

FLORIDA POWERBOX8 SPECIFICATION NOTES (3000 PSI)

- PRODUCT NAME (PATENT NO. 6367209)
PREFORMED POWERS STEEL LINTEL SHALL BE GALVANNEZED COIL STEEL AS MANUFACTURED BY POWERS STEEL AND WIRE PRODUCTS, INC. STEEL GRADE SHALL BE ASTM A575 GRADE C (FY = 40 ksi).
NOTE: DEFORMATIONS DO NOT EFFECT STRUCTURAL CAPACITY. FOR SPANS LESS THAN 16'-0" BOX LINTELS TO BE 20 GA. FOR SPANS GREATER THAN OR EQUAL TO 16'-0" BOX LINTELS TO BE 16 GA.
- SHORE LINTELS AS REQUIRED TO COMPENSATE FOR DEAD LOAD DEFLECTION ON NON-CURED MASONRY GROUT. ALL LINTELS GREATER THAN 12" ARE BUILT WITH 1/2" CAMBER.
NOTE: LINTELS TO BE USED WITH BRICK OR CONCRETE MASONRY UNITS SURVIVING MINIMUM 1" AS SHOWN.
- LINTEL TO BE USED WITH BRICK OR CONCRETE MASONRY UNITS SURVIVING MINIMUM 1" AS SHOWN.
- STEEL SURFACES IN CONTACT WITH GROUT AND/OR MORTAR SHALL BE UNPAINTED AND FREE OF MATERIAL THAT WOULD INHIBIT BOND.
- DESIGN BEARING OF POWERS STEEL LINTELS IS 7' FOR ALL LINTELS GREATER THAN 16'-0" IN SPAN OR GREATER THAN 32" IN DEPTH. ALL OTHER LINTELS REQUIRE A MINIMUM OF 4" BEARING PER THE STANDARD AND FLORIDA BUILDING CODES.
- 1" = 1500 PSI. MASONRY UNITS SHALL CONFORM TO ASTM C90, GRADE N.
- GROUT - 3,000 PSI SLUMP RANGE: 6" TO 11". ROD OR VIBRATE GROUT ADEQUATELY TO ENSURE CONSOLIDATION OF GROUT (NO AIR POCKETS). GROUT SHALL COMPLY WITH ASTM C476-83 AND BE EITHER COARSE OR FINE GROUT.
- MORTAR: TYPE "S" OR TYPE "M" 1800 PSI.
- TOP REINFORCING OR TOP OF WALL REINFORCING, IS PROVIDED BY CODES TO PROVIDE A CONTINUOUS TIE AROUND ATTACHMENTS AND TO PROVIDE FOR UPLIFT RESISTANCE AT LINTELS.
- DETAILS TO TOP OF WALL PER ARCHITECTURAL AND/OR ENGINEERING DRAWINGS.
- LIMITATIONS:
THE LINTELS SHALL NOT EXCEED THE ALLOWABLE DESIGN LOADS AND SPANS SHOWN IN THIS REPORT.
THE LINTELS SHALL NOT BE USED IN A FIRE RESISTANCE RATED ASSEMBLY UNLESS A TEST REPORT DOCUMENTING FIRE RESISTANCE IS SUBMITTED TO THE BUILDING OFFICIAL.
A PROPER BARRIER IS REQUIRED WHEN USING CORROSIVE LUMBER PRODUCTS IN CONTACT WITH THE STEEL LINTELS. A PROPER BARRIER WOULD BE A METALLIC BARRIER WITH A 10 MIL THICKNESS OR TO MAINTAIN A MIN. 1/4" SPACING BETWEEN THE CORROSIVE LUMBER AND STEEL LINTEL.
12) DEFLECTION LIMITS ARE SET TO L600 FOR ALL LOADS SHOWN ABOVE THE DARKENED SOLID LINE. DEFLECTION LIMITS ARE SET TO L360 (LIVE LOAD) AND L240 (DEAD + LIVE LOAD) FOR ALL LOADS SHOWN BELOW DARKENED SOLID LINE.
13) ALL LOADS SHOWN IN TABLES ARE SUPERIMPOSED LOADS. TABLES ARE DATED 10/2017 AND CLEARLY INDICATE SUPERIMPOSED LOADS.
14) #5 REINFORCING BARS (GRADE 40) ARE TO BE SET APPROX. 1/2" FROM TOP OF ALL LINTEL DESIGNS AND IN SOME CASES THE BOTTOM OF LINTELS AS SHOWN ON LOAD TABLES. TOP HORIZONTAL REINFORCEMENT IS TO BE A CONTINUOUS TIE AS NOTED IN NOTE #8. IN THE CASE THAT THE LINTEL IS NOT WITH AN COMPOSITE BOND BEAM SYSTEM, TOP HORIZONTAL REINFORCEMENT IS TO EXTEND 2'-0" PAST INSIDE OF JAMBS.
15) MANUFACTURER:
POWERS STEEL
4118 E. ELWOOD PHOENIX, AZ 85040
PH# (602) 437-1180 FAX# (602) 437-5409
16) TECHNICAL DATA AND ENGINEERING POWERS LINTELS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE FOLLOWING:
- FLORIDA BUILDING CODE
- NAFSFC AISI LIGHT GAUGE
- COLD FORMED STEEL DESIGN - 2012
- A01 530-13A/30C-13/17MS 402-13
TECHNICAL ASSISTANCE IS AVAILABLE FROM THE MANUFACTURER ON SPECIAL DESIGN CONCERNS OR LINTEL DEPTHS DIFFERENT THAN THOSE SHOWN IN THE LOAD TABLES.
STRUCTURAL ENGINEER FOR THESE LINTELS IS:
S.E. CONSULTANTS, INC.
5800 E. THOMAS RD. SUITE 104 SCOTTSDALE, AZ 85251
PHONE (480) 946-2010 FAX (480) 946-1909
IF AN INSPECTOR, CONTRACTOR, SUBCONTRACTOR, OR PLANS EXAMINER HAS ANY TECHNICAL QUESTIONS PLEASE CALL.
17) INSTALLATION:
POWERS LINTELS ARE TO BE INSTALLED IN ACCORDANCE WITH STANDARD CONSTRUCTION PRACTICES. SET TO PROPER LINE AND LEVEL. PLUMB AND TRUE, AND IN CORRECT RELATION TO OTHER WORK.
18) DETAIL PER POWER BOX TECH SUPPORT

PowerBox8 // Lintels // 8" block width
LINTEL LOAD TABLE (IN POUNDS PER LINEAL FOOT)
LATERAL LOAD TABLE (3000 PSI GROUT)
ALL LOADS ARE SUPERIMPOSED
20ga. < 16'-0" span // 16ga. >= 16'-0" span

