

STRUCTURAL DESIGN



ENCLOSED BUILDING EXPOSURE B

MAXIMUM 30'-0" WIDE X 20'-0" EAVE HEIGHT- BOX EAVE FRAME AND BOW FRAME

8 January 2021 Revision 5 M&A Project No. 16022S/17300S/20352S

Prepared for:

Tubular Building Systems, LLC 631 SE Industrial Circle Lake City, Florida 32025

Prepared by:

Moore and Associates Engineering and Consulting, Inc. 1009 East Avenue North Augusta, SC 29841

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

Digitally signed by Wayne S Moore Date: 2021.01.12 15:40:40 -05'00'





This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

		-				
*						
				* PROFILE	NO 57170	*
				This item sealed by using a D Printed o consider	h has been electronically Wayne S. Moore, PE. Digital Signature and date topies of this document ed signed and sealed are must be verified on an	y signed and te. are not not the
MOORE AND A ENGINEERING AND C			/N BY: JG	30'-0"x20'-0	ILAR BUILDING S " ENCLOSED BUII E SEAL COVER SH	LDING EXP. B IEET
THIS DOCUMENT IS THE PROPERTY OF MODRE CONSULTING. THE UNAUTHORIZED REPRODUCTION THIS DOCUMENT IS STRICTLY PROHIBITED AND BE SUBJECT TO LEGAL, ACTION.	AND ASSOCIATES ENGINEERING AND N, COPYING, OR OTHERWISE USE OF ANY INFRINGEMENT THEREUPON MAY			DATE: 1-8-21 SHT. 1	SCALE: NTS 1	7300S/20352S REV.: 5

DRAWING INDEX

SHEET 1	PE SEAL COVER SHEET
SHEET 2	DRAWING INDEX
SHEET 3	INSTALLATION NOTES AND SPECIFICATIONS
SHEET 4	TYPICAL SIDE AND END ELEVATIONS
SHEET 5	TYPICAL RAFTER COLUMN END AND SIDE FRAMING SECTIONS (BOX EAVE RAFTER)
SHEET 5A	TYPICAL RAFTER COLUMN END AND SIDE FRAMING SECTIONS (BOX EAVE RAFTER)
SHEET 5B	TYPICAL RAFTER COLUMN END AND SIDE FRAMING SECTIONS (BOX EAVE RAFTER)
SHEET 6	TYPICAL RAFTER COLUMN CONNECTION DETAILS (LACED COLUMN)
SHEET 6A	TYPICAL RAFTER COLUMN CONNECTION DETAILS (DOUBLE COLUMN)
SHEET 6B	TYPICAL RAFTER COLUMN CONNECTION DETAILS (SINGLE COLUMN)
SHEET 7	TYPICAL RAFTER COLUMN END AND SIDE FRAMING SECTIONS (BOW RAFTER)
SHEET 7A	TYPICAL RAFTER COLUMN END AND SIDE FRAMING SECTIONS (BOW RAFTER)
SHEET 8	TYPICAL RAFTER COLUMN CONNECTION DETAILS (DOUBLE COLUMN)
SHEET 8A	TYPICAL RAFTER COLUMN CONNECTION DETAILS (SINGLE COLUMN)
SHEET 9	BASE RAIL ANCHORAGE OPTIONS FOR LOW AND HIGH WIND SPEED
SHEET 9A	OPTIONAL FOUNDATION ANCHORAGE FOR LOW AND HIGH WIND SPEED
SHEET 9B	BASE RAIL ANCHORAGE OPTION
SHEET 9C	BASE RAIL ANCHORAGE OPTIONS
SHEET 10	BOX EAVE RAFTER END WALL AND SIDE WALL OPENINGS
SHEET 11	BOW RAFTER END WALL AND SIDE WALL OPENINGS
SHEET 12	CONNECTION DETAILS
SHEET 13	CONNECTION DETAILS
SHEET 14	BOX EAVE RAFTER LEAN-TO OPTIONS
SHEET 14A	BOX EAVE RAFTER LEAN-TO OPTIONS
SHEET 15	BOW RAFTER LEAN-TO OPTIONS
SHEET 16	VERTICAL ROOF/SIDING OPTION
SHEET 17	VERTICAL ROOF/SIDING OPTION OPTIONAL DOOR HEADER THAT ICENSE ROOF
SHEET 18	OPTIONAL DOOR HEADER FLOOD VENT DETAIL
SHEET 19	FLOOD VENT DETAIL STAND-ALONE STEM WALL DETAIL VERTICAL SLIDING WINDOW DETAIL STRIP FOOTING OPTION
SHEET SO	VERTICAL SLIDING WINDOW DETAIL * 2
SHEET 21	VERTICAL ROOF/SIDING OPTION OPTIONAL DOOR HEADER FLOOD VENT DETAIL STAND-ALONE STEM WALL DETAIL VERTICAL SLIDING WINDOW DETAIL STRIP FOOTING OPTION STATE OF



This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

MOORE AND ASSOCIATES	DRAWN BY: JG		BULAR BUILDIN 1 SE INDUSTRIA	
ENGINEERING AND CONSULTING, INC.	CHECKED BY: PDH		AKE CITY, FLOR -0" ENCLOSED E	
THIS DOCUMENT IS THE PROPERTY OF HOORE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF	PROJECT MGR: WSM	DATE: 1-8-21	SCALE: NTS	ND: 160225/ 00\$/20352\$
THIS DOUBENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.	CLIENT: TBS	SHT. 2	DMC' NO! 2K-3	REV.: 5

INSTALLATION NOTES AND SPECIFICATIONS

- 1. DESIGN IS FOR A MAXIMUM 30'-0' WIDE x 20'-0' EAVE HEIGHT ENCLOSED STRUCTURES.
- 2. DESIGN WAS DONE IN ACCORDANCE WITH THE 2020 FLORIDA BUILDING CODE (FBC) 7TH EDITION, 2012 INTERNATIONAL BUILDING CODE (IBC), 2015 IBC, AND 2018 IBC.
- 3. DESIGN LOADS ARE AS FOLLOWS:
 - A) DEAD LOAD
- = 1.5 PSF = 15 bZt
- B) LIVE LOAD
- C) GROUND SNOW LOAD = 10 PSF
- 4. LOW ULTIMATE WIND SPEED 105 TO 140 MPH (NOMINAL WIND SPEED 8) TO 108 MPH): MAXIMUM RAFTER/POST AND END POST SPACING = 5.0 FEET.
- 5. HIGH ULTIMATE WIND SPEED 141 TO 170 MPH (NOMINAL WIND SPEED 109 TO 132 MPH): MAXIMUM RAFTER/POST AND END POST SPACING = 4.0 FEET.
- 6. END WALL COLUMNS (POSTS) AND SIDE WALL COLUMNS ARE EQUIVALENT IN SIZE AND SPACING (UNLESS NOTED OTHERWISE).
- 7. RISK CATEGORY I.
- B. WIND EXPOSURE CATEGORY B.
- 9. SPECIFICATIONS APPLICABLE TO 29 GAUGE METAL PANELS FASTENED DIRECTLY TO 2 1/2' x 2 1/2' 14 GAUGE TUBE STEEL (TS) FRAMING MEMBERS, FOR VERTICAL PANELS, 29 GAUGE METAL PANELS SHALL BE FASTENED TO 18 GAUGE HAT CHANNELS (UNLESS OTHERWISE NOTED).
- 10. AVERAGE FASTENER SPACING ON-CENTERS ALONG RAFTERS OR PURLINS, AND POSTS, INTERIOR = 9° OR END = 6°, (MAX.)
- II. FASTENERS CONSIST OF #12-14x3/4" SELF-DRILLING FASTENER (SDF), USE CONTROL SEAL WASHER WITH EXTERIOR FASTENERS.

