

**SOUTH  
DESIGNS**

P.O. Box 688  
Wake Forest, NC 27588  
(O) 919-556-2226  
(F) 919-556-2228  
www.southdesigns.com

Drawn By: SDI

Checked By: RWB

06-20-2022

Revision No. Revision Date

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Client:

**Triple A  
Homes**

Title:

**COVER  
SHEET**

Plan No.

Sheet No. **CS**

# Lot 16 Cotton Farms

DESIGN LOADS	LIVE LOAD (PSF)	DEAD LOAD (PSF)
TABLE R301.4 DWELLING UNITS	40	10
SLEEPING ROOMS	30	10
ATTICS WITH STORAGE	20	10
ATTICS WITHOUT STORAGE	10	10
ROOF SNOW	20	10
STAIRS	40	10
DECKS	40	10
EXTERIOR BALCONIES	60	10
PASSENGER VEHICLE GARAGES	50	--
FIRE ESCAPES	40	10
GUARDRAILS AND HANDRAILS	200	--

- MATERIALS**
- FRAMING LUMBER SHALL BE #2 SPRUCE PINE FIR (SPF) WITH THE FOLLOWING DESIGN PROPERTIES:  
F<sub>b</sub> = 875 PSI F<sub>v</sub> = 70 PSI E = 1,466 PSI
  - FRAMING LUMBER EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND, CONCRETE OR MASONRY SHALL BE #2 SOUTHERN YELLOW PINE (SYP) TREATED IN ACCORDANCE WITH AWPA C22 WITH THE FOLLOWING DESIGN PROPERTIES:  
F<sub>b</sub> = 1050 PSI F<sub>v</sub> = 95 PSI E = 1,666 PSI
  - ENGINEERED WOOD BEAMS SHALL BE LAMINATED VENEER LUMBER (LVL) OR PARALLEL STRAND LUMBER (PSL) WITH THE FOLLOWING MINIMUM DESIGN PROPERTIES:  
F<sub>b</sub> = 2900 PSI F<sub>v</sub> = 285 PSI E = 1,966 PSI
  - STRUCTURAL STEEL SHALL CONFORM TO ASTM A-36 MINIMUM GRADE.
  - BOLTS SHALL CONFORM TO A307 MINIMUM GRADE.
  - REBAR SHALL BE DEFORMED STEEL CONFORMING TO ASTM A615 GRADE 60.
  - POURED CONCRETE SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS. MATERIALS USED TO PRODUCE CONCRETE SHALL COMPLY WITH THE APPLICABLE STANDARDS LISTED IN ACI 318 OR ASTM C 1157.
  - CONCRETE LOCATED PER TABLE R402.2 SHALL BE AIR ENTRAINED WITH THE TOTAL AIR CONTENT NOT LESS THAN 5 PERCENT OR MORE THAN 7 PERCENT.
  - MASONRY UNITS SHALL CONFORM TO ACI 530/ASCE 5/TMS 402 AND MORTAR SHALL COMPLY WITH ASTM C 270.
  - ALLOWABLE SOIL BEARING PRESSURE 2000 PSF.

**GENERAL**

ENGINEER'S SEAL APPLIES TO STRUCTURAL COMPONENTS ONLY AND DOES NOT CERTIFY ARCHITECTURAL LAYOUT OR DIMENSIONAL ACCURACY. ENGINEER IS NOT RESPONSIBLE FOR CONSTRUCTION METHODS OR ANY DEVIATION FROM THE PLANS.

ALL CONSTRUCTION, WORKMANSHIP, MATERIAL QUALITY AND SELECTION SHALL BE IN ACCORDANCE WITH THE NORTH CAROLINA STATE BUILDING CODE - RESIDENTIAL CODE 2012 EDITION OF THE INTERNATIONAL RESIDENTIAL CODE 2012 (IRC), AND LOCAL CODES AND REGULATIONS. DIMENSIONS SHALL GOVERN OVER SCALE AND CODE SHALL GOVERN OVER DIMENSIONS.

