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.
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North Augusta, SC 29841

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

Wayne S Moore
Digitally signed by Wayne S Moore
Date: 2021.10.21 08:30:02 -04'00'

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ENGINEERING AND CONSULTING

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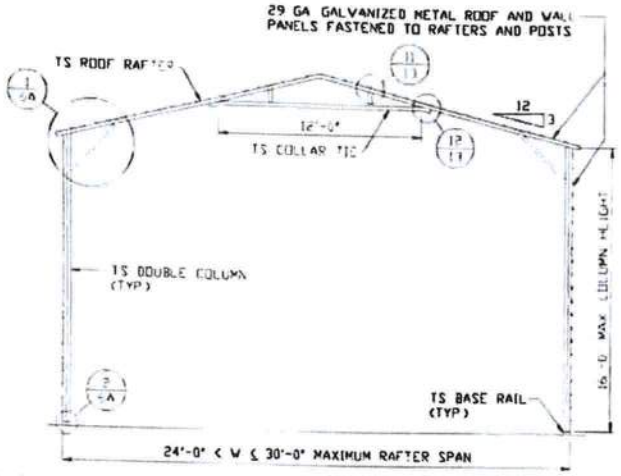
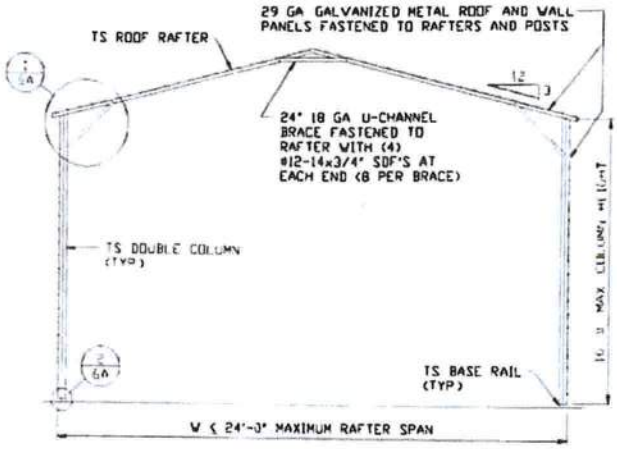


TYPICAL RAFTER/COLUMN END FRAME SECTION

SCALE NTS



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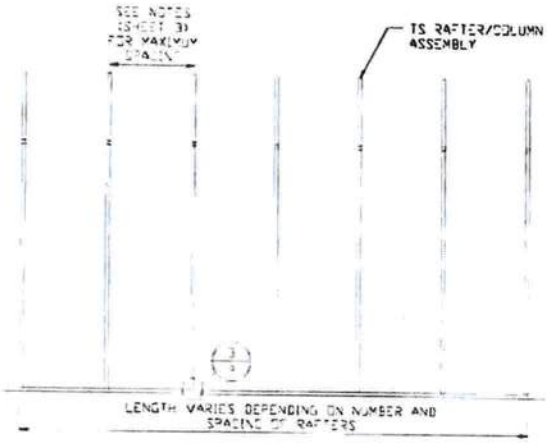

TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION

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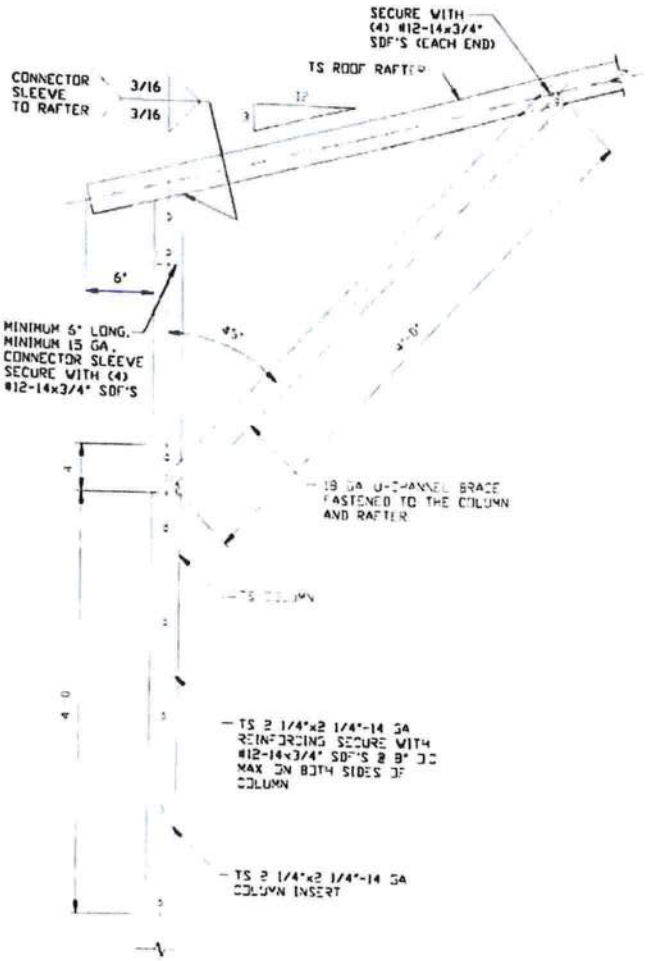
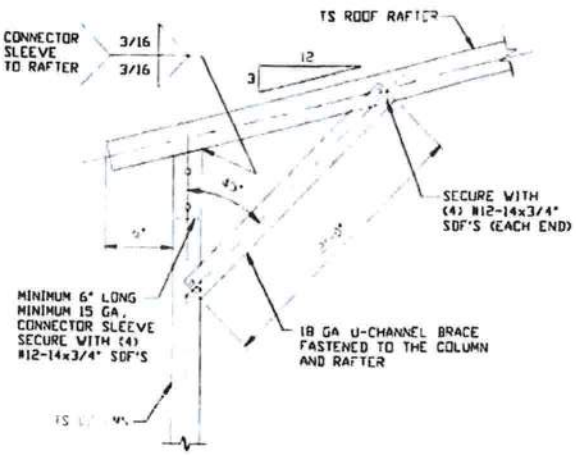
	CHECKED BY: PDH			
	PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS	JOB NO: 16022S/ 17300S/20352S
	CLIENT: TBS	SHT. 5A	DWG. NO: SK-3	REV: 6



1A BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 10'-0" < TO ≤ 13'-0"

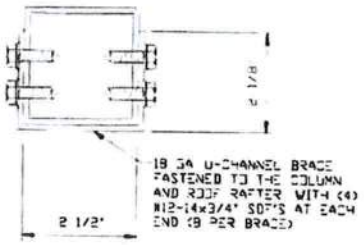
SCALE: NTS

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



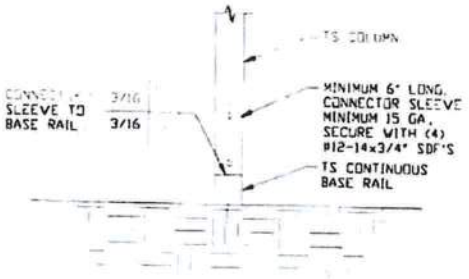
1B BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS ≤ 10'-0"

SCALE: NTS



BRACE SECTION

SCALE: NTS



2 RAFTER COLUMN/BASE RAIL CONNECTION DETAIL

SCALE: NTS

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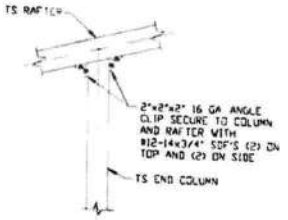
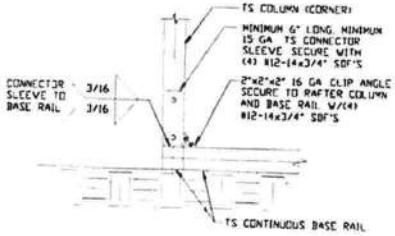
	PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS	JOB NO: 16022S/ 17300S/20352S
	CLIENT: TBS	SHT. 6B	DWG. NO: SK-3	REV.: 6

