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Charleson Ris East 12

July 13, 2017

McGraw Homes Inc 902 SW Willow PI Blue Springs, MO 64014

Re: 1691 NE Parkwood Dr.

Our firm has been asked to address the exterior wall structural nailing pattern for the house located at 1691 NE Parkwood Dr. in Lee's Summit, MO. The builder has added 3 windows to the back of the house eliminating sheathing space.

The remaining sheathing given the additional windows is adequate to provide the lateral resistance required for the revised calculations on sheet S-3.0.

Our firm recommends approval of the exterior sheathing noted above to provide proper lateral resistance.

This report has been prepared for the exclusive use of our client for specific application to the project discussed and has been prepared in accordance with generally accepted engineering practices. No warranties, either express or implied, are intended or made.

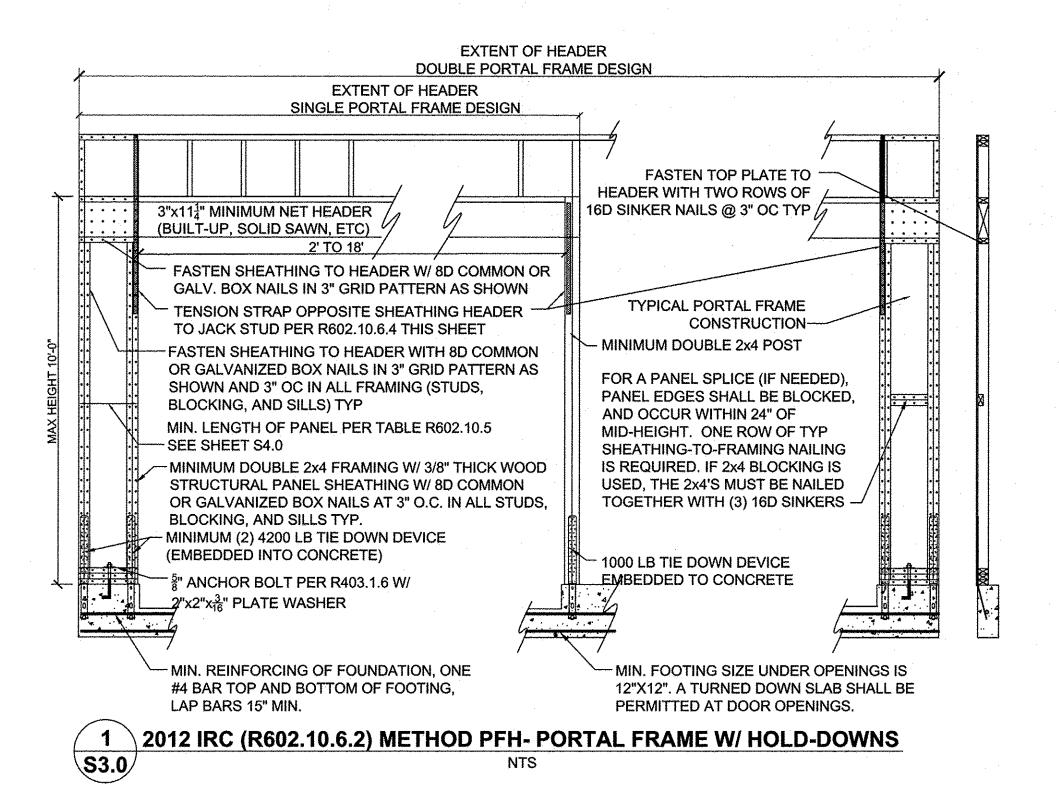
We appreciate the opportunity to be of service to you on this project. If you have any questions regarding this report, please contact us.

Very truly yours,

HD ENGINEERING & DESIGN, INC.

Colter Loshbaugh

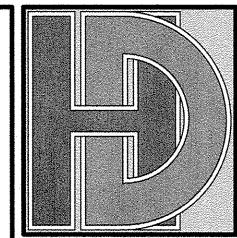
Chris Saathoff, P.E.



MINIMUM WALL STUD FRAMING NOMINAL SIZE & GRADE	MAX. PONY WALL HEIGHT (FEET)	MAX. TOTAL WALL HEIGHT (FEET)	MAX. OPENING WIDTH (FEET)	TENSION STRAP CAPACITY REQUIRED (POUNDS) ^{a, b} BASIC WIND SPEED (MPH)		NO. OF 8d COMMON NAILS REQUIRED AT FLAT 2x6 BASIC WIND SPEED (MPH)	
				EXPOSURE B	EXPOSURE C	EXPOSURE B	EXPOSURE C
				, , , , , , , , , , , , , , , , , , ,	0	10	18
2X4 NO. 2 GRADE	1	10	9	1,000	1,000	8	8
			16	1,000	2,325	8	16
			18	1,200	2,725	8	18
	2	10	9	1,000	1,550	8	10
			16	2,025	3,900	14	26
			18	2,400	DR	16	DR
	2	12	9	1,200	2,750	8	12
			16	3,200	DR	22	DR
			18	3,850	DR	26	DR
	4	12	9	2,350	DR	16	DR
			16	DR	DR	DR	DR
2X6 STUD GRADE	2	12	9	1,000	1,750	8	12
			16	2,050	3,550	14	24
			18	2,450	4,100	18	28
	4	12	9	1,500	2,775	10	18
			16	3,150	DR	22	DR
			18	3,675	DR	26	DR

a. DR = DESIGN REQUIRED b. STRAP SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