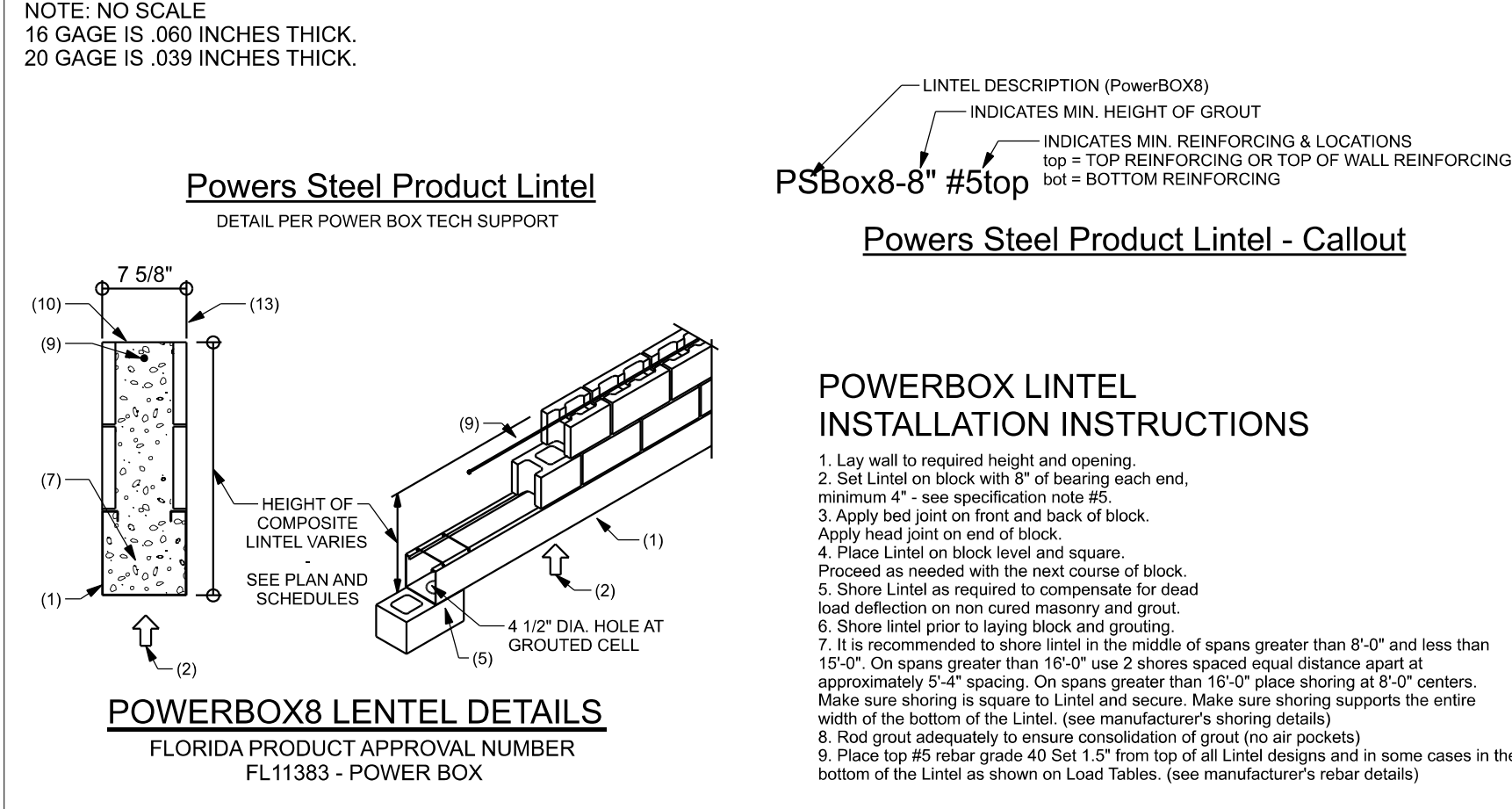
SPAN (ft)	PSbox8-8" #5 stop		PSbox8-12" #5 stop		PSbox8-16" #5 stop		PSbox8-24" #5 stop	
	#5 top	#5 topbot	#5 top	#5 topbot	#5 top	#5 topbot	#5 top	#5 topbot
1'-0"	5568	5568	7369	9170	9170	12772	12772	
2'-2"	3836	3836	5074	5074	5107	8789	8789	
3'-2"	3106	3106	4107	4107	4107	7109	7109	
3'-2"	2606	2606	3444	3444	4283	5960	5960	
4'-0"	2051	2051	2709	2709	3366	4682	4682	
4'-0"	1816	1816	2389	2389	2986	4143	4143	
5'-2"	1574	1574	2077	2077	2580	3586	3586	
6'-2"	1291	1309	1726	1726	2143	2977	2977	
7'-2"	989	1002	1352	1352	1674	2322	2322	
8'-0"	743	996	1131	1311	1625	2255	2255	
9'-2"	552	760	1133	1133	1404	1946	1946	
10'-2"	418	626	977	1011	1277	1770	1770	
11'-2"	352	492	766	887	1132	1567	1567	
12'-2"	297	418	652	756	1045	1446	1446	
13'-4"	229	328	511	596	853	1285	1285	
14'-0"	203	292	456	532	799	1215	1215	
15'-0"	215	334	386	530	688	1154	1154	
16'-0"	157	211	286	400	519	988	1201	1336
18'-0"	142	192	200	365	474	539	1104	1282
20'-0"	104	145	156	261	365	518	899	1037
22'-0"	76	110	147	219	284	327	693	832
24'-0"							625	918
26'-0"							507	787

NOTE: All lintels greater than 22'-0" in length will require (2) #5 bars top or (2) #5 bars top & bottom. TABLE IS PARTIAL TABLE PER POWER STEEL & WIRE - FLORIDA LOAD TABLES DATE: 10/2017

PowerBox8 // Lintels // 8" block width
LINTEL LOAD TABLE (IN POUNDS PER LINEAL FOOT)
LATERAL LOAD TABLE (3000 PSI GROUT)
ALL LOADS ARE SUPERIMPOSED
20ga. < 16'-0" span // 16ga. >= 16'-0" span

SPAN (ft)	PSbox8-8" #5 stop		PSbox8-12" #5 stop		PSbox8-16" #5 stop		PSbox8-24" #5 stop	
	#5 top	#5 topbot	#5 top	#5 topbot	#5 top	#5 topbot	#5 top	#5 topbot
1'-0"	3256	3256	4907	4907	4960	6732	6732	
2'-2"	2254	2254	2836	2836	3434	4661	4661	
3'-2"	1543	1543	1941	1941	2349	3189	3189	
4'-0"	1221	1221	1536	1536	1860	2524	2524	
4'-0"	1085	1085	1365	1365	1653	2264	2264	
5'-2"	945	945	1189	1189	1440	1954	1954	
6'-2"	792	792	996	1206	1206	1637	1637	
7'-2"	698	698	878	1063	1063	1472	1472	
8'-0"	611	611	738	749	822	838	974	1000
9'-2"	492	496	562	570	626	638	742	760
10'-2"	413	417	472	472	536	536	624	624
11'-2"	331	334	379	384	422	430	500	513
12'-2"	287	289	328	333	366	373	433	444
13'-4"	227	231	266	266	296	302	351	360
14'-0"	212	213	241	244	269	274	318	326
15'-0"	221	222	216	216	231	231	261	266
16'-0"	214	215	234	235	252	254	285	289
18'-0"	199	200	219	219	235	236	265	269
20'-0"	182	183	177	178	191	193	216	219
22'-0"	158	158	148	148	159	160	190	192
24'-0"							163	166
26'-0"							138	141

NOTE: Above loads include 1/3 increase for wind. All lintels greater than 22'-0" in length will require (2) #5 bars top or (2) #5 bars top & bottom. TABLE IS PARTIAL TABLE PER POWER STEEL & WIRE - FLORIDA LOAD TABLES DATE: 10/2017

