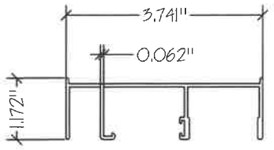
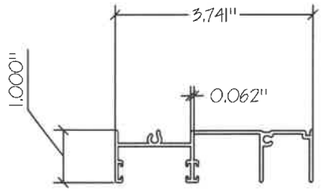
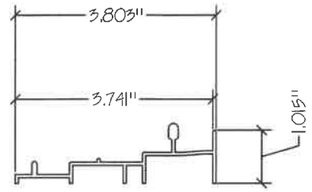


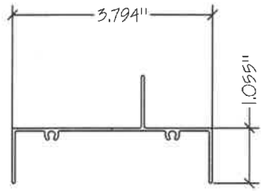
1 WINDOW/ DOOR FRAME HEAD



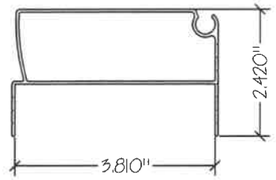
2 WINDOW/ DOOR FRAME JAMB



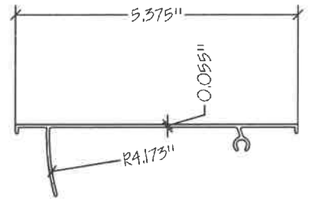
3 WINDOW/ DOOR FRAME SILL



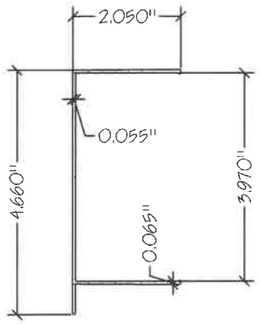
4 TRANSOM FRAME



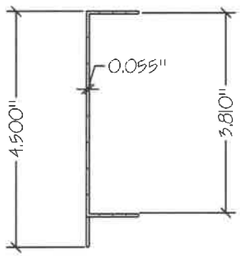
5 HEADER BASE



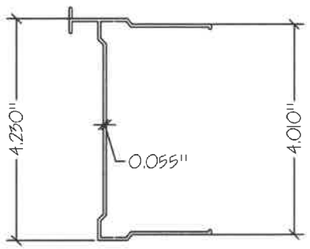
6 HEADER ARM



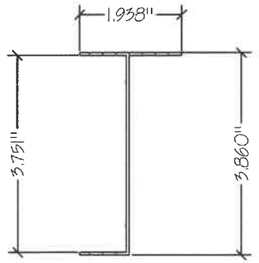
7 4" EXPANDER



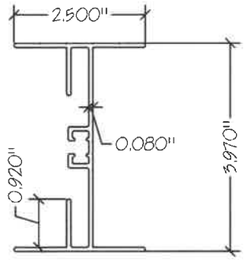
8 4" F-CHANNEL



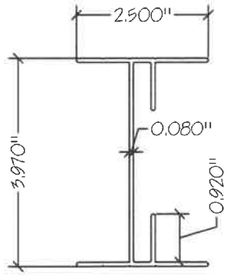
9 4" HANGER BASE



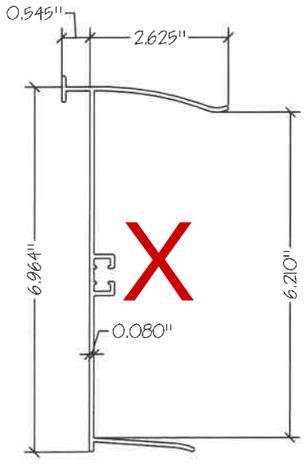
10 4" SILL EXTRUSION



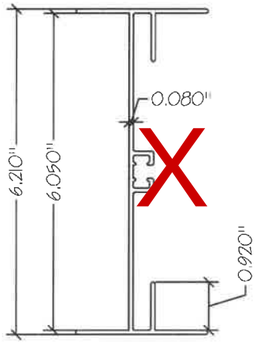
11 4" I-SECTION THERM



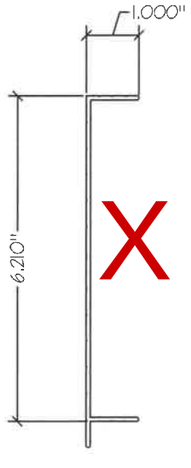
12 4" NON-THERM I-SECTION



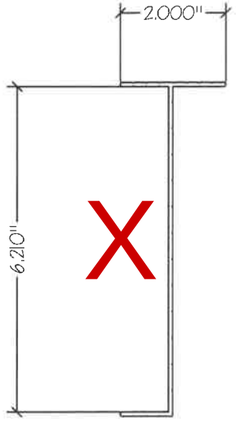
13 6" HANGER BASE



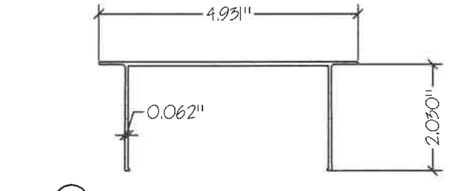
14 6" I-BEAM



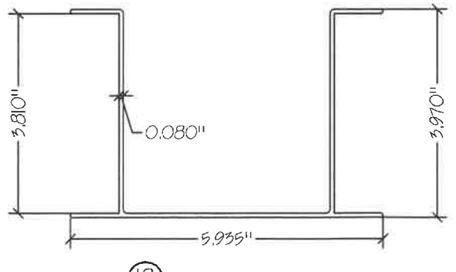
15 6" F-CHANNEL



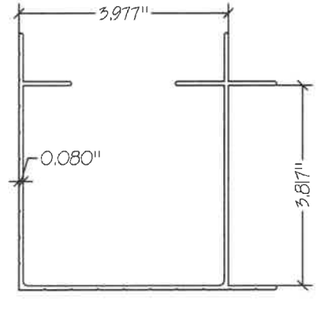
16 6" SILL



17 4" POST SLEVE / WING PANEL CAP



18 4" POST SLEVE



20 CORNER POST

CES
CHAMPION ENCLOSURE SUPPLIERS
12111 CHAMPION WAY, CINCINNATI, OH 45241
PH: (513) 782-3900 FAX: (513) 782-3903

CHAMPION WINDOWS AND PATIO ROOMS
4" Wall System with Gable Style Roof

PARTS AND COMPONENTS

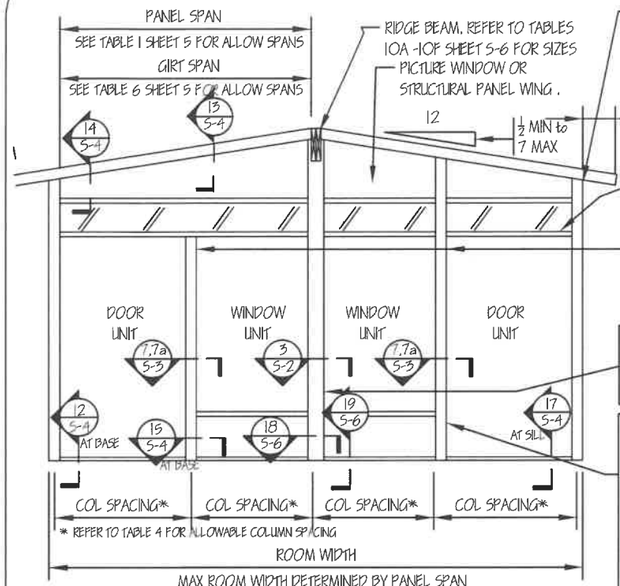
DATE: 2/13/19
SCALE: NTS
Drawn by: MJG

REV:	DATE:

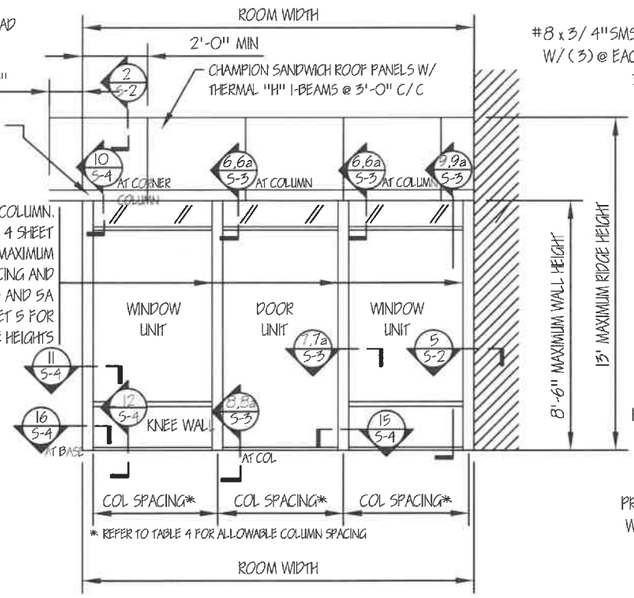
SHEET: 1 OF 6

NORTH CAROLINA PROFESSIONAL SEAL 026759 ENGINEER MARTIN J. GOSS
4/5/2022

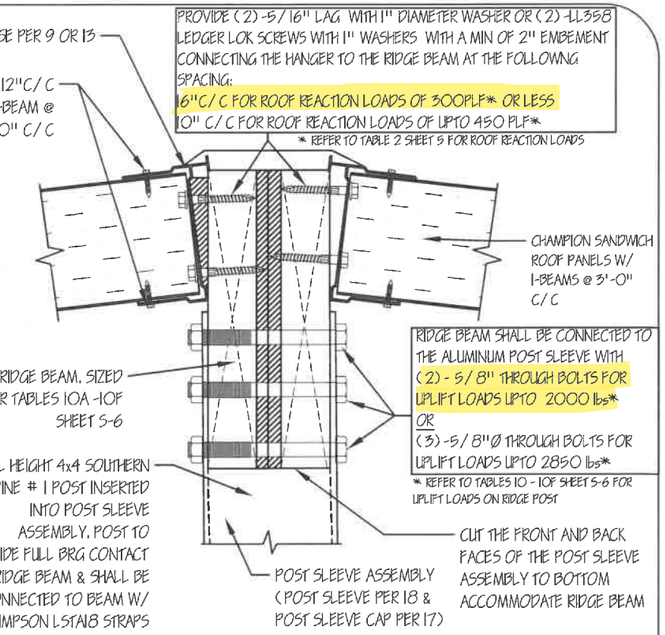
NOTE: ALTERNATE COMBINATION OF DOORS, WINDOWS, TRANSOMS AND KNEE WALLS ARE PERMITTED PROVIDED THE SPECIFIED HEIGHT AND SPACING LIMITATIONS ARE ADHERED TO.



PATIO ENCLOSURE FRONT ELEVATION



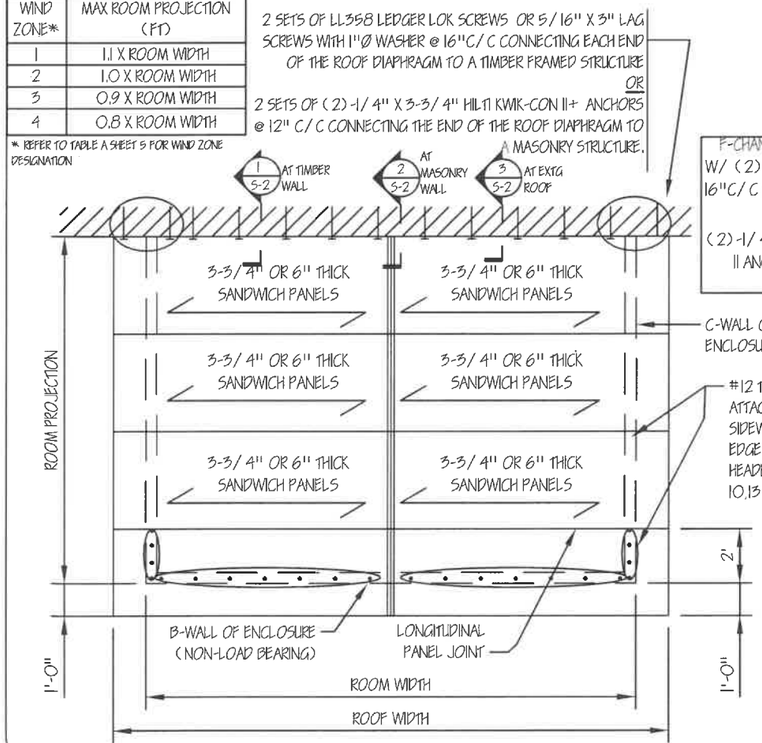
PATIO ENCLOSURE SIDE ELEVATION



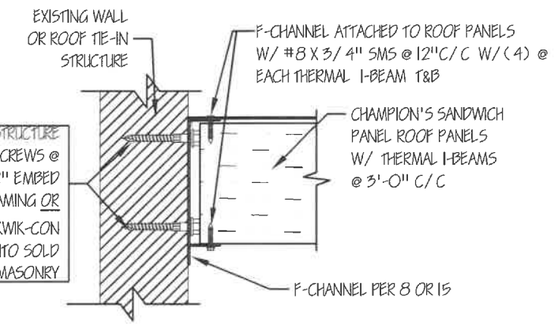
2/5-2 RIDGE BEAM CONNECTION DETAILS

WIND ZONE*	MAX ROOM PROJECTION (FT)
1	1.1 X ROOM WIDTH
2	1.0 X ROOM WIDTH
3	0.9 X ROOM WIDTH
4	0.8 X ROOM WIDTH

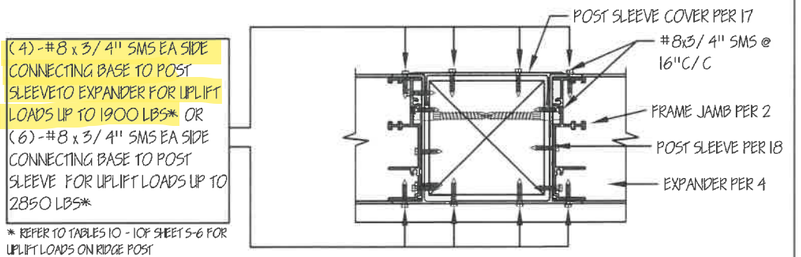
* REFER TO TABLE A SHEET 5 FOR WIND ZONE DESIGNATION



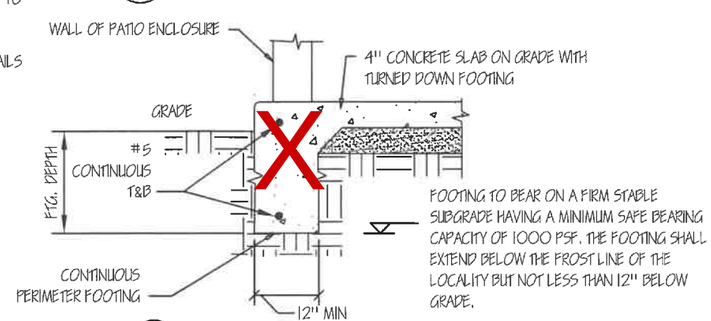
PATIO ROOM ROOF PLAN



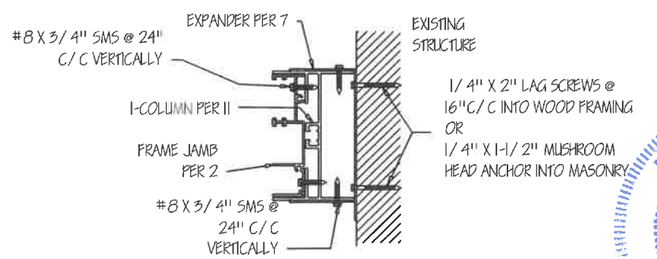
1/5-2 ROOF ATTACHMENT TO HOUSE



3/5-2 RIDGE POST TO BASE CONNECTION



4/5-2 TURNED DOWN FOOTING DETAIL



5/5-2 SIDEWALL TO EXTG STRUCTURE CONNECTION DETAIL

CES
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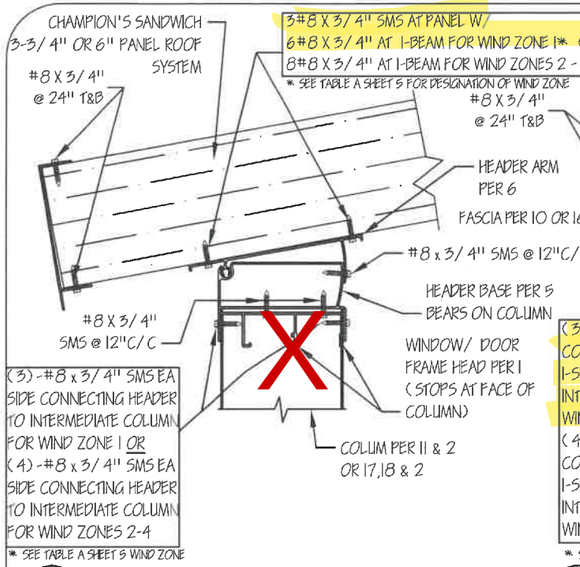
CHAMPION WINDOWS AND PATIO ROOM
4" Wall System with Gable Style Roof
ELEVATION AND SECTION DETAILS

DATE: 2/13/19
SCALE: NTS
Drawn by: MJG

REV:	DATE:

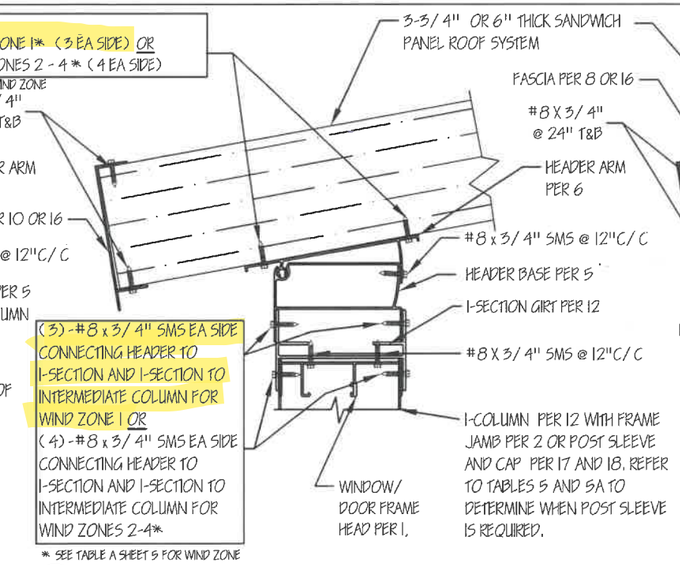
SHEET: 2 OF 6

NORTH CAROLINA PROFESSIONAL SEAL 023759 ENGINEER JUSTIN J. GOSS
4/5/2022

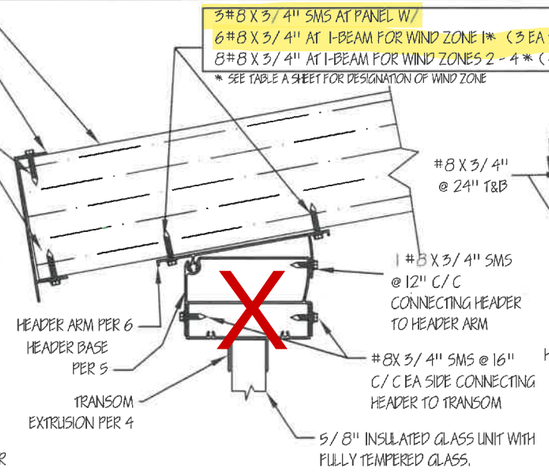


3#8 X 3/4" SMS AT PANEL W/ 6#8 X 3/4" AT I-BEAM FOR WIND ZONE I* (3 EA SIDE) OR 8#8 X 3/4" AT I-BEAM FOR WIND ZONES 2 - 4* (4 EA SIDE)
* SEE TABLE A SHEET 5 FOR DESIGNATION OF WIND ZONE

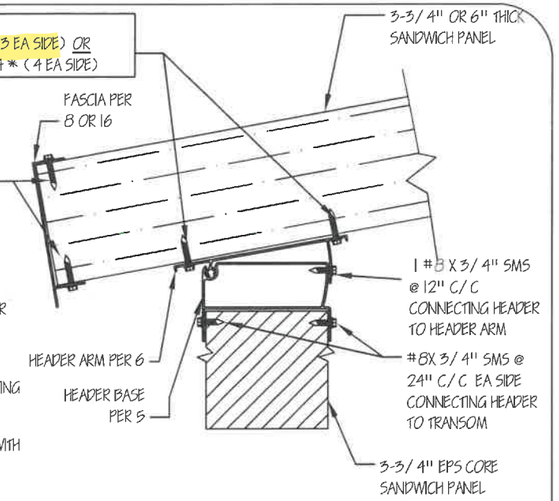
6 5-3 STANDARD HEADER TO CENTER COLUMN CONNECTION



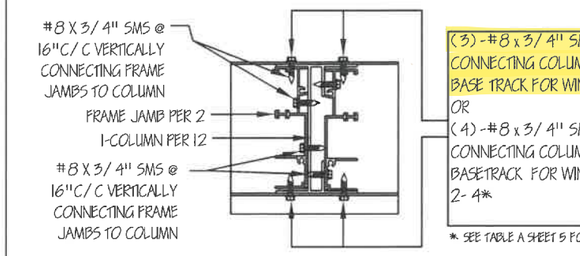
6A 5-3 HEADER WITH I-SECTION TO CENTER COLUMN CONNECTION



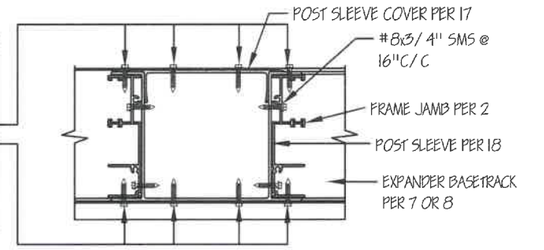
9 5-3 HEADER TO GLASS TRANSOM CONNECTION



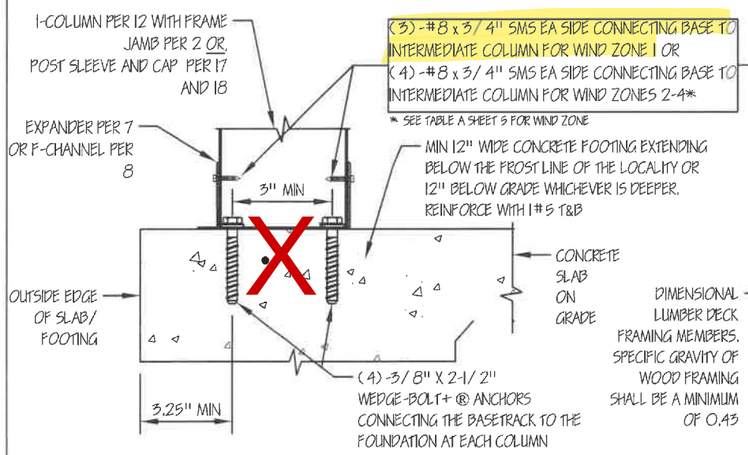
9A 5-3 HEADER TO PANEL TRANSOM CONNECTION



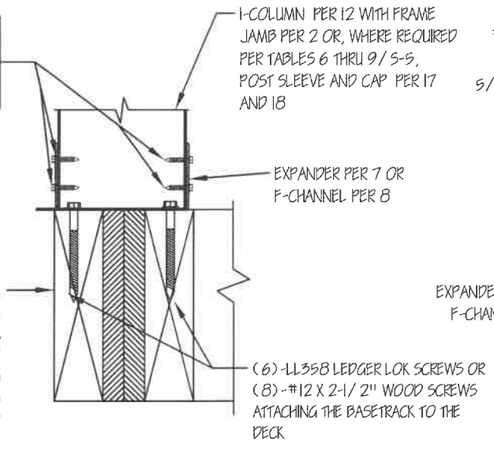
7 5-3 CENTER COLUM PER 12 + 2 TO BASE DETAIL



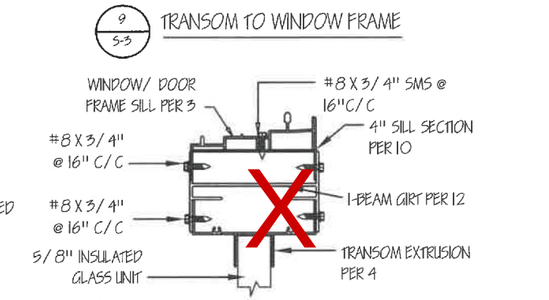
7A 5-3 CENTER COLUM PER 17, 18+ 2 TO BASE CONNECTION



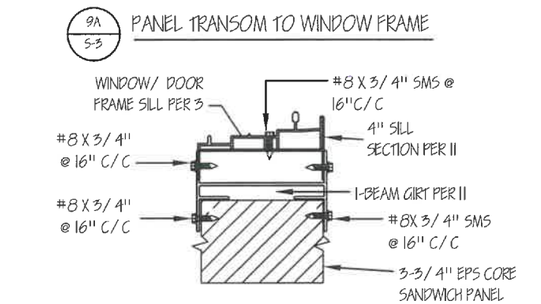
8 5-3 CENTER COLUMN TO FOUNDATON CONNECTION