 SPECIFICATIONS APPLICABLE ONLY FOR MEAN ROOF HEIGHT OF 20 FEET OR LESS, AND ROOF SLOPES OF 14" (3:12 PITCH) OR LESS
 SPACING REQUIREMENTS FOR OTHER ROOF HEIGHTS AND/OR SLOPES MAY WARY, ROOF SLOPES LESS THAN 3:12 REQUIRE USE OF JOINT SEALANT.
- 12. STANDARD ANCHORS SHALL BE INSTALLED THROUGH BASE RAIL WITHIN 6° DF EACH COLUMN.
- 13. STANDARD GROUND ANCHORS (SOIL NAILS) CONSIST OF 84 REBAR W/WELDED NUT x 30' LONG IN SUITABLE SOIL CONDITIONS MAY BE USED FOR LOW (£ 108 MPH NUMINAL) WIND SPEEDS ONLY, 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:

SDIL SITE CLASS = D RISK CATEGORY I

R= 3.25

I_E= 1.0

Sps= 1.522 g V= CSM

Spt= 0.839 g



This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

MOORE AND ASSOCIATES	
ENGINEERING AND CONSULTING, INC	1

STHT	THE MENT	19 THE	PROPERTY	DE MOD	DF AND	23TAIG022A	ENGINEERING	ANTI
CDM2	ULIING, IH	E UNAUI	HUNGIZED K	EPKLUKA	TIUN, U	urtinu, uk i	itherwise usi	LUS
ZIHT	DOCUMENT	IS STRI	CTLY PROP	HBITED	AND ANY	INFRINGEME	NT THEREUPON	YAH I
	UBJECT TO							
DE 31	DESERT IN	PEOW.	UC 1 TOLE					

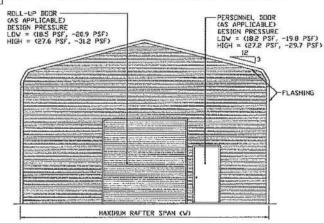
Committee and	CHECKED BY: PDH		AKE CITY, FLOI '-0" ENCLOSED	BUILD	
	PROJECT MGR: WSM	DATE: 1-8-21	SCALE: NTS	173	225203/200
	CLIENT: TBS	SHT, 3	DWG. NO: SK-3		REV. 5

BOX EAVE FRAME RAFTER ENCLOSED BUILDING ROLL-UP DOOR (AS APPLICABLE) DESIGN PRESSURE LOV = (18.5 PSF, -23.9 PSF) HIGH = (27.6 PSF, -31.2 PSF) HIGH = (27.6 PSF, -31.2 PSF) 12 3 FLASHING MAXIMUM RAFTER SPAN (V)

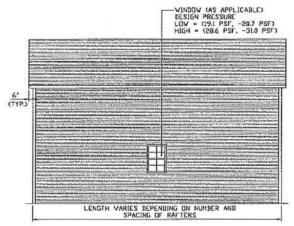
TYPICAL END ELEVATION

SCALE: NTS

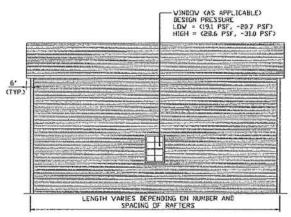
BOW FRAME RAFTER ENCLOSED BUILDING



TYPICAL END ELEVATION



TYPICAL SIDE ELEVATION
SCALE: NTS



TYPICAL SIDE ELEVATION

SCALE: NTS



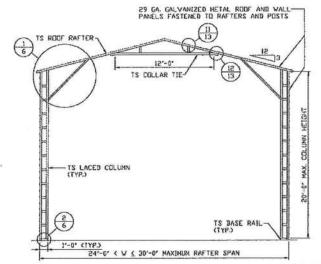
This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

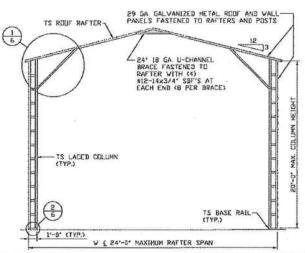
MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGINEERING AND CONSULTING THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERVISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

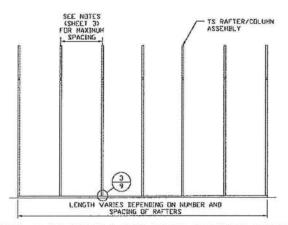
DRAWN BY: JG		BULAR BUILDIN BI SE INDUSTRI	
CHECKED BY: PDH		AKE CITY, FLOI '-0" ENCLOSED	
PROJECT HGR: WSM	DATE: 1-8-21	SCALE: NTS	ND 16022S/ 00S/20352S
CLIENT: TBS	SHT. 4	DWG. NO: SK-3	REV. 5



TYPICAL RAFTER/COLUMN END FRAME SECTION SCALE NTS



TYPICAL RAFTER/COLUMN END FRAME SECTION SCALE: NTS

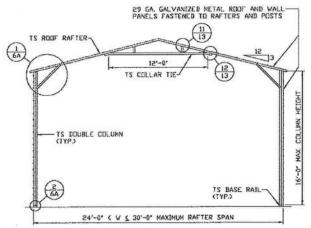


TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION SCALE: NTS

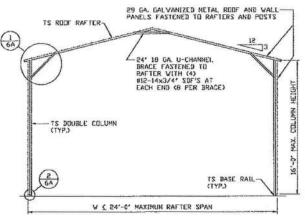


This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

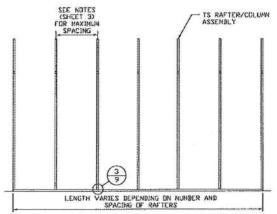
MOORE AND ASSOCIATES	DRAWN BY: JG		TUBULAR BÜILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE				
ENIONIEEDINIO AND CONGULTERIO INC	CHECKED BY PDH	The Street Particular Street	AKE CITY, FLOR '-0" ENCLOSED B	IDA 32025 BUILDING EXP. B			
THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGINEERING AND	PROJECT MGRI WSM	DATE: 1-8-21	SCALE: NTS	JDB ND: 16022S/ 17300S/20352S			
CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR DITHERVISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.	CLIENT: TBS	SHT. 5	DVG. ND: SK-3	REVA 5			



TYPICAL RAFTER/COLUMN END FRAME SECTION



TYPICAL RAFTER/COLUMN END FRAME SECTION SCALE: NTS

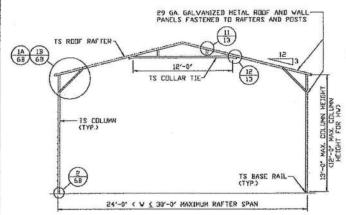


TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION SCALE: NTS

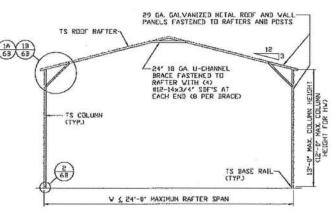


This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

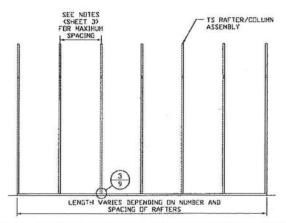
MOORE AND ASSOCIATES	DRAWN BY: JG	63	BULAR BUILDING 31 SE INDUSTRIA AKE CITY, FLOR	L CIRCLE
ENGINEERING AND CONSULTING, INC.	CHECKED BY: PDH			BUILDING EXP. B
THIS DOCUMENT IS THE PROPERTY OF HOORE AND ASSOCIATES ENGINEERING AND	PROJECT MGR: WSM	DATE: 1-8-21	SCALE: NTS	JOB NO 16022S/ 17300S/20352S
CONSULTING THE UNAUTHORIZED REPRODUCTION, COPYING, OR DITHERVISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.	CLIENT: TBS	SHT. 5A	DWG. NO: SK-3	REV. 5



TYPICAL RAFTER/COLUMN END FRAME SECTION
SCALE: NTS



TYPICAL RAFTER/COLUMN END FRAME SECTION

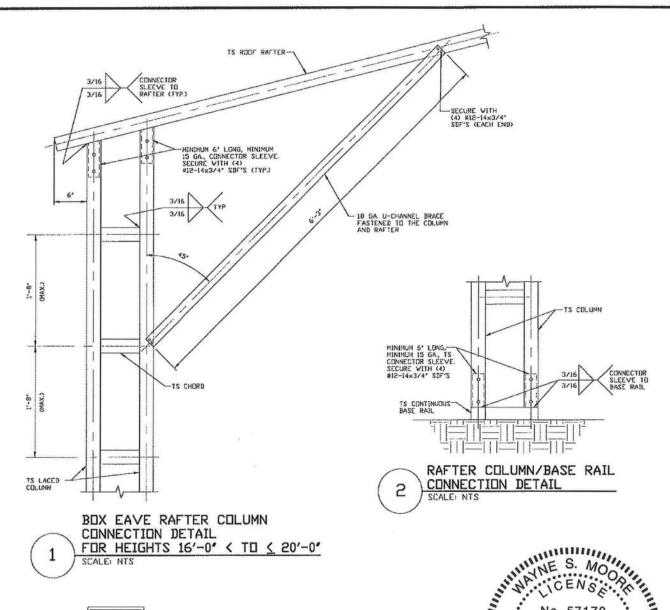


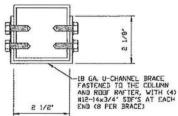
TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION SCALE: NTS



