

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'





Reviewed

for

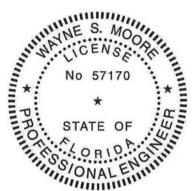
Cop

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

				,1		
						s:
				* PROFILITION	NO 57170 * STATE OF SOME OF S	NORTH * HARA
MOORE AND A	SSOCIATES	DRAWN BY: JG		using a D Printed o consider signature copies. TUBU	has been electronically Wayne S. Moore, PE. Digital Signature and date opies of this documented signed and sealed are must be verified on an all the control of the control	t are not not the not electronic
ENGINEERING AND (THIS DOCUMENT IS THE PROPERTY OF MOORE CONSULTING THE UNAUTHORIZED REPRODUCTION THIS DOCUMENT IS STRICTLY PROHIBITED AND BE SUBJECT TO LEGAL ACTION.	CONSULTING, INC.	CHECKED BY: F PROJECT MGR: CLIENT: TBS	WSM	PI DATE: 1-8-21	E SEAL COVER SH	

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	88	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	90	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	=70.05100	OPTIONAL DOOR HEADER
SHEET		FLOOD VENT DETAIL
SHEET		STAND-ALONE STEM WALL DETAIL
SHEET		VERTICAL ROOF/SIDING OPTION OPTIONAL DOOR HEADER FLOOD VENT DETAIL STAND-ALONE STEM WALL DETAIL VERTICAL SLIDING WINDOW DETAIL * * * * * * * * * * * * * * * * * * *



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.

STRIP FOOTING OPTION

SHEET 21

THIS DOCUMENT IS THE PROPERTY OF HODRE 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 CHECKED BY: PDH PROJECT MGR: WSM	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE 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			
	CLIENT: TBS	SHT. 2	DWG, NO: SK-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 LUADS ARE AS FULLUWS:

A) DEAD LOAD

= 1.5 PSF

B) LIVE LOAD

= 12 PSF

- 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.
- 8. WIND EXPOSURE CATEGORY B.
- 9. SPECIFICATIONS APPLICABLE TO 29 GAUGE METAL PANELS FASTENED DIRECTLY TO 2 1/2" × 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 DN-CENTERS ALONG RAFTERS OR PURLINS, AND POSTS, INTERIOR = 9' OR END = 6', (MAX.)
- 11. 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 VARY, ROOF SLOPES LESS THAN 3:12 REQUIRE USE OF JOINT SEALANT.
- 12. STANDARD 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 × 30' LONG IN SUITABLE SOIL CONDITIONS MAY BE USED FOR LOW (< 108 MPH NOMINAL) 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

 $I_{\varepsilon} = 1.0$ $V = C_{S} W$

 $S_{DS} = 1.522 g$ $S_{DI} = 0.839 g$

No 57170

*
STATE OF

STATE OF

ORION

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.

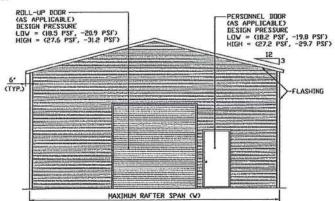
THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

TUBULAR BUILDING SYSTEMS
631 SE INDUSTRIAL CIRCLE
LAKE CITY, FLORIDA 32025
CHECKED BY: PDH 30'-0" ENCLOSED BUILDING EXP. B

PROJECT MGR: WSM DATE: 1-8-21 SCALE: NTS 17300S/20352S

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

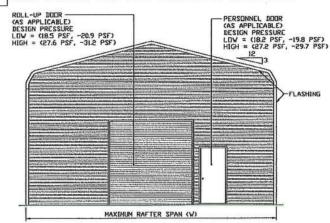
BOX EAVE FRAME RAFTER ENCLOSED BUILDING



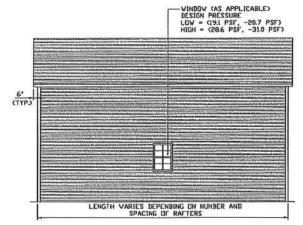


SCALE: NTS

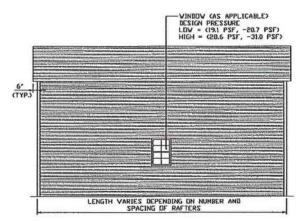
BOW FRAME RAFTER ENCLOSED BUILDING



TYPICAL END ELEVATION SCALE: NTS

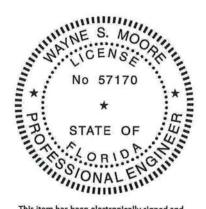


TYPICAL SIDE ELEVATION
SCALE: NTS



TYPICAL SIDE ELEVATION

SCALE: NTS



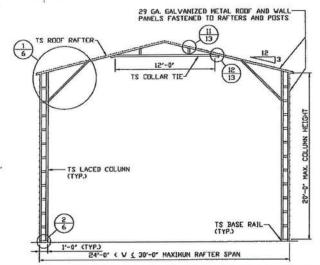
This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

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 OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

DRAWN BY: JG	6:	BULAR BUILDING 31 SE INDUSTRIAL AKE CITY, FLORII 0'-0" ENCLOSED BU SCALE: NTS	AL CIRCLE
CHECKED BY: PDH			
PROJECT MGR: WSM	DATE: 1-8-21	SCALE: NTS	JOB NO 16022S/ 17300S/20352S
CLIENT, TRS	SHT. 4	DWG. NO SK-3	REV. 5



TYPICAL RAFTER/COLUMN END FRAME SECTION SCALE: NTS

29 GA. GALVANIZED METAL ROOF AND VALL
PANELS PASTENED TO RAFTERS AND POSTS

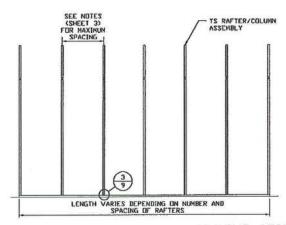
24' 18 GA. U-CHANNEL
BRACE FASTENED TO
RAFTER VITH (4)
112-143/4' SDF'S AT
EACH END (9 PER BRACE)

TS LACED COLUMN
(TYP.)

TS BASE RAIL
(TYP.)

Y & 24'-0' MAXIMUM RAFTER SPAN

TYPICAL RAFTER/COLUMN END FRAME SECTION SCALE: NTS



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION

SCALE: NTS



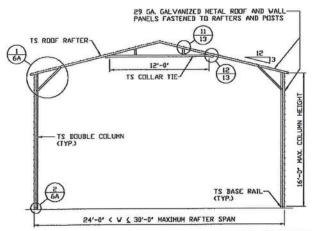
This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

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.	

