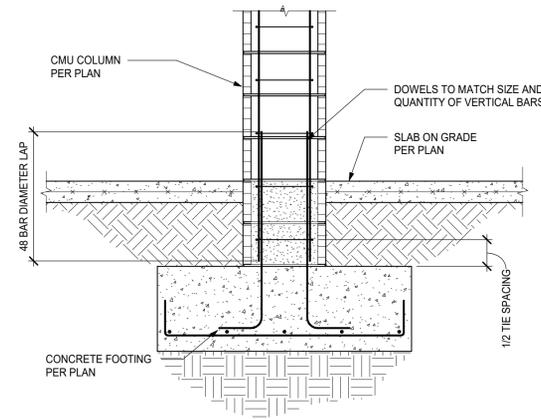
**3 STEMWALL AT INTERIOR OPENING**  
SCALE: 3/4" = 1'-0"



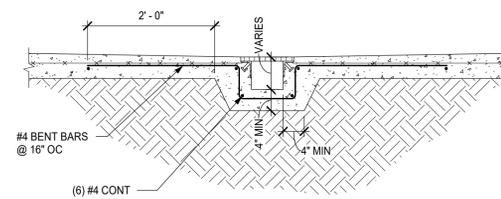
**4 CMU STEMWALL FOOTING**  
SCALE: 3/4" = 1'-0"



**5 CMU STEMWALL FOOTING**  
SCALE: 3/4" = 1'-0"

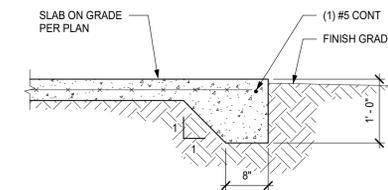


**6 CMU COLUMN FOOTING**  
SCALE: 3/4" = 1'-0"

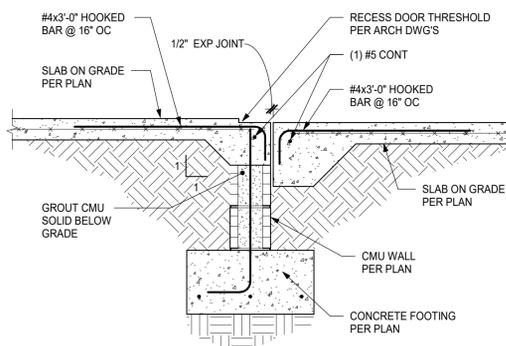


**NOTES:**  
1. POUR SLAB MONOLITHIC AROUND DRAIN  
2. MAINTAIN MINIMUM SPECIFIED SLAB THICKNESS AROUND DRAIN  
3. VERIFY DRAIN DIMENSIONS W/ SUPPLIER. COORDINATE EXTENT AND LOCATIONS OF DRAINS W/ ARCH DRAWINGS.

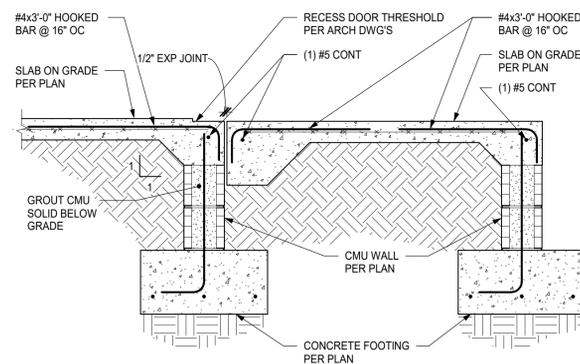
**7 TYPICAL TRENCH DETAIL**  
SCALE: 3/4" = 1'-0"



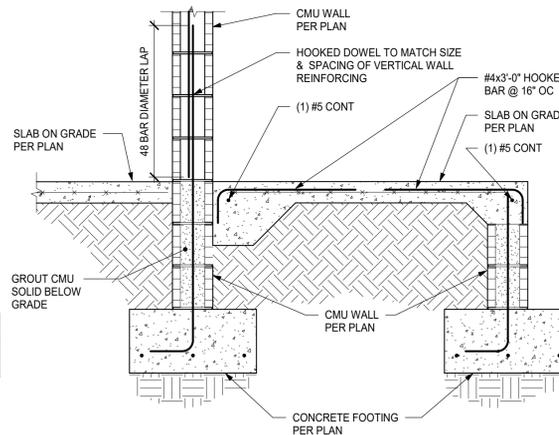
**8 THICKENED SLAB EDGE**  
SCALE: 3/4" = 1'-0"