This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.	DRAWN BY: JG CHECKED BY: PDH	63	BULAR BUILDIN 31 SE INDUSTRIA AKE CITY, FLOR 1-0" ENCLOSED I	L CIRCLE
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERVISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGENENT THEREUPON MAY	PROJECT MGR: WSM	DATE: 1-8-21	SCALE: NTS	JDB ND: 16022S/ 17300S/20352S
THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.	CLIENT: TBS	SHT. 5B	DWG. NO SK-3	REV. 5



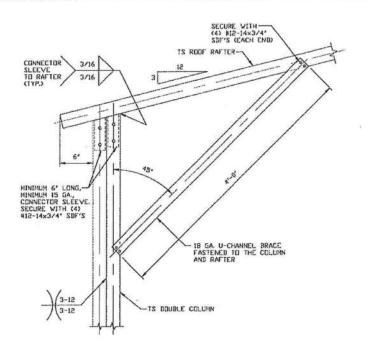


BRACE SECTION



This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

MOORE AND ASSOCIATES	DRAWN BY: JG	0.000	BULAR BUILDING 11 SE INDUSTRIA	
ENGINEERING AND CONSULTING, INC.	CHECKED BY: PDH		AKE CITY, FLOR '-0" ENCLOSED B	IDA 32025 BUILDING EXP. B
IS DOCUMENT IS THE PROPERTY OF MODRE AND ASSICIATES ENGINEERING AND	PROJECT MGR: VSM	DATE: 1-8-21	SCALE: NTS	JOB NO 16022S/ 17300S/20352S
INSULTING THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF IS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY SUBJECT TO LEGAL ACTION.	CLIENT: TBS	SHT. 6	DWG. NO: SK-3	REV. 5



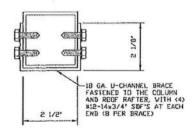
BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 13'-0" < TO < 16'-0"

SCALE: NTS
NDTE: COLUMN HEIGHTS 12'-0' < TO < 16'-0" FOR HIGH WIND.

3-12
3-12
1S DOUBLE COLUMN
MINIMUM 6' LONG,
CONNECTOR SLEEVE
SCURE VITH (4)
BASE RAIL
3/16
1S DOUBLE COLUMN
MINIMUM 1S GA.
SECURE VITH (4)
B12-14×3/4' SDF'S

TS CONTINUOUS
BASE RAIL

RAFTER COLUMN/BASE RAIL
CONNECTION DETAIL



BRACE SECTION
SCALE: NTS

1



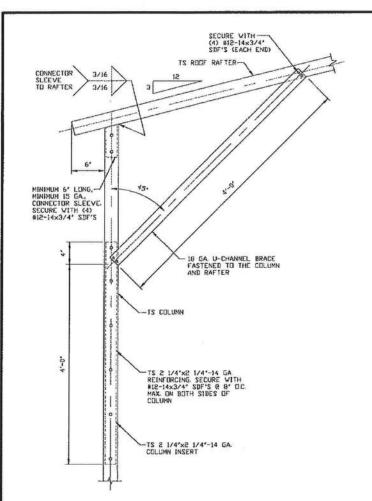
This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

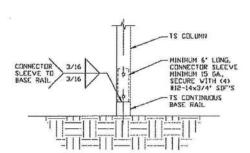
THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

DRAWN BY: JG	63	BULAR BUILDIN 31 SE INDUSTRI AKE CITY, FLOI	AL CIR RIDA 3	CLE 2025
CHECKED BY: PDH	30'-0"x20'-0" ENCLOSED BUILDING EXP. B			
PROJECT MGR: WSM	DATE: 1-8-21	SCALE: NTS		ND 16022S/ 00S/20352S
CLIENT: TBS	SHT. 6A	DWG. NO: SK-3		REV. 5

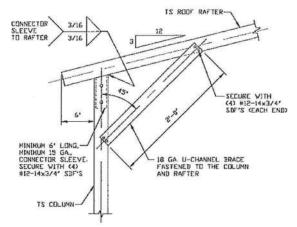


BOX EAVE RAFTER COLUMN
CONNECTION DETAIL
FOR HEIGHTS 10'-0" < TO < 13'-0"

SCALE: NTS NOTE: MAXIMUM COLUMN HEIGHT IS 12'-0" FOR HIGH WIND.

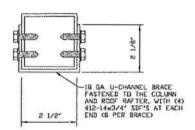


RAFTER COLUMN/BASE RAIL CONNECTION DETAIL
SCALE NYS



BOX EAVE RAFTER COLUMN CONNECTION DETAIL

FOR HEIGHTS \(\leq \) 10'-0'



BRACE SECTION



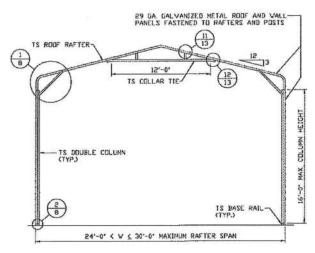
This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

MOORE AND	ASSOCIATES
ENGINEERING AND	CONSULTING, INC.

THIS DOCUMENT IS THE PROPERTY OF HOUSE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

_	PROJECT NGR: WSM	DATE: 1-8-21	SCALE: NTS	ND: 160225/ 005/203525	
	CLIENT: TBS	SHT. 6B	DWG. NO: SK-3	REV. 5	



TS ROOF RAFTER
18

24' 18 GA. U-CHANNEL
BRACE FASTENED TO
RAFTER VITH (4)
BI2-14x3/4' SDF'S AT
EACH END (6 PER BRACE)

15 BOUBLE COLUMN

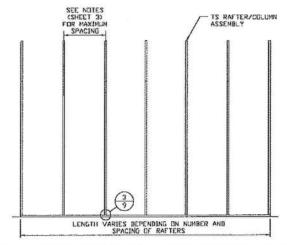
(TYP.)

15 BASE RAIL(TYP.)

V & 24'-0' NAXIMUM RAFTER SPAN

TYPICAL RAFTER/COLUMN END FRAME SECTION SCALE NTS

TYPICAL RAFTER/COLUMN END FRAME SECTION
SCALE: NTS



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION SCALE: NTS

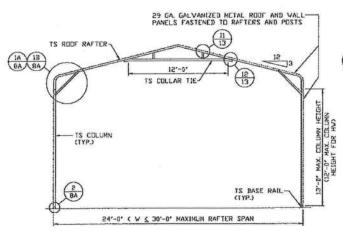


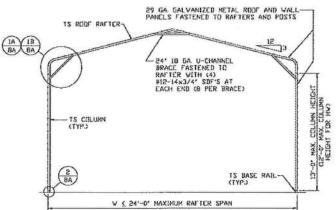
This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND
CONSULTING, THE UNAUTHORIZED REPRODUCTION, COPYING, OR DYHERVISE USE OF
THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY
BE SUBJECT TO LEGAL ACTION.

