2018 APPENDIX B BUILDING CODE SUMMARY

Name of Project: Word Afire Ministries

Address: 1503 Denim Road Erwin, NC Zip Code: 28339

Proposed Use: Church

Owner or Authorized Agent: Vivian Cogdell Phone # E-Mail:

Owned By: ☐ City / County ☒ Private ☐ State

Code Enforcement Jurisdiction: ☐ City ☒ County Harnett ☐ State

LEAD DESIGN PROFESSIONAL : Joe T. Smith, Jr.

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Building	Smith Engineering & Design	Joe T. Smith, Jr.	24916	(919)-736-2141	smithengineeringnc@hotmail.com
Civil					
Electrical					
Fire Alarm					
Plumbing					
Mechanical					
Sprinkler-Standpipe					
Structural					
Retaining Walls >5' High					
Other					

2018 NC BUILDING CODE: ☐ New Construction ☐ Addition ☐ Shell/Core ☐ Phased Construction-Shell Core ☐ 1st Time Interior Completion

2018 NC EXISTING CODE: (check all that apply) ☐ Prescriptive ☐ Repair ☐ Chapter 14 ☐ Alteration Level I ☐ Alteration Level II ☒ Alteration Level III ☐ Historic Property ☒ Change of Use

CONSTRUCTED: (date) **CURRENT USE(s) (Ch. 3)** B

RENOVATED: (date) **PROPOSED USE(s) (Ch. 3)** A-3 & B

BUILDING DATA

Construction Type : (check all that apply) ☐ I-A ☐ I-B ☐ II-A ☐ II-B ☐ III-A ☐ III-B ☐ IV ☒ V-A ☒ V-B

Sprinklers : ☒ NO ☐ Partial ☐ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D

Standpipes : ☒ NO Class: ☐ I ☐ II ☐ III ☐ Wet ☐ Dry

Primary Fire District : ☒ NO ☐ YES (Primary) **Flood Hazard Area:** ☒ No ☐ YES

Special Inpections Required: ☒ NO ☐ YES

GROSS BUILDING AREA TABLE

FLOOR	EXISTING (SQ. FT.)	NEW (SQ. FT.)	SUB-TOTAL
3th Floor			
2nd Floor			
Mezzanine			
1stFloor (Upper Level)	6,500	0	6,500
Basement (Lower Level)			
TOTAL :	6,500	0	6,500

ALLOWABLE AREA

THIS TENANT SPACE = 3,381 SQ.FT.

Primary Occupancy :

- Assembly ☐ A-1 ☐ A-2 ☒ A-3 ☐ A-4 ☐ A-5
- Business ☐
- Educational ☐
- Factory ☐ F-1 Moderate ☐ F-2 Low
- Hazardous ☐ H-1 Detonate ☐ H-2 Deflagrate ☐ H-3 Combust ☐ H-4 Health ☐ H-5 HMP
- Institutional ☐ I-1 ☐ I-2 ☐ I-3 ☐ I-4
  - I-3 Condition ☐ 1 ☐ 2
  - I-2 Condition ☐ 1 ☐ 2
  - I-1 Condition ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
- Mercantile ☐
- Residential ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
- Storage ☐ S-1 Moderate ☐ S-2 Low ☐ High-Piled ☐ Parking Garage ☐ Open ☐ Enclosed ☐ Repair Garage
- Utility and Misc. ☐

Accessory Occupancy Classification(s) :

Incidental Uses: (Table 509)

This separation is not exempt as a Nonseparated Use (see exceptions).

Special Uses: (Chapter 4 - List Code Sections):

Special Provisions: (Chapter 5 - List Code Sections):

Mixed Occupancy: ☐ NO ☒ YES Secondary occupancy type(s): B Separation : 0 Hour Exception : 508.3

☒ Non-Separated Use (508.3)
The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building.

☐ Separated Use (508.4) See below for area calculations for each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1.

$$\frac{\text{Actual Area of Occupancy A}}{\text{Allowable Area of Occupancy A}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} = \leq 1.0$$

$$\frac{N/A}{N/A} \; N/A + \frac{N/A}{N/A} \; N/A = N/A \leq 1.0$$

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 506.2[4] AREA	(C) AREA FOR FRONTAGE INCREASE[1,5]	(D) ALLOWABLE AREA PER STORY OR UNLIMITED[2,3]
1	Church	6,500	6,000	4,500	10,500

[1] Frontage area increases from Section 506.2 are computed thus:
a. Perimeter which fronts a public way or open space having 20 feet minimum width = 360' (F)
b. Total Building Perimeter = 360' (P)
c. Ratio (F/P) = 1 (F/P)
d. W = Minimum width of public way = 30' (W)
e. Percent of frontage increase I_f = 100 [F/P - 0.25] x W/30 = 75 (%)

[2] Unlimited area applicable under conditions of Section 507.