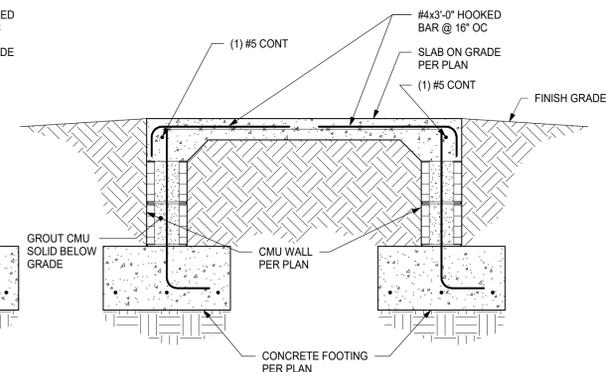
**9 STEMWALL AT DOOR THRESHOLD**  
SCALE: 3/4" = 1'-0"



**10 STEMWALL AT DOOR THRESHOLD**  
SCALE: 3/4" = 1'-0"



**11 CMU STEMWALL FOOTING**  
SCALE: 3/4" = 1'-0"



**12 CMU STEMWALL FOOTING**  
SCALE: 3/4" = 1'-0"

ST.  
ST. JAMES CITY FIRE STATION #2  
5051 STRINGELLOW ROAD  
JAMES CITY, FL 33956

**CASTELLANOS + TRAMONTE**  
ARCHITECTS  
1228 LAFAYETTE STREET, SUITE #1 CAPE CORAL, FLORIDA 33904  
(239) 549-0997

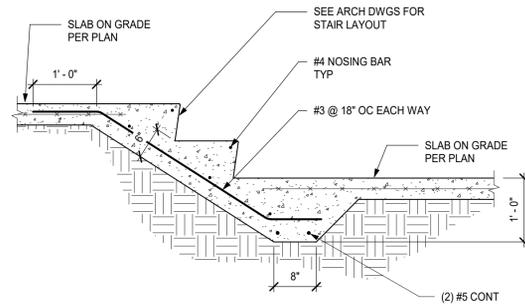
DRAWN BY	ML
CHECKED BY	OC
ISSUED FOR:	
PERMIT/BID	7/18/25

ARCHITECT/ENGINEER STAMP  
ESRA HASANBAS PERSELI  
LICENSE  
No. 95683  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER  
07/25/2025

