

**2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)**
(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: **PHALANX CROOSFIT**
 Address: **2659 HWY 87 S., CAMERON, NC** Zip Code: **28326**
 Owner/Authorized Agent: **EQUAGEN PLLC** Phone #: (919) 267-3004 E-Mail: info@equagen.com
 Owned By: City/County Private State
 Code Enforcement Jurisdiction: City CAMERON County HARNETT State NC

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural	Equagen PLLC	Moti KC	042307	(919)267-3004	moti.kc@equagen.com
Civil	Equagen PLLC	Moti KC	042307	(919)267-3004	moti.kc@equagen.com
Electrical	Equagen PLLC	Moti KC	042307	(919)267-3004	moti.kc@equagen.com
Fire Alarm	Equagen PLLC	Moti KC	042307	(919)267-3004	moti.kc@equagen.com
Plumbing	Equagen PLLC	Moti KC	042307	(919)267-3004	moti.kc@equagen.com
Mechanical	Equagen PLLC	Moti KC	042307	(919)267-3004	moti.kc@equagen.com
Sprinkler-Standpipe	N/A				
Structural	Equagen PLLC	RABIN P.OJHA	042307	(919)267-3004	rabin.ojha@equagen.com
Retaining Walls >5' High	N/A				
Other					

2018 NC BUILDING CODE: New Building Addition Renovation
 1st Time Interior Completion
 Shell/Core - Contact the local inspection jurisdiction for possible additional procedures and requirements
 Phased Construction - Shell/Core - Contact the local inspection jurisdiction for possible additional procedures and requirements

2018 NC EXISTING BUILDING CODE: EXISTING: Prescriptive Repair Chapter 14
 Alteration: Level I Level II Level III
 Historic Property Change of Use

CONSTRUCTED: (date) N/A CURRENT OCCUPANCY(S) (Ch. 3): N/A
 RENOVATED: (date) N/A PROPOSED OCCUPANCY(S) (Ch. 3): A-3; B

OCCUPANT LOAD CALCULATION:

OCCUPANCY	AREA (in sq.ft)	OCCUPANT LOAD FACTOR (per Table 1004.1.2)	OCCUPANT LOAD
A-3	6000	50 gross (exercise rooms with equipment)	120
B	6000	100 gross (Business areas)	60
TOTAL DESIGN OCCUPANT LOAD:			180

RISK CATEGORY (Table 1604.5): Current: I II III IV
 Proposed: I II III IV

BASIC BUILDING DATA
 Construction Type: I-A I-B II-A II-B III-A III-B IV V-A V-B
 Sprinklers: No Partial Yes NFPA 13 NFPA 13R NFPA 13D
 Standpipes: No Yes Class I II III Wet Dry
 Fire District: No Yes Flood Hazard Area: No Yes
 Special Inspections Required: No Yes (Contact the local inspection jurisdiction for additional procedures and requirements.)

Gross Building Area Table

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
3rd Floor	-	-	-
2nd Floor	-	480	480
Mezzanine	-	12000	12000
1st Floor	-	-	-
Basement	-	-	-
TOTAL		12000	

ALLOWABLE AREA

Primary Occupancy Classification(s):
 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 HPM
 Institutional I-1 Condition I-2 I-3 Condition I-4
 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 Miscellaneous

Accessory Occupancy Classification(s): N/A
 Incidental Uses (Table 509): N/A
Special Uses (Chapter 4 - List Code Sections): 411
Special Provisions: (Chapter 5 - List Code Sections): N/A
Mixed Occupancy: No Yes Separation: 2 Hr. Exception: _____

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.

Actual Area of Occupancy A + Actual Area of Occupancy B
 Allowable Area of Occupancy A Allowable Area of Occupancy B

0.63 + 0.32 + = 0.95 ≤ 1.00

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 506.2 AREA	(C) AREA FOR FRONTAGE INCREASE ^{1,2}	(D) ALLOWABLE AREA PER STORY OR UNLIMITED ^{3,4}
1	SHOP 1 (GYM)	6000	9500		
2	SHOP 2 (BUSINESS)	6000	19000		

1 Frontage area increases from Section 506.3 are computed thus:
 a. Perimeter which fronts a public way or open space having 20 feet minimum width = ____ (F)
 b. Total Building Perimeter = ____ (P)
 c. Ratio (F/P) = ____ (F/P)
 d. W = Minimum width of public way = ____ (W)
 e. Percent of frontage increase If = 100[F/P - 0.25] x W/30 = ____ (%)
 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 open parking garages must comply with Table 406.5.4.
 5 Frontage increase is based on the unsprinklered area value in Table 506.2.

