

STRUCTURAL DESIGN

ENCLOSED BUILDING EXPOSURE B

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

29 July 2021 Revision 6 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

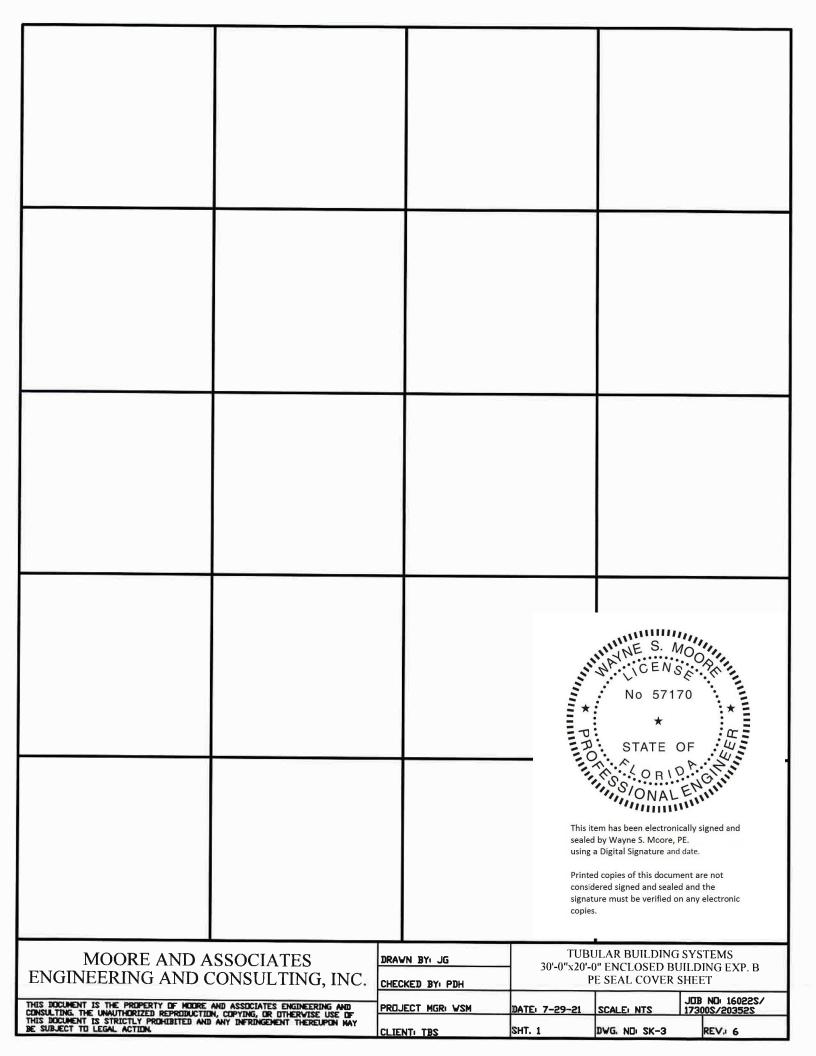
> 401 S. Main Street, Suite 200 Mount Airy, NC 27030







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SHEET 20

SHEET 21

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VERTICAL SLIDING WINDOW DETAIL

STRIP FOOTING OPTION

CLIENT: TBS	SHT. 2	DVG. NO SK-3		REV. 6	
PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS		ND: 160225/ 005/203525	
CHECKED BY: PDH		AKE CITY, FLOI -0" ENCLOSED	RIDA 32025 BUILDING EXP. B		
DRAWN BY: JG		TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE			

INSTALLATION NOTES AND SPECIFICATIONS

- 1 DESIGN IS FOR A MAXIMUM 30'-0" WIDE \times 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 = 15 PSF
 B) LIVE LOAD = 12 PSF
 C) GROUND SNOW LOAD = 10 PSF
- 4 LOW ULTIMATE WIND SPEED 105 TO 140 MPH (NOMINAL WIND SPEED 81 TO 108 MPH): MAXIMUM RAFTER/POST AND END POST SPACING = 50 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" x 2 1/2" x 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)
- 11 FASTENERS CONSIST OF #12-14×3/4" 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 S' OF EACH COLUMN
- 13 STANDARD GROUND ANCHORS (SOIL NAILS) CONSIST OF #4 REBAR W/WELDED NUT x 33" LONG IN SUITABLE SOIL CONDITIONS MAY BE USED FOR LOW (< 138 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

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	LAI	KE CITY, FLORIE)A 3	2025	
CHECKED BY: PDH	30'-0"x20'-0" ENCLOSED BUILDING EXP. B				
PROJECT MGR: VSM	DATE: 7-29-21	SCALE: NTS		ND: 16022S/	
CLIENT: TBS	SHT. 3	DVG. NO: SK-3		REV.1 6	

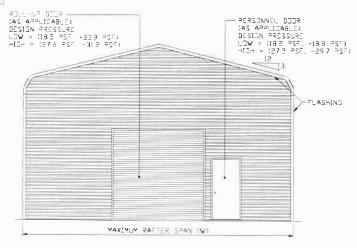
BOX EAVE FRAME RAFTER ENCLOSED BUILDING ROLL-UP DOOR (AS APPLICABLE) DESIGN PRESSURE LOW = (185 PSF, -209 PSF) HIGH = (276 PSF -312 PSF) HIGH = (272 PSF, -297 PSF) 12 FLASHING

TYPICAL END ELEVATION

SCALEL MIS

BOW FRAME RAFTER ENCLOSED BUILDING

MAXIMUM RAFTER SPAN (W)

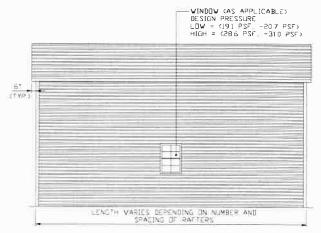


TYPICAL END ELEVATION

VINDUM (AS APPLICABLE)
BESIGN PRESSURE
LUM 191 PSF -207 PSF)
HIGH = (28 6 PSF -310 PSF)

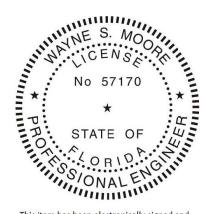
LENGTH VARIES DEPENDING ON NUMBER AND
SPACING OF RAFTERS

TYPICAL SIDE ELEVATION



TYPICAL SIDE ELEVATION

SCALE NT

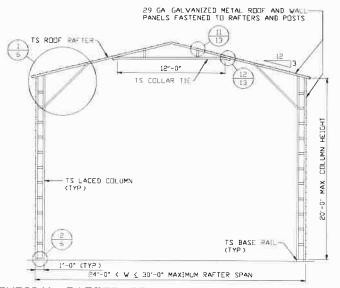


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CHECKED BY: PDH		30'-0"x20'-0" ENCLOSED BUILDING EXP. B			
PROJECT MGR: VSM	DATE: 7-29-21	JDB ND: 16022S/ 17-29-21 SCALE: NTS 17300S/20352S			
CLIENT: TBS	SHT. 4	DWG. ND: SK-3	REV. 6		



