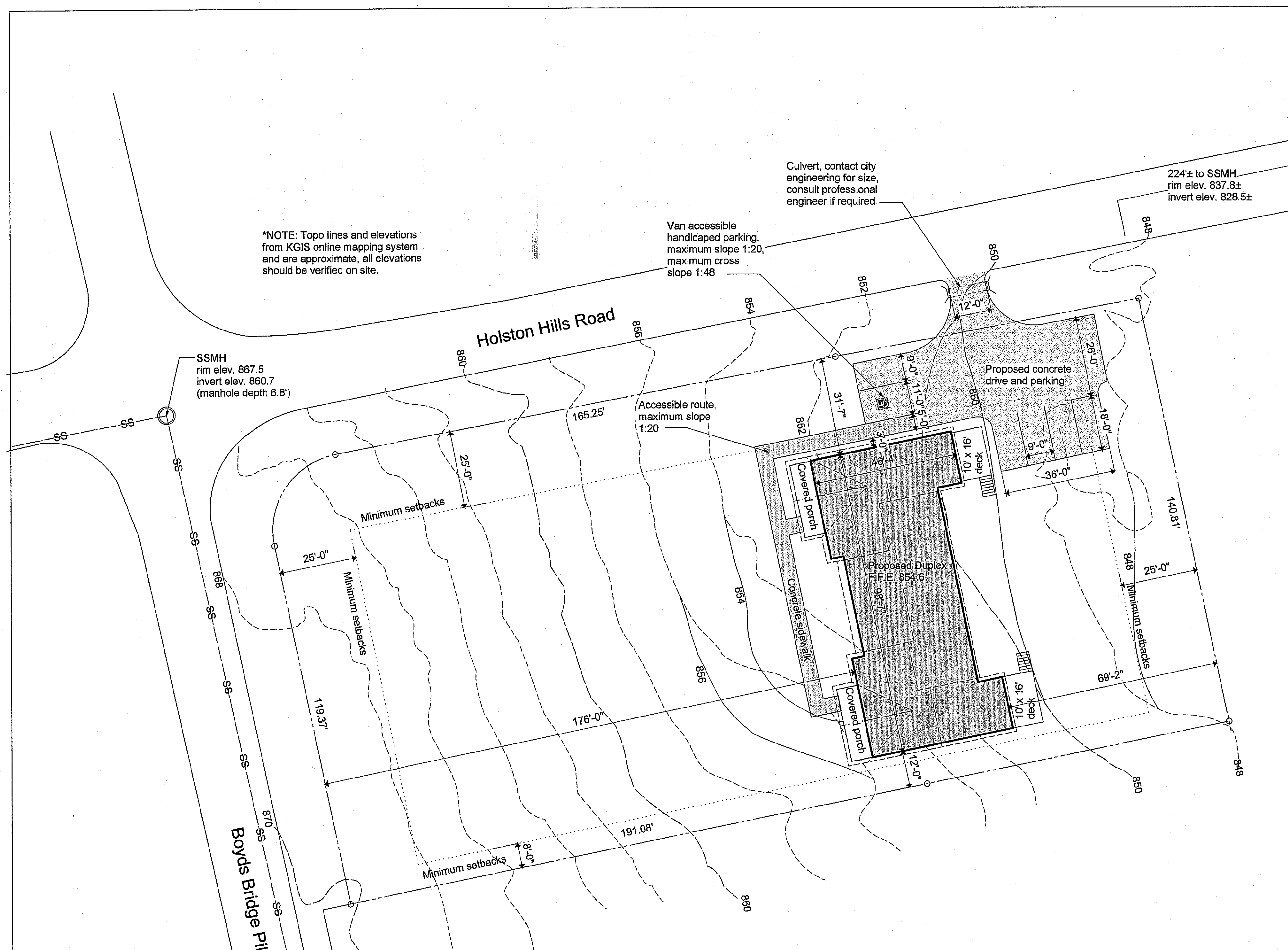




Knox County Code Administration & Inspection
Residential Deck Code Handout

This handout is a guide and is not all-inclusive and all materials must be installed per the manufacturers' instructions and the 2012 International Residential Code (IRC).

- Flashing shall be installed at top of the ledger board and between the house wall. Flashing shall be continuous, corrosion resistance type and installed per manufacturers instructions. This is usually stainless, double hot dipped galvanized, vinyl or copper. Aluminum flashing is not allowed.
- The house wall ledger board shall be bolted to the house and be the same size as the floor joists (or larger if installing ledger strips).
- The house ledger board shall be bolted (edge-grained top to bottom) to the house with 1/2" dia. lag bolts * with washers that are long enough to fully penetrate the structural member of the house. Bolt spacing shall be as follows: Joist Span 6' Bolt Spacing 30" or Joist Span 8' Bolt Spacing 23" or Joist Span 10' Bolt Spacing 19" or Joist Span 12' Bolt Spacing 17" or Joist Span 14' Bolt Spacing 15" or Joist Span 16' Bolt Spacing 13" or Joist Span 18' Bolt Spacing 11" or Joist Span 20' Bolt Spacing 9" or Joist Span 22' Bolt Spacing 7" or Joist Span 24' Bolt Spacing 5" or Joist Span 26' Bolt Spacing 3" or Joist Span 28' Bolt Spacing 1" or Joist Span 30' Bolt Spacing 0". Do not bolt to sick. Center of bolts must be at least 2" from the edge.
- Joist hangers shall be sized and supported in accordance with table 4. Girders must be fully supported by and structurally anchored to posts.
- Deck girders shall be sized and supported in accordance with table 4. Girders must be fully supported by and structurally anchored to posts.
- Posts shall be sized in accordance with table 3. All posts must be structurally anchored to the footing.
- Ledger strips can be used in lieu of hangers or wall bracing. Ledger strips are to be 2" x 2" minimum and anchored with 3 - #16 nails " spaced 2" - 3" apart under each joist location.
- Footing shall be sized in accordance with table 3.

* ALL FASTENERS, HANGERS, AND NAILS ARE TO BE DOUBLE HOT DIPPED GALVANIZED OR STAINLESS STEEL.

Handrails and Guardrails:
Posts and deck with a raised floor surface located more than 30" above the grade or floor below shall have guardrails not less than 36" in height. Intermediate rails shall be placed which do not allow passage of a 4" sphere.

