



Fire Marshal Division

October 9, 2018

Williams Hicks
P.O. Box 655
Goldston, NC 27252

Re: Little Miracles Daycare

Application Numbers – BCOM1809-0002

Mr. Hicks,

Thank you for submitting the plans for the Daycare up-fit. The plans have been carefully reviewed by a qualified code enforcement official to examine for full compliance with the North Carolina Fire Prevention Code and all other fire protection regulatory documents. There are some items that were found during the plan review process that need to be addressed before a final inspection of the new facility can be given. These items are outlined and described below.

- **1003.2.11 Means of egress illumination.**
 - The means of egress, **including the exit discharge**, shall be illuminated at all times the building space served by the means of egress is occupied
 - The portion of the exterior exit discharge immediately adjacent to exit discharge doorways in buildings required to have two or more exits.

- **906.1 Fire Extinguishers**
 - Fire extinguishers shall be located as not to exceed 75' of travel distance to an extinguisher.
 - The fire extinguishers provided shall have a minimum rating of 2A10:BC and shall not be installed higher than 5 feet above the finished floor.

- **404.2 Fire Safety and Evacuation Plans**
 - An approved fire safety and evacuation plan shall be prepared, posted and maintained for Group E occupancies.



- **Fire Alarm System**
 - Fire alarm plans shall be submitted for review and approval.
 - The fire alarm system plans shall bear the seal of a licensed P.E. within the state of North Carolina.
 - Spec Sheets shall be submitted for all fire alarm system devices.
 - Any changes to the fire alarm system shall bear the seal of approval of a P.E.
 - Pull stations required at exits from nursery.
- **1008.1.10 Panic Hardware**
 - Doors serving spaces in a Group E occupancy with 49 > persons must be provided with panic hardware and listed in accordance with UL 305.
- **Notes**
 - **Please provide fire extinguisher locations, FACP location, smoke detector locations**
 - **See note on drawing referencing door swing reversal**
 - **Please schedule all fire inspections with the Fire Marshal's Office.**
 - **910-984-4003**

Thank you again for submitting the plans for the Daycare remodel. Please review the plans and adhere to any notes and alterations that were made in addition to the original drawings. These remarks are for the plans that were submitted and its original intent. These remarks do not apply if the original intent changes or what was submitted on the above date changes. If you have any questions, please do not hesitate to call this office.

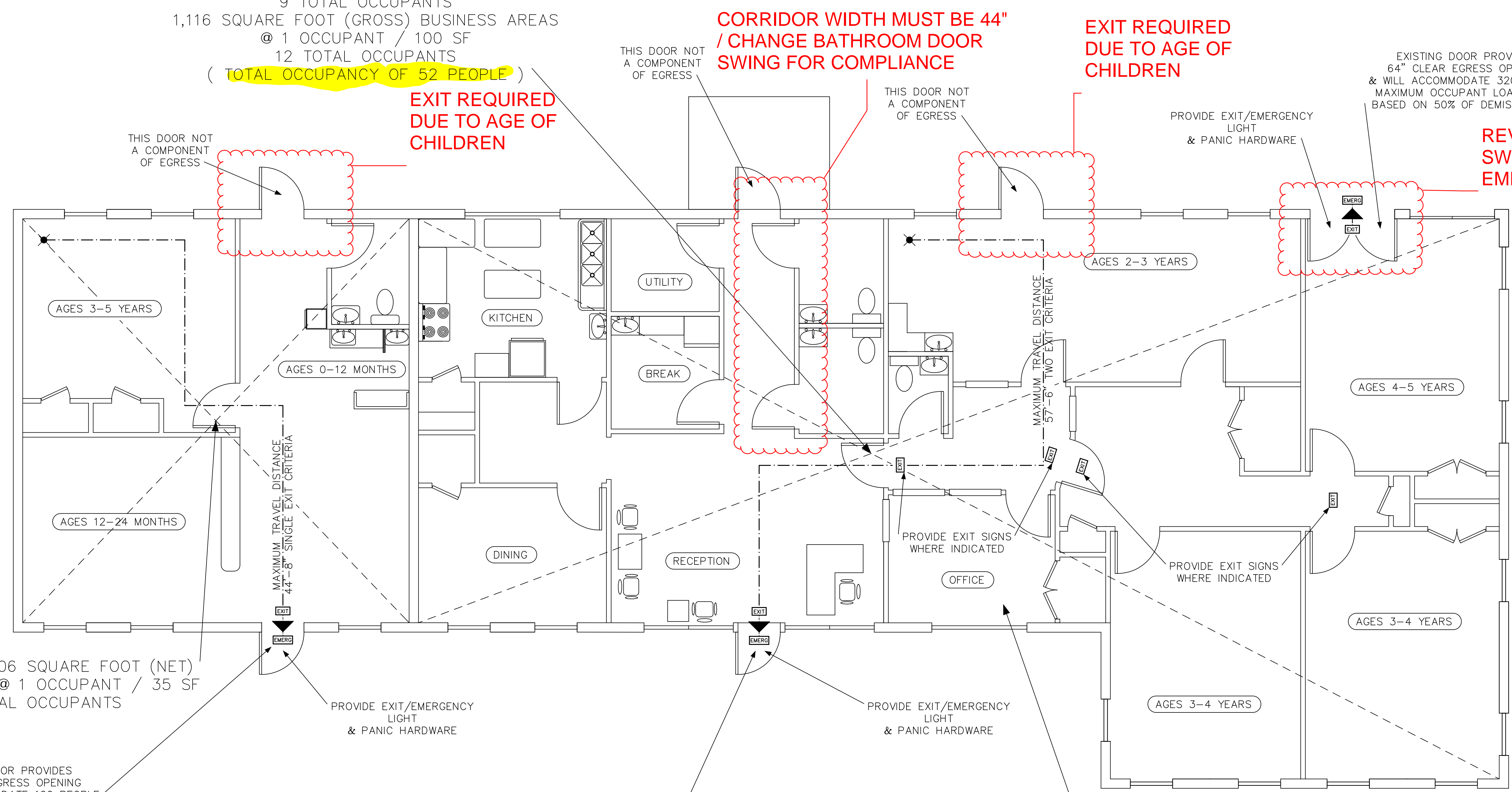
Again, thank you and we look forward to working with you during the construction period!