TYPICAL RAFTER/COLUMN END FRAME SECTION

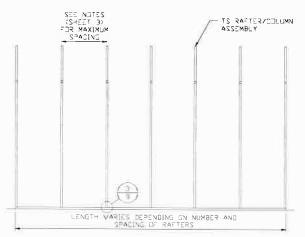
29 GA GALVANIZED METAL RODE AND WALL
PANELS FASTENED TO RAFTERS AND POSTS

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

15. BASE RAIL
(TYP)

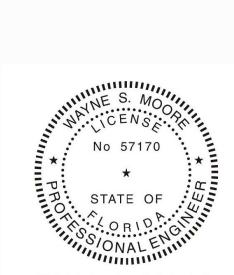
V (24'-0' MAXIMUM RAFTER SPAN

TYPICAL RAFTER/COLUMN END FRAME SECTION SCALE NTS



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION

SCALE NTS

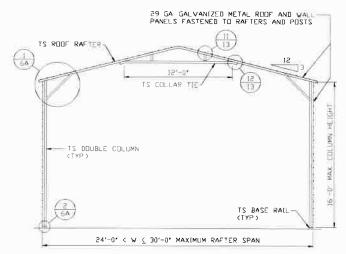


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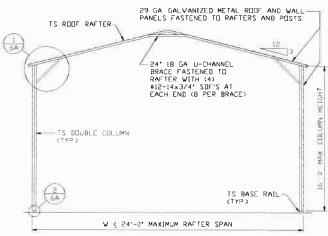
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CHECKED BY: PDH	30'-0"x20'-0" ENCLOSED BUILDING EXP. B				
PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS		ND: 160225/ 00S/20352S	
CLIENT: TBS	SHT. 5	DVG. NO SK-3		REV.i 6	



TYPICAL RAFTER/COLUMN END FRAME SECTION

SCALE NTS



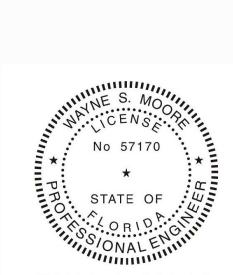
TYPICAL RAFTER/COLUMN END FRAME SECTION

LENGTH VARIES DEPENDING ON NUMBER AND
SPACING OF RAFTERS

LENGTH VARIES DEPENDING ON NUMBER AND
SPACING OF RAFTERS

TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION

SCALE NTS

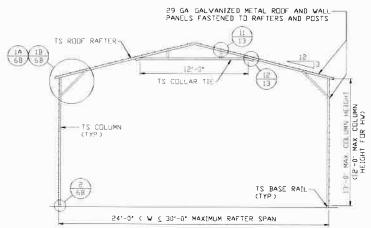


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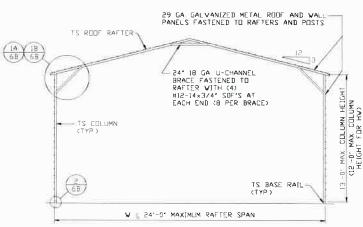
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	LA	LAKE CITY, FLORIDA 32025			
CHECKED BY: PDH	30' - 0"x20'-0	30'-0"x20'-0" ENCLOSED BUILDING EXP. B			
PROJECT MGR: WSM	DATE: 7-29-21	DATE: 7-29-21 SCALE: NTS 17300S/20352			
CLIENT: TBS	SHT. 5A	DWG. ND: SK-3	REV. 6		

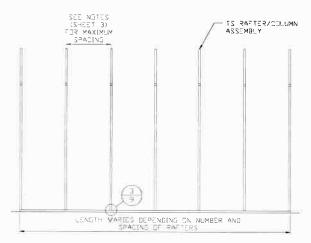


TYPICAL RAFTER/COLUMN END FRAME SECTION

SCALE: NTS

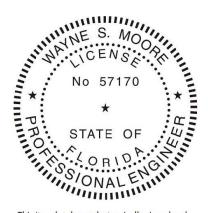


TYPICAL RAFTER/COLUMN END FRAME SECTION



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION

SCALE NTS

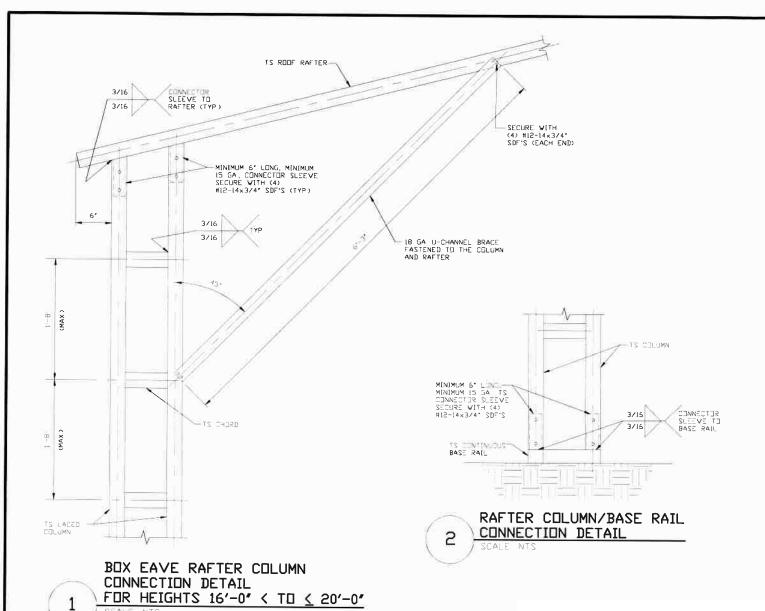


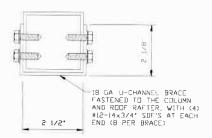
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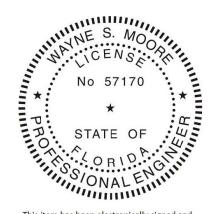
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35 AL AL 314 45	TUBULAR BUILDING SYSTEMS				
DRAWN BY: JG	1 631	631 SE INDUSTRIAL CIRCLE			
	LAKE CITY, FLORIDA 32025				
CHECKED BY: PDH	30'-0"x20'-0" ENCLOSED BUILDING EXP. B				
PROJECT MGR: VSM	DATE: 7-29-21	SCALE: NTS		ND: 16022S/ 00S/20352S	
CLIENT: TBS	SHT. 5B	DWG. NO SK-3		REV, 6	