		RESIC	DENTIAL SEISMIC	& WIND ANALYSIS			ari Bar ummandara gijimasa saminya, ara masa salasan a sangangan masayay i masanasanan
TERMINE WEIGHT OF HOUSE:				DEAD LOAD (psf)	AREA (ft²)	INPUT CALCULATED VALUE WEIGHT (lbs.)	
DOF EILING				10 10	2540 2481	25400 24810	
RST FLOOR RST FLOOR EXT. WALL DL			WALL LENGTH (ft)	10 WALL HEIGHT (ft) 10	1791 WALL UNIT WT. (psf)	17910 WEIGHT (lbs) 22000	
RST FLOOR INT. PARTITION WALL DL				DEAD LOAD (psf)	AREA (#2) 1791	WEIGHT (lbs) 10746	
	 ECTED AREAS (WIND D -TO-BACK	DESIGN PER 115 MPH	 3-SECOND GUST, EXPOSI 	URE C AND MEAN ROOF HEIGHT <= SIDE-TO-S			a the control of the stand of the same planes and which can plane planes processes are used and construction o
AREA SLOPED ROOF 336	LOAD 2859	e farmen kannan jarini di firija ta a di dajaja men a Andari Andria Andria di kannan di kannan di kannan di da	SLOPED ROOF	AREA 506	LOAD 4298		
VERT. ROOF 125 1ST 605	1554 7521	CUMULATIVE 12009	VERT. ROOF 1ST	0 616	0 7645	CUMULATIVE 12018	
SLOPED ROOF WALL/VERT. ROOF	ZONE B ZONE A		F) - PER ASCE CH. 6 9.7 14.2	ZONE C ZONE D	11.3 7.7	2a (FIG. 28.6-1, ASCE7)	
MEAN ROOF HT., h If there is a walkout wall to be sheathed, d	determine tributary wind a	17	——————————————————————————————————————				
₀ =0.00256K _z K _{zt} K _d V ² (ASCE7-10 Velocity F	Pressure)						
(SITE GROUND MOTION - %g - FROM AS (from ASCE7 Table 11.4-1)	SCE7 SEISMIC MAP)					61210 12.0% 1.6	
(from ASCE7 Table 12.2-1)						0.128 6.5	
			SEISMIC	SHEAR		• • • • • • • • • • • • • • • • • • •	Supering and series and photographs and to accept to the control of the control o
CATION T FLOOR				Fron	n ASCE7 (Eq. 12.8-1):	V (= 1.2 * S _{DS} * W 1446	' / R) (lbs.)
Sheathing Location		ng Schedule	<u> </u>	tening Schedule 1" penetration@ 6" OC Edges, 6" OC	Allowat	ele Shear (#/LF)	Code Reference per IBC, Table
Exterior (Option #1) Exterior (Option #2)	7/16" APA Rate 7/16" APA Rate		Field For 24" stud spacin	ng, 12" OC Field For 16" stud spacing 1" penetration@ 4" OC Edges, 6" OC		155	2306.3(1) per IBC, Table
Exterior (Option #2) Exterior (Option #3)	7/16" APA Rate	· ·	Field For 24" stud spacin	Field For 24" stud spacing, 12" OC Field For 16" stud spacing 1-1/2" 16ga. Staples w/ 1" penetration@ 3" OC Edges, 6" OC		230 310	
A. M. T. T. M.			8d Common Nails w/ 1-3/	g, 12" OC Field For 16" stud spacing /8" penetration @ 6" O.C. Edges, 12"		V (V	2306.3(1)
Exterior (Option #4)	7/16" APA Rated Plywood/OSB or shiplap panel sheathing, or 3/8" shiplap panel sheathing with tighter nail spacing		O.C. Field for 7/16" APA-rated plywood/OSB or shiplap panel sheathing OR @ 4" O.C. Edges, 12" O.C. Field for 3/8" shiplap panel sheathing		220		AF&PA SDPWS Table 4.3A
Exterior (Option #5)	7/16" APA Rated Plywood/OSB or shiplap panel sheathing, or 3/8" shiplap panel sheathing with tighter nail spacing		8d Common Nails w/ 1-3/8" penetration @ 4" O.C. Edges, 12" O.C. Field for 7/16" APA-rated plywood/OSB or shiplap panel sheathing OR @ 3" O.C. Edges, 12" O.C. Field for 3/8" shiplap panel sheathing			320	AF&PA SDPWS Table 4.3A
Exterior <u>(Option #6)</u>	7/16" APA Rated Plywood/OSB or shiplap panel sheathing, or 3/8" shiplap panel sheathing with tighter nail spacing and double studs at each panel edge		8d Common Nails w/ 1-3/8" penetration @ 3" O.C. Edges, 12" O.C. Field			410	AF&PA SDPWS Table 4.3A