Stairs:
Open sides of stairs with a total rise of more than 30" above the grade or floor below shall have guardrails not less than 36" in height measured vertically from the nosing of the treads. Intermediate rails shall be placed which do not allow passage of a 4" sphere.

Treads and Risers:
The maximum rise height shall be 8" (measured vertically between leading edges of adjacent treads). The minimum tread depth shall be 9" (measured horizontally from nose to nose). A railing not less than 36" but not more than 42" shall be provided on stairways with solid risers.

1 of 5

Based on the 2012 International Residential Code. Other materials, configurations, or engineered designs may be utilized that fall within the guidelines of this code.

TABLE 1: Joist Span Chart

Joist Size	12"	16"	18"	24"
2" x 6"	10'-0"	9'-0"	8'-0"	8'-0"
2" x 8"	14'-0"	12'-0"	11'-0"	11'-0"
2" x 10"	18'-0"	16'-0"	14'-0"	13'-0"
2" x 12"	21'-0"	18'-0"	17'-0"	16'-0"

Note: Above span length are clear span dimensions between bearing points. (Based on No. 2 pine)

TABLE 2: Deck Post Sizing

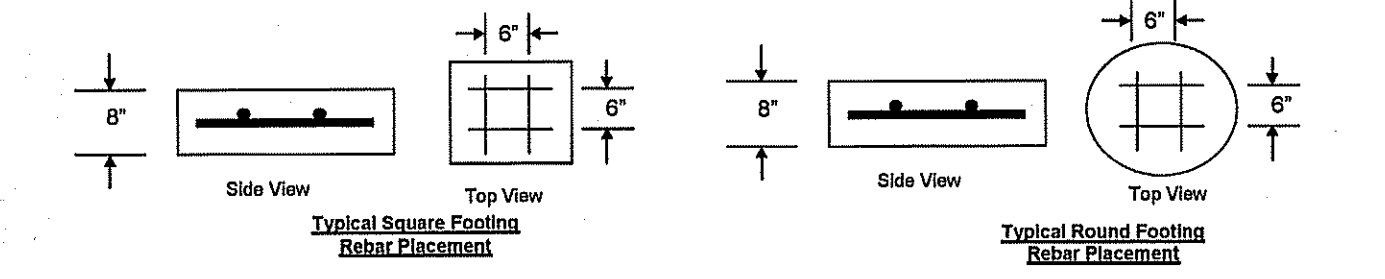
Post Height	Wood Post Size	Round Metal (Sch. 40)
0' to 6'-0"	4" x 4"	3" Dia.
6' to 12'	6" x 6"	3" Dia.

Note: Call the Codes office if your posts are greater than 12 feet in height or provide an engineered design.

TABLE 3: Deck Pier Footing Chart

Header Size	2 @ 2"x6" or a single Member	2 @ 2"x10"	2 @ 2"x12"
Square Footing Size	12" x 12"	17" x 17"	20" x 20"
Round Footing Size	14"	19"	23"

Note: Minimum thickness of concrete = 6", minimum frost line depth = 12". Install two (2) #4 rebar in each direction spaced 6" on center.



2 of 5

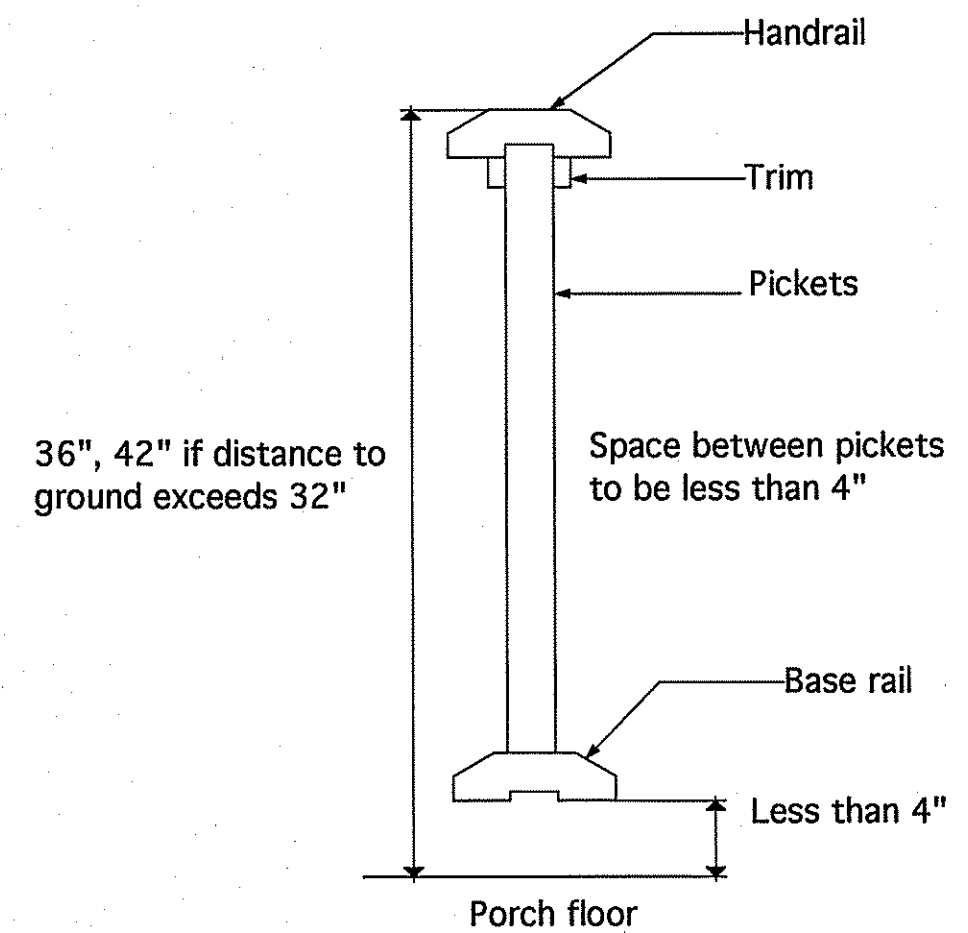
CLEAR OPENING	Span of Supported Floor Framing										
	4'	6'	8'	10'	12'	14'	16'	18'	20'	22'	
4'	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x10	(1) 2x12	(1) 2x12	(1) 2x12	
6'	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x10	(1) 2x12	(1) 2x12	(1) 2x12	
8'	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x10	(1) 2x12	(1) 2x12	(1) 2x12	
10'	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x10	(1) 2x12	(1) 2x12	(1) 2x12	
12'	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x10	(1) 2x12	(1) 2x12	(1) 2x12	
14'	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x10	(1) 2x12	(1) 2x12	(1) 2x12	
16'	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x10	(1) 2x12	(1) 2x12	(1) 2x12	
18'	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x10	(1) 2x12	(1) 2x12	(1) 2x12	
20'	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x10	(1) 2x12	(1) 2x12	(1) 2x12	
22'	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x10	(1) 2x12	(1) 2x12	(1) 2x12	

Southern Pine lumber sizes for No. 2 grade are shown in regular type, with number of plies given in parentheses. Southern Pine glued laminated timber sizes for 24F-1.8E combination are shown in italics when (4) 2x12's no longer meet design conditions. A 3.0" bearing length is assumed on girder ends.

