

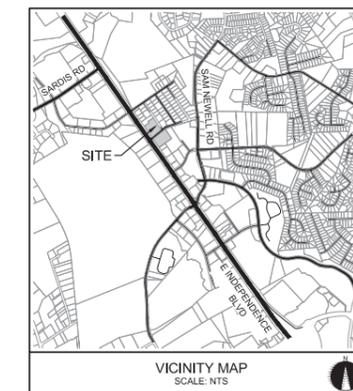






LANDSCAPE ARCHITECTURE  
CIVIL ENGINEERING  
TRANSPORTATION PLANNING

2459 Wilkinson Blvd, Ste 200 Charlotte, NC 28208  
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INFINITY OF CHARLOTTE

**DEVELOPMENT NOTES**

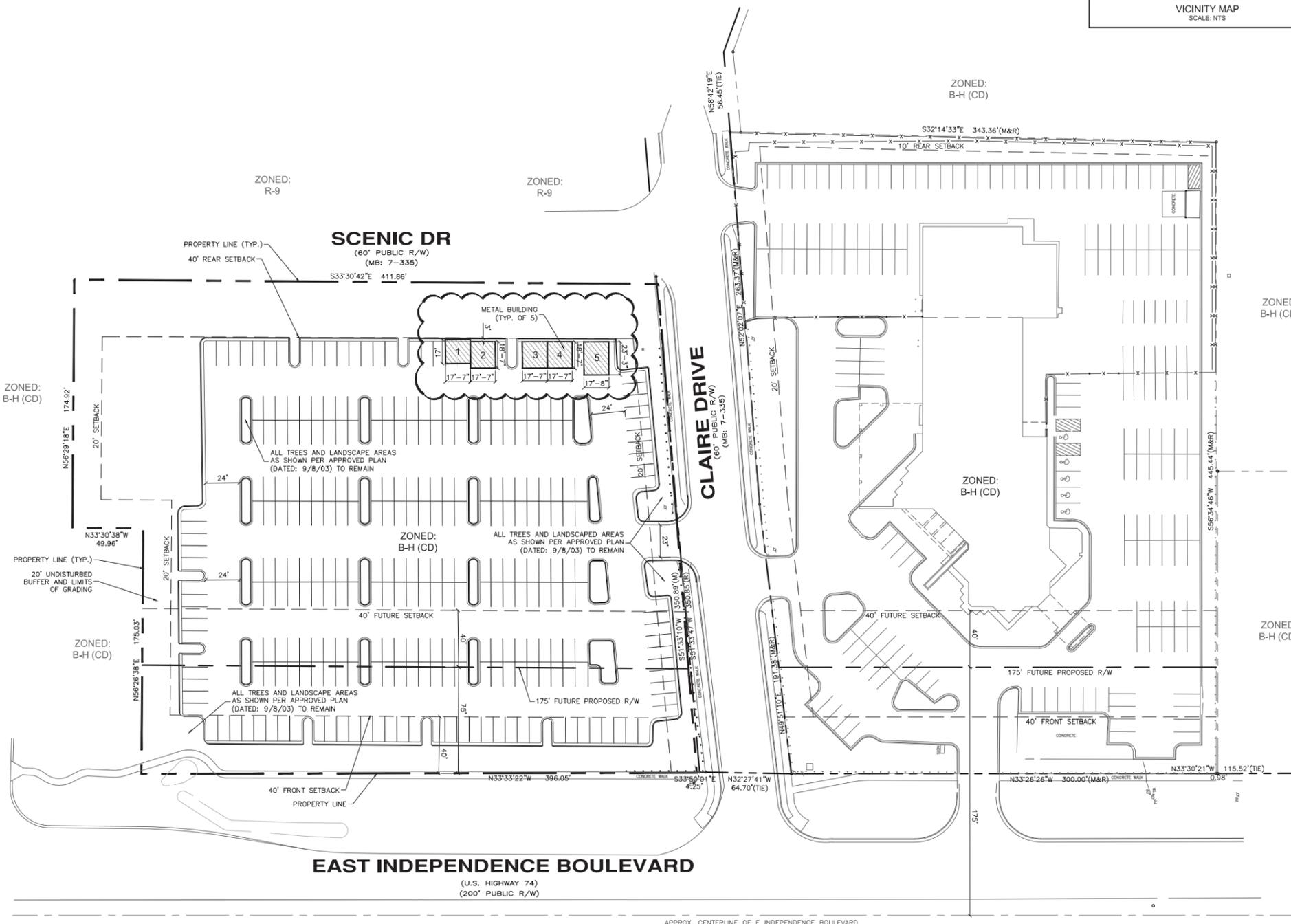
- DEVELOPMENT OF THE SITE WILL BE CONTROLLED BY THE STANDARDS DEPICTED ON THIS SITE PLAN AND BY THE STANDARDS OF THE MATTHEWS ZONING ORDINANCE. THE DEVELOPMENT DEPICTED ON THIS PLAN IS INTENDED TO REFLECT THE ARRANGEMENT OF PROPOSED USES ON THE SITE, BUT EXACT CONFIGURATION, PLACEMENT, AND SIZE OF INDIVIDUAL SITE ELEMENTS MAY BE ALTERED OR MODIFIED WITHIN THE LIMITS PRESCRIBED BY THE ORDINANCE, DURING THE DESIGN DEVELOPMENT AND CONSTRUCTION PHASES.
- THIS PETITION AMENDS AN EXISTING PLAN FOR THE SITE OCCUPIED BY AN AUTOMOBILE DEALERSHIP AND ADDS A NEW SITE TO THE OVERALL PLAN FOR ADDITIONAL PARKING. THE PROPOSED USE OF THE NEW PORTION OF THE SITE COVERED BY THIS PETITION IS FOR THE PARKING AND STORAGE OF VEHICLES THAT MAY BE BROUGHT TO THE ADJOINING AUTOMOBILE DEALERSHIP SITE FOR SALE OR SERVICE ON THAT SITE, VISITORS TO THE DEALERSHIP, AND EMPLOYEES OF THE DEALERSHIP, AND RELATED BUFFERS. FIVE OPEN METAL STRUCTURES WILL BE ADDED FOR THE PURPOSE OF DETAILING NEW AND USED VEHICLES. THE AREA WILL NOT BE USED FOR THE STORAGE OF INOPERABLE OR WRECKED VEHICLES. ANY PERMITS SOUGHT FOR TEMPORARY USES OF THE SITE MUST FULLY COMPLY WITH THE PROVISIONS OF THIS SITE PLAN.
- BUFFER AREA WILL BE DEVELOPED IN ACCORDANCE WITH THE PROVISIONS OF THE MATTHEWS ZONING ORDINANCE. REQUIRED BUFFERS ON THE SITE MAY BE ELIMINATED IF THE ADJOINING PARCELS ARE REZONED SUCH THAT BUFFERS ARE NO LONGER REQUIRED, EXCEPT THAT THE BUFFER AREA ON THE SOUTHWEST SIDE OF THE SITE MAY ONLY BE REMOVED WITH THE CONSENT FOR THE PROPERTY OWNER. THE AREA OF THE SITE LABELED ON THE SITE PLAN AS "UNDISTURBED" WILL NOT BE CLEARED OR GRADED. SECURITY FENCING MAY BE INSTALLED ON THE SIDE OF THE UNDISTURBED BUFFER AREAS AND WILL BE LIMITED TO 6' IN HEIGHT.
- STORMWATER DETENTION FACILITIES WILL BE DESIGNED TO MEET THE APPLICABLE STANDARDS OF THE TOWN OF MATTHEWS. THE PETITIONER WILL CONSTRUCT STORM WATER FACILITIES IN SUCH A FASHION THAT NO IMPOUNDMENT OF WATER WILL OCCUR BEYOND THE BOUNDARIES OF THE PETITIONER'S SITE. IN ADDITION, THE STORMWATER DETENTION FACILITIES WILL BE DESIGNED SO AS TO DIRECT THE DISCHARGE FROM THE FACILITY TOWARD THE ROADSIDE DRAINAGE ALONG INDEPENDENCE BLVD.
- SIGNAGE ON THE SITE WILL COMPLY WITH THE PROVISIONS OF THE MATTHEWS ZONING ORDINANCE. NO SIGNAGE WILL BE PERMITTED ON THE PORTION OF THE SITE THAT IS LOCATED WEST OF CLAIRE DRIVE. IN ADDITION, NO BANNERS, PENNANTS, BALLOONS, OR OTHER SIMILAR MATERIALS OR DISPLAYS WILL BE PERMITTED ON THE SITE.
- PARKING, IF REQUIRED BY THE ZONING ORDINANCE FOR THE PROPOSED USE, WILL BE PROVIDED WHICH WILL MEET OR EXCEED THE STANDARDS OF THE ZONING ORDINANCE. THE TOTAL NUMBER OF PARKING SPACES ON THE PORTION OF THE SITE LOCATED WEST OF CLAIRE DRIVE WILL NOT EXCEED 316 SPACES. ALL PARKING OF VEHICLES, INCLUDING CUSTOMER VEHICLES, VEHICLES FOR SALE, AND EMPLOYEE VEHICLES WILL BE PARKED ON THE PETITIONER'S SITE AND NOT ON CLAIRE DRIVE.
- SCREENING, IF APPLICABLE, WILL CONFORM TO THE STANDARDS OF THE ZONING ORDINANCE.
- SITE LIGHTING WILL BE LIMITED TO 25 FEET IN HEIGHT. ALL LIGHT FIXTURES WILL BE DESIGNED TO DIRECT LIGHT INTO THE SITE AND AWAY FROM ADJOINING PROPERTIES. THE LIGHTING AND LIGHT FIXTURES FOR THE EXPANDED PARKING WILL BE DESIGNED AND OPERATED IN CONJUNCTION WITH THE LIGHTING ON THE EXISTING SITE. THE LIGHTS TURN ON AND OFF AT TIMES THAT VARY WITH THE TIME OF YEAR, BUT GENERALLY THEY TURN ON AT DUSK AND GO OFF BETWEEN 10:00 AND 11:00 IN THE EVENING. A FEW OF THE LIGHTS WILL REMAIN ON FOR SECURITY PURPOSES BUT THE LIGHTS THAT WILL BE LOCATED NEAREST TO SCENIC DRIVE WILL TURN OFF. NO OUTDOOR SPEAKERS OR INTERCOM SYSTEMS WILL BE PLACED ANYWHERE WITHIN THE SITE.
- THE PETITIONER WILL CONSTRUCT A 5' SIDEWALK ALONG INDEPENDENCE BLVD., AS GENERALLY DEPICTED ON THE SITE PLAN, IF APPROVED BY NCDOT.
- ADDITIONAL DECORATIVE LANDSCAPING WILL BE INSTALLED AS PART OF THE SITE DEVELOPMENT FOR THE NEW PORTION OF THE SITE AS GENERALLY DEPICTED ON THE SITE PLAN. IN ADDITION, TREES WILL BE PLANTED WITHIN AND ADJACENT TO THE LANDSCAPED AREAS AND BETWEEN THE LANDSCAPED AREAS AS GENERALLY DEPICTED ON THE SITE PLAN. THE VARIETY OF TREES TO BE PLANTED WILL BE APPROVED BY THE MATTHEWS PLANNING DEPARTMENT, SUBJECT TO THE RESTRICTIONS IMPOSED BY DUKE ENERGY COMPANY FOR THE PLANTING OF TREES IN PROXIMITY TO OVERHEAD POWER LINES. THE INTENT OF THIS TREE PLANTING IS TO PROVIDE A VARIETY OF TREE SIZES AND SHAPES TO COMPLIMENT THE SITE AND TO CREATE A UNIQUE DEPARTURE FROM THE TYPICAL FRONTAGE USES FOUND ALONG THIS PORTION OF INDEPENDENCE BLVD.
- ACCESS TO THE SITE WILL BE PROVIDED BY NEW OR RELOCATED CONNECTIONS TO CLAIRE DR. AND AN EXISTING CONNECTION TO INDEPENDENCE BLVD. AS GENERALLY DEPICTED ON THE SITE PLAN. NO ACCESS TO THE PORTION OF THE SITE LOCATED WEST OF CLAIRE DRIVE WILL BE ALLOWED FROM INDEPENDENCE BLVD. THE PETITIONER WILL NOTIFY THE COMPANIES THAT DELIVER VEHICLES TO THE SITE AND INFORM THEM THAT THEY MUST UNLOAD VEHICLES ONLY ON THE PETITIONER'S SITE AND MAY NOT UNLOAD VEHICLES ON CLAIRE DRIVE. THE LETTERS WILL ALSO INDICATE THAT THE MATTHEWS POLICE WILL BE CALLED IF ANY TRANSPORT TRUCK UNLOADS OR ATTEMPTS TO UNLOAD ON CLAIRE DRIVE. COPIES OF THESE LETTERS WILL BE PROVIDED TO THE TOWN. THIS IS A CONTINUING OBLIGATION THAT RUNS WITH THE LAND SO LONG AS THIS CONDITION APPLIES TO THE SITE. DRIVEWAY DIMENSIONS WILL BE SUFFICIENT TO ACCOMMODATE THE TURNING RADI OF THE VEHICLES TRANSPORTING CARS TO THE SITE.
- THE PRIOR RESTRICTION ON THE NUMBER OF VEHICLES THAT CAN BE MARKETED FROM THE EXISTING, PREVIOUSLY APPROVED SITE PLAN ON THE EAST SIDE OF CLAIRE DRIVE WILL REMAIN IN FORCE. IN ADDITION, NO DISPLAY OF VEHICLES WILL BE PERMITTED ON THE GRASSED AREAS OF THE SITE BETWEEN THE PARKING LOTS AND THE PUBLIC STREET RIGHT-OF-WAY. THE LOADING AND UNLOADING OF MOTOR VEHICLES FROM TRANSPORT TRUCKS WILL ONLY OCCUR ON THE SITE AND NOT WITHIN ANY PUBLIC STREET RIGHT-OF-WAY.
- THROUGHOUT THIS REZONING PETITION, THE TERMS "OWNER", "OWNERS", "PETITIONER", OR "PETITIONERS", SHALL, WITH RESPECT TO THE SITE, BE DEEMED TO INCLUDE THE HEIRS, DEVISEES, PERSONAL REPRESENTATIVES, SUCCESSORS IN INTEREST AND ASSIGNEES OF THE OWNER OR OWNERS OF THE SITE WHO MAY BE INVOLVED IN ITS DEVELOPMENT FROM TIME TO TIME.

