

# THERMAL VIEW SUNROOM

## A SUPERIOR MASON PRODUCT

MASTER PLAN SHEET FOR SYSTEMS UNDER A MONOSLOPE ROOF

VALID ONLY FOR ZIP CODE: 28356  
 VALID ONLY FOR: Sean France Inc.  
 FOR PERMIT USE WITHIN 14 DAYS OF DIGITAL SEAL  
 PE027234 CA-C-4561

### DESIGN NOTES:

1) THIS STRUCTURE HAS BEEN DESIGNED & COMPLIES WITH THE REQUIREMENTS OF THE 2012 INTERNATIONAL BUILDING CODE. CONTRACTOR SHALL INVESTIGATE AND CONFORM TO ALL LOCAL BUILDING CODE AMENDMENTS WHICH MAY APPLY. DESIGN CRITERIA OR SPANS BEYOND STATED HEREIN MAY REQUIRE ADDITIONAL SITE SPECIFIC SEALED ENGINEERING. ALL LOADS BASED ON RISK CATEGORY II UP TO Vult=180 MPH, Vwind=139.50 MPH, EXP 'C', Kd=0.85, Kt=1.0 (FLAT OR UNOBSTRUCTED TERRAIN ONLY), ENCLOSED (Gcpi= +/-0.18), 15' MRH PER ASCE 7-10 AS APPLICABLE ENCLOSURES DESIGNED AS CATEGORY II PER AAMA/NPEA/NSA 2100.  
 \*\* THIS DOCUMENT SHALL NOT BE USED OR REPRODUCED WITHOUT THE ORIGINAL SIGNATURE & RAISED SEAL OF A CERTIFIED PROFESSIONAL ENGINEER

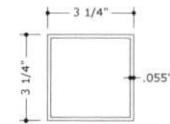
### DIGITAL SEAL NOTES:

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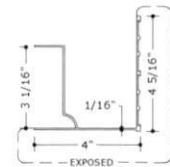
### GENERAL NOTES:

- THE EXISTING STRUCTURE MUST BE CAPABLE OF SUPPORTING THE LOADED SUPERIOR MASON STRUCTURE AS DETERMINED BY OTHERS OR BY SPECIAL ENGINEERING BY UNDERSIGNED ENGINEER ATTACHED HERETO. NO WARRANTY IS CONTAINED HEREIN.
- WALL MEMBERS SHALL BE CONSTRUCTED USING MINIMUM TYPE 3005-H25 ALUMINUM FACINGS, (1) OR (2) PCF ASTM C-578 CARPENTER BRAND EPS. ADHERE TO ALUMINUM FACINGS WITH ASHLAND CHEMICAL 2020 ISO GRIP FABRICATION TO BE BY ELITE PANEL PRODUCTS ONLY IN ACCORDANCE WITH APPROVED FABRICATION METHODS.
- ALL EXTRUSIONS SHALL BE ALUMINUM ALLOY TYPE 6063-T6 OR BETTER.
- ALL FASTENERS TO BE ASTM F993, CW 316 STAINLESS STEEL, SAE GRADE 2 STEEL MIN. OR CADMIUM PLATED OR OTHER CORROSION RESISTANT MATERIAL AND SHALL COMPLY WITH THE 2010 ALUMINUM DESIGN MANUAL, THE ALUMINUM ASSOCIATION, INC., & APPLICABLE FEDERAL, STATE, AND LOCAL CODES.
- FASTENERS SHALL HAVE A HEAD AND/OR BE PROVIDED WITH 1/2" DIAMETER WASHER MINIMUM UNLESS NOTED OTHERWISE. FOR ALUMINUM MEMBERS ALL ANCHORS SHALL BE SPACED WITH 2x DIAMETER END DISTANCE AND 2.5x DIAMETER MIN. SPACING TO ADJACENT ANCHORS. UNLESS NOTED OTHERWISE, PROVIDE (5) PITCHES MIN PAST THE THREAD PLANE FOR ALL SCREW CONNECTIONS.
- ANY FASTENER STRIPPED OR NOT ADEQUATELY HOLDING SHALL BE REPLACED.
- THE CONTRACTOR IS RESPONSIBLE TO INSULATE ALUMINUM MEMBERS FROM DISSIMILAR METALS TO PREVENT ELECTROLYSIS.
- ALL CONCRETE ANCHORS MUST BE CARBON STEEL ULTRACONS BY 'ELCO' OR EQUIVALENT W/ 1/2" EMBED, 2" MIN. EDGE DISTANCE, FASTENED TO MINIMUM 3192PSI MIN. UNCRACKED CONCRETE.
- IF REQUIRED BY CODE, THE EPS CORE SHALL BE SEPARATED FROM THE BUILDING INTERIOR BY A 15 MINUTE THERMAL BARRIER OF APPROVED 5/8" INCH GYPSUM WALLBOARD OR EQUAL. SUPERIOR MASON CAN PROVIDE UL715 (INTERIOR) OR CLASS A (EXTERIOR) PANEL TO SATISFY CODE PROVIDED ALUM. & EPS MEET SPECS ABOVE.
- SOLID WALL KICKPLATE SHALL NOT BE GREATER THAN 25% OF THE TOTAL WALL HEIGHT.
- WINDOWS AND DOORS SHALL BE BY OTHERS IN ACCORDANCE WITH REQUIRED WIND PRESSURES STATED IN TABLES & SHALL MEET ALL PRODUCT APPROVAL REQUIREMENTS. THIS ENCLOSURE IS **NOT IMPACT RESISTANT**. SHUTTERS SHALL NOT BE INSTALLED TO THIS ENCLOSURE. WHEN REQUIRED BY CODE, AN APPROVED IMPACT PROTECTION SYSTEM SHALL BE INSTALLED AT THE HOST STRUCTURE. HOST STRUCTURE DOORS AND WINDOWS ARE NOT TO BE REMOVED EXISTING TO THIS ENCLOSURE. THIS ENCLOSURE IS NON-HABITABLE SPACE.
- ALUMINUM MEMBERS IN CONTACT WITH CONCRETE & WOOD SHALL BE PROTECTED BY 'KOPPERS BITUMINOUS PAINT' OR MFR. EQUAL IN ACCORDANCE WITH APPLICABLE CODE REQUIREMENTS.
- ELECTRICAL GROUND AND ALL RELATED WIRING AND CONSIDERATIONS TO BE DESIGNED BY OTHERS AS REQUIRED.
- MAXIMUM AVG. COLUMN SPACING = 6FT, MAX COLUMN HEIGHT = 10FT, MAX LIVE LOAD = 50PSF, MAX WIND VELOCITY & EXPOSURE = 170MPH, 'C' ROOF SPAN PER SEPARATE ENGINEERING. SITE SPECIFIC ENGINEERING REQUIRED FOR ANY DETAIL WHICH DEVIATES FROM THIS PLAN OR BEYOND THESE LIMITATIONS. ROOF PANEL ANCHOR DESIGN CONSIDERS ONLY ROOF UPLIFT AND LIVE LOADS. ROOF LOADS HAVE NOT BEEN CONSIDERED TO ACT SIMULTANEOUSLY WITH WALL WIND LOADS.
- EXISTING WOOD HOST STRUCTURE SHALL BE #2 SYP MIN. EXISTING METAL HOST STRUCTURE SHALL BE A36 STEEL OR 6063-T6 MIN ALUMINUM 1/2" THICK MIN. EXISTING CONCRETE HOST STRUCTURE SHALL BE 3000 PSI MIN. STRUCTURAL ADHESIVE SHALL HAVE 1500 PSI MIN BOND STRENGTH.
- THE SYSTEM DETAILED HEREIN IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SPECIFIC SITE. FOR SITE CONDITIONS DIFFERENT FROM THE CONDITIONS DETAILED HEREIN, A LICENSED ENGINEER OR REGISTERED ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE IN CONJUNCTION WITH THIS DOCUMENT.
- ENGINEER SEAL AFFIXED HERETO VALIDATES STRUCTURAL DESIGN AS SHOWN ONLY. USE OF THIS SPECIFICATION BY CONTRACTOR, et al. INDEMNIFIES AND SAVES HARMLESS THIS ENGINEER FOR ALL COSTS AND DAMAGES INCLUDING LEGAL FEES AND APPELLATE FEES RESULTING FROM MATERIAL FABRICATION, SYSTEM ERECTION, AND CONSTRUCTION PRACTICES BEYOND THAT WHICH IS CALLED FOR BY LOCAL, STATE, AND FEDERAL CODES AND FROM DEVIATIONS OF THIS PLAN.
- EXCEPT AS EXPRESSLY PROVIDED IN THIS SPECIFICATION, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED.
- WIND CATEGORY TABLE AND SEISMIC LATERAL LOAD TO BE SELECTED PER ATTACHED SITE SPECIFIC CONDITIONS OR BY A SITE SPECIFIC DESIGN PROFESSIONAL.