Interior	1/2" Gyps	um Board	No. 6- 1 ¹ / ₄ " Type W or S	Screws @ 8" O.C. Edges, 12" O.C. Field		60	per IBC, Table 2306.4.4
Interior	16 Ga. Simpson/USP 7 (or ea	• •		& (1) 8d @ intermediate studs (per cations - see detail on sheet S3)		325	
TERIOR SHEATHING OPTION FOR FIRST	TFLOOR	4		WIDTH OF 1ST STORY (FT.) DEPTH OF 1ST STORY (FT.)	55 56		
	- 		problem, the real property of the second sec			·	automorphism and a second seco
		The second section of the sect		BACK WALL OF GARAGE (FT.) GAR. WALL: 1=F-B, 2=S-S	28		
		EXTER	IOR STRUCTURAL WALL L				
FRONT-TO-BACK	T	EISMIC		GAR. WALL: 1=F-B, 2=S-S ENGTHS (ft.) & RESISTANCES	28 2 WIND	SIDE-TO-SIDE	RESISTANCE (lbs
	RESISTANCE (lps.) 26320		IOR STRUCTURAL WALL L RESISTANCE (lbs.) 8680	GAR. WALL: 1=F-B, 2=S-S	28 2	SIDE-TO-SIDE 31	RESISTANCE (lbs
FFLOOR 94	RESISTANCE (lbs.) 26320 ADDITIONAL RESIS	SIDE-TO-SIDE 31 TANCE REQUIRED WIND	RESISTANCE (lbs.)	GAR. WALL: 1=F-B, 2=S-S ENGTHS (ft.) & RESISTANCES FRONT-TO-BACK 94 Anchor Bolt Spacing diameter (in.)	28 2 WIND RESISTANCE (lbs.) 36848 I (in.) 0.5	31 16d Nail Spacing req'd at 1st Floor F-B	bottom plate (in.)
T FLOOR 94	RESISTANCE (lbs.) 26320 ADDITIONAL RESIS	SIDE-TO-SIDE 31 STANCE REQUIRED	RESISTANCE (lbs.)	GAR. WALL: 1=F-B, 2=S-S ENGTHS (ft.) & RESISTANCES FRONT-TO-BACK 94 Anchor Bolt Spacing diameter (in.) Shear value (per NDS) Spacing F-B (inches)	28 2 WIND RESISTANCE (lbs.) 36848 I (in.) 0.5 944 169.0	31 16d Nail Spacing req'd at	bottom plate (in.)
FLOOR FRONT-TO-BACK	RESISTANCE (lbs.) 26320 ADDITIONAL RESIS SEISMIC 0	SIDE-TO-SIDE 31 TANCE REQUIRED WIND 0	RESISTANCE (lbs.)	GAR. WALL: 1=F-B, 2=S-S ENGTHS (ft.) & RESISTANCES FRONT-TO-BACK 94 Anchor Bolt Spacing diameter (in.) Shear value (per NDS)	28 2 WIND RESISTANCE (lbs.) 36848 1 (in.) 0.5 944	31 16d Nail Spacing req'd at 1st Floor F-B	12152 bottom plate (in.)
FLOOR FRONT-TO-BACK	RESISTANCE (lbs.) 26320 ADDITIONAL RESIS SEISMIC 0	SIDE-TO-SIDE 31 TANCE REQUIRED WIND 0 0	RESISTANCE (lbs.) 8680	GAR. WALL: 1=F-B, 2=S-S ENGTHS (ft.) & RESISTANCES FRONT-TO-BACK 94 Anchor Bolt Spacing diameter (in.) Shear value (per NDS) Spacing F-B (inches) spacing S-S (inches)	28 2 WIND RESISTANCE (lbs.) 36848 1 (in.) 0.5 944 169.0 165.9	31 16d Nail Spacing req'd at 1st Floor F-B	12152 bottom plate (in.)
T FLOOR 94	RESISTANCE (lbs.) 26320 ADDITIONAL RESIS SEISMIC 0 0 ADDITIONAL	SIDE-TO-SIDE 31 TANCE REQUIRED WIND 0 0 RESISTANCE REQUI	RESISTANCE (lbs.) 8680 RED IN ADDITION TO RESI	GAR. WALL: 1=F-B, 2=S-S ENGTHS (ft.) & RESISTANCES FRONT-TO-BACK 94 Anchor Bolt Spacing diameter (in.) Shear value (per NDS) Spacing F-B (inches) spacing S-S (inches)	28 2 WIND RESISTANCE (lbs.) 36848 1 (in.) 0.5 944 169.0 165.9 WALLS** INT. WALL LENGTH	31 16d Nail Spacing req'd at 1st Floor F-B 1st Floor S-S RESISTANCE PROVIDED BY	bottom plate (in.)
T FLOOR 94	RESISTANCE (lbs.) 26320 ADDITIONAL RESIS SEISMIC 0 0	SIDE-TO-SIDE 31 TANCE REQUIRED WIND 0 0 RESISTANCE REQUI	RESISTANCE (lbs.) 8680 RED IN ADDITION TO RESI	GAR. WALL: 1=F-B, 2=S-S ENGTHS (ft.) & RESISTANCES FRONT-TO-BACK 94 Anchor Bolt Spacing diameter (in.) Shear value (per NDS) Spacing F-B (inches) spacing S-S (inches)	28 2 WIND RESISTANCE (lbs.) 36848 1 (in.) 0.5 944 169.0 165.9 VALLS** INT. WALL LENGTH SHEATHED W/ OSB	31 16d Nail Spacing req'd at 1st Floor F-B 1st Floor S-S	bottom plate (in.)