- ADDITIONAL LOADS**
- FIGURE R301.2(4) - BASIC DESIGN WIND SPEED 100 MPH
- FIGURE R301.2(2) - SEISMIC DESIGN CATEGORY B
- TABLE R301.2(4) - DESIGN POSITIVE AND NEGATIVE PRESSURE FOR DOORS AND WINDOW FOR A MEAN ROOF HEIGHT OF 35 FEET OR LESS SHALL BE 25 PSF
- TABLE R301.2(2) - COMPONENT AND CLADDING LOADS FOR A MEAN ROOF HEIGHT OF 30 FEET OR LESS LOCATED IN EXPOSURE B
- ROOF VALUES BOTH POSITIVE AND NEGATIVE SHALL BE DESIGNED BASED ON ROOF PITCHES AS FOLLOWS:  
45.4 PSF FOR 0:12 TO 2:25:12, 34.8 PSF FOR 2:25:12 TO 7:12 AND 21 PSF FOR 7:12 TO 12:12  
WALL CLADDING IS DESIGNED FOR A 24.1 PSF POSITIVE AND NEGATIVE PRESSURE

- ENERGY COMPLIANCE:**
- TABLE N1102.1 - REFER TO TABLE N1101.1 TO DETERMINE THE CLIMATE ZONE BY COUNTY AND REFER TO TABLE N1102.1 FOR R VALUE INSULATION REQUIREMENTS LISTED BY ZONE.
- TABLE N1102.1 - ZONE 7 - MAX. GLAZING U FACTOR: 0.40, MIN. INSULATION R VALUES: CEILING R-30, WALLS R-13, FLOORS R-19, BASEMENT WALLS R-7, SLAB PERIMETER R-0, CRAWL SPACE WALLS R-7.
- TABLE N1102.1 - ZONE 8 - MAX. GLAZING U FACTOR: 0.40, MIN. INSULATION R VALUES: CEILING R-30, WALLS R-13, FLOORS R-19, BASEMENT WALLS R-8, SLAB PERIMETER R-5 (2 FT DEEP), CRAWL SPACE WALLS R-10.

- CONSTRUCTION**
- STEEL FLITCH BEAMS SHALL BE FASTENED TOGETHER WITH 1/2" DIAMETER BOLTS WITH WASHERS PLACED UNDER THE THREADED END OF THE BOLT. BOLTS SHALL BE SPACED AT MAXIMUM 24" o.c. STAGGERED TOP AND BOTTOM OF BEAM WITH A MINIMUM 2" EDGE DISTANCE. TWO BOLTS SHALL BE LOCATED AT 6" FROM EACH END OF FLITCH BEAM.
  - STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3 1/2" AND FULL FLANGE WIDTH. BEAMS MUST BE ANCHORED AT EACH END WITH A MINIMUM OF FOUR 16d NAILS OR TWO 1/2" x 4" LAG SCREWS.
  - ENGINEERED WOOD BEAMS SHALL BE INSTALLED WITH ALL CONNECTIONS PER MANUFACTURER'S INSTRUCTIONS.
  - ALL BEAMS SHALL BE CONTINUOUSLY SUPPORTED Laterally AND SHALL BEAR FULL WIDTH ON THE SUPPORTING WALLS OR COLUMNS INDICATED WITH A MINIMUM OF THREE STUDS.
  - SOLID BLOCKING SHALL BE PROVIDED AT ALL POINT LOADS TO TRANSFER LOADS THROUGH FLOOR LEVELS. COLUMNS SHALL BE CONTINUOUS TO THE FOUNDATION OR TO OTHER STRUCTURAL ELEMENTS.
  - ENGINEERED WOOD FLOOR SYSTEMS AND ROOF TRUSS SYSTEMS SHALL BE PROVIDED FOR REVIEW AND COORDINATED WITH THE ENGINEER OF RECORD. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
  - WALL BRACING REQUIREMENTS SHALL BE IN ACCORDANCE WITH SECTION R602.10 OF THE NORTH CAROLINA RESIDENTIAL CODE.
  - BRICK LINTELS SHALL BE 3 1/2 x 3 1/2 x 1/4 STEEL ANGLE FOR UP TO 60" MAXIMUM SPAN AND 6 x 4 x 5/16 FOR SPANS GREATER THAN 60".
  - BRICK LINTELS AT SLOPED AREAS SHALL BE 4 x 3 1/2 x 1/4 STEEL ANGLE WITH 16d NAILS IN 3/16" HOLES IN 4" ANGLE LEG AT 12" o.c. TO DOUBLE RAFTER. WHEN THE SLOPE EXCEEDS 4:12 A MINIMUM OF 3 x 3 x 1/4 PLATES SHALL BE WELDED AT 24" o.c. ALONG THE STEEL ANGLE.

