

Application #

\* Must be owner/occupier or licensed contractor. Address, company name & phone must match information on license.

Harnett County Central Permitting
420 McKinney Pkwy Lillington, NC 27546
PO Box 65 Lillington, NC 27546
910-893-7525 ext. 1 Fax 910-893-2793 www.harnett.org/permits

### **Application for Residential Building and Trades Permit**

Owner's Name: Christy Lane A. Rolfs	on		Date
Site Address: 1425 Baptist Grove Roa	d, Fuquay Varina, NC 27526	Phone	858-967-2463
			/A
Description of Proposed Work: Met			\$36,130
· · · · · ·	General Contractor Information	·	
Kris and Christy Rolfson - Owner		858-967-2463	
Building Contractor's Company Name	9	Telephone	
1425 Baptist Grove Road		christy.rolfson@g	gmail.com
Address		Email Address	
	TED SQ FT GARAGE SQ	FT_1,920	
License #	Electrical Contractor Information		
Description of Work N/A	<u>Electrical Contractor Information</u> Service Size:		ole:YesNo
•			<del></del>
Electrical Contractor's Company Nan	ne	Telephone	
Address		Email Address	
Licence #			
License #	chanical/HVAC Contractor Informa	tion	
Description of Work N/A		<u></u>	
Description of Weik			-
Mechanical Contractor's Company N	ame	Telephone	
		·	
Address		Email Address	
License #	Plumbing Contractor Information		
- N/A - No plumb	Plumbing Contractor Information		
Description of Work N/A - No plumb	ng wiii be installed	# Baths	
Diversion of Country starts Country and Name		Talanhana	
Plumbing Contractor's Company Nar	ne	Telephone	
Address		Email Address	
Address		Email / tadi coo	
License #			
	Insulation Contractor Information		
Same as General Contractor			
Insulation Contractor's Company Nar	ne & Address	Telephone	

\*NOTE: General Contractor / owner must fill out and sign the second page of this application.



I hereby certify that I have the authority to make necessary application, that the application is correct and that the construction will conform to the regulations in the Building, Electrical, Plumbing and Mechanical codes, and the Harnett County Zoning Ordinance. I state the information on the above contractors is correct as known to me and that by signing below I have obtained all subcontractors permission to obtain these permits and if any changes occur including listed contractors, site plan, number of bedrooms, building and trade plans, Environmental Health permit changes or proposed use changes, I certify it is my responsibility to notify the Harnett County Central Permitting Department of any and all changes.

is as per current fee schedule.	ssue fee is \$150.00. After 2 years re-issue fee
Signature of Owner/Contractor/Officer(s) of Corporation	Date
Affidavit for Worker's Compo	
General Contractor Owner C	Officer/Agent of the Contractor or Owner
Do hereby confirm under penalties of perjury that the personant forth in the permit:	on(s), firm(s) or corporation(s) performing the work
Has three (3) or more employees and has obtained	·
Has one (1) or more subcontractors(s) and has obtathem.	ined workers' compensation insurance to cover
Has one (1) or more subcontractors(s) who has thei covering themselves.	r own policy of workers' compensation insurance
Has no more than two (2) employees and no subcor	ntractors.
While working on the project for which this permit is sought Department issuing the permit may require certificates of contonion to issuance of the permit and at any time during the permit carrying out the work.	overage of worker's compensation insurance prior
Sign w/Title:	Date:



# STRUCTURAL DESIGN ENCLOSED BUILDING

## 31'-0"-50'- 0" MAXIMUM WIDE X 16'- 0" HEIGHT-BOX EAVE FRAME

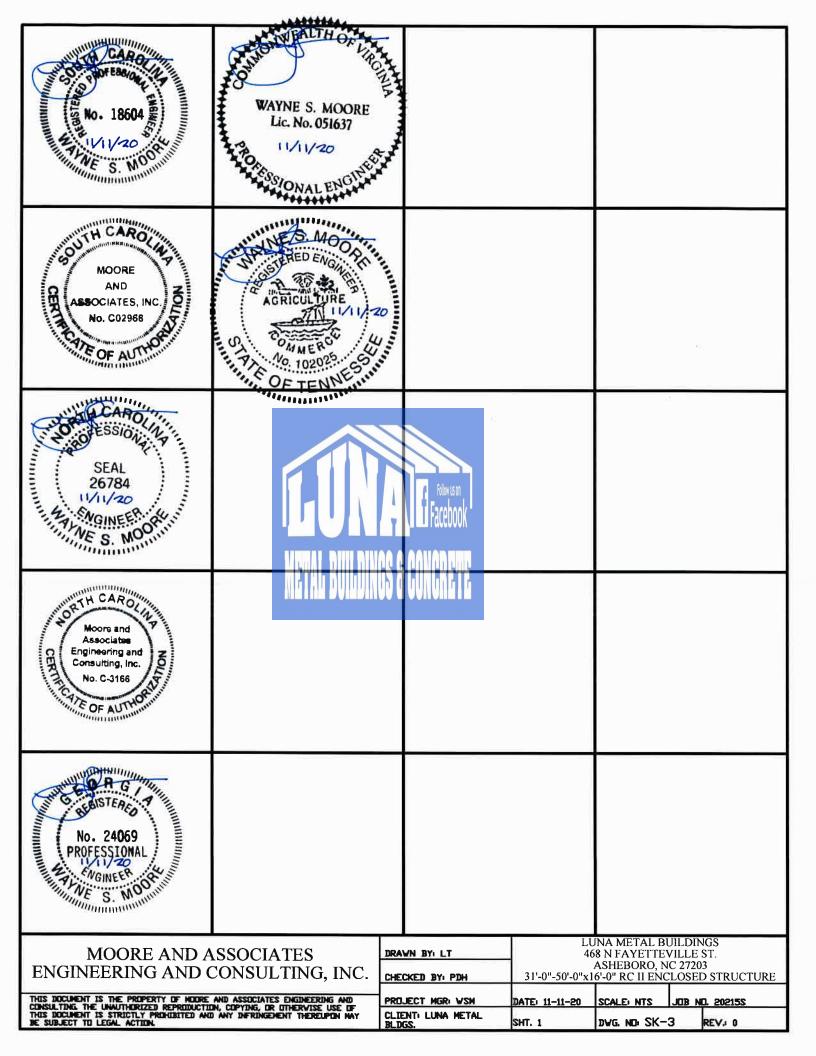
11 November 2020 Revision 0 M&A Project No. 20215S