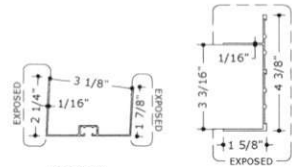
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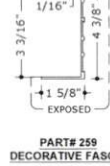
DOOR JAMB / HEADER:  
 3 1/4" X 3 1/4" X .055"  
 ALUMINUM TUBE (6063-T5 MIN)



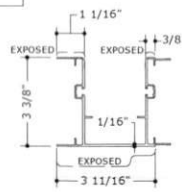
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 DECORATIVE GUTTER FASCIA



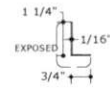
PART# 381  
 WALL HANGER



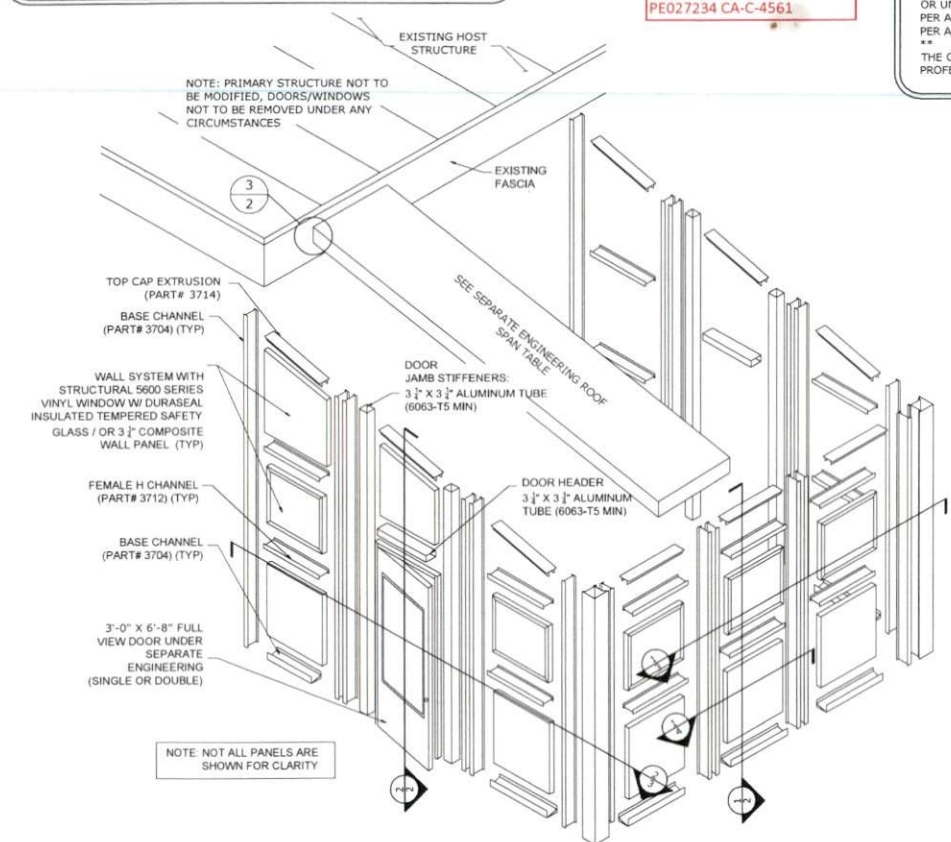
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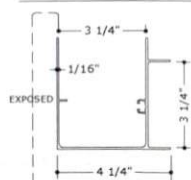
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 ELECTRICAL BOX CAVITY



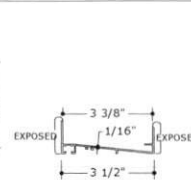
PART# 1205  
 ANGLE MEMBER



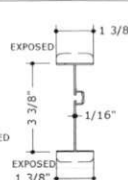
NOTE: NOT ALL PANELS ARE SHOWN FOR CLARITY