T FLOOR FRONT-TO-BACK T FLOOR SIDE-TO-SIDE I FLOOR FRONT-TO-BACK T FLOOR SIDE-TO-SIDE	ADDITIONAL RESISTANCE (bs.) 26320 ADDITIONAL RESISTANCE ADDITIONAL RESISTANCE REQUIRED (POUNDS) 0	SIDE-TO-SIDE 31 TANCE REQUIRED WIND 0 0 RESISTANCE REQUIR PORTAL FRAMES OR PERF. SHEAR WALL RESISTANCE	RESISTANCE (lbs.) 8680 RED IN ADDITION TO RESI INTERIOR X-BRACES (325#/BRACE)	GAR. WALL: 1=F-B, 2=S-S ENGTHS (ft.) & RESISTANCES FRONT-TO-BACK 94 Anchor Bolt Spacing diameter (in.) Shear value (per NDS) Spacing F-B (inches) spacing S-S (inches) ISTANCE PROVIDED BY EXTERIOR V INTERIOR WALL LENGTH W/ 1/2" GYPSUM BOARD PER TABLE (FT.)	WIND RESISTANCE (lbs.) 36848 1 (in.) 0.5 944 169.0 165.9 VALLS** INT. WALL LENGTH SHEATHED W/ OSB (TOTAL LENGTH, ONE	31 16d Nail Spacing req'd at 1st Floor F-B 1st Floor S-S RESISTANCE PROVIDED BY ADDITIONAL METHODS	bottom plate (in.)
FLOOR FRONT-TO-BACK FLOOR SIDE-TO-SIDE FLOOR FRONT-TO-BACK FLOOR SIDE-TO-SIDE OTES: 1) SEE ATTACHED CALCULATION SEE SHEET S1 FOR INTERIOR STEEL X-	ADDITIONAL RESIS SEISMIC O ADDITIONAL RESIS SEISMIC O O O O NS FOR PORTAL FRAMEBRACE INSTALLATION	SIDE-TO-SIDE 31 TANCE REQUIRED WIND 0 0 0 PORTAL FRAMES OR PERF. SHEAR WALL RESISTANCE E OR PERFORATED S 3) INTERIOR WALLS S	RESISTANCE (lbs.) 8680 RED IN ADDITION TO RESI INTERIOR X-BRACES (325#/BRACE) HEAR WALL RESISTANCE SHEATHED WITH OSB SHA	GAR. WALL: 1=F-B, 2=S-S ENGTHS (ft.) & RESISTANCES FRONT-TO-BACK 94 Anchor Bolt Spacing diameter (in.) Shear value (per NDS) Spacing F-B (inches) spacing S-S (inches) INTERIOR WALL LENGTH W/ 1/2" GYPSUM BOARD PER TABLE (FT.) E CAPACITIES (IF APPLICABLE), ALL BE ATTACHED WITH SAME STALE	WIND RESISTANCE (ibs.) 36848 I (in.) 0.5 944 169.0 165.9 VALLS** INT. WALL LENGTH SHEATHED W/ OSB (TOTAL LENGTH, ONE SIDE, FT.)	31 16d Nail Spacing req'd at 1st Floor F-B 1st Floor S-S RESISTANCE PROVIDED BY ADDITIONAL METHODS (POUNDS)	Dottom plate (in.) OK? YES
FLOOR FRONT-TO-BACK FFLOOR SIDE-TO-SIDE FLOOR FRONT-TO-BACK FFLOOR SIDE-TO-SIDE OTES: 1) SEE ATTACHED CALCULATION SEE SHEET S1 FOR INTERIOR STEEL X- TTERN AS EXTERIOR OSB ON SAME FL	ADDITIONAL RESIS SEISMIC O ADDITIONAL RESIS SEISMIC O O ADDITIONAL RESISTANCE REQUIRED (POUNDS) O O NS FOR PORTAL FRAM BRACE INSTALLATION LOOR (SEE TABLE ABC	SIDE-TO-SIDE 31 TANCE REQUIRED WIND 0 0 0 PORTAL FRAMES OR PERF. SHEAR WALL RESISTANCE E OR PERFORATED S 3) INTERIOR WALLS S	RESISTANCE (lbs.) 8680 RED IN ADDITION TO RESI INTERIOR X-BRACES (325#/BRACE) HEAR WALL RESISTANCE SHEATHED WITH OSB SHA	GAR. WALL: 1=F-B, 2=S-S ENGTHS (ft.) & RESISTANCES FRONT-TO-BACK 94 Anchor Bolt Spacing diameter (in.) Shear value (per NDS) Spacing F-B (inches) spacing S-S (inches) INTERIOR WALL LENGTH W/ 1/2" GYPSUM BOARD PER TABLE (FT.) E CAPACITIES (IF APPLICABLE), ALL BE ATTACHED WITH SAME STALE IGHT SECTIONS OF 2-8" OR LONGE	WIND RESISTANCE (ibs.) 36848 I (in.) 0.5 944 169.0 165.9 VALLS** INT. WALL LENGTH SHEATHED W/ OSB (TOTAL LENGTH, ONE SIDE, FT.)	31 16d Nail Spacing req'd at 1st Floor F-B 1st Floor S-S RESISTANCE PROVIDED BY ADDITIONAL METHODS (POUNDS)	Dottom plate (in.) OK? YES