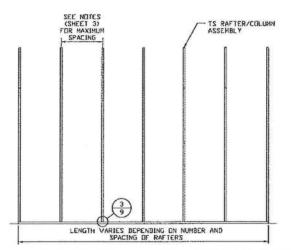
	DRAWN BY: JG	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE LAKE CITY, FLORIDA 32025			
	CHECKED BY: PDH		'-0" ENCLOSED		
-	PROJECT MGR: WSM	DATE: 1-8-21	SCALE: NTS		NO: 16022S/ 00S/20352S
	CLIENT: TBS	SHT. 7	DWG, NO SK-3		REV.: 5





TYPICAL RAFTER/COLUMN END FRAME SECTION SCALE: NTS

TYPICAL RAFTER/COLUMN END FRAME SECTION SCALE: NTS



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION
SCALE: NTS

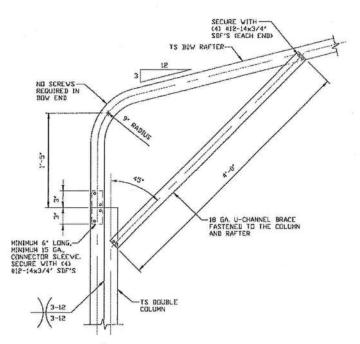


This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGIN	NEEDING AND
CONSULTING THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHER	
THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT TO	HEREUPUN MAY
BE SUBJECT TO LEGAL ACTION	

DRAWN BYI JG		BULAR BUILDIN 31 SE INDUSTRI	
CHECKED BY: PDH		AKE CITY, FLOI '-0" ENCLOSED	
PROJECT MGR: WSM	DATE: 1-8-21	SCALE! NTS	ND: 16022S/
CLIENT: TBS	SHT. 7A	DWG. NO SK-3	REV. 5

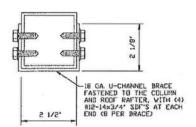


TS DOUBLE COLUMN HINIMUM 6' LONG, CONNECTOR SLEEVE HINIMUM 15 GA., SECURE WITH (4) #12-14x3/4' SDF'S CONNECTOR SLEEVE TO BASE RAIL TS CONTINUOUS BASE RAIL

RAFTER COLUMN/BASE RAIL CONNECTION DETAIL

BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 13'-0' < TO < 16'-0'

SCALE: NTS NOTE: COLUMN HEIGHTS 12'-0' < TO < 16'-0' FOR HIGH WIND.



BRACE SECTION SCALE: NTS

1



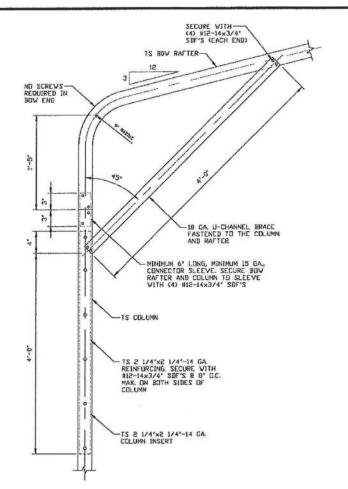
This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

MOORE AND ASSOCIATES	
ENGINEERING AND CONSULTING, IN	C.

THIS DOCUMENT IS THE PROPERTY OF HOORE AND ASSOCIATES ENGINEERING AND CONSULTING, THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

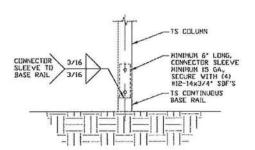
CLIENT: TBS	в тиг	DWG. NO: SK-3		REV. 5
PROJECT MGRI WSM	DATE: 1-8-21	SCALE: NTS		ND: 160225/ 005/203525
CHECKED BY: PDH		AKE CITY, FLOI '-0" ENCLOSED		
DRAWN BY JG	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE			



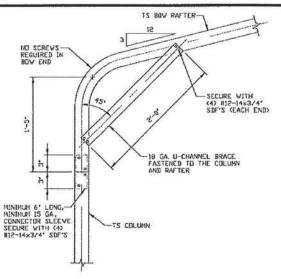
BOX EAVE RAFTER COLUMN
CONNECTION DETAIL
A FOR HEIGHTS 10'-0' < TO < 13'-0"

1A SCALE: NTS

NOTE: MAXIMUM COLUMN HEIGHT IS 12'-0' FOR HIGH WIND.



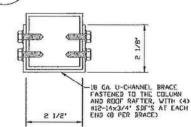
2 RAFTER COLUMN/BASE RAIL
CONNECTION DETAIL
SCALE: NTS



BOX EAVE RAFTER COLUMN CONNECTION DETAIL

FOR HEIGHTS

SCALE: NTS



BRACE SECTION



This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

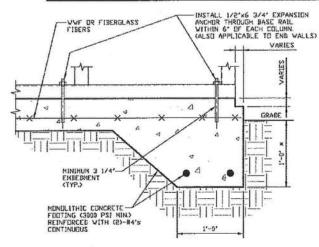
MOORE AND ASSOCIATES	
ENGINEERING AND CONSULTING, INC	

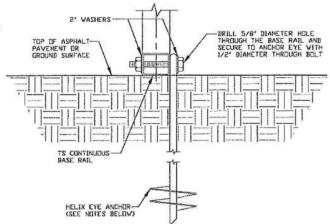
THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERVISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

DRAWN BY: JG	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE				
CHECKED BY: PDH		AKE CITY, FLOI '-0" ENCLOSED			
PROJECT MGR: WSM	DATE: 1-8-21	SCALE: NTS		ND: 16022S/ 00S/20352S	
CLIENT: TBS	SHT, BA	DWG. NO SK-3		REV.I 5	

BASE RAIL ANCHORAGE OPTIONS FOR LOW AND HIGH WIND SPEED

3B





GROUND BASE HELIX ANCHORAGE

* COURDINATE WITH LOCAL CODES/ORD.
REGARDING MINIMUM FROST DEPTH REQ.

SCALE: NTS (CAN BE USED FOR ASPHALT)

3A

CONCRETE MONOLITHIC SLAB ANCHORAGE BASE RAIL

SCALE: NTS MINIMUM ANCHOR EDGE DISTANCE IS 4' COURDINATE WITH LOCAL CODES/ORD, REGARDING MINIMUM FROST DEPTH REQ.

GENERAL NOTES

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

CONCRETE

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

COVER OVER REINFORCING STEEL:

FOR FOUNDATIONS, MINIMUM CONCRETE COVER OVER REINFURCING BARS SHALL BE PER ACI-318: 3 INCHES IN FOUNDATIONS WHERE THE CONCRETE IS CAST AGAINST AND PERMANENTLY IN CONTACT WITH THE EARTH OR EXPOSED TO THE EARTH OR WEATHER, AND I 1/2 INCHES ELSEWHERE.

REINFORCING STEEL

THE TURNDOWN REINFORCING STEEL SHALL BE ASIM A615 GRADE 60. THE SLAB REINFORCEMENT SHALL BE WELDED WIRE FABRIC MEETING ASIM A185 OR FIBERGLASS FIBER REINFORCEMENT.

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:

- 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.
- 4. FOR LOUSE 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 LOSE TO MEDIUM DENSE SANDS, FIRM TO STIFFER CLAYS AND SILTS, ALLUVIAL FILL USE MINIMUM (2) 8' HELICES WITH MINIMUM 60 INCH EMBEDMENT.



This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

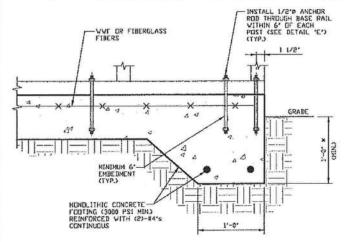
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGINEERING AND CONSULTING THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

DRAWN BYI JG	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE					
CHECKED BY: PDH	LAKE CITY, FLORIDA 32025 30'-0"x20'-0" ENCLOSED BUILDING EXP. B					
PROJECT MGR: WSM	DATE: 1-8-21	SCALE: NTS	JDB ND: 16022 17300S/203525			
CLIENT: TBS	SHT. 9	DWG. NO SK-3		REV. 5		

OPTIONAL FOUNDATION ANCHORAGE FOR LOW AND HIGH WIND SPEED





CONCRETE MONOLITHIC BASE RAIL ANCHORAGE

SCALE: NTS MINIMUM ANCHOR EDGE DISTANCE IS 1 1/2' * CODRDINATE WITH LOCAL CODES/DRD. REGARDING MINIMUM FROST DEPTH REO.

GENERAL NOTES

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

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

COVER OVER REINFORCING STEEL!

FOR FOUNDATIONS, MINIMUM CONCRETE COVER OVER REINFORCING BARS SHALL BE PER ACI-318: 3 INCHES IN FOUNDATIONS WHERE THE CONCRETE IS CAST AGAINST AND PERMANENTLY IN CONTACT WITH THE EARTH OR EXPOSED TO THE EARTH OR WEATHER, AND 1 1/2 INCHES ELSEWHERE.

