

FLORIDA POWERBOX8  
SPECIFICATION NOTES (3000 PSI)

1) PRODUCT NAME (PATENT NO. 6367209):

PREFORMED POWERS STEEL LINTEL SHALL BE GALVANNEZED COIL STEEL AS MANUFACTURED BY POWERS STEEL AND WIRE PRODUCTS. THE STEEL GRADE SHALL BE ASTM A570 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.

2) SHORE LINTELS AS REQUIRED TO COMPENSATE FOR DEAD LOAD DEFLECTION ON NON-CURED MASONRY GROUT! ALL LINTELS GREATER THAN 12'-0" ARE BUILT WITH 1/2" CAMBER.

3) LINTEL TO BE USED WITH BRICK OR CONCRETE MASONRY UNITS HAVING MINIMUM Fm AS SHOWN.

4) STEEL SURFACES IN CONTACT WITH GROUT AND/OR MORTAR SHALL BE UNPAINTED AND FREE OF MATERIAL THAT MIGHT INHIBIT BOND.

5) DESIGN BEARING OF POWERS STEEL LINTELS IS 8" 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.

6) Fm = 1500 psi. MASONRY UNITS SHALL CONFORM TO ASTM C90, GRADE N.

7) GROUT - 3,000 psi. SLUMP RANGE: 8" 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.

8) MORTAR: TYPE "S" OR TYPE "M" 1800 psi.

9) TOP REINFORCING OR TOP OF WALL REINFORCING, IS REQUIRED BY CODES TO PROVIDE A CONTINUOUS TIE AROUND A STRUCTURE AND TO PROVIDE FOR UPLIFT RESISTANCE AT LINTELS.

10) ATTACHMENTS TO TOP OF WALL PER ARCHITECTURAL AND/OR ENGINEERING DRAWINGS.

11) 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 OFFICE.

A PROPER BARRIER IS REQUIRED WHEN USING CORROSIVE LUMBER PRODUCTS IN CONTACT WITH THE STEEL LINTELS. A PROPER BARRIER WOULD BE A POLYETHYLENE 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 L/600 FOR ALL LOADS SHOWN ABOVE THE DARKENED SOLID LINE. DEFLECTION LIMITS ARE SET TO L/360 (LIVE LOAD) AND L/240 (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 SET APPROX. 1'-0" FROM TOP OF ALL LINTEL DESIGNS AND IN SOME CASES THE BOTTOM OF LINTEL AS SHOWN ON LOAD TABLES.

15) HORIZONTAL REINFORCEMENT IS TO BE A CONTINUOUS TIE AS NOTED IN NOTE #6. IN THE CASE THAT THE LINTEL IS NOT WITHIN A COMPOSITE BOND BEAM SYSTEM, TOP HORIZONTAL REINFORCEMENT IS TO EXTEND 2'-0" PAST INSIDE OF JAMBS.

16) MANUFACTURER: POWERS STEEL, 4118 E. ELWOOD PHOENIX, AZ 85040 PH# (602) 437-1160 FAX# (602) 437-5409

17) TECHNICAL DATA AND ENGINEERING POWERS LINTELS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE FOLLOWING:

- FLORIDA BUILDING CODE

- NASPEC AISI LIGHT GAGE

- COLD FORMED STEEL DESIGN - 2012

- ACI 530-13/ASCE 5-13/TMS 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 SCOTSDALE, AZ 85251 PHONE (480) 946-2010 FAX (480) 946-1909

IF AN INSPECTOR, CONTRACTOR, SUBCONTRACTOR, OR PLANS EXAMINER HAS ANY TECHNICAL QUESTIONS PLEASE CALL.

18) INSTALLATION:

POWERS LINTELS ARE TO BE INSTALLED IN ACCORDANCE WITH STANDARD CONSTRUCTIONS PRACTICES. SET TO PROPER LINE AND LEVEL. PLUMB AND TRUE, AND IN CORRECT RELATION TO OTHER WORK.

