

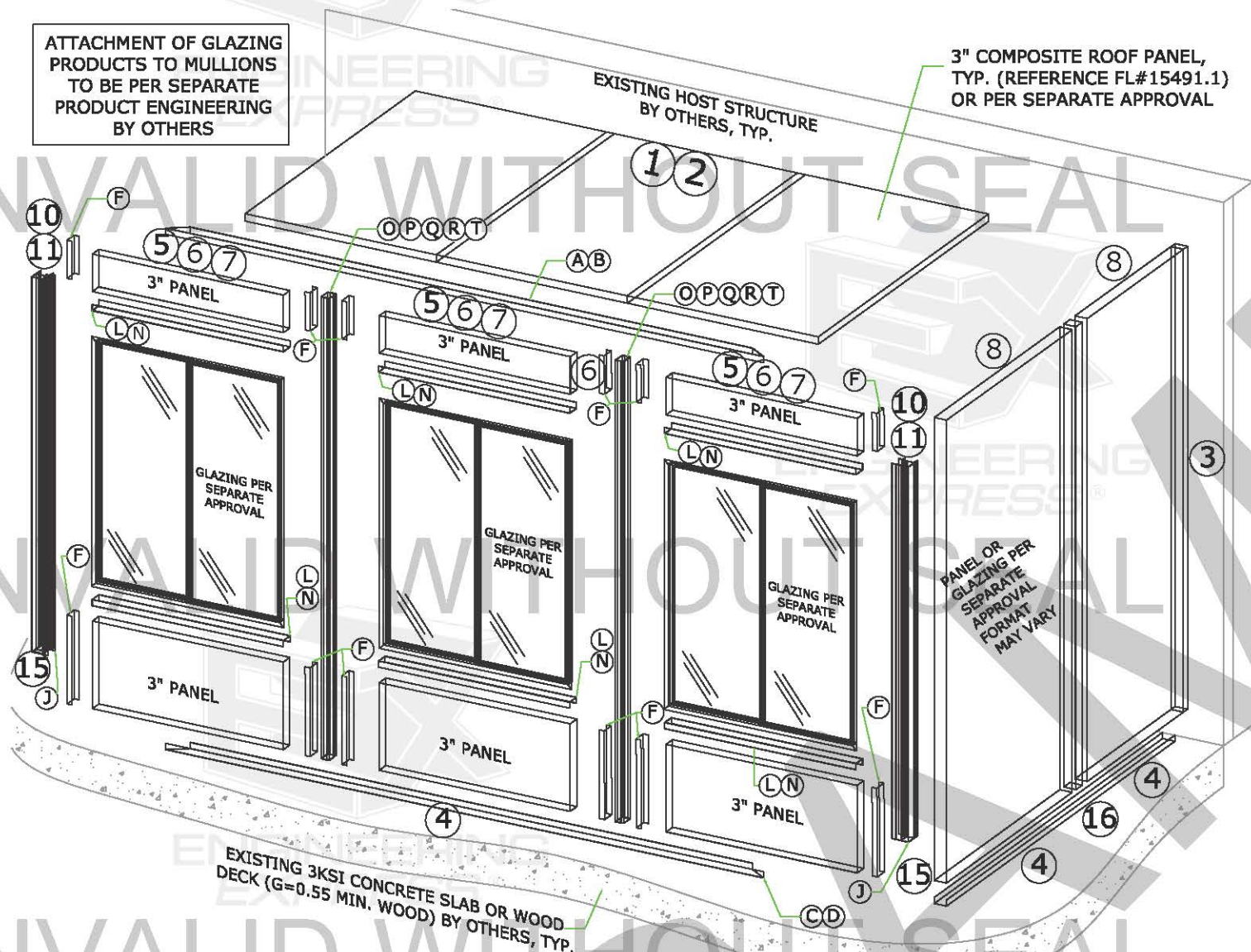


3" MODULAR ROOMS GLASS WALL ROOM SYSTEM MASTER PLAN SHEET

ATTACHMENT OF GLAZING PRODUCTS TO MULLIONS TO BE PER SEPARATE PRODUCT ENGINEERING BY OTHERS

3" COMPOSITE ROOF PANEL, TYP. (REFERENCE FL#15491.1) OR PER SEPARATE APPROVAL

EXISTING HOST STRUCTURE BY OTHERS, TYP.



EXISTING 3KSI CONCRETE SLAB OR WOOD DECK (G=0.55 MIN. WOOD) BY OTHERS, TYP.

MODULAR ROOM
ISOMETRIC

N.T.S.

EXPLODED
ISOMETRIC

VISIT [ECALC.IO/25244](https://ecalculator.io/25244)

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FOR ADDITIONAL PLANS, REPORTS & RESOURCES



- THIS ENCLOSURE IS ONLY CERTIFIED
AS **NON-HABITABLE** PER AAMA 2100

- THIS ENCLOSURE DOES NOT QUALIFY
FOR LARGE MISSILE IMPACT RESISTANCE
UNDER ANY CIRCUMSTANCE

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DESIGN NOTES:

POSITIVE AND NEGATIVE DESIGN PRESSURES CALCULATED FOR USE WITH THIS SYSTEM SHALL BE DETERMINED BY OTHERS ON A JOB-SPECIFIC BASIS IN ACCORDANCE WITH THE STRUCTURAL REQUIREMENTS OF THE 2012/2015/2018 IBC/IRC, AS WELL AS CURRENT VERSIONS OF THE MN, NC, NJ, NY, OH, SC, & VA BUILDING CODES AS APPLICABLE. CODE ENFORCED COMPLIES WITH STATE OF SEAL AND IF MULTIPLE VERSIONS LISTED THEN MOST STRINGENT APPLIES. DESIGN SHALL UTILIZE ASD DESIGN METHOD USING ASCE 7-16 OR ASCE 7-10 BASED.

*THIS DOCUMENT DOES **NOT** CERTIFY PRODUCT FOR USE AS A HABITABLE STRUCTURE. AAMA 2100 SUNROOM CLASSIFICATION II, III, OR IV ONLY.