Steps in Using this Table:

- Verify the applicability of this table's design loads in pounds per square foot (psf) and corresponding load duration factor.
- Find the span of supported floor framing, (i.e. span of joists or trusses that frame into the beam).
- Find the clear opening required in foot.
- Select the number of plies and size of the Southern Pine 24F-1.8E glued laminated timber.
- Beams supporting face mounted joists cannot be smaller than joist and top flange hangers are required.
- Member sizes were designed assuming beams were braced continuously to prevent lateral compression buckling.

3 of 5



Rail Detail
(not to scale)

DECK STAIRS
Stair to have risers not to exceed 7 3/4" and treads of no less than 10" with open riser space of less than 4" or with closed risers and 3/4" nosings on treads

DECK DETAILS
Not to Scale

Site plan for use in "Use on Review" process, additional licensed professional services may be required prior to construction

1-B-19-JR
11/21/18
SITE PLAN
Scale: 1" = 20'-0"

DRWAN BY:
J. Perry Childress
1821 Maryville Pike
Knoxville, TN 37920
(865) 803-2545

Sertoma Duplex Site Plan
4865 Boyds Bridge Pike, Knoxville, TN 37917

DATE:
11-8-18

SHEET
1
of 1

DRWN. BY: SER	
CHKD. BY: MDA	
APPR. BY:	
DATE: 12-28-12	
REVISIONS	

SERTOMA - DUPLEX FLOOR PLAN

1916 RIVER SHORES KNOXVILLE, TENNESSEE

ALLAN ASSOCIATES ARCHITECTS, PLLC

5516 WALLWOOD ROAD KNOXVILLE, TENNESSEE 37912

865 / 689-1302

SHEET NUMBER

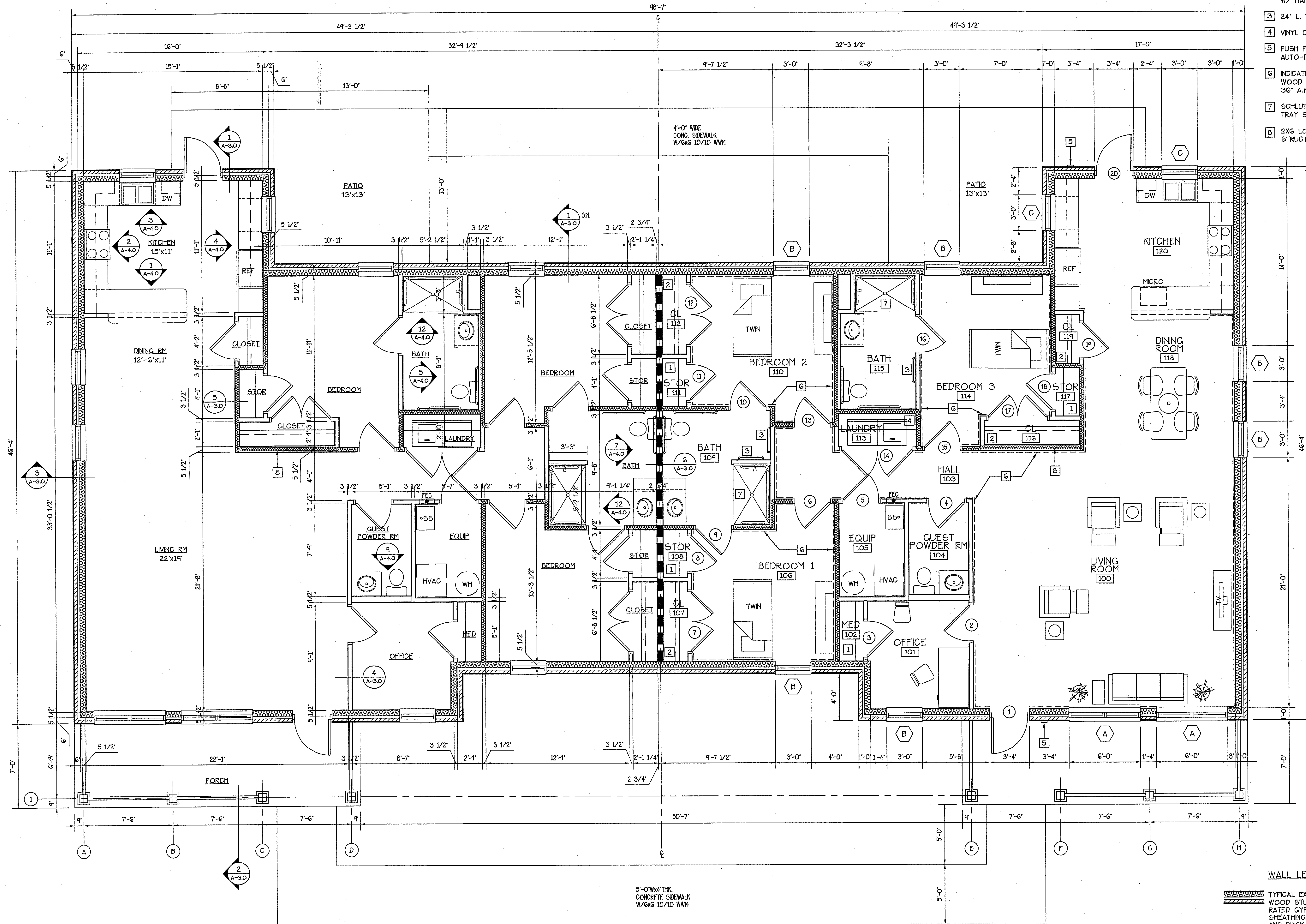
A-1.0

PLAN NOTES

- 1 FIVE (5) VINYL COATED WIRE SHELVES, SPACED EQUALLY.
- 2 VINYL COATED 16" D. WIRE SHELF W/ HANGING ROD. 54" A.F.F.
- 3 24" L. TOWEL BAR.
- 4 VINYL COATED 16" D. WIRE SHELF.
- 5 PUSH PAD FOR AUTO-DOOR-OPENER.
- 6 INDICATES LOCATION OF 1x6 WOOD CHAIR RAIL W/ TOP AT 36" A.F.F.
- 7 SCHLUTER-KERDI-SHOWER-ST TRAY SYSTEM SEE 7/A-3.0
- 8 2X6 LOAD BEARING WALL SEE STRUCT.