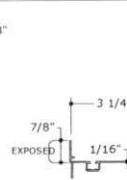
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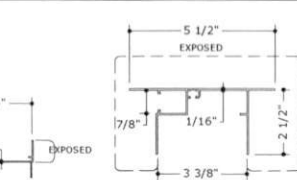
PART# 3704  
 BASE CHANNEL



PART# 3712  
 FEMALE H CHANNEL



PART# 3713  
 MALE H CHANNEL



PART# 3714  
 TOP CAP

FRANK L. BENNARDO, P.E.  
 PE# 0046549 CA-C-3865  
 03/29/2019

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SUPERIOR MASON  
 SUNROOM SYSTEM  
 MASTER PLAN SHEET

REMARKS	DATE	DRWN	CHKD	DATE
INT ISSUE	10/13/17			

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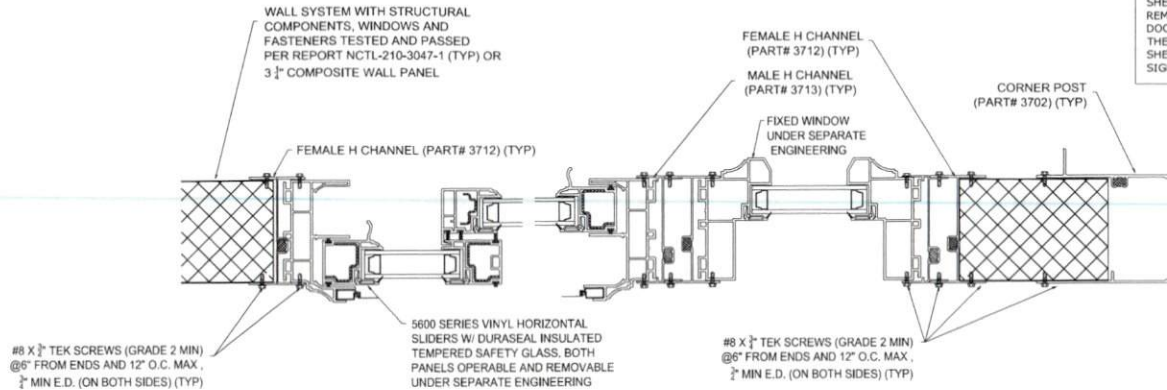
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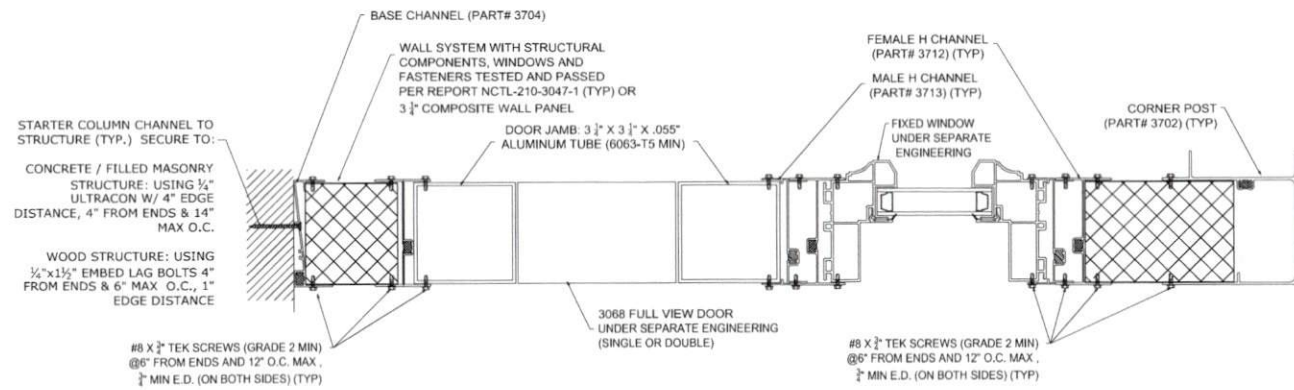