GENERAL NOTES:

1. STRUCTURE SHALL BE FABRICATED IN ACCORDANCE WITH ALL GOVERNING CODES. CONTRACTOR SHALL INVESTIGATE AND CONFORM TO ALL LOCAL BUILDING CODE AMENDMENTS WHICH MAY APPLY.
2. NO 33-1/3% INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS SYSTEM.
3. THE ARCHITECT/ENGINEER OF RECORD OR PERMITTING CONTRACTOR FOR THE PROJECT SHALL BE RESPONSIBLE FOR THE INTEGRITY OF ALL SUPPORTING SURFACES.
4. THE HOST STRUCTURE SHALL NOT BE MODIFIED WITH THIS DESIGN - ALL EXISTING WINDOWS, DOORS, AND WALLS SHALL REMAIN IN PLACE. WHERE IMPACT PROTECTION IS REQUIRED, IT SHALL BE PLACED AT THE HOST STRUCTURE, NOT ON THE SUNROOM.

ANCHORAGE

5. ALL FASTENERS TO BE #12 OR GREATER SAE GRADE 5 UNLESS NOTED OTHERWISE. FASTENERS SHALL BE CADMIUM-PLATED OR OTHERWISE CORROSION-RESISTANT MATERIAL AND SHALL COMPLY WITH "SPECIFICATIONS FOR ALUMINUM STRUCTURES" SECTION J.3.1 BY THE ALUMINUM ASSOCIATION, INC., & ANY APPLICABLE FEDERAL, STATE, AND/OR LOCAL CODES.
6. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS. MINIMUM EMBEDMENT SHALL BE AS NOTED HEREIN. MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDES STUCCO, FOAM, BRICK, AND OTHER WALL FINISHES.
7. ALL CONCRETE ANCHORS SHALL BE INSTALLED TO NON-CRACKED CONCRETE ONLY.

MATERIALS

8. THE CONTRACTOR IS RESPONSIBLE TO INSULATE ALL MEMBERS FROM DISSIMILAR MATERIALS TO PREVENT ELECTROLYSIS.
9. ALL ALUMINUM SHALL BE 6063-T6 ALLOY AND TEMPER UNLESS NOTED OTHERWISE.
10. ALL CONCRETE TO REACH A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI IN 7 DAYS.
11. ANY WOOD USED IN A PRIMARY CONNECTION SHALL BE SYP#2 OR BETTER.

OTHER

12. ENGINEER SEAL AFFIXED HERETO VALIDATES STRUCTURAL DESIGN AS SHOWN ONLY. USE OF THIS SPECIFICATION BY CONTRACTOR, et. al. INDEMNIFIES & SAVES HARMLESS THIS ENGINEER FOR ALL COST & DAMAGES INCLUDING LEGAL FEES & APPELLATE FEES RESULTING FROM MATERIAL FABRICATION, SYSTEM ERECTION, & CONSTRUCTION PRACTICES BEYOND THAT WHICH IS CALLED FOR BY LOCAL, STATE, & FEDERAL CODES & FROM DEVIATIONS OF THIS PLAN.
13. THIS ENGINEER HAS NOT VISITED THIS JOBSITE. INFORMATION CONTAINED HEREIN IS BASED ON CONTRACTOR SUPPLIED DATA AND MEASUREMENTS. THIS ENGINEER SHALL NOT BE HELD RESPONSIBLE OR LIABLE IN ANY WAY FOR ERRONEOUS OR INACCURATE DATA OR MEASUREMENTS. WORK SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION. THIS ENGINEER SHALL BE NOTIFIED AND GIVEN AN OPPORTUNITY TO REEVALUATE OUR WORK UPON DISCOVERY OF ANY INACCURATE INFORMATION PRIOR TO MODIFICATION OF EXISTING FIELD CONDITIONS AND FABRICATION AND INSTALLATION OF MATERIALS.
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06/16/2020

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3IN MODULAR GLASS
GLASS ROOM MONOSLOPE ROOF
MASTER PLAN SHEET

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1

Technical drawings of various window and door components, including channels, receivers, headers, extrusions, and mullions, with dimensions in inches.

Component A: 3" THERMO TOP CAP CHANNEL. Dimensions: 0.500", 1.100", 0.044", 2.512", 2.600", 0.044".

Component B.1: 3" THERMO TOP CAP PLATE (UPPER ASSEMBLY). Dimensions: 3.811", 1.073".

Component B.2: 3" THERMO TOP CAP PLATE (LOWER ASSEMBLY). Dimensions: 0.0250", 0.702".

Component C: 3" NON-THERMO BASE CHANNEL. Dimensions: 3.240", 0.050", 0.050", 1.500".

Component D: 3" THERMO BASE CHANNEL. Dimensions: 3.260", 0.050", 0.055", 1.500", 1.443".

Component E: 3" RECEIVING CHANNEL (ALSO USED FOR NON-THERMO TOP CAP). Dimensions: 3.008", 0.053", 0.053".

Component F: 3" KEYED RECEIVER. Dimensions: 0.450", 3.155", 0.045", 0.045", 2.743".

Component G: 3" WALL NON-THERMO HEADER. Dimensions: 0.065", 0.050", 1.873", 3.236".

Component H: 3" WALL THERMO HEADER. Dimensions: 3.218", 0.060".

Component I: GUTTER EXTRUSION. Dimensions: 5.000", 0.066", 4.065", 0.066", 4.125".

Component J: 3" THERMO MODULAR ROOM CORNER POST. Dimensions: 3.180", 1.000", 4.180", 0.062", 4.180".

Component K: 2"x3" MODULAR ROOM MALE MULLION. Dimensions: 1.722", 0.050" TYP., 3.140".

Component L: 2"x3" THERMO MODULAR ROOM FEMALE MULLION. Dimensions: 1.500", 0.036", 3.165", 0.050" TYP., 3.140".

Component M: 2"x3" THERMO MODULAR ROOM MALE MULLION. Dimensions: 1.305", 0.050" TYP., 3.165".

Component N: 2"x3" THERMO MODULAR ROOM FEMALE MULLION. Dimensions: 1.500", 0.036", 3.165", 0.050" TYP., 3.140".

Component O: COMPLETE REINFORCED NON-THERMO MODULAR MULLION WITH 3"x3" INSERT. Dimensions: 1.9800", 0.0500", 3.1200".

Component P: COMPLETE REINFORCED THERMO MODULAR MULLION WITH 3"x3" INSERT. Dimensions: 2.000", 3.140", 0.050" TYP., 3.165".

Component Q: 2"x3" NON-THERMO MODULAR COMPLETE MULLION WITHOUT INSERT. Dimensions: 2.000", 3.140", 0.050" TYP., 3.165".

Component R: 2"x3" THERMO MODULAR COMPLETE MULLION WITHOUT INSERT. Dimensions: 2.000", 3.165".