19) HEIGHT OF COMPOSITE LINTEL VARIES

SEE PLAN AND SCHEDULES

4-1/2" DIA. HOLE AT GROUDED CELL

POWERBOX8 LENTEL DETAILS

FLORIDA PRODUCT APPROVAL NUMBER FL11363 - POWER BOX

NOTE: NO SCALE.

16 GAGE IS .060 INCHES THICK.

20 GAGE IS .039 INCHES THICK.

POWERBOX8 STEEL LINTELS

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POWERS STEEL PRODUCT LINTEL

DETAIL PER POWER BOX TECH SUPPORT

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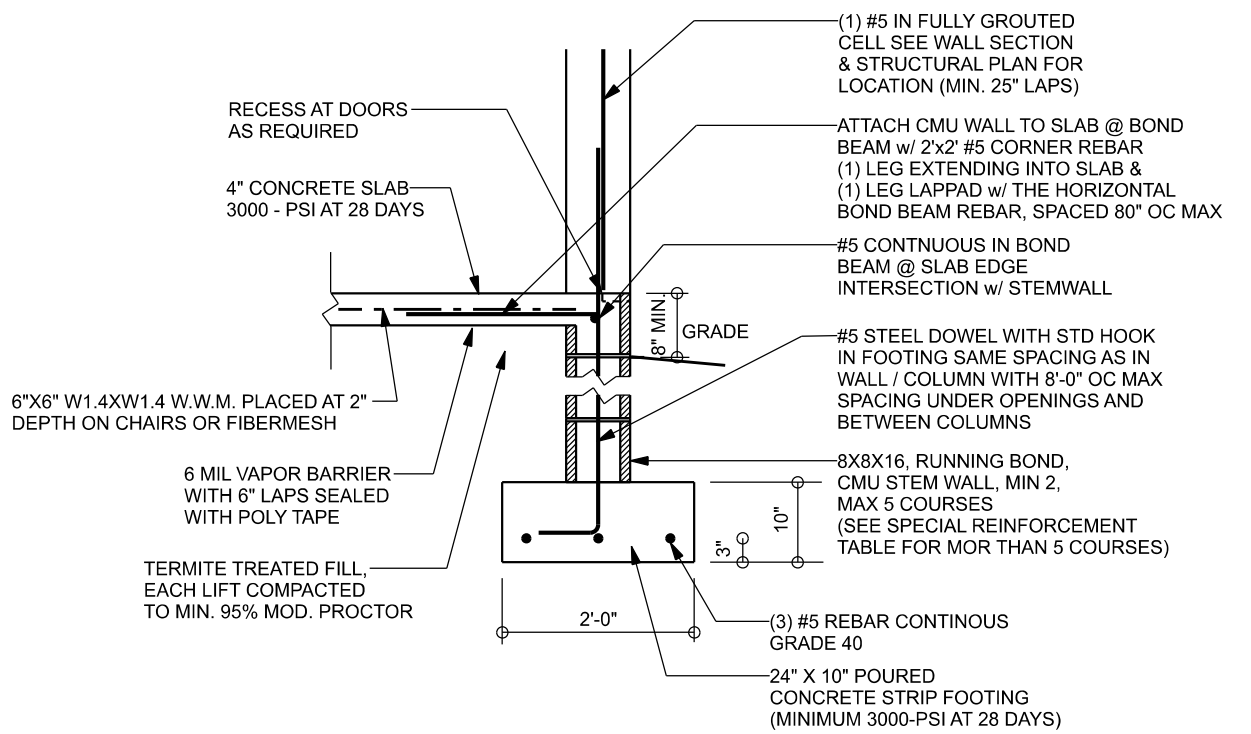
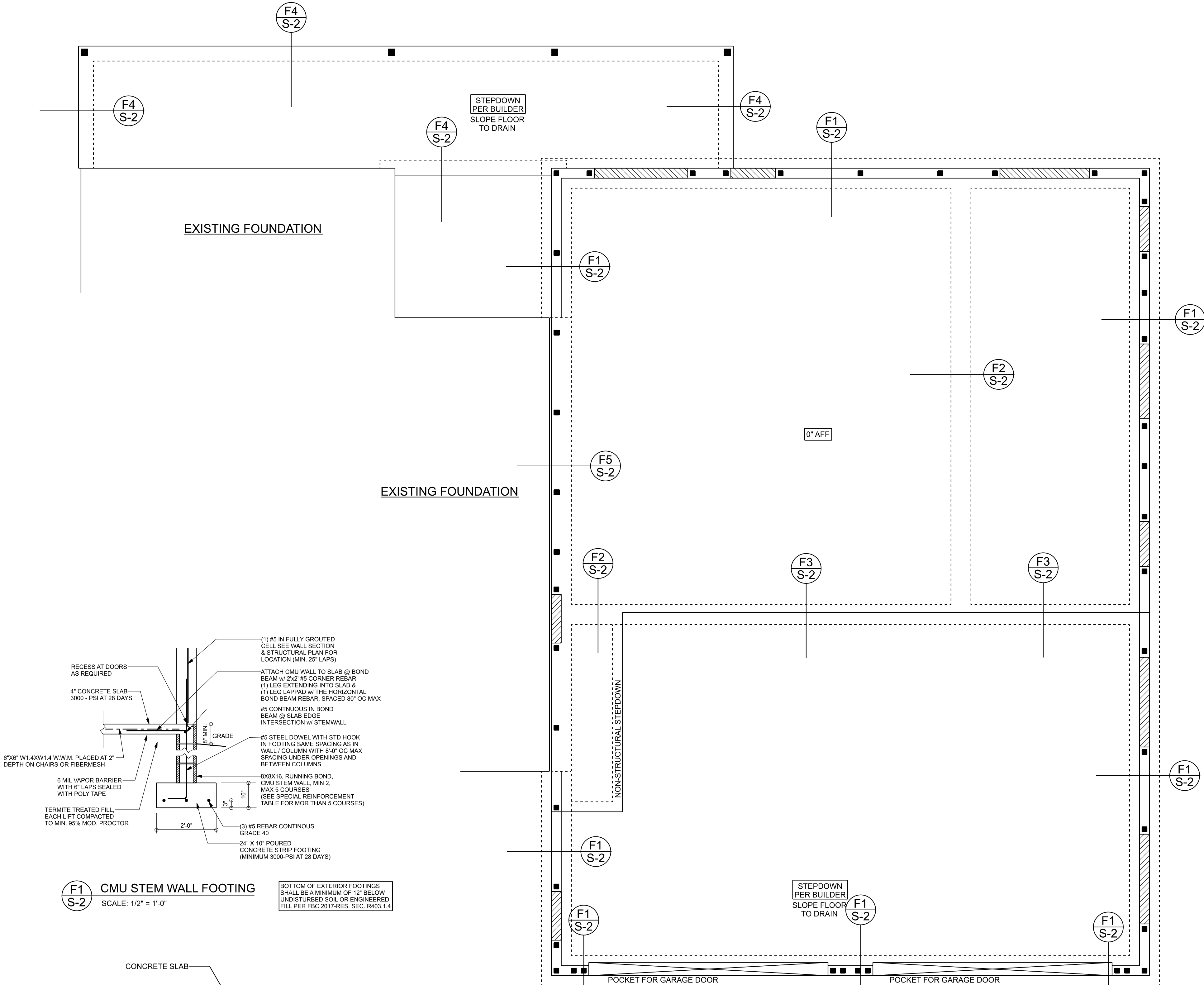
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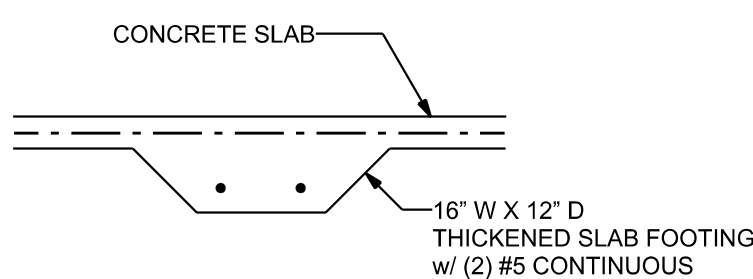
TALL STEM WALL TABLE:							
The table assumes 60 ksi reinforcing bars with 6" hook in the footing and bent 24" into the reinforced slab at the top. The vertical steel is to be placed toward the tension side of the CMU wall (away from the soil pressure, within 2" of the exterior side of the wall). If the wall is over 8' high, add Duowall ladder reinforcement at 16"OC vertically or a horizontal bond beam with 1#5 continuous at mid height. For higher parts of the wall 12" CMU may be used with reinforcement as shown in the table below.							
STEM WALL HEIGHT (FEET)	UNBALANCED BACKFILL HEIGHT	VERTICAL REINFORCEMENT FOR 8" CMU STEM WALL (INCHES O.C.)			VERTICAL REINFORCEMENT FOR 12" CMU STEM WALL (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/TMS 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 F'm = 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 bond and 12"x12" or 16"x16" column block
2.3 Clay brick standard	ASTM C 216-02, Grade SW, Type FBS, 5.5"x2.75"x11.5"
2.4 Reinforcing bars, #3 - #11	ASTM 615, Grade 40, Fy = 40 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 A305, Class C80, 0.60 oz/lb or 304SS
2.4F Coating for corrosion protection	Joint reinforcement in walls exposed to moisture or wire ties, anchors, sheet metal ties not completely embedded in mortar or grout, ASTM A153, Class B2, 1.50 oz/lb 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.