WALL LEGEND

- TYPICAL EXTERIOR WALL: WOOD STUDS W/ 5/8" FIRE RATED GYP. BD., 7/16" O.S.B. SHEATHING, WEATHER BARRIER AND BRICK OR HARDIPANEL SIDING.
- 1 HOUR RATED WALL. SEE 6/A-3.0.
- INTERIOR SOUND WALL. SEE 5/A-3.0.
- TYPICAL INTERIOR WALL 4/A-3.0 2x4 WD. STUDS AT 16" O.C. W/ SOUND BATT AND 5/8" GYP. BD. EA. SIDE.



DIMENSION FLOOR PLAN
SCALE: 1/4" = 1'-0"

FINISH FLOOR PLAN
SCALE: 1/4" = 1'-0"

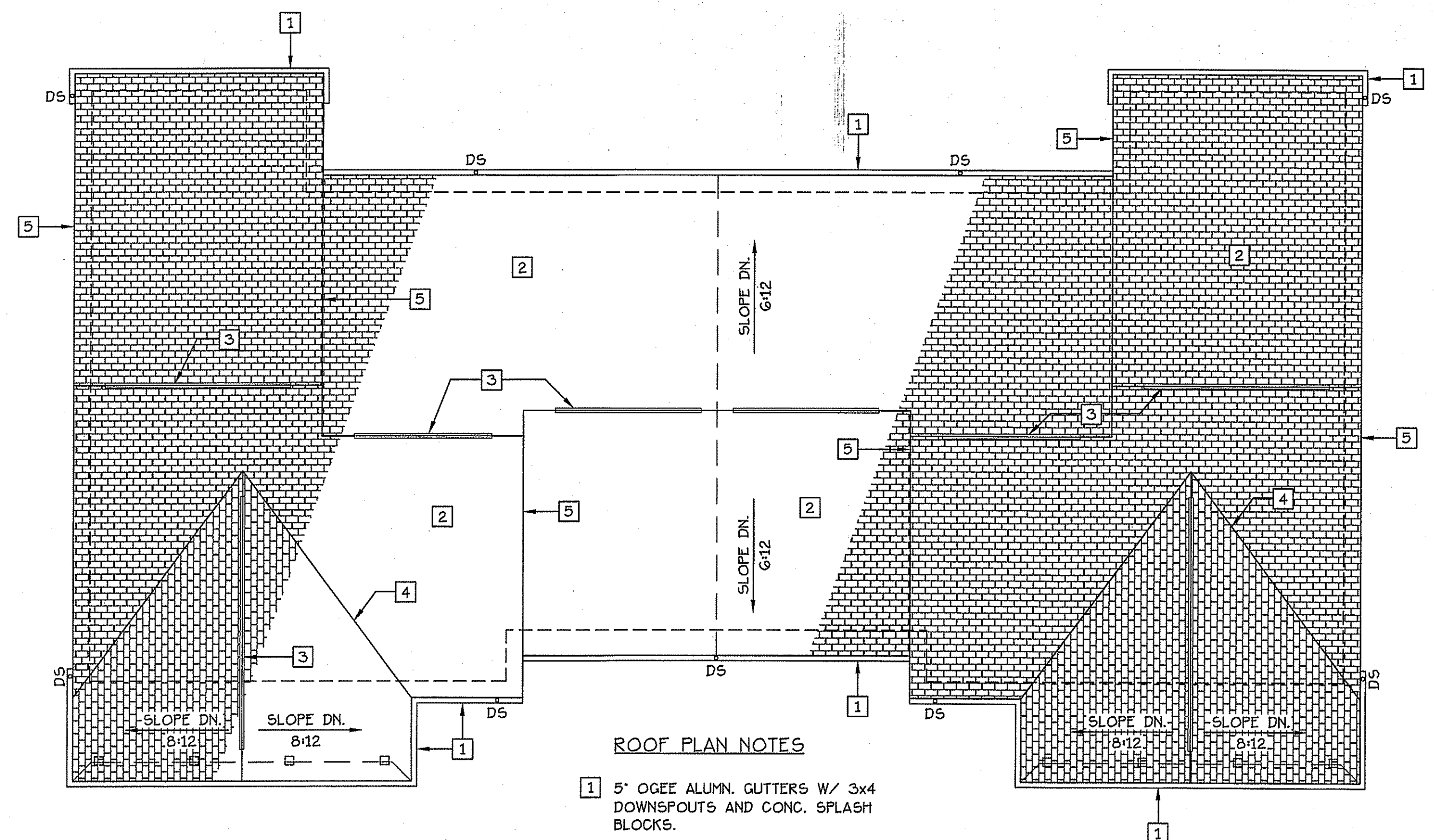
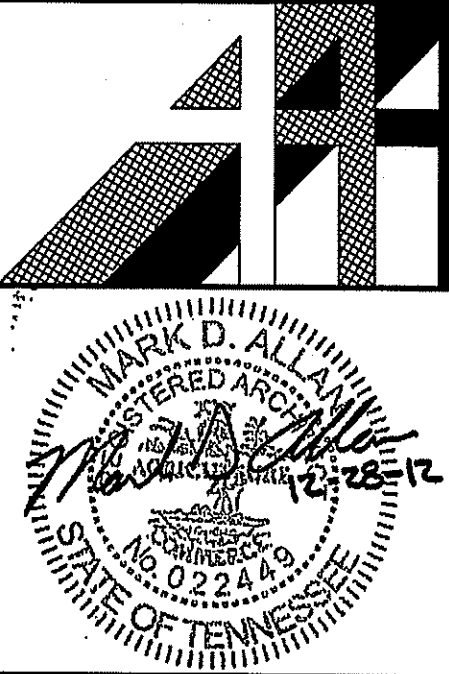
GROSS UNIT AREA = 1,959 S.F.
NET UNIT AREA = 1,795 S.F.