FLOOR FRONT-TO-BACK FLOOR SIDE-TO-SIDE FLOOR FRONT-TO-BACK FLOOR SIDE-TO-SIDE OTES: 1) SEE ATTACHED CALCULATION SEE SHEET S1 FOR INTERIOR STEEL X- TIERN AS EXTERIOR OSB ON SAME FL X12	ADDITIONAL RESIS SEISMIC O ADDITIONAL RESIS SEISMIC O O ADDITIONAL RESISTANCE REQUIRED (POUNDS) O NS FOR PORTAL FRAMEBRACE INSTALLATION LOOR (SEE TABLE ABCOMBES) DEGREES 30.3	SIDE-TO-SIDE 31 STANCE REQUIRED WIND 0 0 0 RESISTANCE REQUIR PORTAL FRAMES OR PERF. SHEAR WALL RESISTANCE E OR PERFORATED S 3) INTERIOR WALLS S VE) AND ARE ONLY A	RESISTANCE (lbs.) 8680 RED IN ADDITION TO RESI INTERIOR X-BRACES (325#/BRACE) HEAR WALL RESISTANCE CHEATHED WITH OSB SH/	GAR. WALL: 1=F-B, 2=S-S ENGTHS (ft.) & RESISTANCES FRONT-TO-BACK 94 Anchor Bolt Spacing diameter (in.) Shear value (per NDS) Spacing F-B (inches) spacing S-S (inches) INTERIOR WALL LENGTH W/ 1/2" GYPSUM BOARD PER TABLE (FT.) E CAPACITIES (IF APPLICABLE), ALL BE ATTACHED WITH SAME STALE IGHT SECTIONS OF 2-8" OR LONGE	WIND RESISTANCE (ibs.) 36848 I (in.) 0.5 944 169.0 165.9 VALLS** INT. WALL LENGTH SHEATHED W/ OSB (TOTAL LENGTH, ONE SIDE, FT.)	31 16d Nail Spacing req'd at 1st Floor F-B 1st Floor S-S RESISTANCE PROVIDED BY ADDITIONAL METHODS (POUNDS)	Dottom plate (in.) OK? YES
FLOOR FRONT-TO-BACK FICOR SIDE-TO-SIDE FLOOR FRONT-TO-BACK FICOR SIDE-TO-SIDE OTES: 1) SEE ATTACHED CALCULATION SEE SHEET S1 FOR INTERIOR STEEL X- TIERN AS EXTERIOR OSB ON SAME FL X/12	ADDITIONAL RESIS SEISMIC O ADDITIONAL RESIS SEISMIC O O ADDITIONAL RESISTANCE REQUIRED (POUNDS) O NS FOR PORTAL FRAM BRACE INSTALLATION LOOR (SEE TABLE ABC	SIDE-TO-SIDE 31 STANCE REQUIRED WIND 0 0 0 RESISTANCE REQUIR PORTAL FRAMES OR PERF. SHEAR WALL RESISTANCE E OR PERFORATED S 3) INTERIOR WALLS S VE) AND ARE ONLY A	RESISTANCE (lbs.) 8680 RED IN ADDITION TO RESI INTERIOR X-BRACES (325#/BRACE) HEAR WALL RESISTANCE SHEATHED WITH OSB SHAPPLICABLE FOR FULL-HE WIND UPLIFT	GAR. WALL: 1=F-B, 2=S-S ENGTHS (ft.) & RESISTANCES FRONT-TO-BACK 94 Anchor Bolt Spacing diameter (in.) Shear value (per NDS) Spacing F-B (inches) spacing S-S (inches) INTERIOR WALL LENGTH W/ 1/2" GYPSUM BOARD PER TABLE (FT.) E CAPACITIES (IF APPLICABLE), ALL BE ATTACHED WITH SAME STALE IGHT SECTIONS OF 2-8" OR LONGE	WIND RESISTANCE (ibs.) 36848 I (in.) 0.5 944 169.0 165.9 VALLS** INT. WALL LENGTH SHEATHED W/ OSB (TOTAL LENGTH, ONE SIDE, FT.)	31 16d Nail Spacing req'd at 1st Floor F-B 1st Floor S-S RESISTANCE PROVIDED BY ADDITIONAL METHODS (POUNDS)	Dottom plate (in.) OK? YES
FLOOR FRONT-TO-BACK FLOOR SIDE-TO-SIDE FLOOR SIDE-TO-SIDE OTES: 1) SEE ATTACHED CALCULATION SEE SHEET S1 FOR INTERIOR STEEL X- TTERN AS EXTERIOR OSB ON SAME FL X/12 OOF PITCH (MAX) LENGTH (FT.) OVERHANG 1 TOTAL AREA (FT ²)	ADDITIONAL RESIS SEISMIC O ADDITIONAL RESIS SEISMIC O O ADDITIONAL RESIS SEISMIC O O O NS FOR PORTAL FRAM SERACE INSTALLATION LOOR (SEE TABLE ABC DEGREES 30.3 ASCE 7 PRESSURE (PSF)	SIDE-TO-SIDE 31 TANCE REQUIRED WIND 0 0 0 RESISTANCE REQUIR PORTAL FRAMES OR PERF. SHEAR WALL RESISTANCE E OR PERFORATED S 3) INTERIOR WALLS S VE) AND ARE ONLY A PITCH OF 6 OR LESS: LINEAL FT. OF OH 224	RESISTANCE (lbs.) 8680 RED IN ADDITION TO RESI INTERIOR X-BRACES (325#/BRACE) HEAR WALL RESISTANCE CHEATHED WITH OSB SHAPLICABLE FOR FULL-HE WIND UPLIFT EOH-13.3, E-7.2, G-5.2 UPLIFT PER FT* (LBS)	GAR. WALL: 