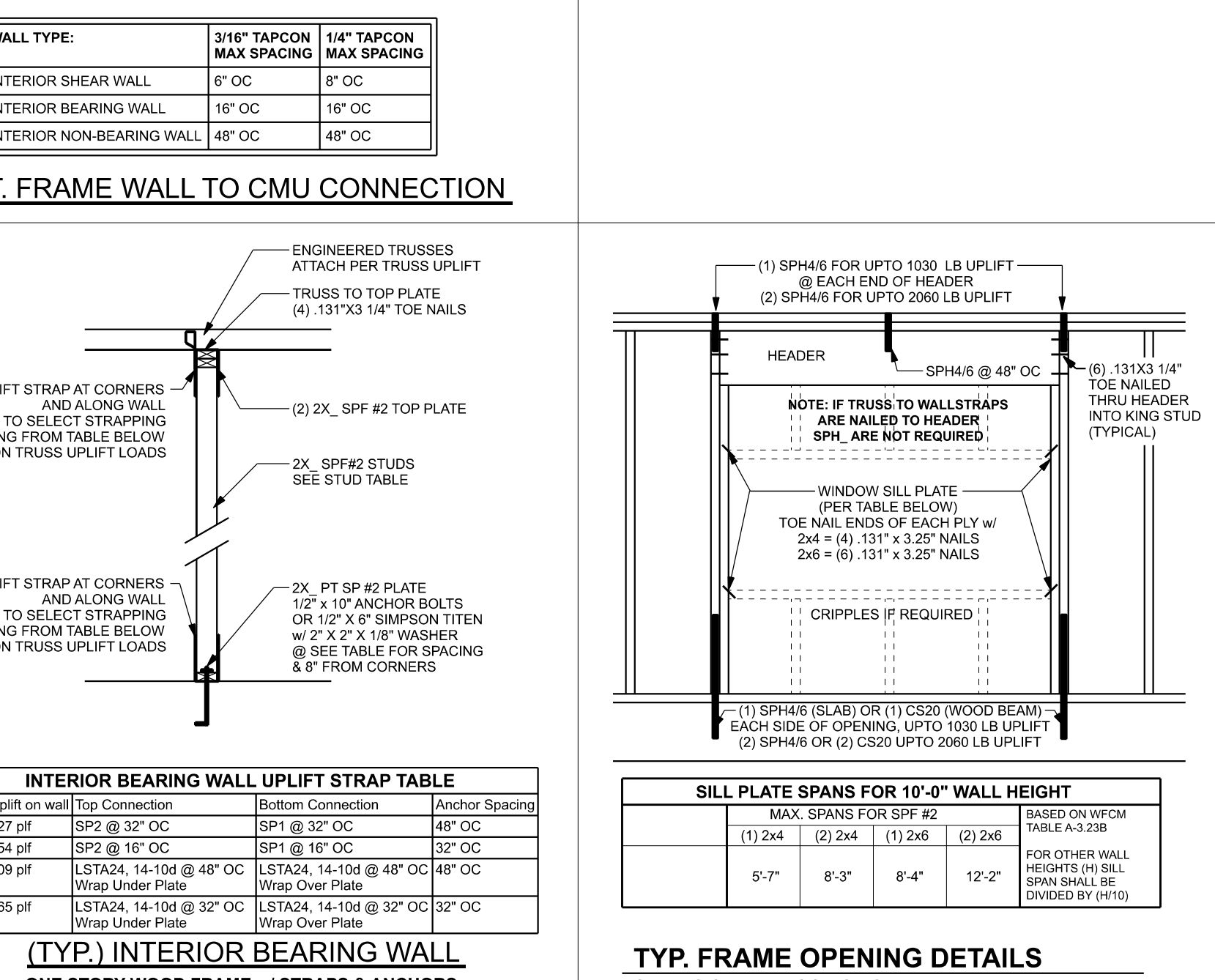
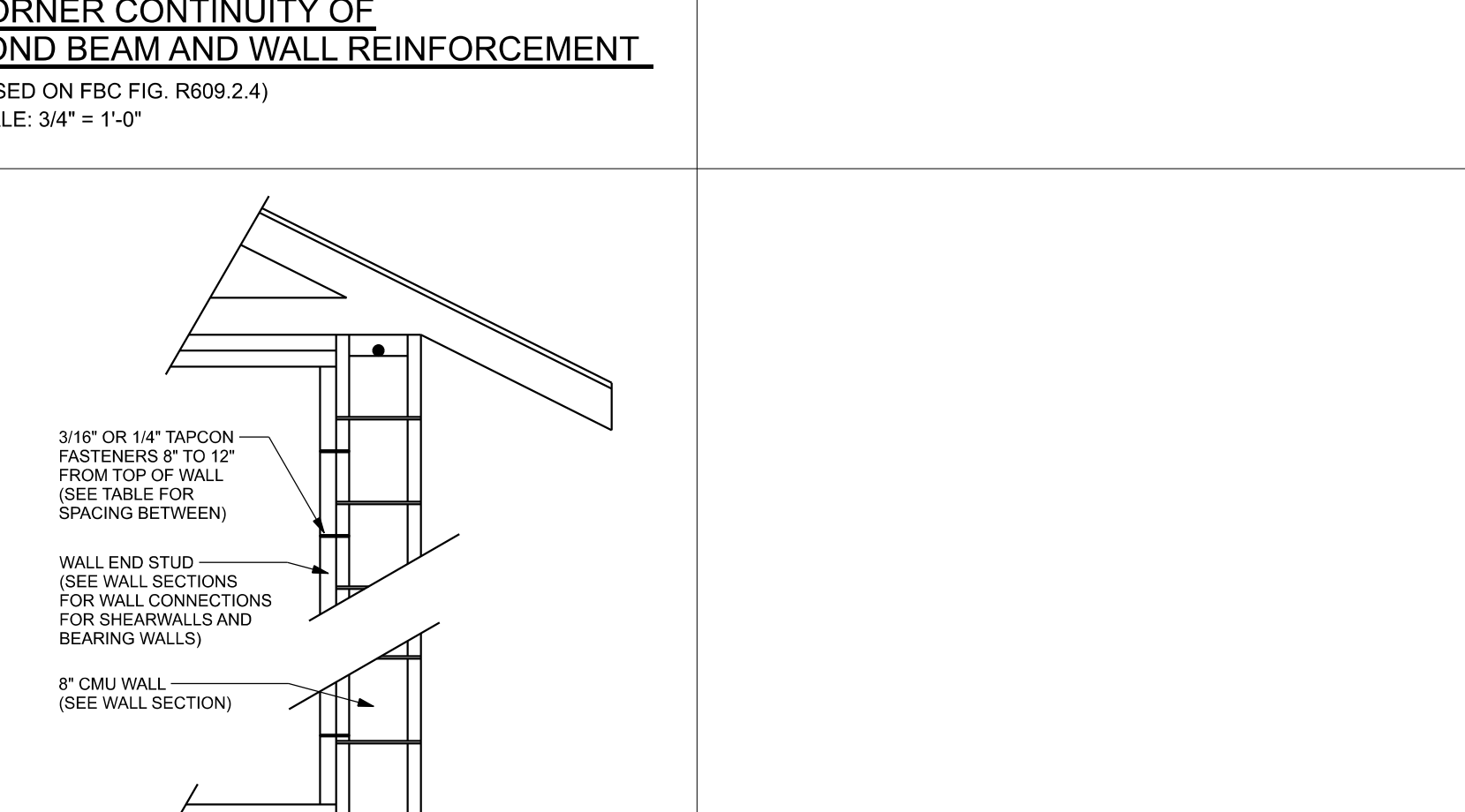