ALLOWABLE HEIGHT

	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE 1
Building Height in Feet	55	25	TABLE 504.3
Building Height in Stories	2	1	TABLE 504.4

1 Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4.
 2 The maximum height of air traffic control towers must comply with Table 412.3.1.
 3 The maximum height of open parking garages must comply with Table 406.5.4.

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D	PROVIDED (W/REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	SHEET # FOR PENETRATION	SHEET # FOR RATED JOINTS
Structural Frame, including columns, girders, trusses	30+	0HR	0HR				
Bearing Walls							
Exterior	30+	0HR	0HR				
North	30+	0HR	0HR				
East	30+	0HR	0HR				
West	30+	0HR	0HR				
South	30+	0HR	0HR				
Interior							
Nonbearing Walls and Partitions							
Exterior walls							
North							
East							
West							
South							
Interior walls and partitions							
Floor Construction							
Including supporting beams and joists							
Floor Ceiling Assembly							
Columns Supporting Floors							
Roof Construction, including supporting beams and joists							
Roof Ceiling Assembly							
Columns Supporting Roof							
Shaft Enclosures - Exit							
Shaft Enclosures - Other							
Corridor Separation							
Occupancy/Fire Barrier Separation		2HR	2HR				
Party/Fire Wall Separation							
Smoke Barrier Separation							
Smoke Partition							
Tenant/Dwelling Unit/Sleeping Unit Separation							
Incidental Use Separation							

* Indicate section number permitting reduction

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 # OF PARKING SPACES REQUIRED	TOTAL # OF PARKING SPACES PROVIDED	# OF ACCESSIBLE SPACES PROVIDED			TOTAL # ACCESSIBLE PROVIDED
			REGULAR WITH 5' ACCESS AISLE	132' ACCESS AISLE	8' ACCESS AISLE	
2420 SF	4	4	3	-	1	4

PLUMBING FIXTURE REQUIREMENTS (TABLE 2902.1)

USE	EXISTG	WATERCLOSETS			URINALS			LAVATORIES			SHOWERS		DRINKING FOUNTAINS	
		MALE	FEMALE	UNISEX	MALE	FEMALE	UNISEX	MALE	FEMALE	UNISEX	TUBS	REGULAR	ACCESSIBLE	
GYM	EXISTG	-	-	-	-	-	-	-	-	-	-	-	-	
	NEW	1	1	-	-	1	1	1	1	2	-	1	-	
	REQD	1	1	-	-	-	-	1	-	-	-	1	-	
BUSINESS	EXISTG	-	-	-	-	-	-	-	-	-	-	-	-	
	NEW	2	2	-	-	1	1	1	1	-	-	1	-	
	REQD	2	2	-	-	1	1	1	-	-	-	1	-	

Based on Section 2902.1.1, the total occupant load of 120 is divided equally for each sex for gym space. Male occupant load=60; Female occupant load=60
 Based on Section 2902.1.1, the total occupant load of 60 is divided equally for each sex for business space. Male occupant load=30; Female occupant load=30

SPECIAL APPROVALS
 Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHQS, etc., describe below)

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 (%)

LIFE SAFETY SYSTEM REQUIREMENTS
 Emergency Lighting: No Yes
 Exit Signs: No Yes
 Fire Alarm: No Yes
 Smoke Detection Systems: No Yes Partial
 Carbon Monoxide Detection: No Yes

LIFE SAFETY PLAN REQUIREMENTS
 Life Safety Plan Sheet #A00
 Fire and/or smoke rated wall locations (Chapter 7)
 Assumed and real property line locations (if not on the site plan)
 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

**2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
MECHANICAL DESIGN
(PROVIDE ON THE MECHANICAL SHEETS IF APPLICABLE)**

MECHANICAL SUMMARY
MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone
 winter dry bulb: 47 F
 summer dry bulb: 80 F

Interior design conditions
 winter dry bulb: 55 F
 summer dry bulb: 54 F
 relative humidity: 58 %

Building heating load: 308 MBH

Building cooling load:

Mechanical Spacing Conditioning System
 Unitary description of unit: _____
 heating efficiency: _____
 cooling efficiency: _____
 size category of unit: ONE 4.3 AND 2 TON MINI-SPLIT UNIT

Boiler Size category. If oversized, state reason: _____
 Chiller Size category. If oversized, state reason: _____