1=F-B, 2=S-S ENGTHS (ft.) & RESISTANCES FRONT-TO-BACK 94 Anchor Bolt Spacing diameter (in.) Shear value (per NDS) Spacing F-B (inches) spacing S-S (inches) INTERIOR WALL LENGTH W/ 1/2" GYPSUM BOARD PER TABLE (FT.) E CAPACITIES (IF APPLICABLE), ALL BE ATTACHED WITH SAME STAIL IGHT SECTIONS OF 2-8" OR LONGE ANALYSIS	WIND RESISTANCE (ibs.) 36848 I (in.) 0.5 944 169.0 165.9 VALLS** INT. WALL LENGTH SHEATHED W/ OSB (TOTAL LENGTH, ONE SIDE, FT.)	31 16d Nail Spacing req'd at 1st Floor F-B 1st Floor S-S RESISTANCE PROVIDED BY ADDITIONAL METHODS (POUNDS)	Dottom plate (in.) OK? YES YES
FLOOR FRONT-TO-BACK FLOOR SIDE-TO-SIDE FLOOR SIDE-TO-SIDE OTES: 1) SEE ATTACHED CALCULATION SEE SHEET S1 FOR INTERIOR STEEL X- TTERN AS EXTERIOR OSB ON SAME FL OF PITCH (MAX) COVERHANG TOTAL AREA (FT²) MAIN ROOF** 3080 ONG PERIMETER	ADDITIONAL RESIS SEISMIC O ADDITIONAL RESIS SEISMIC O O O O NS FOR PORTAL FRAM BRACE INSTALLATION LOOR (SEE TABLE ABC DEGREES 30.3 ASCE 7 PRESSURE (PSF) -1.08 ZONE E AREA (FT²) -440 TOTAL UPLIFT PER LINEAU	SIDE-TO-SIDE 31 STANCE REQUIRED WIND 0 0 RESISTANCE REQUIR PORTAL FRAMES OR PERF. SHEAR WALL RESISTANCE E OR PERFORATED S 3) INTERIOR WALLS S VE) AND ARE ONLY A PITCH OF 6 OR LESS: LINEAL FT. OF OH 224 ZONE G AREA (FT²) 3520 FOOT ALONG EXTERIOR (I	RESISTANCE (lbs.) 8680 RED IN ADDITION TO RESI INTERIOR X-BRACES (325#/BRACE) HEAR WALL RESISTANCE SHEATHED WITH OSB SH/PPLICABLE FOR FULL-HE WIND UPLIFT EOH -13.3, E-7.2, G-5.2 UPLIFT PER FT* (LBS) -1.08 PRESSURE ZN. E (PSF) -1.08	GAR. WALL: 1=F-B, 2=S-S ENGTHS (ft.) & RESISTANCES FRONT-TO-BACK 94 Anchor Bolt Spacing diameter (in.) Shear value (per NDS) Spacing F-B (inches) spacing S-S (inches) STANCE PROVIDED BY EXTERIOR V INTERIOR WALL LENGTH W/ 1/2" GYPSUM BOARD PER TABLE (FT.) E CAPACITIES (IF APPLICABLE), ALL BE ATTACHED WITH SAME STALIGHT SECTIONS OF 2-8" OR LONGE ANALYSIS PRESSURE ZN. G (PSF) -0.36 -4.6	WIND RESISTANCE (lbs.) 36848 (in.) 0.5 944 169.0 165.9 VALLS** INT. WALL LENGTH SHEATHED W/ OSB (TOTAL LENGTH, ONE SIDE, FT.) PLE/NAILING R	16d Nail Spacing req'd at 1st Floor F-B 1st Floor S-S RESISTANCE PROVIDED BY ADDITIONAL METHODS (POUNDS) 0 0 FORCE PER LINEAL FT @	Dottom plate (in.) OK? YES YES
T FLOOR FRONT-TO-BACK T FLOOR SIDE-TO-SIDE T T T T T T T T T T T T T T T T T T T	ADDITIONAL RESISTANCE SEISMIC 0 0 0 0 ADDITIONAL RESISTANCE RESISTANCE REQUIRED (POUNDS) 0 NS FOR PORTAL FRAM BRACE INSTALLATION LOOR (SEE TABLE ABC DEGREES 30.3 ASCE 7 PRESSURE (PSF) -1.08 ZONE E AREA (FT²) -440 TOTAL UPLIFT PER LINEAL RESISTANCE DUE TO DEAD	SIDE-TO-SIDE 31 TANCE REQUIRED WIND 0 0 0 RESISTANCE REQUIR PORTAL FRAMES OR PERF. SHEAR WALL RESISTANCE E OR PERFORATED S 3) INTERIOR WALLS S VE) AND ARE ONLY A PITCH OF 6 OR LESS: LINEAL FT. OF OH 224 ZONE G AREA (FT²) 3520 FOOT ALONG EXTERIOR (II) WEIGHT & (3) 10d TOENAII	RESISTANCE (lbs.) 8680 RED IN ADDITION TO RESI INTERIOR X-BRACES (325#/BRACE) HEAR WALL RESISTANCE SHEATHED WITH OSB SH/ PPLICABLE FOR FULL-HE WIND UPLIFT EOH -13.3, E-7.2, G-5.2 UPLIFT PER FT* (LBS) -1.08 PRESSURE ZN. E (PSF) -1.08 POUNDS) LS	GAR. WALL: 1=F-B, 2=S-S ENGTHS (ft.) & RESISTANCES FRONT-TO-BACK 94 Anchor Bolt Spacing diameter (in.) Shear value (per NDS) Spacing F-B (inches) spacing S-S (inches) STANCE PROVIDED BY