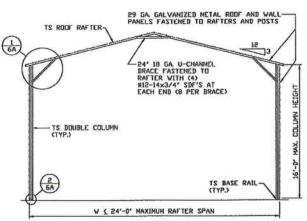
THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

DRAWN BY: JG	63	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE LAKE CITY, FLORIDA 32025						
CHECKED BY: PDH	30'-0"x20	'-0" ENCLOSED	BUILD	ING EXP. B				
PROJECT MGR: WSM	DATE: 1-8-21	SCALE: NTS		ND: 160225/ 005/203525				
CLIENT) TBS	SHT. 5	DWG. NO SK-3		REV. 5				

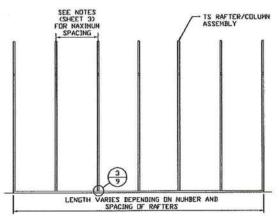


TYPICAL RAFTER/COLUMN END FRAME SECTION

SCALE: NTS

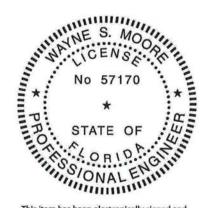


TYPICAL RAFTER/COLUMN END FRAME SECTION SCALE: NTS



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION

SCALE: NTS



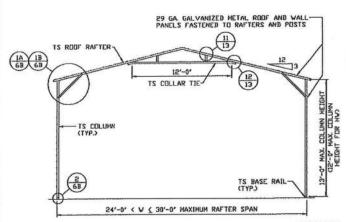
This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

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

MOORE AND ASSOCIAT	ES
ENGINEERING AND CONSULT	ING, INC.

THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND CONSULTING THE UNAUTHORIZED REPRODUCTION, COPYING, OR DITHERVISE 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	
ı	CHECKED BY: PDH	30'-0"x20	'-0" ENCLOSED	BUILD	ING EXP. B	
\dashv	PROJECT MGR: WSM	DATE: 1-8-21	SCALE: NTS		ND: 160225/ 005/203525	
	CLIENT: TBS	SHT. 5A	DWG. NO: SK-3		REVA 5	



29 GA. GALVANIZED METAL ROOF AND WALL
PANELS FASTENED TO RAFTERS AND POSTS

1A 1B
6B 6B

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

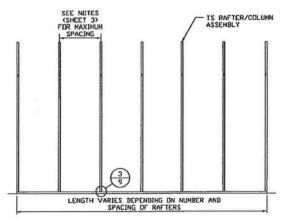
75 BASE RAIL
(TYP.)

V \$\(\) 24'-0' MAXIMUM RAFTER SPAN

TYPICAL RAFTER/COLUMN END FRAME SECTION

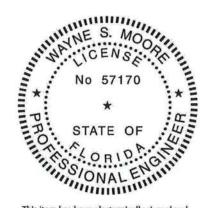
SCALE: NTS

TYPICAL RAFTER/COLUMN END FRAME SECTION
SCALE: NTS



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION

SCALE: NTS



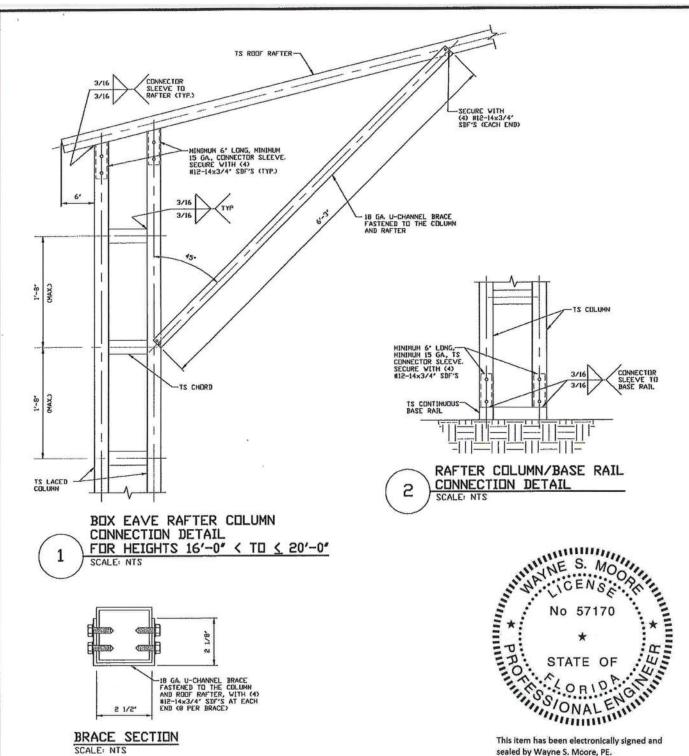
This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

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.	

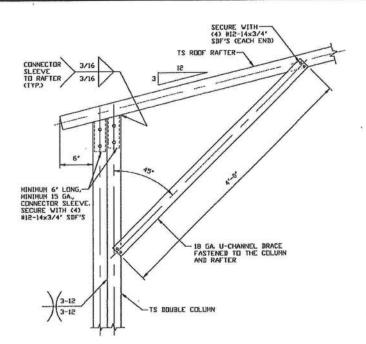
THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

DRAWN BY: JG CHECKED BY: PDH	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE LAKE CITY, FLORIDA 32025 30'-0"×20'-0" ENCLOSED BUILDING EXP. B					
_	PROJECT MGR: WSM	DATE: 1-8-21	SCALE: NTS		ND: 160225/ 005/203525	
	CLIENT: TBS	SHT. 5B	DWG. NO: SK-3		REV. 5	



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	63	BULAR BUILDING 31 SE INDUSTRIA AKE CITY, FLORI '-0" ENCLOSED B	L CIRCLE IDA 32025
THIS DOCUMENT IS THE PROPERTY OF MOORE AND ASSOCIATES ENGINEERING AND	PROJECT MGR: WSM	DATE: 1-8-21	SCALE: NTS	JDB ND 16022S/ 17300S/20352S
CONSULTING THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERVISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.	CLIENT: TBS	SHT. 6	DWG. NO: SK-3	REV. 5



CONNECTOR 3/16

CONNECTOR 3/16

SLEEVE TO 3/16

BASE RAIL 3/16

TS DOUBLE COLUMN
MINIMUM 6' LONG,
CONNECTOR SLEEVE
MINIMUM 15 GA,
SECURE VITH (4)
B12-14x3/4' SDF'S

TS CONTINUOUS
BASE RAIL

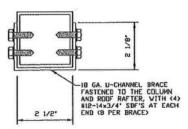
2 RAFTER COLUMN/BASE RAIL
CONNECTION DETAIL
SCALE: NTS

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

SCALE: NTS

1

NOTE: COLUMN HEIGHTS 12'-0' < TO & 16'-0" FOR HIGH WIND.