#### Prepared for:



401 S. Main Street, Suite 200 Mount Airy, NC 27030





## DRAWING INDEX

SHEET	1	PE SEAL COVER SHEET
SHEET	2	DRAWING INDEX
SHEET	3	INSTALLATION NOTES AND SPECIFICATIONS
SHEET	4	TYPICAL END AND SIDE ELEVATIONS
SHEET	5	TYPICAL RAFTER/POST END FRAMING SECTIONS
SHEET	5A	TYPICAL RAFTER/POST END FRAMING SECTIONS
SHEET	5B	TYPICAL RAFTER/POST SIDE FRAMING SECTIONS
SHEET	6	TYPICAL RAFTER/POST CONNECTION DETAILS
SHEET	7	BASE RAIL ANCHORAGE OPTIONS
SHEET	8	END WALL AND END WALL DPENINGS
SHEET	88	SIDE WALL OPENINGS
SHEET	9	CONNECTION DETAILS
SHEET	10	CONNECTION DETAILS
SHEET	11	LEAN-TO OPTIONS
SHEET	11A	LEAN-TO OPTIONS
SHEET	11B	LEAN-TO OPTIONS
SHEET	12	VERTICAL ROOF/SIDING OPTION
SHEET	13	VERTICAL ROOF/SIDING OPTION
SHEET	13A	VERTICAL ROOF/SIDING OPTION
SHEET	14	SIDE WALL AND END WALL HEADER ORTIONS

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.	DRAWN BY: LT  CHECKED BY: PDH	LUNA METAL BUILDINGS 468 N FAYETTEVILLE ST. ASHEBORO, NC 27203 31'-0"-50'-0"x16'-0" RC II ENCLOSED STRUCTURI			
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#### INSTALLATION NOTES AND SPECIFICATIONS

- 1. DESIGN IS FOR A MAXIMUM 31'-0" TO 50'-0" WIDE x 16'-0" EAVE HEIGHT ENCLOSED STRUCTURES.
- 2. DESIGN WAS DONE IN ACCORDANCE WITH THE 2018 NORTH CAROLINA BUILDING CODE (NCBC), 2018 INTERNATIONAL BUILDING CODE (IBC), 2015 IBC AND 2012 IBC
- 3. DESIGN LOADS ARE AS FOLLOWS:

A) DEAD LOAD

= 11.5 PSF

B) ROOF LIVE LOAD

= 20 PSF

C) GROUND SNOW LOAD = 35 PSF

NOTE: UNBALANCED SNOW LOAD DUE TO DRIFTING HAS NOT BEEN EVALUATED.

- 4. 3-SECOND GUST ULTIMATE WIND SPEED ( $V_{ULT}$ ) =  $\leq$  155 MPH (NOMINAL WIND SPEED =  $\leq$  120 MPH).
- 5, MAXIMUM RAFTER/POST AND END POST SPACING = 4.0 FEET D.C. (UNLESS NOTED OTHERWISE).
- 6. END WALL POSTS ARE SIMILAR TO SIDE WALL POSTS UNLESS NOTED OTHERWISE.
- 7. RISK CATEGORY I/II.
- 8, WIND EXPOSURE CATEGORY B/C.
- 9, SPECIFICATIONS APPLICABLE TO 29 GAUGE METAL PANELS FASTENED DIRECTLY TO 2 1/4' x 2 1/4' 14 GAUGE TUBE STEEL (TS) FRAMING MEMBERS (UNLESS NOTED OTHERWISE), TS 2 1/4' x 2 1/4' 12 GAUGE MAY BE USED AS AN OPTION.
- 10. AVERAGE FASTENER SPACING ON-CENTERS ALONG RAFTERS OR PURLINS, AND POSTS (INTERIOR OR END) = 8° O.C. (MAX.) AND 8" DC (MAX) FOR RC II
- 11, FASTENERS CONSIST OF #12-14x3/4° SELF-DRILLING FASTENER (SDF), USE CONTROL SEAL WASHER WITH EXTERIOR FASTENERS. REQUIREMENTS FOR OTHER ROOF HEIGHTS AND/OR SLOPES MAY VARY, ROOF SLOPES LESS THAN 3:12 REQUIRE USE OF LAP JOINT SEALANT.
- 12. ANCHORS SHALL BE INSTALLED THROUGH BASE RAIL WITHIN 6° OF EACH COLUMN.
- 13. STANDARD GROUND ANCHORS (SOIL NAILS) CONSIST OF #4 REBAR W/ WELDED NUT × 36' LONG AND MAY ONLY BE USED FOR WIDTHS < 40'-0' AND VOLT = < 145 MPH IN CONJUNCTION WITH OTHER (OPTIONAL) ANCHOR DEVICES AND ONLY IN SUITABLE SOILS. OPTIONAL ANCHORAGE MAY BE USED IN SUITABLE SOILS AND MUST BE USED IN UNSUITABLE SOILS AS NOTED. COORDINATE WITH LOCAL CODES/ORDINANCES REGARDING MINIMUM LENGTH FOR FROST DEPTH PROTECTION.
- 14. WIND FORCES GOVERN OVER SEISMIC FORCES SEISMIC PARAMETERS ANALYZED ARE