Sincerely,



D. Banks Wallace
Chief Deputy Fire Marshal

'X' INDICATES MULTI-FUNCTION AREA
 1,054 SQUARE FOOT (NET) DAYCARE AREAS
 @ 1 OCCUPANT / 35 SF
 31 TOTAL OCCUPANTS
 128 SQUARE FOOT (NET) ASSEMBLY AREA (DINING)
 @ 1 OCCUPANT / 15 SF
 9 TOTAL OCCUPANTS
 1,116 SQUARE FOOT (GROSS) BUSINESS AREAS
 @ 1 OCCUPANT / 100 SF
 12 TOTAL OCCUPANTS
 (TOTAL OCCUPANCY OF 52 PEOPLE)



'X' INDICATES 706 SQUARE FOOT (NET) DAYCARE AREA @ 1 OCCUPANT / 35 SF
 21 TOTAL OCCUPANTS

Reviewed For Code Compliance By:
D. Banks Wallace
Chief Deputy Fire Marshal
10/09/2018 1:49:11 PM

3,503 SQUARE FOOT (GROSS)
 EXISTING BUILDING
 SINGLE FIRE AREA
 TYPE 5B CONSTRUCTION
 EDUCATIONAL OCCUPANCY (DAYCARE)

1	4 OCT 2018	RELEASE FOR CONSTRUCTION
NO.	DATE:	SUBMISSIONS:
DRAWN BY:	CHECKED BY:	PROJECT:
JEFFERSON C. WOODALL	JEFFERSON C. WOODALL	TREE OF KNOWLEDGE

The use of these plans and specifications shall be restricted to the original site for which they were prepared and publication thereof is limited to such use. Re-use, reproduction, or publication by any method, in whole or part, is prohibited. Title to the plans and specifications shall remain with the Architect without prejudice. These instruments shall be returned upon request to the Architect. Visual contact with these plans and specifications shall constitute acceptance of the above.