# TYPICAL SECTIONS



1  
3 NTS SECTION VIEW

## TYPICAL HORIZONTAL SECTION OF WALL WITH WINDOW SYSTEM



2  
3 NTS SECTION VIEW

## TYPICAL HORIZONTAL SECTION OF WALL WITH DOOR

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**SUPERIOR MASON SUNROOM SYSTEM MASTER PLAN SHEET**

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3 OF 4

# COLUMN ALLOWABLE HEIGHT TABLES: ( $V_{ult}$ , EXPOSURE)

**Table 1: 130 MPH FOR 'H' COLUMNS**

EXPOSURE	LIVE /SNOW LOAD*	MAX ROOF SPAN	AVERAGE COLUMN SPACING						
			3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"
B	50 PSF MAX	21' - 0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	9'-2"	7'-3"
C	50 PSF MAX	21' - 0"	10'-0"	10'-0"	10'-0"	10'-0"	9'-9"	8'-4"	6'-7"

**Table 2: 140 MPH FOR 'H' COLUMNS**

EXPOSURE	LIVE /SNOW LOAD*	MAX ROOF SPAN	AVERAGE COLUMN SPACING						
			3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"
B	50 PSF MAX	19' - 0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	9'-0"	8'-7"
C	50 PSF MAX	19' - 0"	10'-0"	10'-0"	10'-0"	10'-0"	9'-9"	8'-7"	7'-4"

**Table 3: 150 MPH FOR 'H' COLUMNS**

EXPOSURE	LIVE /SNOW LOAD*	MAX ROOF SPAN	AVERAGE COLUMN SPACING						
			3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"
B	50 PSF MAX	17' - 0"	10'-0"	10'-0"	10'-0"	10'-0"	9'-9"	9'-5"	8'-2"
C	50 PSF MAX	17' - 0"	10'-0"	10'-0"	10'-0"	10'-0"	9'-0"	8'-0"	6'-9"

**Table 4: 160 MPH FOR 'H' COLUMNS**

EXPOSURE	LIVE /SNOW LOAD*	MAX ROOF SPAN	AVERAGE COLUMN SPACING						
			3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"
B	50 PSF MAX	15' - 0"	10'-0"	10'-0"	10'-0"	10'-0"	9'-4"	8'-3"	7'-0"
C	50 PSF MAX	15' - 0"	10'-0"	10'-0"	10'-0"	9'-4"	8'-5"	7'-5"	6'-2"

**Table 5: 170 MPH FOR 'H' COLUMNS**

EXPOSURE	LIVE /SNOW LOAD*	MAX ROOF SPAN	AVERAGE COLUMN SPACING						
			3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"
B	50 PSF MAX	13' - 0"	10'-0"	10'-0"	10'-0"	10'-0"	9'-6"	9'-0"	8'-9"
C	50 PSF MAX	13' - 0"	10'-0"	10'-0"	9'-8"	9'-0"	8'-1"	7'-2"	6'-1"

## TABLE NOTES:

- 2010 / 2015 ALUMINUM DESIGN MANUAL, ALLOWABLE STRESS DESIGN METHOD USED IN ALL TABLES.
- USE APPROPRIATE TABLE REQUIRED BY THE BUILDING CODE REFERENCED IN THE GENERAL NOTES. VERIFY REQUIREMENTS WITH BUILDING DEPARTMENT.
- DEFLECTION LIMIT =  $L/180$  AT GLASS POINTS.
- LOADING CRITERIA CONSIDERED IS AS FOLLOWS: 2PSF ROOF DEAD LOAD, 30 PSF MINIMUM ROOF LIVE LOAD, WALL WIND LOAD PER ASCE 7-10, RISK CATEGORY II, MRH=15FT (SEE GENERAL NOTES FOR DESIGN CRITERIA).
- CUSTOM WINDOWS STRUCTURAL 5600 SERIES VINYL HORIZONTAL SLIDERS W/ DURASEAL JAMBS USED FOR CALCULATIONS, ANY SUPERIOR MASON ALUMINUM WINDOWS CAN BE SUBSTITUTED, OR OTHER MANUFACTURER EQUIVALENT WINDOW, AS VERIFIED BY OTHERS.
- COLUMN SPACING IS HALF THE DISTANCE TO THE LEFT ADDED TO HALF THE DISTANCE TO THE RIGHT OF THE BEAM (AVERAGE COLUMN SPACING), SEE FIGURE 1.
- VALUES BELOW ALLOWABLE CEILING HEIGHT INTENDED TO BE BUILT ON KNEEWALLS OR OTHER SUPPORTING STRUCTURES (CERTIFIED BY OTHERS).
- \*LIVE LOADS SPECIFIED HEREIN LIST THE ALLOWABLE ROOF LIVE LOAD AND MAY BE SUBSTITUTED WITH THE REQUIRED SNOW LOAD (NOT CONCURRENTLY WITH THE ROOF LIVE LOAD, BUT CONCURRENT WITH WIND) PROVIDED THE PROJECT SITE IS CERTIFIED BY A PROFESSIONAL ENGINEER BASED ON PROJECT CONDITIONS.
- COASTAL EXPOSURE D SHALL BE CERTIFIED UNDER A SITE SPECIFIC BASIS.