8A 5-3 CENTER COLUMN TO DECK CONNECTION



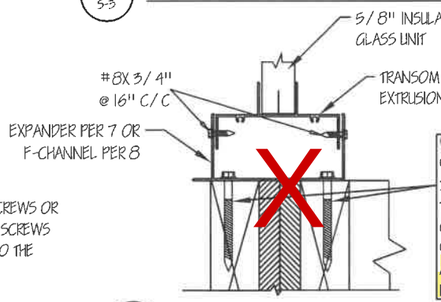
9 5-3 TRANSOM TO WINDOW FRAME



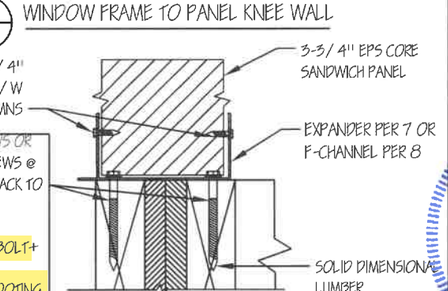
9A 5-3 PANEL TRANSOM TO WINDOW FRAME

9 5-3 WINDOW FRAME TO GLASS KNEE WALL

9A 5-3 WINDOW FRAME TO PANEL KNEE WALL



9 5-3 GLASS KNEE WALL TO BASE TRACK



9 5-3 PANEL KNEE WALL TO BASE TRACK

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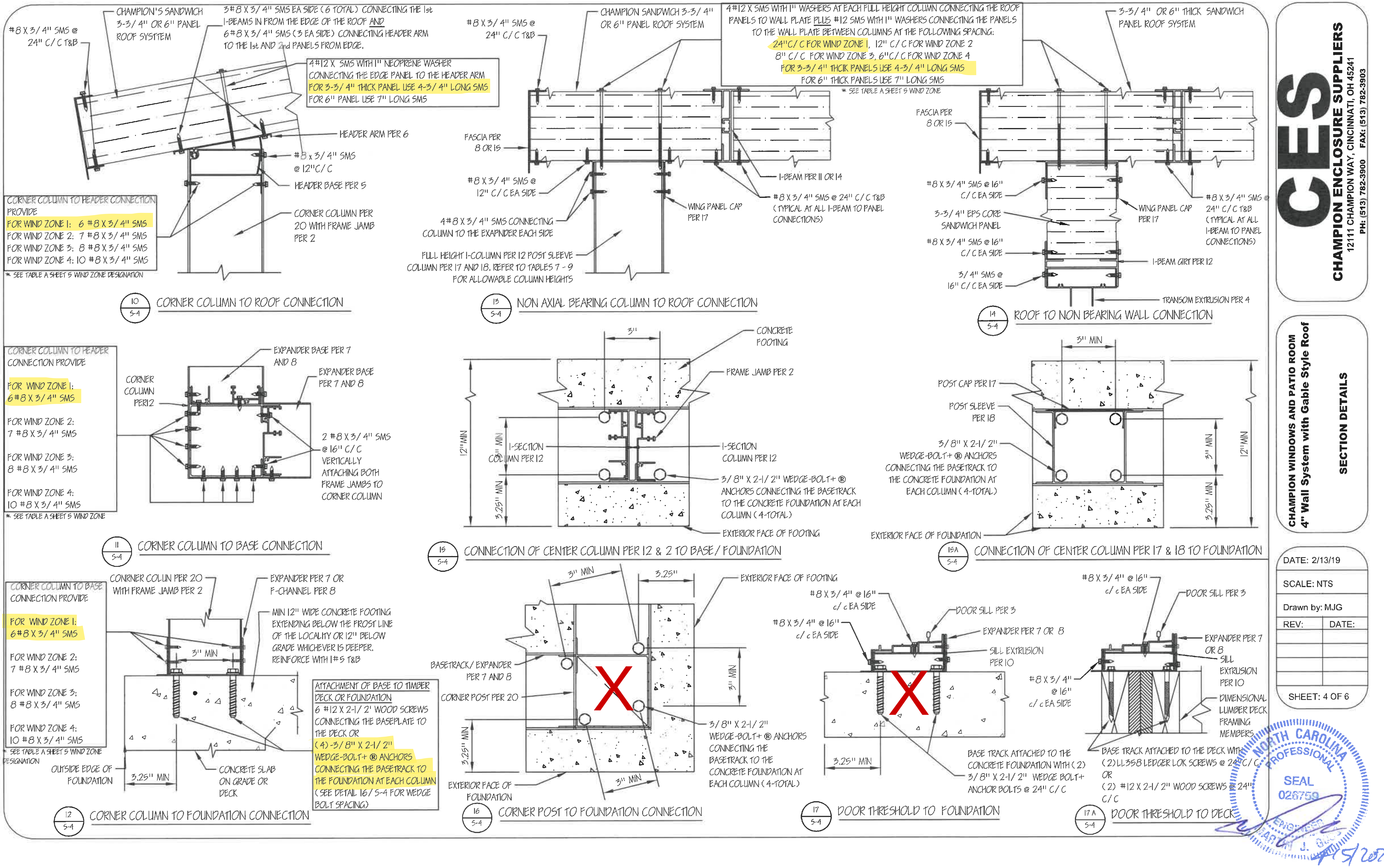
CHAMPION WINDOWS AND PATIO ROOM
4" Wall System with Gable Style Roof
SECTION DETAILS

DATE: 2/13/19
SCALE: NTS
Drawn by: MJG

REV:	DATE:

SHEET: 3 OF 6

NORTH CAROLINA PROFESSIONAL SEAL 023759 ENGINEER MARTIN L GOSS
4/5/2022


#8 X 3/4" SMS @ 24" C/C T&B
CHAMPION'S SANDWICH 3-3/4" OR 6" PANEL ROOF SYSTEM
3#8 X 3/4" SMS EA SIDE (6 TOTAL) CONNECTING THE 1st I-BEAMS IN FROM THE EDGE OF THE ROOF AND 6#8 X 3/4" SMS (3 EA SIDE) CONNECTING HEADER ARM TO THE 1st AND 2nd PANELS FROM EDGE.
4#12 X SMS WITH 1" NEOPRENE WASHER CONNECTING THE EDGE PANEL TO THE HEADER ARM
FOR 3-3/4" THICK PANEL USE 4-3/4" LONG SMS
FOR 6" PANEL USE 7" LONG SMS
HEADER ARM PER 6
#8 x 3/4" SMS @ 12"C/C
HEADER BASE PER 5
CORNER COLUMN PER 20 WITH FRAME JAMB PER 2
CORNER COLUMN TO HEADER CONNECTION PROVIDE
FOR WIND ZONE 1: 6 #8 X 3/4" SMS
FOR WIND ZONE 2: 7 #8 X 3/4" SMS
FOR WIND ZONE 3: 8 #8 X 3/4" SMS
FOR WIND ZONE 4: 10 #8 X 3/4" SMS
* SEE TABLE A SHEET 5 WIND ZONE DESIGNATION
10 S-4 CORNER COLUMN TO ROOF CONNECTION
#8 X 3/4" SMS @ 24" C/C T&B
CHAMPION SANDWICH 3-3/4" OR 6" PANEL ROOF SYSTEM
4#12 X SMS WITH 1" WASHERS AT EACH FULL HEIGHT COLUMN CONNECTING THE ROOF PANELS TO WALL PLATE PLUS #12 SMS WITH 1" WASHERS CONNECTING THE PANELS TO THE WALL PLATE BETWEEN COLUMNS AT THE FOLLOWING SPACING:
24"C/C FOR WIND ZONE 1, 12" C/C FOR WIND ZONE 2
8" C/C FOR WIND ZONE 3, 6"C/C FOR WIND ZONE 4
FOR 3-3/4" THICK PANELS USE 4-3/4" LONG SMS
FOR 6" THICK PANELS USE 7" LONG SMS
* SEE TABLE A SHEET 5 WIND ZONE
FASCIA PER 8 OR 15
#8 X 3/4" SMS @ 12" C/C EA SIDE
I-BEAM PER 11 OR 14
WING PANEL CAP PER 17
#8 X 3/4" SMS @ 24" C/C T&B (TYPICAL AT ALL I-BEAM TO PANEL CONNECTIONS)
4#8 X 3/4" SMS CONNECTING COLUMN TO THE EXAPNDER EACH SIDE
FULL HEIGHT I-COLUMN PER 12 POST SLEEVE COLUMN PER 17 AND 18, REFER TO TABLES 7 - 9 FOR ALLOWABLE COLUMN HEIGHTS
13 S-4 NON AXIAL BEARING COLUMN TO ROOF CONNECTION
3-3/4" OR 6" THICK SANDWICH PANEL ROOF SYSTEM
FASCIA PER 8 OR 15
#8 X 3/4" SMS @ 16" C/C EA SIDE
3-3/4" EPS CORE SANDWICH PANEL
#8 X 3/4" SMS @ 16" C/C EA SIDE
3/4" SMS @ 16" C/C EA SIDE
WING PANEL CAP PER 17
#8 X 3/4" SMS @ 24" C/C T&B (TYPICAL AT ALL I-BEAM TO PANEL CONNECTIONS)
I-BEAM GIRT PER 12
TRANSOM EXTRUSION PER 4
14 S-4 ROOF TO NON BEARING WALL CONNECTION
CORNER COLUMN TO HEADER CONNECTION PROVIDE
FOR WIND ZONE 1: 6#8 X 3/4" SMS
FOR WIND ZONE 2: 7 #8 X 3/4" SMS
FOR WIND ZONE 3: 8 #8 X 3/4" SMS
FOR WIND ZONE 4: 10 #8 X 3/4" SMS
* SEE TABLE A SHEET 5 WIND ZONE
CORNER COLUMN PER 12
EXPANDER BASE PER 7 AND 8
EXPANDER BASE PER 7 AND 8
2 #8 X 3/4" SMS @ 16" C/C VERTICALLY ATTACHING BOTH FRAME JAMBS TO CORNER COLUMN
11 S-4 CORNER COLUMN TO BASE CONNECTION
3"
CONCRETE FOOTING
FRAME JAMB PER 2
12" MIN
1" MIN
I-SECTION COLUMN PER 12
I-SECTION COLUMN PER 12
3/8" X 2-1/2" WEDGE-BOLT+ ® ANCHORS CONNECTING THE BASETRACK TO THE CONCRETE FOUNDATION AT EACH COLUMN (4-TOTAL)
3.25" MIN
EXTERIOR FACE OF FOOTING
15 S-4 CONNECTION OF CENTER COLUMN PER 12 & 2 TO BASE/FOUNDATION
3" MIN
POST CAP PER 17
POST SLEEVE PER 18
3/8" X 2-1/2" WEDGE-BOLT+ ® ANCHORS CONNECTING THE BASETRACK TO THE CONCRETE FOUNDATION AT EACH COLUMN (4-TOTAL)
3" MIN
12" MIN
3.25" MIN
EXTERIOR FACE OF FOUNDATION
15A S-4 CONNECTION OF CENTER COLUMN PER 17 & 18 TO FOUNDATION
CORNER COLUMN TO BASE CONNECTION PROVIDE
FOR WIND ZONE 1: 6#8 X 3/4" SMS
FOR WIND ZONE 2: 7 #8 X 3/4" SMS
FOR WIND ZONE 3: 8 #8 X 3/4" SMS
FOR WIND ZONE 4: 10 #8 X 3/4" SMS
* SEE TABLE A SHEET 5 WIND ZONE DESIGNATION
CORNER COLUN PER 20 WITH FRAME JAMB PER 2
EXPANDER PER 7 OR F-CHANNEL PER 8
MIN 12" WIDE CONCRETE FOOTING EXTENDING BELOW THE FROST LINE OF THE LOCALITY OR 12" BELOW GRADE WHICHEVER IS DEEPER. REINFORCE WITH 1#5 T&B
3" MIN
ATTACHMENT OF BASE TO TIMBER DECK OR FOUNDATION
6 #12 X 2-1/2' WOOD SCREWS CONNECTING THE BASEPLATE TO THE DECK OR
(4)-3/8" X 2-1/2" WEDGE-BOLT+ ® ANCHORS CONNECTING THE BASETRACK TO THE FOUNDATION AT EACH COLUMN (SEE DETAIL 16/S-4 FOR WEDGE BOLT SPACING)
OUTSIDE EDGE OF FOUNDATION
3.25" MIN
CONCRETE SLAB ON GRADE OR DECK
12 S-4 CORNER COLUMN TO FOUNDATION CONNECTION
3" MIN
3.25"
EXTERIOR FACE OF FOOTING
BASETRACK/EXPANDER PER 7 AND 8
CORNER POST PER 20
3" MIN
3.25" MIN
3/8" X 2-1/2" WEDGE-BOLT+ ® ANCHORS CONNECTING THE BASETRACK TO THE CONCRETE FOUNDATION AT EACH COLUMN (4-TOTAL)
3" MIN
EXTERIOR FACE OF FOUNDATION
16 S-4 CORNER POST TO FOUNDATION CONNECTION
#8 X 3/4" @ 16" c/c EA SIDE
#8 X 3/4" @ 16" c/c EA SIDE
DOOR SILL PER 3
EXPANDER PER 7 OR 8
SILL EXTRUSION PER 10
#8 X 3/4" @ 16" c/c EA SIDE
3.25" MIN
BASE TRACK ATTACHED TO THE CONCRETE FOUNDATION WITH (2) 3/8" X 2-1/2" WEDGE BOLT+ ANCHOR BOLTS @ 24" C/C
17 S-4 DOOR THRESHOLD TO FOUNDATION
#8 X 3/4" @ 16" c/c EA SIDE
DOOR SILL PER 3
EXPANDER PER 7 OR 8
SILL EXTRUSION PER 10
DIMENSIONAL LUMBER DECK FRAMING MEMBERS
BASE TRACK ATTACHED TO THE DECK WITH (2) LL358 LEDGER LOK SCREWS @ 24" C/C OR (2) #12 X 2-1/2" WOOD SCREWS @ 24" C/C
17A S-4 DOOR THRESHOLD TO DECK
NORTH CAROLINA PROFESSIONAL SEAL 028759 ENGINEER