INITIAL SUBMISSION: MAY 5, 2003  
REVISED PER STAFF COMMENTS: JULY 3, 2003  
REVISED PER PLANNING BOARD APPROVAL: AUGUST 7, 2003  
REVISED PER ADDITIONAL TOWN BOARD COMMENTS: SEPTEMBER 3, 2003  
NOTE 12 REVISED AT TOWN BOARD: SEPTEMBER 8, 2003  
REVISIONS TO SITE PLAN AND PER STAFF COMMENTS: DECEMBER 18, 2017

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**SITE DEVELOPMENT DATA**

TOTAL SITE AREA:	±3.23 ACRES
TAX PARCEL #:	193-201-10
EXISTING ZONING:	B-H (CD)
PROPOSED ZONING:	B-H (CD)
SETBACKS:	
FRONT:	40'
SIDE:	10' CORNER; 10' ABUTTING RESIDENTIAL
REAR:	40'
EXISTING USE:	AUTOMOBILE DEALERSHIP
PROPOSED USE:	TO REMAIN AUTOMOBILE DEALERSHIP
PARKING PROVIDED:	316 SPACES
IMPERVIOUS SURFACE:	1.89 AC
PERCENT IMPERVIOUS:	58.5% (TOTAL SITE)
PETITIONER:	SONIC AUTOMOTIVE 4401 COLWICK ROAD CHARLOTTE, NC 28211



**REZONING**

**INFINITI OF CHARLOTTE**  
MATTHEWS, NORTH CAROLINA

**SONIC AUTOMOTIVE**  
4401 COLWICK ROAD  
CHARLOTTE, NC 28211

**SCHEMATIC SITE PLAN**

SCALE: 1" = 40'

PROJECT #: 340-009  
DRAWN BY: BMS  
CHECKED BY: MM

DECEMBER 18, 2017

REVISIONS:

**RZ1.0**



## REGULAR / A-FRAME 18'-0" WIDE CARPORT STYLE BUILDINGS

MANUFACTURED BY:



**T-N-T**  
**Carports, Inc.**

170 Holly Springs Rd.  
 Mt. Airy, NC 27030  
 1-800-597-3597

ENGINEERED BY:



**A&A ENGINEERING**  
 CIVIL - STRUCTURAL

5911 Renaissance Place, Suite B • Toledo, OH 43623  
 Tel: 419-292-1983 • Fax: 419-292-0935  
 www.a-a-engineers.com

**DESIGN NOTES**

1. ALL CONSTRUCTION SHALL BE PROVIDED IN ACCORDANCE WITH IBC 2009, OSHA, AISC 360, ASCE 7-05, AWS D 1.1 CODES AND ALL APPLICABLE LOCAL REQUIREMENTS.
2. BASE CONNECTIONS SHALL BE PROVIDED AS SHOWN ON FOUNDATION DETAILS SHEET.
3. ALL MATERIALS IDENTIFIED BY MANUFACTURER NAME MAY BE SUBSTITUTED WITH MATERIAL EQUAL OR EXCEEDING ORIGINAL.
4. ALL SHOP CONNECTIONS SHALL BE WELDED CONNECTIONS.
5. ALL FIELD CONNECTIONS SHALL BE TEKS #12 (1/4"x1").
6. STEEL SHEATHING SHALL BE 29GA. CORRUGATED GALV. OR PAINTED STEEL - MAIN RIB HT. 3/4" (FY=80KSI) OR EQ.
7. ALL STRUCTURAL LIGHT GAUGE TUBING AND CHANNELS SHALL BE GRADE 50 STEEL.
8. STRUCTURAL TUBE TS2 1/2"x2 1/2" - 14GA. IS EQUIVALENT TO TS2 1/4"x2 1/4" - 12GA AND EITHER ONE MAY BE USED IN LIEU OF THE OTHER.

**DESIGN CRITERIA**

- PREVAILING CODE: NSBC 2012 (IBC 2009)  
 USE GROUP: U (CARPORTS, BARN)
1. DEAD LOAD (D)  $D = 4$  PSF
  2. ROOF LIVE/SNOW LOAD (Lr)  
 $Lr = 20 - 70$  PSF  
 (AS PER SNOW LOAD)
  3. SNOW LOAD (S)  
 GROUND SNOW LOAD  $P_g = 20 - 90$  PSF  
 IMPORTANCE FACTOR  $I_s = 0.8$
  4. WIND LOAD (W)  
 BASIC WIND SPEED  $V_{ASD} = 90 - 150$  MPH  
 EXPOSURE C  
 IMPORTANCE FACTOR  $I_w = 0.87$  ( $V_{ASD} <= 100$ )  
 $0.77$  ( $V_{ASD} > 100$ )
  5. SEISMIC LOAD (E)  
 DESIGN CATEGORY D  
 IMPORTANCE FACTOR  $I_e = 1.00$

**LOAD COMBINATIONS:**

1.  $D + (Lr \text{ OR } S)$
2.  $D + (W \text{ OR } \pm 0.7E)$
3.  $D + 0.75 (W \text{ OR } \pm 0.7E) + 0.75 (Lr \text{ OR } S)$
4.  $0.6D + (W \text{ OR } \pm 0.7E)$

**DRAWING INDEX**

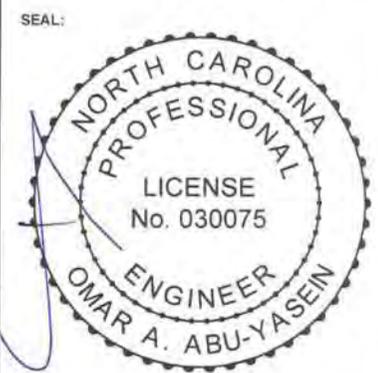
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**DRAWING INFORMATION**

PROJECT: 18'-0" WIDE BUILDINGS  
 LOCATION: STATE OF NORTH CAROLINA  
 PROJECT NO.: 032-14-0811  
 SHEET TITLE: COVER SHEET  
 SHEET NO.: 1 / 11  
 DRAWN BY: IZM DATE: 10/16/14  
 CHECKED BY: OAA DATE: 10/16/14

**LEGAL INFORMATION**

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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 ISSUE: **10/31/2014**  
 CERTIFICATION ON THESE DRAWINGS IS VALID FOR ONE YEAR FROM DATE OF ISSUE

DATE EXPIRES: **12/31/2015**  
 DATE SIGNED: **SEPT 03 2014**

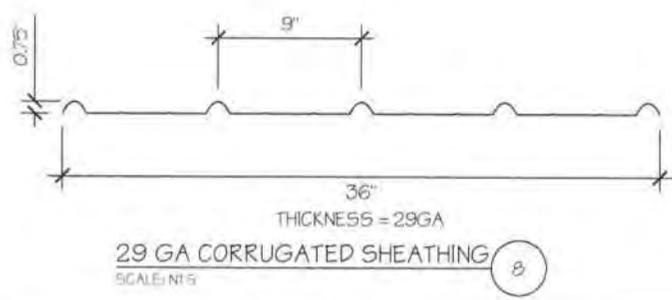
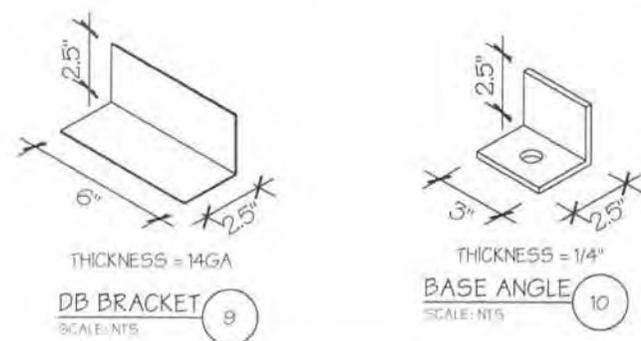
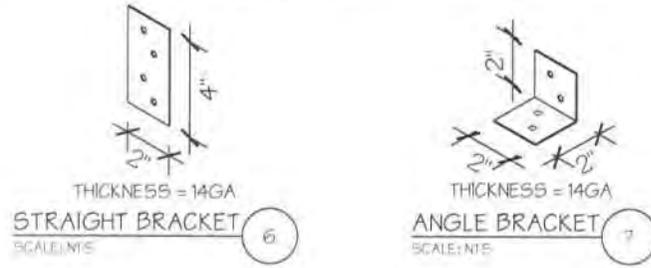
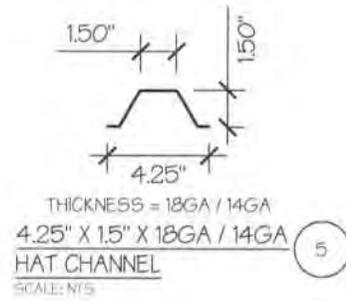
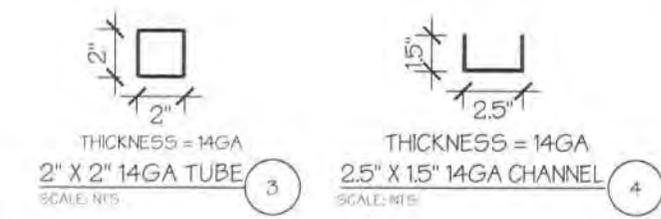
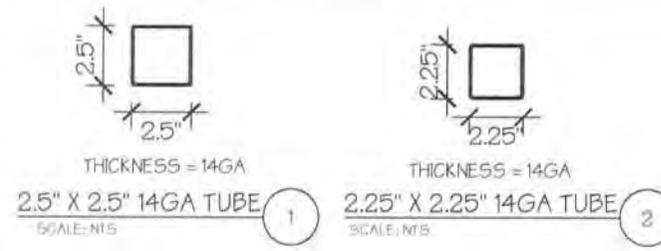
TABLE 2.1: MEMBER PROPERTIES

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" 14GA CHANNEL	4
5	KNEE BRACES	2.5" X 1.5" 14GA CHANNEL	4
6	CONNECTOR SLEEVE	2.25" X 2.25" X 14GA TUBE	2
7	BASE ANGLE	2.5" X 2.5" X 3" LG. 1/4" ANGLE	10
8	PURLIN	4.25" X 1.5" X 18GA / 14GA HAT CHANNEL	5
9	GIRT	4.25" X 1.5" X 18GA / 14GA HAT CHANNEL	5
9A	OPT. END WALL GIRT	2.5" X 1.5" 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	2.5" X 2.5" X 6" LG. 14GA ANGLE	9
22	TRUSS SPACER	2.5" X 2.5" X 14GA TUBE	1
23	ALL FASTENERS	TEKS #12 X 3/4" SELF-DRILL SCREWS W/ NEOPRENE/STEEL WASHER	