List equipment efficiencies:

**2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
ELECTRICAL DESIGN
(PROVIDE ON THE ELECTRICAL SHEETS IF APPLICABLE)**

ELECTRICAL SUMMARY
ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance: Energy Code Performance Prescriptive
 ASHRAE 90.1 Performance Prescriptive

Lighting schedule (each fixture type)
 lamp type required in fixture: STRIP LED LIGHT
 number of lamps in fixture: SINGLE LAMP IN ONE FIXTURE
 total wattage per fixture: 40 W PER FIXTURE
 total interior wattage specified vs. allowed (whole building or space by space): 2780W SPECIFIED VS 3175W ALLOWED (BUILDING AREA METHOD)
 total exterior wattage specified vs. allowed: N/A

Additional Efficiency Package Options (When using the 2018 NCECC; not required for ASHRAE 90.1)
 C406.2 More Efficient HVAC Equipment Performance
 C406.3 Reduced Lighting Power Density
 C406.4 Enhanced Digital Lighting Controls
 C406.5 On-Site Renewable Energy
 C406.6 Dedicated Outdoor Air System
 C406.7 Reduced Energy Use in Service Water Heating

ENERGY REQUIREMENTS:
 The following data shall be considered minimum and any special attribute required to meet the 2018 North Carolina State Building Code - Energy Conservation 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 versus the annual energy cost for the proposed design.

Existing building envelope complies with code: No Yes (The remainder of this section is not applicable)
Exempt Building: No Yes (Provide code or statutory reference): _____
Climate Zone: 3A 4A 5A
Method of Compliance: Energy Code Performance Prescriptive

THERMAL ENVELOPE (Prescriptive method only)

Roof/ceiling Assembly (each assembly)
 Description of assembly: Standing Seam Metal Roof
 U-Value of total assembly: _____
 R-Value of insulation: R-30
 Skylights in each assembly: _____
 U-Value of skylight: _____
 total square footage of skylights in each assembly: _____

Exterior Walls (each assembly)
 Description of assembly: Steel Studs, Girts
 U-Value of total assembly: _____
 R-Value of insulation: R-19
 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: Concrete slab on grade
 U-Value of total assembly: _____
 R-Value of insulation: R-15
 Horizontal/vertical requirement: 24"
 slab heated: No

**2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
STRUCTURAL DESIGN
(PROVIDE ON THE STRUCTURAL SHEETS IF APPLICABLE)**

DESIGN LOADS:

Importance Factors: Snow (IS) 1.00
 Seismic (IE) 1.00

Live Loads: Roof 20 psf
 Mezzanine _____ psf
 Floor 100 psf (MAIN FLOOR)

Ground Snow Load: 10 psf

Wind Load: Ultimate Wind Speed 120 mph (ASCE-7)
 Exposure Category C

SEISMIC DESIGN CATEGORY: A B C D
 Provide the following Seismic Design Parameters:
 Risk Category (Table 1604.5) I II III IV
Spectral Response Acceleration SS 20.5 %g S1 9.3 %g
 Site Classification (ASCE 7) A B C D E F
 Data Source: Field Test Presumptive Historical Data
Basic structural system
 Bearing Wall Dual w/Special Moment Frame
 Building Frame Dual w/Intermediate R/C or Special Steel
 Moment Frame Inverted Pendulum
 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 1500 psf
 Pile size, type, and capacity _____

NO.	DATE	DESCRIPTIONS
3	08/01/2023	REVISION 3
2	06/19/2023	REVISION 2
1	05/17/2023	REVISION 1
0	05/02/2023	SUBMITTAL

APPENDIX B

SITE ADDRESS:
 2659 Highway 87 S. Cameron,
 North Carolina 28326

PROFESSIONAL SEAL

NORTH CAROLINA
 PROFESSIONAL
 SEAL
 056950
 ENGINEER
 RABIN P. OJHA
 08/01/2023

**2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
STRUCTURAL DESIGN
(PROVIDE ON THE STRUCTURAL SHEETS IF APPLICABLE)**

ENGINEERING & INSPECTIONS
 FIRM LIC. # 1869

121 EDINBURGH SOUTH DRIVE, SUITE 103
 CARY, NC 27511
 PHONE: 919.444.5442
 EMAIL: MOTI.KC@EQUAGEN.COM

DRAWN BY:	BR
CHECKED BY:	RO
DATE:	08/01/2023
SCALE:	AS SHOWN
22-4006	