3313 AMBER DRIVE
 WILMINGTON, NC 28409
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 jeffersonwoodall@gmail.com

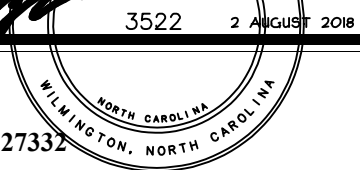


PROJECT:
 INTERIOR ALTERATION & CHANGE
 OF OCCUPANCY
 TREE OF KNOWLEDGE DAYCARE CENTER
 622 BUFFALO LAKE ROAD
 SANFORD, NC 27332

DRAWING DESCRIPTION:

LS PLAN

**2012 APPENDIX B
BUILDING CODE SUMMARY
FOR ALL COMMERCIAL PROJECTS**



Name of Project: **TREE OF KNOWLEDGE DAYCARE CENTER**
 Address: **622 BUFFALO LAKE ROAD, SANFORD, NC** Zip Code **27332**
 Proposed Use: **DAYCARE CENTER (OCCUPANCY GROUP E)**
 Owner/Authorized Agent: **BILL HICKS** Phone # **(919) 427-8889** E-Mail **whicks1765@gmail.com**
 Owned By: City/County Private State
 Code Enforcement Jurisdiction: City - **SANFORD** County - **HARNETT** State

LEAD DESIGN PROFESSIONAL: JEFFERSON C. WOODALL, ARCHITECT

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural	JCW, A	JCW	3522	(336) 689-1362	jeffersonwoodall@gmail.com
Civil	SITE PLAN PROVIDED BY OWNER				
Electrical	NOT APPLICABLE – ANY CHANGES TO EXISTING ELECTRICAL SYSTEMS TO BE SUPPLIED BY NC LICENSED SUB-CONTRACTOR				
Fire Alarm	TO BE SUPPLIED BY OWNER'S FIRE ALARM SYSTEM DESIGNER				
Plumbing	NOT APPLICABLE – ANY CHANGES TO EXISTING ELECTRICAL SYSTEMS TO BE SUPPLIED BY NC LICENSED SUB-CONTRACTOR				
Mechanical	NOT APPLICABLE – ANY CHANGES TO EXISTING MECHANICAL SYSTEMS TO BE SUPPLIED BY NC LICENSED SUB-CONTRACTOR				
Sprinkler-Standpipe	NOT APPLICABLE				
Structural	NOT APPLICABLE				
Retaining Walls >5' High	NOT APPLICABLE				
Other	NOT APPLICABLE				

2012 EDITION OF NC CODE FOR: New Construction Addition Upfit
EXISTING: Reconstruction Alteration & Change of Occupancy Repair Renovation
CONSTRUCTED: 1998 **ORIGINAL USE(S) (Ch. 3):** **MEDICAL OFFICES (B OCCUPANCY)**
RENOVATED: UNKNOWN **CURRENT USE(S) (Ch. 3):** **MEDICAL OFFICES (B OCCUPANCY)**
PROPOSED USE(S) (Ch. 3): **DAYCARE (E OCCUPANCY)**

BASIC BUILDING DATA

Construction Type: I-A II-A III-A IV V-A
 I-B II-B III-B 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 (Primary) **Flood Hazard Area:** No Yes

Building Height:

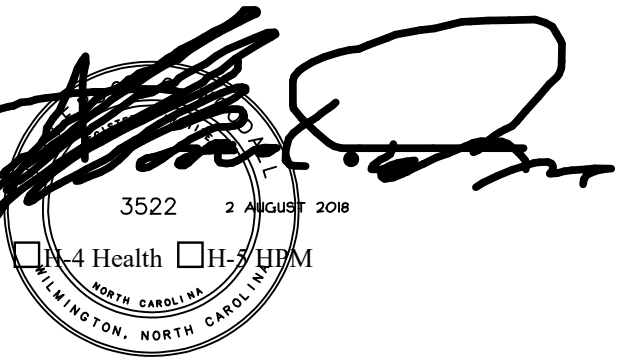
Gross Building Area:

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
6 th Floor	NA	NA	NA
5 th Floor	NA	NA	NA
4 th Floor	NA	NA	NA
3 rd Floor	NA	NA	NA
2 nd Floor	NA	NA	NA
Mezzanine	NA	NA	NA
1 st Floor	3503	0	3503
Basement	NA	NA	NA
TOTAL	3503		3503

ALLOWABLE AREA

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 HPM
- Institutional I-1 I-2 I-3 I-4
- I-3 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 Miscellaneous



Accessory Occupancies:

- 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 I-2 I-3 I-4
- I-3 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 Miscellaneous

Incidental Uses (Table 508.2.5):