TABLE 2.2: SHEATHING FASTENER SCHEDULE

LOCATION	CORNER PANELS	SIDE LAPS	EDGE LAPS	ELSEWHERE
SPACING	6" C/C	MIN. 1	4" C/C	8" C/C

FASTENER TYPE: TEKS #12X1" SELF-DRILL SCREWS W/ NEOPRENE/STEEL WASHER



MANUFACTURED BY: 12/20/2017



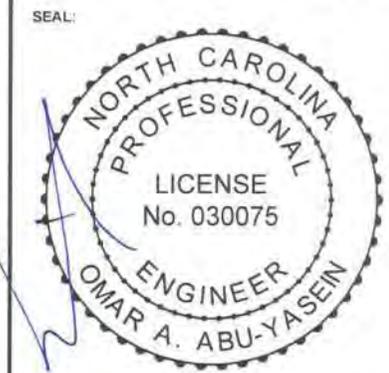
170 Holly Springs Rd.  
Mt. Airy, NC 27030  
1-800-597-3597

ENGINEERED BY:  
**A&A ENGINEERING**  
CIVIL - STRUCTURAL  
6011 Remembrance Place, Suite B • Toledo, OH 43023  
Tel: 419-292-1983 • Fax: 419-292-0955  
www.aa-engineers.com

**DRAWING INFORMATION**  
PROJECT: 18'-0" WIDE BUILDINGS  
LOCATION: STATE OF NORTH CAROLINA  
PROJECT NO.: 032-14-0811  
SHEET TITLE:

COVER SHEET  
SHEET NO.: 2 / 11  
DRAWN BY: IZM DATE: 10/16/14  
CHECKED BY: OAA DATE: 10/16/14

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DATE EXPIRES: 12/31/2015  
DATE SIGNED: SEPT 03 2014

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**170 Holly Springs Rd.  
Mt. Airy, NC 27030  
1-800-597-3597**

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6911 Renaissance Place, Suite B • Toledo, OH 43623  
Tel: 419-292-1983 • Fax: 419-292-0955  
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**DRAWING INFORMATION**

PROJECT: 18'-0" WIDE BUILDINGS  
LOCATION: STATE OF NORTH CAROLINA  
PROJECT NO.: 032-14-0811  
SHEET TITLE:

**FRAME SECTIONS & DETAILS**

SHEET NO.: 3 / 11  
DRAWN BY: IZM DATE: 10/16/14  
CHECKED BY: OAA DATE: 10/16/14

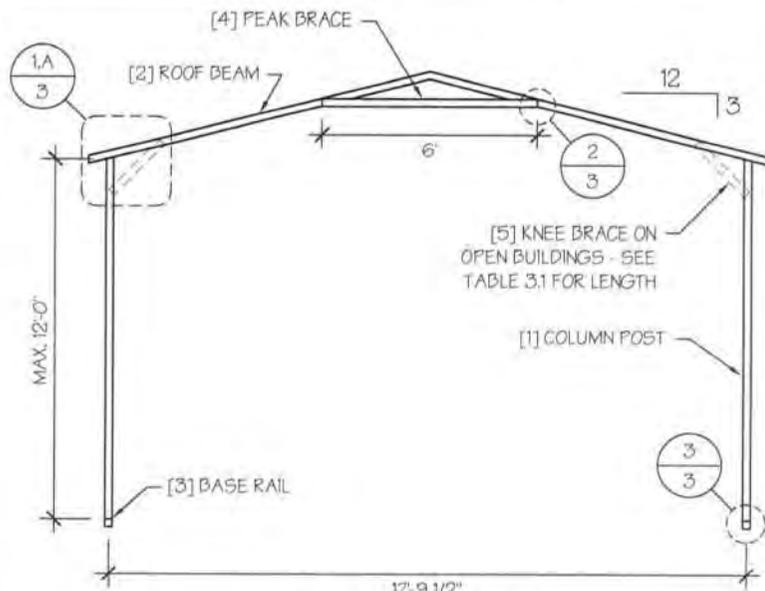
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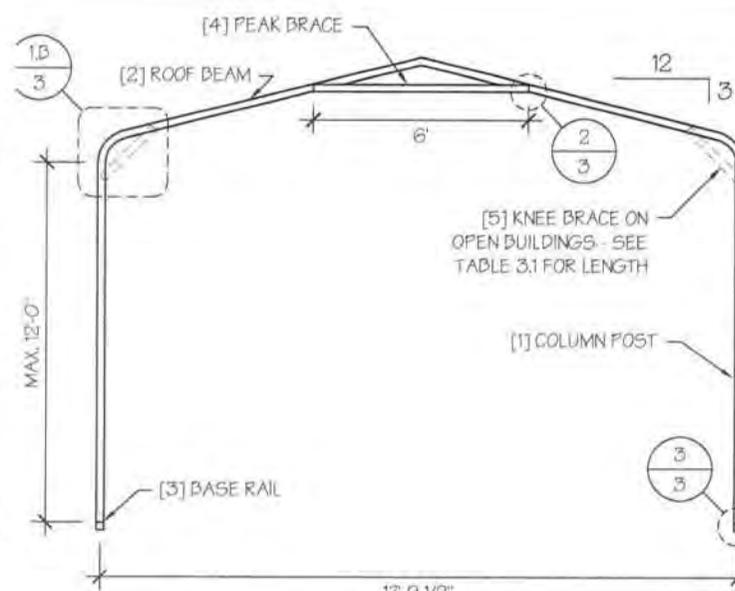
SEAL:



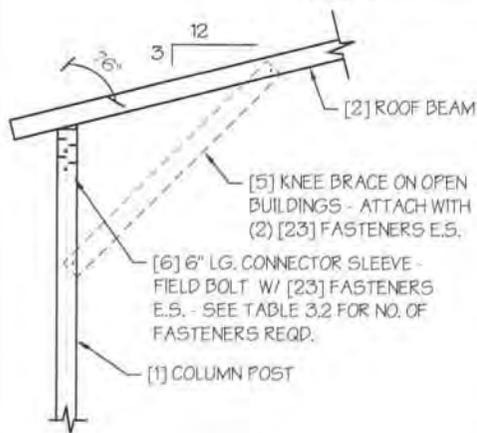
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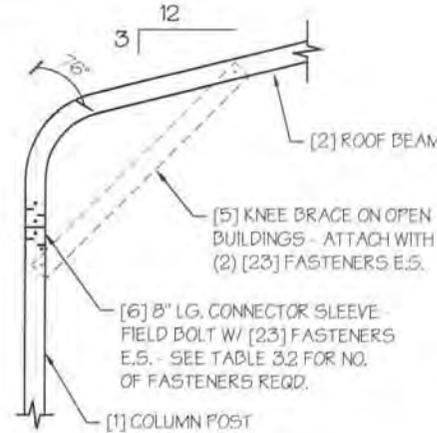
**TYP. A-FRAME SECTION**  
SCALE: NTS



**TYP. REGULAR FRAME SECTION**  
SCALE: NTS

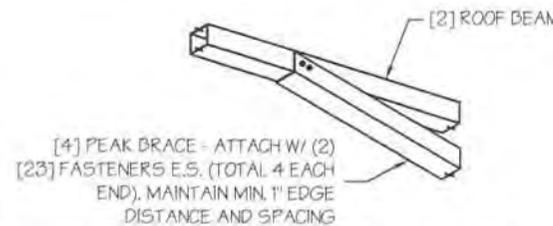


**A. A-FRAME**

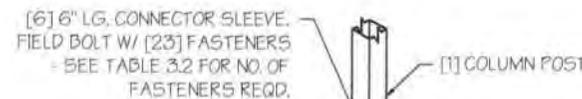


**B. REGULAR FRAME**

**EAVE DETAIL**  
SCALE: NTS



**PEAK BRACE CONNECTION DETAILS**  
SCALE: NTS



**BASE DETAIL**  
SCALE: NTS

**TABLE 3.1: KNEE BRACE SCHEDULE\***

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

\* REQUIRED ON OPEN BUILDINGS

**TABLE 3.2 FASTENER SCHEDULE**

WIND SPEED (MPH)	NO. OF FASTENERS
90 TO 105	4
110 TO 130	6
135 TO 150	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.

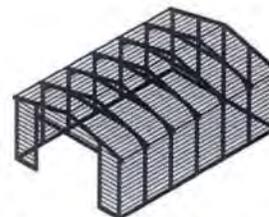
**TABLE 4: FRAME SPACING SCHEDULE**

GROUND SNOW / ROOF LIVE LOAD (PSF)	ENCLOSED BUILDINGS								OPEN BUILDINGS							
	WIND SPEED (MPH)								WIND SPEED (MPH)							
	90	100	110	120	130	140	150		90	100	110	120	130	140	150	
EAVE HEIGHT = 10'-0" TO 12'-0"	30 / 20	5	5	5	4.5/5	3.5	3	2.5	5	4.5/5	4/5	3.5/5	3/3.5	3	2.5	
	40 / 25	4.5/5	4.5/5	4.5/5	4.5/5	3.5	3	2.5	4.5	4.5	4/4.5	3.5/4.5	3/3.5	3	2.5	
	50 / 35	4/5	4/5	4/5	4/4.5	3.5	3	2.5	4	4	4	3.5/4	3/3.5	3	2.5	
	60 / 40	3.5	3.5	3.5	3.5	3.5	3	2.5	3	3	3	3	3	3	2.5	
	70 / 50	3	3	3	3	3	3	2.5	3	3	3	3	3	3	2.5	
	80 / 60	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	90 / 70	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2	2	2	2	2	2	2
	EAVE HEIGHT = 7'-0" TO 9'-0"	30 / 20	5	5	5	4.5/5	4	3.5/4	3.5	5	4.5/5	4/5	3.5/5	3/4	3/4	3/3.5
		40 / 25	4.5/5	4.5/5	4.5/5	4.5/5	4	3.5/4	3.5	4.5/5	4.5/5	4/5	3.5/5	3/4	3/4	3/3.5
50 / 35		4/5	4/5	4/5	4/5	4	3.5/4	3.5	4	4	4	3.5/4	3/4	3/4	3/3.5	
60 / 40		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3/3.5	3/3.5	3/3.5	
70 / 50		3	3	3	3	3	3	3	3	3	3	3	3	3	3	
80 / 60		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
90 / 70		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
EAVE HEIGHT = UP TO 6'-0"		30 / 20	5	5	5	4.5/5	4/4.5	3.5/4.5	3.5/4.5	5	4.5/5	4/5	3.5/5	3/4.5	3/4.5	3/4
		40 / 25	4.5/5	4.5/5	4.5/5	4.5/5	4/4.5	3.5/4.5	3.5/4.5	4.5/5	4.5/5	4/5	3.5/5	3/4.5	3/4.5	3/4
	50 / 35	4/5	4/5	4/5	4/5	4/4.5	3.5/4.5	3.5/4.5	4/5	4/5	4/5	3.5/5	3/4.5	3/4.5	3/4	
	60 / 40	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3/3.5	3/3.5	3/3.5	
	70 / 50	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
	80 / 60	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	90 / 70	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5

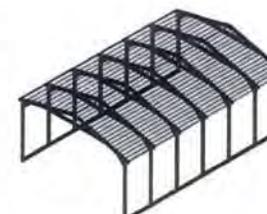
- NOTES:**
1. FRAME SPACINGS ARE IN UNITS OF FEET (FT).
  2. WHERE TWO VALUES ARE SHOWN, THE HIGHER VALUE CAN ONLY BE USED FOR VERTICAL SHEATHING.
  3. SNOW LOADS AND ROOF LIVE LOADS ARE IN POUNDS PER SQUARE FOOT (PSF). WIND SPEED IS 3 SEC. GUST IN MILES PER HOUR (MPH).
  4. FOR VALUES THAT LIE BETWEEN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

**GENERAL ENCLOSURE NOTES:**

1. TYPICAL ENCLOSED AND OPEN BUILDINGS ARE AS SHOWN ON THE RIGHT.
2. 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.
3. FOR ENCLOSED BUILDINGS, ONE END WALL CAN BE OPEN IF THE OTHER END WALL IS ENCLOSED, THE OPEN END WALL MUST HAVE EITHER GABLE FRAMING (SEE SHEET 8A) OR A DOUBLE END FRAME.
4. OPEN BUILDINGS CAN HAVE PARTIALLY ENCLOSED SIDE WALLS. FOR SIDE WALLS UP TO 3' ENCLOSED THERE IS NO CHANGE IN THE DESIGN. FOR GREATER THAN 3' SIDE WALL ENCLOSURES, THE SPACING FROM ABOVE TABLES NEEDS TO BE REDUCED BY 6".
5. OPEN BUILDING WITH PARTIALLY ENCLOSED END WALLS NEED TO HAVE SIDE WALL BRACING TO SUPPORT THE PARTIALLY ENCLOSED SIDE WALL. SEE SHEET 9 FOR TYPICAL BRACING DETAILS.