BRACE SECTION



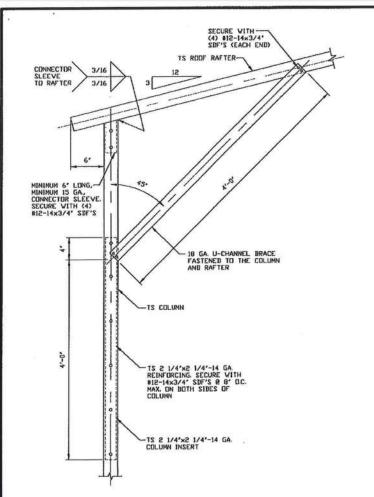
This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

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.	

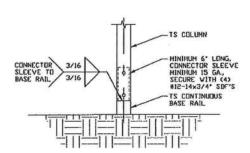
THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSICIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR DITHERVISE USE OF THIS DICCIMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

	DRAWN BY: JG CHECKED BY: PDH	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE LAKE CITY, FLORIDA 32025 30'-0"x20'-0" ENCLOSED BUILDING EXP. B				
-	PROJECT MGR: VSM	DATE: 1-8-21	SCALE: NTS		ND 160225/ 005/203525	
	CLIENT: TBS	SHT. 6A	DWG. NO: SK-3		REV. 5	

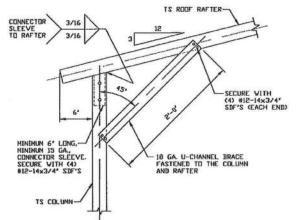


BOX EAVE RAFTER COLUMN
CONNECTION DETAIL
FOR HEIGHTS 10'-0' < TO \(\) 13'-0"

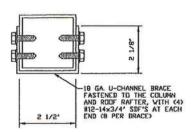
SCALE: NTS NDTE: MAXIMUM COLUMN HEIGHT IS 12'-0" FOR HIGH WIND.



2 RAFTER COLUMN/BASE RAIL
CONNECTION DETAIL
SCALE: NTS



BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS \(\lambde \) 10'-0"



BRACE SECTION



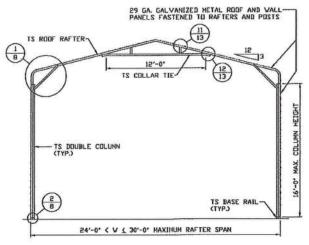
This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

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

DRAWN BY: JG	63	BULAR BUILDIN 31 SE INDUSTRI	AL CI	RCLE
CHECKED BY PDH	LAKE CITY, FLORIDA 32025 30'-0"x20'-0" ENCLOSED BUILDING EXP. B			
PROJECT MGR: WSM	SM DATE: 1-8-21 SCA		SCALE: NTS JOB	
CI TENT: TRO	SHT. 6B	DWG. NO: SK-3		REV. 5



29 GA GALVANIZED METAL RODF AND VALL
PANELS FASTENED TO RAFTERS AND POSTS

12 3

24' 18 GA U-CHANNEL
BRACE FASTENED TO
RAFTER VITH (4)
H12-14x3/4' SDF'S AT
EACH END (8 PER BRACE)

15 BOUBLE COLUMN
(TYP.)

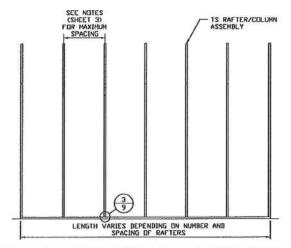
15 BASE RAIL
(TYP.)

V & 24'-0' MAXIMUM RAFTER SPAN

TYPICAL RAFTER/COLUMN END FRAME SECTION

SCALE: NTS SCALE

TYPICAL RAFTER/COLUMN END FRAME SECTION SCALE, NTS



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION SCALE, NTS

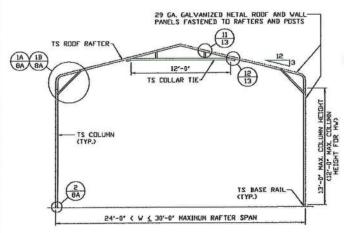


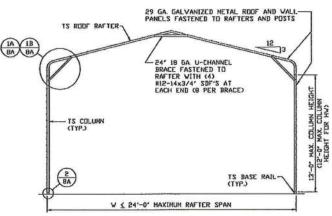
This item has been electronically signed and sealed by Wayne S. Möore, PE. using a Digital Signature and date.

MOORE AND ASSOCIATES	DRAV
ENGINEERING AND CONSULTING, INC.	CHEC

THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGI	
CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHER	
THIS DUCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT TO BE SUBJECT TO LEGAL ACTION.	HEREUPUN MAY

DRAWN BY: JG	63	BULAR BUILDIN 31 SE INDUSTRI	AL CIF	RCLE
CHECKED BY: PDH		AKE CITY, FLOI '-0" ENCLOSED		
PROJECT MGR: WSM	DATE: 1-8-21 SCALE: NT:			ND: 16022S/ 00S/20352S
CLIENT: TBS	SHT. 7	DWG, ND: SK-3		REV.: 5

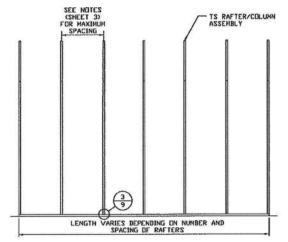




TYPICAL RAFTER/COLUMN END FRAME SECTION

SCALE: NTS

TYPICAL RAFTER/COLUMN END FRAME SECTION



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION SCALE: NTS



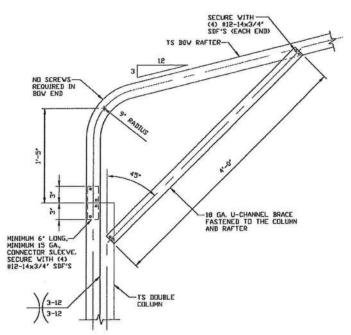
This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

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 OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

	TUBULAR BUILDING SYSTEMS			
DRAWN BY: JG	31 SE INDUSTRI	AL CIR	CLE	
CHECKED BY: PDH		AKE CITY, FLOI '-0" ENCLOSED		
PROJECT MGR: WSM	DATE: 1-8-21	ND: 16022S/ 00S/20352S		
CLIENT: TBS	SHT. 7A	DAC' NO 2K-3		REV. 5

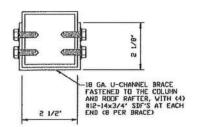


RAFTER COLUMN/BASE RAIL
CONNECTION DETAIL
SCALE: NTS

CONNECTOR SLEEVE TO BASE RAIL

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.