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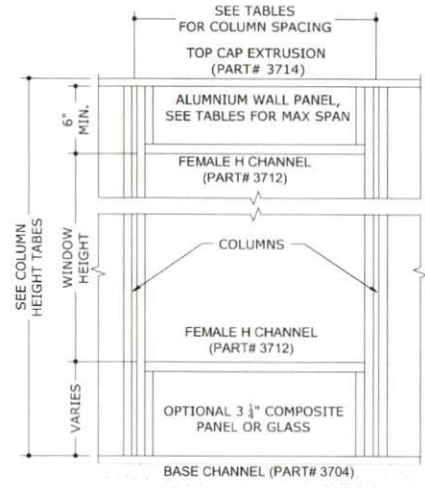
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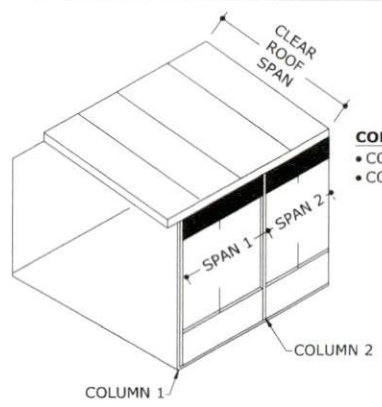
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4



1 TYPICAL ELEVATION  
4 NTS ELEVATION

ISOMETRIC OF AVERAGE COLUMN SPAN DEFINITION (FIGURE 1):



**COLUMN SPACING DEFINED:**  
• COLUMN 1 SPACING =  $(\frac{1}{2} * \text{SPAN 1})$   
• COLUMN 2 SPACING =  $\frac{1}{2}(\text{SPAN 1} + \text{SPAN 2})$

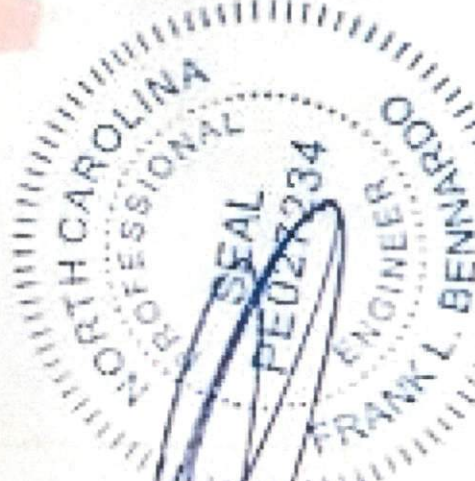
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Fran

Benr

Date



2020

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DATE OF SIGNATURE & SEAL, THRU 8:30


-05'0



valid.

Signature Panel

Digitally signed by Frank Bennardo  
 Date: 2020.11.19 08:39:58 -05'00'



FRANK L. BENNARDO, P.E.  
PE# 0046549 CA# 9885

**RESERVED**  
03/29/2019

IF CHECKED, CERTIFYING P.E. APPEARS BELOW  
**SEALING ENGINEER AND PE# APPEARS IN SEAL**  
 VALID ONLY WITH RAISED ENGINEER SEAL

VALID FOR 1 PERMIT ONLY U.N.O

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USING MINIMUM TYPE 3005-H25 & CARPENTER BRAND EPS. ADHERE TO 2020D ISO GRIP. FABRICATION TO BE CE WITH APPROVED FABRICATION

LOY TYPE 6063-T6 OR BETTER. & STAINLESS STEEL, SAE GRADE 2 RRORSION RESISTANT MATERIAL AND GN MANUAL THE ALUMINUM

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