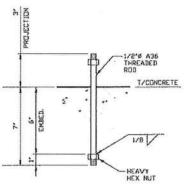
REINFORCING STEEL!

THE TURNDOWN REINFORCING STEEL SHALL BE ASTM AGIS GRADE 60. THE SLAB REINFORCEMENT SHALL BE VELDED WIRE FABRIC MEETING ASTM A185 OR FIBERGLASS FIBER REINFORCEMENT.

REINFORCEMENT MAY BE BENT IN THE SHOP OR THE FIELD PROVIDED

1. REINFORCEMENT IS BENT COLD.
2. 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.



ANCHOR ROD THROUGH BASE RAIL DETAIL 3D

SCALE: NTS



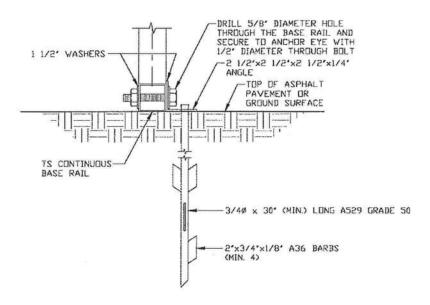
This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGINEERING AND	
CONSULTING THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERVISE USE OF	
THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY	,
BE SUBJECT TO LEGAL ACTION.	

DRAWN BY: JG	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE LAKE CITY, FLORIDA 32025					631 SE INDUSTRIAL CIRCLE LAKE CITY, FLORIDA 32025			
CHECKED BY: PDH	30'-0"x20	'-0" ENCLOSED I	BUILDING EXP. B						
PREJECT MGR: WSM	DATE: 1-8-21	SCALE: NTS	JDB ND: 16022S/ 17300S/20352S						
CLIENT: TBS	SHT, 9A	DAC' NO: 2K-3	REVA 5						

BASE RAIL ANCHORAGE OPTION



ASPHALT BASE ANCHORAGE (HP 9 BARBED DRIVE ANCHOR)

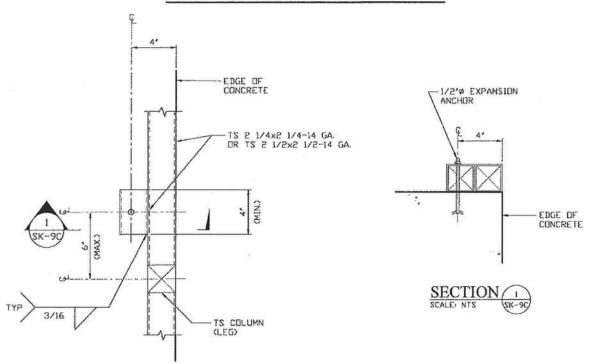
SCALE: NTS
(CAN BE USED FOR ASPHALT)
* COORDINATE WITH LOCAL CODES/ORD.
REGARDING MINIMUM FROST DEPTH REQ.



This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

CONSULTING THE UNSUTHINGED REPRODUCTION, CONTING OR DITERRATSE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.	CLIENT: TBS	SHT, 9B	DWG, NO SK-3	REV. 5		
THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF	PROJECT MGR: WSM	DATE: 1-B-21	SCALE: NTS	JOB NO: 160225/ 173005/203525		
ENGINEERING AND CONSULTING, INC.	CHECKED BY: PDH		AKE CITY, FLOR '-0" ENCLOSED E	IDA 32025 BUILDING EXP. B		
MOORE AND ASSOCIATES	DRAWN BY: JG	63	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE			

BASE RAIL ANCHORAGE OPTIONS



TYPICAL ANCHUR DETAIL WHEN BASE RAIL IS NEAR EDGE OF CONCRETE

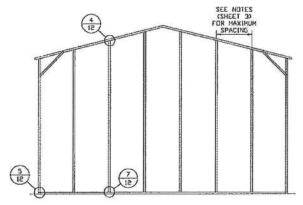
SCALE: NTS



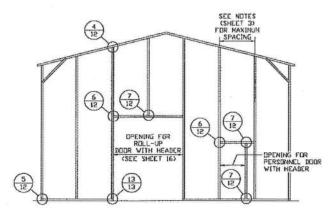
This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

MOORE AND ASSOCIATES	DRAWN BYI JG	63	BULAR BUILDIN 11 SE INDUSTRIA AKE CITY, FLOR	L CIR	CLE
ENGINEERING AND CONSULTING, INC.	CHECKED BY: PDH		'-0" ENCLOSED I	BUILD	ING EXP. B
THIS DOCUMENT IS THE PROPERTY OF HOORE AND ASSOCIATES ENGINEERING AND CONSULTING, THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF	PROJECT MGR: WSM	DATE: 1-8-21	SCALE: NTS		ND: 16022S/ 00S/20352S
THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.	CLIENT: TBS	SHT. 9C	DWG. NO: SK-3		REV. 5

BOX EAVE RAFTER END WALL AND SIDE WALL OPENINGS

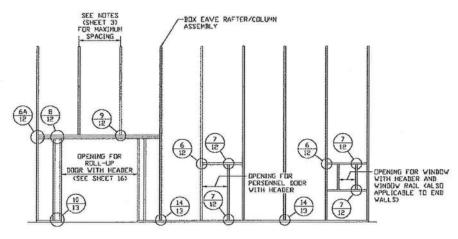


TYPICAL BOX EAVE RAFTER END WALL FRAMING SECTION



TYPICAL BOX EAVE RAFTER END WALL OPENINGS FRAMING SECTION

SCALE: NTS



TYPICAL BOX EAVE RAFTER SIDE WALL OPENINGS FRAMING SECTION

SCALE: NTS



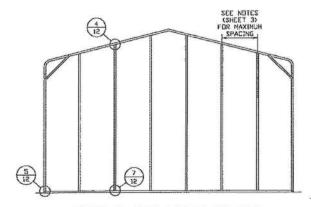
This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

	ASSOCIATES ENGINEERING AND
	OPYING, OR OTHERWISE USE OF Y INFRINGEMENT THEREUPON MAY
BE SUBJECT TO LEGAL ACT	THE PERSON NAMED IN THE

DRAWN BY: JG	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE				
CHECKED BY: PDH		AKE CITY, FLOI '-0" ENCLOSED			
PROJECT MGRI WSM	DATE: 1-8-21	SCALE: NTS		8 NO: 16022S/	
CLIENT: TBS	SHT. 10	DVG. NO: SK-3		REV. 5	

BOW RAFTER END WALL AND SIDE WALL OPENINGS



TYPICAL BOX EAVE RAFTER END WALL FRAMING SECTION SCALE: NTS

DPENING FOR ROLL-UP DOOR WITH HEADER (SEE SHEET 16) DPENING FOR PERSONNEL DOOR WITH HEADER (5) $\begin{pmatrix} 13 \\ 13 \end{pmatrix}$ TYPICAL BOX EAVE RAFTER END WALL OPENINGS FRAMING SECTION

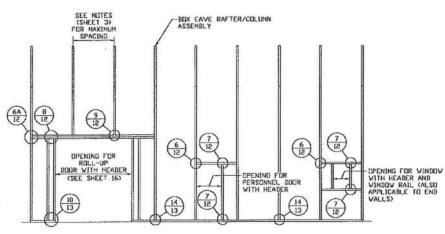
(6) (12)

SCALE: NTS

SEE NOTES (SHEET 3) FOR MAXIMUM SPACING

(7)

(6) 12)



TYPICAL BOX EAVE RAFTER SIDE WALL OPENINGS FRAMING SECTION



This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

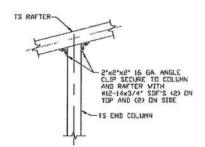
MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, THE UNAUTHORIZED REPRODUCTION, COPYING, OR DIMERVISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

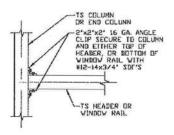
DRAWN BY: JG	63	BULAR BUILDIN	AL CI	RCLE	
CHECKED BY: PDH		AKE CITY, FLOF '-0" ENCLOSED			
PROJECT MGR: WSM	DATE: 1-8-21	SCALE) NTS		JOB NO 16022S/ 17300S/20352S	
CLIENT: TRS	SHT, 11	DWG, NO SK-3		REV. 5	