SOIL SITE CLASS = D RISK CATEGORY I/II

R= 3.25

g 880.5 = Sag

S<sub>DI</sub>= 1.258 g

I<sub>E</sub>= 10

 $\sqrt{=}$  C<sub>S</sub>W

15 MAXIMUM THRESHOLD HEIGHT FOR PERSONNE



IN RC II STRUCTURES IS 1/2%



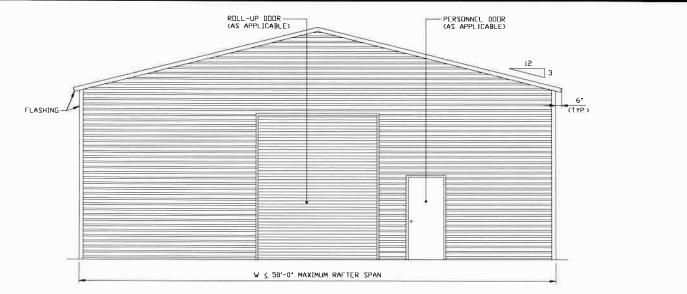
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DRAWN BY: LT

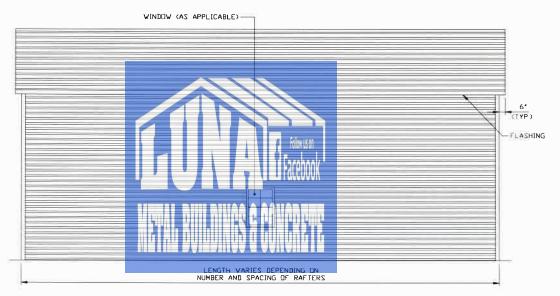
LUNA METAL BUILDINGS 468 N FAYETTEVILLE ST. ASHEBORO, NC 27203 31'-0"-50'-0"x16'-0" RC II ENCLOSED STRUCTURE

PROJECT MGR: VSM	DATE: 11-11-20	SCALE: NTS JUB N	C. 20215S
CLIENT: LUNA METAL BLDGS.	SHT. 3	DVG. NO SK-3	REV: 0



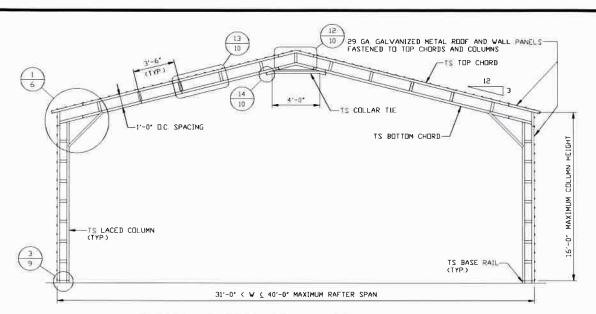
### TYPICAL END ELEVATION

SCALE: NTS

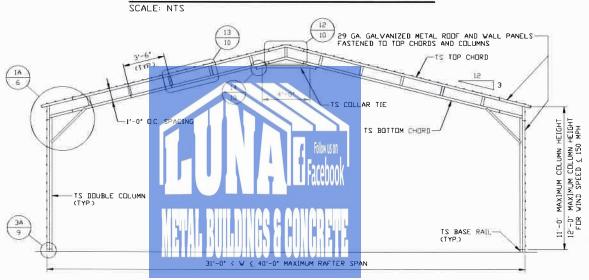


## TYPICAL SIDE ELEVATION SCALE: NTS

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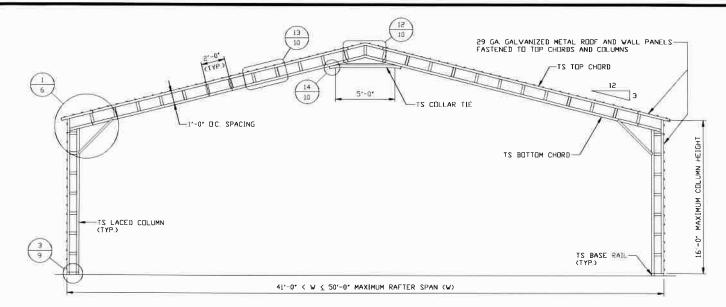
#### TYPICAL RAFTER/COLUMN FRAME SECTION



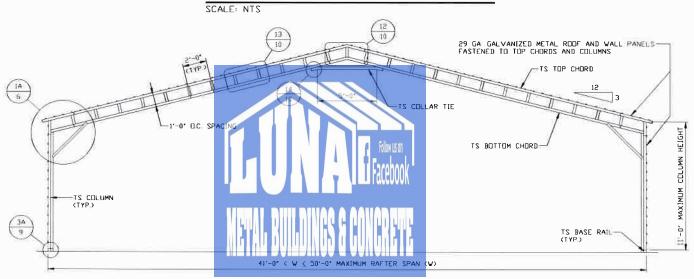
#### TYPICAL RAFTER/COLUMN FRAME SECTION