Component S: I-BEAM MULLION INSERT. Dimensions: 1.9800", 0.0500", 3.1200".

Component T: COMPLETE REINFORCED THERMO MODULAR MULLION WITH I-BEAM INSERT. Dimensions: 2.9860", 3.1650".

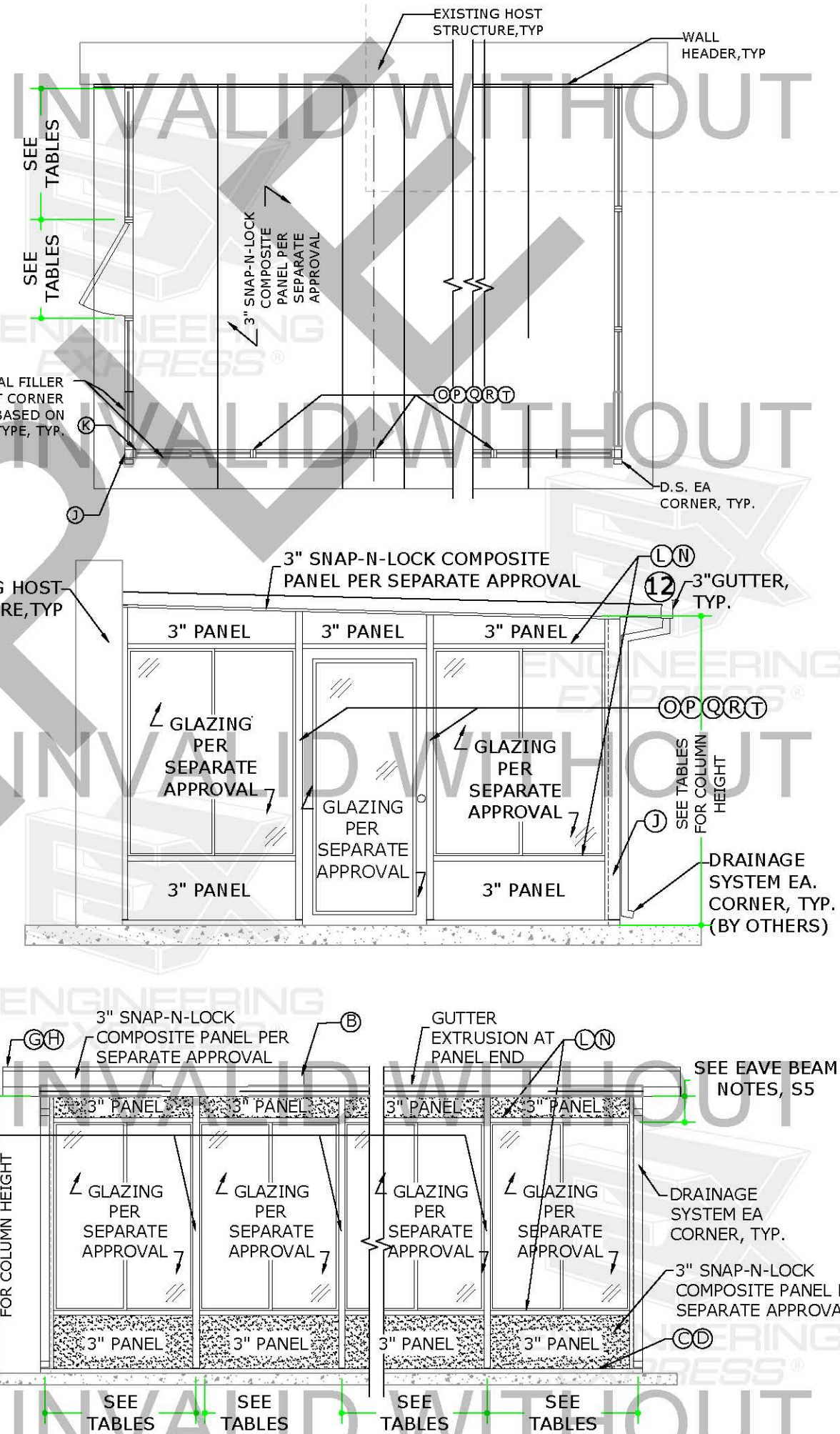
Notes:

- 1/4" Ø SEX BOLTS SAE GR. 5 @ 18" O.C. AND 4" FROM ENDS
- FULL LENGTH 3"x3"x1/4" 6063-T6 ALUM. INSERT
- CORNER POST TIE-DOWN DETAIL

1 SLOPED ROOF
2 N.T.S. PLAN VIEW

2 SLOPED ROOF
2 N.T.S. SIDE ELEVATION

3 SLOPED ROOF
2 N.T.S. FRONT ELEVATION



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**3IN MODULAR GLASS
GLASS ROOM MONOSLOPE ROOF
MASTER PLAN SHEET**

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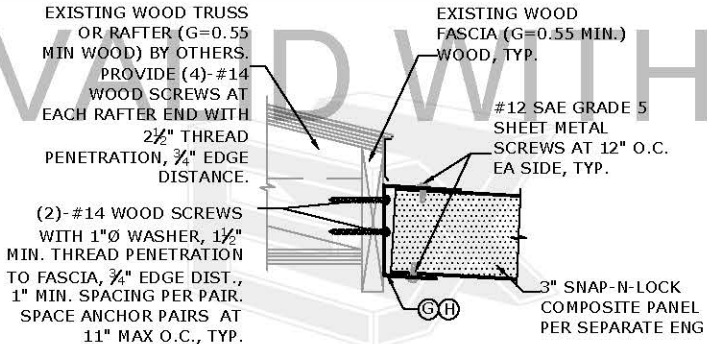
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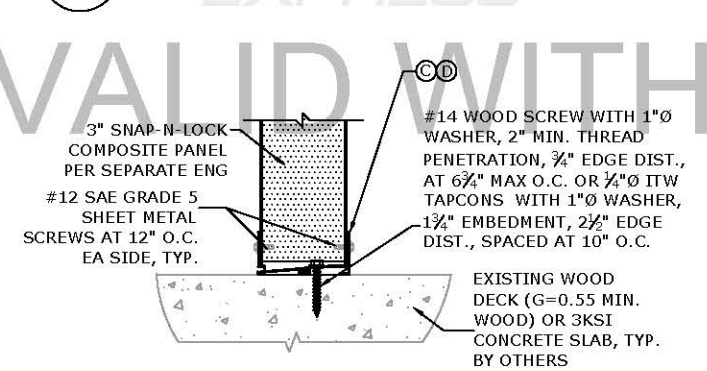
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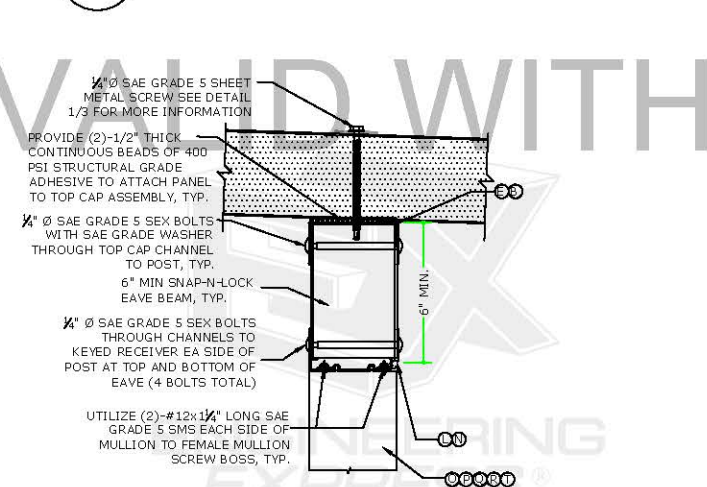
CONNECTIONS