[3] Maximum Building Area = total number of stories in the building x D (maximum 3 stories) (506.2).

[4] The maximum area of parking garages must comply with 406.5.4. The maximum area of air traffic control towers must comply with Table 412.3.1.

[5] Frontage increase is based on the unsprinklered area value in Table 506.2.

ALLOWABLE HEIGHT

	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE
Building Height in Feet (Table 504.3)	40'-0"	16'-0"	
Building Height in Stories (Table 504.4)	1	1	

1. Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4.

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQUIRED	RATING PROVIDED (W/ N/A * REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	DESIGN # FOR RATED JOINTS
Structural frame, including columns, girders, trusses		0 HOUR	0 HOUR				
Bearing walls							
Exterior							
North	N/A	0 HOUR	N/A				
East	N/A	0 HOUR	N/A				
West	N/A	0 HOUR	N/A				
South	N/A	0 HOUR	N/A				
Interior		0 HOUR	0 HOUR				
Nonbearing walls and partitions							
Exterior							
North	>30'	0 HOUR	0 HOUR				
East	>30'	0 HOUR	0 HOUR				
West	>30'	0 HOUR	0 HOUR				
South	>30'	0 HOUR	0 HOUR				
Interior walls and partitions		0 HOUR	0 HOUR				
Floor Construction including supporting beams and joists		0 HOUR	0 HOUR				
Roof Construction including supporting beams and joists		0 HOUR	0 HOUR				
Roof/Ceiling Assembly		N/A	N/A				
Columns Supporting Roof		0 HOUR	0 HOUR				
Shafts Enclosures - Exit		N/A	N/A				
Shafts Enclosures - Other		N/A	N/A				
Corridor Separation		0 HOUR	0 HOUR				
Occupancy/Fire Barrier Separation		0 HOUR	0 HOUR				
Party/Fire Wall Separation		N/A	N/A				
Smoke Barrier Separation		N/A	N/A				
Smoke Partition		N/A	N/A				
Tenant/Dwelling Unit/ Sleeping Unit Separation		N/A	N/A				
Incidental Use Separation		N/A	N/A				

*Indicates section number permitting reduction.

PERCENTAGE OF WALL OPENING CALCULATIONS

FIRE SEPARATION DISTANCE (feet) FROM PROPERTY LINES	DEGREE OF OPENINGS PROTECTION (TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLANS (%)
>30'	Unprotected, Nonsprinklered	No Limit	<50%

LIFE SAFETY SYSTEM REQUIREMENTS

- Emergency Lighting: ☐ No ☒ Yes
- Exit Signs: ☐ No ☒ Yes
- Fire Alarm: ☒ No ☐ Yes
- Smoke Detection Systems: ☒ No ☐ Yes
- Carbon Monoxide Detection: ☒ No ☐ Yes

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: LF-1

- ☐ Fire and/or smoke rated wall locations (Chapter 7)
- ☐ Assumed and real property line locations
- ☐ Exterior wall opening area with respect to distance to assumed property lines (705.8)
- ☒ Occupancy Use for each area as it relates to occupant load calculation (Table 1004.1.2)
- ☒ Occupant loads for each area
- ☒ Exit access travel distances (1017)
- ☒ Common path of travel distances [Tables 1006.2.1 & 1006.3.2(1)]
- ☐ Dead end lengths (1020.4)
- ☒ Clear exit widths for each exit door
- ☒ Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.3)
- ☒ Actual occupant load for each exit door
- ☐ A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
- ☐ Location of doors with panic hardware (1010.1.10)
- ☐ Location of doors with delayed egress locks and the amount of delay (1010.1.9.7)
- ☐ Location of doors with electromagnetic egress locks (1010.1.9.9)
- ☐ Location of doors equipped with hold-open devices
- ☐ Location of emergency escape windows (1030)
- ☒ The square footage of each fire area (202)
- ☐ The square footage of each smoke compartment for Occupancy Classification I-2 (407.5)
- ☐ Note any code exceptions or table notes that may have been utilized regarding the items above

ACCESSIBLE DWELLING UNITS
(SECTION 1107)

TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS REQUIRED	TYPE A UNITS PROVIDED	TYPE B UNITS REQUIRED	TYPE B UNITS PROVIDED	TOTAL ACCESSIBLE UNITS PROVIDED
N/A							