EXTERIOR V INTERIOR WALL LENGTH W/ 1/2" GYPSUM BOARD PER TABLE (FT.) E CAPACITIES (IF APPLICABLE), ALL BE ATTACHED WITH SAME STALIGHT SECTIONS OF 2-8" OR LONGE ANALYSIS PRESSURE ZN. G (PSF) -0.36 -4.6 251.6	WIND RESISTANCE (lbs.) 36848 J (in.) 0.5 944 169.0 165.9 WALLS** INT. WALL LENGTH SHEATHED W/ OSB (TOTAL LENGTH, ONE SIDE, FT.) PLE/NAILING R TOTAL FORCE (LBS) -792 UPLIFT OK	16d Nail Spacing req'd at 1st Floor F-B 1st Floor S-S RESISTANCE PROVIDED BY ADDITIONAL METHODS (POUNDS) 0 0 5 FORCE PER LINEAL FT @ -3.6	Dottom plate (in.) OK? YES YES YES PERIMETER (LBS)
T FLOOR FRONT-TO-BACK T FLOOR SIDE-TO-SIDE T FLOOR SIDE-TO-SIDE	ADDITIONAL RESISTANCE (bs.) 26320 ADDITIONAL RESISTANCE SEISMIC 0 0 0 0 NS FOR PORTAL FRAME (BRACE INSTALLATION) LOOR (SEE TABLE ABC) DEGREES 30.3 ASCE 7 PRESSURE (PSF) -1.08 ZONE E AREA (FT²) -440 TOTAL UPLIFT PER LINEAL RESISTANCE DUE TO DEAD	SIDE-TO-SIDE 31 STANCE REQUIRED WIND 0 0 0 0 RESISTANCE REQUIRED PORTAL FRAMES OR PERF. SHEAR WALL RESISTANCE E OR PERFORATED S 3) INTERIOR WALLS S VE) AND ARE ONLY A PITCH OF 6 OR LESS: LINEAL FT. OF OH 224 ZONE G AREA (FT²) 3520 FOOT ALONG EXTERIOR (II) WEIGHT & (3) 10d TOENAII	RESISTANCE (lbs.) 8680 RED IN ADDITION TO RESI INTERIOR X-BRACES (325#/BRACE) HEAR WALL RESISTANCE SHEATHED WITH OSB SH/ PPLICABLE FOR FULL-HE WIND UPLIFT EOH -13.3, E-7.2, G-5.2 UPLIFT PER FT* (LBS) -1.08 PRESSURE ZN. E (PSF) -1.08 POUNDS) LS	GAR. WALL: 1=F-B, 2=S-S ENGTHS (ft.) & RESISTANCES FRONT-TO-BACK 94 Anchor Bolt Spacing diameter (in.) Shear value (per NDS) Spacing F-B (inches) spacing S-S (inches) STANCE PROVIDED BY EXTERIOR V INTERIOR WALL LENGTH W/ 1/2" GYPSUM BOARD PER TABLE (FT.) E CAPACITIES (IF APPLICABLE), ALL BE ATTACHED WITH SAME STALIGHT SECTIONS OF 2-8" OR LONGE ANALYSIS PRESSURE ZN. G (PSF) -0.36 -4.6 251.6	WIND RESISTANCE (lbs.) 36848 J (in.) 0.5 944 169.0 165.9 WALLS** INT. WALL LENGTH SHEATHED W/ OSB (TOTAL LENGTH, ONE SIDE, FT.) PLE/NAILING R TOTAL FORCE (LBS) -792 UPLIFT OK	16d Nail Spacing req'd at 1st Floor F-B 1st Floor S-S RESISTANCE PROVIDED BY ADDITIONAL METHODS (POUNDS) 0 0 5 FORCE PER LINEAL FT @ -3.6	Dottom plate (in.) OK? YES YES YES PERIMETER (LBS)
T FLOOR SIDE-TO-SIDE TOTAL AREA (FT²) MAIN ROOF** NSIDE EXTERIOR WALLS TOTAL AREA (FT²) MAIN ROOF** NSIDE EXTERIOR WALLS TOTAL PANEL S XX, UNBLOCKED, AND W/ SHEATHING A TOTE FOR DESIGN: L WALLS USED IN THE CALCULATION O	ADDITIONAL RESISTANCE SEISMIC O O ADDITIONAL RESISTANCE RESISTANCE REQUIRED (POUNDS) O NS FOR PORTAL FRAM BRACE INSTALLATION LOOR (SEE TABLE ABC DEGREES 30.3 ASCE 7 PRESSURE (PSF) -1.08 ZONE E AREA (FT²) -440 TOTAL UPLIFT PER LINEAL RESISTANCE DUE TO DEAD SHEATHING BRACING MAPPLIED DIRECTLY TO	SIDE-TO-SIDE 31 TANCE REQUIRED WIND 0 0 RESISTANCE REQUIR PORTAL FRAMES OR PERF. SHEAR WALL RESISTANCE E OR PERFORATED S 3) INTERIOR WALLS S VE) AND ARE ONLY A PITCH OF 6 OR LESS: LINEAL FT. OF OH 224 ZONE G AREA (FT²) 3520 FOOT ALONG EXTERIOR (I) WEIGHT & (3) 10d TOENAII ETHOD REQUIRES US FRAMING MEMBERS	RESISTANCE (lbs.) 8680 RED IN ADDITION TO RESI INTERIOR X-BRACES (325#/BRACE) HEAR WALL RESISTANCE CHEATHED WITH OSB SH/PPLICABLE FOR FULL-HE WIND UPLIFT EOH -13.3, E-7.2, G-5.2 UPLIFT PER FT* (LBS) -1.08 PRESSURE ZN. E (PSF) -1.08 POUNDS) LS E OF THE ABOVE