CLIENT: TBS

CONNECTION DETAILS



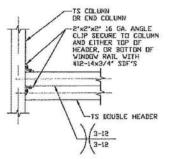
TS COLUMN (CORNER) MINIMUM 6' LONG, MINIMUM 15 GA., TS CONNECTOR SLEEVE. SECURE WITH (4) #12-14x3/4' SDF'S 2'x2'x2' 16 GA CLIP ANGLE SECURE TO RAFTER COLUMN AND BASE RAIL W/(4) #12-14x3/4' SDF'S CONNECTOR SLEEVE TO BASE RAIL 3/16 3/16 TS CONTINUOUS BASE RAIL

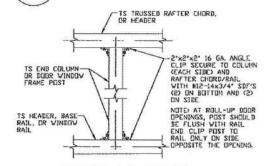


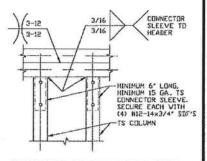
END COLUMN/RAFTER CONNECTION DETAIL 4 SCALEL NTS

END COLUMN/BASE RAIL CONNECTION DETAIL SCALE: NTS

HEADER OR WINDOW RAIL TO COLUMN CONNECTION DETAIL SCALE: NTS





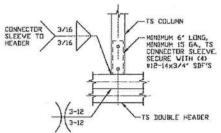


DOUBLE HEADER TO COLUMN CONNECTION DETAIL 6A SCALE: NTS

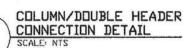
BASE RAIL, OR WINDOW RAIL CONNECTION DETAIL SCALE: NTS

COLUMN TO HEADER, DOUBLE HEADER/COLUMN CONNECTION DETAIL 8 SCALE: NTS

6



9

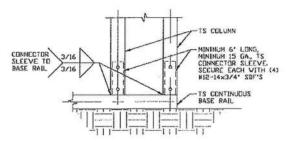




This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.	DRAWN BY: JG CHECKED BY: PDH	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE LAKE CITY, FLORIDA 32025 30'-0"x20'-0" ENCLOSED BUILDING EXP.		L CIRCLE DA 32025
THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR DITERVISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.	PREJECT MGR: WSM	DATE: 1-8-21 SHT, 12	SCALE: NTS	JOB NO 16022S/ 17300S/20352S REV. 5

CONNECTION DETAILS



3/16

TS ROOF RAFTER

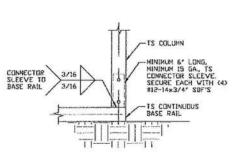
TS CHORD

TS COLLAR TIE

10 COLUMN/BASE RAIL CONNECTION DETAIL SCALE: NTS

RAFTER TO CHORD CONNECTION DETAIL

12 COLLAR TIE CONNECTION DETAIL



13 COLUMN/BASE RAIL CONNECTION DETAIL

TS TRUSSED RAFTER
CHORD, OR HEADER

TS END COLUMN
OR DOOR VINDOV
FRAME POST

TS HEADER, BASE
RAIL, OR VINDOV
RAIL

COLUMN TO HEADER, BASE RAIL CONNECTION DETAIL

SCALE: NTS

14

No 57170

*

BO STATE OF

WOOD

A CORIO A CHARLES

NO STATE OF WARREN

OR 10 A CHARLES

OR

This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

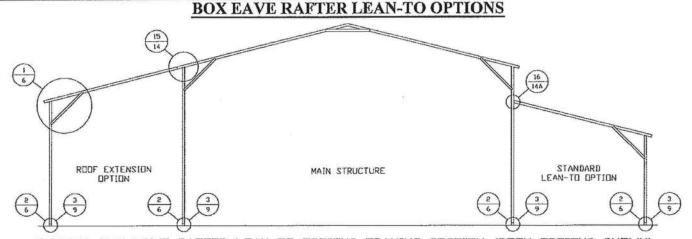
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.

THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGINEERING AND CONSULTING, THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERVISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

TUBULAR BUILDING SYSTEMS
631 SE INDUSTRIAL CIRCLE
LAKE CITY, FLORIDA 32025
CHECKED BY: PDH 30'-0"x20'-0" ENCLOSED BUILDING EXP. B
PROJECT MGR: WSM DATE: 1-8-21 SCALE: NTS 17300S/20352S

CLIENT: TBS SHT. 13 DWG. ND: SK-3 REV.: 5



TYPICAL BOX EAVE RAFTER LEAN-TO OPTIONS FRAMING SECTION (BOTH OPTIONS SHOWN)

SCALE: NTS
MAIN BUILDING COLUMNS WITH LEAN-TO OR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE LACED COLUMNS FOR
EAVE HEIGHTS 16'-0' < TO < 20'-0'.

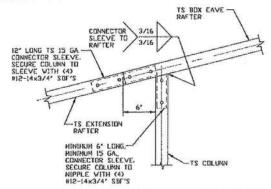
MAIN BUILDING COLUMNS WITH LEAN-TO OR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE DOUBLE COLUMNS FOR
EAVE HEIGHTS 13'-0' (12'-0' FOR HIGH WIND) < TO < 16'-0'.

MAIN BUILDING COLUMNS WITH LEAN-TO OR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE SINGLE COLUMNS FOR
EAVE HEIGHTS 10'-0' < TO < 13'-0' (12'-0' FOR HIGH WIND) < WITH 4'-4' INSERT).

MAIN BUILDING COLUMNS WITH LEAN-TO OR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE SINGLE COLUMNS FOR
EAVE HEIGHTS < 10'-0'.

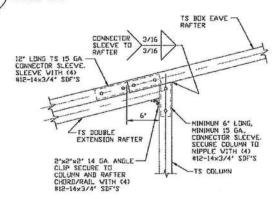
MAIN BUILDING COLUMNS WITH LEAN-TO OR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE SINGLE COLUMNS FOR
EAVE HEIGHTS < 10'-0'.

KNEE BRACES MUST BE 4'-0' (5'-0' FOR HIGH WIND) WHEN LEAN-TO'S ARE ADDED.



SIDE EXTENSION RAFTER/COLUMN DETAIL

FOR RAFTER SPANS & 15'-0'



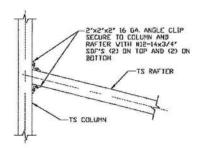
SIDE EXTENSION RAFTER/COLUMN DETAIL FOR RAFTER SPANS 15'-0" < TO < 24'-0"



This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

ENGINEERING AND CONSULTING, INC.	DRAWN BY: JG	TÜBÜLAR BÜLDING SYSTEMS 631 SE INDUSTRIAL CIRCLE			
	CHECKED BY: PDH	LAKE CITY, FLORIDA 32025 30'-0"x20'-0" ENCLOSED BUILDING EXP. B			
	PROJECT MGR: WSM	DATE: 1-8-21	SCALE: NTS	JOB NO 16022S/ 17300S/20352S	
CONSULTING. THE UNAUTHORIZED REPRIDUCTION, COPYING, OR DIHERVISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.	CLIENT: TBS	SHT. 14	DWG. NO SK-3	REV. 5	

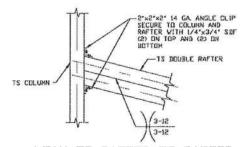
BOX EAVE RAFTER LEAN-TO OPTIONS



LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS & 15'-0'

SCALE: NTS

16



LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS 15'-0' < TO \(24'-0'')

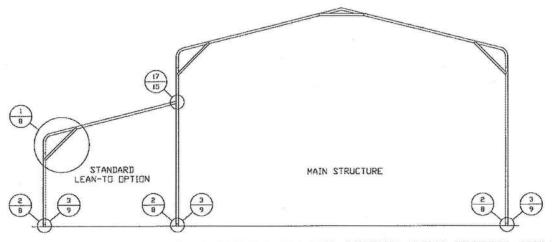
16A) SCALE: NTS



This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.	DRAWN BY: JG CHECKED BY: PDH	— 63 L	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE LAKE CITY, FLORIDA 32025 30'-0"x20'-0" ENCLOSED BUILDING EXP.	
THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.	PROJECT MGR: WSM	DATE: 1-8-21 SHT. 14A	SCALE: NTS	JDB ND 16022S/ 17300S/20352S REV. 5

BOW RAFTER LEAN-TO OPTIONS

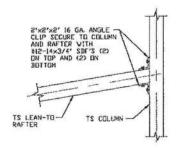


BOW RAFTER LEAN-TO OPTIONS FRAMING SECTION (BOTH OPTIONS SHOWN)

SCALE! NTS MAIN BUILDING COLUMNS WITH LEAN-TO OR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE DOUBLE COLUMNS FOR EAVE HEIGHTS 13'-0' (12'-0' FOR HIGH WIND) < TO < 16'-0'.