DRWN. BY: SER	CHKD. BY: MDA	APPR. BY:	DATE: 12-28-12	REVISIONS

SERTOMA - DUPLEX
1916 RIVER SHORES
KNOXVILLE, TENNESSEE

ALLAN ASSOCIATES ARCHITECTS, PLLC

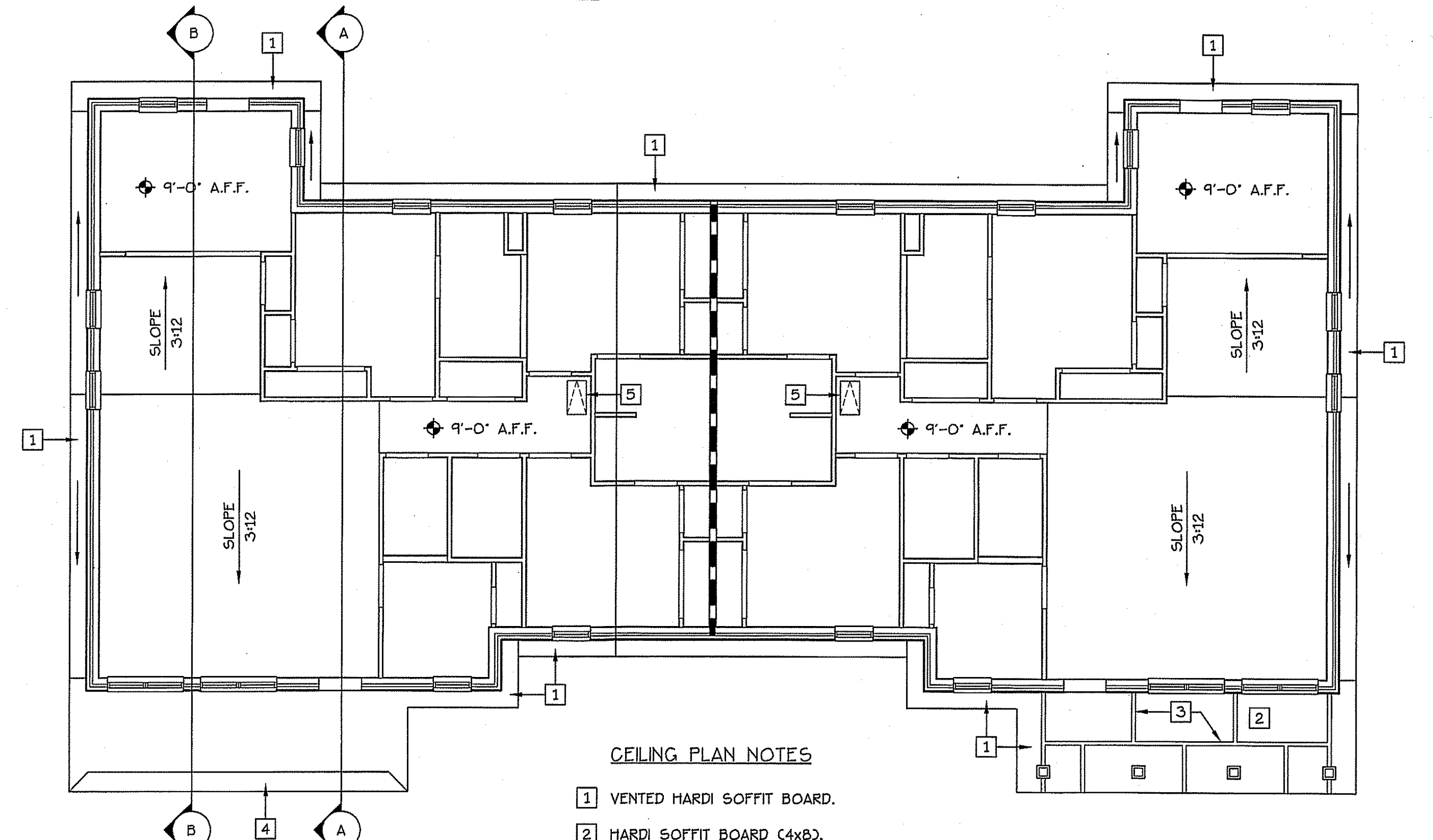
5516 WALLWOOD ROAD
KNOXVILLE, TENNESSEE 37912
865 / 888-1302



ROOF PLAN
SCALE: 1/8" = 1'-0"

ROOF PLAN NOTES

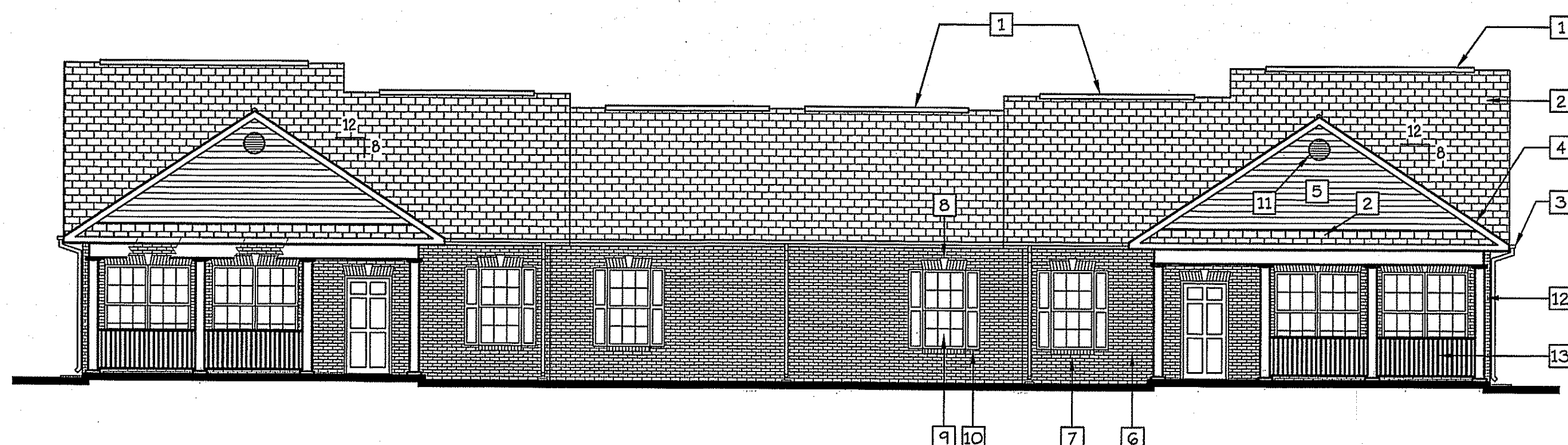
- 5" OGEE ALUMN. GUTTERS W/ 3x4 DOWNSPOUTS AND CONC. SPLASH BLOCKS.
- FIBERGLASS DIMENSIONAL ROOF SHINGLES, ALGAE RESISTANT, 30 YR. CERTAINTED LANDMARK OVER 15# ROOF FELT.
- OMNI-ROLL SHINGLE OVER RIDGE VENT.
- ICE/WATER SHIELD VALLEY FLASHING.
- 1x6 HARDI TRIM FASCIA BOARD.