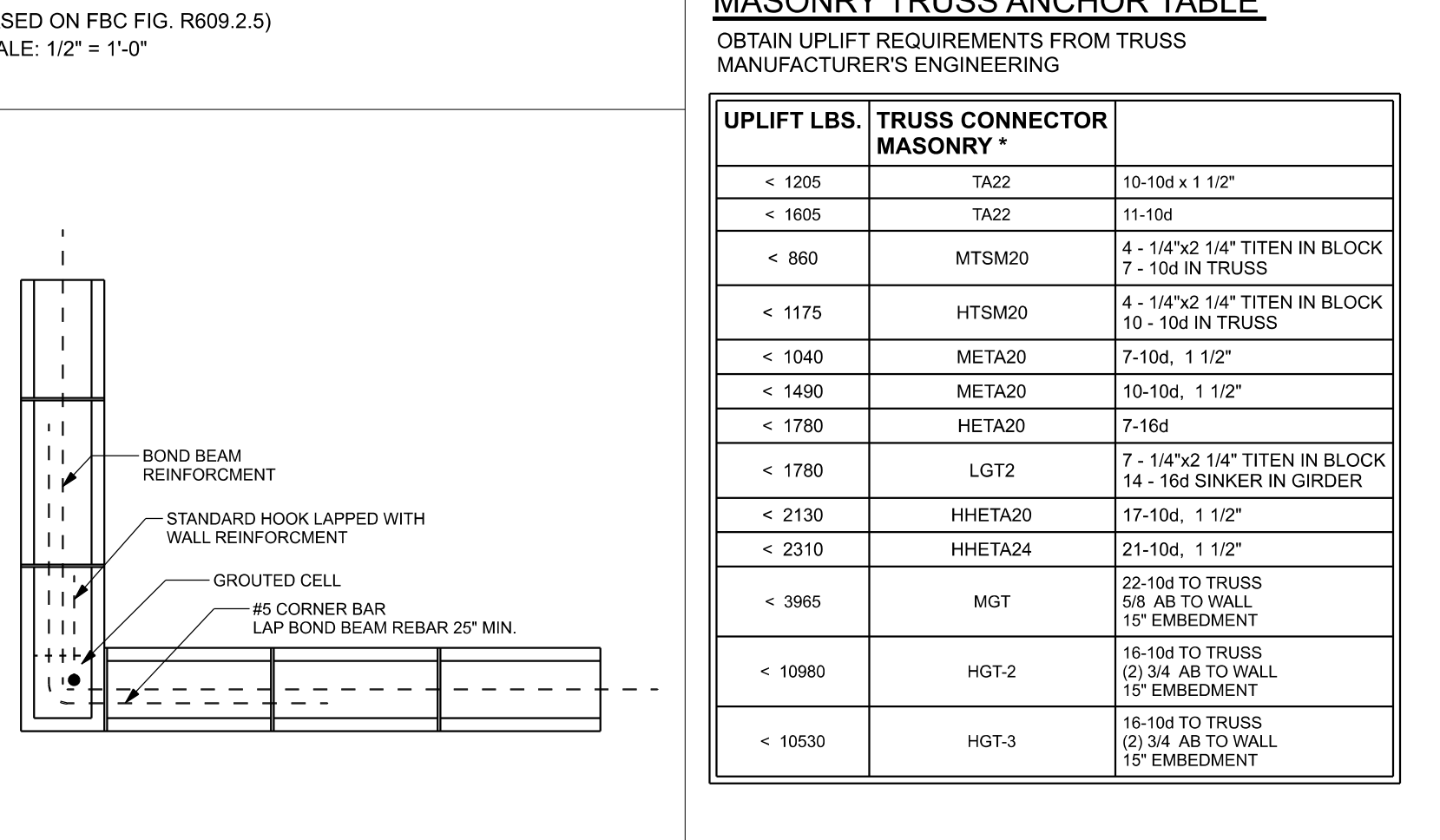
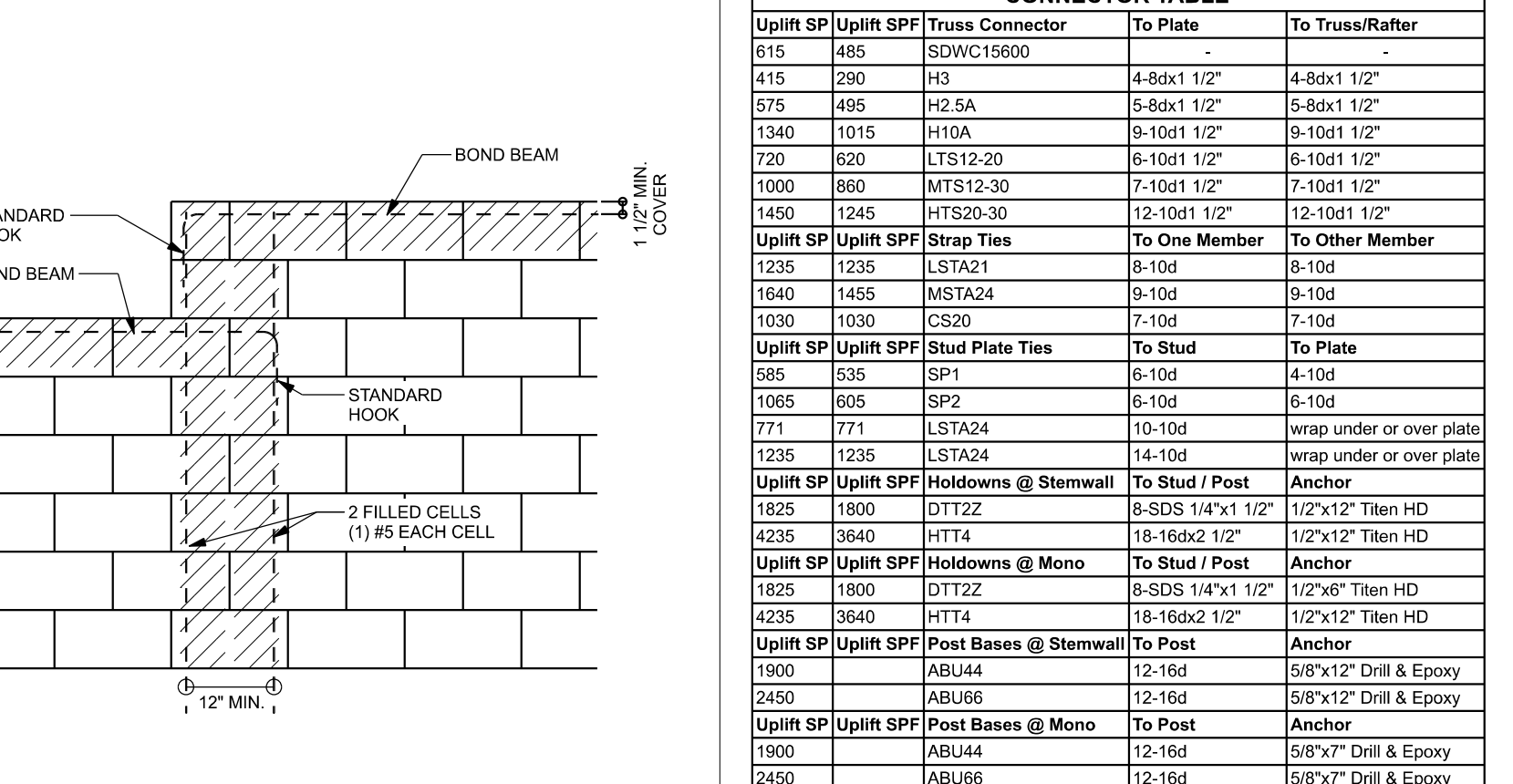
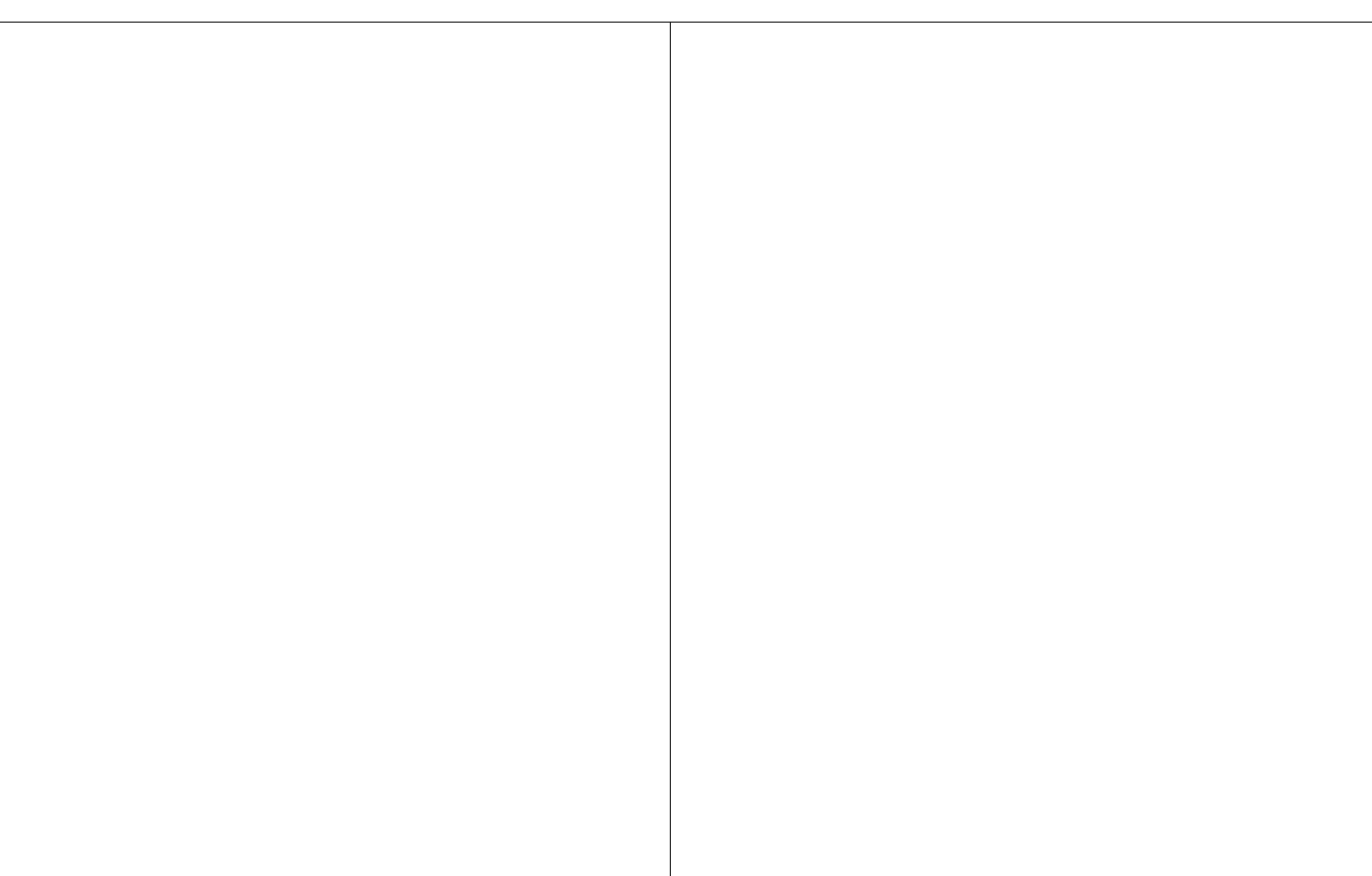