MAIN BUILDING COLUMNS WITH LEAN-TO OR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE SINGLE COLUMNS FOR EAVE HEIGHTS 10'-0' < TO < 13'-0' (12'-0' FOR HIGH WIND) (WITH 4'-4' INSERT).

MAIN BUILDING COLUMNS WITH LEAN-TO OR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE SINGLE COLUMNS FOR EAVE HEIGHTS (10'-0') ATTACHED ARE REQUIRED TO BE SINGLE COLUMNS FOR EAVE HEIGHTS < ID'-0".
KNEE BRACES MUST BE 4'-0" (5'-0" FOR HIGH WIND) WHEN LEAN-TO'S ARE ADDED.



LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS

≤ 15'-0" 17

SCALE: NTS

17A

2'x2'x2' 16 GA ANGLE — CLIP SECURE TO COLUMN AND RAFTER VITH 812-14x3/4' SDF'S (2) ON TOP AND (2) ON BOTTOM TS DOUBLE LEAN-TO RAFTER TS BOUBLE

LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS 15'-0" < TO ≤ 24'-0"

TUBULAR BUILDING SYSTEMS DRAWN BYI JG 631 SE INDUSTRIAL CIRCLE LAKE CITY, FLORIDA 32025 30'-0"x20'-0" ENCLÓSED BUILDING EXP. B CHECKED BY: PDH JOB NO 16022S/ 17300S/20352S PROJECT MGR: WSM DATE: 1-8-21 SCALE: NTS REV. 5 SHT. 15 DWG. NO SK-3 CLIENT: TBS

This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

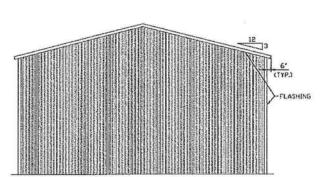
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

SCALE: NTS

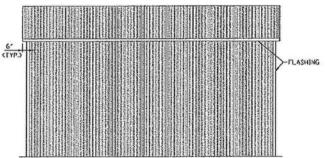
THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINSEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

BOX EAVE RAFTER VERTICAL ROOF/SIDING OPTION 29 GA. GALVANIZED NETAL ROOF AND WALL PANELS FASTENED TO HAT CHANNELS AND GIRTS



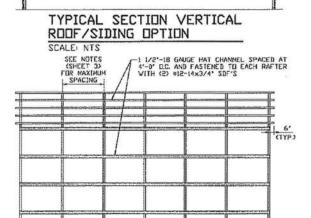
TYPICAL END ELEVATION VERTICAL ROOF/SIDING OPTION

SCALE: NTS



TYPICAL SIDE ELEVATION VERTICAL ROOF/SIDING OPTION

SCALE: NTS

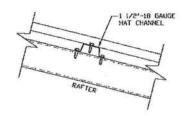


-1 1/2'-18 GAUGE HAT CHANNEL

TYPICAL FRAMING SECTION VERTICAL ROOF/SIDING OPTION

SCALE: NTS

INDITE: TS WALL GIRTS CAN BE USED AS AN OPTION IN PLACE OF HAT CHANNELS. TS GIRTS MUST BE SPACE AT 4'-0' (MAX.) D.C.



ROOF PANEL ATTACHMENT

(ALTERNATE FOR VERTICAL ROOF PANELS) SCALE: NTS



This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

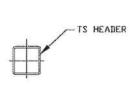
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

MOORE AND ASSOCIATES	
ENGINEERING AND CONSULTING, I	NC.

THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGINEERING AND CONSULTING, THE UNMITHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

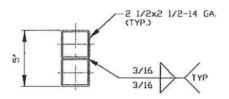
	DRAWN BYI JG	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE LAKE CITY, FLORIDA 32025					
	CHECKED BY: PDH		'-0" ENCLOSED				
-	PROJECT MGR: WSM	DATE: 1-8-21	SCALE: NTS		ND: 160225/ 005/203525		
	CLIENT: TBS	SHT. 16	DVG. NO SK-3		REV. 5		

SIDE WALL HEADER OPTIONS



HEADER DETAIL FOR DOOR OPENINGS ≤ 10'-0"

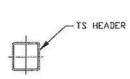
SCALE: NTS



HEADER DETAIL FOR DOOR OPENINGS 10'-0' < LENGTH ≤ 15'-0'

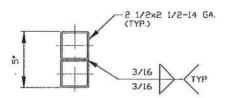
SCALE: NTS

END WALL HEADER OPTIONS



HEADER DETAIL FOR DOOR OPENINGS ≤ 12'-0"

SCALE: NTS



HEADER DETAIL FOR DOOR OPENINGS 12'-0' < LENGTH ≤ 15'-0'

SCALE: NTS



This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

	MOORE AND ASSOCIATES
EN	IGINEERING AND CONSULTING, INC.

THIS DOCUMENT IS THE PROPERTY OF HOUSE AND ASSOCIATES ENGINEERING AND CONSULTING THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERVISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

DRAWN BY: JG		BULAR BUILDIN BI SE INDUSTRI	
CHECKED BY: PDH	L	AKE CITY, FLO	
PROJECT MGR: VSM	DATE: 1-8-21	SCALE: NTS	JOB NO: 16022\$/ 17300\$/20352\$
CLIENT: TBS	SHT. 17	DWG. NO: SK-3	REV. 5

FLOOD VENT DETAIL FRAME OPENING FOR FLOOD VENT WITH TS 2 1/2"x2 1/2" MEMBERS (MATCH ADJACENT RAFTER POSTS AND BASERAIL) 1/2"-18S DR F EXPANDED METAL. ATTACH W/ McNICHOLS SQUARE FASTENERS OR APPROVED EQUAL AT 6" D.C. ATTACH W/ METAL TEK SCREWS. TS POST CMIN. I MAX. GRADE TS BASE RAIL 1'-0' GRADE GRADE

TYPICAL FLOOD VENT DETAIL

1. MINIMUM VENT SPACE REQUIRED = 1 SQ. INCH OF OPEN VENT AREA PER SQ. FOOT OF BUILDING AREA.

SCALE: NTS

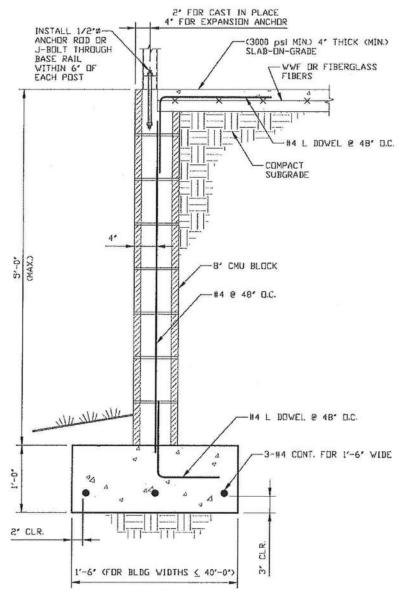
- 2. THERE SHALL BE A MINIMUM OF TWO OPENINGS ON DIFFERENT SIDES FOR EACH ENCLOSED BUILDING.
- 3. APPLY L3 FACTOR WHEN CALCULATING TOTAL OPEN AREA WHEN USING 1/2'-18GA S OR F EXPANDED METAL.
- 4. TOTAL OPEN AREA OF VENT = LxH(MIN. 12").
- 5. FLOOD VENT DETAIL COMPLIES WITH FEMA/NFIP.
- PREFABRICATED FLOOD VENTS MEETING THE REQUIREMENTS OF FEMA/NIFIP MAY BE USED.