CES

CHAMPION ENCLOSURE SUPPLIERS
12111 CHAMPION WAY, CINCINNATI, OH 45241
PH: (513) 782-3900 FAX: (513) 782-3903

CHAMPION WINDOWS AND PATIO ROOM
4" Wall System with Gable Style Roof

SECTION DETAILS

DATE: 2/13/19
SCALE: NTS
Drawn by: MJG

REV:	DATE:

SHEET: 4 OF 6

TABLE A: WIND ZONE DESIGNATION BASED ON DESIGN WIND SPEED AND EXPOSURE				
STRENGTH DESIGN WIND SPEED	115 MPH RISK CAT II	130 MPH RISK CAT II	140 MPH RISK CAT II	150 MPH RISK CAT II
ALLOWABLE STRESS WIND SPEED	90 MPH	100 MPH	110 MPH	120 MPH
EXP B	WIND ZONE 1	WIND ZONE 2	WIND ZONE 3	WIND ZONE 4
EXP C	WIND ZONE 2	WIND ZONE 3	WIND ZONE 4	SPECIAL DESIGN REQUIRED
EXP D	WIND ZONE 3	WIND ZONE 4	SPECIAL DESIGN REQUIRED	SPECIAL DESIGN REQUIRED

1. EXPOSURE CATEGORIES ARE AS DEFINED IN THE IRC, IBC AND ASCE-7
2. TABLE APPLIES TO PATIO ROOMS WITH MEAN ROOF HEIGHTS UP TO 30' IN EXPOSURE B AND UP TO 15' IN EXPOSURES C AND D. FOR ROOMS IN EXPOSURE CATEGORIES C AND D WITH MEAN ROOF HEIGHTS WITH MEAN ROOF HEIGHTS BETWEEN 15' AND 30' THE NEXT HIGHEST WIND ZONE DESIGNATION SHALL BE SELECTED OR A SITE SPECIFIC DESIGN WILL BE UTILIZED.
3. SITE SPECIFIC DETERMINATION OF WIND PRESSURES IS REQUIRED FOR SITES ON ISOLATED HILLS, RIDGES OR ESCARPMENTS THAT ARE ABRUPT CHANGES FROM THE GENERAL TOPOGRAPHY OF THE AREA.

TABLE 1: ALLOWABLE SANDWICH ROOF PANEL SPANS (FT-IN)											
PANEL THICKNESS (IN)	LIVE LOAD (PSF)	ROOF SNOW LOAD (PSF)									
	20	20	25	30	35	40	45	50	55	60	70
3-3/4"	17'-4"	16'-8"	15'-5"	14'-5"	13'-7"	12'-10"	12'-2"	11'-6"	11'-0"	10'-7"	9'-10"
6"	20'	20'	19' 2"	17'-7"	16'-4"	15'-4"	14'-6"	13'-9"	13'-2"	12'-8"	11'-8"

ROOF DEFLECTION CRITERIA = L/120

1. THE ALLOWABLE SPANS ARE BASED ON UNIFORM SNOW LOADING CONDITIONS.
2. FOR OSB ROOF PANELS WITH ASPHALT SHINGLES, THE INPUT ROOF LOAD FOR THIS CHART SHALL EQUAL THE DESIGN SNOW/ ROOF LIVE LOAD + 5PSF.

TABLE 2: APPLIED ROOF LOADS (PLF) ON WINDOW AND DOOR HEADER														
PANEL SPAN (FT)	ROOF LIVE/ SNOW LOAD (PSF)										WIND ZONE *			
	20	25	30	35	40	45	50	55	60	70	1	2	3	4
6	92	112	132	140	172	192	212	232	252	292	-98	-121	-145	-173
8	115	140	165	190	215	240	265	290	315	365	-109	-136	-163	-193
10	138	168	198	228	258	288	318	348	378	438	-120	-148	-179	-214
12	161	196	231	266	301	336	371	406	441	511	-132	-163	-197	-234
14	184	224	264	304	344	384	424	464	504		-143	-176	-213	-254
16	207	252	297	342	387	432					-155	-192	-232	-276
18	230	280	330	380							-166	-206	-250	-296
20	253	308									-178	-220	-266	-318

1. TABLE 1 INCLUDES THE DEAD LOAD OF THE STANDARD ROOF PANEL. FOR OSB ROOF PANELS WITH ASPHALT SHINGLES, THE INPUT ROOF LOAD FOR THIS CHART SHALL EQUAL THE DESIGN SNOW/ ROOF LIVE LOAD + 5PSF.
2. NEGATIVE VALUES INDICATE UPLIFT LOADS

* SEE TABLE A SHEET 5 FOR DESIGNATION OF WIND ZONE

TABLE 3: ALLOWABLE SPANS FOR HEADERS OVER DOOR AND WINDOW OPENINGS											
APPLIED LOAD* (PLF)	70	100	125	150	175	200	250	300	350	400	500
STANDARD HEADER	96"	78"	72"	64"	60"	56"	48"	N/A	N/A	N/A	N/A
HEADER WITH I-BEAM	96"	96"	96"	95"	88"	78"	72"	66"	60"	56"	48"

*. APPLIED LOAD IS THE LARGER OF THE APPLIED ROOF LOAD FROM SNOW LOADING OR FROM WIND LOADING DETERMINED FROM TABLE 2 SHEET 5

TABLE 4: ALLOWABLE COLUMN SPACING BASED ON DOOR/ WINDOW UNIT CAPACITY				
WIND ZONE	1	2	3	4
ALLOWABLE COLUMN SPACING	96"	84"	78"	68"

* SEE TABLE A SHEET 5 FOR DESIGNATION OF WIND ZONE

TABLE 5: ALLOWABLE HEIGHT OF LOAD BEARING I-COLUMN PER 12 AND 2				
COLUMN SPACING (INCHES)	WIND ZONE *			
	1	2	3	4
60"	8.5'	8.5'	8.5'	8.0'
68"	8.5'	8.5'	8.0'	8.0'
78"	8.5'	8.0'	7.5'	---
84"	8.5'	7.5'	---	---
96"	8.0'	---	---	---