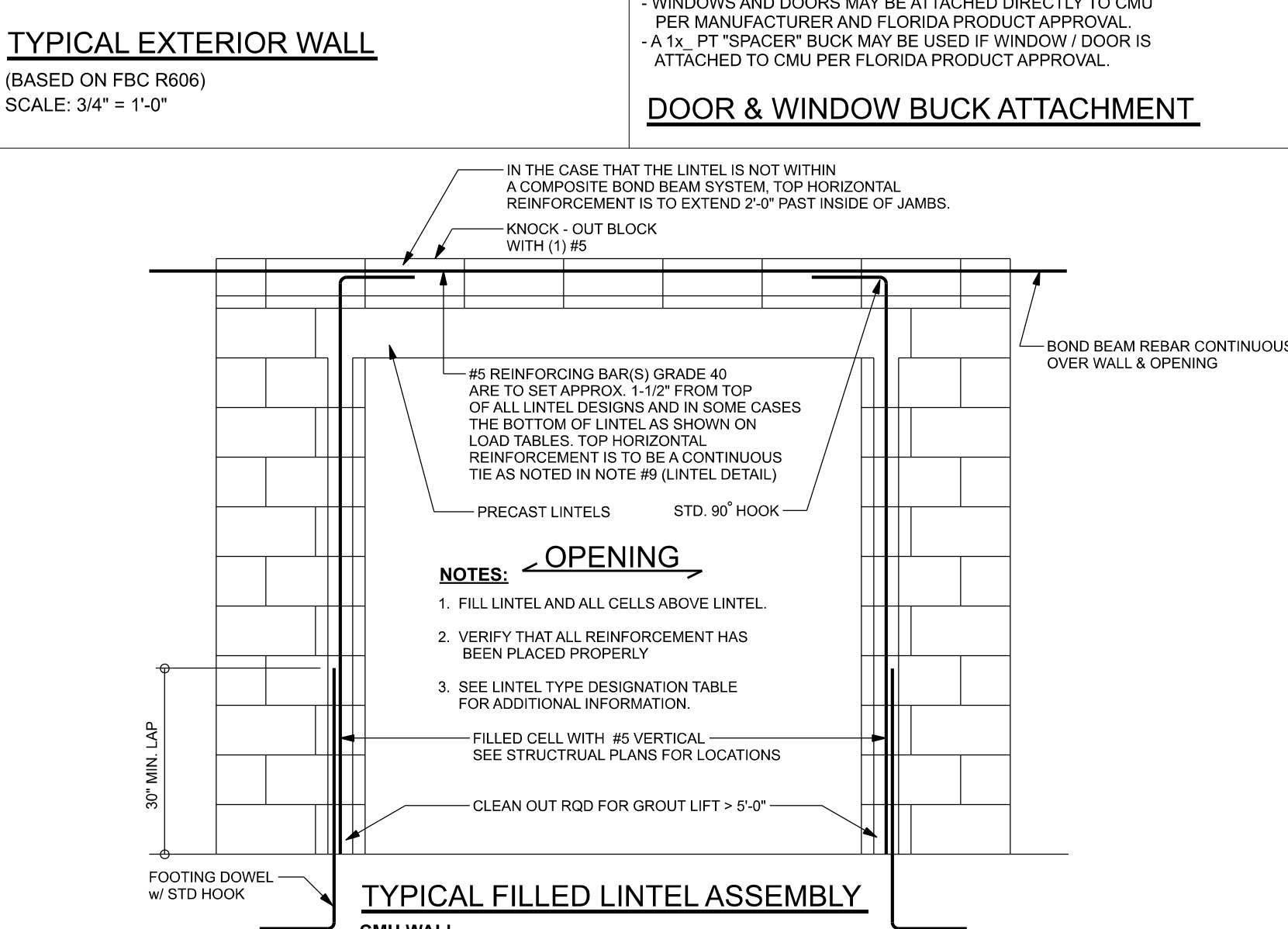
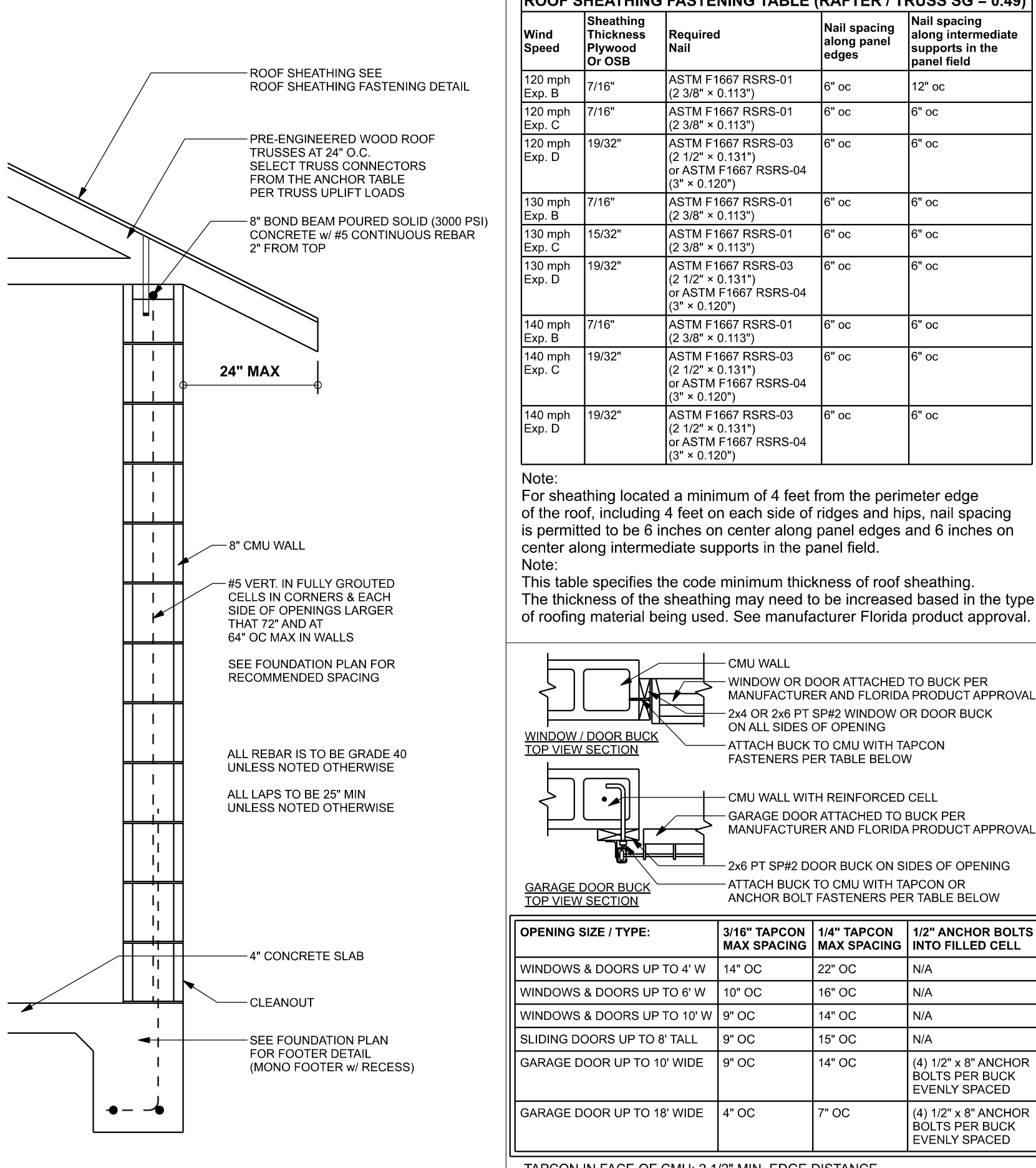