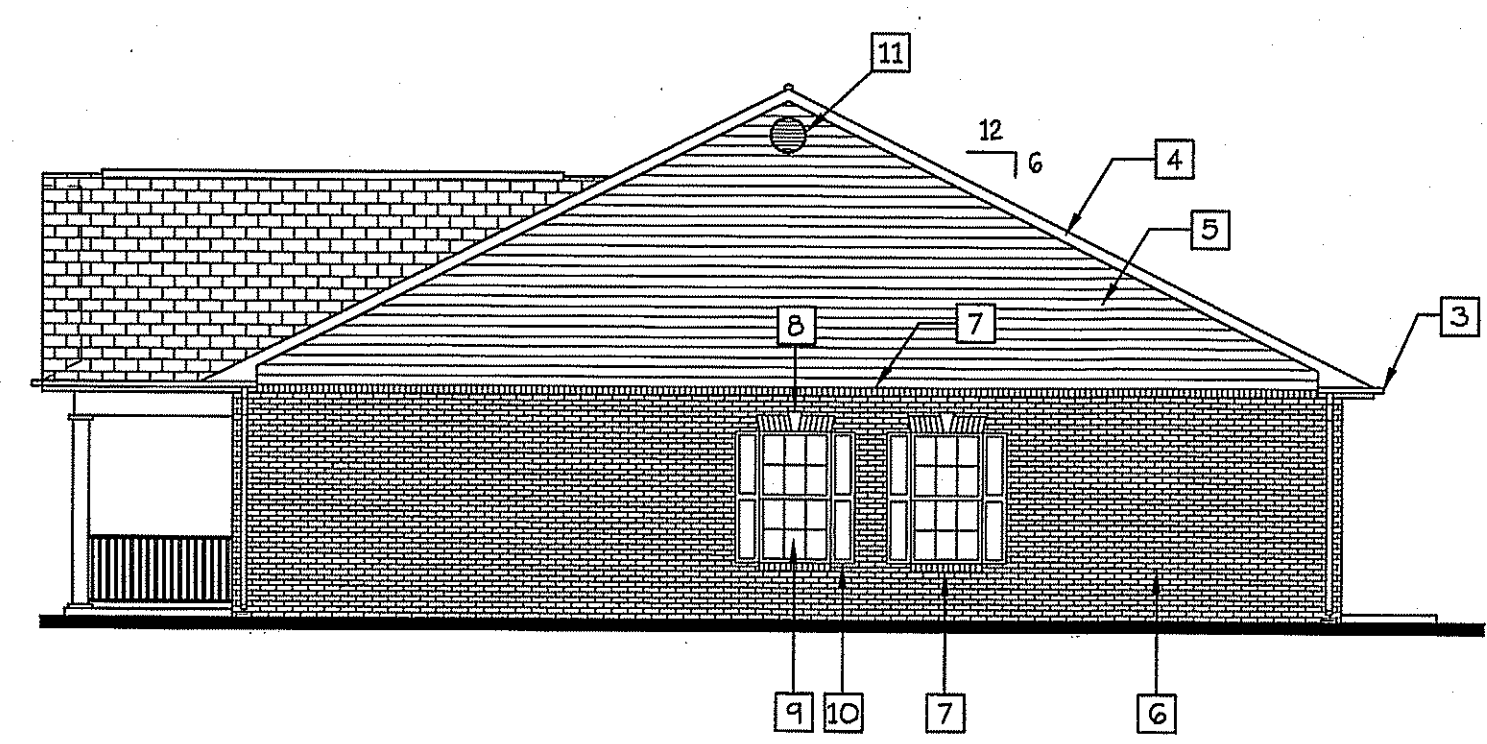
CEILING PLAN
SCALE: 1/8" = 1'-0"