ACCESSIBLE PARKING
(SECTION 1106)

LOT OR PARKING AREA	TOTAL # PARKING SPACES REQUIRED	TOTAL # PARKING SPACES PROVIDED	# ACCESSIBLE SPACES PROVIDED: REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH 132" ACCESS AISLE	VAN SPACES WITH 8' ACCESS AISLE	TOTAL # ACCESSIBLE SPACES PROVIDED
Existing						
TOTAL						

PLUMBING FIXTURE REQUIREMENTS
(TABLE 2902.1)

USE	WATER CLOSETS MALE	WATER CLOSETS FEMALE	WATER CLOSETS UNISEX	URINALS	LAVATORIES MALE	LAVATORIES FEMALE	LAVATORIES UNISEX	UTILITY SINK	DRINKING FOUNTAINS REGULAR	DRINKING FOUNTAINS ACCESSIBLE
EXISTING	1	1	0	0	1	1	0	0	0	0
NEW	0	2	0	0	0	1	0	0	1	1
REQUIRED	1	2	0	0	1	1	0	0	1	1

SPECIAL APPROVALS

Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, ICC, etc., describe below)

STRUCTURAL DESIGN

Existing Building

DESIGN LOADS:

Importance Factors: Snow (I_s) Seismic (I_E)

Live Loads: Roof Mezzanine Floor

Ground Snow Load:

Wind Loads: Basic Wind Speed Exposure Category

SEISMIC CATEGORY ☐ A ☐ B ☐ C ☐ D

Provide the following Seismic Design Parameters:

Occupancy Category (Table 1604.5) ☐ I ☐ II ☐ III ☐ IV

Spectral Response Acceleration S_s %g S_1 %g

Site Classification (ASCE-7) ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F

Data source: ☐ Field Test ☐ Presumptive ☐ Historical Data

Basic Structural System: (check one)

☐ Bearing Wall ☐ Dual W/ Special Moment Frame
☐ Building Frame ☐ Dual W/ Intermediate R/C or Special Steel
☐ Moment Frame ☐ Inverted Pendulum

Analysis Procedure: ☐ Simplified ☐ Equivalent Lateral Force ☐ Dynamic

Architectural, Mechanical, Components Anchored? ☐ Yes ☐ No

LATERAL DESIGN CONTROL: ☐ Earthquake ☐ Wind

SOIL BEARING CAPACITIES:

Field Test (provide copy of test report) psf

Presumptive Bearing Capacity psf

Pile Size, Type, and Capacity

SPECIAL INSPECTIONS REQUIRED: ☐ Yes ☐ No

ENERGY SUMMARY

ENERGY REQUIREMENTS:

The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If performance method, state the annual energy cost for the standard reference design vs annual energy cost for the proposed design.

Existing building envelope complies with code: ☒ (If checked, the remainder of this section is not applicable.)

Exempt Building: ☐ Provide code or statutory reference:

Climate Zone : ☐ 3 ☐ 4 ☐ 5

Method of Compliance :

Energy Code: ☐ Performance ☐ Prescriptive ☐ Trade-Off

ASHRAE 90.1: ☐ Performance ☐ Prescriptive ☐ Trade-Off

Other: ☐ Performance (specify source)

THERMAL ENVELOPE :

Roof/Ceiling Assembly (each assembly)
- Description of Assembly
- U-value of Total Assembly
- R-value of Insulation
- Skylights in each assembly
  - U-Value of skylight
  - Total square footage of skylights in each assembly

Exterior Walls (each assembly)
- Description of Assembly
- U-value of Total Assembly
- R-value of Insulation
- Openings (windows or doors with glazing)
  - U-Value of assembly
  - Solar heat gain coefficient:
  - Projection factor:
  - Door R-Values:

Walls below grade (each assembly)
- Description of Assembly
- U-value of Total Assembly
- R-value of Insulation

Floors over unconditioned space (each assembly)
- Description of Assembly
- U-value of Total Assembly
- R-value of Insulation

Floors slab on grade
- Description of Assembly
- U-value of Total Assembly
- R-value of Insulation
- Horizontal/vertical requirement
- Slab heated

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 024916 7-22-22 JOE T. SMITH JR.

REVISIONS

REV.	DATE	DESCRIPTION

Word Afire Ministries
1503 Denim Road
Erwin, NC 28339

DATE: 22 July 2022
DRAWN BY: J.S.
SCALE: N.T.S.

T-1