TABLE	GAR. WALL: 1=F-B, 2=S-S ENGTHS (ft.) & RESISTANCES FRONT-TO-BACK 94 Anchor Bolt Spacing diameter (in.) Shear value (per NDS) Spacing F-B (Inches) spacing S-S (Inches) STANCE PROVIDED BY EXTERIOR V INTERIOR WALL LENGTH W/ 1/2" GYPSUM BOARD PER TABLE (FT.) E CAPACITIES (IF APPLICABLE), ALL BE ATTACHED WITH SAME STAIL IGHT SECTIONS OF 2'-8" OR LONGE ANALYSIS PRESSURE ZN. G (PSF) -0.36 4.6 251.6 FOR SHEATHING OF THE ENTIRE STAIL STAIL STAIL SECTIONS OF THE ENTIRE STAIL STAIL SECTIONS OF THE ENTIRE STAIL SECTIONS OF THE SECTION	WIND RESISTANCE (lbs.) 36848 I (in.) 0.5 944 169.0 165.9 WALLS** INT. WALL LENGTH SHEATHED W/ OSB (TOTAL LENGTH, ONE SIDE, FT.) PLE/NAILING R TOTAL FORCE (LBS) -792 UPLIFT OK IRUCTURE. IN ADDITION	16d Nail Spacing req'd at 1st Floor F-B 1st Floor S-S RESISTANCE PROVIDED BY ADDITIONAL METHODS (POUNDS) 0 0	Dottom plate (in.) OK? YES YES YES PERIMETER (LBS) L BE @ 16" O.C.
T FLOOR FRONT-TO-BACK T FLOOR SIDE-TO-SIDE T FLOOR SIDE-TO-SIDE T FLOOR SIDE-TO-SIDE T FLOOR SIDE-TO-SIDE NOTES: 1) SEE ATTACHED CALCULATION SEE SHEET S1 FOR INTERIOR STEEL X- ITTERN AS EXTERIOR OSB ON SAME FL OOF PITCH (MAX) TOTAL AREA (FT²) MAIN ROOF** MAIN ROOF** NSIDE EXTERIOR WALLS OTE FOR CONSTRUCTION: E CONTINUOUS STRUCTURAL PANEL S	ADDITIONAL RESISTANCE SEISMIC O O ADDITIONAL RESISTANCE REQUIRED (POUNDS) O NS FOR PORTAL FRAM BRACE INSTALLATION LOOR (SEE TABLE ABC DEGREES 30.3 ASCE 7 PRESSURE (PSF) -1.08 ZONE E AREA (FT²) -440 TOTAL UPLIFT PER LINEAL RESISTANCE DUE TO DEAD SHEATHING BRACING MAPPLIED DIRECTLY TO DET THE RESISTANCE FOR PER VALUES IN 2012 IBC	SIDE-TO-SIDE 31 TANCE REQUIRED WIND 0 0 RESISTANCE REQUIR PORTAL FRAMES OR PERF. SHEAR WALL RESISTANCE E OR PERFORATED S 3) INTERIOR WALLS S VE) AND ARE ONLY A PITCH OF 6 OR LESS: LINEAL FT. OF OH 224 ZONE G AREA (FT²) 3520 FOOT ALONG EXTERIOR (II) WEIGHT & (3) 10d TOENAII ETHOD REQUIRES US FRAMING MEMBERS OR THIS STRUCTURE S C SECTION 2306 AND A	RESISTANCE (lbs.) 8680 RED IN ADDITION TO RESI INTERIOR X-BRACES (325#/BRACE) HEAR WALL RESISTANCE CHEATHED WITH OSB SH/PPLICABLE FOR FULL-HE WIND UPLIFT EOH -13.3, E-7.2, G-5.2 UPLIFT PER FT* (LBS) -1.08 PRESSURE ZN. E (PSF) -1.08 POUNDS) LS E OF THE ABOVE TABLE	GAR. WALL: 1=F-B, 2=S-S ENGTHS (ft.) & RESISTANCES FRONT-TO-BACK 94 Anchor Bolt Spacing diameter (in.) Shear value (per NDS) Spacing F-B (Inches) spacing S-S (Inches) STANCE PROVIDED BY EXTERIOR V INTERIOR WALL LENGTH W/ 1/2" GYPSUM BOARD PER TABLE (FT.) E CAPACITIES (IF APPLICABLE), ALL BE ATTACHED WITH SAME STAIL IGHT SECTIONS OF 2'-8" OR LONGE ANALYSIS PRESSURE ZN. G (PSF) -0.36 4.6 251.6 FOR SHEATHING OF THE ENTIRE STAIL STAIL STAIL SECTIONS OF THE ENTIRE STAIL STAIL SECTIONS OF THE ENTIRE STAIL SECTIONS OF THE SECTION	WIND RESISTANCE (lbs.) 36848 I (in.) 0.5 944 169.0 165.9 WALLS** INT. WALL LENGTH SHEATHED W/ OSB (TOTAL LENGTH, ONE SIDE, FT.) PLE/NAILING R TOTAL FORCE (LBS) -792 UPLIFT OK IRUCTURE. IN ADDITION	16d Nail Spacing req'd at 1st Floor F-B 1st Floor S-S RESISTANCE PROVIDED BY ADDITIONAL METHODS (POUNDS) 0 0	Dottom plate (in.) OK? YES YES YES PERIMETER (LBS) L BE @ 16" O.C.



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REVISION TABLE

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STRUCTURAL DETAILS