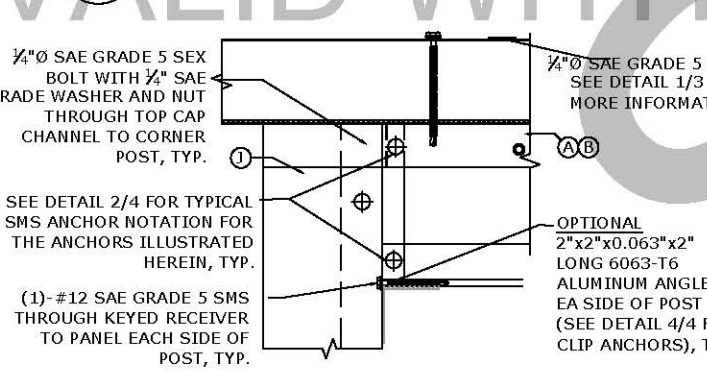
1 ROOF PANEL TO WOOD HOST
SECTION



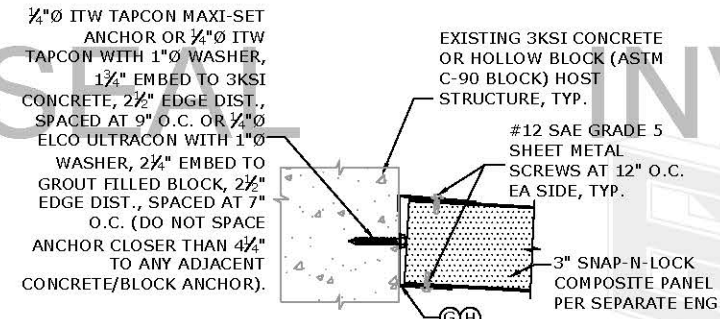
4 WALL PANEL TO HOST BASE
SECTION



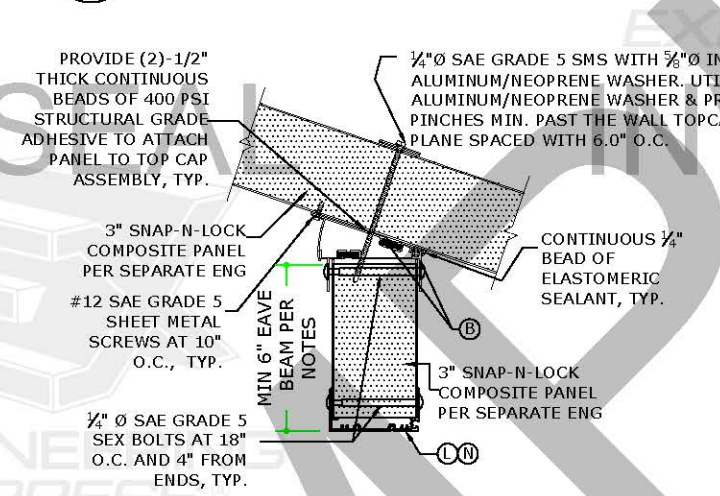
7 CONNECTION AT EAVE & POST
SECTION



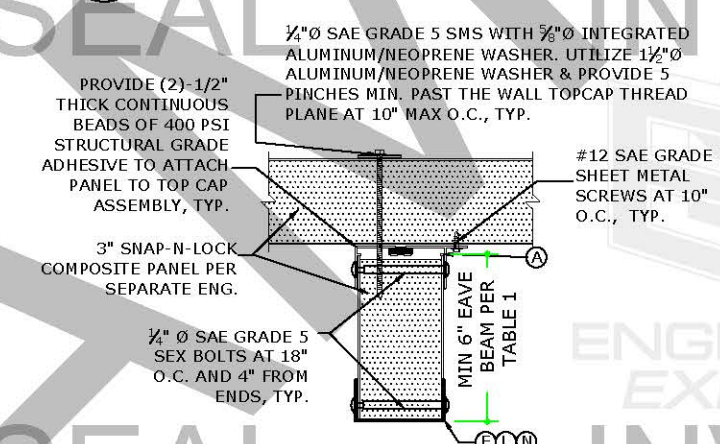
10 CORNER POST TO TOPCAP
ELEVATION



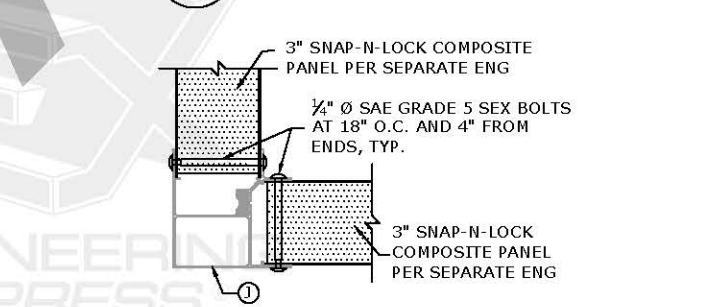
2 ROOF PANEL TO BLOCK HOST
SECTION



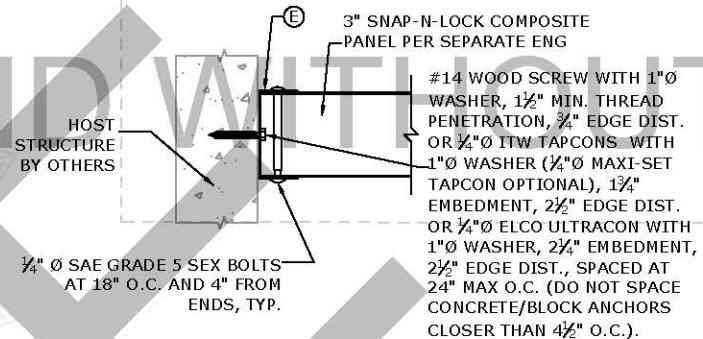
5 ROOF TO WALL PANEL AT EAVE
SECTION



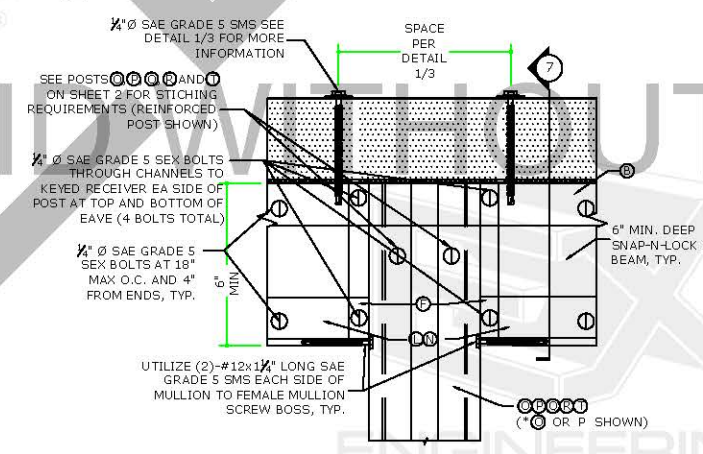