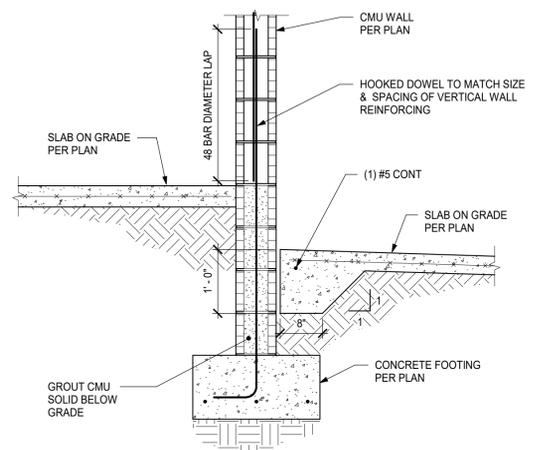
DRAWING NAME:  
FOUNDATION DETAILS

SHEET  
**S5.1**

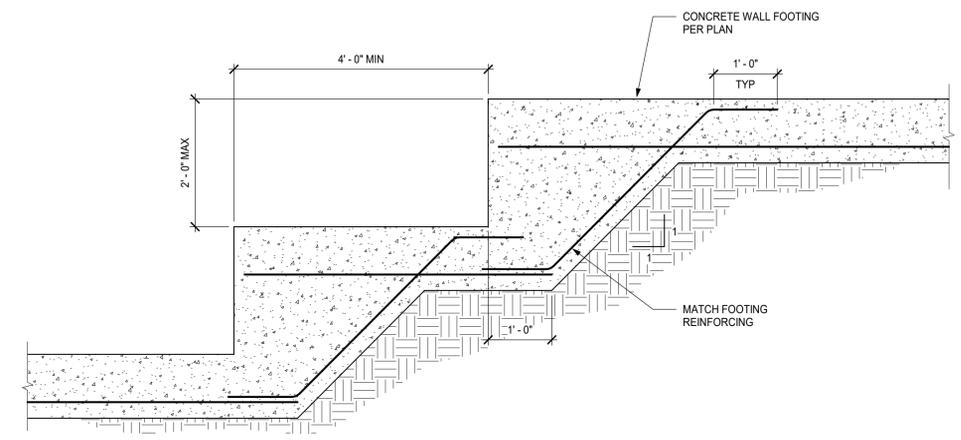
**rtm**  
engineering consultants  
12573 New Brittany Blvd | Fort Myers, FL 33907  
T: 239-213-5050 | www.rtmassociates.com  
Project Number: 24347 | CDA-31254



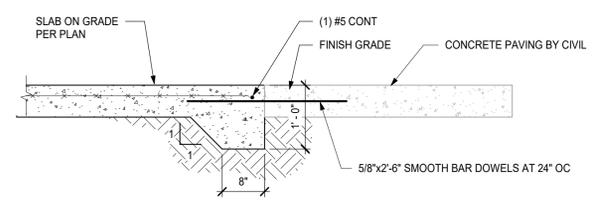
**1 CAST IN PLACE STAIR ON GRADE**  
SCALE: 3/4" = 1'-0"



**2 CMU STEMWALL FOOTING**  
SCALE: 3/4" = 1'-0"



**3 TYPICAL STEP FOOTING DETAIL**  
SCALE: NOT TO SCALE



**4 SLAB EDGE AT EXTERIOR PAVING**  
SCALE: 3/4" = 1'-0"

ST.  
ST. JAMES CITY FIRE STATION #2  
5051 STRINGFELLOW ROAD  
JAMES CITY, FL 33956

**CASTELLANOS + TRAMONTE**  
ARCHITECTS

1228 LAFAYETTE STREET SUITE #1 CAPE CORAL, FLORIDA 33904  
(239) 549-0997 AA 26003303

DRAWN BY	ML
CHECKED BY	OC
ISSUED FOR:	
PERMIT/BID	7/18/25

ARCHITECT/ENGINEER STAMP

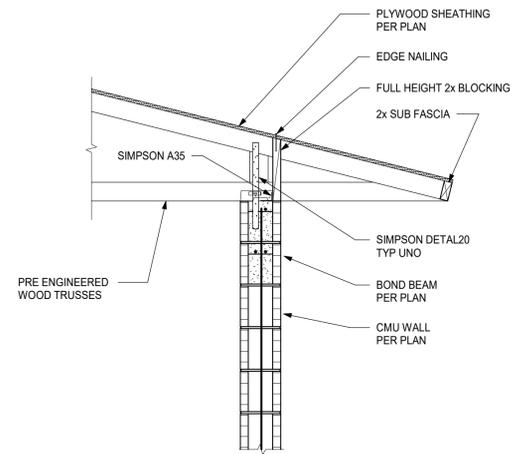
ESPA HASANBAS PERSELI  
LICENSE  
No. 95683  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER  
07/25/2025

DRAWING NAME:  
FOUNDATION DETAILS

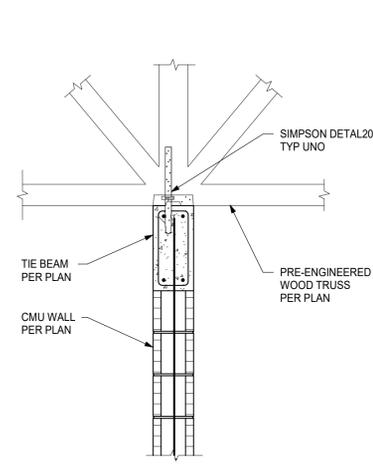
**rtm**  
engineering consultants

12573 New Brittany Blvd | Fort Myers, FL 33907  
T: 239-213-5050 | www.rtmassociates.com  
Project Number: 24347 COA: 31254