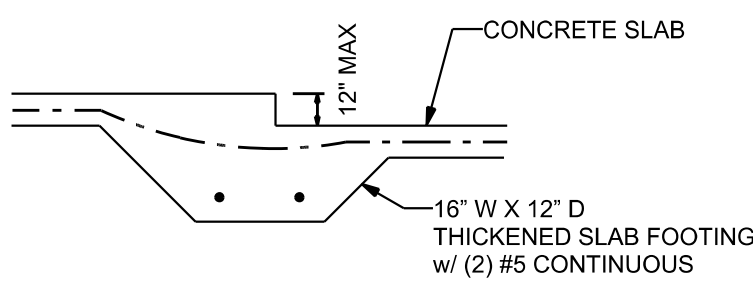


F1 S-2 CMU STEM WALL FOOTING  
SCALE: 1/2" = 1'-0"

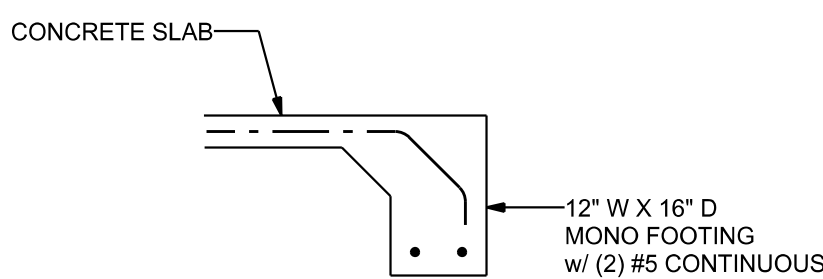
BOTTOM OF EXTERIOR FOOTINGS SHALL BE A MINIMUM OF 12" BELOW UNDISTURBED SOIL OR ENGINEERED FILL PER FBC 2017-RES. SEC. R403.1.4



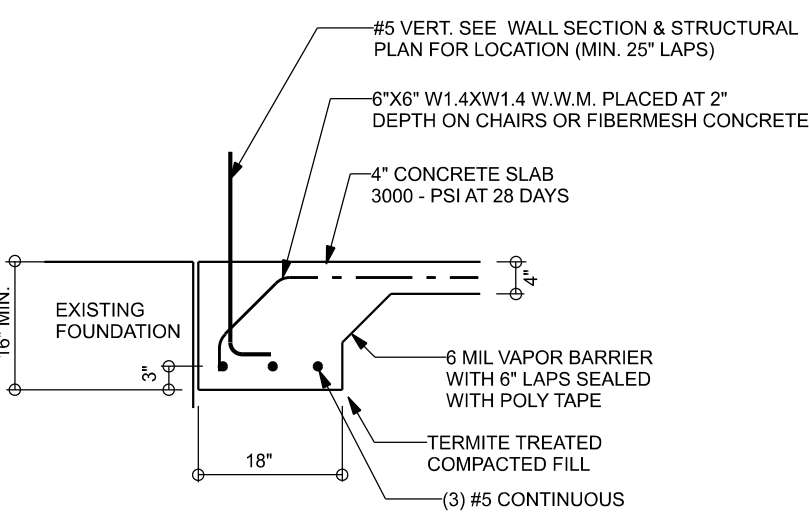
F2 S-2 INTERIOR BEARING FOOTING  
SCALE: 1/2" = 1'-0"