- Furnace room where any piece of equipment is over 400,000 Btu per hour input
- Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horsepower
- Refrigerant machine room
- Hydrogen cutoff rooms, not classified as Group H
- Incinerator rooms
- Paint shops, not classified as Group H, located in occupancies other than Group F
- Laboratories and vocational shops, not classified as Group H, located in a Group E or I-2 occupancy
- Laundry rooms over 100 square feet
- Group I-3 cells equipped with padded surfaces
- Group I-2 waste and linen collection rooms
- Waste and linen collection rooms over 100 square feet
- Stationary storage battery systems having a liquid electrolyte capacity of more than 50 gallons, or a lithium-ion capacity of 1,000 pounds used for facility standby power, emergency power or uninterrupted power supplies
- Rooms containing fire pumps
- Group I-2 storage rooms over 100 square feet
- Group I-2 commercial kitchens
- Group I-2 laundries equal to or less than 100 square feet
- Group I-2 rooms or spaces that contain fuel-fired heating equipment

- Special Uses: 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427

- Special Provisions: 509.2 509.3 509.4 509.5 509.6 509.7 509.8 509.9

Mixed Occupancy: No Yes Separation: NA Exception: NA

Incidental Use Separation (508.2.5)

This separation is not exempt as a Non-Separated Use (see exceptions).

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.

$$\frac{\text{Actual Area of Occupancy A}}{\text{Allowable Area of Occupancy A}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} \leq 1$$

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \dots = \underline{\hspace{2cm}} \leq 1.00$$

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 503 ⁵ AREA	(C) AREA FOR FRONTAGE INCREASE ¹	(D) AREA FOR SPRINKLER INCREASE ²	(E) ALLOWABLE AREA OR UNLIMITED ³	(F) MAXIMUM BUILDING AREA ⁴
ONE	DAYCARE	3503	9500	NA	NA	9500	9500

¹ Frontage area increases from Section 506.2 are computed thus:

- Perimeter which fronts a public way or open space having 20 feet minimum width = _____ (F)
- Total Building Perimeter = _____ (P)
- Ratio (F/P) = _____ (F/P)
- W = Minimum width of public way = _____ (W)
- Percent of frontage increase $I_f = 100 [F/P - 0.25] \times W/30 = \text{_____} (\%)$

² The sprinkler increase per Section 506.3 is as follows:

- Multi-story building $I_s = 200$ percent
- Single story building $I_s = 300$ percent

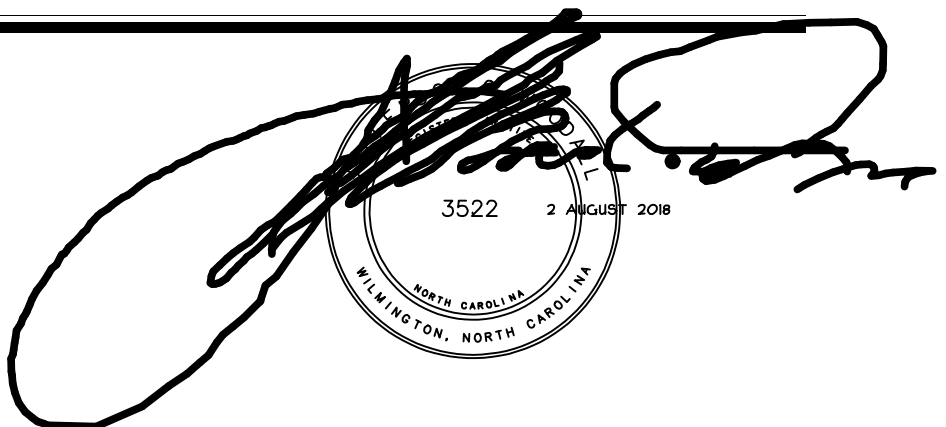
³ Unlimited area applicable under conditions of Section 507.

⁴ Maximum Building Area = total number of stories in the building x E (506.4).

⁵ The maximum area of open parking garages must comply with Table 406.3.5. The maximum area of air traffic control towers must comply with Table 412.1.2.