8 ROOF TO WALL PANEL AT RAKE
SECTION



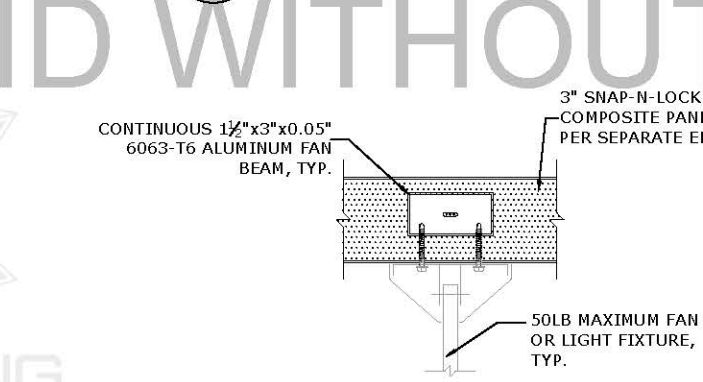
11 CORNER COLUMN
DETAIL



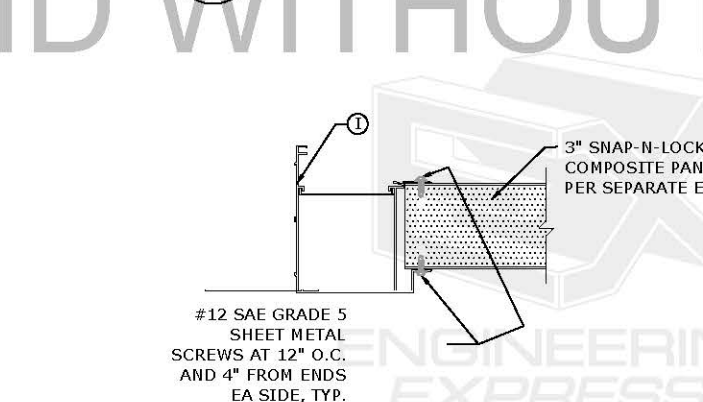
3 WALL PANEL TO HOST SIDE WALL
SECTION



6 CONNECTION AT EAVE & POST
ELEVATION



9 FAN BEAM IN PANEL ROOF
DETAIL



12 ROOF PANEL GUTTER
DETAIL

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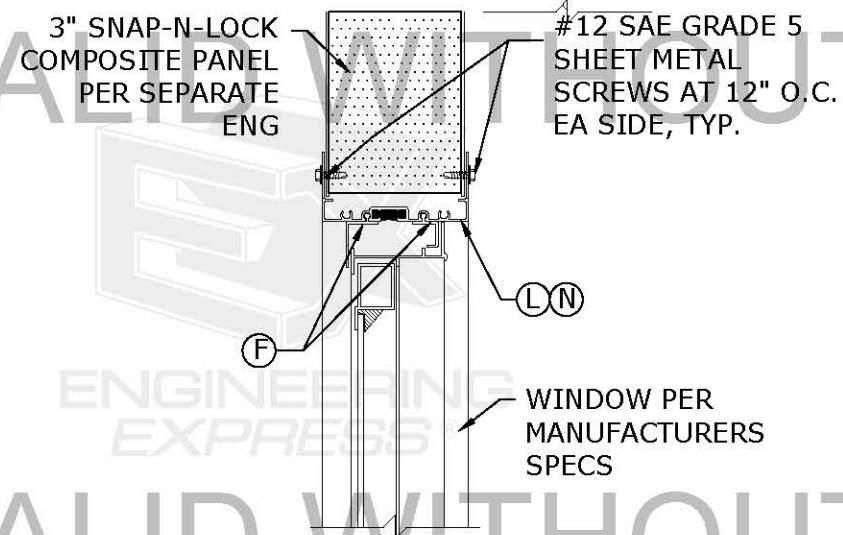
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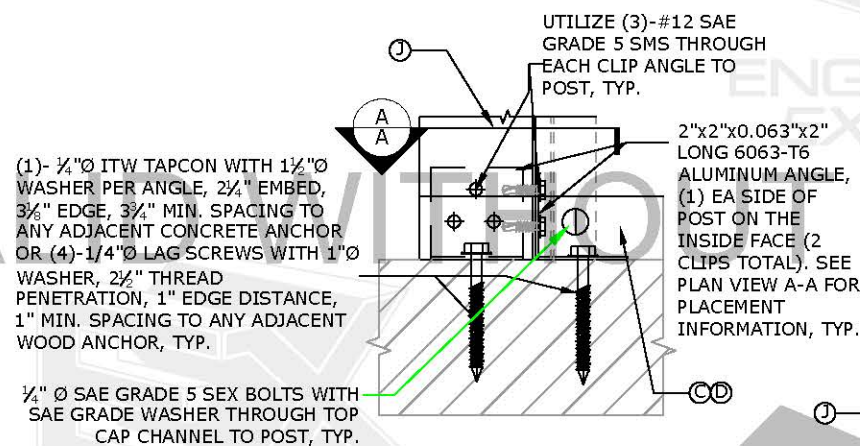
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3