BRACE SECTION
SCALE: NTS



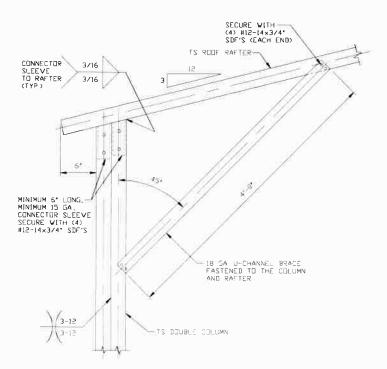
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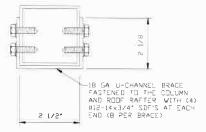
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	LA	LAKE CITY, FLORIDA 32025			
CHECKED BY: PDH	30'-0"x20'	30'-0"x20'-0" ENCLOSED BUILDING EXP. B			
PROJECT MGR: VSM	DATE: 7-29-21	SCALE: NTS		3 ND: 16022S/ 00S/20352S	
CLIENT: TBS	SHT. 6	DWG. NO: SK-3		REV.1 6	



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

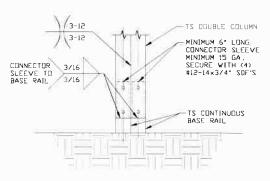
NOTE: COLUMN HEISHTS 12'-0' < TO < 16'-0" FOR HIGH WIND



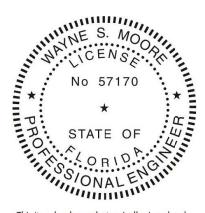
BRACE SECTION

SCALE NTS

1



2 RAFTER COLUMN/BASE RAIL
CONNECTION DETAIL
SCALE NTS



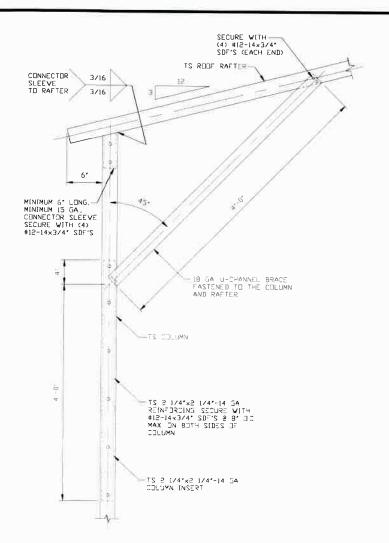
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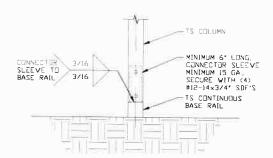
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PROJECT MGR: VSM	DATE: 7-29-21	SCALE: NTS		ND: 16022S/ 00S/20352S		
CHECKED BY: PDH		LAKE CITY, FLORIDA 32025 30'-0"x20'-0" ENCLOSED BUILDING EXP. B				
DRAWN BYI JG		TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE				



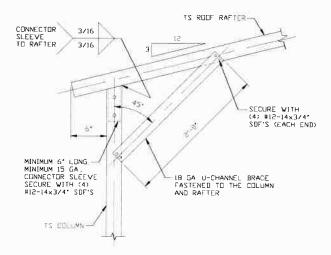
BOX EAVE RAFTER COLUMN
CONNECTION DETAIL
FOR HEIGHTS 10'-0' < TO < 13'-0"

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

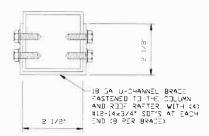


1A

2 RAFTER COLUMN/BASE RAIL CONNECTION DETAIL SCALE: NTS

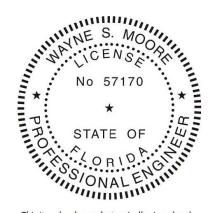


BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS & 10'-0'



BRACE SECTION

SCALE NTS



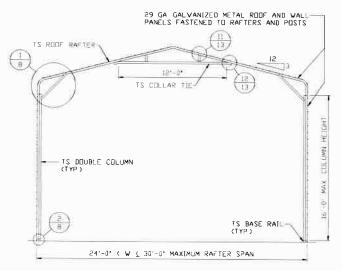
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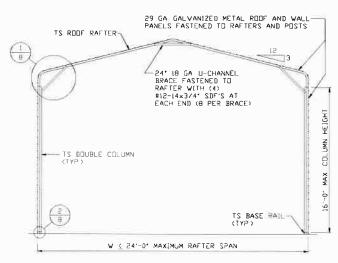
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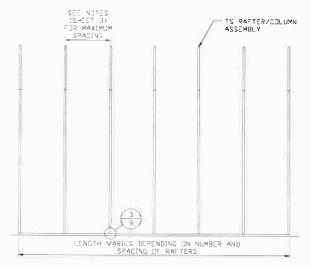
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PROJECT MGR: VSM	DATE: 7-29-21	SCALE: NTS		ND: 16022S/ 00S/20352S	
CHECKED BY PDH	LAKE CITY, FLORIDA 32025 30'-0"x20'-0" ENCLOSED BUILDING EXP. B				
DRAWN BY: JG	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE				



TYPICAL RAFTER/COLUMN END FRAME SECTION SCALE NTS



TYPICAL RAFTER/COLUMN END FRAME SECTION



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION SCALE NTS

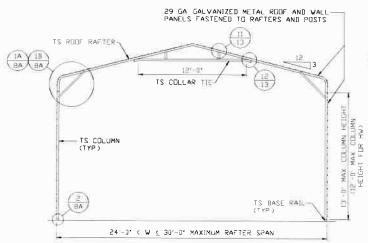


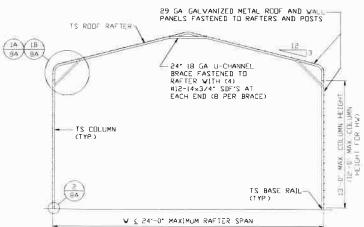
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		LAKE CITY, FLORIDA 32025		
CHECKED BY: PDH	30'-0"x20'-0	" ENCLOSED BU	JILDIN	VG EXP. B
PROJECT MGR: VSM	DATE: 7-29-21	SCALE: NTS		ND: 160225/ S/203525
CLIENT: TBS	SHT. 7	DWG. NO SK-3	RI	EV. 6





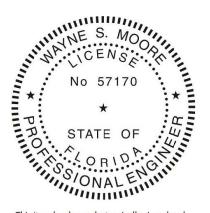
TYPICAL RAFTER/COLUMN END FRAME SECTION SCALE NTS

TYPICAL RAFTER/COLUMN END FRAME SECTION

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TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION

SCALE NTS

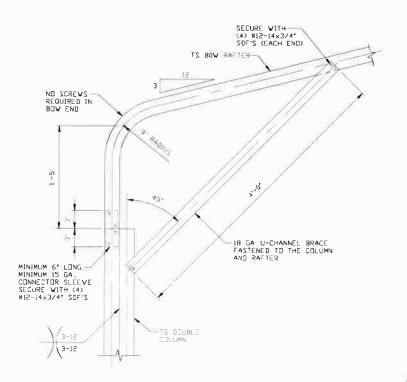


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	DRAWN BY: JG		JLAR BUILDING SE INDUSTRIAL	_	
			KE CITY, FLORID		
ń	CHECKED BY: PDH	30'-0"x20'-0)" ENCLOSED BU	HLD.	ING EXP. B
	PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS		ND: 16022\$/ 00\$/20352\$
	CLIENT: TBS	SHT. 7A	DWG. NO SK-3		REV. 6



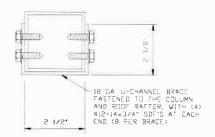
RAFTER COLUMN/BASE RAIL
CONNECTION DETAIL

CONNECTOR SLEEVE TO BASE RAIL 3/16 TS DOUBLE COLUMN

MINIMUM 6" LONG, CONNECTOR SLEEVE MINIMUM 15 GA, SECURE WITH (4) B12-14×3/4" SDF'S

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



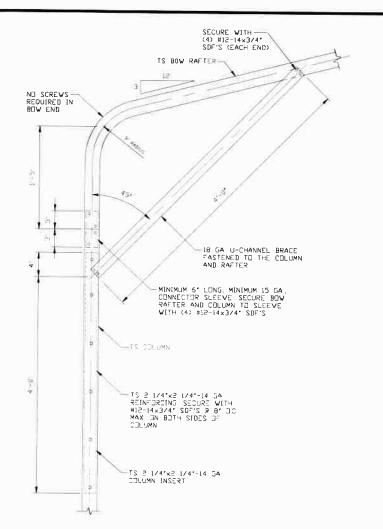
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	TUBULAR BUILDING SYSTEMS			
DRAWN BY: JG	631 SE INDUSTRIAL CIRCLE			
	LAKE CITY, FLORIDA 32025			
CHECKED BY: PDH	30'-0"x20'-0	" ENCLOSED BU	ILD	ING EXP. B
PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS		NO: 160225/ 202/203525
CLIENT: TBS	SHT. 8	DVG. ND: SK-3		REV.i 6



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

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

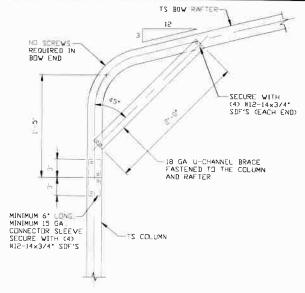
SCALE NTS

CONNECTER 3/16

CONNECTER SLEEVE MINIMUM 6' LONG CONNECTER SLEEVE MINIMUM 15 GA.
SECURE WITH (4)
HI2-14-3/4' SDF'S
TS CONTINUOUS
BASE RAIL

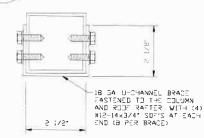
1A

RAFTER COLUMN/BASE RAIL
CONNECTION DETAIL
SCALE: NTS



BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS

18



BRACE SECTION

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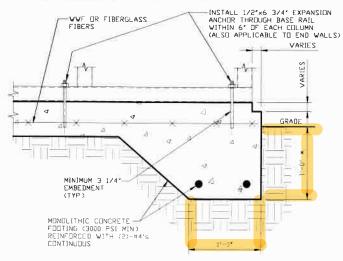
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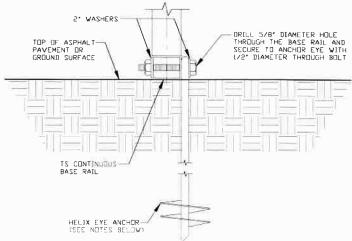
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CLIENT: TBS	SHT. BA	DWG. NO SK-3		REV,ı 6	
PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS		ND: 160225/ 1005/203525	
CHECKED BY: PDH		KE CITY, FLOI -0" ENCLOSED			
DRAWN BY: JG	63	ULAR BUILDIN I SE INDUSTRI	AL CIF	RCLE	

BASE RAIL ANCHORAGE OPTIONS FOR LOW AND HIGH WIND SPEED





3A

CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE

MINIMUM ANCHOR EDGE DISTANCE IS 4" * COORDINATE WITH LOCAL CODES/ORD REGARDING MINIMUM FROST DEPTH REQ

NOTE: CONCRETE MONOLITHIC SLAB DESIGN ON MINIMUM SOIL BEARING CAPACITY OF 1500 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:

GENERAL NOTES

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:

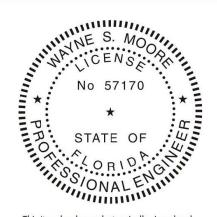
- REINFORCEMENT IS BENT COLD
 THE DIAMETER OF THE BEND, MEASURED ON THE INSIDE OF THE
 BAR, IS NOT LESS THAN SIX-BAR DIAMETERS
- REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT

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
- FOR MEDIUM DENSE COARSE SANDS, SANDY GRAVELS VERY STIFF SILTS, AND CLAYS USE MINIMUM (2) 4" HELICES WITH MINIMUM 30 INCH EMBEDMENT
- 4 FOR LOOSE TO MEDIUM DENSE SANDS, FIRM TO STIFF CLAYS AND SILTS ALLUVIAL FILL USE MINIMUM (2) 6' HELICES WITH MINIMUM 50 INCH EMBEDMENT
- 5 FOR VERY LOSE TO MEDIUM DENSE SANDS, FIRM TO STIFFER CLAYS AND SILTS, ALLUVIAL FILL USE MINIMUM (2) 8° HELICES WITH MINIMUM 60 INCH EMBEDMENT

GROUND BASE HELIX ANCHORAGE ЗΒ

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



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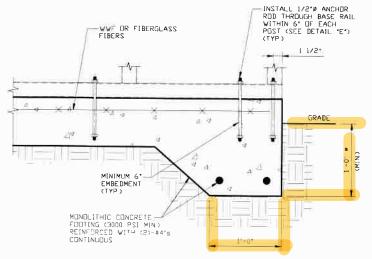
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CHECKED BY: PDH		KE CITY, FLOR 0" ENCLOSED B	IDA 32025 UILDING EXP. B
PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS	JDB NO: 16022S/ 17300S/20352S
CLIENT: TBS	SHT. 9	DWG. ND: SK-3	REV. 6

OPTIONAL FOUNDATION ANCHORAGE FOR LOW AND HIGH WIND SPEED



30

CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE

MINIMUM ANCHOR EDGE DISTANCE IS 1 1/2" COURDINATE WITH LOCAL CODES/ORD REGARDING MINIMUM FROST DEPTH RED

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:

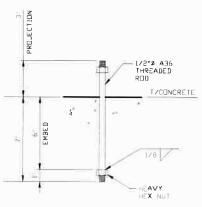
FOR FOUNDATIONS, MINIMUM CONCRETE COVER OVER REINFORCING BARS SHALL BE PER ACI-318
3 INCHES IN FOUNDATIONS WHERE THE CONCRETE IS CAST AGAINST AND PERMANENTLY IN CONTACT WITH THE EARTH OR EXPOSED TO THE EARTH OR WEATHER, AND 1 1/2 INCHES ELSEWHERE

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

- REINFORCEMENT IS BENT COLD
- 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 BENT



ANCHOR ROD THROUGH BASE RAIL DETAIL

3D



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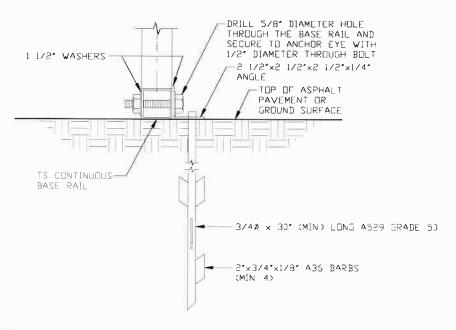
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DKHWIY DIT 30	LAKE CITY, FLORIDA 32025			
CHECKED BY: PDH	30'-0"x20'-0" ENCLOSED BUILDING EXP. B			
PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS		ND: 160225/ 005/203525
CLIENT: TBS	SHT. 9A	DWG. ND: SK-3		REV.1 6

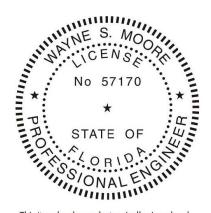
BASE RAIL ANCHORAGE OPTION



ASPHALT BASE ANCHORAGE (HP 9 BARBED DRIVE ANCHOR)

* COAN BE USED FOR ASPHALT)

* COORDINATE WITH LOCAL CODES/ORD
REGARDING MINIMUM FROST DEPTH REQ



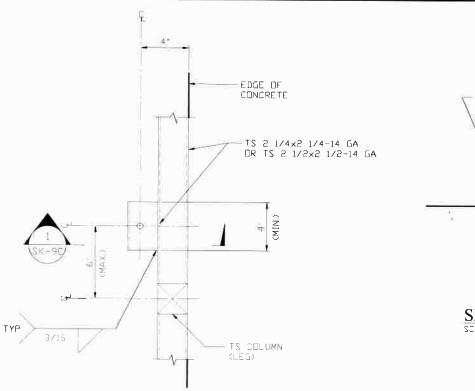
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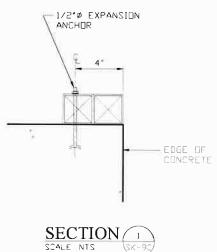
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	L/	NKE CITY, FLOR	IDA 32025
CHECKED BY: PDH	30'-0"x20'	-0" ENCLOSED E	BUILDING EXP. B
PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS	JOB NO: 16022S/ 17300S/20352S
CLIENT: TBS	SHT. 9B	DWG. ND: SK-3	REV. 6

BASE RAIL ANCHORAGE OPTIONS





TYPICAL ANCHOR DETAIL WHEN BASE RAIL IS NEAR EDGE OF CONCRETE

STALE NIS



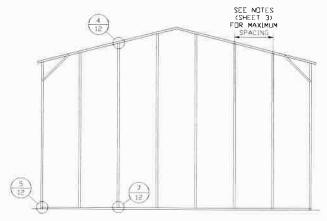
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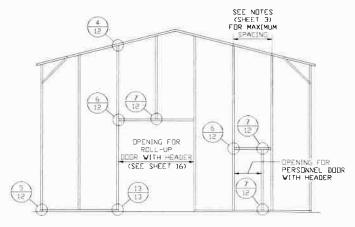
Ī		TUBU	JLAR BUILDING	SYSTEMS
	DRAWN BY: JG	631	SE INDUSTRIAL	. CIRCLE
		LAI	KE CITY, FLORIE	DA 32025
	CHECKED BY: PDH	30'-0"x20'-(" ENCLOSED BL	JILDING EXP. B
	PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS	JDB ND: 160225/ 173005/203525
	CLIENT: TBS	SHT. 9C	DWG. NO SK-3	REV. 6

BOX EAVE RAFTER END WALL AND SIDE WALL OPENINGS



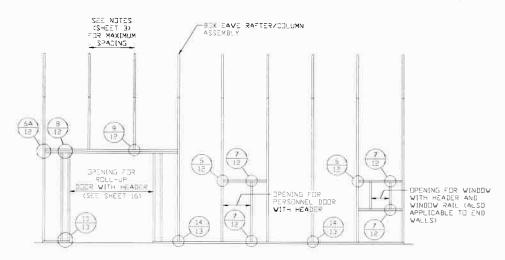
TYPICAL BOX EAVE RAFTER END WALL FRAMING SECTION

SCALE: NTS



TYPICAL BOX EAVE RAFTER END WALL OPENINGS FRAMING SECTION

SCALE NTS



TYPICAL BOX EAVE RAFTER SIDE WALL OPENINGS FRAMING SECTION

SCALE NTS



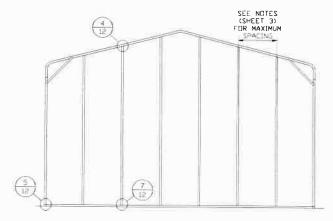
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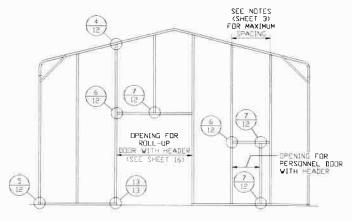
	TUBU	JLAR BUILDING	SYS	TEMS	
DRAWN BY: JG	631	631 SE INDUSTRIAL CIRCLE			
	LAKE CITY, FLORIDA 32025				
CHECKED BY: PDH	30'-0"x20'-0	O" ENCLOSED BL	JILD	ING EXP. B	
				ND: 160225/	
PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS	1730	252805/200	
	SHT. 10	DWG. NO. SK-3		DEV. 6	
CLIENT: TBS	12U 1 TO	IDAG' UTI 2K-2		REV. 6	

BOW RAFTER END WALL AND SIDE WALL OPENINGS



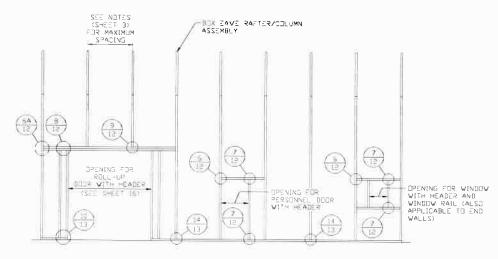
TYPICAL BOX EAVE RAFTER END WALL FRAMING SECTION