ABBREVIATIONS	CONCRETE
CONC	CONCRETE
CONT	CONTINUOUS
DBL	DOUBLE
DJ	DOUBLE JOIST
DSP	DOUBLE STUD POCKET
EA	EACH
FL PT	FLAT PLATE
FTG	FOOTING
HGR	HANGER
LVL	LAMINATED VENEER LUMBER
NTS	NOT TO SCALE
OC	ON CENTER
PSL	PARALLEL STRAND LUMBER
PT	PRESSURE TREATED
SC	STUD COLUMN
SP	STUD POCKET
TJ	TRIPLE JOIST
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE

SQUARE FOOTAGE		
	HEATED S.F.	UNHEATED S.F.
FIRST FLOOR	1904	
SECOND FLOOR	618	
GARAGE		519
FRONT PORCH		125
DECK		186
TOTAL	2522	830
OPT. SCREENED PORCH		186
OPT. 3RD CAR GARAGE		278

REVISION LOG						
Rev	Description	Drawn By	Date	Sheets Affected	Brochure Required	Engineering Required
1	REVISED KITCHEN LAYOUT, MASTER BATH, FOYER, AND DINING	SDI	07/18/2023			
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						

TABLE N1102.1 CLIMATE ZONES 3-5

CLIMATE ZONES	FENESTRATION U-FACTOR <sup>b</sup>	SKYLIGHT U-FACTOR <sup>b</sup>	GLAZED FENESTRATION SHGC <sup>b,c</sup>	CEILING R-VALUE <sup>k</sup>	WOOD FRAMED WALL R-VALUE <sup>l</sup>	MASS WALL R-VALUE <sup>l</sup>	FLOOR R-VALUE <sup>l</sup>	BASEMENT WALL R-VALUE <sup>l</sup>	SLAB R-VALUE AND DEPTH <sup>d</sup>	CRAWL SPACE WALL R-VALUE <sup>e</sup>
3	0.35	0.65	0.30	30	13	5/10	19	10 <sup>13</sup>	0	5/13
4	0.35	0.60	0.30	38 OR 30 CONT <sup>j</sup>	15 OR 13+2.5 <sup>h</sup>	5/10	19	10 <sup>13</sup>	10 <sup>d</sup>	10 <sup>13</sup>
5	0.35	0.60	NR	38 OR 30 CONT <sup>j</sup>	19 OR 13+5 OR 15+3.5 <sup>h</sup>	13/17	30/9	10 <sup>13</sup>	10 <sup>d</sup>	10 <sup>13</sup>