BRACE SECTION
SCALE: NTS

1



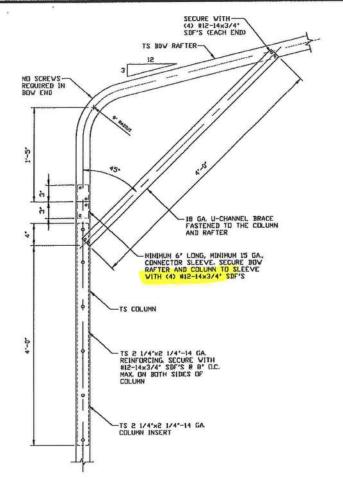
TS DOUBLE COLUMN

-MINIMUM 6' LDNG, CONNECTOR SLEEVE MINIMUM 15 GA., SECURE VITH (4) H12-14x3/4' SDF'S

TS CONTINUOUS BASE RAIL

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.	ED BY: PDH	LAK	SE INDUSTRIAL CI LE CITY, FLORIDA " ENCLOSED BUIL!	32025
	CT MGR: WSM D	2522 72		B ND: 160225/ 3005/203525 REV: 5



MINIMUM 6 LUNG,
MINIMUM 6 LUNG,
MINIMUM 15 GA,
CONNECTOR SLEEVE,
SECURE VITH
(4) HI2-14x3/4' SDF'S (EACH END)

TS COLUMN

BOX EAVE RAFTER COLUMN

BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS \(\) 10'-0'

8/12

-18 GA. U-CHANNEL BRACE FASTENED TO THE COLUMN AND RODE RAFTER, WITH (4) HI2-143/4' SDF'S AT EACH END (8 PER BRACE)

BRACE SECTION

5 1/5.

SCALE: NTS

1B

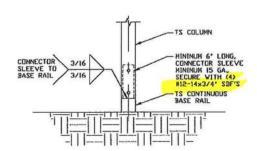
BOX EAVE RAFTER COLUMN CONNECTION DETAIL

FOR HEIGHTS 10'-0" < TO ≤ 13'-0"

SCALE: NTS

1A

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



2 RAFTER COLUMN/BASE RAIL
CONNECTION DETAIL
SCALE NTS



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

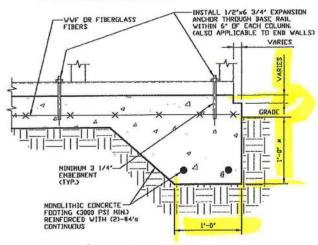
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

MOORE AND ASSOCIATES	
ENGINEERING AND CONSULTING, IT	VC.

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	63	BULAK BUILDI 31 SE INDUSTRI	AL CIR	CLE
CHECKED BY: PDH	LAKE CITY, FLORIDA 32025 30'-0"x20'-0" ENCLOSED BUILDING			
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



2' VASHERS RILL 5/8' DIAMETER HOLE ROUGH THE BASE RAIL AND CURE TO ANCHOR EYE WITH 2' DIAMETER THROUGH BOLT TOP DF ASPHALT-PAVEHENT DR GROUND SURFACE TS CONTINUOUS BASE RAIL HELIX EYE ANCHOR-

3A

CONCRETE MONOLITHIC SLAB BASE RAIL ANCHURAGE

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

GROUND BASE HELIX ANCHORAGE

SCALE: NTS (CAN BE USED FOR ASPHALT) * 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.

CUNCRETE

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 WELDED WIRE FABRIC MEETING ASTM A105 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.

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.
- 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. FUR 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.

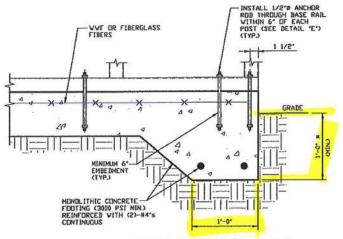
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

THIS DOCUMENT IS THE PROPERTY OF MOORE 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 31 SE INDUSTRI			
CHECKED BY: PDH	LAKE CITY, FLORIDA 32025 30'-0"x20'-0" ENCLOSED BUILDING EXP. B				
PROJECT MGR: WSM	DATE: 1-B-21	SCALE: NTS		ND: 160225/ 005/203525	
CLIENT: TBS	SHT. 9	DWG. NO: SK-3		REV. 5	

OPTIONAL FOUNDATION ANCHORAGE FOR LOW AND HIGH WIND SPEED



30

CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE

SCALE: NTS MINIMUM ANCHOR EDGE DISTANCE IS 1 1/2'

** COORDINATE 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 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 A615 GRADE 60. THE SLAB REINFORCEMENT SHALL BE WELDED WIRE FABRIC MEETING ASTM A185 OR FIBERGLASS FIBER REINFORCEMENT.

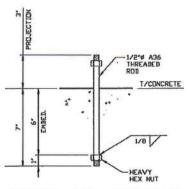
REINFORCEMENT MAY BE BENT IN THE SHOP OR THE FIELD PROVIDED

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.

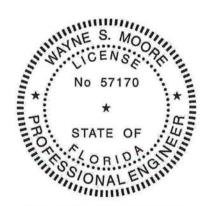
3. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT

BE FIELD BENT.