CONNECTION DETAILS



4 END COLUMN/RAFTER CONNECTION DETAIL
SCALE: NTS



5 END COLUMN/BASE RAIL CONNECTION DETAIL
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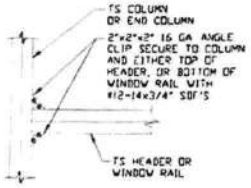
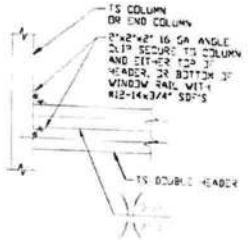
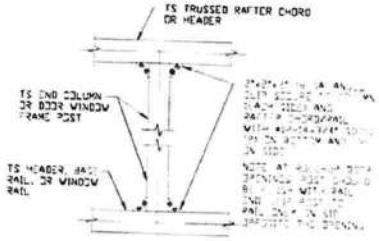


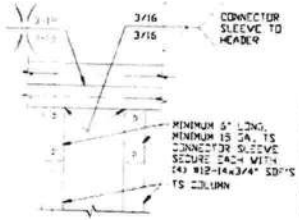
6 HEADER OR WINDOW RAIL TO COLUMN CONNECTION DETAIL
SCALE: NTS



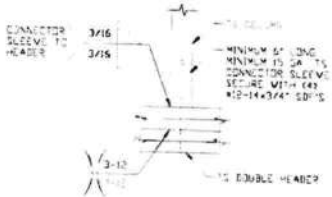
6A DOUBLE HEADER TO COLUMN CONNECTION DETAIL
SCALE: NTS



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



8 DOUBLE HEADER/COLUMN CONNECTION DETAIL
SCALE: NTS



9 COLUMN/DOUBLE HEADER CONNECTION DETAIL
SCALE: NTS

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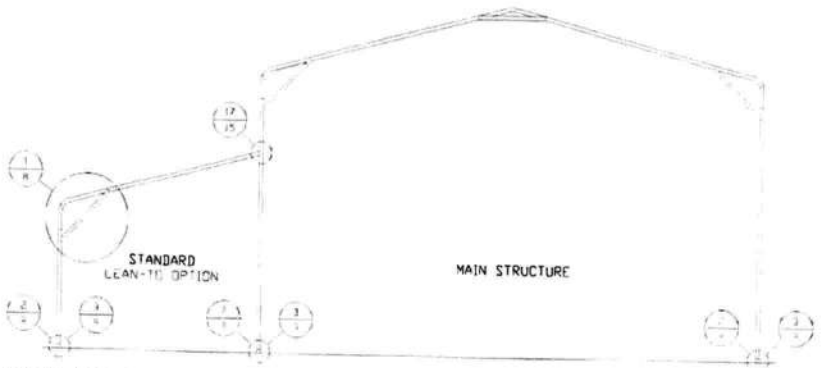
PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS	JOB NO: 16022S/ 17300S/20352S	
CLIENT: TBS	SHT. 12	DWG. NO: SK-3	REV.: 6	

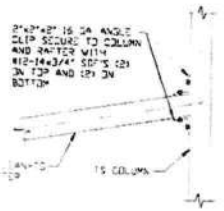
BOW RAFTER LEAN-TO OPTIONS



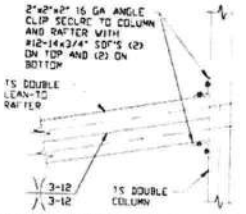
TYPICAL BOW RAFTER LEAN-TO OPTIONS FRAMING SECTION (BOTH OPTIONS SHOWN)

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 13'-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 < 13'-0"
KNEE BRACES MUST BE 4'-0" (5'-0" FOR HIGH WIND) WHEN LEAN-TO'S ARE ADDED



17 LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS ≤ 15'-0"
SCALE: NTS



17A LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS 15'-0" < TO ≤ 24'-0"
SCALE: NTS