- R-VALUES ARE MINIMUMS. U-FACTORS AND SHGC ARE MAXIMUMS.
- THE FENESTRATION U-FACTOR COLUMN EXCLUDES SKYLIGHTS. THE SHGC COLUMN APPLIES TO ALL GLAZED FENESTRATION.
- "10<sup>13</sup>" MEANS R-10 CONT. INSULATED SHEATHING ON THE INTERIOR OR EXTERIOR OF THE HOME OR R-13 CAVITY INSULATION AT THE INTERIOR OF THE BASEMENT WALL OR CRAWL SPACE WALL.
- FOR MONOLITHIC SLABS, INSULATION SHALL BE APPLIED FROM THE INSPECTION GAP DOWNWARD TO THE BOTTOM OF THE FOOTING OR A MAXIMUM OF 18 INCHES BELOW GRADE, WHICHEVER IS LESS. FOR FLOATING SLABS, INSULATION SHALL EXTEND TO THE BOTTOM OF THE FOUNDATION WALL OR 24 INCHES, WHICHEVER IS LESS. R-5 SHALL BE ADDED TO THE REQUIRED SLAB EDGE R-VALUE FOR HEATED SLABS.
- R-19 FIBERGLASS BATTS COMPRESSED AND INSTALLED IN A NOMINAL 2x6 CAVITY IS DEEMED TO COMPLY. FIBERGLASS BATTS RATED R-19 OR HIGHER COMPRESSED AND INSTALLED IN A 2x4 WALL IS NOT DEEMED TO COMPLY.
- BASEMENT WALL INSULATION IS NOT REQUIRED IN WARM-HUMID LOCATIONS AS DEFINED BY FIGURE N1101.2 (1) AND (2) AND TABLE N1101.2.
- OR INSULATION SUFFICIENT TO FILL THE FRAMING CAVITY, R-19 MINIMUM.
- "13+5" MEANS R-13 CAVITY INSULATION PLUS R-5 INSULATED SHEATHING. "15+3.5" MEANS R-15 CAVITY INSULATION PLUS R-3 INSULATED SHEATHING. IF STRUCTURAL SHEATHING COVERS 25 PERCENT OR LESS OF THE EXTERIOR, INSULATING SHEATHING IS NOT REQUIRED WHERE STRUCTURAL SHEATHING IS USED. IF THE STRUCTURAL SHEATHING COVERS MORE THAN 25 PERCENT OF THE EXTERIOR, STRUCTURAL SHEATHING SHALL BE SUPPLEMENTED WITH INSULATED SHEATHING OF AT LEAST R-2. "13+2.5" MEANS R-13 CAVITY INSULATION PLUS R-2.5 SHEATHING.
- FOR MASS WALLS, THE SECOND R-VALUE APPLIES WHEN MORE THAN HALF THE INSULATION IS ON THE INTERIOR OF THE MASS WALL.
- R-20 SHALL BE DEEMED TO SATISFY THE CEILING INSULATION REQUIREMENT WHEREVER THE FULL HEIGHT OF THE UNCOMPRESSED R-20 INSULATION EXTENDS OVER THE WALL TOP PLATE AT THE EAVES. OTHERWISE R-20 INSULATION IS REQUIRED WHERE ADEQUATE CLEARANCE EXISTS OR INSULATION MUST EXTEND TO EITHER THE INSULATION BAFFLE OR WITHIN 1" OF THE ATTIC ROOF DECK.
- TABLE VALUE REQUIRED EXCEPT FOR ROOF EDGE WHERE THE SPACE IS LIMITED BY THE PITCH OR THE ROOF, THERE THE INSULATION MUST FILL THE SPACE UP TO THE AIR BAFFLE.

ATTIC VENT SCHEDULE							
Cotton Farms Lot 16							
MAIN HOUSE		SQ FTG	2488	AT / NEAR RIDGE		AT / NEAR EAVE	
VENT TYPE	SQ. FT. REQUIRED RANGE	SQ. FT. SUPPLIED	PERCENT OF TOTAL SUPPLIED	POT LARGE (SQ. FT. EACH)	POT SMALL (SQ. FT. EACH)	RIDGE VENT (SQ. FT. PER FT.)	EAVE VENT (SQ. FT. PER FT.)
				0.4236	0.2778	0.125	0.1944
RIDGE VENT	3.32	4.15	6.00	49.48	0	0	48.00
SOFFIT VENTS	4.98	4.15	6.13	50.52			0
TOTAL (MIN)	8.29	8.29	12.13	100.00	POT VENTS MAY BE REQUIRED IF THERE IS INSUFFICIENT RIDGE AVAILABLE		

\* SCHEDULE HAS BEEN CALCULATED ASSUMING EAVE VENTILATION AT 50-60% OF TOTAL AND RIDGE AT 40-50% OF TOTAL REQUIRED VENTILATION



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Client:

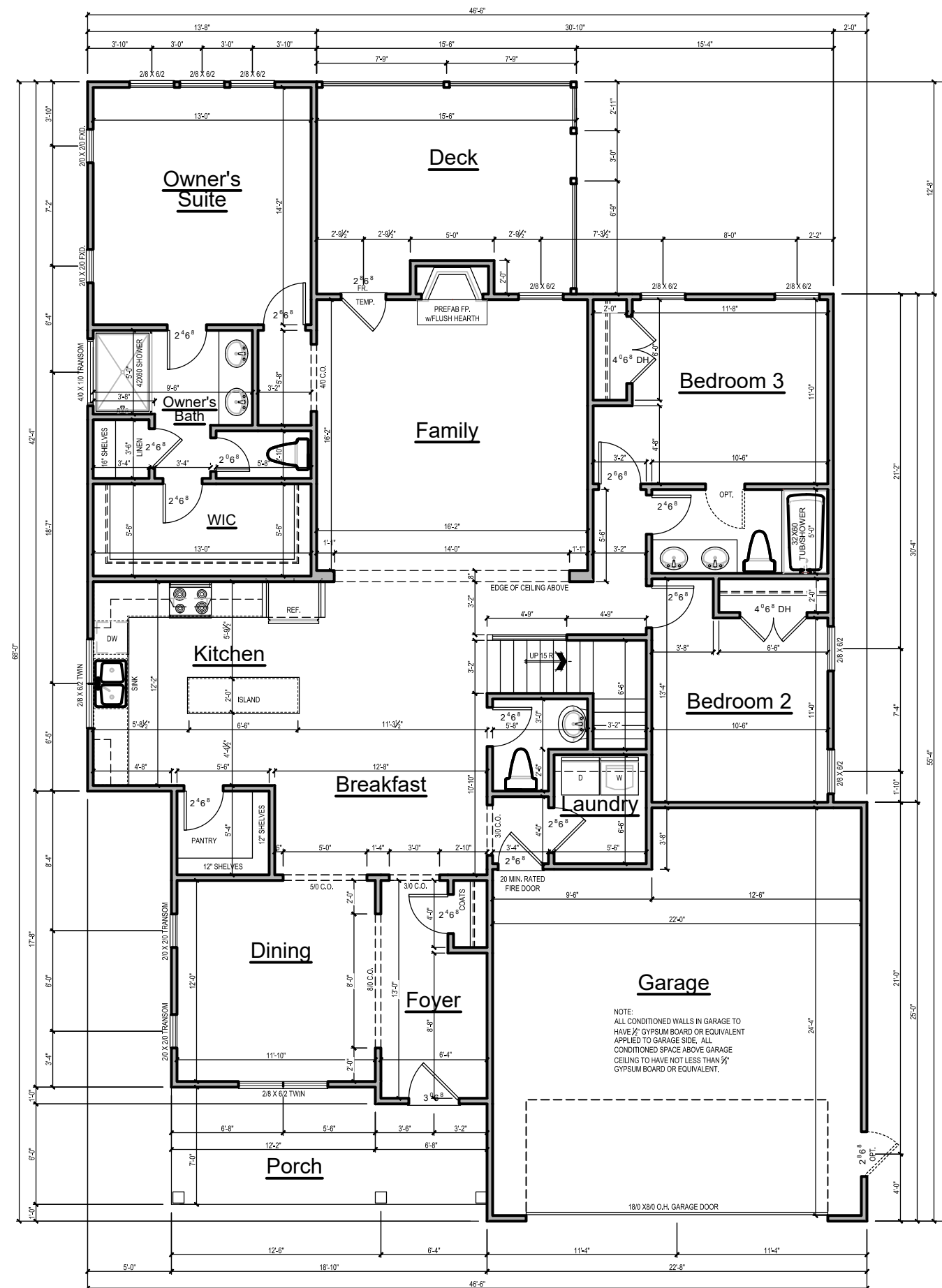
**Triple A  
Homes**

Title:

**FIRST  
FLOOR  
PLAN**

Plan No.

Sheet No. **A-1**



**GENERAL NOTES**

**WALLS:**  
ALL WALLS ARE DRAWN 4" THICK U.N.O.  
ANGLED WALL ARE DRAWN @84° U.N.O.

**SMOKE DETECTORS:**  
LOCATION AND NUMBER OF DETECTORS SHALL CONFORM TO NEC.

**EGRESS:**  
ALL BEDROOMS MUST HAVE AT LEAST ONE WINDOW WHICH CONFORMS TO R-310 OF THE N.C. BLDG. CODE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY CHOSEN WINDOWS MEET EGRESS REQUIREMENTS AS MANUFACTURERS VARY.