ANCHOR ROD THROUGH BASE RAIL DETAIL 3D

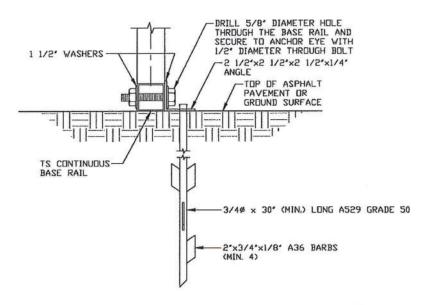
SCALE: NTS



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

ENCINEEDING AND CONGULTING INC	DRAWN BYI JG	63	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE		
	CHECKED BY: PDH		AKE CITY, FLOR '-0" ENCLOSED B	UILDING EXP. B	
THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGINEERING AND	PROJECT MGR: WSM	DATE: 1-8-21	SCALE) NTS	JDB ND 16022S/ 17300S/20352S	
CONSULTING THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERVISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.	CLIENT: TBS	SHT. 9A	DWG. NO: SK-3	REV. 5	

BASE RAIL ANCHORAGE OPTION



ASPHALT BASE ANCHORAGE (HP 9 BARBED DRIVE ANCHOR)

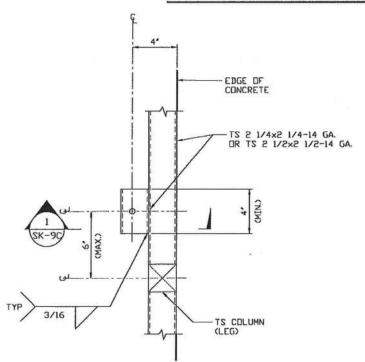
SCALE: NTS
(CAN BE USED FOR ASPHALT)
* COORDINATE WITH LOCAL CODES/ORD.
REGARDING MINIMUM FROST DEPTH REQ.

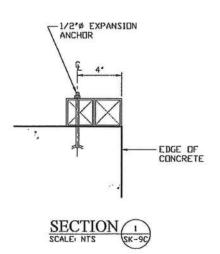


This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

CONSULTING THE 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. 9B	DWG. NO: SK-3	REV. 5
THIS DOCUMENT IS THE PROPERTY OF HOORE AND ASSOCIATES ENGINEERING AND	PROJECT MGR: WSM	DATE: 1-8-21	SCALE: NTS	JDB ND 16022S/ 17300S/20352S
ENGINEERING AND CONSULTING, INC.	CHECKED BY: PDH		AKE CITY, FLORI -0" ENCLOSED B	
MOORE AND ASSOCIATES	DRAWN BYI JG	63	I SE INDUSTRIA	LCIRCLE

BASE RAIL ANCHORAGE OPTIONS





TYPICAL ANCHOR 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.

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	3.

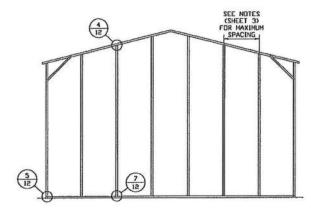
THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERVISE USE OF THIS DOCUMENT IS STRICTLY PROMIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

	TUBULAR BUILDING SYSTEMS
DRAWN BY: JG	631 SE INDUSTRIAL CIRCLE
anti-fiction control and anti-fiction an	LAKE CITY, FLORIDA 32025
CHECKED BY: PDH	30'-0"x20'-0" ENCLOSED BUILDING EXP. B

PROJECT MGR: VSM DATE: 1-8-21 SCALE: NTS 173005/203525

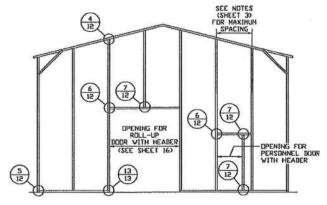
CLIENT: TBS SHT. 9C DVG. NO: SK-3 REV.: 5

BOX EAVE RAFTER END WALL AND SIDE WALL OPENINGS



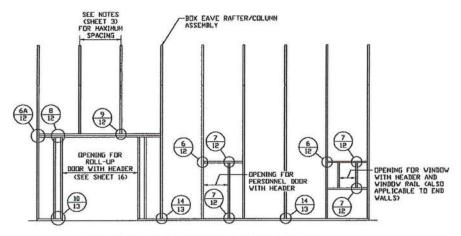
TYPICAL BOX EAVE RAFTER END WALL FRAMING SECTION

SCALE: NTS



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.

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.	

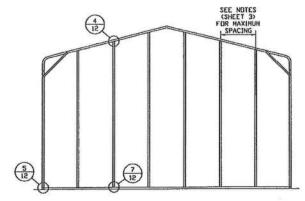
THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERVISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

DRAWN BY: JG	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE
CHECKED BY: PDH	LAKE CITY, FLORIDA 32025 30'-0"x20'-0" ENCLOSED BUILDING EXP. B
	JUB ND: 16022S/

PROJECT MGR: VSM DATE: 1-8-21 SCALE: NTS 17300S/20332S

CLIENT: TBS SHT. 10 DVG. ND: SK-3 REV.: 5

BOW RAFTER END WALL AND SIDE WALL OPENINGS



TYPICAL BOX EAVE RAFTER END WALL FRAMING SECTION

SEE NOTES
(SHEET 3)
FOR MAXIMUM
SPACING

OPENING FOR
ROLL-UP
DOOR VITH HEADER
(SEE SHEET 16)

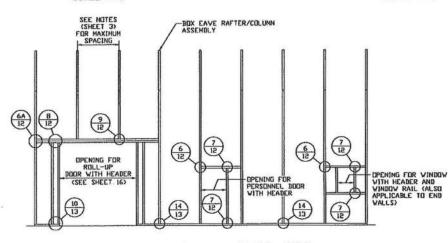
13
13

SEE NOTES
(SHEET 3)
FOR MAXIMUM
SPACING

OPENING FOR
PERSONNEL DOOR
VITH HEADER
VITH HEADER

TYPICAL BOX EAVE RAFTER END WALL OPENINGS FRAMING SECTION

SCALE NTS



TYPICAL BOX EAVE RAFTER SIDE WALL OPENINGS FRAMING SECTION

SCALE: NTS

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.

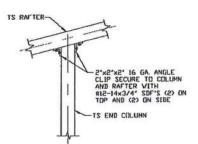
	MOORE AND ASSOCIATES	
ENGIN	EERING AND CONSULTING, INC.	