13 HEAD/SILL PANEL FILL
N.T.S. DETAIL

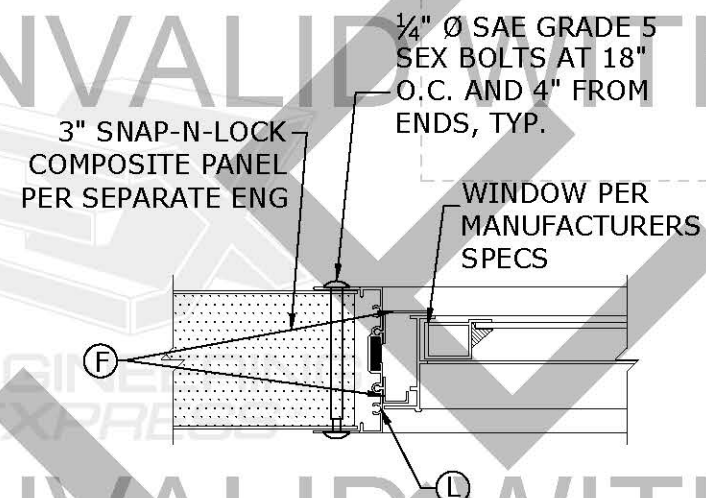


15 TYPICAL CORNER POST TIE-DOWN FOR ALL SYSTEMS
N.T.S. DETAIL

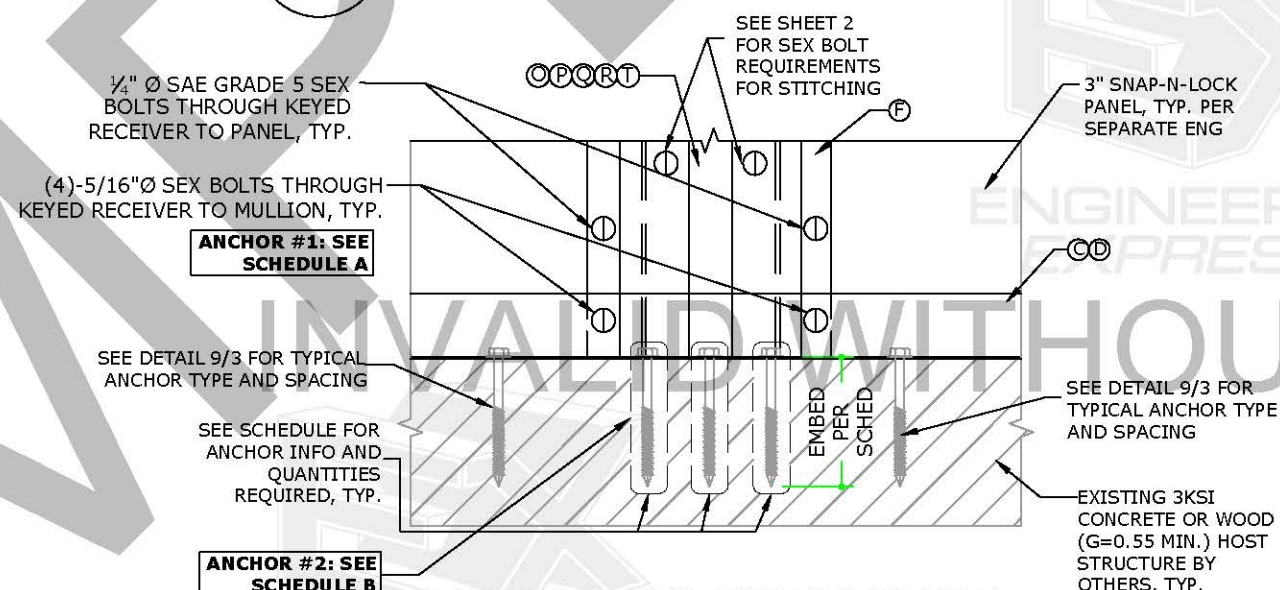
ANCHOR # 1 SCHEDULE A:

WIND TIER	ANCHOR TYPE	DESCRIPTION
up to 20 psf	1	(1)- 1/4" SAE GRADE 5 SEX BOLT WITH 1/4" SAE GRADE WASHER
from 20 psf to 30 psf	1	(1)- 3/8" SAE GRADE 5 SEX BOLT WITH 3/8" SAE GRADE WASHER

1/4" SAE GR 5 THRUBOLTS MAY BE USED IN LIEU OF SEX BOLTS IN ALL CASES



14 WIND JAMB AT PANEL FILL
N.T.S. DETAIL



16 TYPICAL POST CONNECTION FOR GLASS WALL SYSTEMS
N.T.S. DETAIL

ANCHOR #2 SCHEDULE B:

WIND TIER	ANCHOR 2 SUBSTRATE	QUANTITY REQUIRED
up to 20 psf	CONNECTION AT CONCRETE	(2)- 3/8" ITW TAPCONS WITH 1 1/2" WASHER, 2 1/2" EMBED, 3" EDGE, 4" SPACING, TYP.
	CONNECTION AT WOOD	(3)- 1/4" LAG SCREWS 1 1/2" WASHER, 2 1/2" THREAD PENETRATION, 1" EDGE, 1" SPACING
from 20 psf to 30 psf	CONNECTION AT CONCRETE	(2)- 3/8" ITW TAPCONS WITH 1 1/2" WASHER, 2 1/2" EMBED, 3" EDGE, 4" SPACING, TYP.
	CONNECTION AT WOOD	(4)- 1/4" LAG SCREWS 1 1/2" WASHER, 2 1/2" THREAD PENETRATION, 1" EDGE, 1" SPACING

