

## REGULAR / A-FRAME 24'-0" WIDE CARPORT STYLE BUILDINGS

### DESIGN NOTES

- ALL CONSTRUCTION SHALL BE PROVIDED IN ACCORDANCE WITH IBC 2021, OSHA, AISC 360, AISI 100, ASCE 7-16, AWS D1.3 CODES AND ALL APPLICABLE LOCAL REQUIREMENTS.
- ALL MATERIALS IDENTIFIED BY MANUFACTURER NAME MAY BE SUBSTITUTED WITH MATERIAL EQUAL OR EXCEEDING ORIGINAL.
- ALL SHOP CONNECTIONS SHALL BE WELDED CONNECTIONS.
- ALL STRUCTURAL FIELD CONNECTIONS SHALL BE #12-14 X 3/4" SDS (ESR-2196 OR EQ) WITHOUT WASHERS.
- STEEL SHEATHING SHALL BE 29GA. CORRUGATED GALV. OR PAINTED STEEL - MAIN RIB HT. 3/4" (FY=80KSI) OR EQ. CONNECTIONS SHALL BE #12-14 X 3/4" SDS (ESR-2196 OR EQ) WITH NEOPRENE WASHERS.
- ALL STRUCTURAL LIGHT GAUGE TUBING AND CHANNELS SHALL BE GRADE 50 STEEL (FY = 50 KSI, FU = 65 KSI).
- STRUCTURAL TUBE 2 1/2" X 2 1/2" - 14GA. IS EQUIVALENT TO TS 2 1/4" X 2 1/4" - 12GA AND EITHER ONE MAY BE USED IN LIEU OF THE OTHER.
- GYPSUM BOARD OR DRYWALL FINISH OR ANY BRITTLE BASE MATERIAL IS NOT ACCOUNTED FOR IN THE DESIGN CRITERIA.
- ALL DESIGN CRITERIA MUST BE INCREASED TO THE NEXT HIGHER INCREMENT BASED ON THE TABLES ON PAGE 4. NO INTERPOLATION IS ALLOWED.

### DESIGN CRITERIA

- PREVAILING CODE: FBC 2023 (IBC 2021)
- USE GROUP: U (CARPORTS, BARNS)
- RISK CATEGORY: I
- ROOF DEAD LOAD (D)  $D = 4$  PSF
  - ROOF LIVE/SNOW LOAD (Lr)  
 $L_r = 20 - 61$  PSF  
(AS PER SNOW LOAD  
SEE TABLE 4)
  - SNOW LOAD (S)  
GROUND SNOW LOAD  $P_g = 20 - 90$  PSF  
IMPORTANCE FACTOR  $I_s = 0.8$   
THERMAL FACTOR  $C_t = 1.2$   
EXPOSURE FACTOR  $C_e = 1.0$   
ROOF SLOPE FACTOR  $C_s = 1.0$
  - WIND LOAD (W)  
BASIC WIND SPEED  $V_{ULT} = 105 - 180$  MPH  
EXPOSURE C  
SEISMIC LOAD (E)  
DESIGN CATEGORY D  
IMPORTANCE FACTOR  $I_e = 1.00$
- LOAD COMBINATIONS:
- $D + (L_r \text{ OR } S)$
  - $D + (0.6W \text{ OR } \pm 0.7E)$
  - $D + 0.75 (0.6W \text{ OR } \pm 0.7E) + 0.75 (L_r \text{ OR } S)$
  - $0.6D + (0.6W \text{ OR } \pm 0.7E)$

### DRAWING INDEX

COVER SHEET	-----	1
SCHEDULES & MEMBER -		
SECTIONS	-----	2
FRAME SECTIONS & DETAILS	-----	3-A, 3-B
SPACING SCHEDULES -		
& ENCLOSURE NOTES	-----	4
PURLIN & GIRT SCHEDULES	-----	5
SHEATHING OPTIONS	-----	6
SIDE WALL FRAMING		
& OPENINGS	-----	7-A, 7-B
END WALL FRAMING		
& OPENINGS	-----	8-A, 8-B
CORNER BRACING DETAILS	-----	9
OPTIONAL LEAN-TO ADDITION	-----	10
FOUNDATION OPTIONS	-----	11-A TO 11-D

Omar  
Abu-  
Yasein

Digitally signed  
by Omar Abu-  
Yasein  
Date: 2023.12.29  
12:52:06 -05'00'

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### DRAWING INFORMATION

PROJECT: 24'-0" WIDE BUILDINGS

LOCATION: STATE OF FLORIDA

PROJECT NO.: 711-23-3491

SHEET TITLE:

COVER SHEET

SHEET NO.: 1 / 11

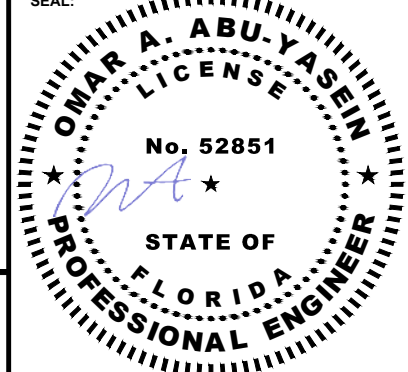
DRAWN BY: A.W. DATE: 1/26/22

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### CUSTOMER INFORMATION

OWNER:  
ADDRESS:

### DESIGN LOADS

GROUND SNOW:

ROOF LIVE LOAD:

BASIC WIND SPEED:

### BUILDING INFORMATION

WIDTH:

LENGTH:

HEIGHT:

FRAME TYPE:

- ☐ A-FRAME  
☐ REGULAR  
☐ FULL  
☐ PARTIAL  
☐ OPEN

ENCLOSURE  
TYPE:

### CERTIFICATION VALIDITY NOTICE

DATE OF PLANS  
EXPIRATION: 12-27-2024

CERTIFICATION ON THESE DRAWINGS IS  
VALID FOR ONE YEAR FROM DATE OF ISSUE

TABLE 2.1: MEMBER PROPERTIES

NO.	LABEL	PROPERTY	DETAIL NO.
1	COLUMN POST	2.5" X 2.5" X 14GA TUBE	1
2	ROOF BEAM	2.5" X 2.5" X 14GA TUBE	1
3	BASE RAIL	2.5" X 2.5" X 14GA TUBE	1
4	PEAK BRACE	2.5" X 2.5" X 14GA CHANNEL	4
5	KNEE BRACES	2.5" X 1.5" X 14GA CHANNEL	4
6	CONNECTOR SLEEVE	2.25" X 2.25" X 12GA TUBE	2
7	BASE ANGLE	2" X 2" X 3" LG. 3/16" ANGLE	10
8	PURLIN	4.25" X 1.5" X 14GA / 18GA HAT CHANNEL	5
9	GIRT	4.25" X 1.5" X 14GA / 18GA HAT CHANNEL	5
9A	OPT. END WALL GIRT	2.5" X 1.5" X 14GA CHANNEL	1
10	SHEATHING	29 GA CORRUGATED SHEET	8
11	END WALL POST	2.5" X 2.5" X 14GA TUBE	1
12	DOOR POST	2.5" X 2.5" X 14GA TUBE	1
13	SINGLE HEADER	2.5" X 2.5" X 14GA TUBE	1
14	DOUBLE HEADER	DBL. 2.5" X 2.5" X 14GA TUBE	1
15	SERVICE DOOR / WINDOW FRAMING	2.5" X 2.5" X 14GA TUBE	1
16	ANGLE BRACKET	2" X 2" X 2" LG. 14GA ANGLE	7
17	STRAIGHT BRACKET	2" X 2" X 4" LG. 14GA PLATE	6
18	PB SUPPORT	2.5" X 2.5" X 14GA TUBE	1
19	DIAGONAL BRACE	2" X 2" X 14 GA TUBE	3
20	GABLE BRACE	2" X 2" X 14 GA TUBE	3
21	DB BRACKET	2.25" X 2.25" X 6" LG. 14GA ANGLE	9
22	TRUSS SPACER	2.5" X 2.5" X 14GA TUBE	1
23	ALL FASTENERS	#12 X 1" SELF-DRILL SCREWS (ESR-2196 OR EQ) W/ NEOPRENE/STEEL WASHER	

TABLE 2.2: SHEATHING FASTENER SCHEDULE

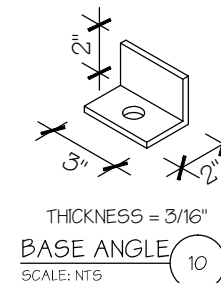
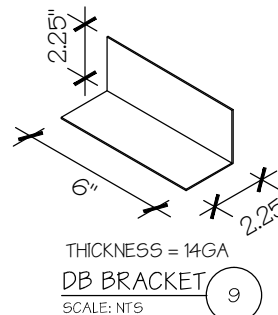
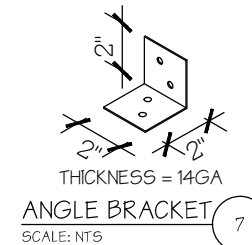
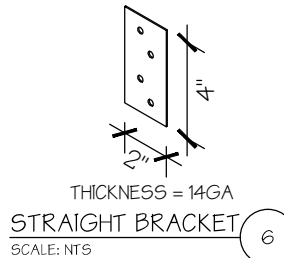
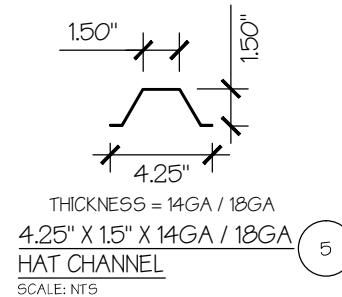
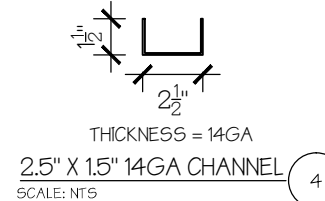
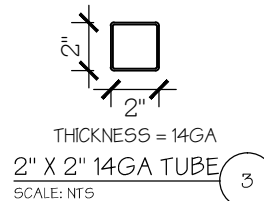
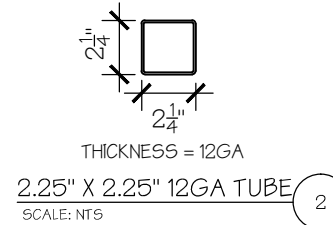
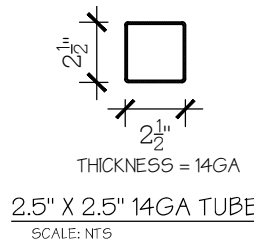
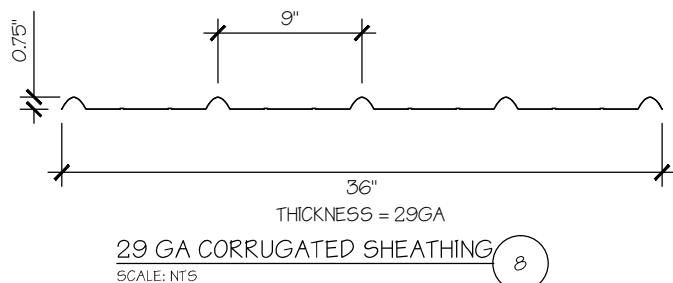
LOCATION	CORNER PANELS	SIDE LAPS	EDGE LAPS	ELSEWHERE
SPACING	9" C/C	MIN. 1	4 1/2" C/C	9" C/C

FASTENER TYPE: #12X1" SELF-DRILL SCREWS (ESR-2196 OR EQ) W/ NEOPRENE/STEEL WASHER

\*SEE TYP. SHEATHING FASTENER SCHEDULE DIAGRAM ON PAGE 6.

TABLE 2.3: GAUGE THICKNESS

GAUGE	29	18	14	12
THICKNESS (IN)	0.0135	0.049	0.083	0.109



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PROJECT: 24'-0" WIDE BUILDINGS

LOCATION: STATE OF FLORIDA

PROJECT NO.: 711-23-3491

SHEET TITLE:

SCHEDULES &  
MEMBER SECTIONS

SHEET NO.: 2 / 11

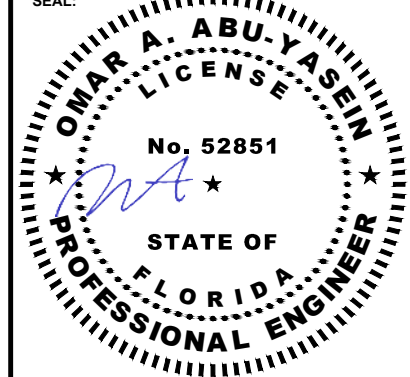
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# DRAWING INFORMATION

PROJECT: 24'-0" WIDE BUILDINGS

LOCATION: STATE OF FLORIDA

PROJECT NO.: 711-23-3491

SHEET TITLE:

FRAME SECTIONS &  
DETAILS

SHEET NO.: 3-A / 11

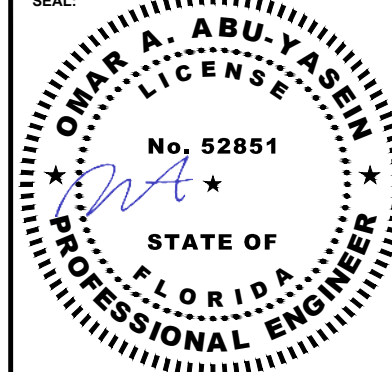
DRAWN BY: A.W. DATE: 1/26/22

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# LEGAL INFORMATION

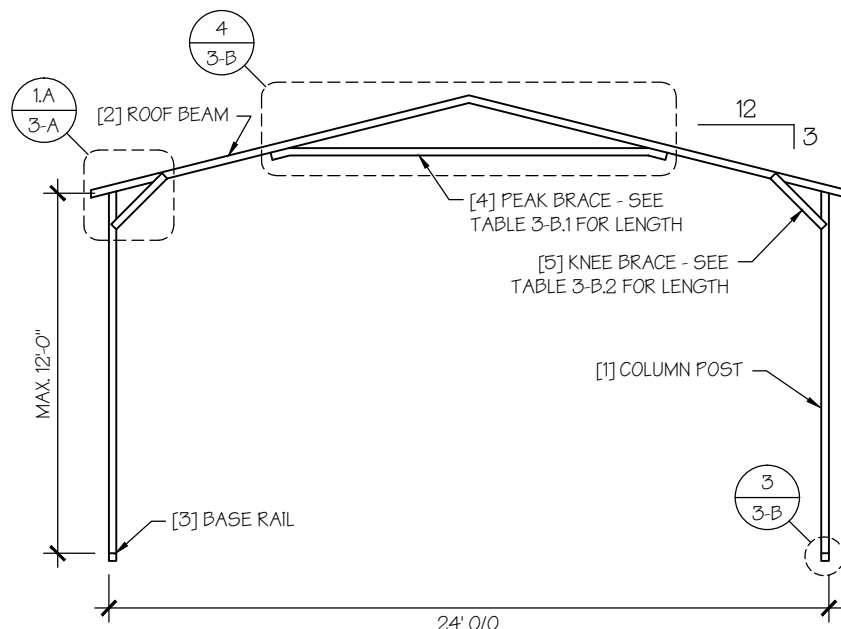
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SEAL:

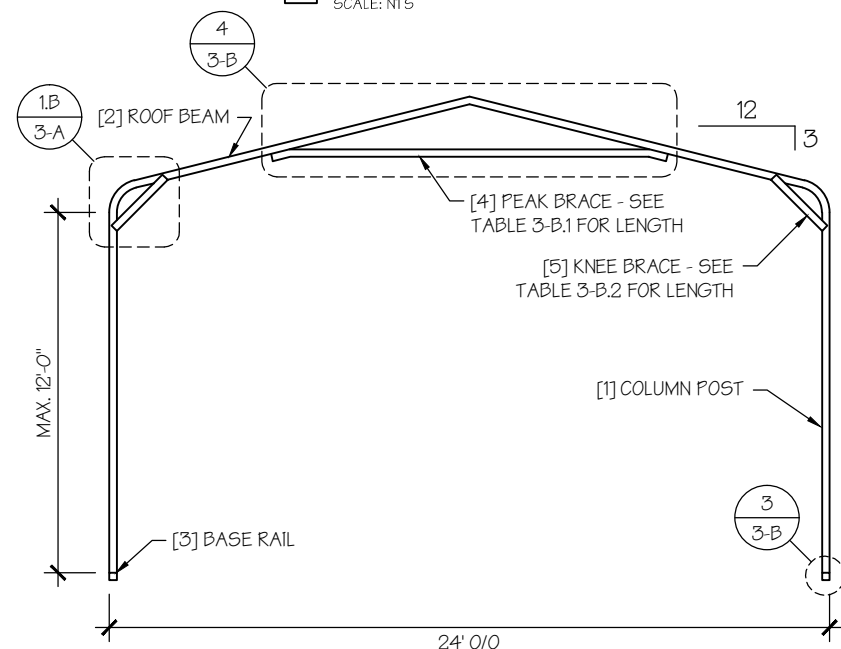


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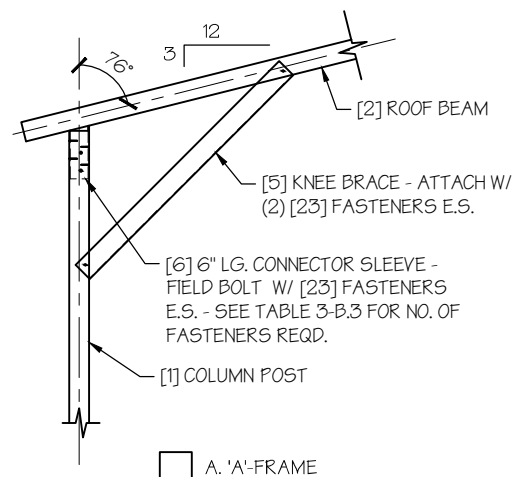
DATE SIGNED: 12-27-2023



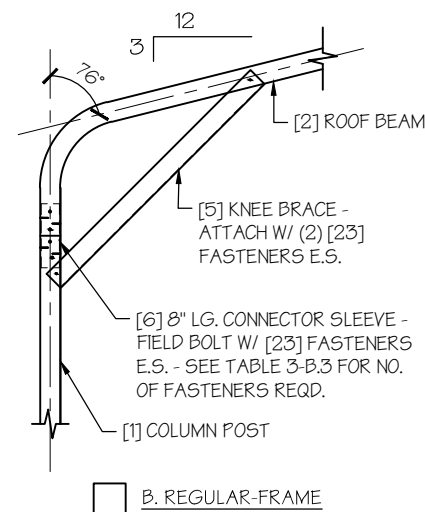
☐ TYP. A-FRAME SECTION  
SCALE: NTS



☐ TYP. REGULAR FRAME SECTION  
SCALE: NTS

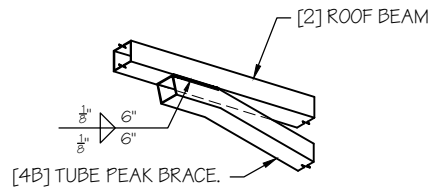


☐ A. A-FRAME

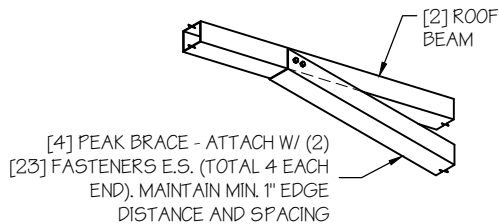


☐ B. REGULAR-FRAME

EAVE DETAIL  
SCALE: NTS



A. PEAK BRACE TUBE

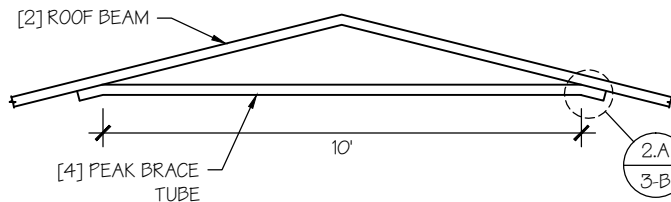


B. PEAK BRACE CHANNEL

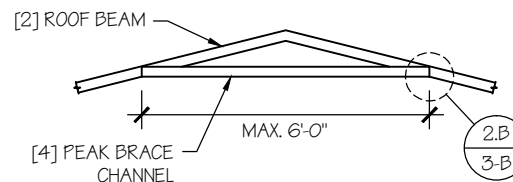
## PEAK BRACE CONNECTION DETAILS

SCALE: NTS

2



A. WELDED PEAK BRACE

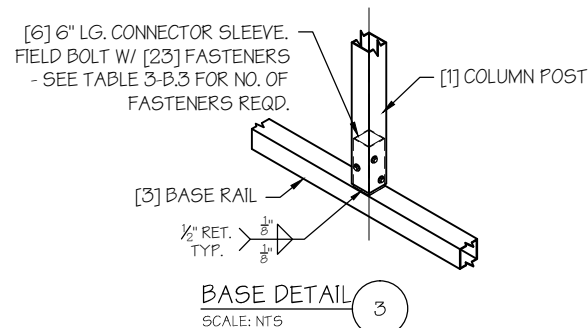


B. CHANNEL PEAK BRACE

## PEAK BRACE DETAILS

SCALE: NTS

4



BASE DETAIL

SCALE: NTS

3

TABLE 3-B.1: PEAK BRACE SCHEDULE

GROUND SNOW / ROOF LIVE LOAD (PSF)	WIND SPEED	
	□ 105 TO 130	□ 140 TO 180
□ 30 / 20	6'	10'
□ 35 / 25 TO 90 / 61	10'	10'

TABLE 3-B.2: KNEE BRACE SCHEDULE

EAVE HEIGHT	KNEE BRACE LENGTH
□ UP TO 8'	24"
□ 9' TO 12'	36"

TABLE 3-B.3 FASTENER SCHEDULE

WIND SPEED (MPH)	NO. OF FASTENERS
□ 105 TO 125	4
□ 130 TO 155	6
□ 160 TO 180	8

NOTE: COLUMN POST MAY BE ADJUSTED ±1" FOR LEVELING.  
MANUFACTURER IS NOT RESPONSIBLE FOR LEVELING OF GROUND  
AND/OR CONCRETE SURFACE PROVIDED BY OTHERS.

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SHEET TITLE:

## FRAME DETAILS

SHEET NO.: 3-B / 11

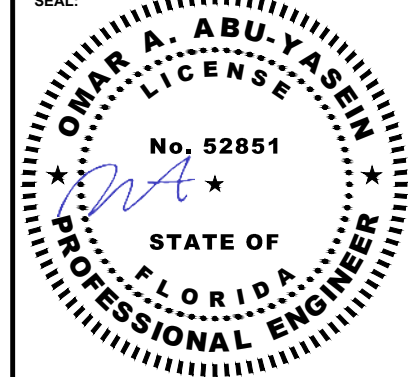
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DATE SIGNED: 12-27-2023

TABLE 4: FRAME SPACING CHART / SCHEDULE

EAVE HEIGHT = 10'-0" TO 12'-0"	GROUND SNOW / ROOF LIVE LOAD (PSF)	■ ENCLOSED BUILDINGS							■ OPEN BUILDINGS						
		WIND SPEED (MPH)							WIND SPEED (MPH)						
		□105	□115	□130	□140	□155	□165	□180	□105	□115	□130	□140	□155	□165	□180
EAVE HEIGHT = 7'-0" TO 9'-0"	□30 / 20	60	60	54/60	54	42	42	36	48	48	48	42	36	30	24
	□40 / 27	48/60	48/60	42/60	42/54	42	42	36	42	42	42	42	36	30	24
	□50 / 34	40/48	40/48	40/48	40/48	40/42	40/42	36	30	30	30	30	30	30	24
	□60 / 41	36	36	36	36	36	36	36	30	30	30	30	30	30	24
	□70 / 47	30	30	30	30	30	30	30	24	24	24	24	24	24	24
	□80 / 54	24	24	24	24	24	24	24	24	24	18	18	18	18	18
	□90 / 61	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	□30 / 20	60	60	54/60	54	48	42/48	42	54	54	48/54	42/54	36/48	36	30
EAVE HEIGHT = UP TO 6'-0"	□40 / 27	48/60	48/60	42/60	42/54	42/48	42/48	42	42	42	42	42	36/42	36	30
	□50 / 34	40/48	40/48	40/48	40/48	40/48	40/48	40/42	36	36	36	36	36	36	30
	□60 / 41	36	36	36	36	36	36	36	30	30	30	30	30	30	30
	□70 / 47	30	30	30	30	30	30	30	24	24	24	24	24	24	24
	□80 / 54	24	24	24	24	24	24	24	24	24	24	24	24	24	24
	□90 / 61	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	□30 / 20	60	60	54/60	54	48	42/48	42	60	54/60	48/60	42/54	36/48	36/42	36
	□40 / 27	48/60	48/60	42/60	42/54	42/48	42/48	42	48	48	42/48	42/48	36/48	36/42	36
EAVE HEIGHT = UP TO 6'-0"	□50 / 34	40/48	40/48	40/48	40/48	40/48	40/48	40/42	40/42	40/42	40/42	40/42	36/42	36	36
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## NOTES:

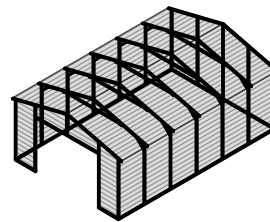
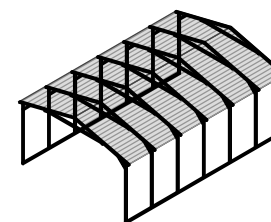
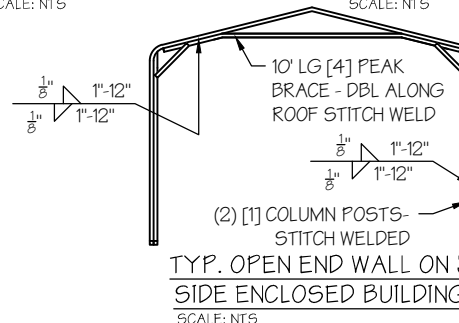
1. FRAME SPACINGS ARE IN UNITS OF INCHES (IN).
2. WHERE TWO VALUES ARE SHOWN, THE HIGHER VALUE CAN ONLY BE USED FOR VERTICAL SHEATHING.
3. SNOW LOADS AND ROOF LIVE LOADS ARE IN POUNDS PER SQUARE FOOT (PSF). WIND SPEED IS 3 SEC. GUST IN MILES PER HOUR (MPH).
4. FOR VALUES THAT LIE BETWEEN TWO CELLS, THE HIGHER (MORE STRINGENT) VALUE HAS TO BE USED. INTERPOLATION BETWEEN CELLS IS NOT ALLOWED.

## ENCLOSURE CLASSIFICATION:

1. ENCLOSED BUILDING = ALL 4 WALLS FULLY ENCLOSED WITH DOORS/WINDOWS = USE ENCLOSED BUILDING SPACING CHART.
2. OPEN BUILDING = ALL 4 WALLS FULLY OPEN = USE OPEN BUILDING SPACING CHART.
3. 3FT PARTIALLY ENCLOSED = BOTH END-WALLS FULLY OPEN, WITH BOTH SIDE-WALLS ONLY 3FT ENCLOSED = USE OPEN BUILDING SPACING CHART.
4. PARTIALLY ENCLOSED = BOTH END-WALLS FULLY OPEN, WITH BOTH SIDE-WALLS ENCLOSED MORE THAN 3FT = START WITH OPEN BUILDING SPACING CHART AND THEN REDUCE SPACING BY 6".
5. 3 SIDED ENCLOSED = ALL WALLS ARE ENCLOSED EXCEPT FOR 1 END-WALL = START WITH ENCLOSED BUILDING SPACING + THE OPEN END FRAME MUST HAVE EITHER A GABLED END OR HAVE DOUBLED WELDED LEGS & ROOF.
6. FOR ALL SHEATHING ENCLOSURES NOT LISTED ABOVE, REFER TO SHEET 5 FOR SPACING AND DESIGN REQUIREMENTS.

## GENERAL NOTES:

1. THE MAX. BUILDING LENGTH FOR ENCLOSED BUILDINGS IS 50'-0". THIS CAN BE INCREASED BY ADDING A DOUBLE FRAME AT THE CENTER TO BREAK THE LENGTH OF THE BUILDING.
2. BUILDINGS WITH PARTIALLY ENCLOSED END WALLS NEED TO HAVE SIDE WALL BRACING TO SUPPORT THE PARTIALLY ENCLOSED END WALL. (SEE FIGURE A ON SHEET 5).
3. ALL BUILDINGS WITH AN OPEN END WALL MUST HAVE A 10'-0" TUBE PEAK BRACE.