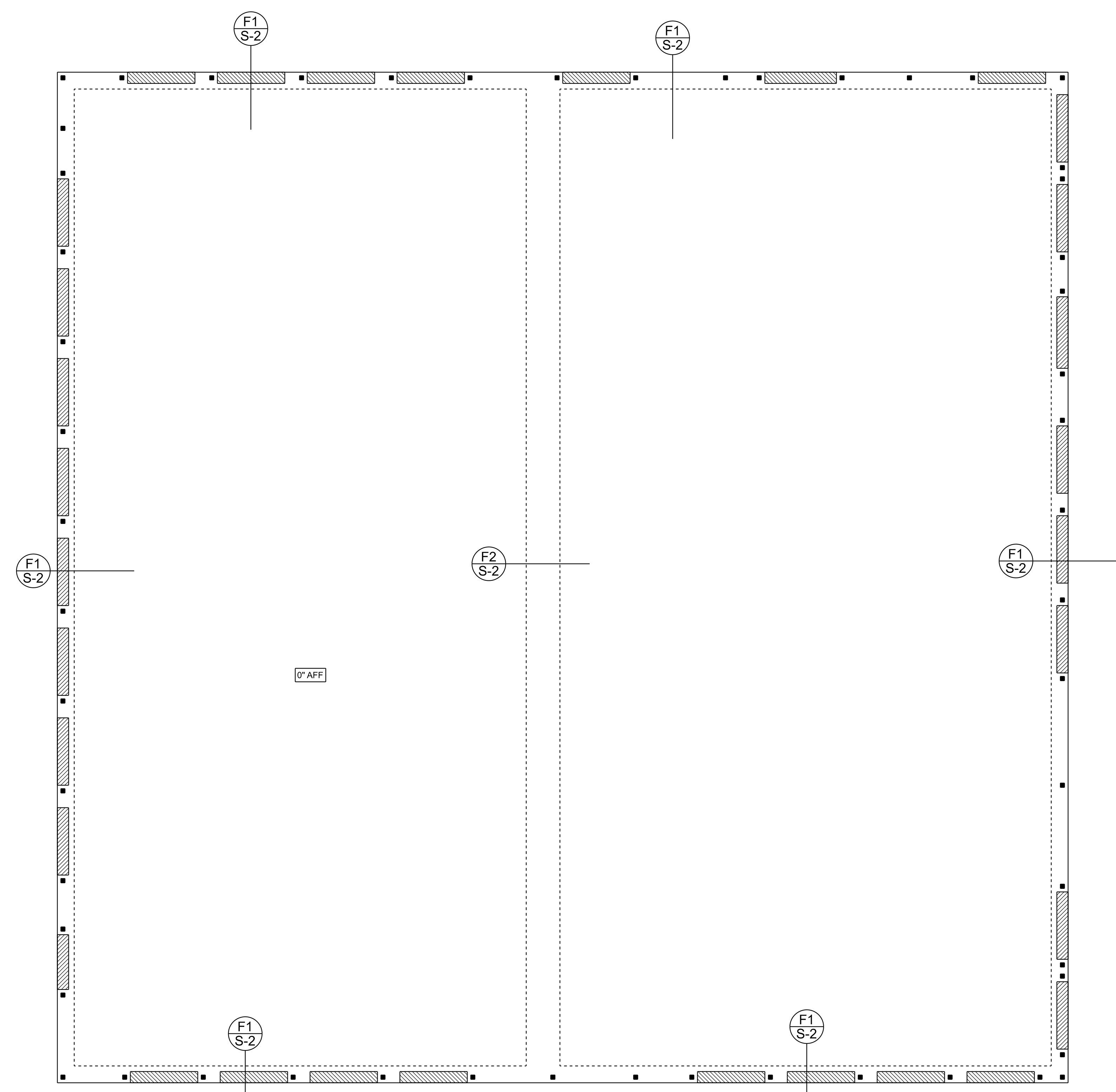
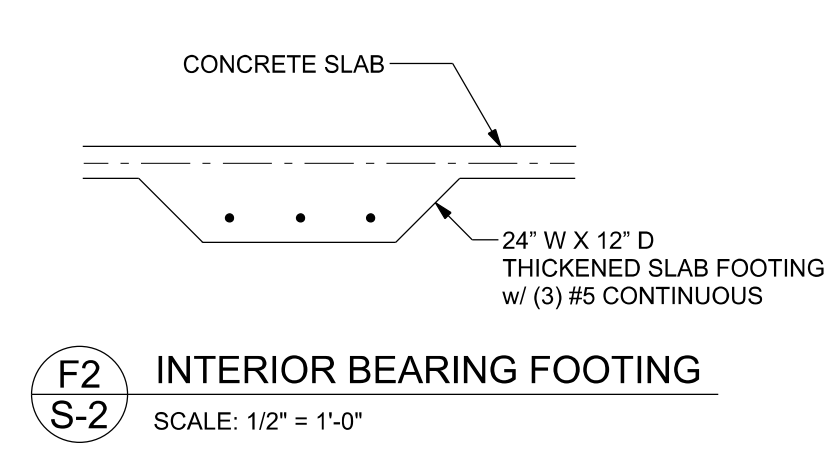
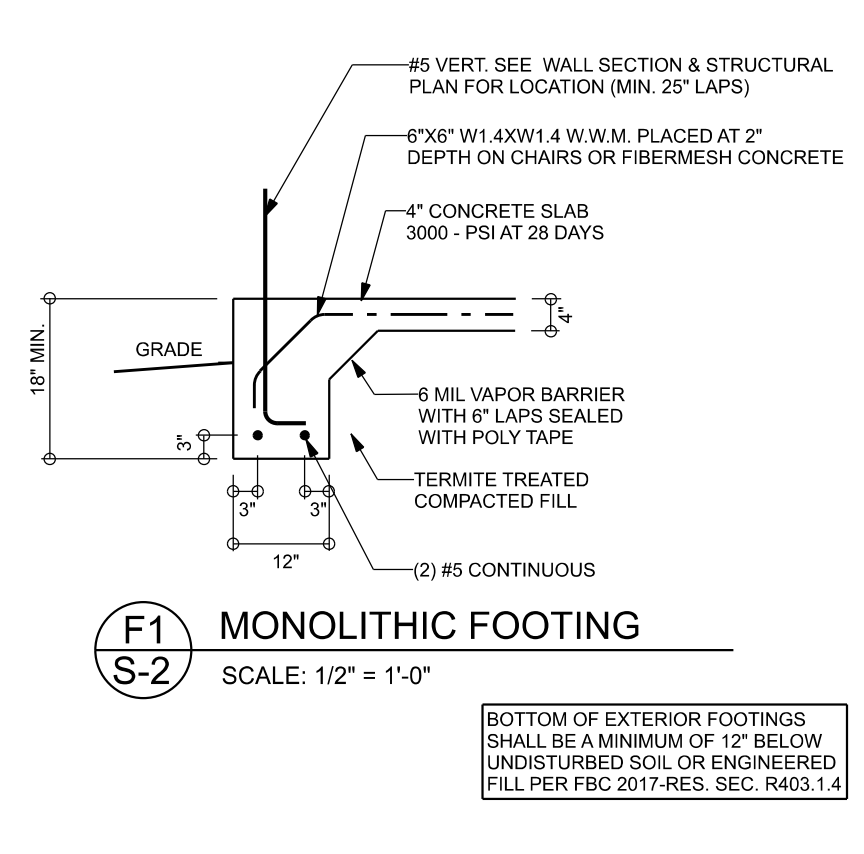
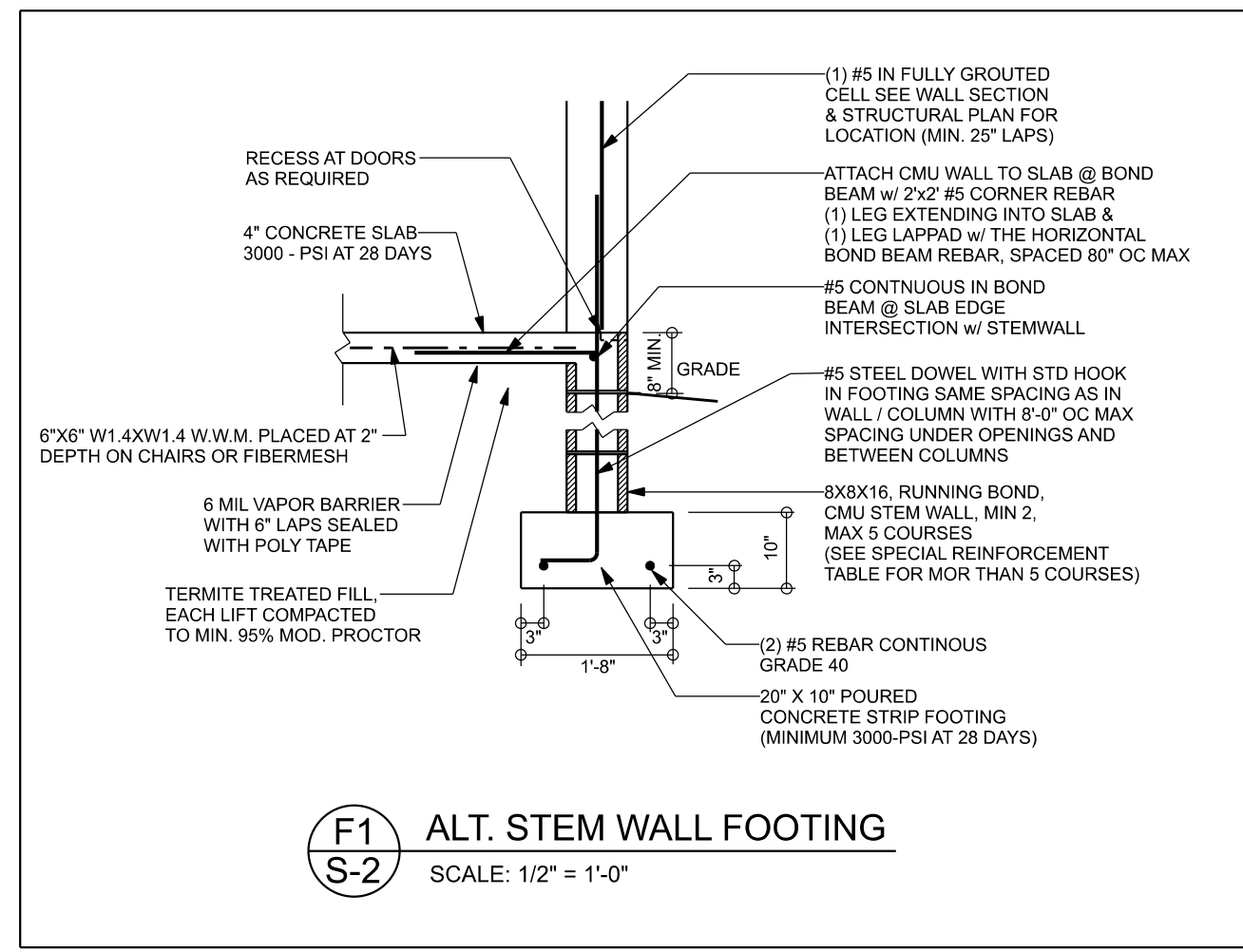
EXTERIOR WALL STUD TABLE FOR SPF #2 STUDS:

THIS STUD HEIGHT TABLE IS PER 2012 WFCM, TABLE 3.2.0, EXTERIOR LOAD BEARING & NON LOAD BEARING STUD LENGTHS FOR WALLS WITH OSB EXTERIOR AND 1/2" GYP INTERIOR. RESISTING INTERIOR ZONE WINDLOADS, 140 MPH, EXPOSURE C, STUD DEFLECTION LIMIT H240 (NOT OK FOR BRITTLE FINISH). STUD SPACINGS SHALL BE MULTIPLIED BY 0.8 FOR FRAMING LOCATED WITHIN 4 FEET OF CORNERS FOR END ZONE LOADING. (END ZONE EXAMPLE: 16" O.C., x 0.8 = 12.8" O.C.)

GRADE & SPECIES TABLE	F	E
2x8	SP #2	925 1.4
2x10	SP #2	800 1.4
2x12	SP #2	750 1.4
GLB	24F-V3 SP	2600 1.9
LTL	TIMBERSTRAND	1700 1.7
LVL	MICROLAM	2950 2.0
PVL	PARALAM	2900 2.0

NOTE: (1) 2x4 @ 16" OC TO 9'-7" STUD HEIGHT
(1) 2x4 @ 12" OC TO 10'-7" STUD HEIGHT
(1) 2x6 @ 16" OC TO 14'-10" STUD HEIGHT
(1) 2x6 @ 12" OC TO 16'-4" STUD HEIGHT





FOUNDATION NOTES

FN - 1 DIMENSIONS ON FOUNDATION & STRUCTURAL SHEETS ARE NOT EXACT. REFER TO ARCHITECTURAL PLANS FOR ACTUAL DIMENSIONS, RECESSES IN SLAB, STEP DOWNS, ETC. DISOSWAY DESIGN GROUP OR MARK DISOSWAY, P.E. IS NOT RESPONSIBLE FOR DIMENSION ERRORS ON THIS PLAN.

FN - 2 CONTRACTOR SHALL VERIFY NEED FOR INTERIOR BEARING WALL AREAS BY REVIEWING THE ROOF TRUSS PLAN (BY THE SUPPLIER) BEFORE FINALIZING FOUNDATION PLAN.

FN - 3 THE SLAB SHALL BE: 4" CONCRETE SLAB REINFORCED W/ #6@14" MELDED WIRE MESH PLACED ON CHAIRS @ 1 1/2" DEPTH OR FIBER MESH CONCRETE, 6-MIL POLY VAPOR BARRIER W/ 6" LAPS SEALED W/ POLY TAPE OVER TERMITES-TREATED & COMPACTED FILL.

TALL STEM WALL TABLE:
The table assumes 60 ksi reinforcing bars with 6" hook in the footing and bent 24" into the reinforced slab at the top. The vertical steel is to be placed toward the tension side of the CMU wall (away from the soil pressure, within 2" of the exterior side of the wall). If the wall is over 8' high, add Durowall ladder reinforcement at 16"OC vertically or a horizontal bond beam with #5 continuous at mid height. For higher parts of the wall 12" CMU may be used with reinforcement as shown in the table below:

STEMWALL HEIGHT (FEET)	UNBALANCED BACKFILL HEIGHT	VERTICAL REINFORCEMENT FOR 8" CMU STEMWALL (INCHES O.C.)			VERTICAL REINFORCEMENT FOR 12" CMU STEMWALL (INCHES O.C.)		
		#5	#7	#8	#5	#7	#8
3.3	3.0	96	96	96	96	96	96
4.0	3.7	96	96	96	96	96	96
4.7	4.3	88	96	96	96	96	96
5.3	5.0	56	96	96	96	96	96
6.0	5.7	40	80	96	80	96	96
6.7	6.3	32	56	80	56	96	96
7.3	7.0	24	40	56	40	80	96
8.0	7.7	16	32	48	32	64	80
8.7	8.3	8	24	32	24	48	64
9.3	9.0	8	16	24	16	40	48

MASONRY NOTE:
MASONRY CONSTRUCTION AND MATERIALS FOR THIS PROJECT SHALL CONFORM TO ALL REQUIREMENTS OF "SPECIFICATION FOR MASONRY STRUCTURES" (ACI 530.1/ASCE 6/MS 602). THE CONTRACTOR AND MASON MUST IMMEDIATELY, BEFORE PROCEEDING, NOTIFY THE ENGINEER OF ANY CONFLICTS BETWEEN ACI 530.1-02 AND THESE DESIGN DRAWINGS. ANY EXCEPTIONS TO ACI 530.1-02 MUST BE APPROVED BY THE ENGINEER IN WRITING.