SCALE NTS



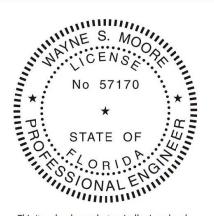
TYPICAL BOX EAVE RAFTER END WALL OPENINGS FRAMING SECTION

SCALE: NTS



TYPICAL BOX EAVE RAFTER SIDE WALL OPENINGS FRAMING SECTION

SCALE NTS



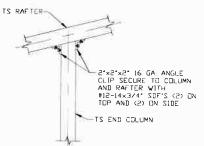
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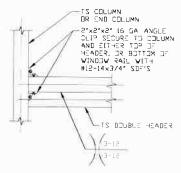
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	LA	KE CITY, FLOR	IDA 32025
CHECKED BY: PDH	30'-0"x20'-	-0" ENCLOSED E	BUILDING EXP. B
PROJECT MGR: VSM	DATE: 7-29-21	SCALE: NTS	JOB NO: 16022S/ 17300S/20352S
CLIENT: TBS	SHT. 11	DWG. ND: SK-3	REV. 6

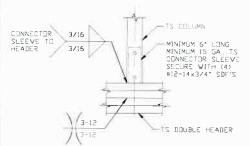
CONNECTION DETAILS



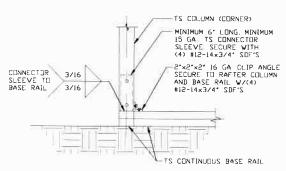
END COLUMN/RAFTER CONNECTION DETAIL 4



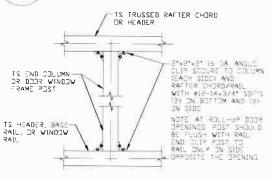
DOUBLE HEADER TO COLUMN CONNECTION DETAIL



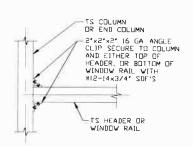
COLUMN/DOUBLE HEADER CONNECTION DETAIL 9



END COLUMN/BASE RAIL CONNECTION DETAIL

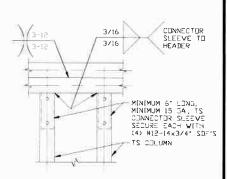


COLUMN TO HEADER, BASE RAIL, OR WINDOW RAIL CONNECTION DETAIL SCALE NTS



HEADER OR WINDOW RAIL TO COLUMN CONNECTION DETAIL

6



DOUBLE HEADER/COLUMN CONNECTION DETAIL 8



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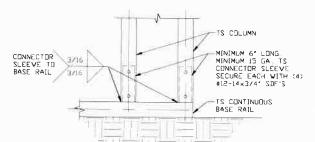
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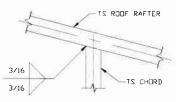
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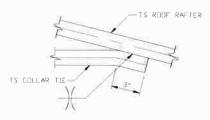
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	CHECKED BY: PDH	LAKE CITY, FLORIDA 32025 30'-0"x20'-0" ENCLOSED BUILDING EXP. B			
_	PROJECT MGR: VSM	DATE: 7-29-21	SCALE: NTS	JOB NO 16022S/ 17300S/20352S	
	CLIENT: TBS	SHT. 12	DWG, ND: SK-3	REV. 6	

CONNECTION DETAILS





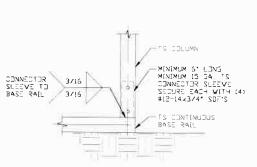


10 COLUMN/BASE RAIL CONNECTION DETAIL

RAFTER TO CHORD CONNECTION DETAIL

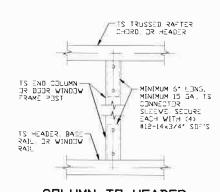
SCALE NTS

12 COLLAR TIE CONNECTION DETAIL



COLUMN/BASE RAIL CONNECTION DETAIL SCALE NTS

13



COLUMN TO HEADER, BASE RAIL CONNECTION DETAIL

14

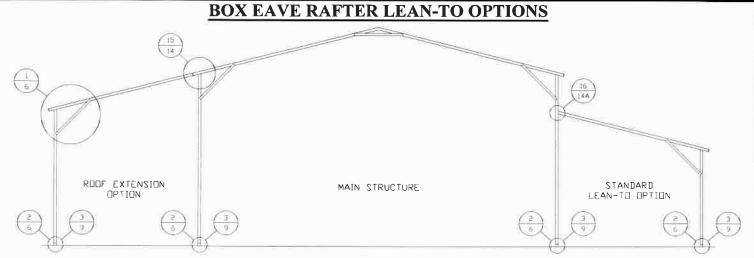
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CHECKED BY: PDH		KE CITY, FLORIE "ENCLOSED BU		
PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS		ND: 16022\$/ 00\$/20352\$
CLIENTI TBS	SHT. 13	DWG. ND: SK-3		REV.i 6



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 MAIN BUILDING CULUMNS WITH LEAN-TO DR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE DOUBLE COLUMNS FOR EAVE HEIGHTS 16'-0' (TO \$ 20'-0' MAIN BUILDING COLUMNS WITH LEAN-TO DR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE DOUBLE COLUMNS FOR EAVE HEIGHTS 13'-0' (12'-0' FOR HIGH WIND) (TO \$ 15'-0' MAIN BUILDING COLUMNS WITH LEAN-TO DR 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)

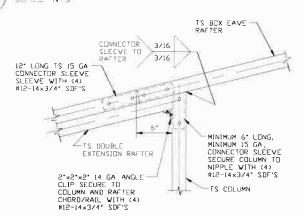
MAIN BUILDING COLUMNS WITH LEAN-TO DR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE SINGLE COLUMNS FOR EAVE HEIGHTS (10'-0')

TS BOX EAVE RAFTER CONNECTOR SLEEVE TO 3/15 3/15 12. FING L2 12 34 CHARGE COFRWALL SECRE COFRWALL SEEAS MILH (4) #15-14*3/4, 20£.2 TS EXTENSION RAFTER

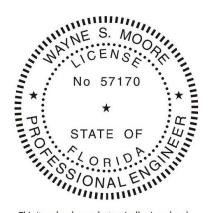
KNEE BRACES MUST BE 4'-0" (5'-0" FOR HIGH WIND) WHEN LEAN-TO'S ARE ADDED