TYP. ENCLOSED BUILDING  
SCALE: NTSTYP. OPEN BUILDING  
SCALE: NTS

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SPACING SCHEDULES  
& ENCLOSURE NOTES

SHEET NO.: 4 / 11

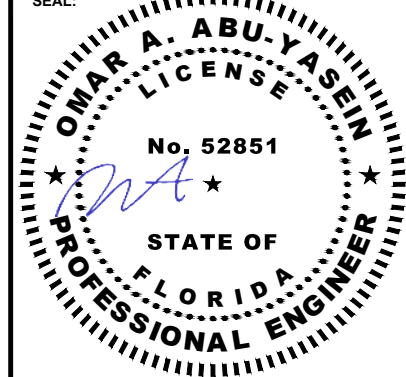
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TABLE 5.1: PURLIN SPACING SCHEDULE

GROUND SNOW / ROOF LIVE LOAD (PSF)	■ 14GA. HAT CHANNEL PURLIN							■ 18GA. HAT CHANNEL PURLIN						
	WIND SPEED (MPH)							WIND SPEED (MPH)						
	105	115	130	140	155	165	180	105	115	130	140	155	165	180
□ 30 / 20	54	48	42	36	30	24	24	36	30	24	18	18	12	12
□ 40 / 27	42	42	42	36	30	24	24	30	30	24	18	18	12	12
□ 50 / 34	40	40	40	36	30	24	24	24	24	24	18	18	12	12
□ 60 / 41	36	36	36	36	30	24	24	18	18	18	18	18	12	12
□ 70 / 47	32	32	32	32	30	24	24	18	18	18	18	18	12	12
□ 80 / 54	30	30	30	30	30	24	24	18	18	18	18	18	12	12
□ 90 / 61	24	24	24	24	24	24	24	12	12	12	12	12	12	12
□ 30 / 20	54	48	42	42	36	30	30	48	36	30	24	18	18	12
□ 40 / 27	42	42	42	42	36	30	30	42	36	30	24	18	18	12
□ 50 / 34	40	40	40	40	36	30	30	30	30	30	24	18	18	12
□ 60 / 41	36	36	36	36	36	30	30	30	30	30	24	18	18	12
□ 70 / 47	32	32	32	32	32	30	30	24	24	24	24	18	18	12
□ 80 / 54	32	32	32	32	32	30	30	18	18	18	18	18	18	12
□ 90 / 61	30	30	30	30	30	30	30	18	18	18	18	18	18	12
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□ 80 / 54	32	32	32	32	32	32	30	32	32	32	32	32	32	30
□ 90 / 61	30	30	30	30	30	30	30	30	30	30	30	30	30	30

## NOTES:

- PURLIN SPACING UNITS ARE IN INCHES.
- FRAME SPACING NEEDS TO BE DETERMINED FROM TABLE 4.

## IRREGULAR BUILDING NOTES:

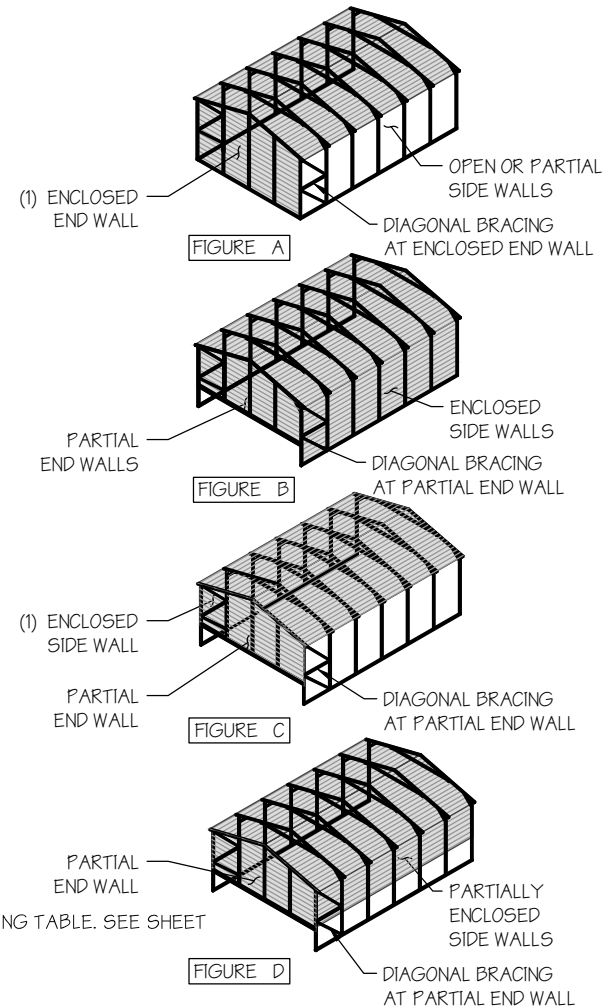
- FIGURES A, B, C & D ON THE RIGHT INDICATE EXAMPLES OF IRREGULAR BUILDINGS.
- FOR IRREGULAR BUILDINGS, FRAME SPACING MUST BE REDUCED BY 6" FROM OPEN BUILDING SPACING TABLE. SEE SHEET 4 FOR OPEN BUILDING TABLE.
- SITE SPECIFICS MAY ALLOW FOR ALTERNATIVE SPACING.
- IRREGULAR BUILDING & BUILDINGS W/ MORE THAN 2 SIDE OPENINGS MUST HAVE A 10' TUBE PEAK BRACE ON ALL FRAMES.

TABLE 5.2: GIRT SPACING SCHEDULE

FRAME SPACING	WIND SPEED (MPH)						
	105	115	130	140	155	165	180
□ 5'-0"	60	48	36	30	24	24	18
□ 4'-6"	60	60	48	42	36	30	24
□ 4'-0"	60	60	54	54	42	36	30
□ 3'-6"	60	60	54	54	48	42	42
□ 2'-0" TO 3'-0"	60	60	54	54	48	42	42

## NOTES:

- GIRT SPACING UNITS ARE IN INCHES.
- THIS SCHEDULE IS TO BE USED FOR BOTH 14GA AND 18 GA PURLINS.
- FRAME SPACING NEEDS TO BE DETERMINED FROM TABLE 4.



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PROJECT: 24'-0" WIDE BUILDINGS

LOCATION: STATE OF FLORIDA

PROJECT NO.: 711-23-3491

SHEET TITLE:

PURLIN & GIRT  
SPACING SCHEDULES

SHEET NO.: 5 / 11

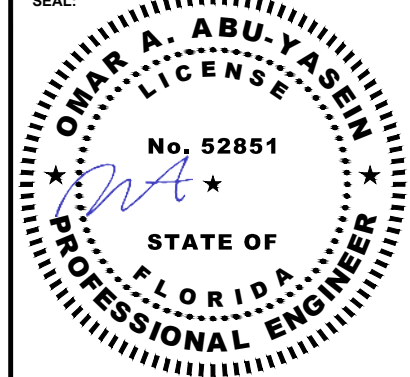
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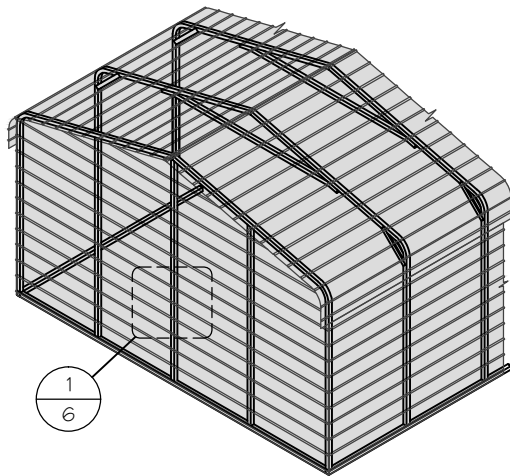
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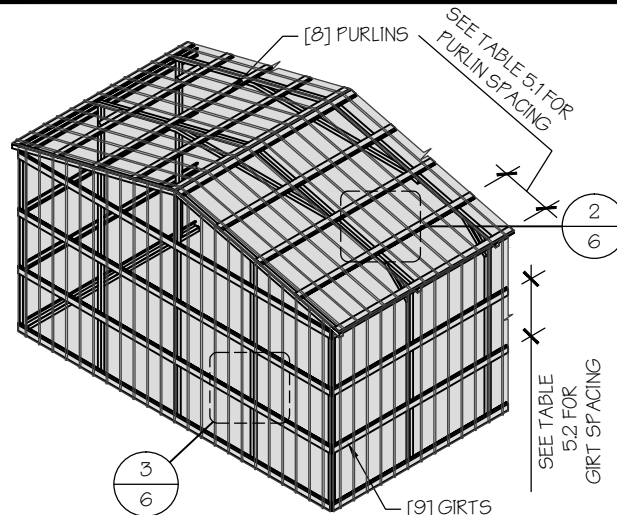


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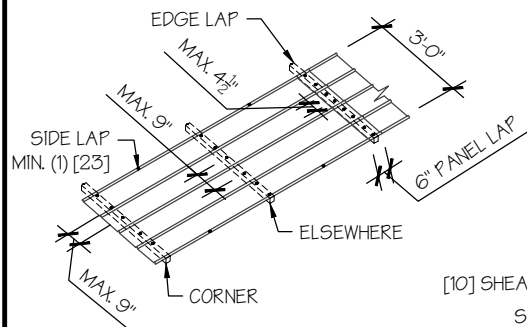
☐ TYP. HORIZONTAL SHEATHING  
SCALE: NTS



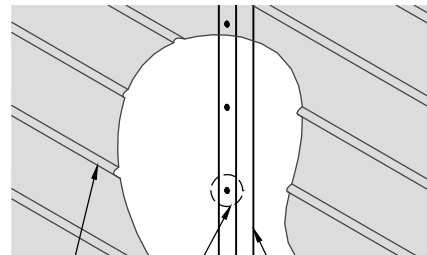
☐ TYP. VERTICAL SHEATHING  
SCALE: NTS

#### GENERAL SHEATHING NOTES:

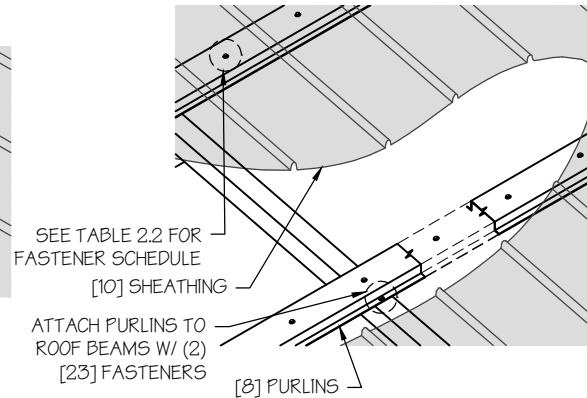
1. REGULAR STYLE BUILDINGS CAN ONLY HAVE HORIZONTAL SHEATHING ON ROOF AND WALLS.
2. A-FRAME STYLE BUILDINGS CAN HAVE ANY COMBINATION OF HORIZONTAL OR VERTICAL SHEATHING ON ROOFS AND WALLS.
3. BOTH HORIZONTAL AND VERTICALS ROOF SHEATHING CAN HAVE MAX. 6" OVERHANG.
4. USING VERTICAL SHEATHING MAY ALLOW FOR GREATER FRAME SPACING. SEE NOTE 2 UNDER TABLE 4.
5. VERTICAL SHEATHING RECOMMENDED FOR BUILDINGS 30' OR LONGER



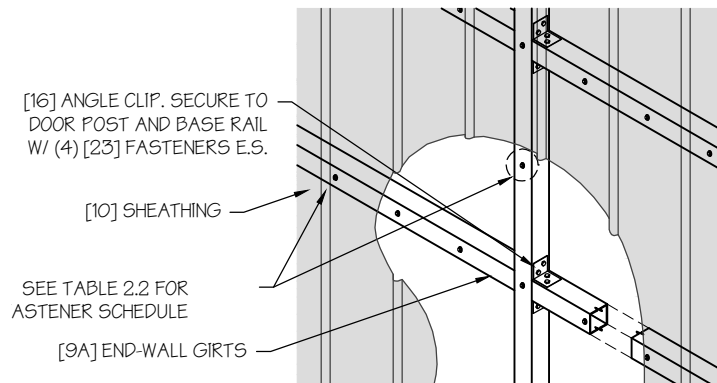
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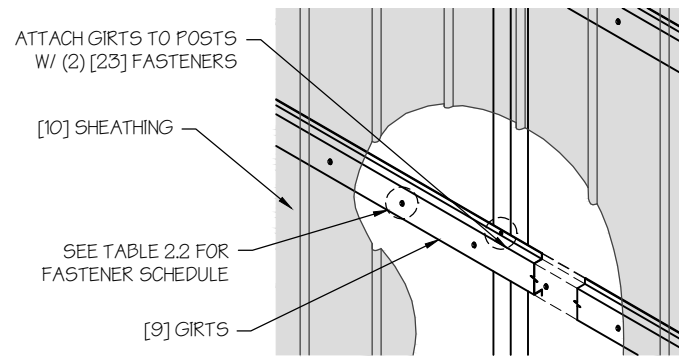
TYP. HORIZONTAL SHEATHING DETAIL 1  
SCALE: NTS



ROOF VERTICAL SHEATHING DETAIL 2  
SCALE: NTS



☐ WALL VERTICAL SHEATHING - TUBE DETAIL 3  
SCALE: NTS



☐ WALL VERTICAL SHEATHING - HAT CHANNEL DETAIL 3  
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PROJECT: 24'-0" WIDE BUILDINGS

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SHEET TITLE:

SHEATHING OPTIONS  
& DETAILS

SHEET NO.: 6 / 11

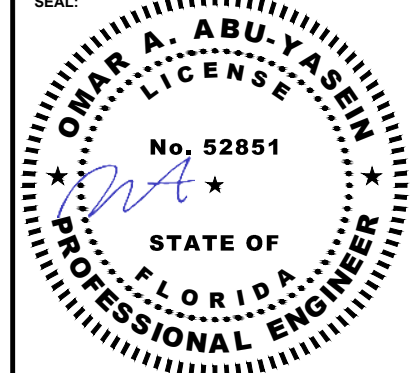
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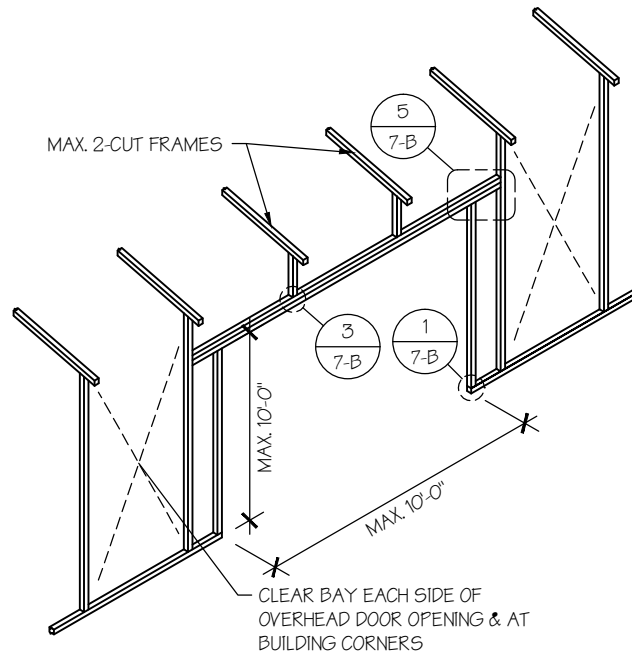
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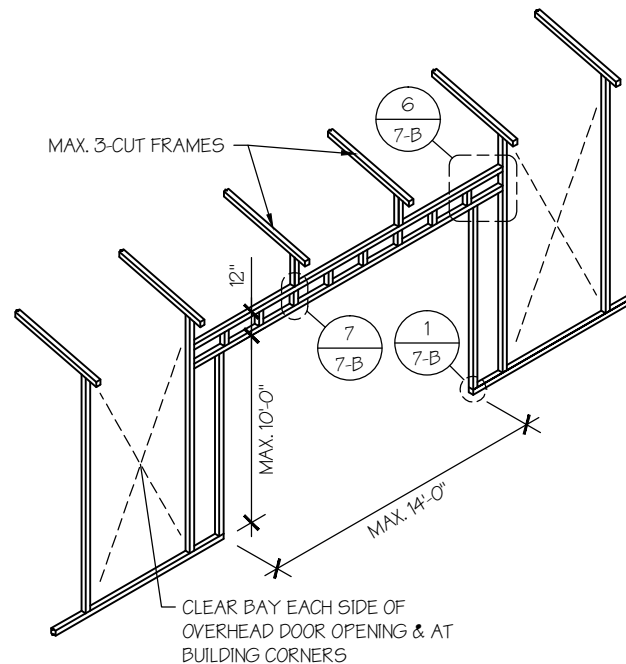
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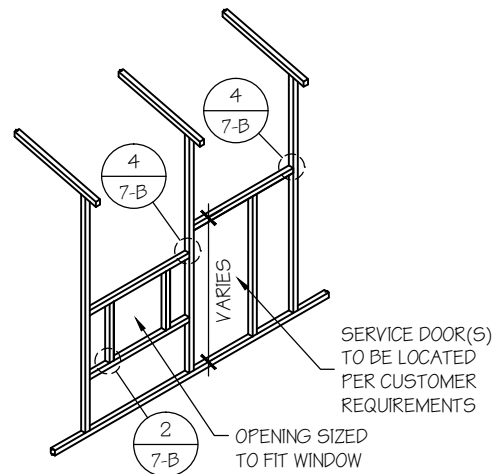
☐ SIDE WALL OVERHEAD DOOR OPENINGS

SCALE: NTS



☐ SIDE WALL OVERHEAD DOOR OPENINGS WITH TRUSS STYLE HEADER

SCALE: NTS



☐ SIDE WALL SERVICE DOOR / WINDOW OPENINGS

SCALE: NTS

#### SIDE WALL FRAMING NOTES:

1. TRUSS-STYLE HEADERS ARE REQUIRED FOR WHERE THE GROUND SNOW LOAD IS 40 PSF OR GREATER.
2. DESIGNS AND DETAILS SHOWN HERE ARE APPLICABLE TO BOTH REGULAR AND A-FRAME STYLE BUILDINGS.
3. MAX. HEIGHT OF SIDE WALL OVERHEAD DOOR OPENINGS IS 2 FT LESS THAN THE EAVE HEIGHT.
4. OVERHEAD DOOR OPENINGS CANNOT CUT THROUGH MORE THAN 2 FULL FRAMES.
5. MIN. 1 CLEAR BAY MUST BE MAINTAINED BETWEEN ANY 2 OVERHEAD DOOR OPENINGS. A CLEAR BAY IS A SPACE BETWEEN TWO FRAMES THAT HAS NO OVERHEAD DOOR OPENINGS.
6. MIN. 1 CLEAR BAY MUST ALSO BE MAINTAINED FROM THE BUILDING CORNERS.
7. SERVICE DOORS AND WINDOWS CAN BE PLACED IN CLEAR BAYS OR ANY WHERE ELSE AS NEEDED.

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SIDE WALL FRAMING  
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SHEET NO.: 7-A / 11

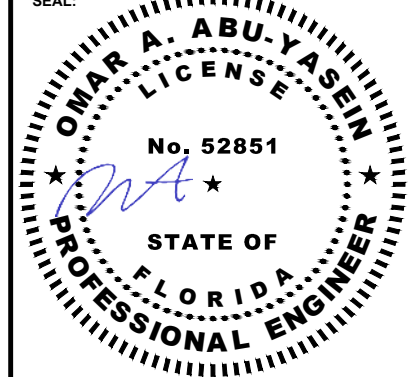
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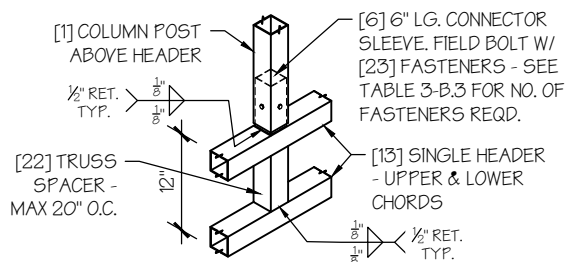
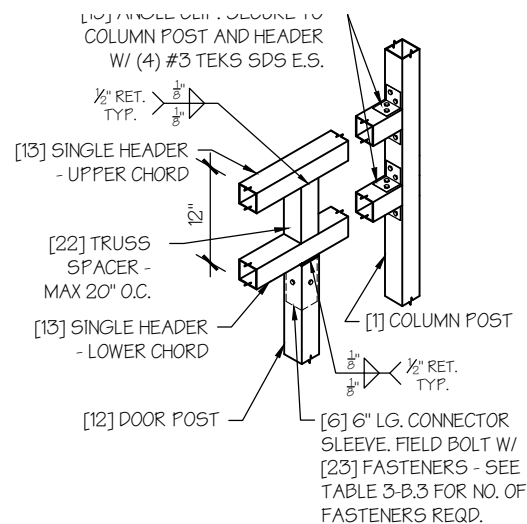
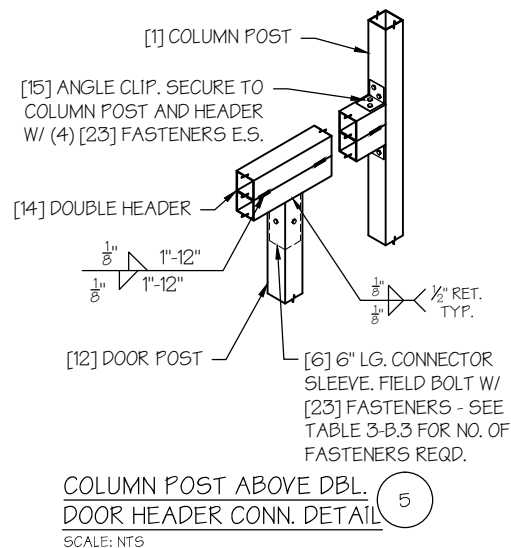
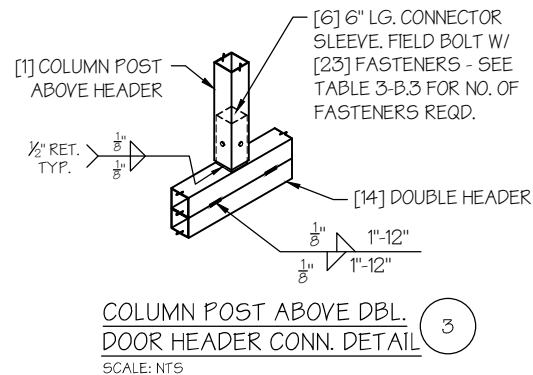
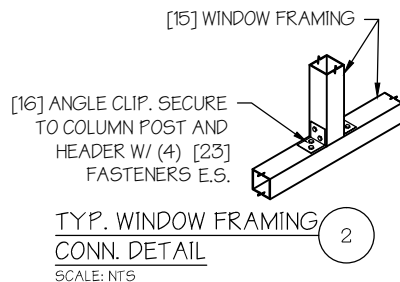
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## SIDE WALL FRAMING DETAILS

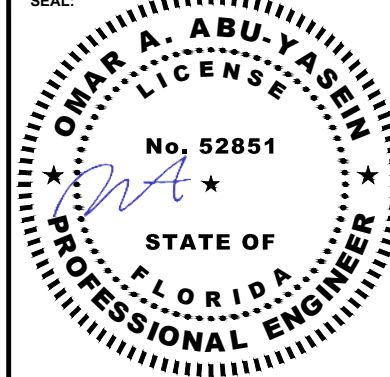
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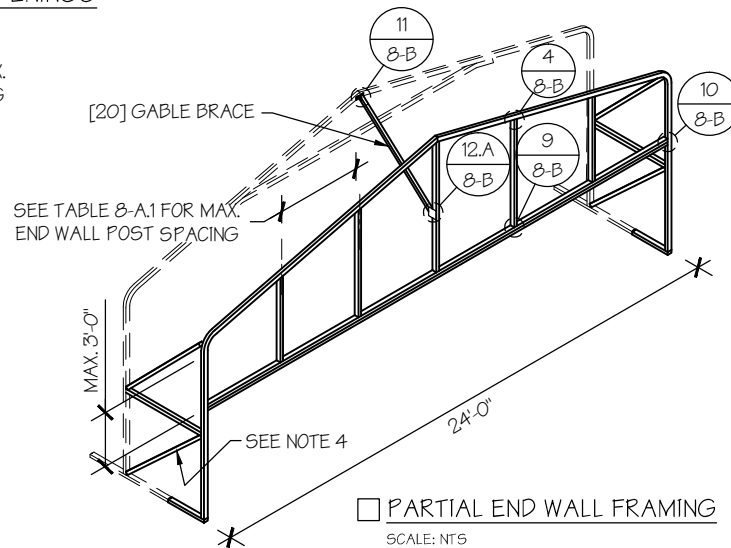
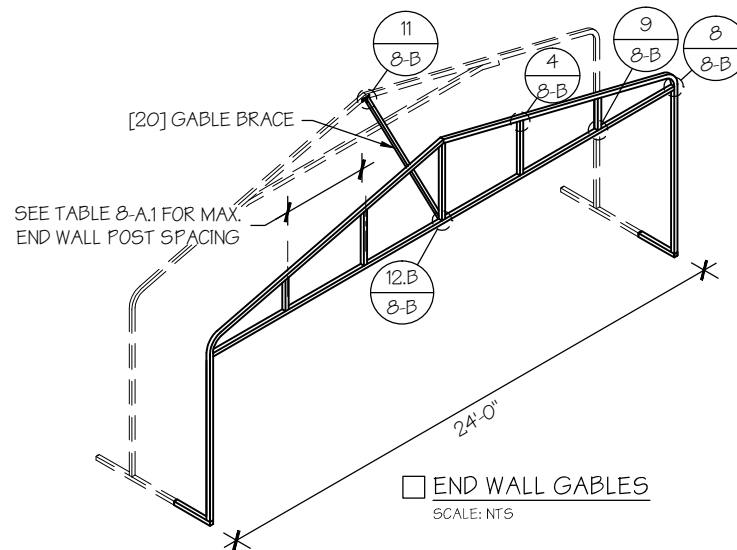
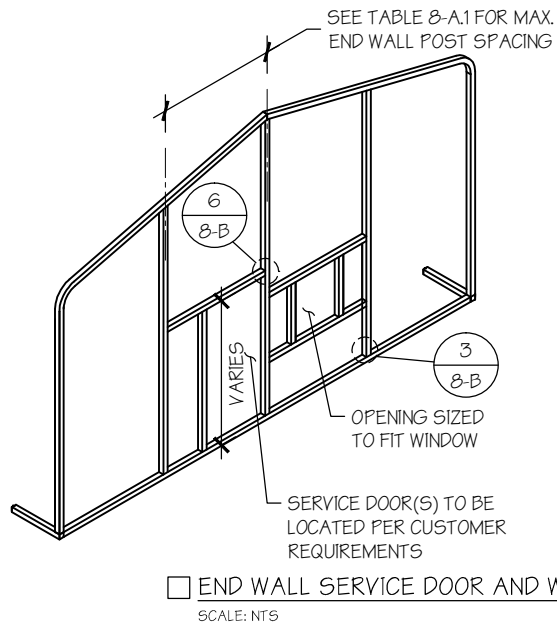
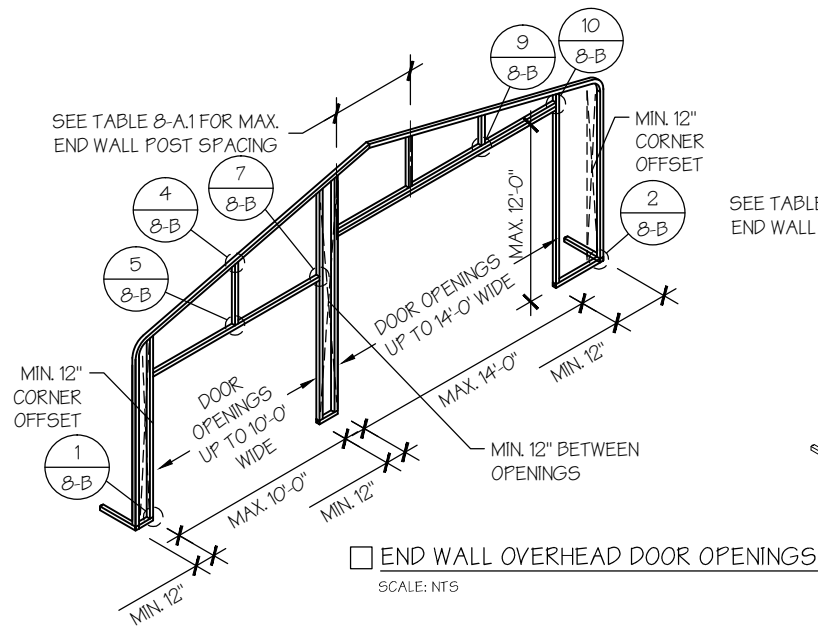