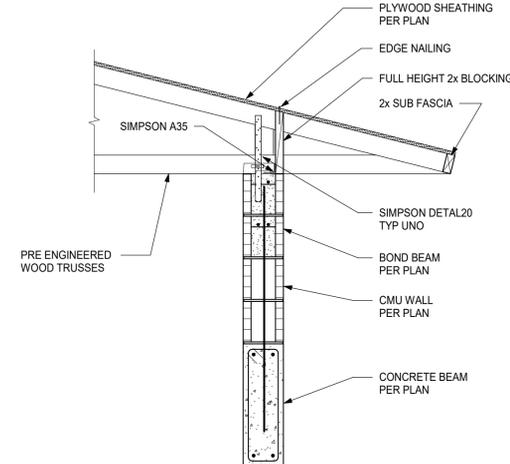
SHEET  
**S5.2**



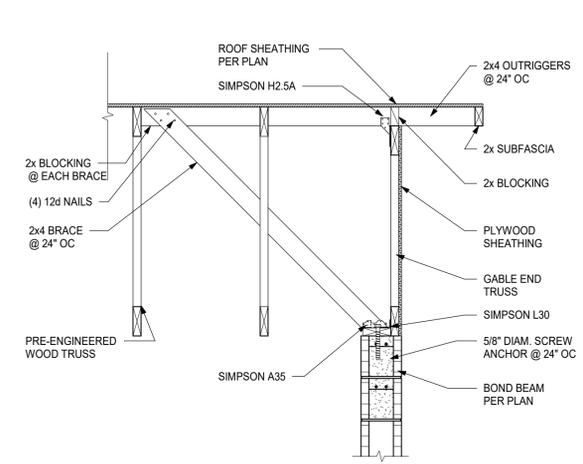
**1 EXTERIOR TRUSS BEARING**  
SCALE: NOT TO SCALE



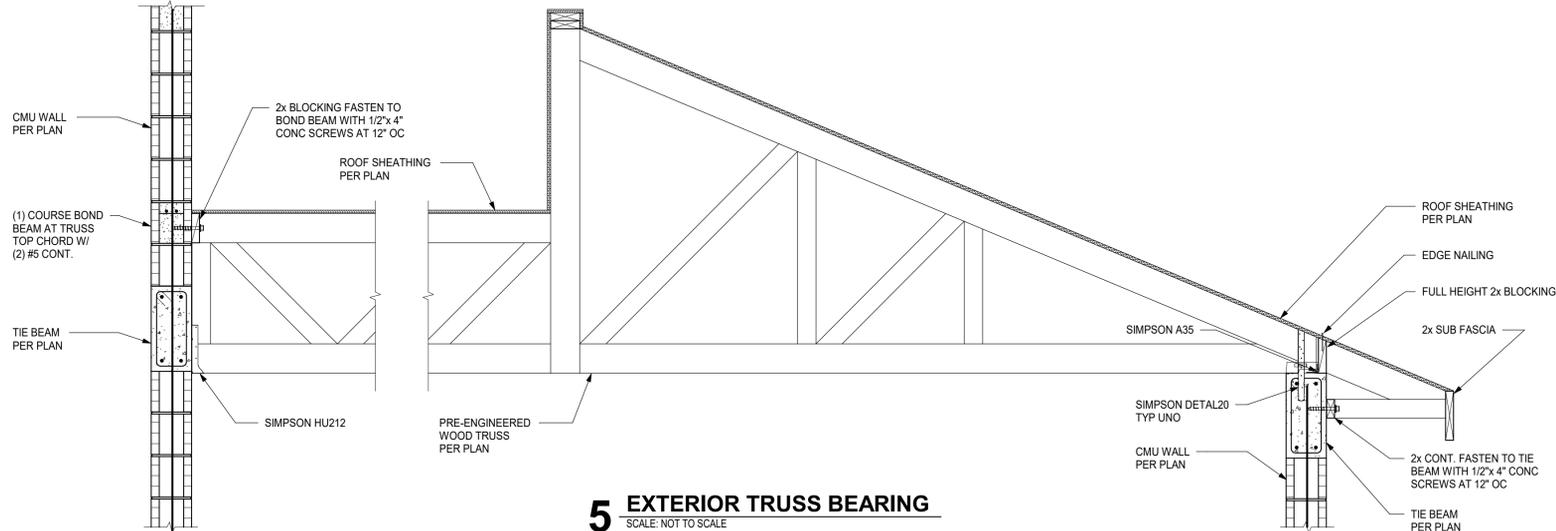
**2 INTERIOR TRUSS BEARING**  
SCALE: NOT TO SCALE