* SEE TABLE A SHEET 5 FOR DESIGNATION OF WIND ZONE

TABLE 5A: ALLOWABLE HEIGHT OF LOAD BEARING POST SLEEVE COLUMN PER 17 AND 18				
COLUMN SPACING (INCHES)	WIND ZONE *			
	1	2	3	4
60"	8.5'	8.5'	8.5'	8.5'
68"	8.5'	8.5'	8.5'	8.5'
78"	8.5'	8.5'	8.5'	---
84"	8.5'	8.5'	---	---
96"	8.5'	---	---	---

* SEE TABLE A SHEET 5 FOR DESIGNATION OF WIND ZONE

TABLE 6: ALLOWABLE SPANS (FT) FOR GIRTS ON WALLS WITH STRUCTURAL SANDWICH WING PANELS				
WIND ZONE	1	2	3	4
MAX GIRT SPAN (FT)	13' 6"	12' 3"	11' 2"	10' 3"

* SEE TABLE A SHEET 5 FOR DESIGNATION OF WIND ZONE

TABLE 7: ALLOWABLE HEIGHT OF NON-LOAD BEARING COLUMN I-COLUMN PER 12 AND 2 SEPARATING TWO DOORS				
COLUMN SPACING (INCHES)	WIND ZONE *			
	1	2	3	4
60"	10' 0"	9' 11"	8' 10"	8' 5"
68"	9' 8"	9' 0"	8' 7"	8' 2"
78"	9' 3"	8' 8"	8' 2"	---
84"	9' 0"	8' 5"	---	---
96"	8' 8"	---	---	---

* SEE TABLE A SHEET 5 FOR DESIGNATION OF WIND ZONE

TABLE 8: ALLOWABLE HEIGHT OF NON-LOAD BEARING COLUMN I-COLUMN PER 12 AND 2 ADJOINING AT LEAST ONE WINDOW				
COLUMN SPACING (INCHES)	WIND ZONE *			
	1	2	3	4
60"	13' 0"	12' 2"	11' 2"	10' 5"
68"	12' 7"	11' 6"	10' 8"	10' 0"
78"	11' 10"	10' 10"	10' 2"	---
84"	11' 5"	10' 7"	---	---
96"	10' 10"	---	---	---

* SEE TABLE A SHEET 5 FOR DESIGNATION OF WIND ZONE

TABLE 9: ALLOWABLE HEIGHT OF NON-LOAD BEARING POST SLEEVE COLUMN PER 17 AND 18				
COLUMN SPACING (INCHES)	WIND ZONE *			
	1	2	3	4
60"	13' 0"	13' 0"	12' 0"	11' 2"
68"	13' 0"	12' 4"	11' 4"	10' 7"
78"	12' 9"	11' 7"	10' 9"	---
84"	12' 4"	11' 3"	---	---
96"	11' 8"	---	---	---

* SEE TABLE A SHEET 5 FOR DESIGNATION OF WIND ZONE

GENERAL NOTES AND SPECIFICATIONS

1. THE STRUCTURAL DESIGN FOR CHAMPION PATIO ROOMS HAS BEEN PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF 2009, 2012, 2015 AND 2018 EDITIONS OF THE IRC CODES, 2019 RESIDENTIAL CODE OF OHIO, 2015 NEW YORK STATE RESIDENTIAL CODE, 2018 SOUTH CAROLINA RESIDENTIAL CODE, 2018 NORTH CAROLINA BUILDING CODE, 2018 KENTUCKY RESIDENTIAL CODE, 9th ED OF THE MASSACHUSETTS RESIDENTIAL CODE, 2019 RHODE ISLAND SBC-2 ONE AND TWO FAMILY DWELLING CODE, DENVER 2015 IRC, 2016 DENVER BUILDING CODE, 2020 GEORGIA AMENDMENTS AND UTILIZING THE FOLLOWING REFERENCED STANDARDS; 2005 AND 2010 EDITIONS OF ASCE 7, 2005 AND 2010 ALUMINUM DESIGN MANUAL, 2005, 2012 AND 2018 NDS FOR WOOD AND AAMA/ NPEA/ NSA 2100 FOR SUNROOMS.
2. THESE PLANS COVER THE DESIGN OF THE PATIO ROOM AND IT'S CONNECTION TO THE EXISTING STRUCTURE. THE STRUCTURAL ADEQUACY OF THE EXISTING STRUCTURE TO SUPPORT THE TRANSFERRED LOADS IS BEYOND THE SCOPE OF THIS PACKAGE AND SHOULD BE VERIFIED BY OTHERS.
3. THE SNOW LOAD TABLES PRESENTED IN THIS PACKAGE ARE FOR UNIFORM ROOF SNOW LOADS. CONSIDERATION SHALL BE GIVEN TO SITE SPECIFIC CONDITIONS SUCH AS SLIDING, DRIFTING OR UNBALANCED SNOW LOADS.
4. BASIC WIND SPEEDS ARE 3-SECOND GUST AT 33 FT ABOVE THE GROUND IN EXPOSURE C.
5. SEISMIC DESIGN FOR ROOMS CONSTRUCTED IN SEISMIC DESIGN CATEGORIES 'D2 WITH UNIFORM ROOF SNOW LOADS UP TO 30PSF HAS BEEN CONSIDERED IN THIS PACKAGE. A SITE SPECIFIC SEISMIC EVALUATION IS REQUIRED FOR ENCLOSURES IN SDC D OR HIGHER WITH DESIGN ROOF SNOW LOADS IN EXCESS OF 30 PSF.
6. THE PATIO ROOM PROJECTION SHALL BE A MAXIMUM OF 1.1 TIMES THE PATIO ROOM WIDTH.
7. CHAMPION PATIO ENCLOSURES CAN BE CONSTRUCTED ON TIMBER FRAMED DECKS PROVIDED THE DECK AND ITS FOOTINGS HAVE BEEN ENGINEERED TO SAFELY CARRY THE ENCLOSURE'S AND THE DECK'S DESIGN LOADS.
8. THE DOOR AND WINDOW UNITS USED IN THE CHAMPION PATIO ROOM SYSTEM, SUPPLIED BY ENCLOSURE SUPPLIERS LLC, ARE GLAZED WITH FULLY TEMPERED INSULATED GLASS CONFORMING TO THE REQUIREMENTS OF ANSI Z97.1 AND CPSC 16 CFR 1201 CATEGORY II. IN WIND BORNE DEBRIS REGIONS GLAZED OPENINGS SHALL BE PROTECTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE GOVERNING CODE.
9. THIS ENCLOSURE MEETS THE REQUIREMENTS OF A CATEGORY II SUNROOM AS DEFINED IN AAMA/ NPEA/ NSA 2100.

MATERIALS

SOILS

1. ALL FOOTINGS SHALL BEAR ON LEVEL(WITHIN 1:12) UNDISTURBED SOIL OR APPROVED ENGINEERING FILL WITH AN ALLOWABLE SOIL BEARING CAPACITY OF 1000 PSF. FOOTINGS SHALL EXTEND BELOW THE FROST LINE OF THE LOCALITY BUT NOT LESS THAN 12" BELOW GRADE.

CONCRETE

1. ALL CONCRETE SHALL CONFORM TO ALL REQUIREMENTS OF ACI 318 SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS.
2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS AND WHERE EXPOSED TO THE EXTERIOR ENVIRONMENT SHALL HAVE AN ENTRAINED AIR CONTENT OF BETWEEN 5.0% TO 7.0%.
3. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 60 KSI DEFORMED BARS AND ASTM A185 MESH.

STRUCTURAL ALUMINUM

1. ALL EXTRUSIONS SHALL BE AL 6063-T6 ALUMINUM PROVIDED BY ENCLOSURE SUPPLIERS LLC.
2. ROOF PANELS SHALL BE 3-3/4" OR 6" THICK STANDARD OR OSB SANDWICH PANELS MANUFACTURED BY ENCLOSURE SUPPLIERS LLC.
   STANDARD ROOF PANEL SKINS CONSISTS OF 0.024" THICK ALUMINUM SHEETHING (3105 H574).
   OSB ROOF PANELS SKINS CONSISTS OF A 0.024" ALUMINUM SHEETHING AND 7/16" OSB COMBINED TOP SKINS AND A 0.024" ALUMINUM SHEETHING BOTTOM SKIN.
   THE CORE FOR ALL PANELS SHALL BE ASTM C578 TYPE II EXPANDED POLYSTYRENE.
   THE PANELS SHALL BE A MAXIMUM OF THREE FEET (3') WIDE AND SHALL BE SLOTTED BETWEEN AL 6063-T6 I-BEAMS.
   THE ALLOWABLE PANEL SPAN CHART IN THIS PACKAGE APPLIES TO BOTH THE STANDARD AND OSB ROOF PANELS.