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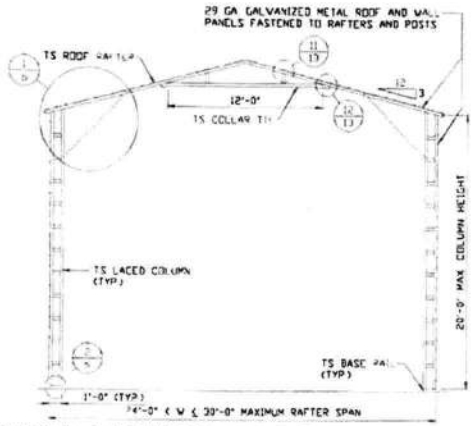
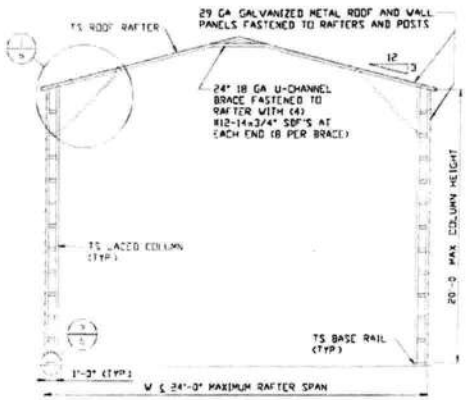
	CLIENT: TBS	SHT. 15	DWG. NO: SK-3	REV: 6	



TYPICAL RAFTER/COLUMN END FRAME SECTION

SCALE NTS



TYPICAL RAFTER/COLUMN END FRAME SECTION

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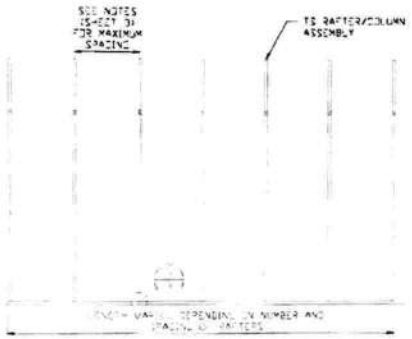

TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION

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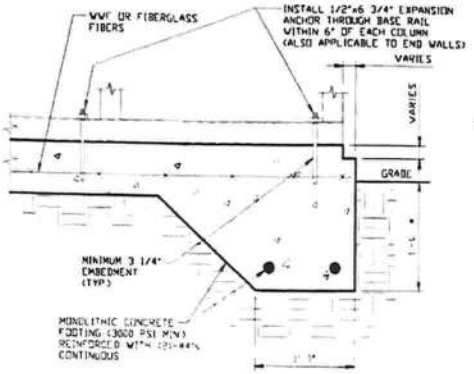
	CLIENT: TBS	SHT. 5	DWG. NO: SK-3	REV.: 6

BASE RAIL ANCHORAGE OPTIONS FOR LOW AND HIGH WIND SPEED

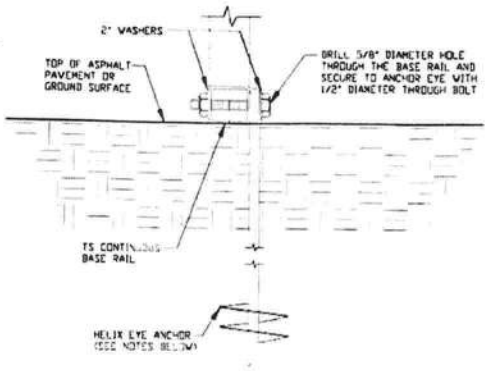


3A CONCRETE MONOLITHIC SLAB BASE RAIL ANCHORAGE

SCALE: N.T.S.

MINIMUM ANCHOR EDGE DISTANCE IS 4"

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



3B GROUND BASE HELIX ANCHORAGE

SCALE: NTS

(CAN BE USED FOR ASPHALT)

* 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

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 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