**ATTIC ACCESS:**  
MIN. ATTIC ACCESS SHALL BE PROVIDED BY BUILDER AND LOCATED ON SITE.

**WALL/CEILING HGT.**  
WALL AND CEILING HEIGHT NOTES ARE BASED ON NOMINAL WALL SIZE.  
KNEE WALL HEIGHT LABELS FOR WALLS UNDER RAFTERS ASSUME AN EXTRA 2" FOR FURRING (IN HEATED SPACES) FOR INSULATION. THE WALL HEIGHT REFERS TO THE HGT. FROM THE FLOOR DECKING TO THE BOTTOM OF THE FURRING.

**1 FIRST FLOOR PLAN**  
SCALE: 3/4"=1'-0"



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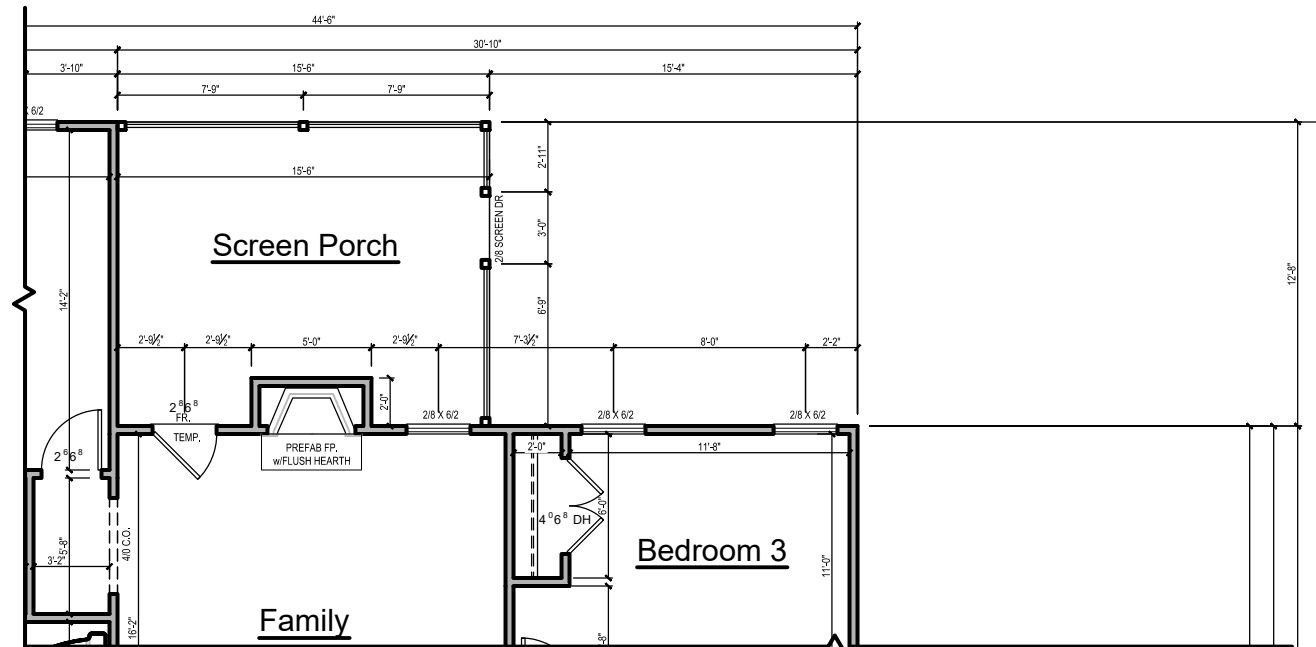
Client:

**Triple A  
Homes**

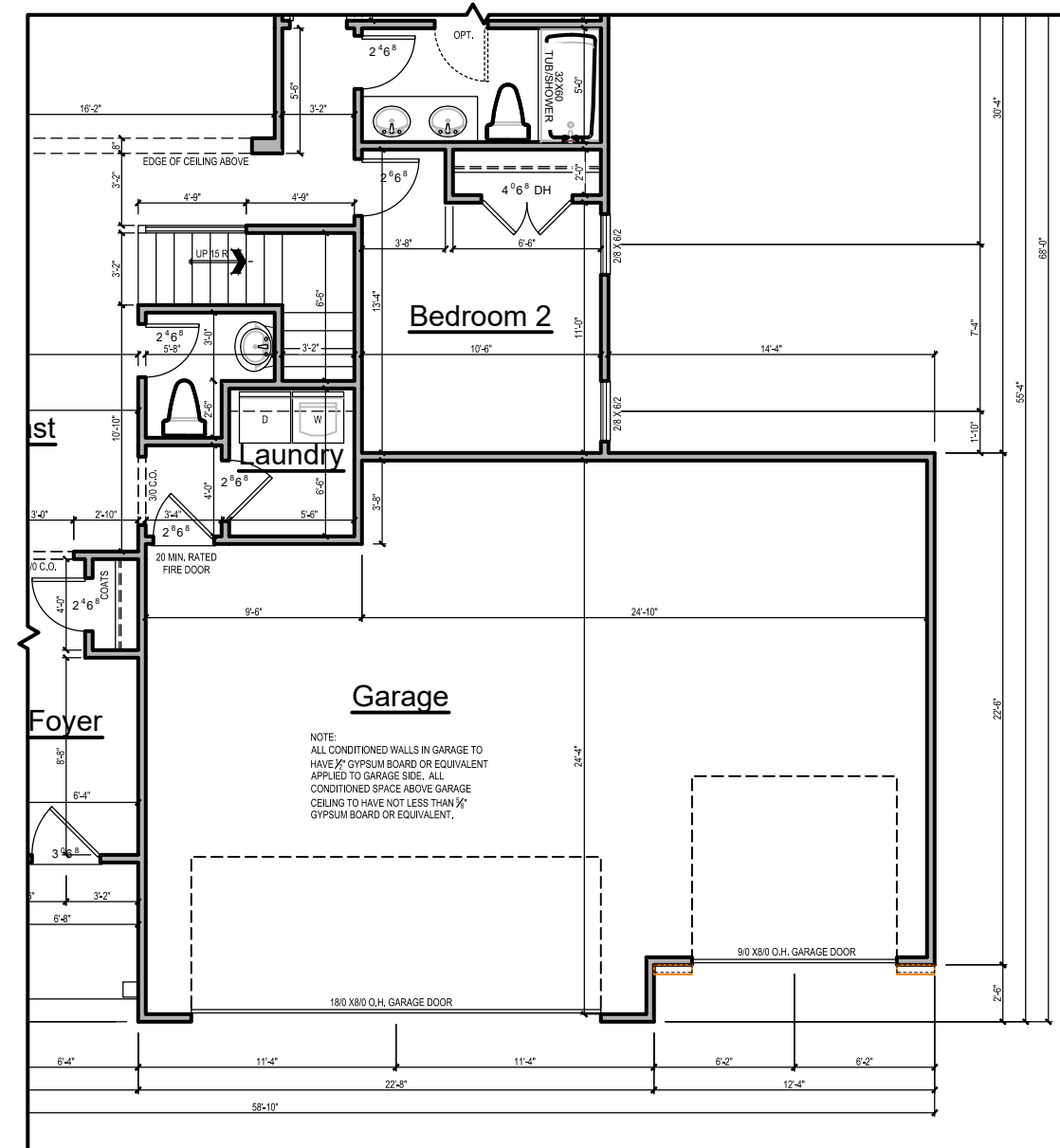
Title:  
**FIRST  
FLOOR  
OPTIONS**

Plan No.