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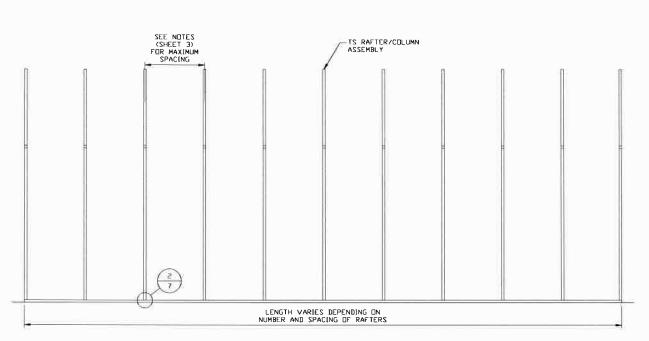


#### TYPICAL RAFTER/POST FRAME SECTION



## $\frac{\text{TYPICAL RAFTER/POST FRAME SECTION}}{\text{SCALE: NTS}}$

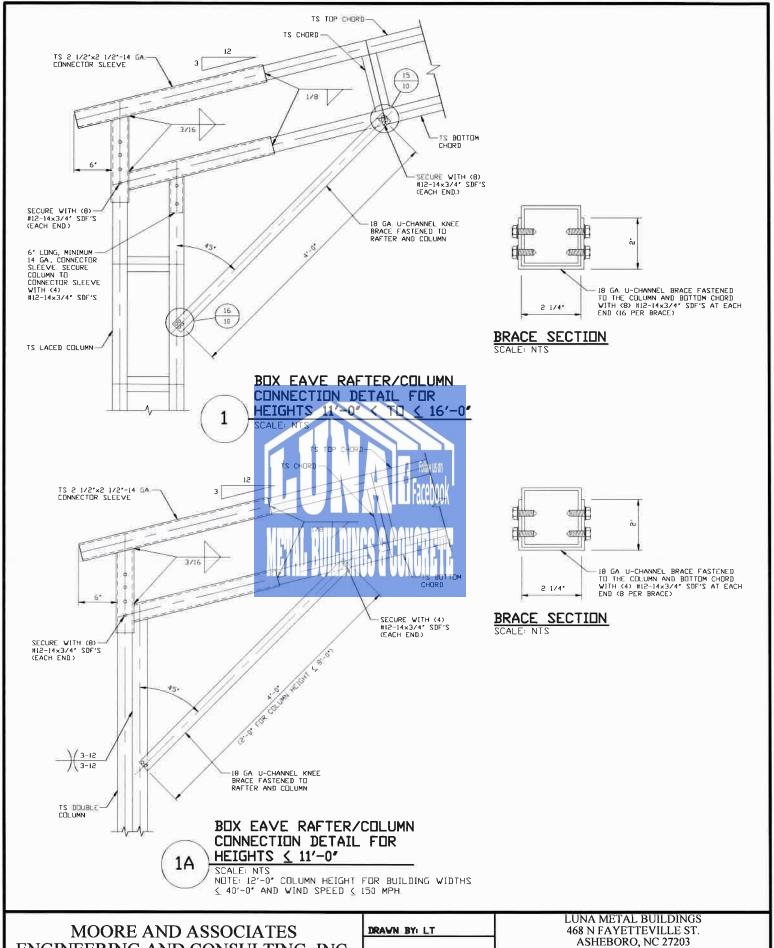
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ENGINEERING AND CONSULTING, INC.	CHECKED BY: PDH		ASHEBORO, N 6'-0" RC II EN(		D STRUCTURE
MOORE AND ASSOCIATES	DRAWN BY: LT	LUNA METAL BUILDINGS 468 N FAYETTEVILLE ST.			



## $\frac{ \mbox{TYPICAL RAFTER/PDST SIDE FRAMING SECTION}}{\mbox{SCALE: NTS}}$

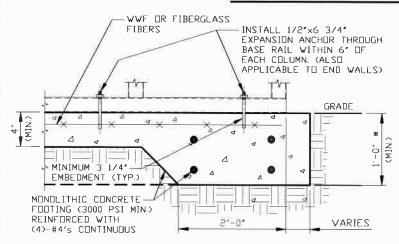


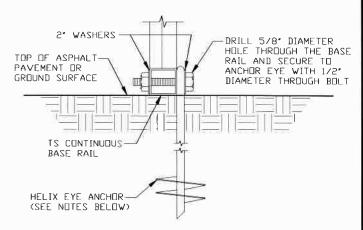
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#### BASE RAIL ANCHORAGE OPTIONS





#### CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE

(MINIMUM ANCHOR EDGE DISTANCE IS 4°)

\* COORDINATE WITH LOCAL BUILDING CODE AND/OR BUILDING OFFICIAL REGARDING REQUIRED FOOTING DEPTH.

#### GROUND BASE HELIX ANCHORAGE

SCALE: NTS (CAN BE USED FOR ASPHALT) \* COORDINATE WITH LOCAL CODES/ORD REGARDING MIN. FROST DEPTH (LENGTH)

#### GENERAL NOTES

NOTE: CONCRETE MONOLITHIC SLAB DESIGN BASED ON MINIMUM SOIL BEARING CAPACITY OF 1,500 PSF

#### CONCRETE

CONCRETE SHALL HAVE A MINIMUM SPECIFIED COMPRESSI STRENGTH OF 3,000 PSI AT 28 DAYS.

#### COVER OVER REINFORCING STEEL

FOR FOUNDATIONS, MINIMUM CONCRETE COVER OVER

BARS SHALL BE PER ACI-318:

3 INCHES IN FOUNDATIONS WHERE THE CONCRETE IS CAST ACI AND PERMANENTLY IN CONTACT WITH THE EARTH OR EXPOSED THE EARTH OR WEATHER, AND 1 1/2 INCHES ELSEWHERE.

