1.1 This plan has been drawn to comply with the 2018 NC Building Code

1.2 Minimum Design Loads for Building and Other Structures ASCE 7-98
2 Roof Dead Load 15 PSF
3 Roof Live Load 20 PSF
4 Typical Floor Dead Load 10 PSF
5 Floor Live Loads
5.1 Rooms other than sleeping rooms 40 PSF
5.2 Sleeping Rooms 30 PSF
5.3 Stairs 40 PSF
5.4 Decks 40 PSF
5.5 Exterior Balconies 60 PSF
6 Wind Loads
6.1 Ultimate Design Wind Speeds 15 MPH
6.2 Wind Importance Factor, Iw 1.00
6.3 Exposure B
6.4 Walls (Component and Cladding) 25 PSF
6.5 Roofs (Component and Cladding)
6.5.1 Roof Slopes 2.25/12 to 7/12 34.8 PSF
6.5.2 Roof Slopes 7/12 to 12/12 21 PSF

It is the sole responsibility of the Contractor and/or Builder to conform to all standards, provisions, requirements, methods of construction and uses of materials provided in buildings and/or structures as required by NC Uniform Building Code, Local Agencies and in accordance with good engineering practices. Verify all dimensions prior to construction.

RAFTER SPANS

RAFTER SPANS FOR SOUTHERN PINE SPECIES
(LIVE LOAD = 20 PSF, LΔ= 240) DEAD LOAD = 10 PSF

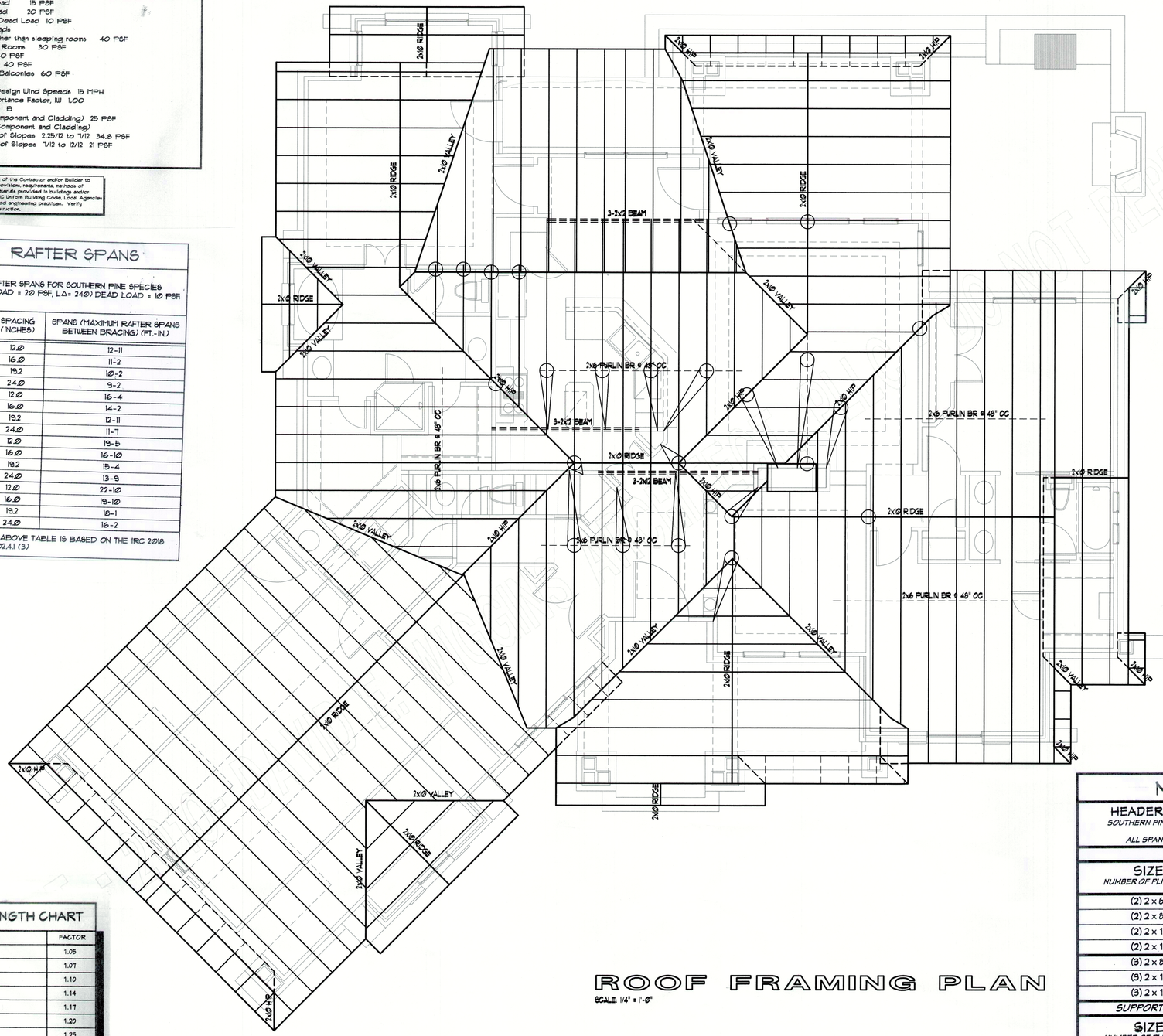
SIZE	SPACING (INCHES)	SPANS (MAXIMUM RAFTER SPANS BETWEEN BRACING) (FT.-IN.)
2"x6"	12.0	12-11
	16.0	11-2
	19.2	10-2
	24.0	9-2
2"x8"	12.0	16-4
	16.0	14-2
	19.2	12-11
	24.0	11-7
2"x10"	12.0	19-5
	16.0	16-10
	19.2	15-4
	24.0	13-9
2"x12"	12.0	22-10
	16.0	19-10
	19.2	18-1
	24.0	16-2