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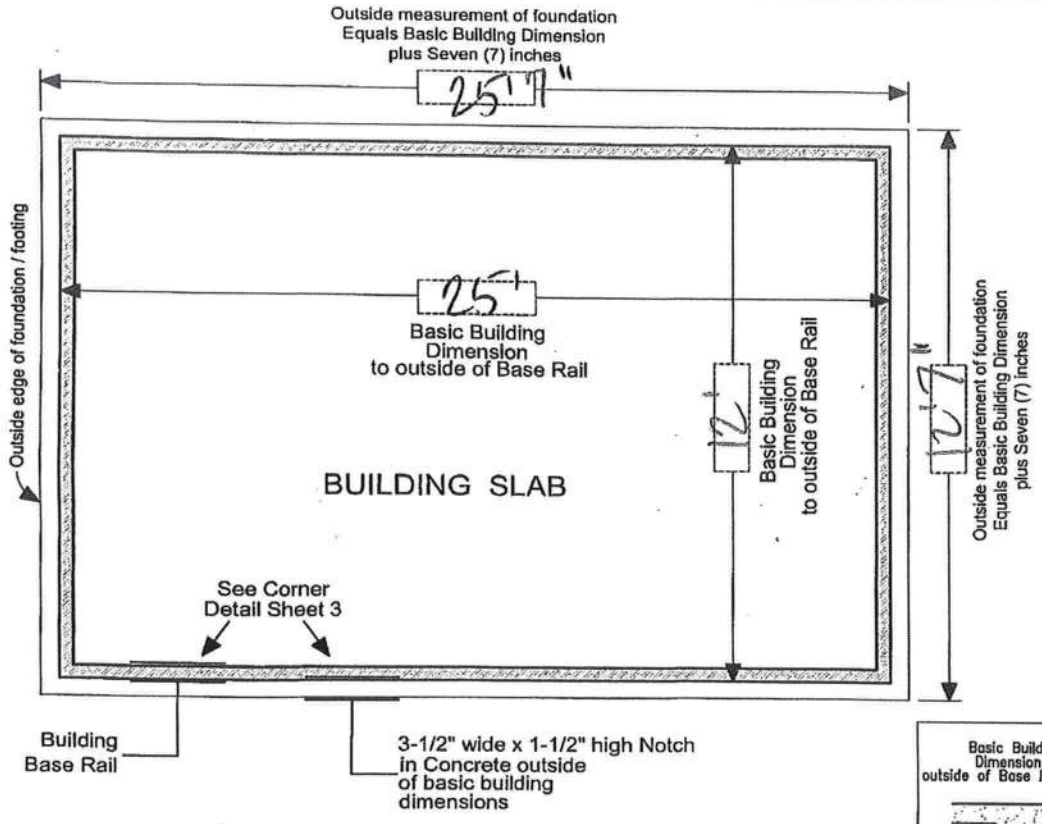
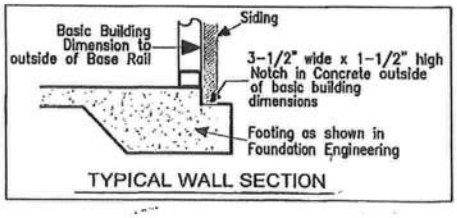


IMPORTANT - NOTES

Record Measurements in these spaces provided

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

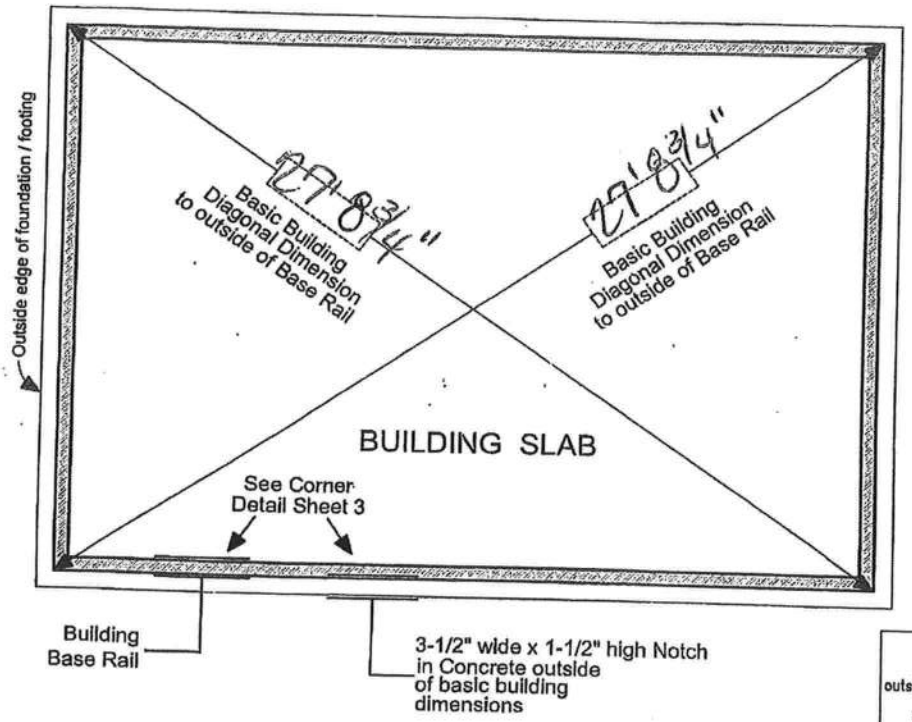
See Sheet 3 of 3 for Detail of Building corner configuration