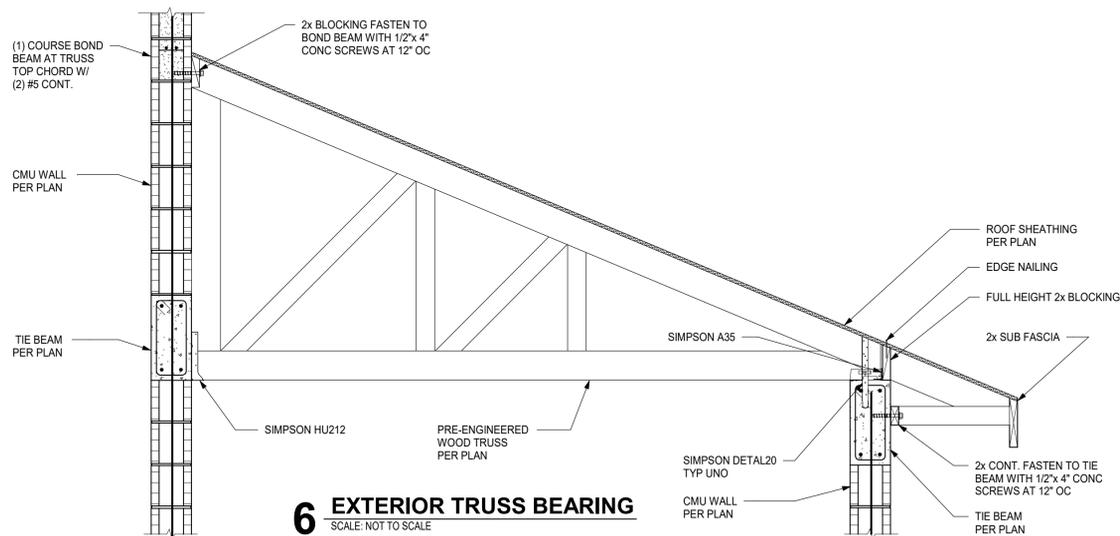
**3 EXTERIOR TRUSS BEARING**  
SCALE: NOT TO SCALE



**4 OUTRIGGER DETAIL**  
SCALE: NOT TO SCALE



**5 EXTERIOR TRUSS BEARING**  
SCALE: NOT TO SCALE



**6 EXTERIOR TRUSS BEARING**  
SCALE: NOT TO SCALE

ST.  
ST. JAMES CITY FIRE STATION #2  
5051 STRINGFELLOW ROAD  
JAMES CITY, FL 33956

**CASTELLANOS + TRAMONTE**  
ARCHITECTS  
1228 LAFAYETTE STREET SUITE #1 CAPE CORAL, FLORIDA 33904  
(239) 549-0997  
AA 26003303

DRAWN BY	ML
CHECKED BY	OC
ISSUED FOR:	
PERMIT/BID	7/18/25

ARCHITECT/ENGINEER STAMP  
ESPA HASANBAS PERSELIN  
LICENSE  
No. 95683  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER  
07/25/2025

DRAWING NAME:  
ROOF FRAMING DETAILS

SHEET  
**S5.3**



D:\Select Structural Dropbox\01 Projects\2024 Projects\24347 SJC Fire Station\Drawings\Working Drawings\_R25\24347 SJC Fire Station.rvt