This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

MOORE AND ASSOCIATES ENGINEERING AND CONSULTING, INC.	DRAWN BY: JG CHECKED BY: PDH	- 63° LA	ULAR BUILDING I SE INDUSTRIA KE CITY, FLORI 0" ENCLOSED B	L CIRCLE
THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRIDUCTION, COPYING, OR OTHERVISE USE OF THIS DOCUMENT IS STRUCTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.	PROJECT MGR: WSM CLIENT: TBS	DATE: 1-8-21 SHT. 18	SCALE: NTS DWG, NO: SK-3	JOB NO: 16022S/ 17300S/20352S REV: 5

STAND -ALONE STEM WALL DETAIL

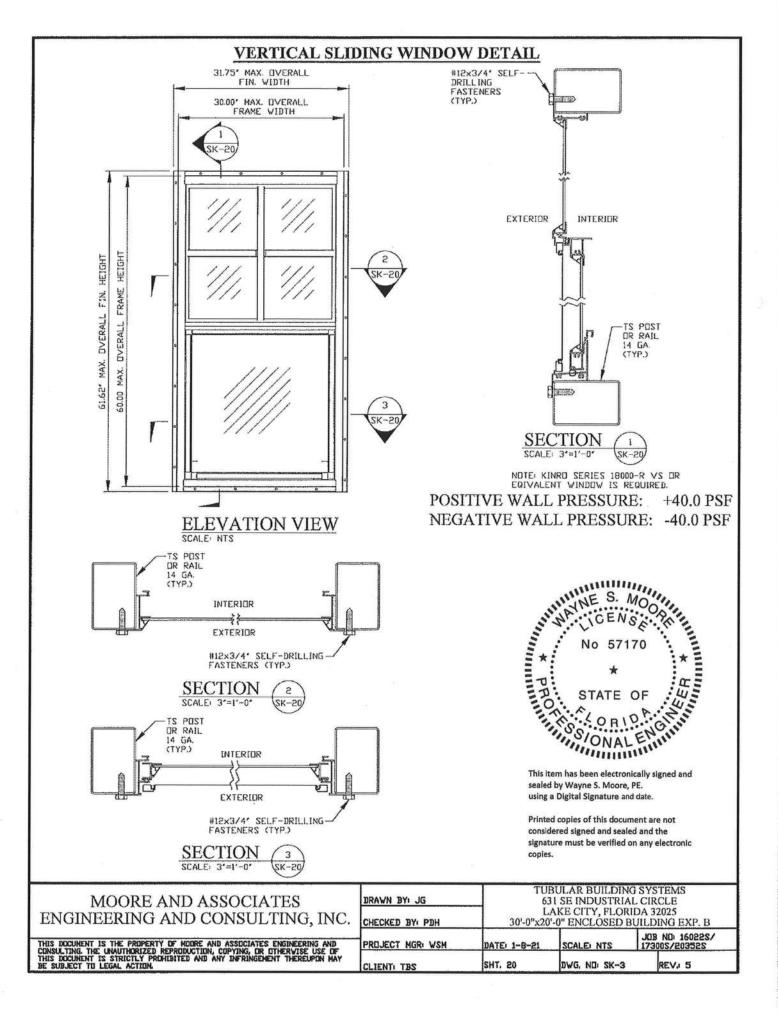


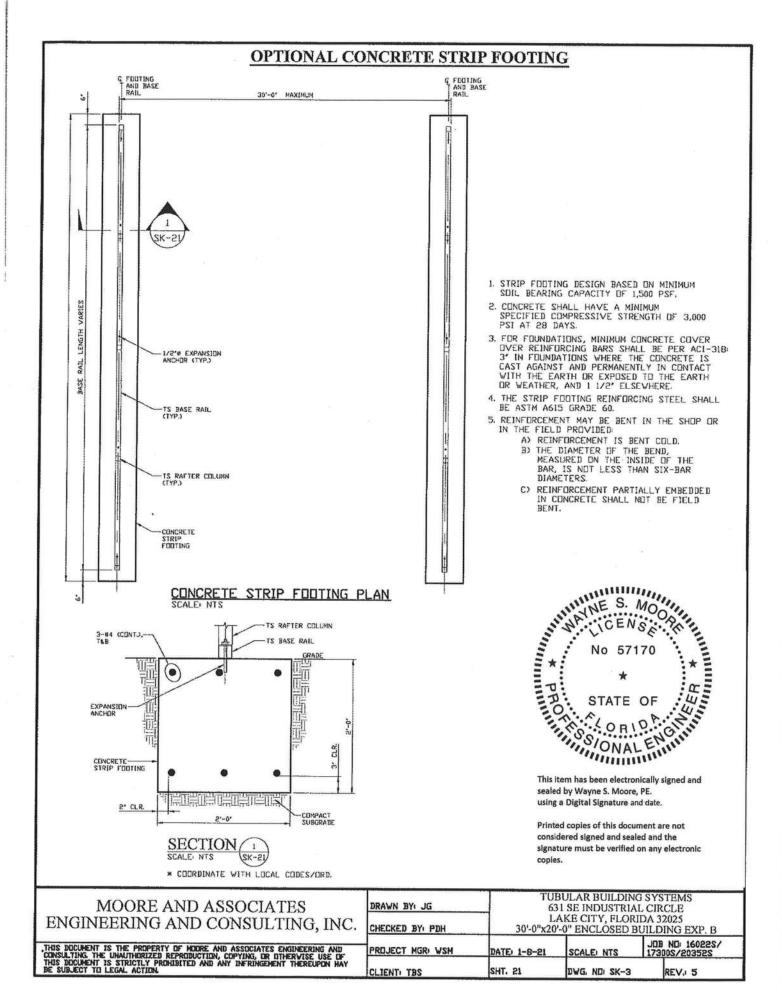
STAND-ALONE CONCRETE MASONRY UNIT (CMU) FOUNDATION STEM WALL DETAIL SCALE: NTS



This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

MOORE AND ASSOCIATES	DRAWN BYI JG	63	BULAR BUILDING	L CIRCLE
ENGINEERING AND CONSULTING, INC.	CHECKED BY: PDH		AKE CITY, FLOR -0" ENCLOSED E	BUILDING EXP. B
THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGINEERING AND CONSULTING, THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF	PROJECT MGR: WSM	DATE: 1-8-21	SCALE) NTS	JDB ND: 160225/ 173005/203525
THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.	CLIENT: TBS	SHT. 19	DWG, NO SK-3	REV. 5





TUBULAR BUILDING Outside edge of foundation / footing Base Rail Building See Corner Detail Sheet 3 FOUNDATION MEASUREMENTS BUILDING SLAB Outside measurement of foundation Equals Basic Building Dimension plus Seven (7) inches TYPICAL BUILDING Basic Building
Dimension
to outside of Base Rail in Concrete outside of basic building dimensions 3-1/2" wide x 1-1/2" high Notch Basic Building Dimension to outside of Base Rail Basic Building Dimension to-outside of Base Rail Outside measurement of foundation Equals Basic Building Dimension TYPICAL WALL SECTION plus Seven (7) inches IMPORTANT - NOTES notch in the concrete footing are to the outside of the rame Base Rail and DO NOT All basic building dimensions Record Measurements in these spaces provided for Detail of Building corner configuration See Sheet 3 of 3 3-1/2" wide x 1-1/2" high
Notch in Concrete outside
of basic building
dimensions Foundation Engineering

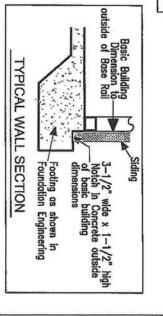
TUBULAR BUILDING Outside edge of foundation / footing Base Rail Building to Dis basic building of binario See Corner Detail Sheet 3 FOUNDATION MEASUREMENTS TYPICAL BUILDING **BUILDING SLAB** in Concrete outside of basic building 3-1/2" wide x 1-1/2" high Notch dimensions to Outside of Base Apail

in these spaces provided Record Measurements **IMPORTANT - NOTES**

All basic building diagonal dimensions are to the outside corner of the frame Base Rail and DO NOT INCLUDE the 3-1/2" x 1-1/2" notch in the concrete footing

See Sheet 3 of 3 for Detail of Building corner configuration

DIAGONALS



SHEET 2 of 3