TABLE 8-A.1: END WALL POST SPACING SCHEDULE

WIND SPEED (MPH)	EAVE HEIGHT		
	UP TO 7'	8' TO 9'	10' TO 12'
□ 105	5'	5'	5'
□ 115	5'	5'	4.5'
□ 130	4.5'	4.5'	4'
□ 140	4.5'	4.5'	3'
□ 155	4'	4'	2.5'
□ 165 - 180	3.5'	3'	2'

#### END WALL FRAMING NOTES:

- DESIGNS AND DETAILS SHOWN HERE ARE APPLICABLE TO BOTH REGULAR AND A-FRAME STYLE BUILDINGS.
- MIN. 12" CLEARANCE MUST BE MAINTAINED BETWEEN ANY TWO OPENINGS (OVERHEAD DOOR OR SERVICE DOOR) AND FROM CORNERS.
- SERVICE DOORS AND WINDOWS CAN BE PLACED AS NEEDED.
- DIAGONAL BRACES NEED TO BE ADDED FOR PARTIAL END WALL ENCLOSURES. SEE SHEET 9 FOR DIAGONAL BRACE CONNECTION DETAILS.

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END WALL FRAMING

SHEET NO.: 8-A / 11

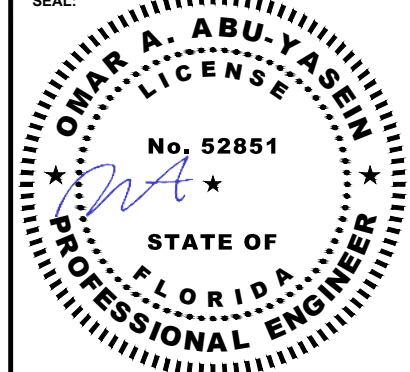
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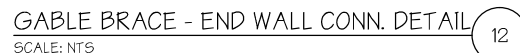
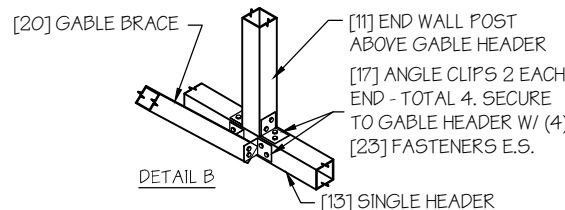
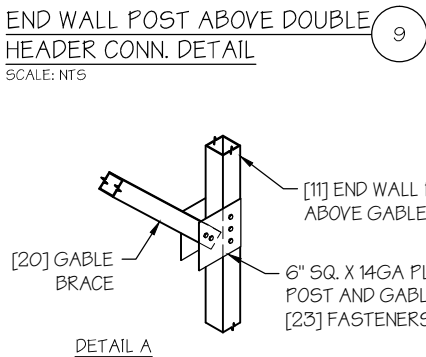
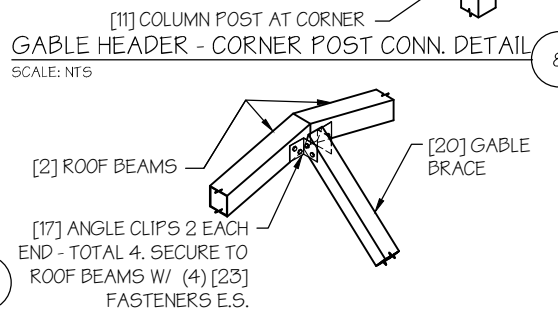
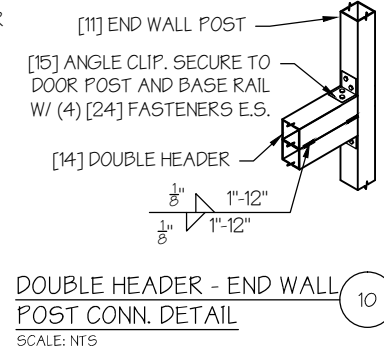
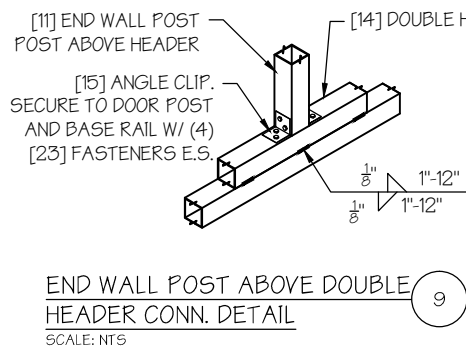
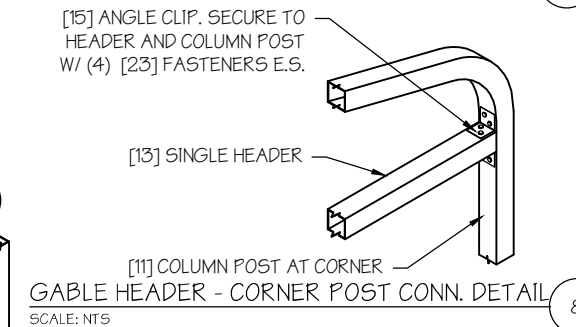
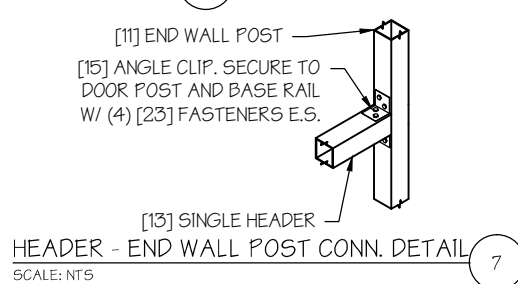
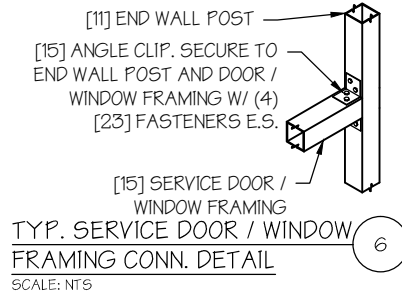
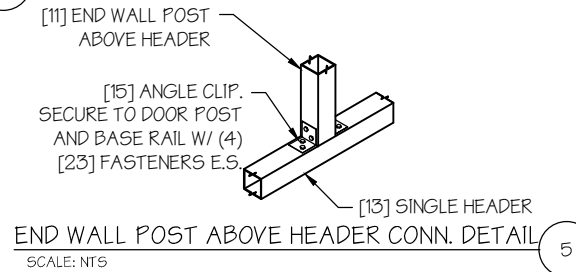
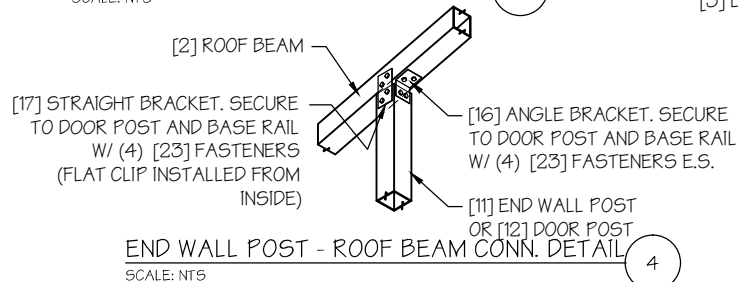
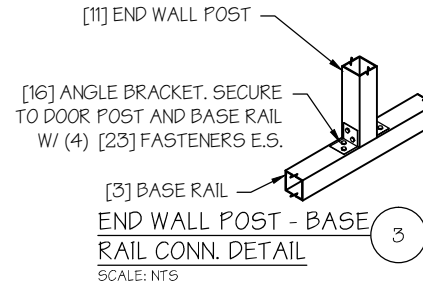
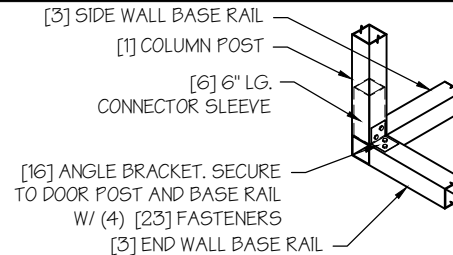
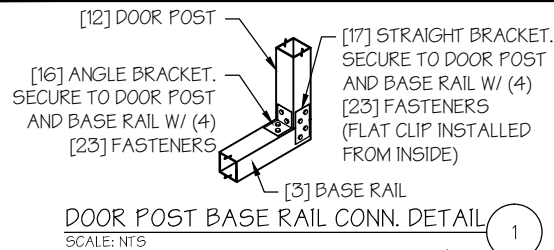
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#### DRAWING INFORMATION

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LOCATION: STATE OF FLORIDA

PROJECT NO.: 711-23-3491

SHEET TITLE:

END WALL FRAMING  
DETAILS

SHEET NO.: 8-B / 11

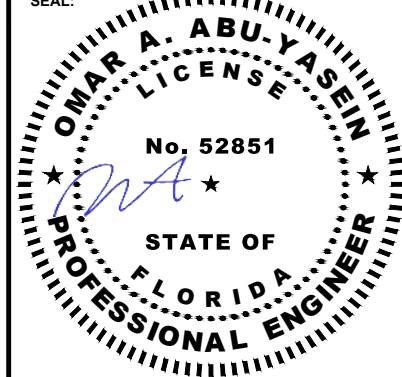
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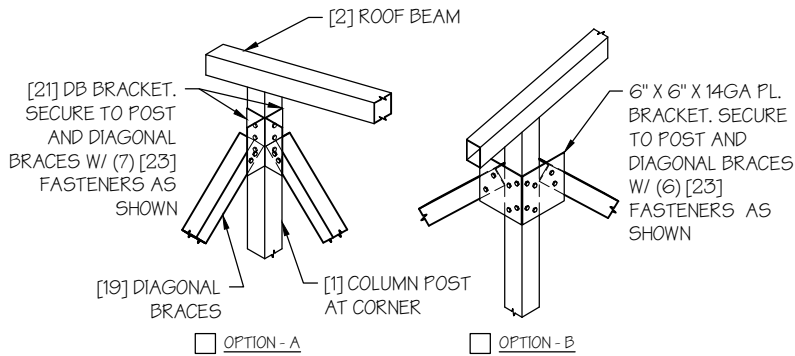
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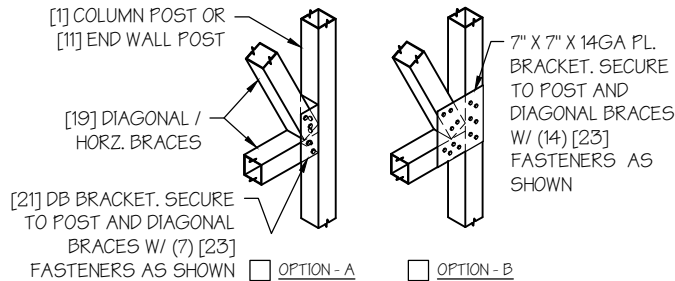
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DIAGONAL BRACE TOP CORNER CONN. DETAIL\*

SCALE: NTS

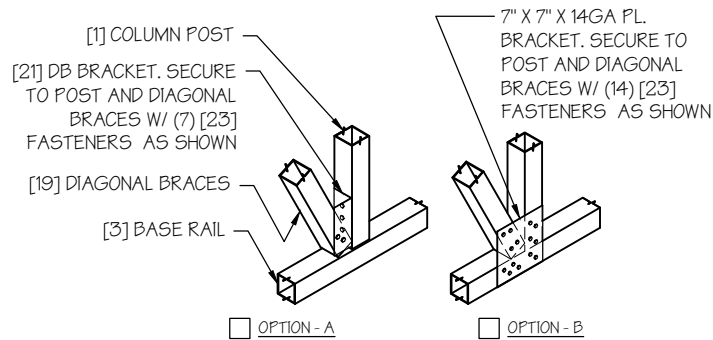
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DIAGONAL BRACE - POST CONN. DETAIL\*

SCALE: NTS

2

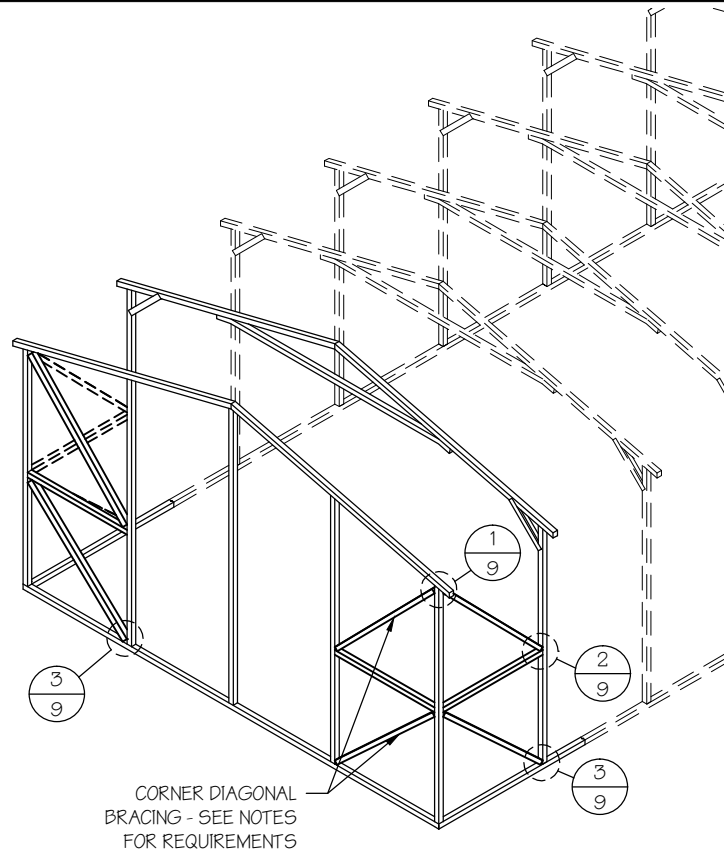


DIAGONAL BRACE BOT. CORNER CONN. DETAIL\*

SCALE: NTS

3

\* INSIDE VIEW SHOWN FOR CLARITY



DIAGONAL BRACING AT CORNERS

SCALE: NTS

#### CORNER BRACING NOTES:

1. DIAGONAL BRACING AT BUILDING CORNERS IS REQUIRED FOR ALL BUILDINGS IN LOCATIONS WHERE WIND SPEED IS 140 MPH OR GREATER.  
- FOR 3 SIDED ENCLOSED BUILDINGS 140 MPH OR GREATER WIND SPEED - THE BUILDING MUST BE DESIGNED WITH OPEN BUILDING SPACING AND DIAGONAL BRACING IS REQUIRED ON ALL ENCLOSED WALLS.
2. SIDE-WALL DIAGONAL BRACING IS REQUIRED WHEN THE ADJACENT END-WALL IS PARTIALLY ENCLOSED.
3. ALL BUILDINGS WITH IRREGULAR ENCLOSURE (SEE SHEET 5) WILL REQUIRE SIDE-WALL BRACING CLOSE TO THE PARTIALLY ENCLOSED END-WALL.