TYP. ENCLOSED BUILDING  
SCALE: NTS



TYP. OPEN BUILDING  
SCALE: NTS

MANUFACTURED BY: 12/20/2017



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**DRAWING INFORMATION**

PROJECT: 18'-0" WIDE BUILDINGS  
LOCATION: STATE OF NORTH CAROLINA  
PROJECT NO.: 032-14-0811  
SHEET TITLE:

SPACING SCHEDULES  
& ENCLOSURE NOTES

SHEET NO.: 4 / 11  
DRAWN BY: IZM DATE: 10/16/14  
CHECKED BY: OAA DATE: 10/16/14

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SEAL:



DATE EXPIRES: 12/31/2015  
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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)							
	90	100	110	120	130	140	150		90	100	110	120	130	140	150	
30 / 20	54	48	42	36	30	24	24	36	30	24	18	18	12	12		
40 / 25	48	48	42	36	30	24	24	30	30	24	18	18	12	12		
50 / 35	48	48	42	36	30	24	24	24	24	24	18	18	12	12		
60 / 40	36	36	36	36	30	24	24	18	18	18	18	18	12	12		
70 / 50	36	36	36	36	30	24	24	18	18	18	18	18	12	12		
80 / 60	30	30	30	30	30	24	24	18	18	18	18	18	12	12		
90 / 70	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 / 25	48	48	42	42	36	30	30	42	36	30	24	18	18	12		
50 / 35	48	48	42	42	36	30	30	30	30	30	24	18	18	12		
60 / 40	42	42	42	42	36	30	30	30	30	30	24	18	18	12		
70 / 50	42	42	42	42	36	30	30	24	24	24	24	18	18	12		
80 / 60	36	36	36	36	36	30	30	18	18	18	18	18	18	12		
90 / 70	36	36	36	36	36	30	30	18	18	18	18	18	18	12		
30 / 20	54	48	42	42	36	36	30	54	48	36	30	24	24	18		
40 / 25	48	48	42	42	36	36	30	48	48	36	30	24	24	18		
50 / 35	48	48	42	42	36	36	30	42	42	36	30	24	24	18		
60 / 40	42	42	42	42	36	36	30	36	36	36	30	24	24	18		
70 / 50	42	42	42	42	36	36	30	30	30	30	30	24	24	18		
80 / 60	36	36	36	36	36	36	30	24	24	24	24	24	24	18		
90 / 70	36	36	36	36	36	36	30	24	24	24	24	24	24	18		
30 / 20	54	48	42	42	36	36	30	54	48	42	42	36	30	30		
40 / 25	48	48	42	42	36	36	30	48	48	42	42	36	30	30		
50 / 35	48	48	42	42	36	36	30	48	48	42	42	36	30	30		
60 / 40	42	42	42	42	36	36	30	42	42	42	42	36	30	30		
70 / 50	42	42	42	42	36	36	30	42	42	42	42	36	30	30		
80 / 60	36	36	36	36	36	36	30	36	36	36	36	36	30	30		
90 / 70	36	36	36	36	36	36	30	36	36	36	36	36	30	30		
30 / 20	54	48	42	42	36	36	30	54	48	42	42	36	36	30		
40 / 25	48	48	42	42	36	36	30	48	48	42	42	36	36	30		
50 / 35	48	48	42	42	36	36	30	48	48	42	42	36	36	30		
60 / 40	42	42	42	42	36	36	30	42	42	42	42	36	36	30		
70 / 50	42	42	42	42	36	36	30	42	42	42	42	36	36	30		
80 / 60	36	36	36	36	36	36	30	36	36	36	36	36	36	30		
90 / 70	36	36	36	36	36	36	30	36	36	36	36	36	36	30		

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

**TABLE 5.2: GIRT SPACING SCHEDULE**

FRAME SPACING	WIND SPEED (MPH)						
	90	100	110	120	130	140	150
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:  
 1. GIRT SPACING UNITS ARE IN INCHES.  
 2. THIS SCHEDULE IS TO BE USED FOR BOTH 14GA AND 18 GA PURLINS.  
 3. FRAME SPACING NEEDS TO BE DETERMINED FROM TABLE 4.

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**DRAWING INFORMATION**

PROJECT: 18'-0" WIDE BUILDINGS  
 LOCATION: STATE OF NORTH CAROLINA  
 PROJECT NO.: 032-14-0811  
 SHEET TITLE:

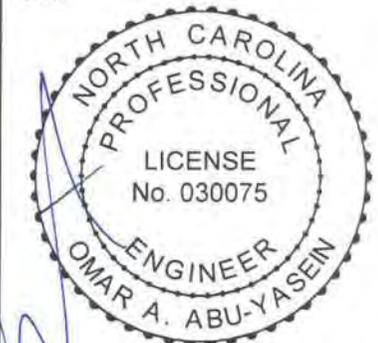
**PURLIN & GIRT SPACING SCHEDULES**

SHEET NO.: 5 / 11  
 DRAWN BY: IZM DATE: 10/16/14  
 CHECKED BY: OAA DATE: 10/16/14

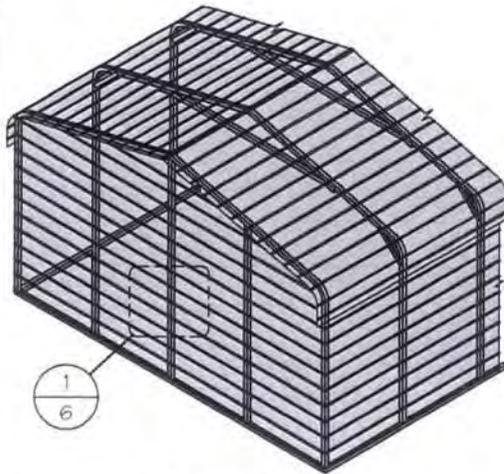
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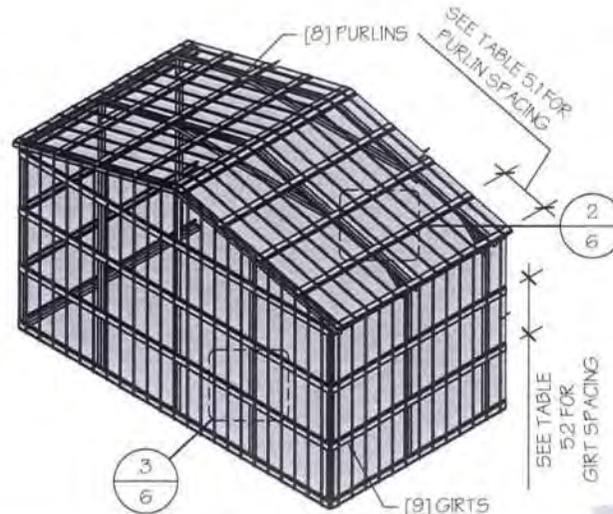
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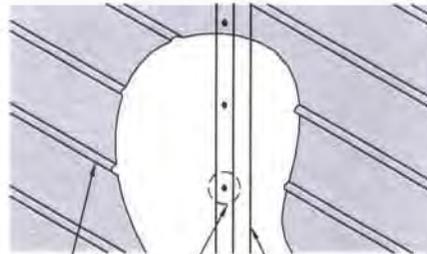
**TYP. HORIZONTAL SHEATHING**  
SCALE: NTS



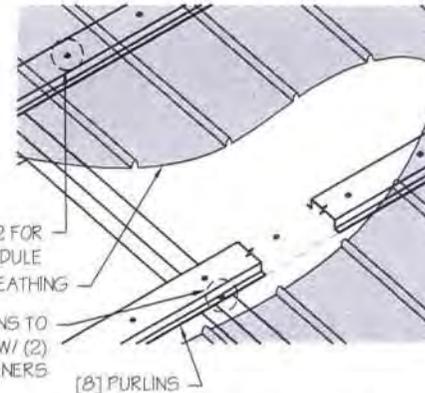
**TYP. VERTICAL SHEATHING**  
SCALE: NTS

**GENERAL SHEATHING NOTES:**

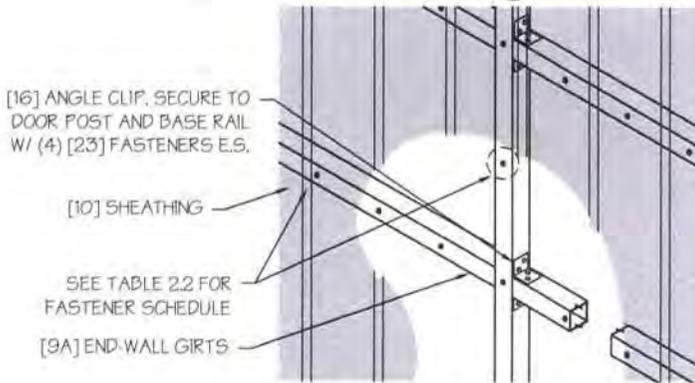
1. REGULAR STYLE BUILDINGS CAN ONLY HAVE HORIZONTAL SHEATHING ON ROOF AND WALLS.
2. A-FRAME STYLE BUILDINGS CAN HAVE ANY COMBINATION OF HORIZONTAL OR VERTICAL SHEATHING ON ROOFS AND WALLS.
3. BOTH HORIZONTAL AND VERTICALS ROOF SHEATHING CAN HAVE MAX. 6" OVERHANG.
4. USING VERTICAL SHEATHING MAY ALLOW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



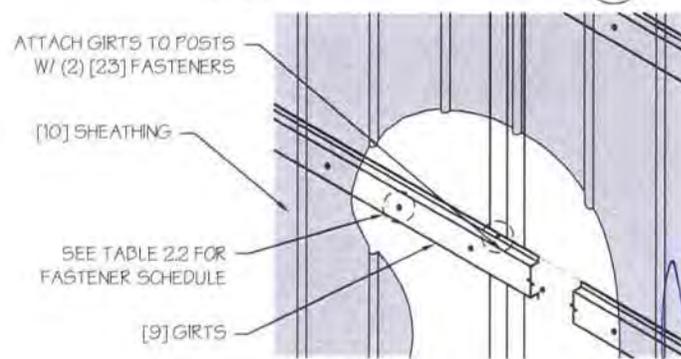
**TYP. HORIZONTAL SHEATHING DETAIL**  
SCALE: NTS



**ROOF VERTICAL SHEATHING DETAIL**  
SCALE: NTS



**WALL VERTICAL SHEATHING - TUBE DETAIL**  
SCALE: NTS



**WALL VERTICAL SHEATHING - HAT CHANNEL DETAIL**  
SCALE: NTS



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**DRAWING INFORMATION**

PROJECT: 18'-0" WIDE BUILDINGS  
LOCATION: STATE OF NORTH CAROLINA  
PROJECT NO.: 032-14-0811  
SHEET TITLE:

**SHEATHING OPTIONS & DETAILS**

SHEET NO.: 6 / 11  
DRAWN BY: IZM DATE: 10/16/14  
CHECKED BY: OAA DATE: 10/16/14

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**DRAWING INFORMATION**

PROJECT: 18'-0" WIDE BUILDINGS  
LOCATION: STATE OF NORTH CAROLINA  
PROJECT NO.: 032-14-0811  
SHEET TITLE:

**SIDE WALL FRAMING & OPENINGS**

SHEET NO.: 7 / 11  
DRAWN BY: IZM DATE: 10/16/14  
CHECKED BY: OAA DATE: 10/16/14

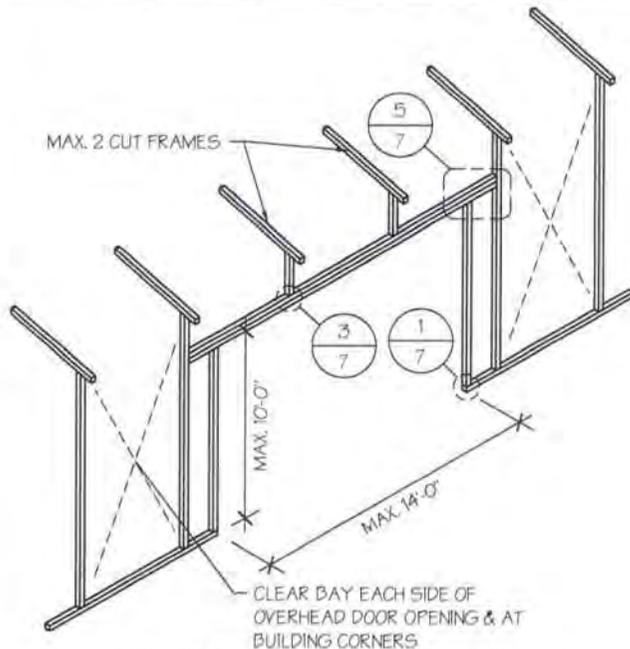
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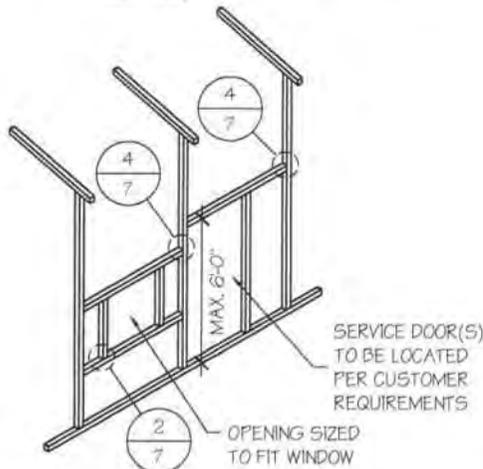
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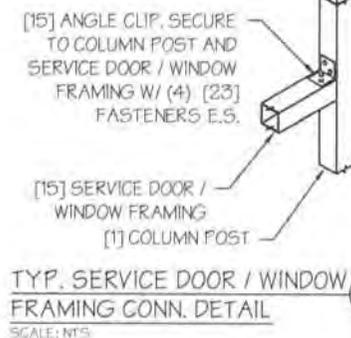
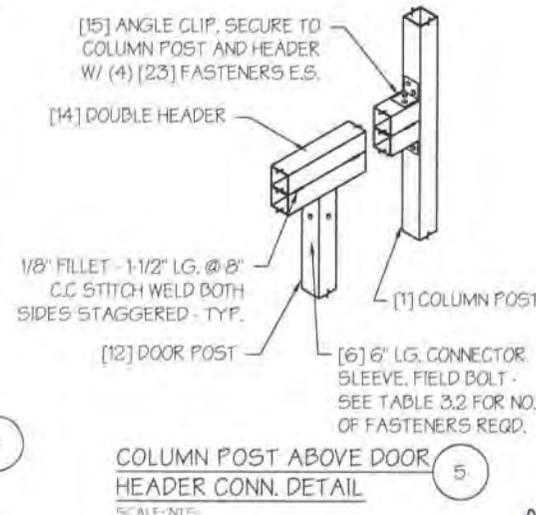
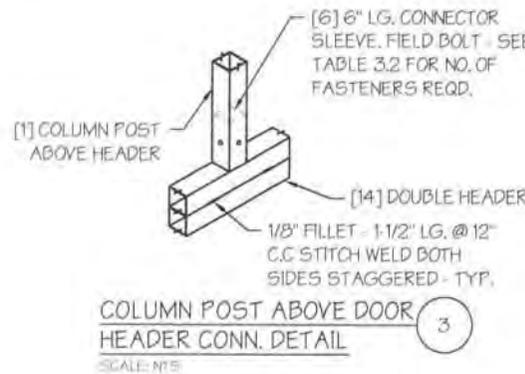
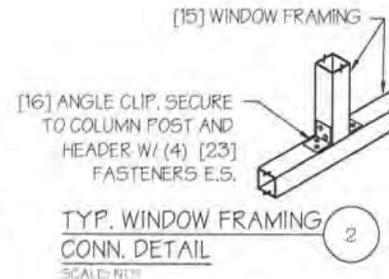
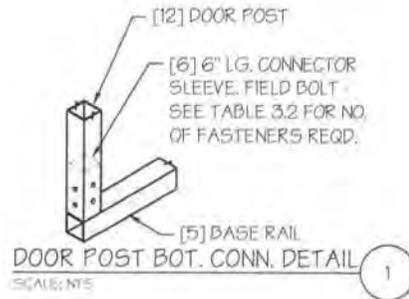
**SIDE WALL OVER HEAD DOOR OPENINGS**  
SCALE: NTS



**SIDE WALL SERVICE DOOR / WINDOW OPENINGS**  
SCALE: NTS

**SIDE WALL FRAMING NOTES:**

- DESIGNS AND DETAILS SHOWN HERE ARE APPLICABLE TO BOTH REGULAR AND A-FRAME STYLE BUILDINGS.
- MAX. HEIGHT OF SIDE WALL DOOR OPENINGS DEPENDS ON POST LENGTH NEEDED TO ACCOMMODATE KNEE BRACES.
- OVERHEAD DOOR OPENINGS CANNOT CUT THROUGH MORE THAN 2 FULL FRAMES.
- 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.
- MIN. 1 CLEAR BAY MUST ALSO BE MAINTAINED FROM THE BUILDING CORNERS.
- SERVICE DOORS AND WINDOWS CAN BE PLACED IN CLEAR BAYS OR ANY WHERE ELSE AS NEEDED.



**COLUMN POST ABOVE DOOR HEADER CONN. DETAIL**  
SCALE: NTS



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**DRAWING INFORMATION**

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LOCATION: STATE OF NORTH CAROLINA  
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SHEET TITLE:

**END WALL FRAMING**

SHEET NO.: B-A / 11  
DRAWN BY: IZM DATE: 10/16/14  
CHECKED BY: OAA DATE: 10/16/14

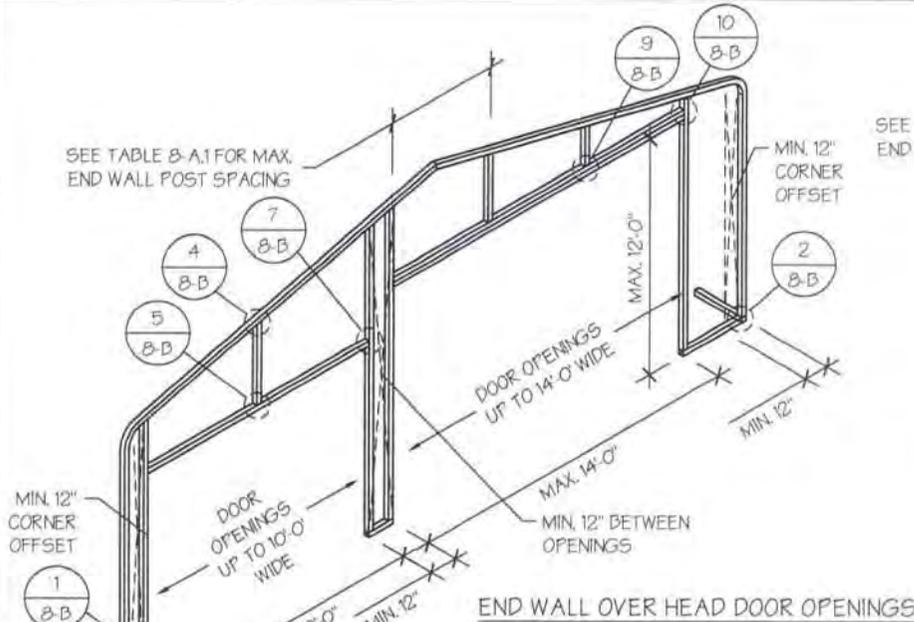
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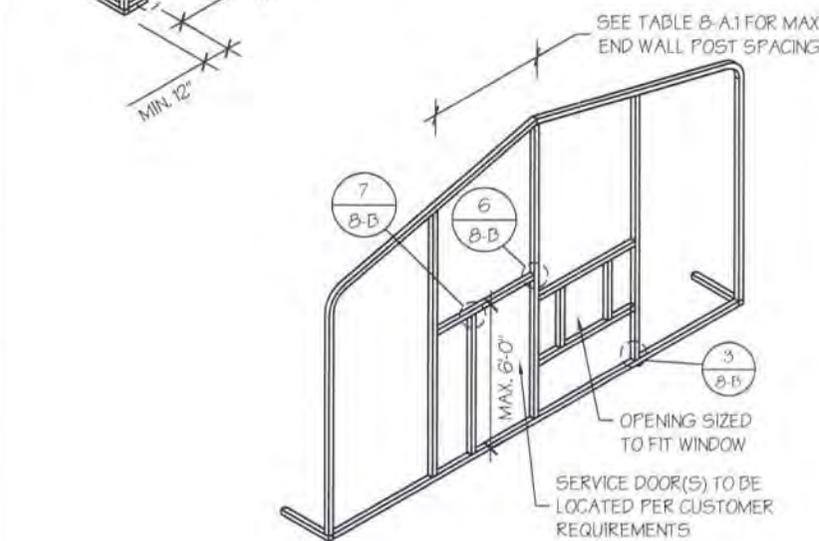
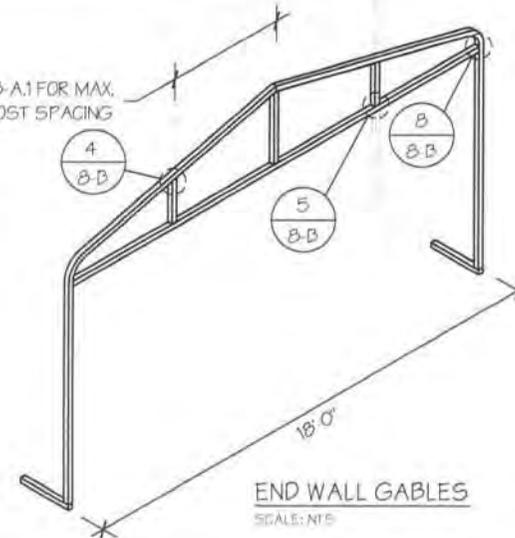
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DATE EXPIRES: 12/31/2015  
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SEE TABLE B-A.1 FOR MAX. END WALL POST SPACING



SEE TABLE B-A.1 FOR MAX. END WALL POST SPACING

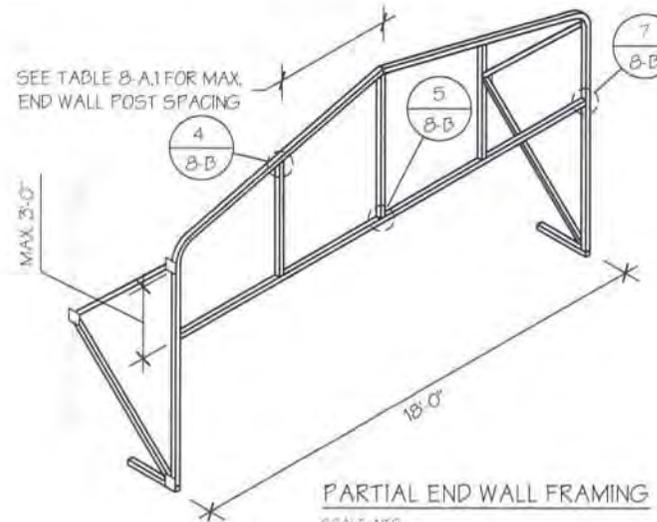


TABLE B-A.1: END WALL POST SPACING SCHEDULE

WIND SPEED (MPH)	EAVE HEIGHT		
	UP TO 7'	8' TO 9'	10' TO 12'
90	5'	5'	5'
100	5'	5'	4.5'
110	4.5'	4.5'	4'
120	4.5'	4.5'	3'
130	4'	4'	2.5'
140-150	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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**DRAWING INFORMATION**