TYPICAL WALL SECTION

TBS
TUBULAR BUILDING SYSTEMS

TYPICAL BUILDING
FOUNDATION MEASUREMENTS



IMPORTANT - NOTES

Record Measurements in these spaces provided

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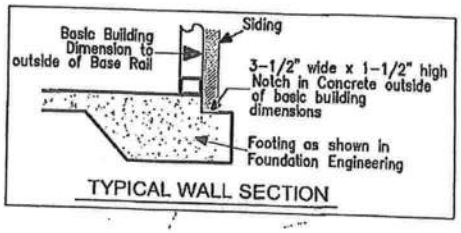
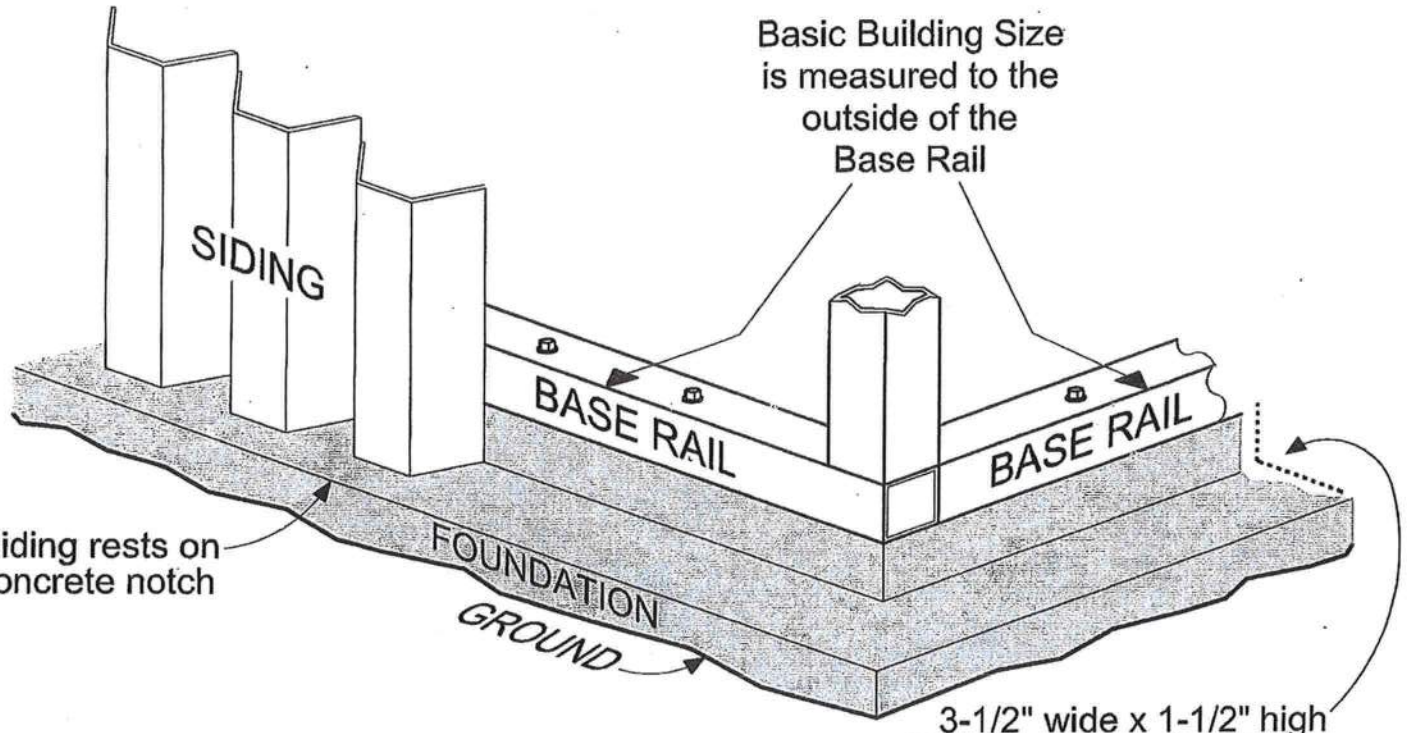
See Sheet 3 of 3 for Detail of Building corner configuration