SIDE EXTENSION RAFTER/COLUMN DETAIL FOR RAFTER SPANS & 15'-0" 15 NTS



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



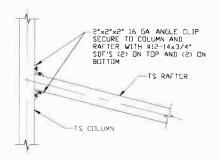
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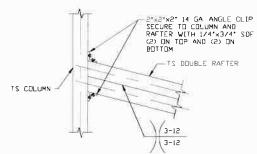
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CLIENT: TBS	SHT. 14	DVG, NO: SK-3	REV. 6	
PROJECT MGR: VSM	DATE: 7-29-21	SCALE: NTS	JOB NO 16022S/ 17300S/20352S	
CHECKED BY: PDH		KE CITY, FLORII 0" ENCLOSED BU		
DRAWN BY: JG	631	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE		

BOX EAVE RAFTER LEAN-TO OPTIONS



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



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

SCALE: NTS

16A



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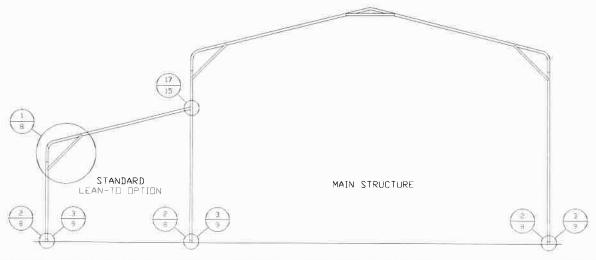
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CLIENT: TBS	SHT. 14A	DWG. ND: SK-3		REV. 6
PROJECT MGR: VSM	DATE: 7-29-21	SCALE: NTS		ND: 16022S/ 20S/20352S
CHECKED BY: PDH		KE CITY, FLORII)" ENCLOSED BU		
DRAWN BY: JG	631 SE INDUSTRIAL CIRCLE			

BOW RAFTER LEAN-TO OPTIONS



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

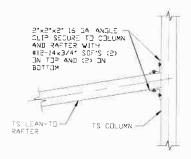
SCALE NTS

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 < 15'-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'

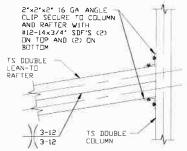
KNEE BRACES MUST BE 4'-0' (5'-0" FOR HIGH WIND) WHEN LEAN-TO'S ARE ADDED



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

17

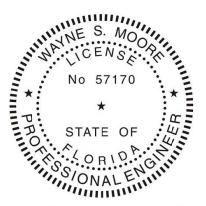
SCĂLE NTS



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

17A

SCALE: NTS



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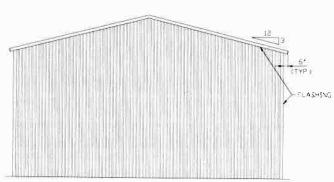
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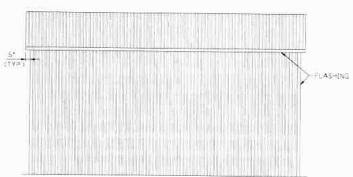
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CHECKED BY: PDH	I	KE CITY, FLORIE O" ENCLOSED BU		
CHECKED BIT FUN	30-0 320-0	ENCLUSED BU	ILDING EAP. B	
PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS	JDB ND: 16022\$/ 17300\$/20352\$	
CLIENT: TBS	SHT. 15	DWG. NO: SK-3	REV. 6	

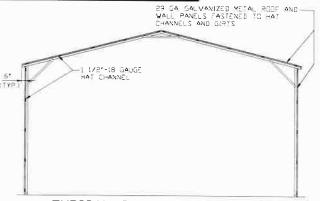
BOX EAVE RAFTER VERTICAL ROOF/SIDING OPTION



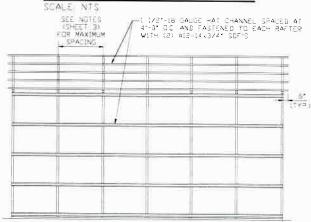
TYPICAL END ELEVATION VERTICAL ROOF/SIDING OPTION



TYPICAL SIDE ELEVATION VERTICAL ROOF/SIDING OPTION

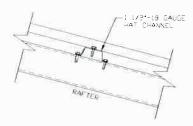


TYPICAL SECTION VERTICAL ROOF/SIDING OPTION



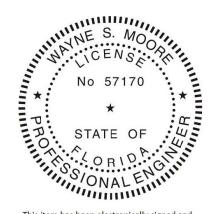
TYPICAL FRAMING SECTION VERTICAL ROOF/SIDING OPTION

SCALE NTS NOTE IS WALL GIRTS CAN BE USED AS AN OPTION IN PLACE OF HAT CHANNELS IS GIRTS MUST BE SPAID AT 42-00 (MAX.) BE



ROOF PANEL ATTACHMENT

(ALTERNATE FOR VERTICAL ROOF PANELS) SCALE NTS



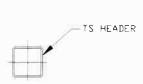
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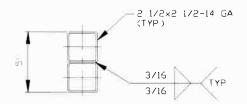
CLIENT: TBS	SHT. 16	DWG. NO SK-3		REV. 6	
PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS		ND: 16022S/ 00S/20352S	
CHECKED BY PDH		AKE CITY, FLOI -0" ENCLOSED			
DRAWN BY: JG	63	ULAR BUILDIN I SE INDUSTRI	AL CIF	RCLE	

SIDE WALL HEADER OPTIONS



HEADER DETAIL FOR DOOR OPENINGS ≤ 10'-0"

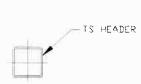
SCALE: NTS



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

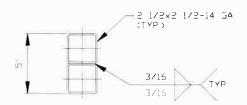
SCALEL NTS

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



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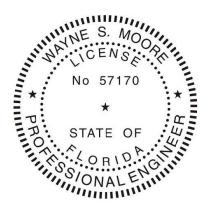
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DRAWN BY: JG	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE					
CHECKED BY: PDH	LAKE CITY, FLORIDA 32025 30'-0"x20'-0" ENCLOSED BUILDING EXP. B					
PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS		ND: 16022S/ 00S/20352S		
CLIENT: TBS	SHT. 17	DWG. NO SK-3		REV.: 6		

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

TYPICAL FLOOD VENT DETAIL

- 1 MINIMUM VENT SPACE REQUIRED = 1 SQ INCH OF OPEN VENT AREA PER SQ FOOT OF BUILDING AREA
- 2 THERE SHALL BE A MINIMUM OF TWO OPENINGS ON DIFFERENT SIDES FOR EACH ENCLOSED BUILDING
- 3 APPLY 13 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