CEILING PLAN NOTES

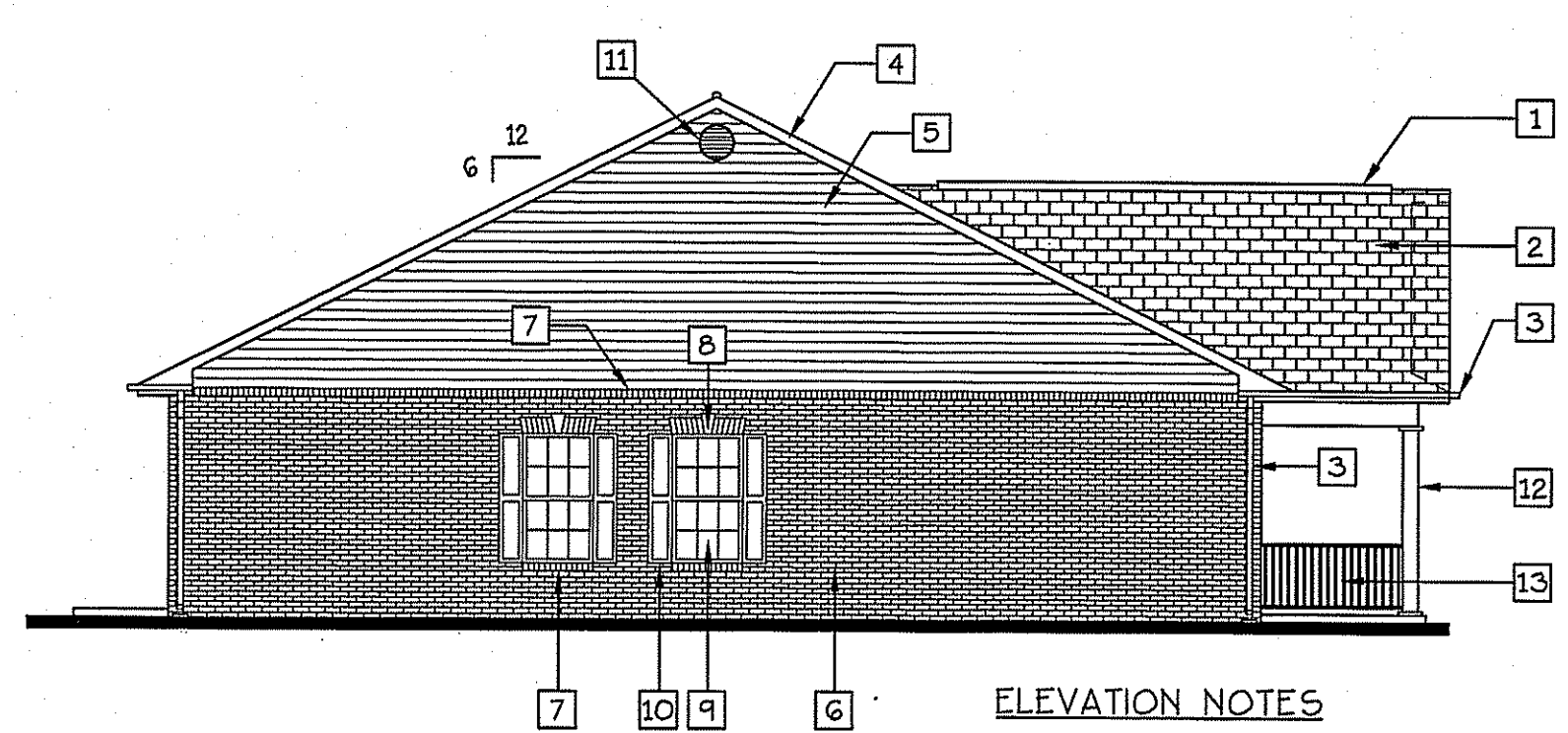
- VENTED HARDI SOFFIT BOARD.
- HARDI SOFFIT BOARD (4x8).
- 1x4 HARDI TRIM AT JOINTS.
- ROOF SHINGLES.
- ALUMINUM FOLDING ATTIC LADDER WERNER #A2210.



FRONT ELEVATION
SCALE: 1/8" = 1'-0"



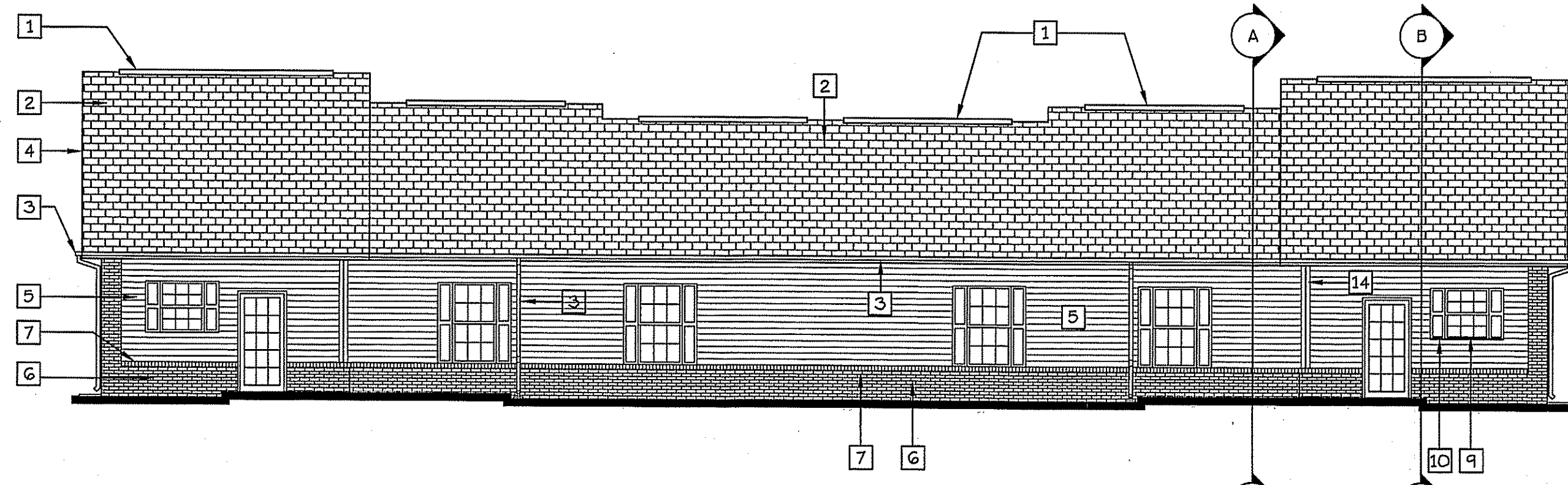
RIGHT SIDE ELEVATION
SCALE: 1/8" = 1'-0"