TUBULAR BUILDING SYSTEMS

TYPICAL BUILDING
FOUNDATION MEASUREMENTS DIAGONALS

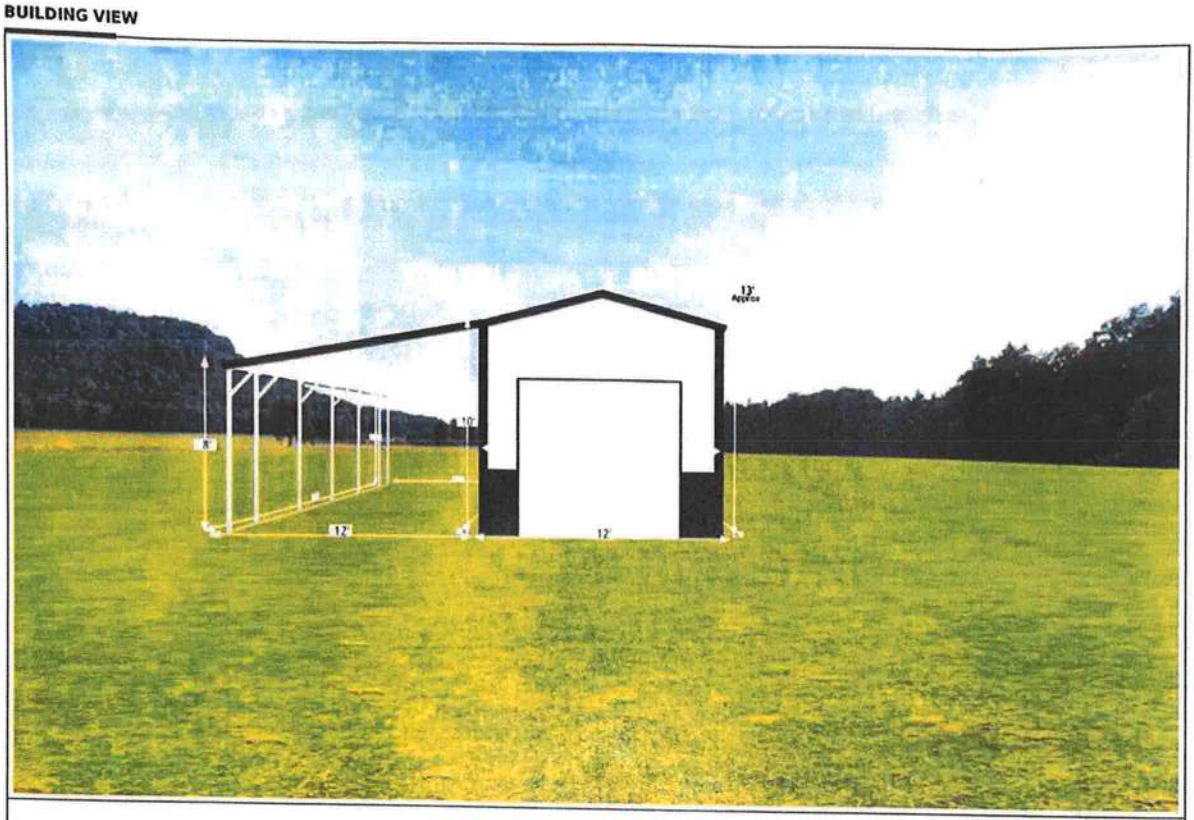


TUBULAR BUILDING SYSTEMS

TYPICAL BUILDING

CORNER DETAIL

BUILDING VIEW



FRONT