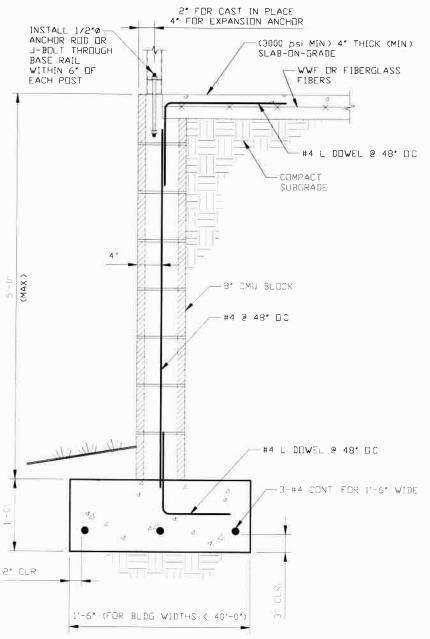
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		ULAR BUILDING				
DRAWN BY: JG	631 SE INDUSTRIAL CIRCLE					
	LA	LAKE CITY, FLORIDA 32025				
CHECKED BY: PDH	30'-0"x20'-	30'-0"x20'-0" ENCLOSED BUILDING EXP. B				
PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS	JOB NO 16022S/ 17300S/20352S			
CLIENT: TBS	SHT. 18	DWG. ND: SK-3	REV. 6			

STAND -ALONE STEM WALL DETAIL



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

SCALE: NTS

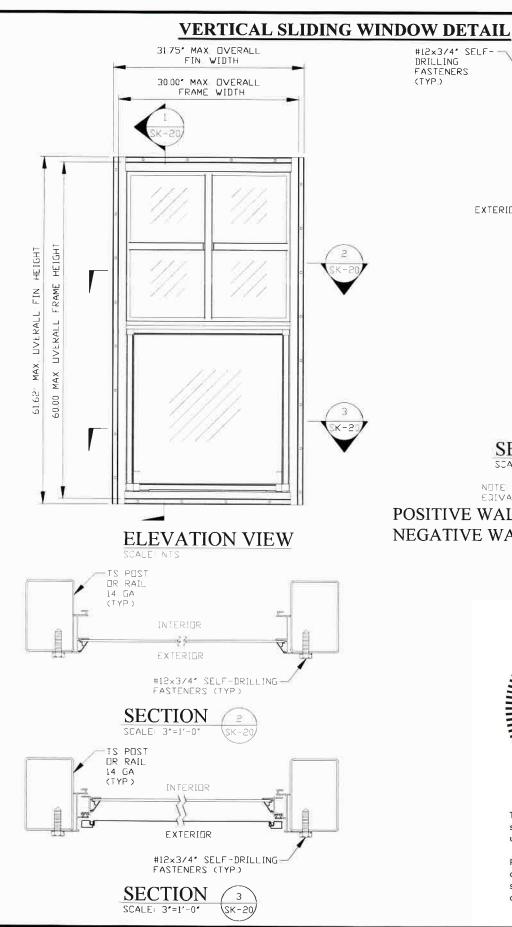


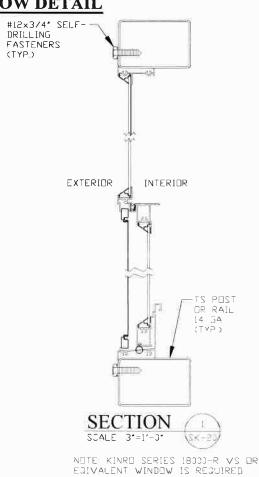
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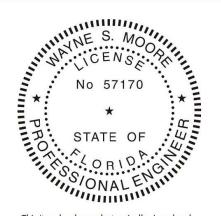
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ı			LAR BUILDING			
d	DRAWN BY: JG	631	SE INDUSTRIAL	CIRCLE		
		[LA]	KE CITY, FLORIE	', FLORIDA 32025		
H	CHECKED BY: PDH	30'-0"x20'-0" ENCLOSED BUILDING EXP. B				
ij	PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS	JOB NO: 16022S/ 17300S/20352S		
	CLIENT: TRS	SHT. 19	DWG. NO: SK-3	REV. 6		





POSITIVE WALL PRESSURE: +40.0 PSF NEGATIVE WALL PRESSURE: -40.0 PSF

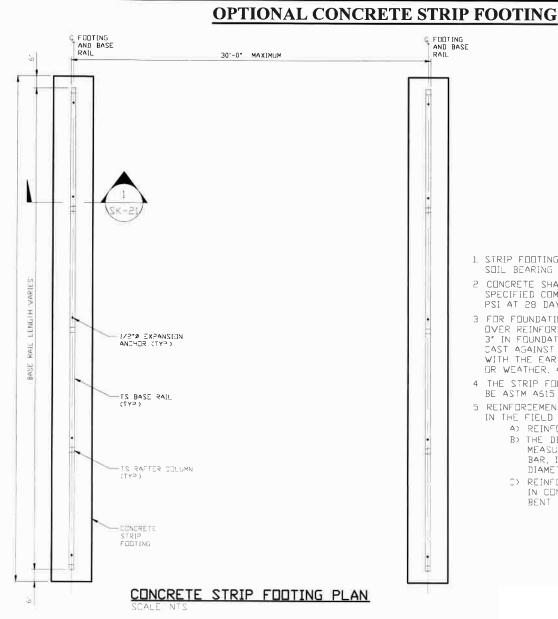


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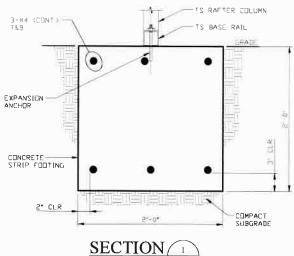
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DRAWN BY: JG	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE					
CHECKED BY: PDH	LAKE CITY, FLORIDA 32025 30'-0"x20'-0" ENCLOSED BUILDING EXP. B					
CHECKED BIT PUR	30-0 X20-	C ENCLOSED BO	JOB NO: 16022S/			
PROJECT MGR: VSM	DATE: 7-29-21	SCALE: NTS	17300\$/20352\$			
CLIENT: TBS	SHT. 20	DWG. NO: SK-3	REV.i 6			



- 1, STRIP FOOTING DESIGN BASED ON MINIMUM SOIL BEARING CAPACITY OF 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 I 1/2' ELSEWHERE
- 4 THE STRIP FOOTING REINFORCING STEEL SHALL BE ASTM ASI5 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
 - C) REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT



1

(SK-21)

* COURDINATE WITH LOCAL CODES/ORD

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1	TUBULAR BUILDING SYSTEMS					
DRAWN BY: JG	631 SE INDUSTRIAL CIRCLE					
	LAKE CITY, FLORIDA 32025					
CHECKED BY: PDH	30'-0"x20'-0" ENCLOSED BUILDING EXP. B					
PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS		ND: 160225/ 005/203525		
CLIENT: TBS	SHT. 21	DVG. NO: SK-3		REV. 6		