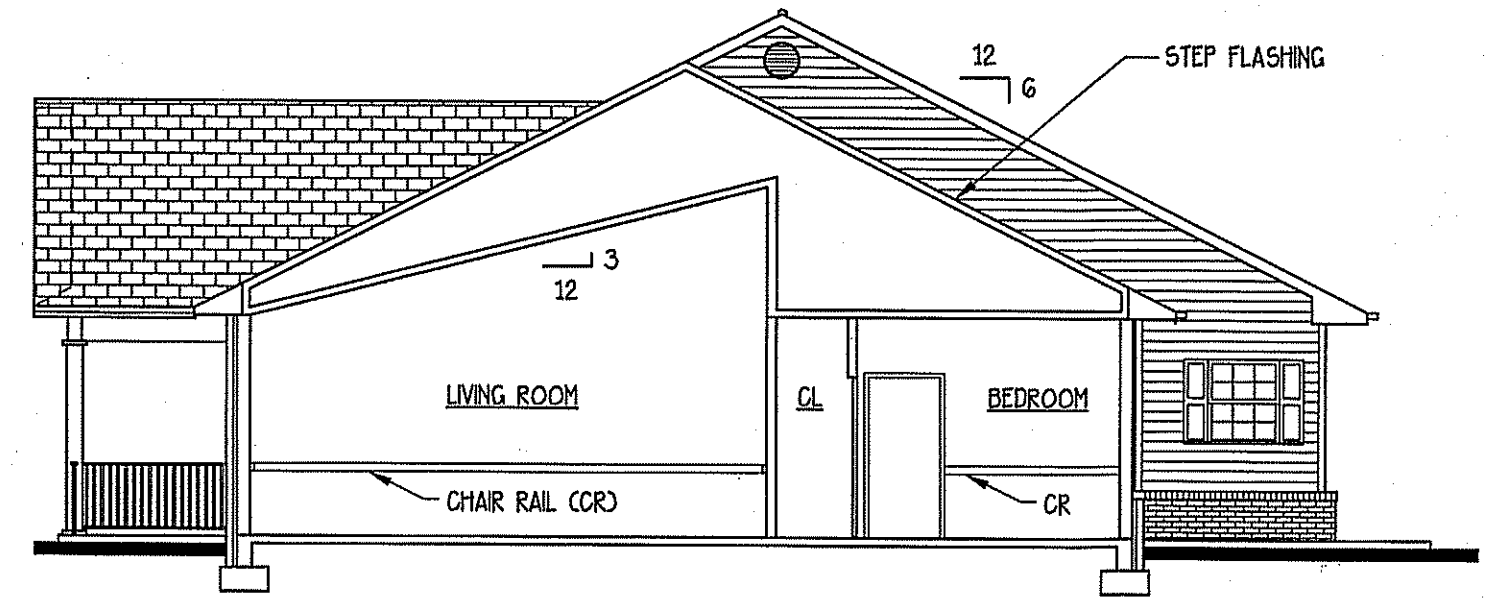
LEFT SIDE ELEVATION
SCALE: 1/8" = 1'-0"

ELEVATION NOTES

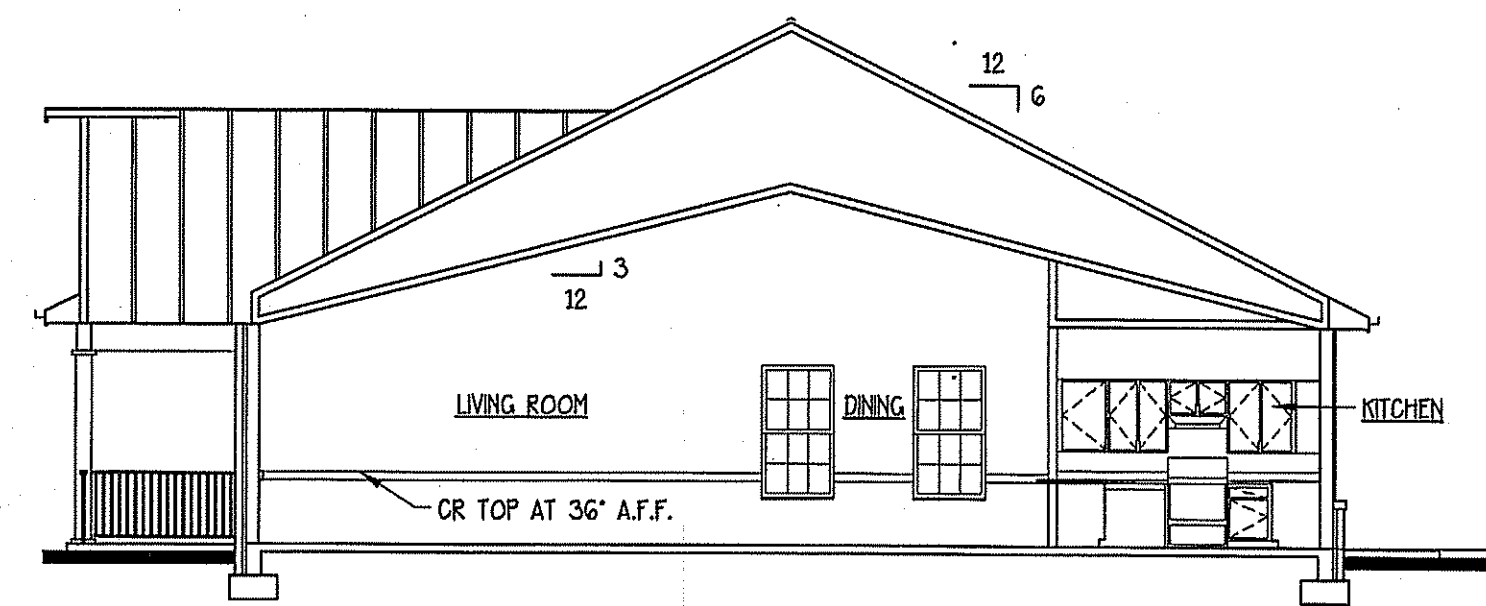
- OMNI-ROLL SHINGLE OVER RIDGE VENT.
- FIBERGLASS DIMENSIONAL ROOF SHINGLES, ALGAE RESISTANT, 30 YR. CERTAINTED LANDMARK OVER 15# FELT.
- 5" OGEE ALUMN. GUTTERS W/ 3x4 DOWNSPOUTS AND CONC. SPLASH BLOCKS.
- 1x6 HARDI TRIM FASCIA BOARD.
- HARDI-LAP SIDING OVER TYVEK HOUSE WRAP.
- BRICK VENEER.
- ROWLOCK BRICK COURSE.
- SOLDIER BRICK COURSE W/ ROCK CAST KEY STONE.
- VINYL WINDOW UNITS W/ INSUL. GLASS, ARGON, LOW E, U=0.32, SHGC=0.30.
- 18" W. VINYL SHUTTERS.
- VINYL GABLE VENT 24" DIA. W/ INSECT SCREEN.
- 8" SQ. ENDURA-STONE PORCH COLUMNS MANUF. BY "PACIFIC COLUMNS".
- VINYL PICKET RAILING AS MANUF. BY ALSIDE.
- 1x4 HARDI TRIM CORNER BOARDS.



REAR ELEVATION
SCALE: 1/8" = 1'-0"



BUILDING SECTION A-A
SCALE: 1/8" = 1'-0"



BUILDING SECTION B-B
SCALE: 1/8" = 1'-0"