#### REINFORCING STEEL

THE TURNDOWN REINFORCING STEEL SHALL BE ASTM AGIS 60 THE SLAB REINFORCEMENT SHALL BE WELDED WIRE F MEETING ASTM A185 OR FIBERGLASS FIBER REINFORCEMEN

#### REINFORCEMENT MAY BE BENT IN THE SHOP OR THE FIELD PROVIDED:

- REINFORCEMENT IS BENT COLD
- THE DIAMETER OF THE BEND, MEASURED ON THE INSIDE OF THE BAR, IS NOT LESS THAN SIX-BAR DIAMETERS.
- 3 REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT

#### HELIX ANCHOR NOTES:

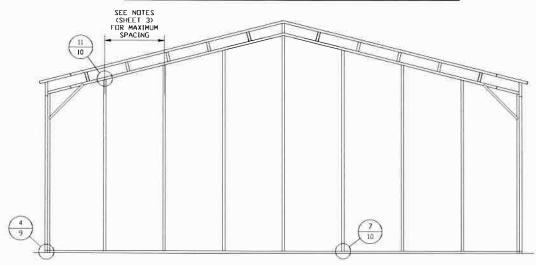
- 1 FOR VERY DENSE AND/OR CEMENTED SANDS, COARSE GRAVEL AND COBBLES, CALICHE, PRELOADED SILTS AND CLAYS USE MINIMUM (2) 4" HELICES WITH MINIMUM 30 INCH EMBEDMENT
- 2. FOR CORAL USE MINIMUM (2) 4" HELICES WITH MINIMUM 30 INCH EMBEDMENT.
- 3 FOR MEDIUM DENSE COARSE SANDS, SANDY GRAVELS, VERY STIFF SILTS AND CLAYS USE MINIMUM (2) 4' HELICES WITH MINIMUM 30 INCH EMBEDMENT
- FOR LOOSE TO MEDIUM DENSE SANDS, FIRM TO STIFF CLAYS AND SILTS ALLUVIAL FILL USE MINIMUM (2) 6' HELICES WITH MINIMUM 50 INCH EMBEDMENT.
- 5 FOR VERY LOOSE TO MEDIUM DENSE SANDS, FIRM TO STIFFER CLAYS AND SILTS, ALLUVIAL FILL USE MINIMUM (2) 8° HELICES WITH MINIMUM 60 INCH EMBEDMENT.

## MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.

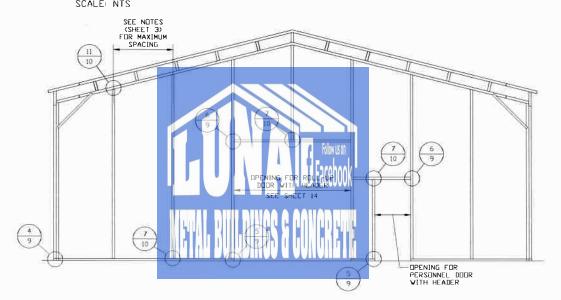
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		===	ASHEBORO, NC 27203					
	CHECKED BY: PDH	31'-0"-50'-0"x	31'-0"-50'-0"x16'-0" RC II ENCLOSED STRUCTURE					
_	PREJECT MGR: VSM	DATE: 11-11-20	SCALE: NTS	JOB	ND. 20215S			
	CLIENT: LUNA METAL BLDGS.	SHT. 7	DWG. NO SK-	-3	REV. 0			

## **END WALL AND END WALL OPENINGS**



## TYPICAL BOX EAVE RAFTER END WALL FRAMING SECTION SCALE: NTS



TYPICAL BOX EAVE RAFTER END WALL OPENINGS FRAMING SECTION SCALE: NTS

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.

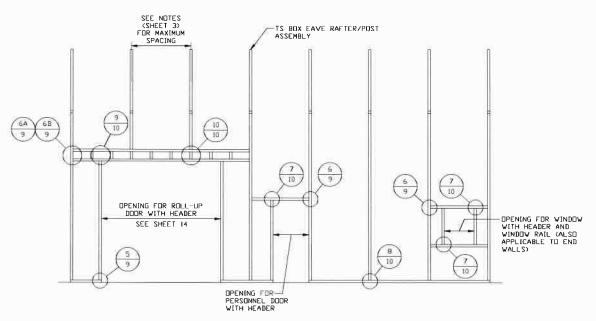
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	LU	LUNA METAL BUILDINGS						
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	ASHEBORO, NC 27203							
CHECKED BY: PDH	31'-0"-50'-0"x16'-0" RC II ENCLOSED STRUCTURE							
			Name (SAS) PROPORTION					