PROJECT: 18'-0" WIDE BUILDINGS  
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SHEET TITLE:

**END WALL FRAMING DETAILS**

SHEET NO.: 8-B / 11  
DRAWN BY: IZM DATE: 10/16/14  
CHECKED BY: OAA DATE: 10/16/14

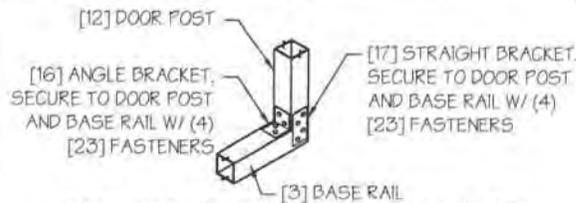
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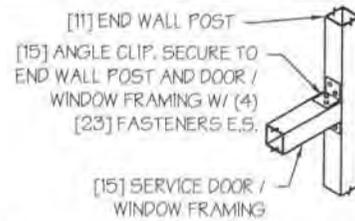
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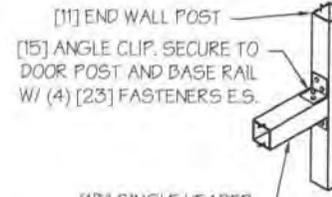
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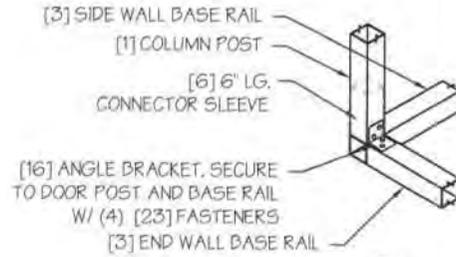
DOOR POST BASE RAIL CONN. DETAIL 1  
SCALE: NTS



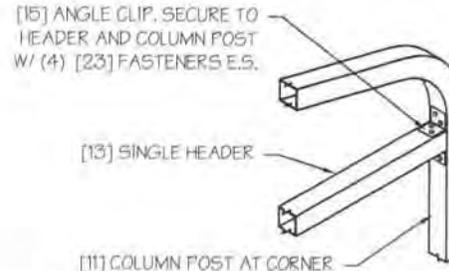
TYP. SERVICE DOOR / WINDOW FRAMING CONN. DETAIL 6  
SCALE: NTS



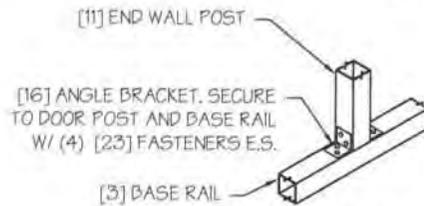
HEADER - END WALL POST CONN. DETAIL 13  
SCALE: NTS



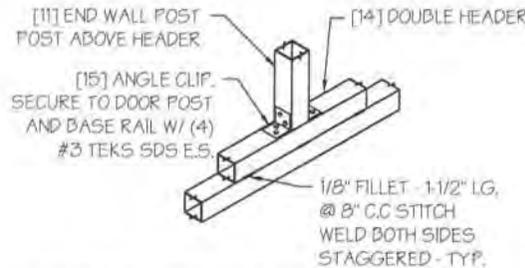
CORNER DETAIL 2  
SCALE: NTS



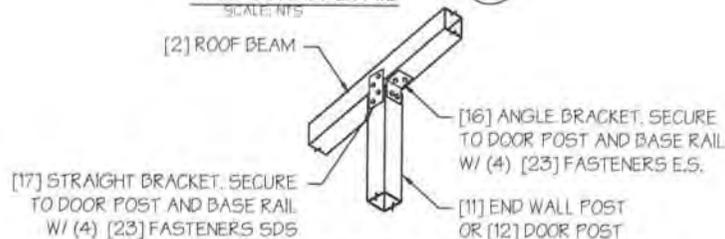
GABLE HEADER - CORNER POST CONN. DETAIL 13  
SCALE: NTS



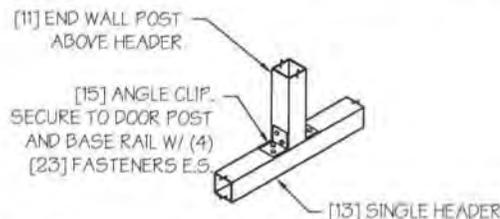
END WALL POST - BASE RAIL CONN. DETAIL 3  
SCALE: NTS



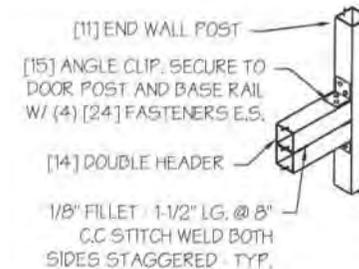
END WALL POST ABOVE DOUBLE HEADER CONN. DETAIL 9  
SCALE: NTS



END WALL POST - ROOF BEAM CONN. DETAIL 4  
SCALE: NTS



END WALL POST ABOVE HEADER CONN. DETAIL 5  
SCALE: NTS



DOUBLE HEADER - END WALL POST CONN. DETAIL 10  
SCALE: NTS



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www.a-a-engineers.com

**DRAWING INFORMATION**

PROJECT: 18'-0" WIDE BUILDINGS  
LOCATION: STATE OF NORTH CAROLINA  
PROJECT NO.: 032-14-0811  
SHEET TITLE:

**CORNER BRACING DETAILS**

SHEET NO.: 9 / 11  
DRAWN BY: IZM DATE: 10/16/14  
CHECKED BY: OAA DATE: 10/16/14

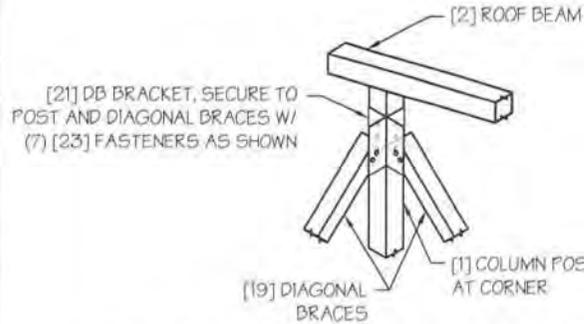
**LEGAL INFORMATION**

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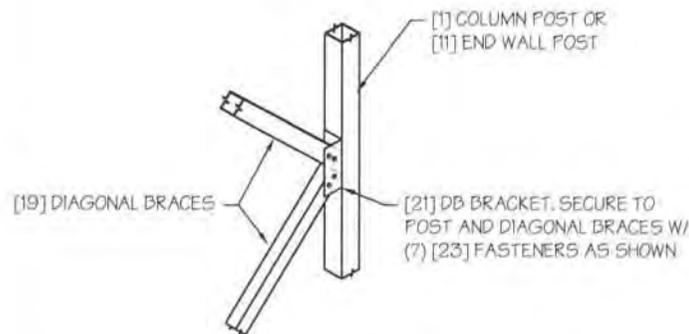
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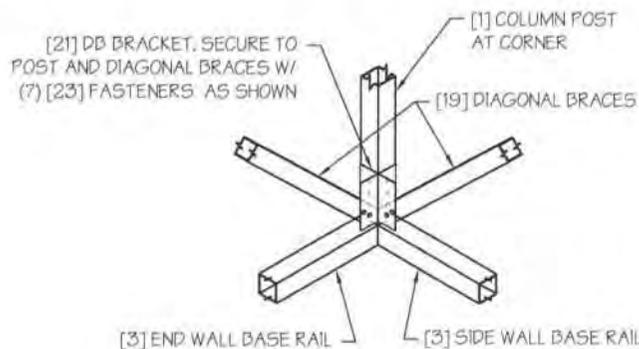
DATE EXPIRES: 12/31/2015  
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**DIAGONAL BRACE TOP CORNER CONN. DETAIL\*** 1  
SCALE: NTS

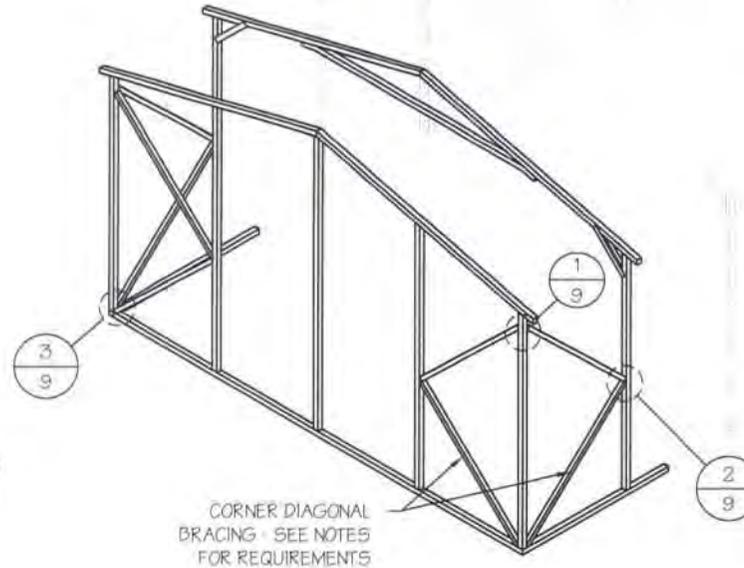


**DIAGONAL BRACE - POST CONN. DETAIL\*** 2  
SCALE: NTS



**DIAGONAL BRACE BOT. CORNER CONN. DETAIL\*** 3  
SCALE: NTS

\* INSIDE VIEW SHOWN FOR CLARITY



**DIAGONAL BRACING AT CORNERS**  
SCALE: NTS

**CORNER BRACING NOTES:**

1. DIAGONAL BRACING AT BUILDING CORNERS IS REQUIRED FOR FULLY ENCLOSED BUILDINGS IN LOCATIONS WHERE WIND SPEED IS 120 MPH OR GREATER.
2. IF CORNER BRACING IS REQUIRED BUT THE BUILDING IS MISSING AN END WALL THEN THE BUILDING MUST BE DESIGNED AS AN OPEN BUILDING (USE SPACING FOR OPEN BUILDING IN TABLE 4.1).
3. DIAGONAL BRACING IS ALSO REQUIRED ON THE CORNERS ON THE SIDE WALLS WHEN THE ADJACENT END WALL IS PARTIALLY ENCLOSED.

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12/20/2017



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**DRAWING INFORMATION**

PROJECT: 18'-0" WIDE BUILDINGS  
LOCATION: STATE OF NORTH CAROLINA  
PROJECT NO.: 032-14-0811  
SHEET TITLE:

**OPTIONAL LEAN-TO ADDITION**

SHEET NO.: 10 / 11  
DRAWN BY: IZM DATE: 10/16/14  
CHECKED BY: OAA DATE: 10/16/14

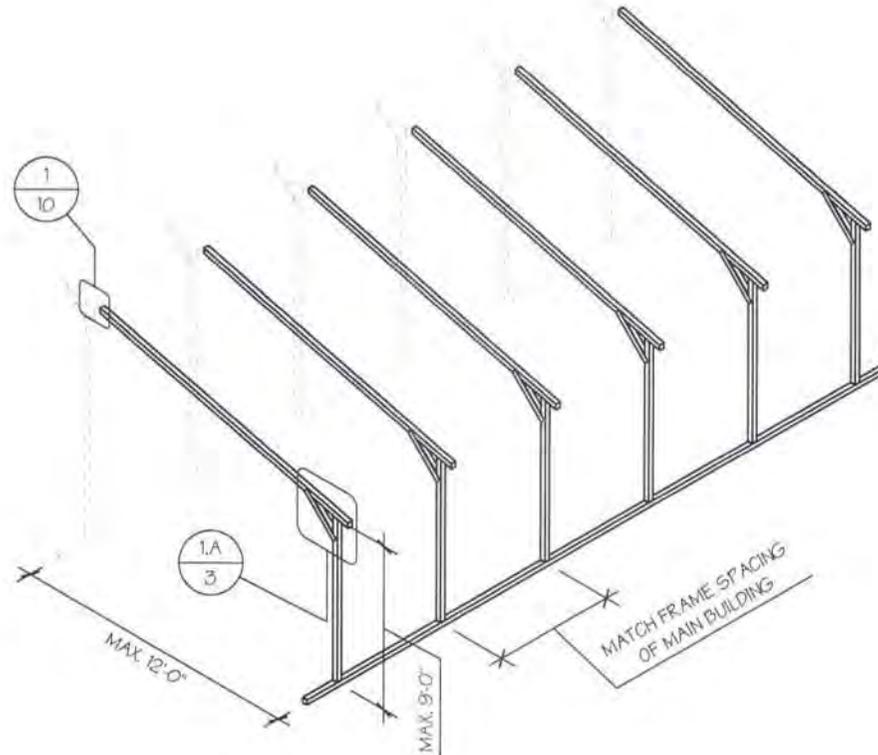
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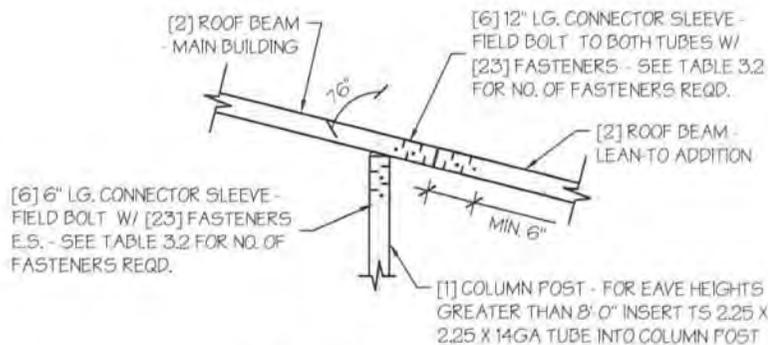
SEAL:



DATE EXPIRES: **12/31/2015**  
DATE SIGNED: **SEPT 03 2014**



**OPTIONAL LEAN-TO ADDITION**  
SCALE: N.T.S.



**LEAN-TO ATTACHMENT DETAIL**  
SCALE: N.T.S.

**LEAN-TO ADDITION NOTES:**

- LEAN-TO ADDITIONS CAN BE ADDED ON EITHER OR BOTH SIDES OF THE BUILDING.
- ROOF SLOPE AND PURLIN, GIRT AND FRAME SPACINGS OF THE ADDITION HAVE TO MATCH THAT OF THE MAIN STRUCTURE..
- 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: 18'-0" WIDE BUILDINGS  
 LOCATION: STATE OF NORTH CAROLINA  
 PROJECT NO.: 032-14-0811  
 SHEET TITLE:

FOUNDATION OPTION 1:  
 CONCRETE SLAB

SHEET NO.: 11-A / 11  
 DRAWN BY: IZM DATE: 10/16/14  
 CHECKED BY: OAA DATE: 10/16/14

**LEGAL INFORMATION**

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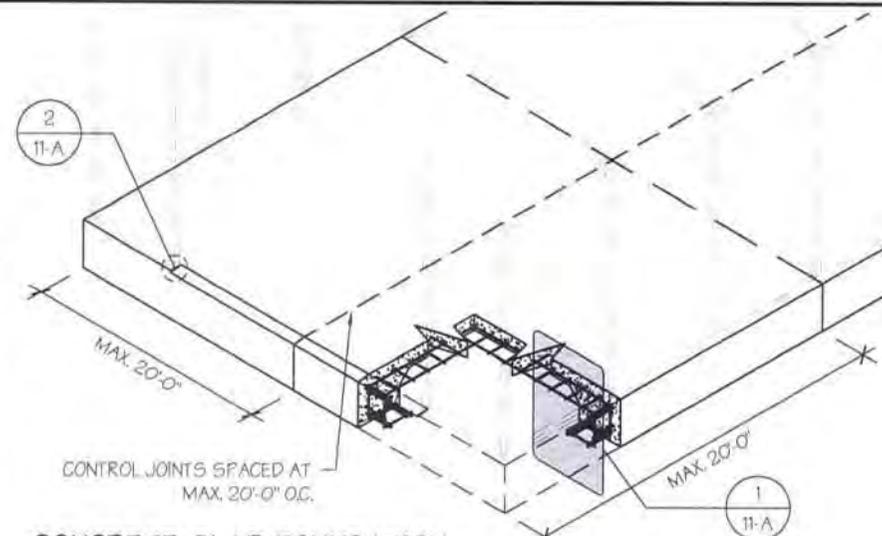
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DATE EXPIRES: 12/31/2015  
 DATE SIGNED: SEPT 03 2014

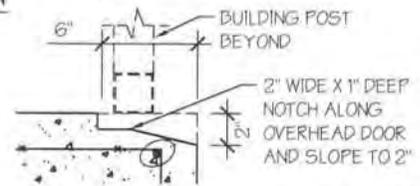
**CONCRETE SLAB FOUNDATION NOTES:**

- DESIGNS SHOWN ON THIS SHEET ARE FOR CONCRETE SLAB FOUNDATION. ANY OF THE FOUNDATIONS SHOWN ON SHEETS 11-A THRU D CAN BE USED.
- EITHER OPTION 1 'EDGE OFFSET' OR OPTION 2 'NOTCHED EDGE' DETAIL CAN BE USED.
- FOR OPTION 1 THE MIN. SLAB SIZE SHALL BE EQUAL TO THE OUTSIDE DIMENSIONS OF THE BUILDING PLUS 5" EACH DIRECTION.
- FOR OPTION 2 THE MIN. SLAB SIZE SHALL BE EQUAL TO THE SIDE DIMENSIONS OF THE BUILDING DIMENSIONS.
- CONCRETE ANCHORS SHALL BE LOCATED AT EVERY NEXT TO EVERY POST AND ON EITHER SIDE OF OPENINGS, TWO ANCHORS SHALL BE INSTALLED AT CORNER OF ENCLOSED BUILDINGS WITH END WALLS - ONE ON EACH BASE RAIL.
- CONCRETE ANCHORS CAN BE ANY ONE OF THE OPTIONS MENTIONED IN TABLE 11-A.1.
- 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.



**CONCRETE SLAB FOUNDATION**

SCALE: NTS



**OVERHEAD DOOR NOTCH DETAIL**

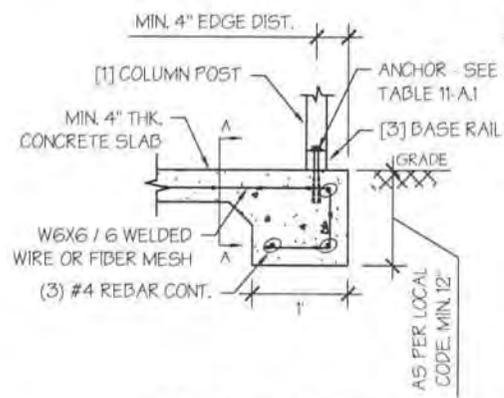
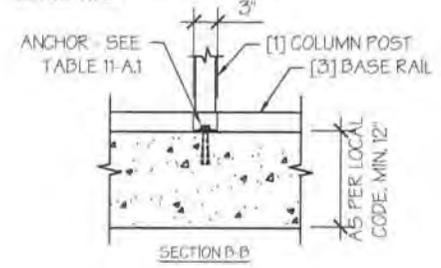
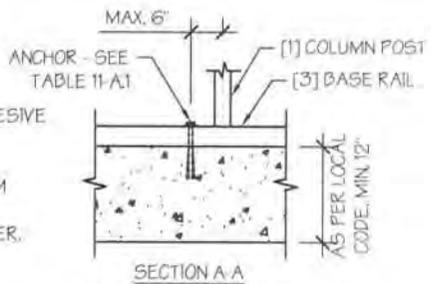
SCALE: NTS

TABLE 11-A.1: CONCRETE SLAB ANCHOR SCHEDULE

WIND SPEED (MPH)	ANCHOR SIZE
90 TO 120	1/2"Ø X 7"
130 TO 150	5/8"Ø X 7"

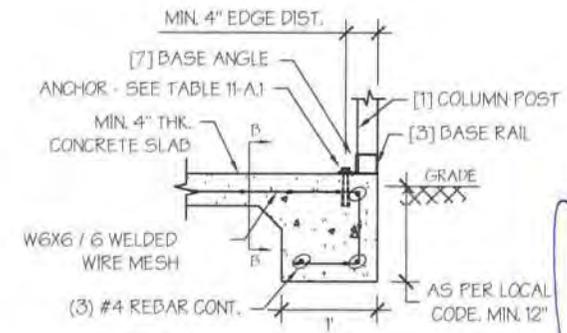
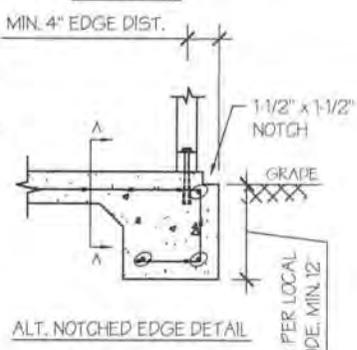
**NOTES:**

- EXPANSION ANCHORS, WEDGE ANCHORS OR ADHESIVE ANCHORS MAY BE USED.
- MIN. EMBEDMENT DEPTH TO BE 4".
- ANCHORS TO BE SPACED NO MORE THAN 6" FROM POSTS.
- ALL ANCHORS TO BE A307 EQUIVALENT OR BETTER.



**OPTION 1: EDGE OFFSET DETAIL**

SCALE: NTS



**OPTION 2: EDGE FLUSH DETAIL**

SCALE: NTS

TABLE 11-B.1: ANCHOR SCHEDULE

WIND SPEED (MPH)	ANCHOR SIZE
90 TO 120	1/2"Ø X 7"
130 TO 150	5/8"Ø X 7"

NOTES:

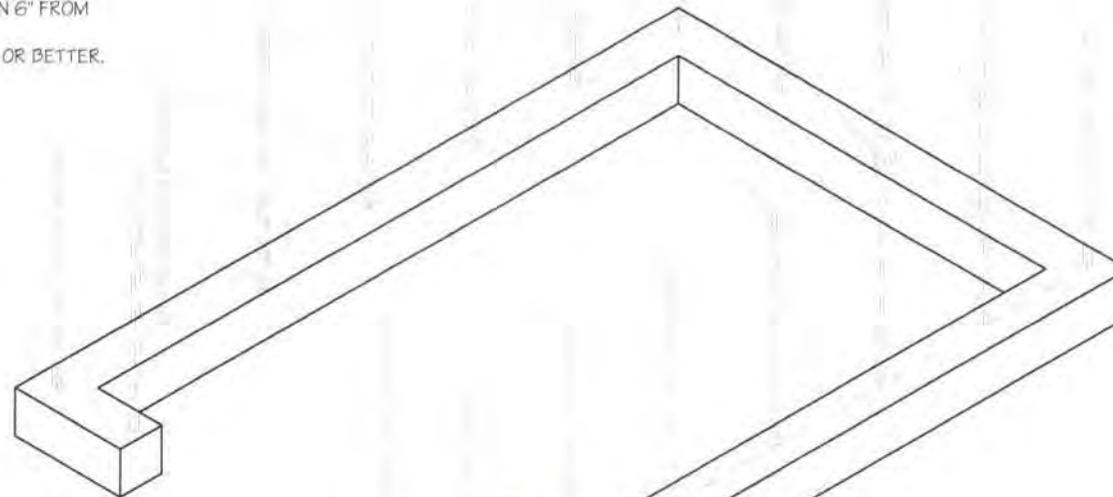
- EXPANSION ANCHORS, WEDGE ANCHORS OR ADHESIVE ANCHORS MAY BE USED.
- MIN. EMBEDMENT DEPTH TO BE 4".
- ANCHORS TO BE SPACED NO MORE THAN 6" FROM POSTS.
- ALL ANCHORS TO BE A307 EQUIVALENT OR BETTER.

TABLE 11-B.2: CONC. STRIP SCHEDULE

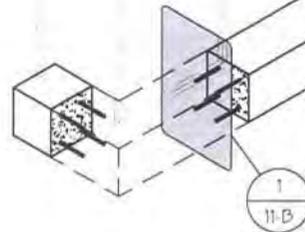
WIND SPEED (MPH)	MIN. SIZE REQD.
90 TO 110	12" X 12"
120 TO 130	18" X 12"
140 TO 150	26" X 12" 21 X 15" 18" X 18"

NOTES:

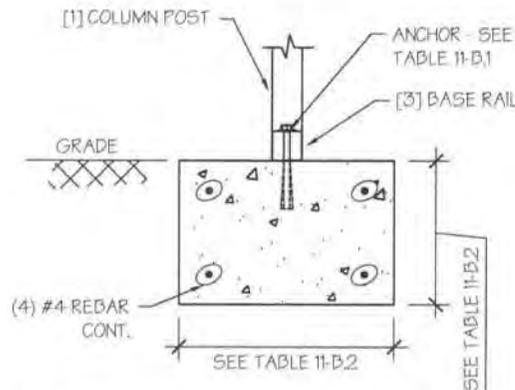
- WIDTH AND DEPTH DIMENSIONS CAN BE INTERCHANGED.