ACI 530.1-02 Section	Specific Requirements
1.4A Compressive strength	8" block bearing walls Fm = 1500 psi
2.1 Mortar	ASTM C 270, Type N, UNO
2.2 Grout	ASTM C 476, admixtures require approval
2.3 CMU standard	ASTM C 90-02, Normal weight, Hollow, medium surface finish, 8"x8"x16" running bonds and 12"x12" or 16"x16" column blocks
2.3 Clay brick standard	ASTM C 216-02, Grade SW, Type FBS, 5.9"x2 7/8"x11 5/8"
2.4 Reinforcing bars, #3 - #11	ASTM E 118, Grade 40, Fy = 49 ksi, Lap splices min 40 bar dia. (25" for #5)
2.4F Coating for corrosion protection	Anchors, sheet metal ties completely embedded in mortar or grout, ASTM A525, Class G60, 0.60 oz/lb2 or 304SS
2.4F Coating for corrosion protection	Joint reinforcement in walls exposed to moisture or wet ties, anchors, sheet metal ties not completely embedded in mortar or grout, ASTM A153, Class B2, 1.50 oz/lb2 or 304SS
3.3.E.2 Pipes, conduits, and accessories	Any not shown on the project drawings require engineering approval.
3.3.E.7 Movement joints	Contractor assumes responsibility for type and location of movement joints if not detailed on project drawings.

Bryan Zecher Construction

Daniel Jackson Res.

PROJECT ADDRESS:
SW Tusculum Ave
Lake City, Florida

Mark Disosway FL PE 53915
This item has been digitally signed and sealed by Mark Disosway PE on digital signature date. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

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DIMENSIONS:
Stated dimensions supersede scaled dimensions. Refer all questions to Mark Disosway, P.E. for resolution. Do not proceed without clarification.

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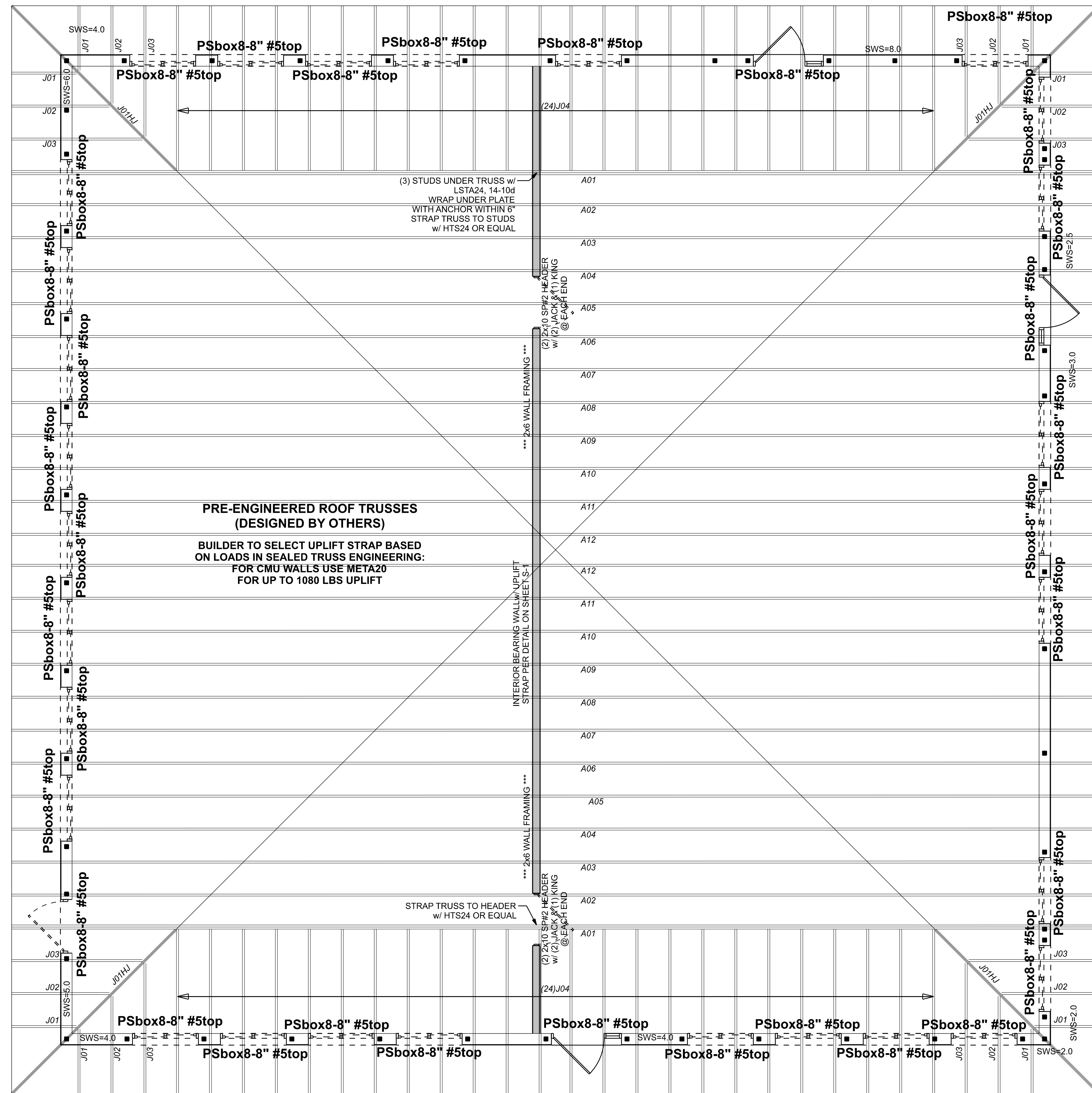
CERTIFICATION: I hereby certify that I have examined this plan, and that the applicable portions of the plan, relating to wind engineering comply with the 7th Edition Florida Building Code Residential (2020) to the best of my knowledge.

LIMITATION: This design is valid for one building, at specified location.

Mark Disosway P.E.
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Lake City, Florida 32025
386.754.5419
disoswaydesign@gmail.com

JOB NUMBER:
231049

S-2
OF 3 SHEETS



STRUCTURAL LAYOUT
SCALE: 1/4" = 1'-0"

1ST FLOOR TOTAL SHEAR WALL SEGMENTS

	REQUIRED	ACTUAL
TRANSVERSE	13.3'	18.5'
LONGITUDINAL	12.7'	22.0'

CONNECTIONS, WALL, & HEADER DESIGN IS BASED ON REACTIONS & UPLIFTS FROM TRUSS ENGINEERING FURNISHED BY BUILDER, W. B. HOWLAND COMPANY, INC. JOB# 20-4958B

STRUCTURAL PLAN NOTES

- Unless noted otherwise on structural plan
- SN-1 ALL LINTELS TO BE: PSbox8-8" #5top (U.N.O.)
 - SN-2 ALL LOAD BEARING FRAME WALL & PORCH HEADERS SHALL BE A MINIMUM OF (2) 2x6 SYP #2 (U.N.O.)
 - SN-3 ALL LOAD BEARING FRAME WALL HEADERS SHALL HAVE (1) JACK STUD & (1) KING STUD EACH SIDE (U.N.O.)
 - SN-4 DIMENSIONS ON STRUCTURAL SHEETS ARE NOT EXACT. REFER TO ARCHITECTURAL FLOOR PLAN FOR ACTUAL DIMENSIONS
 - SN-5 PERMANENT TRUSS BRACING IS TO BE INSTALLED AT LOCATIONS AS SHOWN ON THE SEALED TRUSS DRAWINGS. LATERAL BRACING IS TO BE RESTRAINED PER BCSI-03, BCSI-B1, BCSI-B2, & BCSI-B3. BCSI-B1, BCSI-B2, & BCSI-B3 ARE FURNISHED BY THE TRUSS SUPPLIER, WITH THE SEALED TRUSS PACKAGE

WALL LEGEND

	EXTERIOR WALL (CMU)
	EXTERIOR WALL (WOOD FRAME)
	INTERIOR NON-LOAD BEARING WALL
	INTERIOR LOAD BEARING WALL w/ NO UPLIFT
	INTERIOR LOAD BEARING WALL w/ UPLIFT

Bryan Zecher Construction

Daniel Jackson Res.

PROJECT ADDRESS:
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Lake City, Florida

Mark Disoway FL PE 53915
This item has been digitally signed and sealed by Mark Disoway PE on digital signature date. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

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DIMENSIONS:
Stated dimensions supercede scaled dimensions. Refer all questions to Mark Disoway, P.E. for resolution. Do not proceed without clarification.

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CERTIFICATION: I hereby certify that I have examined this plan, and that the applicable portions of the plan, relating to wind engineering comply with the 7th Edition Florida Building Code Residential (2020) to the best of my knowledge.

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S-3
OF 3 SHEETS