PROJECT MGRI VSM DATE: 11-11-20 SCALE: NTS JOB NO. 20215S

CLIENT: LUNA METAL BLDGS. SHT. 8 DWG. NO: SK-3 REV.: 0

## **SIDE WALL OPENINGS**

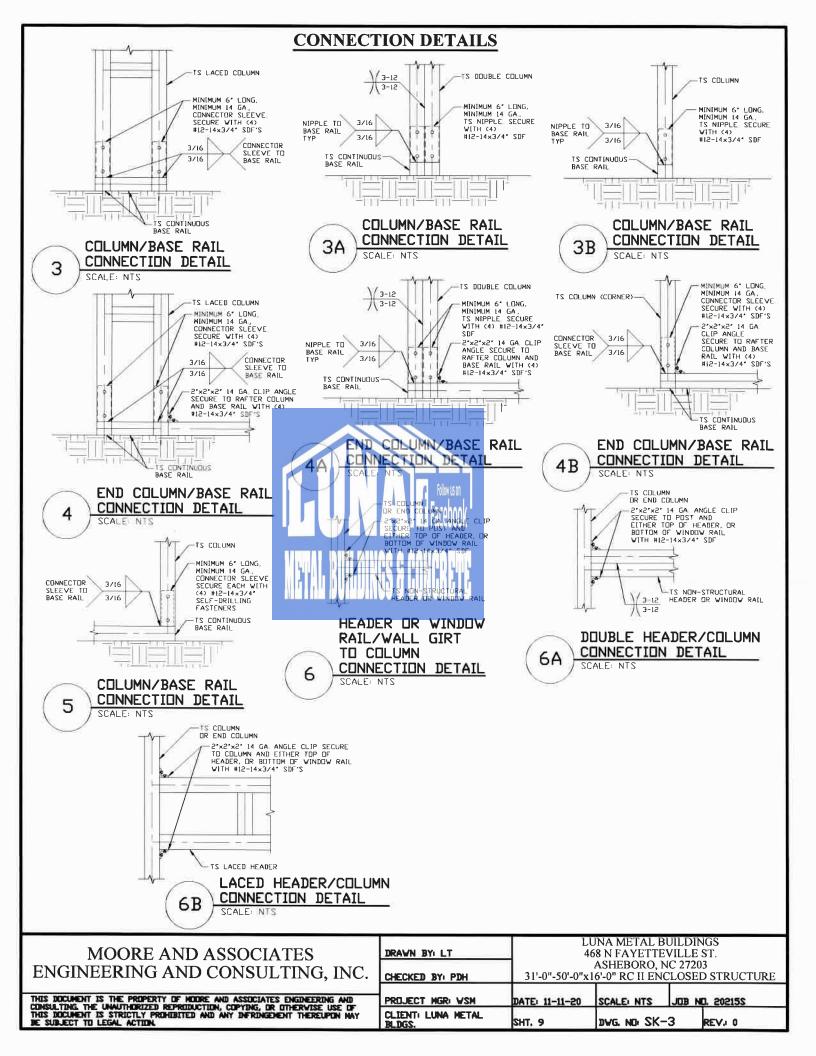


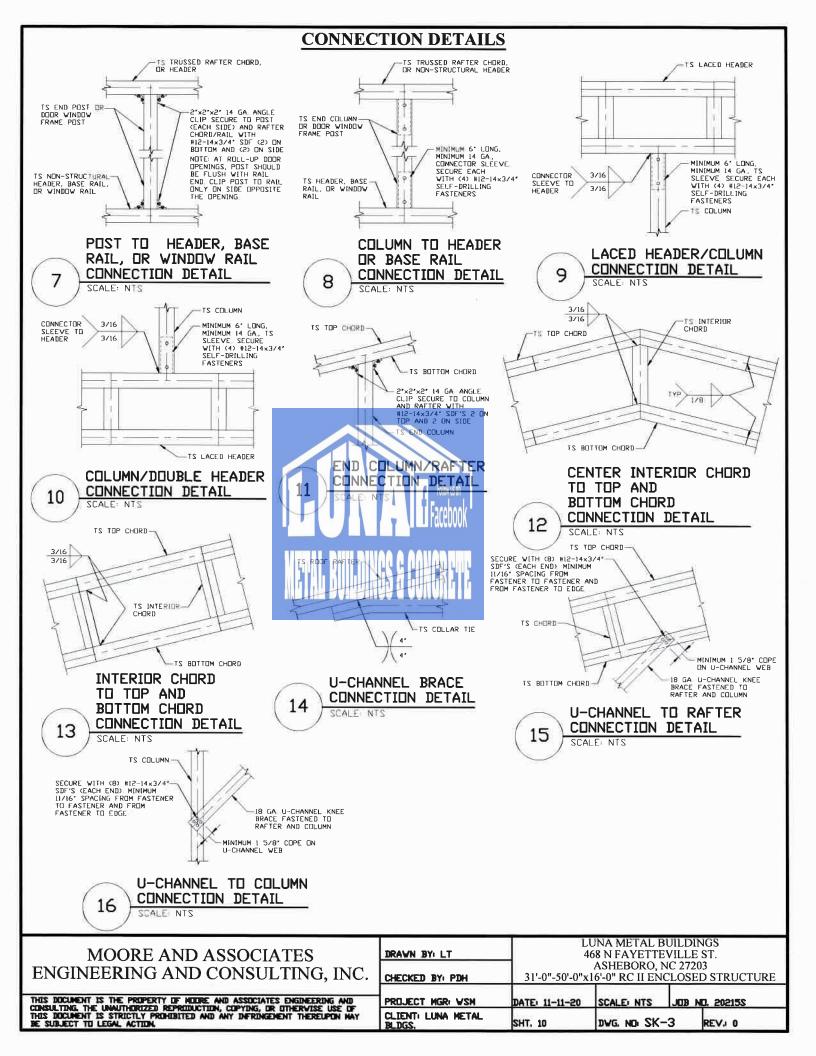
### TYPICAL BOX EAVE RAFTER SIDE WALL OPENINGS FRAMING SECTION

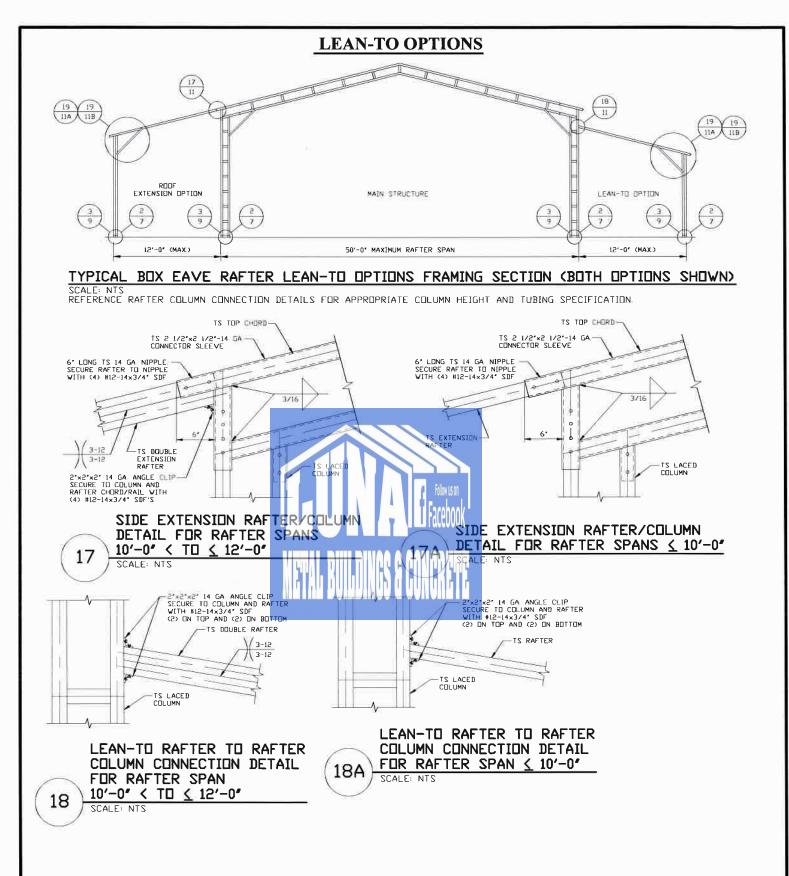
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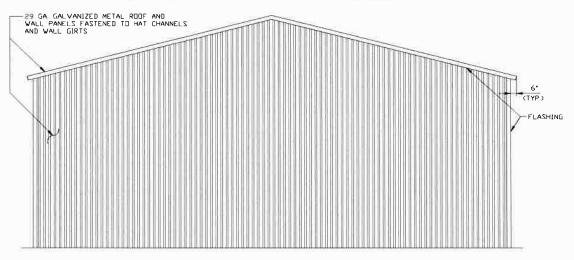
## LEAN-TO OPTIONS FOR RAFTER SPANS ≤ 10'-0" 15 10 TS ROOF RAFTER CONNECTOR SLEEVE TO RAFTER 3/16 SECURE WITH (8) #12-14×3/4' SDF'S (EACH END) -18 GA U-CHANNEL KNEE BRACE FASTENED TO RAFTER AND COLUMN 6' LONG, MINIMUM— 14 GA, CONNECTOR SLEEVE SECURE COLUMN TO CONNECTOR SLEEVE WITH (4) #12-14×3/4" SDF'S 16 10 I8 GA. U-CHANNEL BRACE FASTENED TO THE COLUMN AND BOTTOM CHORD WITH (8) #12-14×3/4" SDF'S AT EACH END (16 PER BRACE) TS LACED COLUMN-2 1/4\* BRACE SECTION SCALE: NTS LEAN-TO RAFTER/COLUMN CONNECTION DETAIL FOR HEIGHTS 11'-0' < TU \ 16'-0' 19 TS ROOF RAFTER CONNECTOR SLEEVE TO RAFTER 3/16 3/16 à 18 GA U-CHANNEL BRACE FASTENED TO THE COLUMN AND BOTTOM CHORD WITH (4) #12-14×3/4" SDF'S AT EACH END (8 PER BRACE) MINIMUM 6' LONG, CONNECTOR SLEEVE MINIMUM 14 GA, SECURE COLUMN TO SLEEVE WITH (4) 1/4'x3/4' SDF'S BRACE SECTION SCALE: NTS 18 GA U-CHANNEL KNEE BRACE FASTENED TO RAFTER AND COLUMN TS DOUBLE COLUMN LEAN-TO RAFTER/COLUMN CONNECTION DETAIL FOR HEIGHTS < 11'-0" 19A SCALE NTS NDTE: 12'-0" CDLUMN HEIGHT FOR BUILDING WIDTHS 40'-0" AND WIND SPEED 150 MPH.