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

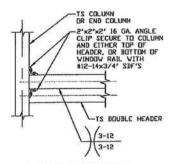
CHECKED BY: PDH	LAKE CITY, FLORIDA 32025 30'-0"x20'-0" ENCLOSED BUILDING EXP. B				
PROJECT MGR: WSM	DATE) 1-8-21	SCALE: NTS	JOB NO 16022S/ 17300S/20352S		

CLIENT: TBS SHT. 11 DWG, ND: SK-3 REV.: 5

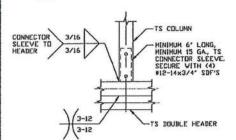
CONNECTION DETAILS



END COLUMN/RAFTER CONNECTION DETAIL 4 SCALE: NTS

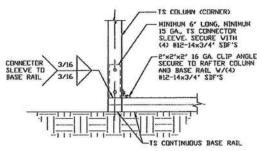


DOUBLE HEADER TO COLUMN CONNECTION DETAIL 6A SCALE: NTS

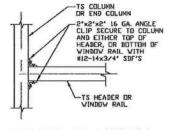


9

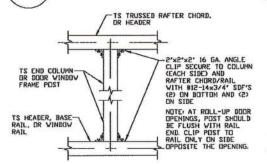
COLUMN/DOUBLE HEADER CONNECTION DETAIL



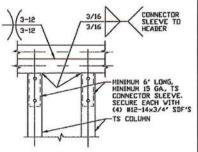
END COLUMN/BASE RAIL CONNECTION DETAIL 5 STALEL NTS



HEADER OR WINDOW RAIL TO COLUMN CONNECTION DETAIL SCALE: NTS



COLUMN TO HEADER, BASE RAIL, OR WINDOW RAIL CONNECTION DETAIL 7 SCALE: NTS



DOUBLE HEADER/COLUMN CONNECTION DETAIL 8 SCALE: NTS

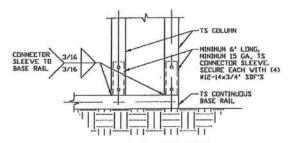


This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

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 HOUSE AND ASSOCIATES ENGINEERING AND CONSULTING, THE UNAUTHORIZED REPRODUCTION, COPYING, OR OTHERWISE USE OF THIS DOCUMENT IS STRICTLY PROMIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.	DRAWN BY: JG	— 63 L	BULAR BUILDIN 11 SE INDUSTRIA AKE CITY, FLOR	AL CIRCLE
	PROJECT MGR: WSM	DATE: 1-8-21 SHT. 12	SCALE: NTS DWG. NO: SK-3	JOB NO: 16022S/ 17300S/20352S REVJ 5

CONNECTION DETAILS



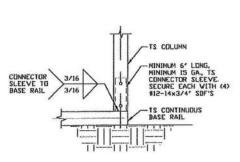
3/16 TS CHORD

TS ROOF RAFTER

10 COLUMN/BASE RAIL
CONNECTION DETAIL
SCALE: NTS

RAFTER TO CHORD CONNECTION DETAIL
SCALE: NTS

12 COLLAR TIE CONNECTION DETAIL
SCALE: NTS



13 CONNECTION DETAIL
SCALE: NTS

TS TRUSSED RAFTER
CHORD, OR HEADER

TS END COLUMN
OR DOOR VINDOV
FRAME POST

TS HEADER, BASE
RAIL, OR VINDOV
RAIL, OR VINDOV
RAIL

COLUMN TO HEADER, BASE RAIL CONNECTION DETAIL SCALE: NTS

14

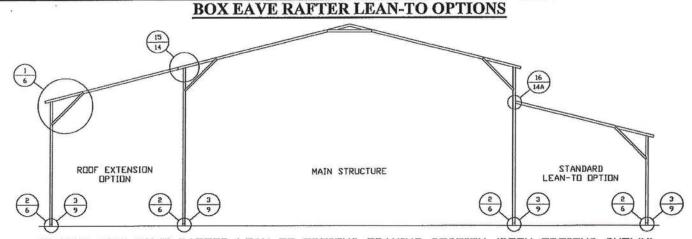
This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

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

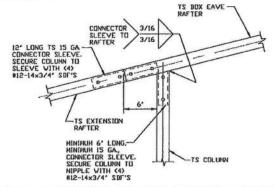
MOORE AND ASSOCIATES	
ENGINEERING AND CONSULTING, I	NC.

THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSICIATES 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.

	TU	BULAR BUILDIN	NG SYS	STEMS
DRAWN BY: JG	63	31 SE INDUSTRI	AL CIF	RCLE
CHECKED BY: PDH		AKE CITY, FLOI '-0" ENCLOSED		
PROJECT MGR: WSM	DATE: 1-8-21	SCALE: NTS		ND: 160225/
CLIENT: TBS	SHT. 13	DWG. NO SK-3		REV. 5



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



SIDE EXTENSION RAFTER/COLUMN DETAIL
FOR RAFTER SPANS ≤ 15'-0'

CONNECTOR 3/16

SLEEVE TO 3/16

RAFTER

TS BUX EAVE
RAFTER

CONNECTOR SLEEVE
SLEEVE VITH (4)
812-14x3/4' SDF'S

TS DUBLE
EXTENSION RAFTER
CLIP SECURE TO
CDLUNA AND RAFTER
CHORD/RAIL WITH (4)
812-14x3/4' SDF'S

TS COLUMN

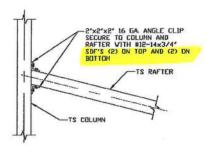
SIDE EXTENSION RAFTER/COLUMN DETAIL FOR RAFTER SPANS 15'-0" < TO \(24'-0" \)



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

MOORE AND ASSOCIATES	DRAWN BYI JG	63	BULAR BUILDIN I SE INDUSTRIA	AL CIRCLE
ENGINEERING AND CONSULTING, INC.	CHECKED BY: PDH		AKE CITY, FLOF -0" ENCLOSED	BUILDING EXP. B
THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGINEERING AND CONSULTING, THE UNAUTHORIZED REPRODUCTION, COPYING, OR DTHERWISE USE OF	PROJECT MGR: WSM	DATE: 1-8-21	SCALE: NTS	JOB NO 16022S/ 17300S/20352S
THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.	CLIENT, TRS	SHT. 14	DVG. NO: SK-3	REV. 5