F3 S-2 INTERIOR BEARING STEP FOOTING  
SCALE: 1/2" = 1'-0"



F4 S-2 PORCH MONOLITHIC FOOTING  
SCALE: 1/2" = 1'-0"



F5 S-2 MONOLITHIC FOOTING @ EXISTING  
SCALE: 1/2" = 1'-0"

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/ 8X8-1.4-1.4 WELDED 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 TERMITE-TREATED & COMPACTED FILL.

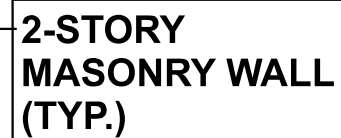
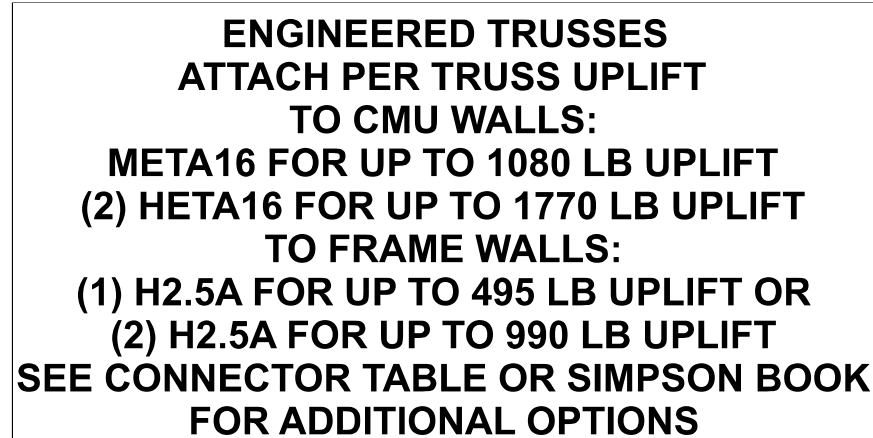
Bryan Zecher Homes, Inc  
Read & Susan Kellner  
PROJECT ADDRESS:  
SW Mortgage Lane  
Lake City, Florida

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.  
C=US, O=Florida, dnQualifier=A014 10C000017E97 DE07CA000746F0, CN=Mark d Disosway  
2024-12-03 20:00:26

DIMENSIONS: Stated dimensions supersede scaled dimensions. Refer all questions to Mark Disosway, P.E. for resolution. Do not proceed without clarification.  
COPYRIGHTS AND PROPERTY RIGHTS: Mark Disosway, P.E. hereby expressly reserves its common law copyrights and property right in these instruments of service. This document is not to be reproduced, altered or copied in any form or manner without first the express written permission and consent of Mark Disosway.  
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 8th Edition Florida Building Code Residential (2023) to the best of my knowledge.  
LIMITATION: This design is valid for one building, at specified location.

Mark Disosway P.E.  
163 SW Midtown Place  
Suite 103  
Lake City, Florida 32025  
386.754.5419  
disoswaydesign@gmail.com

JOB NUMBER:  
241248  
S-2  
OF 3 SHEETS



SN-1	ALL LINTELS TO BE: PSbow6-8" #5top (U.N.O.)
SN-2	ALL LOAD BEARING FRAME WALL & PORCH HEADERS SHALL BE A MINIMUM OF (2) 2X8 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 BC51-03H, BC51-01H, BC51-02, & BC51-03H. BC51-01, BC51-02 & BC51-03H ARE FURNISHED BY THE TRUSS SUPPLIER, WITH THE SEALED TRUSS PACKAGE

S-3  
OF 3 SHEETS