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.	DRAWN BY: LT CHECKED BY: PDH	468 N FAYETTEVILLE ST. ASHEBORO, NC 27203 31'-0"-50'-0"x16'-0" RC II ENCLOSED STRUCTURE			ST. 3
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## **LEAN-TO OPTIONS FOR RAFTER SPANS 10'-0"< TO ≤ 12'-0"** 15 TS ROOF RAFTER CONNECTOR SLEEVE TO RAFTER 3/16 MOTTOB 21 3/16 CHORD SECURE WITH (8) #12-14x3/4' SDF'S (EACH END) 18 GA U-CHANNEL KNEE BRACE FASTENED TO RAFTER AND COLUMN 6' LONG, MINIMUM— 14 GA, CONNECTOR SLEEVE SECURE COLUMN TO CONNECTOR SLEEVE WITH (4) #12-14×3/4' SDF'S 16 -18 GA U-CHANNEL BRACE FASTENED TO THE COLUMN AND BOTTOM CHORD WITH (8) #12-14-23/4" SDF'S AT EACH END (16 PER BRACE) 2 1/4\* TS LACED COLUMN-BRACE SECTION SCALE: NTS LEAN-TO RAFTER/COLUMN CONNECTION DETAIL FOR HEIGHTS 11'-0" 19B SCALE: NTS TS TOP CHOR 12 CONNECTOR SLEEVE TO BOTTOM CHORD 3/16 18 GA U-CHANNEL BRACE FASTENED TO THE COLUMN AND BOTTOM CHORD WITH (4) #12-14×3/4' SDF'S AT EACH END (8 PER BRACE) BRACE SECTION MINIMUM 6' LDNG,— MINIMUM 14 GA., TS NIPPLE SECURE POST TO NIPPLE WITH (4) #12-14×3/4' SDF (TYP) 3-15 -18 GA U-CHANNEL KNEE BRACE FASTENED TO RAFTER AND COLUMN TS DOUBLE COLUMN LEAN-TO RAFTER/COLUMN CONNECTION DETAIL FOR HEIGHTS & 11'-0' 19C SCALE: NTS NOTE: 12'-0' COLUMN HEIGHT FOR BUILDING WIDTHS ∠ 40'-0' AND WIND SPEED ∠ 150 MPH LUNA METAL BUILDINGS MOORE AND ASSOCIATES DRAWN BY: LT 468 N FAYETTEVILLE ST.