BOX EAVE RAFTER LEAN-TO OPTIONS



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

16

TS COLUMN

2: x2* x2* x2* 14 GA. ANGLE CLIP
SECURE TO COLUMN AND
RAFTER VITH 1/4*x3/4* SDF
G2) ON 10P AND (2) DN
BOTTOM

TS DOUBLE RAFTER

15 COLUMN

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

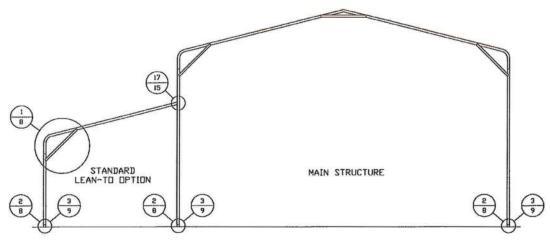
16A) SCALE: NTS



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

MOORE AND ASSOCIATES	DRAWN BY: JG	631	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE		
ENGINEERING AND CONSULTING, INC.	CHECKED BY: PDH		KE CITY, FLORI 0" ENCLOSED B	UILDING 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	JUB ND: 160225/ 173005/203525	
THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.	CLIENT: TBS	SHT. 14A	DWG. NO SK-3	REV. 5	

BOW RAFTER LEAN-TO OPTIONS



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

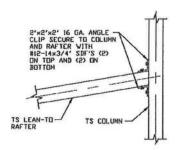
SCALE: NTS

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).

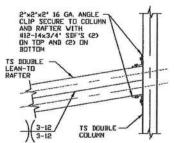
MAIN BUILDING COLUMNS WITH LEAN-TO OR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE SINGLE COLUMNS FOR EAVE HEIGHTS < 10'-0'.

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



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

7A) SCALE: NTS

No 57170

*

PROSTATE OF

ORIOR

ONALEMENT

SS/ONALEMENT

AND

ONALEMENT

ONA

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

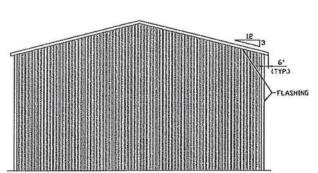
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

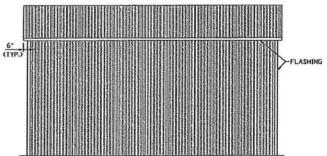
THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR DTHERVISE USE OF THIS DOCUMENT IS STRICTLY PROHIBITED AND ANY INFRINGEMENT THEREUPON MAY BE SUBJECT TO LEGAL ACTION.

DRAWN BY: JG	63	BULAR BUILDIN 31 SE INDUSTRI	AL CIR	CLE
CHECKED BY: PDH		AKE CITY, FLOI '-0" ENCLOSED		
PROJECT MGR: VSM	DATE: 1-8-21	SCALE: NTS		ND: 16022S/ 00S/20352S
CLIENT: TBS	SHT. 15	DVG. NO SK-3		REV. 5

BOX EAVE RAFTER VERTICAL ROOF/SIDING OPTION

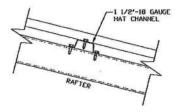


TYPICAL END ELEVATION VERTICAL ROOF/SIDING OPTION



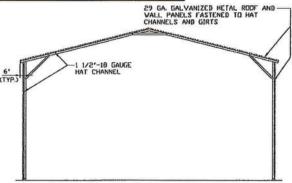
TYPICAL SIDE ELEVATION VERTICAL ROOF/SIDING OPTION

SCALE: NTS



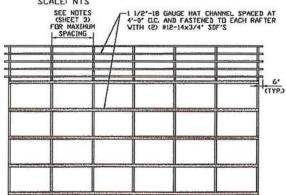
ROOF PANEL ATTACHMENT

(ALTERNATE FOR VERTICAL ROOF PANELS) SCALE: NTS



TYPICAL SECTION VERTICAL ROOF/SIDING OPTION

SCALE: NTS



TYPICAL FRAMING SECTION VERTICAL ROOF/SIDING OPTION

SCALE! NTS

NOTE: TS WALL GIRTS CAN BE USED AS AN OPTION IN PLACE OF HAT CHANNELS. TS GIRTS MUST BE SPACD AT 4'-0'



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

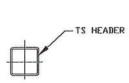
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

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

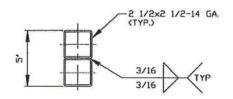
CLIENT: TBS	SHT. 16	DWG. NO: SK-3		REV.: 5	
PROJECT MGR: WSM	DATE: 1-8-21	SCALE: NTS		ND: 160225/ 005/203525	_
CHECKED BY: PDH		AKE CITY, FLOI '-0" ENCLOSED			
DRAWN BYI JG	63	BULAK BUILDIN BI SE INDUSTRIA	AL CIF	RCLE	

SIDE WALL HEADER OPTIONS



HEADER DETAIL FOR DOOR OPENINGS ≤ 10'-0"

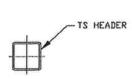
SCALE: NTS



HEADER DETAIL FOR DOOR OPENINGS 10'-0" < LENGTH <u><</u> 15'-0"

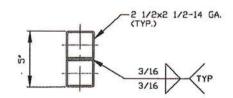
SCALE: NTS

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
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 INDUSTRIA	AL CIR	CLE
CHECKED BY: PDH		AKE CITY, FLOI '-0" ENCLOSED		
PROJECT MGR: WSM	DATE: 1-8-21	SCALE: NTS		ND 16022S/ 00S/20352S
CLIENT: TBS	SHT. 17	DWG. NO: SK-3		REVJ 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 (MIN. I MAX. GRADE TS BASE RAIL 1,-0, 20VE GRADE GRADE

TYPICAL FLOOD VENT DETAIL

CLIENT: TBS

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.
- APPLY 1.3 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.
- 6. 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.

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

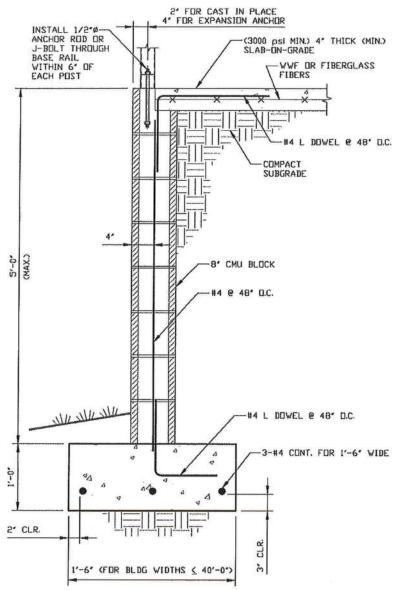
TUBULAR BUILDING SYSTEMS

MOORE AND ASSOCIATES	DRAWN BY: JG	
ENGINEERING AND CONSULTING, INC.	CHECKED BY: PDH	30'-
THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGINEERING AND	PROJECT MGR: WSN	DATE: 1-8

DATE: 1-8-21 SHT. 18	SCALE: NTS	JUB ND 1607 17300S/2035	
	DVG, NO SK-3		EG

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.