FOOTING OPTIONAL AT OPEN END WALLS AND OVERHEAD DOOR OPENINGS



CONCRETE STRIP FOUNDATION  
SCALE: NTS



CONCRETE STRIP FOUNDATION DETAIL  
SCALE: NTS

CONCRETE STRIP FOUNDATION NOTES:

- DESIGNS SHOWN ON THIS SHEET ARE FOR CONCRETE STRIP FOUNDATION. ANY OF THE FOUNDATIONS SHOWN ON SHEETS 11-A THRU D CAN BE USED.
- CONCRETE ANCHORS SHALL BE LOCATED AT EVERY NEXT TO EVERY POST AND ON EITHER SIDE OF OPENINGS. TWO ANCHORS SHALL BE INSTALLED AT CORNER OF ENCLOSED BUILDINGS WITH END WALLS - ONE ON EACH BASE RAIL.
- DEPTH OF CONCRETE STRIP FOOTING SHALL BE GREATER THAN FROST DEPTH SPECIFIED PER LOCAL CODE.
- ASSUMED SOIL BEARING CAPACITY IS TO BE A MIN. OF 1500 PSF.
- CONCRETE STRENGTH TO BE A MIN. OF 2500 PSI @ 28 DAYS.

MANUFACTURED BY: 12/20/2017



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DRAWING INFORMATION

PROJECT: 18'-0" WIDE BUILDINGS  
LOCATION: STATE OF NORTH CAROLINA  
PROJECT NO.: 032-14-0811  
SHEET TITLE:  
FOUNDATION OPTION 2:  
CONCRETE STRIP

SHEET NO.: 11-B / 11

DRAWN BY: DATE: 10/16/14

CHECKED BY: DATE: 10/16/14

LEGAL INFORMATION

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DRAWINGS VALID UP TO 1 YEAR FROM DATE OF ISSUE.

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DATE EXPIRES: 12/31/2015

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**DRAWING INFORMATION**

PROJECT: 18'-0" WIDE BUILDINGS  
LOCATION: STATE OF NORTH CAROLINA  
PROJECT NO.: 032-14-0811  
SHEET TITLE:

**FOUNDATION OPTION 3:  
CONCRETE PIERS**

SHEET NO.: 11-C / 11  
DRAWN BY: IZM DATE: 10/16/14  
CHECKED BY: OAA DATE: 10/16/14

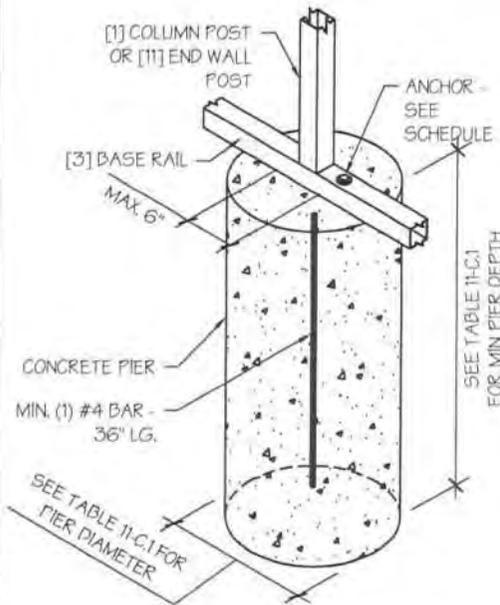
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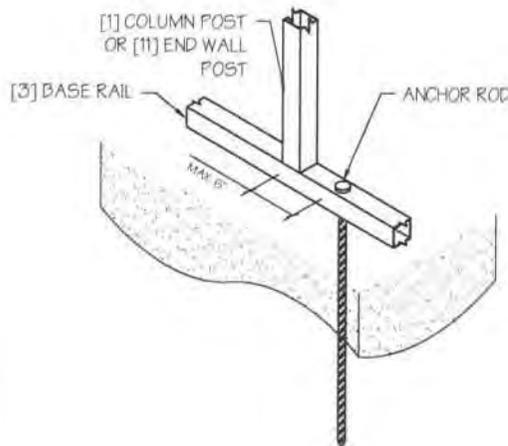
DATE EXPIRES: **12/31/2015**  
DATE SIGNED: **SEPT 03 2014**



**CONCRETE PIER DETAIL**

SCALE: NTS

1



**ANCHOR ROD INTO SOIL DETAIL**

SCALE: NTS

2



**CONCRETE PIER FOUNDATION**

SCALE: NTS

**CONCRETE PIER FOUNDATION NOTES:**

- DESIGNS SHOWN ON THIS SHEET ARE FOR CONCRETE PIER FOUNDATION. ANY OF THE FOUNDATIONS SHOWN ON SHEETS 11-A THRU D 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.
- PIERS SHALL BE FORMED BY DIGGING A HOLE OF THE SAME SIZE AS THE PIER ON LEVEL GRADE AND FILLING WITH CONCRETE. THRD. ROD ANCHORS SHOULD BE DROPPED INTO THE PIERS PRIOR TO POURING THE CONCRETE.
- 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 WELDED NUT AT THE TOP AND ONE COAT OF RUST PROOF PRIMER.
- 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.1: CONC. PIER SCHEDULE**

WIND SPEED (MPH)	MIN. SIZE REQD.
90 TO 110	18"Ø X 36"
120 TO 130	18"Ø X 42"
140 TO 150	18"Ø X 48"

**TABLE 11-C.2: CONCRETE PIER ANCHOR SCHEDULE**

WIND SPEED (MPH)	ANCHOR SIZE
90 TO 120	1/2"Ø X 7"
130 TO 150	5/8"Ø X 7"

**NOTES:**

- EXPANSION ANCHORS, WEDGE ANCHORS OR ADHESIVE ANCHORS MAY BE USED.
- MIN. EMBEDMENT DEPTH TO BE 4".
- ANCHORS TO BE SPACED NO MORE THAN 6" FROM POSTS.
- ALL ANCHORS TO BE A307 EQUIVALENT OR BETTER.

MANUFACTURED BY: 12/20/2017



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**DRAWING INFORMATION**

PROJECT: 18'-0" WIDE BUILDINGS  
LOCATION: STATE OF NORTH CAROLINA  
PROJECT NO.: 032-14-0811  
SHEET TITLE:

FOUNDATION OPTION 4:  
SOIL ANCHORS

SHEET NO.: 11-D / 11  
DRAWN BY: TZM DATE: 10/16/14  
CHECKED BY: OAA DATE: 10/16/14

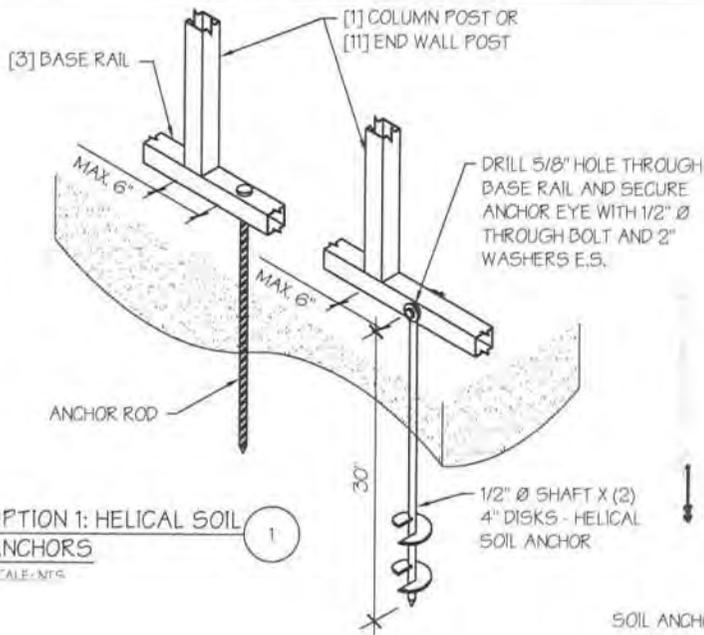
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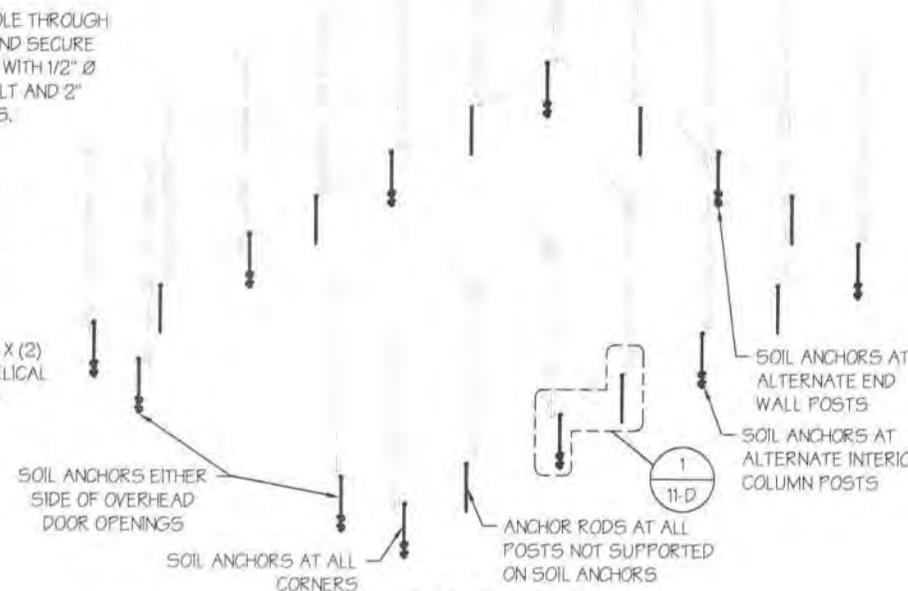


DATE EXPIRES: 12/31/2015  
DATE SIGNED: SEPT 03 2014



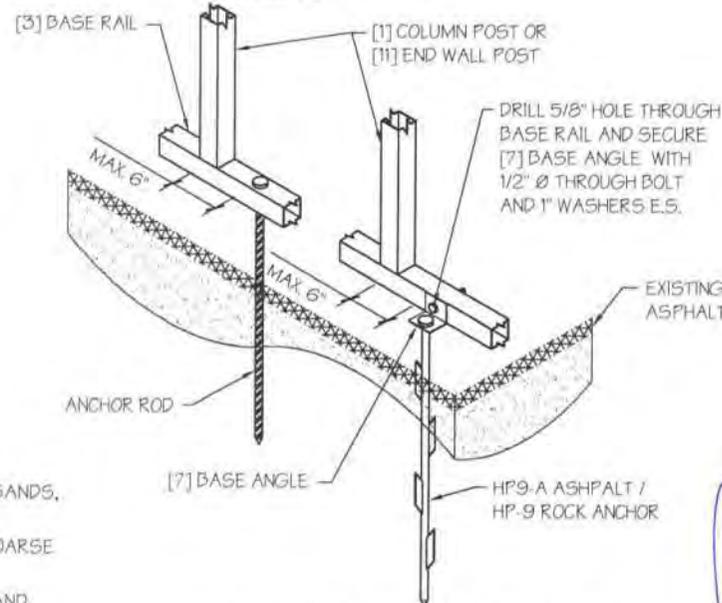
OPTION 1: HELICAL SOIL ANCHORS

SCALE: NTS



SOIL FOUNDATION

SCALE: NTS



OPTION 2: ROCK / ASPHALT ANCHORS

SCALE: NTS

**SOIL FOUNDATION NOTES:**

- DESIGNS SHOWN ON THIS SHEET ARE FOR SOIL ANCHOR FOUNDATION. ANY OF THE FOUNDATIONS SHOWN ON SHEETS 11-A THRU D CAN BE USED.
- SOIL ANCHORS (HELICAL OR ROCK/ASPHALT) SHALL BE LOCATED AT ALL 4 CORNERS, ON EACH SIDE OF OVERHEAD DOOR OPENINGS 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 WELDED NUT AT THE TOP AND ONE COAT OF RUST PROOF PRIMER.
- 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.

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