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## **VERTICAL ROOF/SIDING OPTION**



#### TYPICAL END ELEVATION VERTICAL ROOF/SIDING

SCALE: NTS



#### TYPICAL SIDE ELEVATION VERTICAL ROOF/SIDING

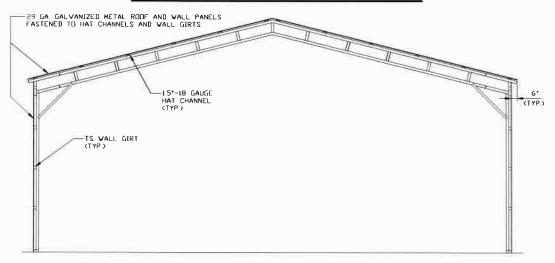
SCALE NTS

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	LUNA METAL BUILDINGS					
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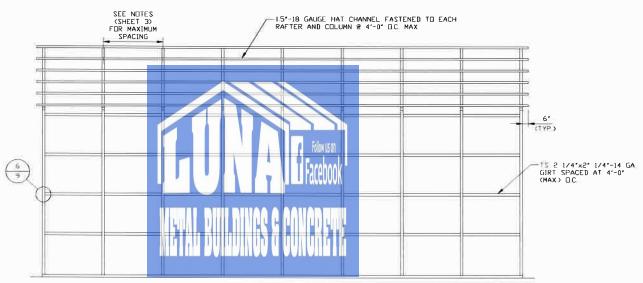
PROJECT MGR: VSM	DATE: 11-11-20	SCALE: NTS	JOB NO. 20215S
CLIENT: LUNA METAL BLDGS.	SHT, 12	DVG. NO: SK-3	3 REV. 0

## **VERTICAL ROOF/SIDING OPTION**

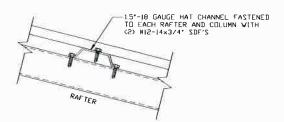


#### TYPICAL END SECTION VERTICAL ROOF/SIDING

SCALE: NTS



## TYPICAL FRAMING SECTION VERTICAL ROOF/SIDING SCALE: NTS



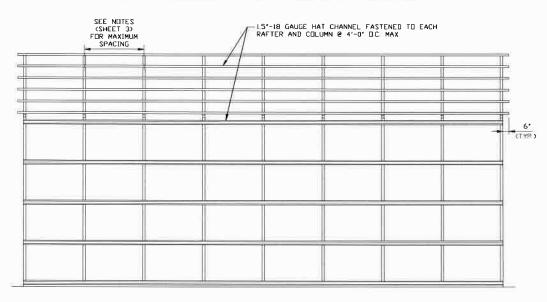
## PANEL ATTACHMENT (ALTERNATE FOR VERTICAL ROOF PANELS) SCALE: NTS

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CLIENT: LUNA METAL BLDGS.	SHT. 13	DWG. NO SK	-3	REV, 0			

## **VERTICAL ROOF/SIDING OPTION**

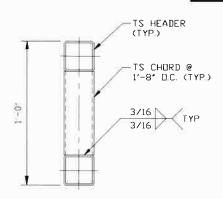


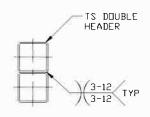
 $\frac{\texttt{OPTIONAL}}{\texttt{SCALE: NTS}} \ \, \frac{\texttt{FRAMING}}{\texttt{SCALE: NTS}} \ \, \frac{\texttt{SECTION}}{\texttt{VERTICAL}} \ \, \frac{\texttt{ROOF/SIDING}}{\texttt{OPTION}}$ 

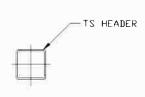


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## **SIDE WALL HEADER OPTIONS**





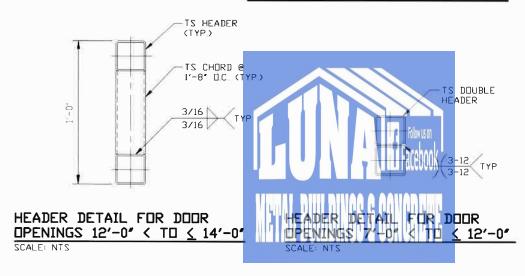


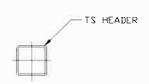
HEADER DETAIL FOR DOOR OPENINGS 6'-0' < TO  $\leq$  14'-0'

HEADER DETAIL FOR DOOR OPENINGS 4'-0' < TO \( \lambda \) 6'-0"

HEADER DETAIL FOR DOOR OPENINGS & 4'-0'

### **END WALL HEADER OPTIONS**





HEADER DETAIL FOR DOOR OPENINGS & 7'-0'

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	CLIENT: LUNA METAL BLDGS.	SHT. 14	DWG. NO: SK-3		REV. 0	