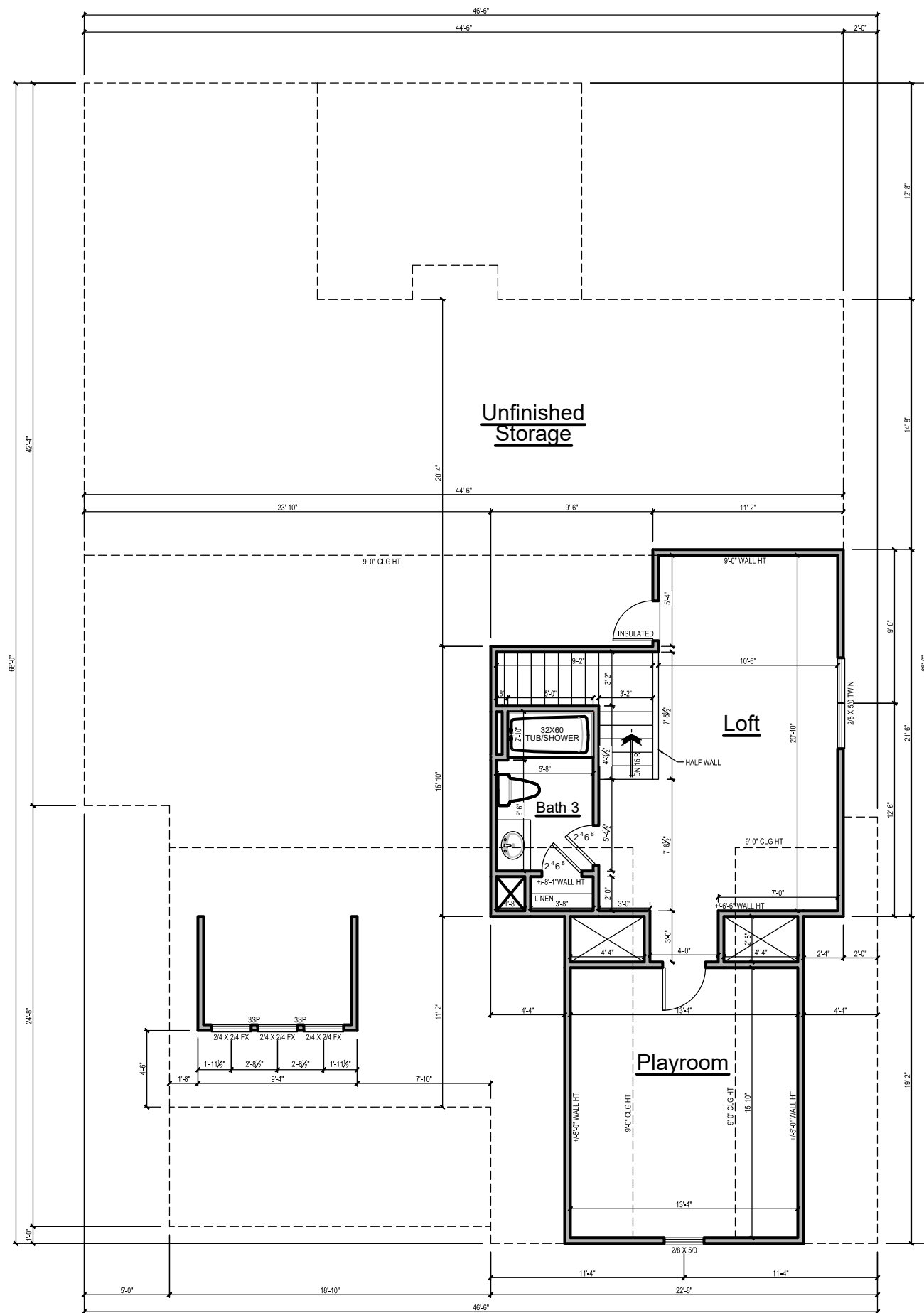
Sheet No. **A-1.1**



**2 OPT SCREEN PORCH**  
SCALE: 1/8" = 1'-0"



**1 OPT 3RD CAR GARAGE**  
SCALE: 1/8" = 1'-0"



NOTE:  
 IF CLEAR OPENING OF THE OPERABLE PORTION OF A WINDOW IS MORE THAN 72" ABOVE GRADE, LOWEST PART OF OPENING MUST BE 24" ABOVE FLOOR UNLESS:

- A. WINDOW IS FIXED UNIT
- B. OPENING DOES NOT ALLOW PASSAGE 4" SPHERE
- C. WINDOW IS EQUIPPED WITH FALL PREVENTION DEVICE
- D. WINDOW IS EQUIPPED WITH AN APPROVED LIMITING DEVICE

**GENERAL NOTES**

**WALLS:**  
 ALL WALLS ARE DRAWN 4" THICK U.N.O.  
 ANGLED WALL ARE DRAWN @45° U.N.O.

**SMOKE DETECTORS:**  
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**EGRESS:**  
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 FOR INSULATION THE WALL HEIGHT REFERS TO THE HGT. FROM THE FLOOR DECKING TO THE BOTTOM OF THE FURRING.

**2 SECOND FLOOR PLAN**  
 SCALE: 1/8" = 1'-0"



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Client:

**Triple A  
 Homes**

Title:

**FIRST  
 FLOOR  
 PLAN**

Plan No.

Sheet No.

**A-2**