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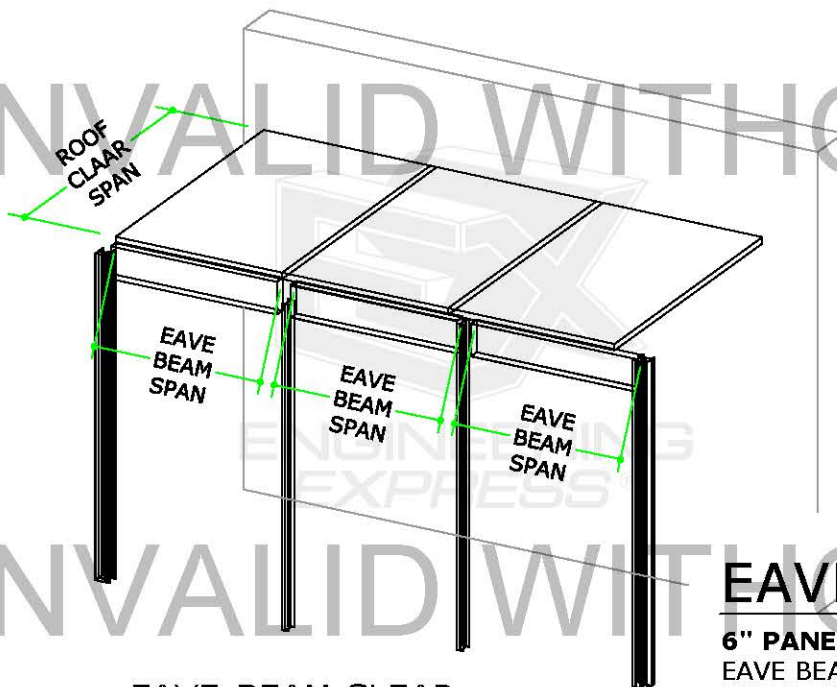
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4 EAVE-BEAM CLEAR SPAN ISOMETRIC
5 N.T.S. ISOMETRIC

* GLAZING NOT SHOWN FOR CLARITY

EAVE BEAM NOTES:

6" PANEL DEPTH:

EAVE BEAM SPAN= 5'-0" UP TO 50PSF
EAVE BEAM SPAN= 6'-0" UP TO 40PSF
MAX ALLOWABLE CLEAR ROOF SPAN= 12'-0"

7" OR GREATER PANEL DEPTH:

EAVE BEAM SPAN= 6'-0" UP TO 60PSF
AT 16' CLEAR ROOF SPAN

SITE SPECIFIC ENGINEERING FOR ADDITIONAL SPANS
DEFLECTION LIMIT = $L/180$.

TABLE 1

Column Type	Max Roof Span S (ft)	Live Load Gravity (psf)	Wind Load (psf)	AVERAGE COLUMN SPACING (FT)				
				3	4	5	6	7
3" MOD ROOM (MALE+FEMALE)	12	20	20	12'-0"	12'-0"	12'-0"	11'-10"	10'-9"
			30	12'-0"	12'-0"	10'-9"	9'-8"	8'-9"
			40	12'-0"	10'-7"	9'-4"	8'-4"	7'-7"
			50	11'-1"	9'-5"	8'-4"	7'-6"	6'-10"
		30	20	12'-0"	12'-0"	12'-0"	11'-3"	10'-2"
			30	12'-0"	11'-10"	10'-4"	9'-2"	8'-3"
			40	12'-0"	10'-3"	9'-0"	8'-0"	7'-2"
			50	10'-10"	9'-2"	8'-0"	7'-1"	6'-5"
		40	20	12'-0"	12'-0"	12'-0"	10'-8"	9'-6"
			30	12'-0"	11'-5"	9'-11"	8'-9"	7'-9"
			40	11'-10"	9'-11"	8'-7"	7'-7"	6'-9"
			50	10'-7"	8'-10"	7'-8"	6'-9"	6'-0"
	50		20	12'-0"	12'-0"	11'-7"	10'-1"	9'-0"
			30	12'-0"	11'-1"	9'-6"	8'-3"	7'-3"
			40	11'-6"	9'-7"	8'-2"	7'-2"	6'-4"
			50	10'-4"	8'-7"	7'-4"	6'-5"	5'-8"

TABLE 2

COLUMN TYPE	MAX ROOF SPAN (FT)	LIVE LOAD GRAVITY (PSF)	WIND LOAD (PSF)	AVERAGE COLUMN SPACING (FT)				
				3	4	5	6	7
3" THERMO MOD ROOM (MALE+FEMALE)	12	20	20	12'-0"	12'-0"	12'-0"	12'-0"	11'-3"
			30	12'-0"	12'-0"	10'-11"	10'-0"	9'-2"
			40	12'-0"	10'-7"	9'-5"	8'-7"	8'-0"
			50	11'-0"	9'-6"	8'-5"	7'-8"	7'-1"
		30	20	12'-0"	12'-0"	12'-0"	12'-0"	11'-3"
			30	12'-0"	12'-0"	10'-11"	10'-0"	9'-2"
			40	12'-0"	10'-7"	9'-5"	8'-7"	8'-0"
			50	11'-0"	9'-5"	8'-5"	7'-8"	7'-1"
		40	20	12'-0"	12'-0"	12'-0"	12'-0"	11'-2"
			30	12'-0"	12'-0"	10'-10"	9'-11"	9'-2"
			40	12'-0"	10'-7"	9'-5"	8'-7"	8'-0"
			50	11'-0"	9'-5"	8'-5"	7'-8"	7'-1"
	50		20	12'-0"	12'-0"	12'-0"	12'-0"	11'-2"
			30	12'-0"	12'-0"	10'-10"	9'-11"	9'-2"
			40	12'-0"	10'-6"	9'-5"	8'-7"	7'-11"
			50	11'-0"	9'-5"	8'-5"	7'-8"	7'-1"

TABLE NOTES:

- DEFLECTION LIMIT = $L/180$ USED IN TABLE RESULTS.
- VALUES BELOW ALLOWABLE CEILING HEIGHT INTENDED TO BE BUILT ON KNEEWALLS OR OTHER SUPPORTING STRUCTURES (CERTIFIED BY OTHERS).
- RESULTS FOR THERMALLY BROKEN POSTS SHALL BE REDUCED BY 10% TO ACCOUNT FOR THERMAL BREAK STRENGTH LOSS.

FRANK BENNARDO, P.E.