NOTE: THE ABOVE TABLE IS BASED ON THE IRC 2018 TABLE R802.4.1 (3)

RAFTER LENGTH CHART

ROOF PITCH		FACTOR
3/12		1.05
4/12		1.07
5/12		1.10
6/12		1.14
7/12		1.17
8/12		1.20
9/12		1.25
10/12		1.30
11/12		1.35
12/12		1.40
14/12		1.54
16/12		1.70

MULTIPY HORIZONTAL SPAN OF MEMBER BY FACTOR. CHOOSE APPROPRIATE FACTOR BY ROOF PITCH.



ROOF FRAMING PLAN

SCALE: 1/4" = 1'-0"

HIP/ VALLEY CONVERSION

IF COMMON RAFTER ROOF PITCH IS...			THEN HIP/ VALLEY RAFTER ROOF PITCH BECOMES...	
RISE/ RUN	SLOPE		RISE/ RUN	SLOPE
1/12	5°		1/17	3°
2/12	10°		2/17	7°
3/12	14°		3/17	10°
4/12	18°		4/17	13°
5/12	23°		5/17	16°
6/12	27°		6/17	19°
7/12	30°		7/17	22°
8/12	34°		8/17	25°
9/12	37°		9/17	28°
10/12	40°		10/17	30°
11/12	42°		11/17	33°
12/12	45°		12/17	35°

CONVERSION CHART FOR SIMPLE ROOFS ONLY. CHART DOES NOT APPLY FOR DUAL PITCH ROOFS.

CEILING JOIST SPANS

CEILING JOIST SPANS FOR SOUTHERN PINE SPECIES (UNINHABITABLE ATTIC WITHOUT STORAGE, LIVE LOAD = 20PSF, LΔ= 240) DEAD LOAD = 10 PSF

**IF HABITABLE ATTIC SPACE OR STORAGE IS DESIRED, REFER TO INTERNATIONAL RESIDENTIAL CODE SPAN TABLES

SIZE	SPACING (INCHES)	VISUALLY GRADED #2 SOUTHERN PINE (MAXIMUM CEILING JOIST SPAN) (FT.-IN.)
2"x4"	12.0	9-3
	16.0	8-0
	19.2	7-4
	24.0	6-7
2"x6"	12.0	13-11
	16.0	12-0
	19.2	11-0
	24.0	9-10
2"x8"	12.0	17-7
	16.0	15-3
	19.2	13-11
	24.0	12-6
2"x10"	12.0	20-11
	16.0	18-1
	19.2	16-6
	24.0	14-9

NOTE: THE ABOVE TABLE IS BASED ON THE IRC 2018 TABLE R802.5.1 (2)

MAXIMUM HEADER SPANS

HEADER SPANS FOR EXTERIOR BEARING WALLS
SOUTHERN PINE #2 OR BETTER LIVE LOAD=30psf DEAD LOAD = 10psf

ALL SPANS ARE ASSUMING A MAXIMUM OF 24 FEET OF SUPPORTED ROOF FRAMING.

SUPPORTING ROOF AND CEILING ONLY

SIZE NUMBER OF PLIES IN ( )	MAXIMUM SPAN (FEET AND INCHES)	JACK STUDS
(2) 2 x 6	4-7	1
(2) 2 x 8	5-9	1
(2) 2 x 10	6-10	2
(2) 2 x 12	8-1	2
(3) 2 x 8	7-3	1
(3) 2 x 10	8-7	2
(3) 2 x 12	10-1	2

SUPPORTING ROOF, CEILING AND ONE CENTER BEARING FLOOR

SIZE NUMBER OF PLIES IN ( )	MAXIMUM SPAN (FEET AND INCHES)	JACK STUDS
(2) 2 x 10	5-8	2
(2) 2 x 12	6-8	2
(3) 2 x 10	7-2	2
(3) 2 x 12	8-5	2

NOTES:
1. THE ABOVE INFORMATION IS FROM THE 2018 IRC TABLE R602.7(1).
2. PLEASE REFER TO THE IRC 2018 FOR ADDITIONAL LUMBER SPECIES AND HEADER OPTIONS.
3. ALL HEADER SIZES SHALL BE DESIGNED/ VERIFIED BY A LOCAL PROFESSIONAL.

COPYRIGHT 2009 - DAVID E WIGGINS, ARCHITECT, PLLC - DO NOT REPRODUCE

DAVID E. WIGGINS
ARCHITECT
RESIDENTIAL & COMMERCIAL DESIGN
2725 Highland Trail - Leander, Texas - 78641
(512) 260-2750

PROJECT:
L'ATTESA DI VITA
PLAN NO. 2091

REVISIONS:

DATE:
NOVEMBER 15, 2009

A8
OF A8