MECHANICAL FASTENERS

1. SHEET METAL SCREWS (SMS) SHALL BE STAINLESS STEEL WITH TYPE AB SCREW THREADS.
2. LAG SCREWS SHALL BE GALVANIZED STEEL "FULL BODIED" SCREWS WITH A MINIMUM BENDING YIELD STRENGTH OF 60,000 PSI FOR 5/16" DIAMETER AND 40,000 PSI FOR 3/8" AND LARGER DIAMETER. LAG SCREWS SHALL HAVE A MINIMUM EMBEDMENT DEPTH OF 8 X LAG SCREW DIAMETER
3. WOOD SCREWS SHALL HAVE A MINIMUM BENDING YIELD STRENGTH OF 80,000 PSI
4. LL358 LEDGER LOK® SCREWS BY FASTENMASTER AND SHALL HAVE A MINIMUM BENDING STRENGTH OF 183,000 PSI AND SHALL HAVE A MINIMUM EMBEDMENT OF 2" INTO THE MAIN WOOD SUPPORTING MEMBER.
5. ANCHOR BOLTS INTO CONCRETE SHALL BE 3/8"Ø X 2-1/ 2" WEDGE-BOLT+ ANCHORS BY POWERS FASTENERS.
6. PIN ANCHORS SHALL BE ZAMAC NAILIN ANCHORS MANUFACTURED BY POWERS FASTENERS, BREWSTERS, ITW OR EQUIVALENT
7. FASTENERS IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE STAINLESS STEEL OR SHALL BE HOT DIPPED GALVANIZED PER ASTM A153. HOT DIPPED CONNECTOR PRODUCTS IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE ASTM-A653 COATING DESIGNATION G-185.

CES
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PH: (513) 782-3900 FAX: (513) 782-3903

CHAMPION WINDOWS AND PATIO ROOM
4" Wall System with Gable Style Roof

DESIGN TABLES AND NOTES

DATE: 7/18/19
SCALE: NTS
Drawn by: MJG

REV:	DATE:
2019 RCO	7/19/19
2015 SC	8/8/19
DENVER CO	11/6/19

SHEET: 5 OF 6

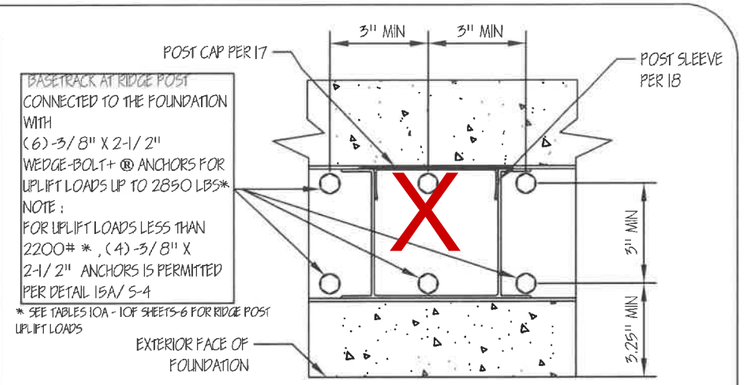
NORTH CAROLINA PROFESSIONAL SEAL 026759 ENGINEER MARTIN J. GOSS
4/5/2022

TABLE 10A: REQUIRED RIDGE BEAM SIZE AND APPLIED AXIAL GRAVITY LOADS ON RIDGE POST FOR 10' PROJECTION ROOM

ROOM WIDTH (FT)	ROOF LIVE/ SNOW LOAD (PSF)								UPLIFT LOADS ON RIDGE POST FOR 10' PROJECTION ROOM: WIND ZONE*			
	20	25	30	35	40	50	60	70	1	2	3	4
14	2-2X8 966#	2-2X8 1176#	2-2X8 1386#	2-2X10 1596#	2-2X10 1806#	2-2X12 2226#	2-2X12 2646#	10" LVL 3066#	-1105	-1365	-1651	-1965
16	2-2X8 1104#	2-2X8 1344#	2-2X10 1584#	2-2X10 1824#	2-2X10 2064#	2-2X12 2544#	10" LVL 3024#	10" LVL 3504#	-1189	-1498	-1777	-2114
18	2-2X8 1242#	2-2X10 1512#	2-2X10 1782#	2-2X10 2052#	2-2X12 2322#	2-2X12 2862#	10" LVL 3402#	10" LVL 3942#	-1280	-1581	-1913	-2276
20	2-2X8 1380#	2-2X10 1680#	2-2X10 1980#	2-2X12 2280#	2-2X12 2580#	10" LVL 3180#	10" LVL 3780#	10" LVL 4380#	-1375	-1698	-2054	-2445
24	2-2X10 1656#	2-2X10 2016#	2-2X12 2376#	2-2X12 2736#	10" LVL 3096#	10" LVL 3816#	10" LVL 4536#	---	-1560	-1925	-2330	---
28	2-2X10 1932#	2-2X12 2352#	2-2X12 2772#	10" LVL 3192#	10" LVL 3612#	10" LVL 4452#	---	---	-1738	-2146	-2596	---
30	2-2X12 2070#	2-2X12 2520#	10" LVL 2970#	10" LVL 3420#	10" LVL 3870#	---	---	---	-1825	-2253	---	---

TABLE 10B: REQUIRED RIDGE BEAM AND APPLIED AXIAL GRAVITY LOADS ON RIDGE POST FOR 12' PROJECTION ROOM

ROOM WIDTH (FT)	ROOF LIVE/ SNOW LOAD (PSF)								UPLIFT LOADS ON RIDGE POST FOR 12' PROJECTION ROOM: WIND ZONE*			
	20	25	30	35	40	50	60	70	1	2	3	4
14	2-2X8 1127#	2-2X10 1372#	2-2X10 1617#	2-2X12 1862#	2-2X12 2107#	10" LVL 2597#	10" LVL 3087#	10" LVL 3577#	-1202	-1484	-1796	-2137
16	2-2X10 1288#	2-2X10 1568#	2-2X12 1848#	2-2X12 2128#	10" LVL 2408#	10" LVL 2968#	10" LVL 3528#	10" LVL 4088#	-1305	-1611	-1949	-2320
18	2-2X10 1449#	2-2X12 1764#	2-2X12 2079#	10" LVL 2394#	10" LVL 2709#	10" LVL 3339#	10" LVL 3969	12" LVL 4599#	-1409	-1739	-2104	-2504
20	2-2X10 1610#	2-2X12 1960#	2-2X12 2310#	10" LVL 2660#	10" LVL 3010#	10" LVL 3710#	12" LVL 4410#	12" LVL 5110#	-1510	-1865	-2256	---
24	2-2X12 1932#	2-2X12 2352#	2-2X12 2772#	10" LVL 3192#	10" LVL 3612#	12" LVL 4452#	12" LVL 5292#	---	-1708	-2109	-2551	---
28	2-2X12 2254#	10" LVL 2744#	10" LVL 3234#	10" LVL 3724#	10" LVL 4214#	12" LVL 5194#	---	---	-1898	-2343	---	---
30	10" LVL 2415#	10" LVL 2940#	10" LVL 3465#	10" LVL 3990#	12" LVL 4515#	---	---	---	-2006	-2477	---	---



18 / S-6 BASEPLATE AT RIDGE POST TO CONCRETE FOUNDATION

TABLE 10C: REQUIRED RIDGE BEAM AND APPLIED AXIAL GRAVITY LOADS ON RIDGE POST FOR 14' PROJECTION ROOM

ROOM WIDTH (FT)	ROOF LIVE/ SNOW LOAD (PSF)								UPLIFT LOADS ON RIDGE POST FOR 14' PROJECTION ROOM: WIND ZONE*			
	20	25	30	35	40	50	60	70	1	2	3	4
14	2-2X10 1288#	2-2X12 1568#	2-2X12 1848#	10" LVL 2128#	10" LVL 2408#	10" LVL 2968#	12" LVL 3528#	12" LVL 4088#	-1309	-1616	-1955	---
16	2-2X12 1472#	2-2X12 1792#	10" LVL 2112#	10" LVL 2432#	10" LVL 2752#	12" LVL 3392#	12" LVL 4032#	12" LVL 4672#	-1422	-1755	-2124	-2527
18	2-2X12 1656#	10" LVL 2016#	10" LVL 2376#	10" LVL 2736#	12" LVL 3096#	12" LVL 3816#	12" LVL 4536#	12" LVL 5256#	-1532	-1892	-2289	---
20	2-2X12 1840#	10" LVL 2240#	10" LVL 2640#	10" LVL 3040#	12" LVL 3440#	12" LVL 4240#	12" LVL 5040#	---	-1640	-2025	-2450	---
24	10" LVL 2208#	10" LVL 2688#	12" LVL 3168#	12" LVL 3648#	12" LVL 4128#	12" LVL 5088#	---	---	-1850	-2283	---	---
28	10" LVL 2576#	10" LVL 3136#	12" LVL 3696#	12" LVL 4256#	12" LVL 4816#	---	---	---	-2090	-2581	---	---
30	10" LVL 2760#	12" LVL 3360#	12" LVL 3960 #	12" LVL 4560#	12" LVL 5160#	---	---	---	-2217	---	---	---