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#### DRAWING INFORMATION

PROJECT: 24'-0" WIDE BUILDINGS

LOCATION: STATE OF FLORIDA

PROJECT NO.: 711-23-3491

SHEET TITLE:

CORNER BRACING  
DETAILS

SHEET NO.: 9 / 11

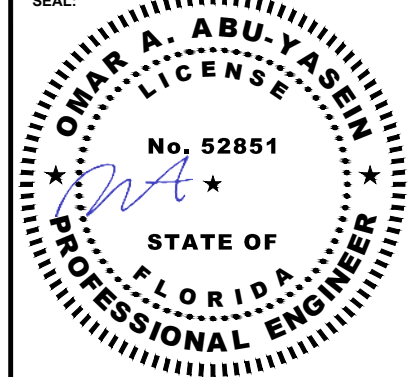
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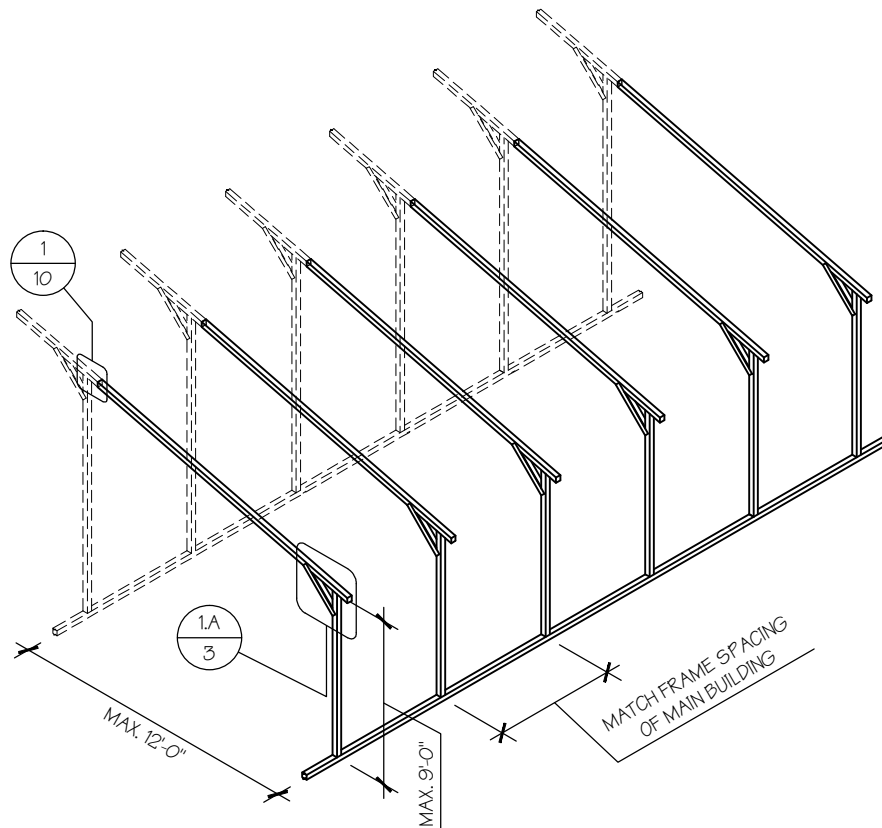
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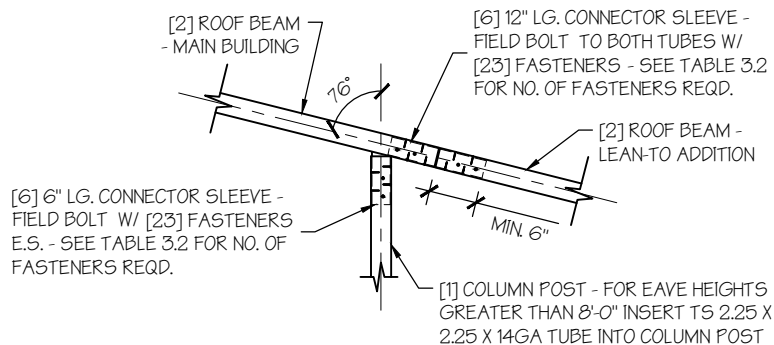
DATE SIGNED: 12-27-2023





□ OPTIONAL LEAN-TO ADDITION

SCALE: NTS



LEAN-TO ATTACHMENT DETAIL

SCALE: NTS

1

#### LEAN-TO ADDITION NOTES:

1. LEAN-TO ADDITIONS CAN BE ADDED ON EITHER OR BOTH SIDES OF THE BUILDING.
2. ROOF SLOPE, PURLIN, GIRT AND FRAME SPACING OF THE ADDITION HAVE TO MATCH THAT OF THE MAIN STRUCTURE.
3. IF THE LEAN-TO ADDITION IS "OPEN" (BOTH END WALLS OR SIDE WALL IS NOT ENCLOSED), THE DESIGN OF THE MAIN BUILDING HAS TO USE THE FRAME SPACING OF AN OPEN BUILDING FROM TABLE 4.

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#### DRAWING INFORMATION

PROJECT: 24'-0" WIDE BUILDINGS

LOCATION: STATE OF FLORIDA

PROJECT NO.: 711-23-3491

SHEET TITLE:

OPTIONAL LEAN-TO  
ADDITION

SHEET NO.: 10 / 11

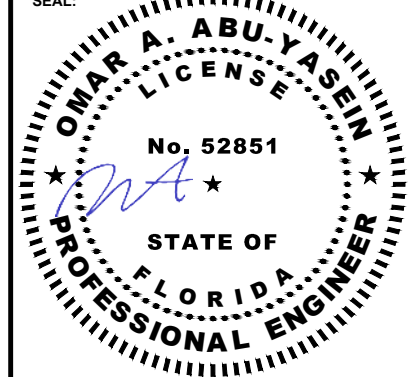
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## CONCRETE SLAB FOUNDATION NOTES:

- DESIGNS SHOWN ON THIS SHEET ARE FOR CONCRETE SLAB FOUNDATION. ANY OF THE FOUNDATIONS SHOWN ON SHEETS 11-A THRU C CAN BE USED.
- CONCRETE ANCHORS SHALL BE LOCATED NEXT TO EVERY POST AND ON EITHER SIDE OF OPENINGS. TWO ANCHORS SHALL BE INSTALLED AT CORNERS OF ENCLOSED BUILDINGS WITH END WALLS - ONE ON EACH BASE RAIL. IN LOCATIONS REQUIRING TWO ANCHORS DUE TO WIND, ONE ANCHOR IS TO BE ON EACH SIDE OF THE COLUMN POST.
- ANCHORS IN CLOSE PROXIMITY TO EACH OTHER MUST HAVE A MIN. 4" SPACING.
- MIN. NUMBER OF CONCRETE ANCHORS PER POST SHALL BE AS SHOWN IN TABLE 11-A.2.
- THE SIZE OF THE SLAB SHALL BE THE SIZE (WIDTH AND LENGTH) OF THE BUILDING PLUS  $5\frac{1}{2}$ " FOR 14GA MATERIAL AND  $5\frac{3}{4}$ " FOR 12GA MATERIAL.
- DEPTH OF SLAB TURN DOWN FOOTING SHALL BE GREATER THAN FROST DEPTH SPECIFIED PER LOCAL CODE.
- CONTROL JOINTS SHALL BE PLACED SO AS TO LIMIT MAX. SLAB SPANS TO 20' IN EACH DIRECTION.
- ASSUMED SOIL BEARING CAPACITY IS TO BE A MIN. OF 1500 PSF.
- CONCRETE STRENGTH TO BE A MIN OF 2500 PSI @ 28 DAYS.

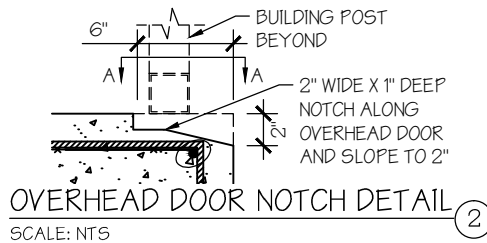
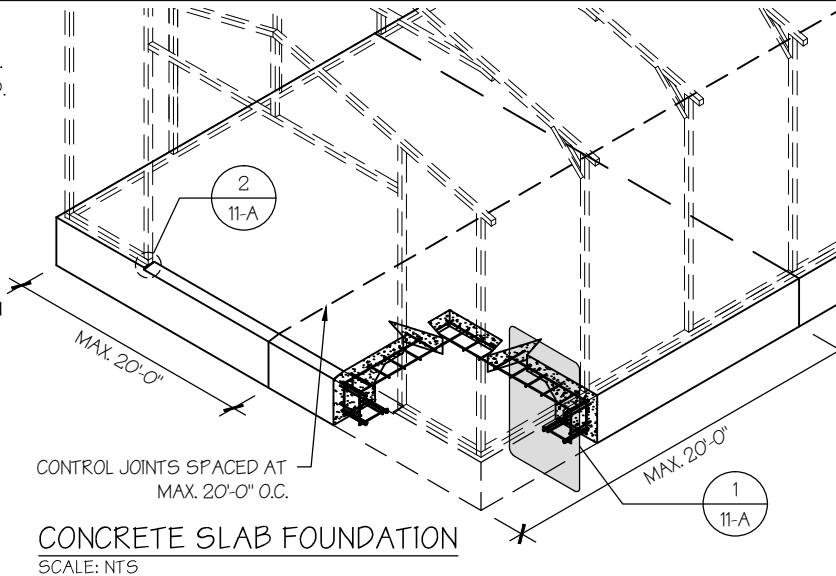


TABLE 11-A.2: CONCRETE SLAB ANCHOR SCHEDULE

ENCLOSURE	WIND SPEED (MPH)	ANCHOR SIZE/NUMBER
ENCLOSED	105 TO 135	(1) 1/2"Ø X 7"
	136 TO 180	(2) 1/2"Ø X 7"
OPEN	105 TO 135	(1) 1/2"Ø X 7"
	136 TO 180	(2) 1/2"Ø X 7"

### NOTES:

- ANCHORS ARE TO BE CONCRETE WEDGE OR EXPANSION ANCHORS.
- MIN. EMBEDMENT DEPTH TO BE  $2\frac{2}{3}$ ".
- ANCHORS TO BE SPACED NO MORE THAN 6" FROM POSTS.

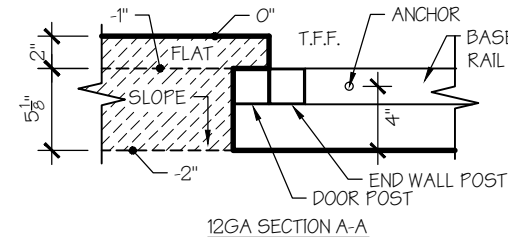
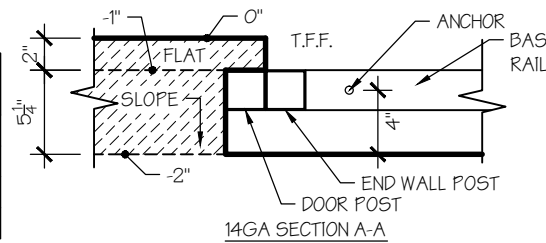
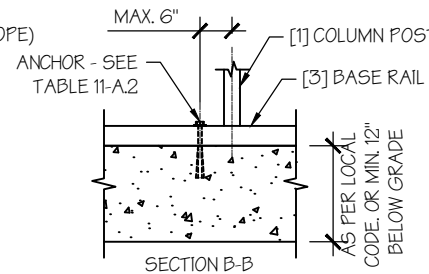
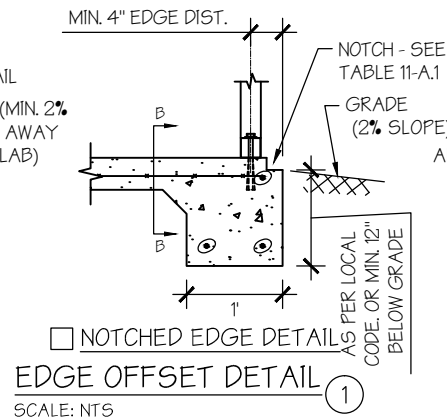
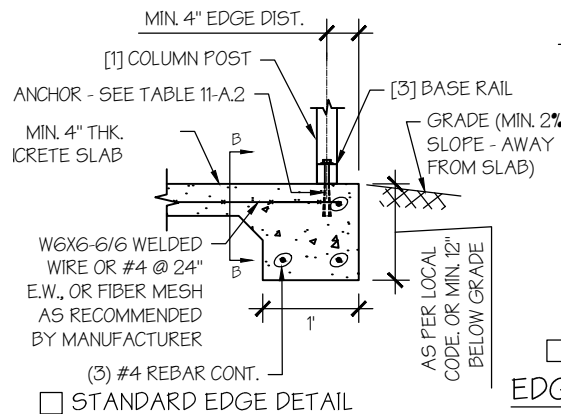