STAND -ALONE STEM WALL DETAIL



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



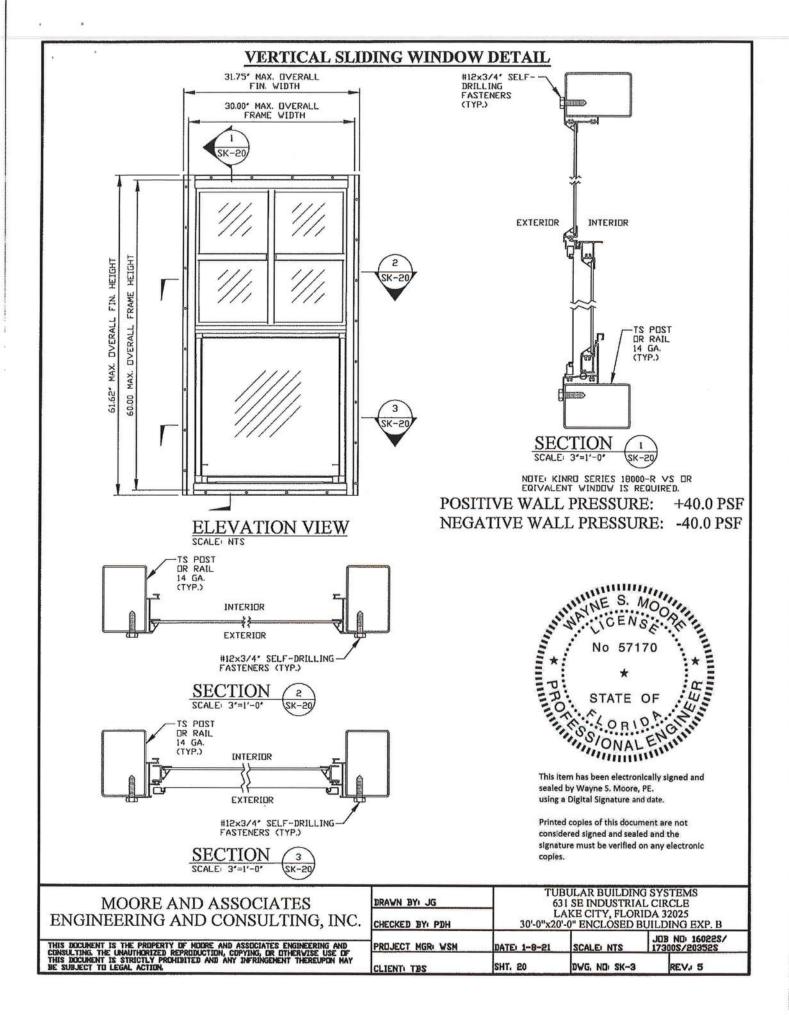
This item has been electronically signed and sealed by Wayne S. Moore, PE. using a Digital Signature and date.

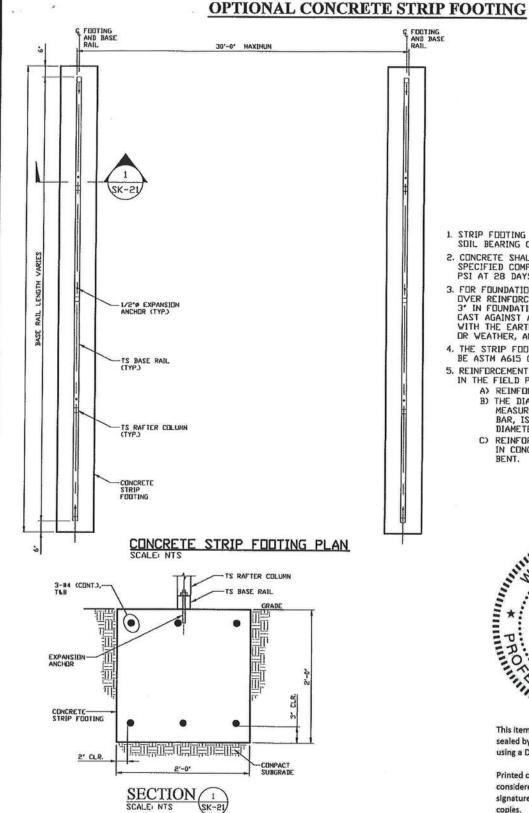
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING, INC.

THIS DOCUMENT IS THE PROPERTY OF MODRE AND ASSOCIATES ENGINEERING AND CONSULTING. THE UNAUTHORIZED REPRODUCTION, COPYING, OR DTHERVISE 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	30'-0"x20'-0" ENCLOSED BUILDING EXP. B					
PROJECT MGR: VSM	DATE: 1-8-21	SCALE: NTS	JOB NO 16022S/ 17300S/20352S			
CLIENT: TBS	SHT. 19	DAC' NO 2K-3		REV. 5		





1. STRIP FOOTING DESIGN BASED ON MINIMUM SDIL BEARING CAPACITY DF 1,500 PSF.

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

3. FOR FOUNDATIONS, MINIMUM CONCRETE COVER OVER REINFORCING BARS SHALL BE PER ACI-318: 3' 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' ELSEWHERE.

4. THE STRIP FOOTING REINFORCING STEEL SHALL BE ASTM A615 GRADE 60.

5. REINFORCEMENT MAY BE BENT IN THE SHOP OR IN THE FIELD PROVIDED:

A) REINFORCEMENT IS BENT COLD.

B) THE DIAMETER OF THE BEND,
MEASURED ON THE INSIDE OF THE
BAR, IS NOT LESS THAN SIX-BAR
DIAMETERS.

REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD



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.

* COORDINATE WITH LOCAL CODES/ORD.

THIS DOCUMENT IS THE PROPERTY OF MOORE 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	SHT. 21	DVG. NO: SK-3		REV. 5		
PROJECT MGR: WSM	DATE: 1-8-21	SCALE: NTS		005/20352S		
CHECKED BY: PDH	LAKE CITY, FLORIDA 32025 30'-0"x20'-0" ENCLOSED BUILDING EXP. B					
DRAWN BYI JG	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE					