06/16/2020

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5

TABLE 3

COLUMN TYPE	MAX ROOF SPAN (FT)	LIVE LOAD GRAVITY (PSF)	WIND LOAD (PSF)	AVERAGE COLUMN SPACING (FT)				
				3	4	5	6	7
3" MOD ROOM (FEMALE+FEMALE) W/ 3x3 INSERT	12	20	20	12'-0"	12'-0"	12'-0"	11'-10"	10'-9"
			30	12'-0"	12'-0"	10'-9"	9'-8"	8'-9"
			40	12'-0"	10'-7"	9'-4"	8'-4"	7'-7"
			50	11'-1"	9'-5"	8'-4"	7'-6"	6'-10"
		30	20	12'-0"	12'-0"	12'-0"	11'-3"	10'-2"
			30	12'-0"	11'-10"	10'-4"	9'-2"	8'-3"
			40	12'-0"	10'-3"	9'-0"	8'-0"	7'-2"
			50	10'-10"	9'-2"	8'-0"	7'-1"	6'-5"
		40	20	12'-0"	12'-0"	12'-0"	10'-8"	9'-6"
			30	12'-0"	11'-5"	9'-11"	8'-9"	7'-9"
			40	11'-10"	9'-11"	8'-7"	7'-7"	6'-9"
			50	10'-7"	8'-10"	7'-8"	6'-9"	6'-0"
		50	20	12'-0"	12'-0"	11'-7"	10'-1"	9'-0"
			30	12'-0"	11'-1"	9'-6"	8'-3"	7'-3"
			40	11'-6"	9'-7"	8'-2"	7'-2"	6'-4"
			50	10'-4"	8'-7"	7'-4"	6'-5"	5'-8"

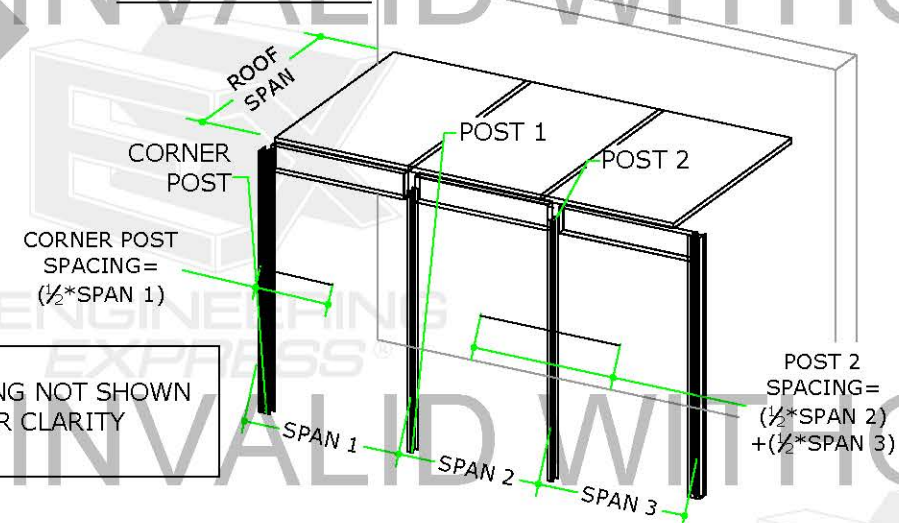
TABLE 5

COLUMN TYPE	MAX ROOF SPAN (FT)	LIVE LOAD GRAVITY (PSF)	WIND LOAD (PSF)	AVERAGE COLUMN SPACING (FT)				
				3	4	5	6	7
3" THERMO MOD ROOM (MALE+MALE) W/ I BEAM INSERT	12	20	20	9'-7"	8'-1"	7'-0"	6'-2"	5'-6"
			30	7'-10"	6'-7"	5'-8"	5'-0"	4'-6"
			40	6'-10"	5'-8"	5'-0"	4'-4"	-
			50	6'-1"	5'-1"	4'-5"	0'-0"	-
		30	20	9'-2"	7'-6"	6'-4"	5'-6"	4'-9"
			30	7'-6"	6'-2"	5'-2"	4'-6"	-
			40	6'-6"	5'-4"	4'-6"	0'-0"	-
			50	5'-9"	4'-9"	4'-0"	0'-0"	-
		40	20	8'-8"	7'-0"	5'-9"	4'-10"	4'-0"
			30	7'-1"	5'-8"	4'-8"	-	-
			40	6'-2"	5'-0"	4'-1"	-	-
			50	5'-6"	4'-5"	-	-	-
		50	20	8'-2"	6'-5"	5'-2"	4'-2"	-
			30	6'-8"	5'-3"	4'-2"	-	-
			40	5'-10"	4'-6"	-	-	-
			50	5'-2"	4'-1"	-	-	-

TABLE 4

COLUMN TYPE	MAX ROOF SPAN (FT)	LIVE LOAD GRAVITY (PSF)	WIND LOAD (PSF)	AVERAGE COLUMN SPACING (FT)				
				3	4	5	6	7
3" THERMO MOD ROOM (FEMALE+FEMALE) W/ 3x3 INSERT	12	20	20	12'-0"	12'-0"	12'-0"	12'-0"	11'-3"
			30	12'-0"	12'-0"	10'-11"	10'-0"	9'-2"
			40	12'-0"	10'-7"	9'-5"	8'-7"	8'-0"
			50	11'-0"	9'-6"	8'-5"	7'-8"	7'-1"
		30	20	12'-0"	12'-0"	12'-0"	12'-0"	11'-3"
			30	12'-0"	12'-0"	10'-11"	10'-0"	9'-2"
			40	12'-0"	10'-7"	9'-5"	8'-7"	8'-0"
			50	11'-0"	9'-5"	8'-5"	7'-8"	7'-1"
		40	20	12'-0"	12'-0"	12'-0"	12'-0"	11'-2"
			30	12'-0"	12'-0"	10'-10"	9'-11"	9'-2"
			40	12'-0"	10'-7"	9'-5"	8'-7"	8'-0"
			50	11'-0"	9'-5"	8'-5"	7'-8"	7'-1"
		50	20	12'-0"	12'-0"	12'-0"	12'-0"	11'-2"
			30	12'-0"	12'-0"	10'-10"	9'-11"	9'-2"
			40	12'-0"	10'-6"	9'-5"	8'-7"	7'-11"
			50	11'-0"	9'-5"	8'-5"	7'-8"	7'-1"

POST SPACING ISOMETRIC DETAIL *



1 POST SPACING ISOMETRIC
6 N.T.S. ISOMETRIC

FRANK BENNARDO, P.E.

06/16/2020

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