TABLE 11-A.1: NOTCH WIDTH

HORIZONTAL/OPEN	VERTICAL
14GA	12GA
2 3/4"	2 7/8"
14GA	12GA
13/4"	17/8"

NOTE: DEPTH IS TO BE 1 1/2"



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## DRAWING INFORMATION

PROJECT: 24'-0" WIDE BUILDINGS

LOCATION: STATE OF FLORIDA

PROJECT NO.: 711-23-3491

SHEET TITLE:

FOUNDATION OPTION 1:  
CONCRETE SLAB

SHEET NO.: 11-A / 11

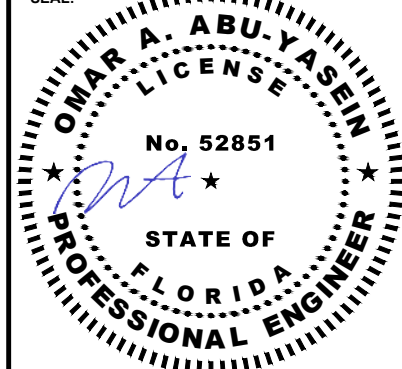
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## CONCRETE SLAB FOUNDATION NOTES:

- DESIGNS SHOWN ON THIS SHEET ARE FOR CONCRETE SLAB FOUNDATION. ANY OF THE FOUNDATIONS SHOWN ON SHEETS 11-A THRU C CAN BE USED.
- CONCRETE ANCHORS SHALL BE LOCATED NEXT TO EVERY POST AND ON EITHER SIDE OF OPENINGS. TWO ANCHORS SHALL BE INSTALLED AT CORNERS OF ENCLOSED BUILDINGS WITH END WALLS - ONE ON EACH BASE RAIL. IN LOCATIONS REQUIRING TWO ANCHORS DUE TO WIND, ONE ANCHOR IS TO BE ON EACH SIDE OF THE COLUMN POST.
- ANCHORS IN CLOSE PROXIMITY TO EACH OTHER MUST HAVE A MIN. 4" SPACING.
- MIN. NUMBER OF CONCRETE ANCHORS PER POST SHALL BE AS SHOWN IN TABLE 11-A.1.
- THE SIZE OF THE SLAB SHALL BE THE SIZE (WIDTH AND LENGTH) OF THE BUILDING PLUS  $\frac{1}{2}$ " FOR 14GA MATERIAL AND 1" FOR 12GA MATERIAL.
- DEPTH OF SLAB TURN DOWN FOOTING SHALL BE GREATER THAN FROST DEPTH SPECIFIED PER LOCAL CODE.
- CONTROL JOINTS SHALL BE PLACED SO AS TO LIMIT MAX. SLAB SPANS TO 20' IN EACH DIRECTION.
- ASSUMED SOIL BEARING CAPACITY IS TO BE A MIN. OF 1500 PSF.
- CONCRETE STRENGTH TO BE A MIN OF 2500 PSI @ 28 DAYS.

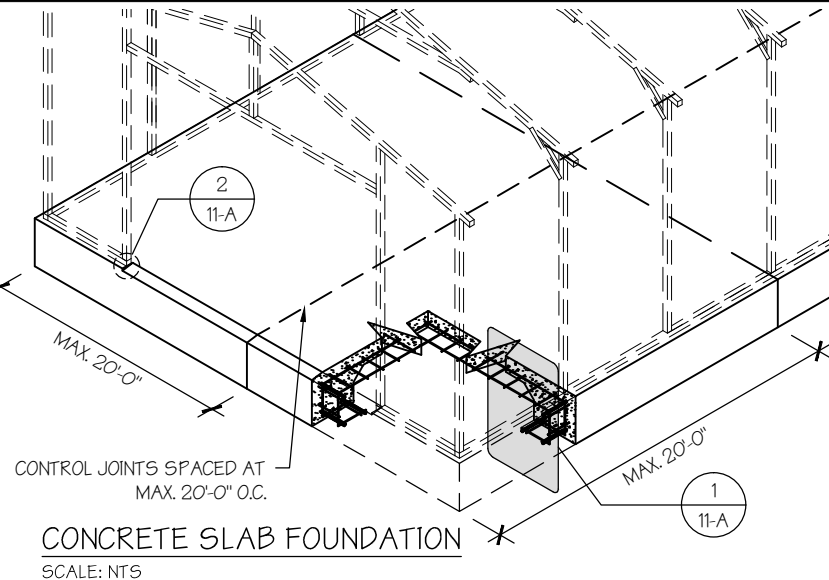
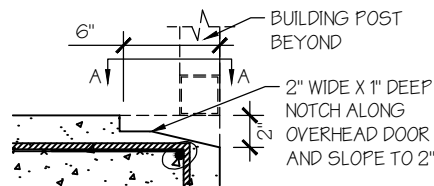


TABLE 11-A.1: CONCRETE SLAB ANCHOR SCHEDULE

ENCLOSURE	WIND SPEED (MPH)	ANCHOR SIZE/NUMBER
ENCLOSED	105 TO 135	(1) 1/2" Ø X 7"
	136 TO 180	(2) 1/2" Ø X 7"
OPEN	105 TO 135	(1) 1/2" Ø X 7"
	136 TO 180	(2) 1/2" Ø X 7"

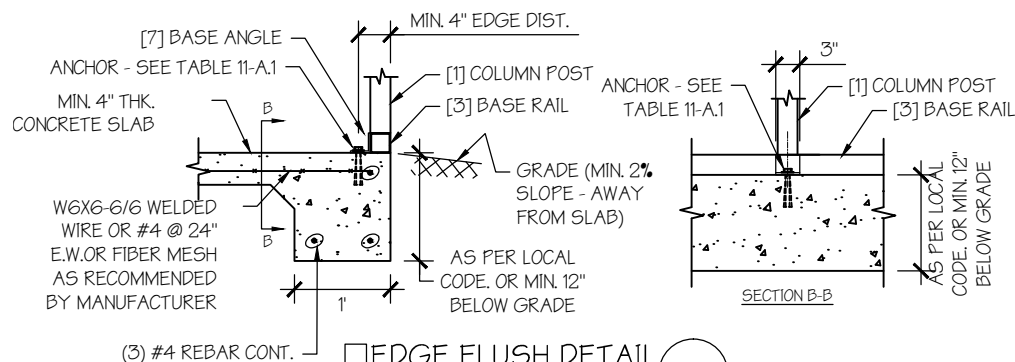
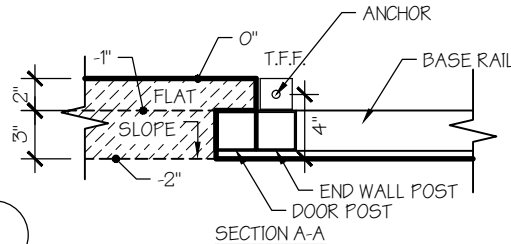
### NOTES:

- ANCHORS ARE TO BE CONCRETE WEDGE OR EXPANSION ANCHORS.
- MIN. EMBEDMENT DEPTH TO BE  $2\frac{7}{8}$ ".
- ANCHORS TO BE SPACED NO MORE THAN 6" FROM POSTS.



OVERHEAD DOOR NOTCH DETAIL

SCALE: NTS



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## DRAWING INFORMATION

PROJECT: 24'-0" WIDE BUILDINGS

LOCATION: STATE OF FLORIDA

PROJECT NO.: 711-23-3491

SHEET TITLE:

FOUNDATION OPTION 1:  
CONCRETE SLAB

SHEET NO.: 11-A / 11

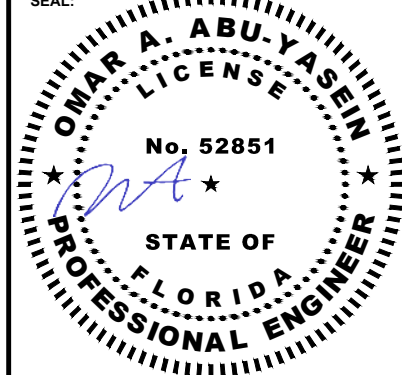
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TABLE 11-B.1: ANCHOR SCHEDULE

ENCLOSURE	WIND SPEED (MPH)	ANCHOR SIZE/NUMBER
ENCLOSED	□105 TO 135	(1) 1/2"Ø X 7"
	□136 TO 180	(2) 1/2"Ø X 7"
OPEN	□105 TO 135	(1) 1/2"Ø X 7"
	□136 TO 180	(2) 1/2"Ø X 7"

## NOTES:

1. ANCHORS ARE TO BE CONCRETE WEDGE OR EXPANSION ANCHORS.
2. MIN. EMBEDMENT DEPTH TO BE 2 3/8".
3. ANCHORS TO BE SPACED NO MORE THAN 6" FROM POSTS.

TABLE 11-B.2: CONC. STRIP SCHEDULE

WIND SPEED (MPH)	MIN. SIZE REQD.
□105 TO 130	15" X 12"
□140 TO 155	24" X 12"
□165 TO 180	30" X 12"
	24 X 15"
	20" X 18"

## NOTES:

1. WIDTH AND DEPTH DIMENSIONS CAN BE INTERCHANGED.

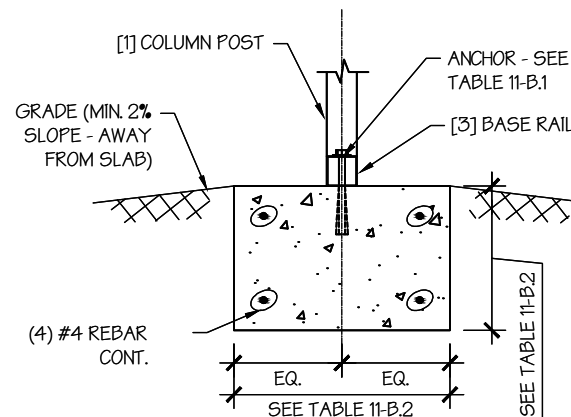
FOOTING OPTIONAL AT OPEN  
END WALLS AND OVERHEAD  
DOOR OPENINGS

## CONCRETE STRIP FOUNDATION NOTES:

1. DESIGNS SHOWN ON THIS SHEET ARE FOR CONCRETE STRIP FOUNDATION. ANY OF THE FOUNDATIONS SHOWN ON SHEETS 11-A THRU C CAN BE USED.
2. CONCRETE ANCHORS SHALL BE LOCATED NEXT TO EVERY POST AND ON EITHER SIDE OF OPENINGS. TWO ANCHORS SHALL BE INSTALLED AT CORNERS OF ENCLOSED BUILDINGS WITH END WALLS - ONE ON EACH BASE RAIL. IN LOCATIONS REQUIRING TWO ANCHORS DUE TO WIND, ONE ANCHOR IS TO BE ON EACH SIDE OF THE COLUMN POST.
3. MIN. NUMBER OF CONCRETE ANCHORS PER POST SHALL BE AS SHOWN IN TABLE 11-B.1.
4. ANCHORS IN CLOSE PROXIMITY TO EACH OTHER MUST HAVE A MIN. 4" SPACING.
5. DEPTH OF CONCRETE STRIP FOOTING SHALL BE GREATER THAN FROST DEPTH SPECIFIED PER LOCAL CODE.
6. ASSUMED SOIL BEARING CAPACITY IS TO BE A MIN. OF 1500 PSF.
7. CONCRETE STRENGTH TO BE A MIN. OF 2500 PSI @ 28 DAYS.
8. BUILDING IS TO BE MOUNTED ON THE CENTER OF THE STRIP FOUNDATION.

## CONCRETE STRIP FOUNDATION

SCALE: NTS



## CONCRETE STRIP FOUNDATION DETAIL

SCALE: NTS

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## DRAWING INFORMATION

PROJECT: 24'-0" WIDE BUILDINGS

LOCATION: STATE OF FLORIDA

PROJECT NO.: 711-23-3491

SHEET TITLE:

FOUNDATION OPTION 2:  
CONCRETE STRIP

SHEET NO.: 11-B / 11

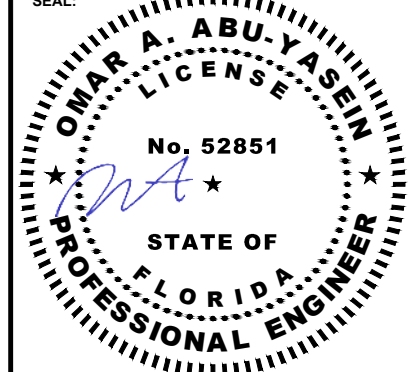
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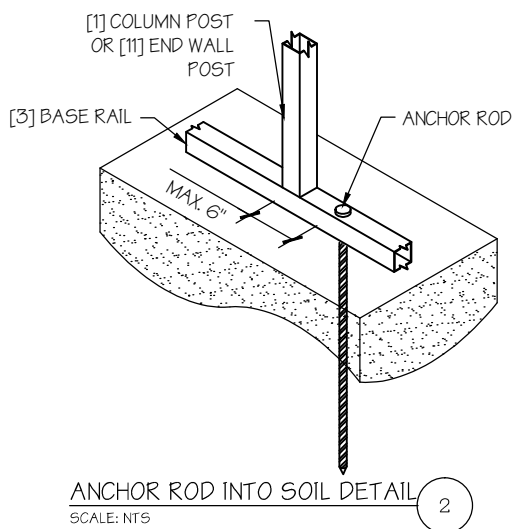
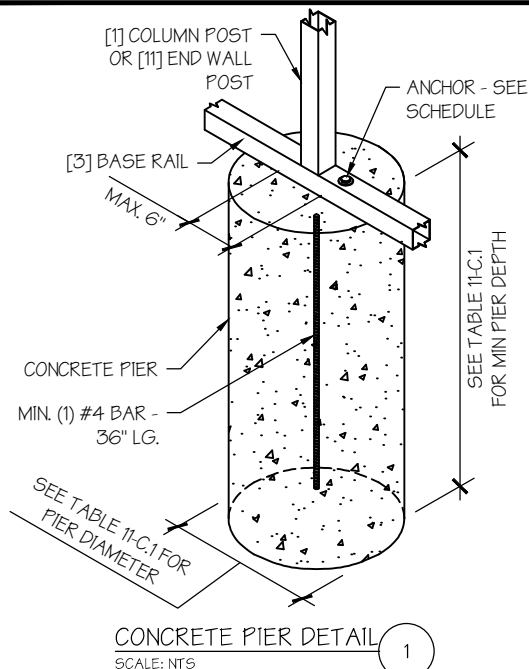
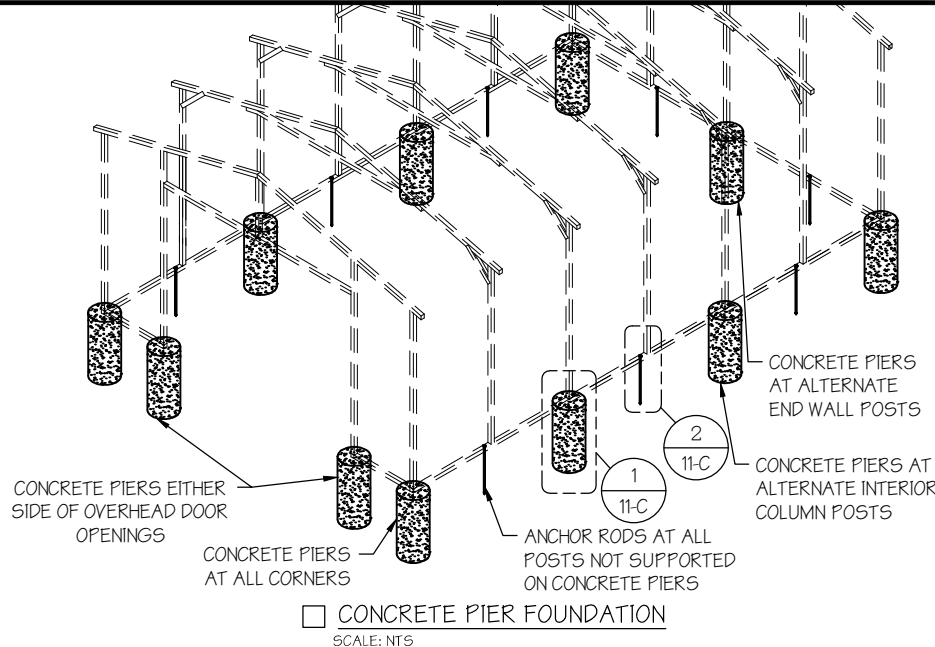


TABLE 11-C.1: CONC. PIER SCHEDULE

WIND SPEED (MPH)	MIN. SIZE REQD.
105 TO 130	24"Ø X 36"
140 TO 155	24"Ø X 42"
165 TO 180	24"Ø X 48"



**CONCRETE PIER FOUNDATION NOTES:**

- DESIGNS SHOWN ON THIS SHEET ARE FOR CONCRETE PIER FOUNDATION. ANY OF THE FOUNDATIONS SHOWN ON SHEETS 11-A THRU C CAN BE USED.
- CONCRETE PIERS SHALL BE LOCATED AT ALL 4 CORNERS, ON EACH SIDE OF OVERHEAD DOOR OPENINGS AND ON ALTERNATE INTERIOR COLUMN POSTS AND END WALLS POSTS.
- TWO ANCHORS SHALL BE INSTALLED AT CORNERS OF ENCLOSED BUILDINGS WITH END WALLS - ONE ON EACH BASE RAIL. IN LOCATIONS REQUIRING TWO ANCHORS DUE TO WIND, ONE ANCHOR IS TO BE ON EACH SIDE OF THE COLUMN POST WITH A PIER.
- ANCHORS IN CLOSE PROXIMITY TO EACH OTHER MUST HAVE A MIN. 4" SPACING.
- MIN. NUMBER OF CONCRETE ANCHORS PER POST WITH A PIER SHALL BE AS SHOWN IN TABLE 11-C.2.
- TWO ANCHORS AND A PIER ARE REQUIRED AT DIAGONAL BRACING LOCATIONS WHEN REQUIRED.
- ALL POSTS NOT SUPPORTED ON CONCRETE PIERS SHALL BE ANCHORED TO THE GROUND WITH A 1/2" X 30" LG. THREADED ROD. RODS WILL HAVE A PRE-FORMED HEAD AT THE TOP AND ONE COAT OF RUST PROOF MATERIAL.
- PIERS SHALL BE FORMED BY DIGGING A HOLE OF THE SAME SIZE AS THE PIER ON LEVEL GRADE AND FILLING IT WITH CONCRETE. THRD. ROD ANCHORS SHOULD BE DROPPED INTO THE PIERS PRIOR TO POURING THE CONCRETE.
- ASSUMED SOIL BEARING CAPACITY IS TO BE A MIN. OF 1500 PSF.
- CONCRETE STRENGTH TO BE A MIN OF 2500 PSI @ 28 DAYS.

TABLE 11-C.2: ANCHOR SCHEDULE

ENCLOSURE	WIND SPEED (MPH)	ANCHOR SIZE/NUMBER
ENCLOSED	105 TO 135	(1) 1/2"Ø X 7"
	136 TO 180	(2) 1/2"Ø X 7"
OPEN	105 TO 135	(1) 1/2"Ø X 7"
	136 TO 180	(2) 1/2"Ø X 7"

**NOTES:**

- ANCHORS ARE TO BE CONCRETE WEDGE OR EXPANSION ANCHORS.
- MIN. EMBEDMENT DEPTH TO BE 2 7/8".
- ANCHORS TO BE SPACED NO MORE THAN 6" FROM POSTS.

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**DRAWING INFORMATION**

PROJECT: 24'-0" WIDE BUILDINGS

LOCATION: STATE OF FLORIDA

PROJECT NO.: 711-23-3491

SHEET TITLE:

FOUNDATION OPTION 3:  
CONCRETE PIERS

SHEET NO.: 11-C / 11

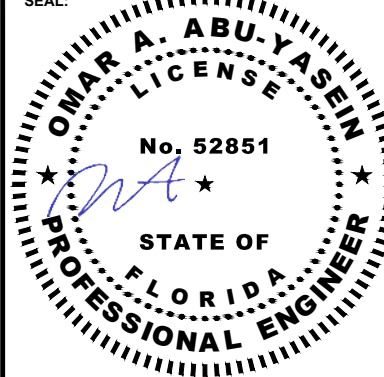
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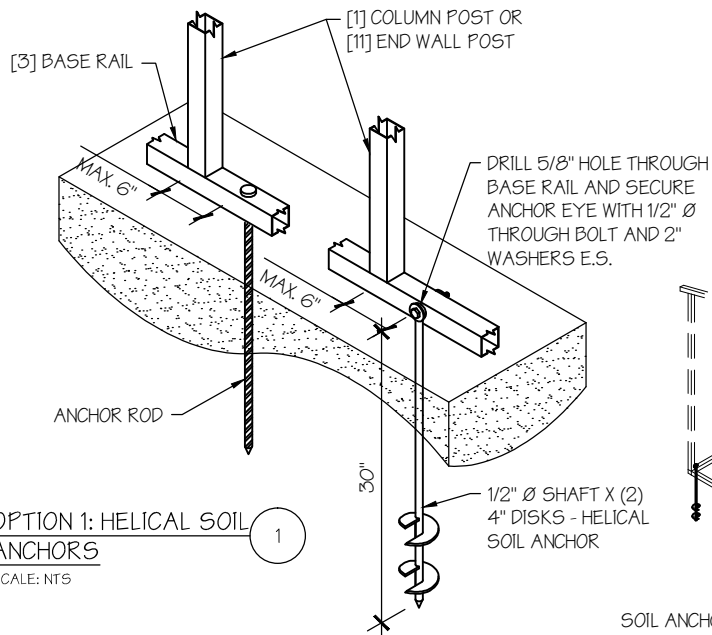
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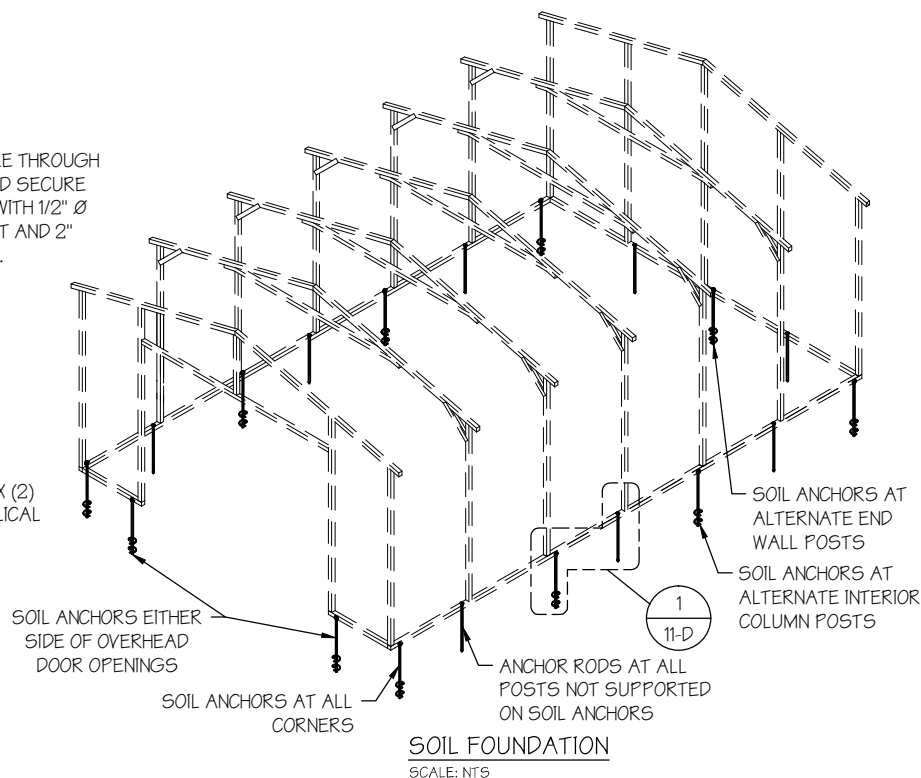


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☐ **OPTION 1: HELICAL SOIL ANCHORS**  
SCALE: NTS



☐ **OPTION 2: ROCK / ASPHALT ANCHORS**  
SCALE: NTS

#### SOIL FOUNDATION NOTES:

- DESIGNS SHOWN ON THIS SHEET ARE FOR SOIL ANCHOR FOUNDATION.
- SOIL ANCHORS (HELICAL OR ROCK/ASPHALT) SHALL BE LOCATED AT ALL 4 CORNERS, ON EACH SIDE OF OVERHEAD DOOR OPENINGS, ON POSTS WITH DIAGONAL BRACING IF REQUIRED, AND ON ALTERNATE INTERIOR COLUMN POSTS AND END WALLS POSTS.
- HELICAL ANCHORS ARE TO BE USED ONLY IF THE DRIVING TORQUE INTO THE GROUND IS 150 FT-LBS OR GREATER. MANUFACTURER IS NOT RESPONSIBLE FOR SOIL QUALITY AT SITE.
- HELICAL ANCHORS CAN ONLY BE USED FOR CLASS 2, 3 & 4 SOILS (SEE SOIL CLASSIFICATIONS THIS PAGE).
- ALL POSTS WITH NO ANCHORS ADJACENT SHALL BE ANCHORED TO THE GROUND WITH A 1/2" X 30" LG. ROD. RODS WILL HAVE A PRE-FORMED HEAD AT THE TOP AND ONE COAT OF RUST PROOF MATERIAL.
- ASSUMED SOIL BEARING CAPACITY IS TO BE A MIN. OF 1500 PSF.

#### SOIL CLASSIFICATIONS:

SOIL CLASS	DESCRIPTION
2	SANDY GRAVEL AND GRAVEL, VERY THIN DENSE AND/OR CEMENTED SANDS, COARSE GRAVEL/COBBLES, PRELOADED SILTS, CLAYS AND CORAL.
3	SAND, SILTY SAND, CLAYEY SAND, SILTY GRAVEL, MEDIUM DENSE COARSE SANDS, SANDY GRAVEL, VERY STIFF SILT AND SANDY CLAYS.
4	LOOSE TO MEDIUM DENSE SANDS, FIRM TO STIFF CLAYS AND SILTS AND ALLUVIAL FILLS.

\*FROM HUD "MODEL MANUFACTURED HOME INSTALLATION STANDARDS"

MANUFACTURED BY:



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Metal buildings,  
Barns, Carports,  
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ENGINEERED BY:



**A&A ENGINEERING**  
CIVIL • STRUCTURAL

6036 Renaissance Place, Toledo, OH 43623  
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www.aa-engineers.com

#### DRAWING INFORMATION

**PROJECT:** 24'-0" WIDE BUILDINGS

**LOCATION:** STATE OF FLORIDA

**PROJECT NO.:** 711-23-3491

**SHEET TITLE:**

FOUNDATION OPTION 4:  
SOIL ANCHORS

**SHEET NO.:** 11-D / 11

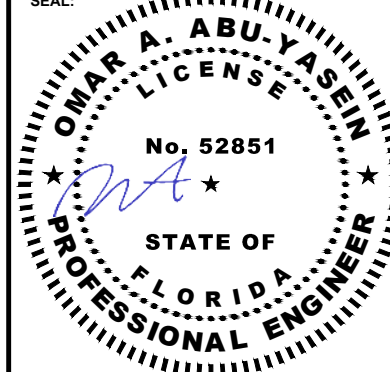
**DRAWN BY:** A.W. **DATE:** 1/26/22

**CHECKED BY:** OAA **DATE:** 1/26/22

#### LEGAL INFORMATION

- ANY DUPLICATION OF THIS DRAWING IN WHOLE OR PART IS STRICTLY FORBIDDEN. ANYONE DOING SO WILL BE PROSECUTED UNDER THE FULL EXTENT OF THE LAW.  
- DRAWINGS VALID UP TO 1 YEAR FROM DATE OF ISSUE.

SEAL:



**STAMP EXPIRY:** 02-28-2025

**DATE SIGNED:** 12-27-2023