TABLE 10D: REQUIRED RIDGE BEAM AND APPLIED AXIAL GRAVITY LOADS ON RIDGE POST FOR 16' PROJECTION ROOM

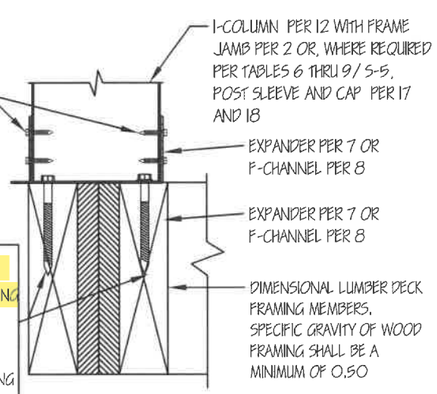
ROOM WIDTH (FT)	ROOF LIVE/ SNOW LOAD (PSF)								UPLIFT LOADS ON RIDGE POST FOR 16' PROJECTION ROOM: WIND ZONE*			
	20	25	30	35	40	50	60	70	1	2	3	4
14	2-2X12 1449#	10" LVL 1764#	10" LVL 2079#	12" LVL 2394#	12" LVL 2709#	12" LVL 3339#	12" LVL 3969#	14" LVL 4599#	-1415	---	---	---
16	2-2X12 1656#	10" LVL 2016#	12" LVL 2376#	12" LVL 2736#	12" LVL 3096#	12" LVL 3816#	14" LVL 4536#	14" LVL 5256#	-1535	-1894	-2292	---
18	10" LVL 1863#	10" LVL 2268#	12" LVL 2673#	12" LVL 3078#	12" LVL 3483#	14" LVL 4293#	14" LVL 5103#	---	-1651	-2039	-2467	---
20	10" LVL 2070#	12" LVL 2520#	12" LVL 2970#	12" LVL 3420#	12" LVL 3870#	14" LVL 4770#	---	---	-1765	-2179	---	---
24	12" LVL 2484#	12" LVL 3024#	12" LVL 3564#	12" LVL 4104#	14" LVL 4644#	---	---	---	-2012	-2484	---	---
28	12" LVL 2898#	12" LVL 3528#	14" LVL 4158#	14" LVL 4788#	14" LVL 5418#	---	---	---	-2289	---	---	---
30	12" LVL 3105#	12" LVL 3780#	14" LVL 4455#	14" LVL 5130#	14" LVL 5805#	---	---	---	-2428	---	---	---

(4)-#8 x 3/4" SMS EA SIDE CONNECTING BASE TO POST SLEEVE TO EXPANDER FOR UPLIFT LOADS UP TO 1900 LBS* OR (6)-#8 x 3/4" SMS EA SIDE CONNECTING BASE TO POST SLEEVE FOR UPLIFT LOADS UP TO 2850 LBS*

* SEE TABLES 10A -10F SHEET 5-6 FOR RIDGE POST UPLIFT LOADS

FOR UPLIFT LOADS UP TO 2400 USE #(4)-LL358 LEDGER LOK SCREWS OR (6) #12 X 3" WOOD SCREWS CONNECTING THE BASETRACK TO THE DECK; FOR UPLIFT LOADS UP TO 2850# USE (6)-LL358 LEDGER LOK SCREWS OR (8) #12 X 3" WOOD SCREWS CONNECTING THE BASETRACK TO THE DECK

* SEE TABLES 10A - 10F SHEETS-6 FOR RIDGE POST UPLIFT LOADS



19 / S-6 BASEPLATE AT RIDGE POST TO DECK FOUNDATION

TABLE 10E: REQUIRED RIDGE BEAM AND APPLIED AXIAL GRAVITY LOADS ON RIDGE POST FOR 18' PROJECTION ROOM

ROOM WIDTH (FT)	ROOF LIVE/ SNOW LOAD (PSF)								UPLIFT LOADS ON RIDGE POST FOR 18' PROJECTION ROOM: WIND ZONE*			
	20	25	30	35	40	50	60	70	1	2	3	4
14	---	---	---	---	---	---	---	---	---	---	---	---
16	10" LVL 1840#	12" LVL 2240#	12" LVL 2640#	12" LVL 3040#	14" LVL 3440#	14" LVL 4240#	14" LVL 5040#	14" LVL 5840#	-1643	---	---	---
18	12" LVL 2070#	12" LVL 2520#	12" LVL 2970#	14" LVL 3420#	14" LVL 3870#	14" LVL 4770#	---	---	-1766	-2180	---	---
20	12" LVL 2300#	12" LVL 2800#	14" LVL 3300#	14" LVL 3800#	14" LVL 4300#	14" LVL 5300#	---	---	-1885	-2327	---	---
24	12" LVL 2760#	14" LVL 3360#	14" LVL 3960#	14" LVL 4560#	14" LVL 5160#	---	---	---	-2186	-2699	---	---
28	12" LVL 3220#	14" LVL 3920#	14" LVL 4620#	14" LVL 5320#	---	---	---	---	-2488	---	---	---
30	12" LVL 3450#	14" LVL 4200#	14" LVL 4950#	14" LVL 5700#	---	---	---	---	---	---	---	---

TABLE 10F: REQUIRED RIDGE BEAM AND APPLIED AXIAL GRAVITY LOADS ON RIDGE POST FOR 20' PROJECTION ROOM

ROOM WIDTH (FT)	ROOF LIVE/ SNOW LOAD (PSF)								UPLIFT LOADS ON RIDGE POST FOR 20' PROJECTION ROOM: WIND ZONE*			
	20	25	30	35	40	50	60	70	1	2	3	4
14	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
18	12" LVL 2277#	14" LVL 2772#	14" LVL 3267#	14" LVL 3762#	14" LVL 4257#	---	---	---	-1876	---	---	---
20	12" LVL 2530#	14" LVL 3080#	14" LVL 3630#	14" LVL 4180#	14" LVL 4730#	---	---	---	-2035	-2513	---	---
24	14" LVL 3036#	14" LVL 3696#	14" LVL 4356#	14" LVL 5016#	---	---	---	---	-2361	---	---	---
28	14" LVL 3542#	14" LVL 4312#	14" LVL 5082#	---	---	---	---	---	-2687	---	---	---
30	14" LVL 3795#	14" LVL 4620#	---	---	---	---	---	---	---	---	---	---

TABLE 11: ALLOWABLE RIDGE POST HEIGHT (FT) BASED ON ALUMINUM SLEEVE CAPACITY

COLUMN SPACING (INCHES)	WIND ZONE*			
	1	2	3	4
60"	13'	13'	12'	11' 2"
68"	13'	12' 4"	11' 5"	10' 8"
78"	12' 9"	11' 8"	10' 9"	---
84"	12' 4"	11' 3"	---	---
96"	11' 8"	---	---	---

* REFER TO TABLE A SHEET 5 FOR WIND ZONE DESIGNATION

TABLE 12: ALLOWABLE AXIAL LOADS ON RIDGE POST (LBS) BASED ON 4X4 WOOD POST INSERT

POST HEIGHT (FT)	WOOD SPECIES	
	DF#2	SP#2/ HEM FIR#2/ SPF#2
9	5791	4741
9.5	5215	4284
10	4739	3888
10.5	4323	3543
11	3959	3240
11.5	3637	2975
12	3352	2710
13	2876	2346

* REFER TO TABLES 10 - 10F SHEET 5-6 FOR AXIAL GRAVITY LOADS ON RIDGE POST

NOTES ON TABLES 6A -6F

1. UPPER ENTRY IN EACH CELL REPRESENTS RIDGE BEAM SIZE.
2. LOWER VALUE IN EACH CELL REPRESENTS GRAVITY LOAD ON RIDGE BEAM SUPPORTS.
3. NEGATIVE VALUES REPRESENTS UPLIFT LOAD ON RIDGE BEAM SUPPORTS
4. 2-2X8, 2-2X10 & 2-2X12 SHALL BE SOUTHERN PINE NO. 1 GRADE DIMENSIONAL LUMBER

NOTES ON TABLES 6A -6F (CONT'D)

5. LVLs SHALL BE 2 PIECES OF 1.75"X 1.9E MICRO=LAM BY ILEVEL TRUS JOIST.
6. 10" AND 12" LVL REPRESENTS AN ACTUAL LVL DEPTH OF 9.25" AND 11.25" RESPECTIVELY.
7. 14" LVL REFERS TO 14" ACTUAL DEPTH OF LVL

NOTES ON TABLES 6A -6F (CONT'D)

8. TABLES INCLUDE THE DEAD LOAD OF THE STANDARD ROOF PANEL. FOR OSB ROOF PANELS WITH ASPHALT SHINGLES, THE INPUT ROOF LOAD FOR THESE CHARTS SHALL EQUAL THE DESIGN SNOW/ ROOF LIVE LOAD + 5PSF.
9. TOTAL LOAD DEFELCTION = L/ 240

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CHAMPION WINDOWS AND PATIO ROOM
4" Wall System with Gable Style Roof

TABLES AND SECTION DETAILS

DATE: 2/13/19
SCALE: NTS
Drawn by: MJG

REV:	DATE:

SHEET: 6 OF 6

NORTH CAROLINA PROFESSIONAL SEAL 026759 ENGINEER MARVIN J. GRAY

4/5/2022