ALLOWABLE HEIGHT

	ALLOWABLE (TABLE 503)	INCREASE FOR SPRINKLERS	SHOWN ON PLANS	CODE REFERENCE
Type of Construction	Type 5B		Type 5B	
Building Height in Feet	40'-0"	NA	20'-0"	
Building Height in Stories	1	NA	1	



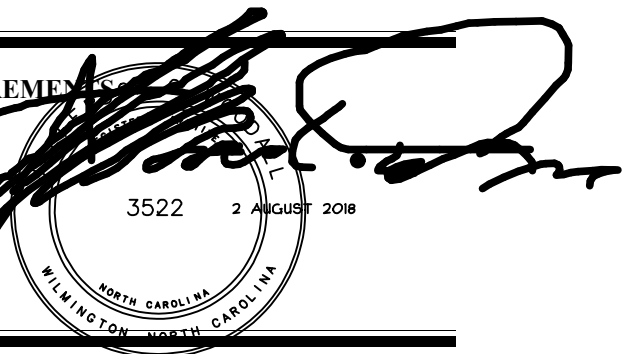
FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING		DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	DESIGN # FOR RATED JOINTS
		REQ'D	PROVIDED (w/_____* REDUCTION)				
Structural Frame, including columns, girders, trusses	NA	0	NA	NA	NA	NA	NA
Bearing Walls							
Exterior							
North	>30'-0"	0	NA	NA	NA	NA	NA
East	>30'-0"	0	NA	NA	NA	NA	NA
West	>30'-0"	0	NA	NA	NA	NA	NA
South	>30'-0"	0	NA	NA	NA	NA	NA
Interior	NA	0	NA	NA	NA	NA	NA
Nonbearing Walls and Partitions							
Exterior walls							
North							
East							
West							
South							
Interior walls and partitions	NA	0	NA	NA	NA	NA	NA
Floor Construction Including supporting beams and joists	NA	0	NA	NA	NA	NA	NA
Roof Construction Including supporting beams and joists	NA	0	NA	NA	NA	NA	NA
Shaft Enclosures - Exit	NA	NA	NA	NA	NA	NA	NA
Shaft Enclosures - Other	NA	NA	NA	NA	NA	NA	NA
Corridor Separation	NA	NA	NA	NA	NA	NA	NA
Occupancy Separation	NA	NA	NA	NA	NA	NA	NA
Party/Fire Wall Separation	NA	NA	NA	NA	NA	NA	NA
Smoke Barrier Separation	NA	NA	NA	NA	NA	NA	NA
Tenant Separation	NA	NA	NA	NA	NA	NA	NA
Incidental Use Separation	NA	NA	NA	NA	NA	NA	NA

* Indicate section number permitting reduction

LIFE SAFETY SYSTEM REQUIREMENTS

- | | | |
|--------------------------|-----------------------------|---|
| Emergency Lighting: | <input type="checkbox"/> No | <input type="checkbox"/> Yes |
| Exit Signs: | <input type="checkbox"/> No | <input type="checkbox"/> Yes |
| Fire Alarm: | <input type="checkbox"/> No | <input type="checkbox"/> Yes |
| Smoke Detection Systems: | <input type="checkbox"/> No | <input type="checkbox"/> Yes <input type="checkbox"/> Partial |
| Panic Hardware: | <input type="checkbox"/> No | <input type="checkbox"/> Yes |

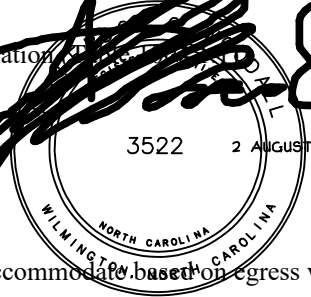


LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: **LIFE SAFETY PLAN NOT REQUIRED BY LOCAL CODE ENFORCEMENT**

- 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)

- Existing structures within 30' of the proposed building
- Occupancy types for each area as it relates to occupant load calculation
- Occupant loads for each area
- Exit access travel distances (1016)
- Common path of travel distances (1014.3 & 1028.8)
- Dead end lengths (1018.4)
- Clear exit widths for each exit door
- Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.1)
- 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 (1008.1.10)
- Location of doors with delayed egress locks and the amount of delay (1008.1.9.7)
- Location of doors with electromagnetic egress locks (1008.1.9.8)
- Location of doors equipped with hold-open devices
- Location of emergency escape windows (1029)
- The square footage of each fire area (902)
- The square footage of each smoke compartment (407.4)
- 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
NOT APPLICABLE							

**ACCESSIBLE PARKING
(SECTION 1106)**

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED			TOTAL # ACCESSIBLE PROVIDED
	REQUIRED	PROVIDED	REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH		
				132" ACCESS AISLE	8' ACCESS AISLE	
NORTH OF BUILDING	18 SEE CALCULATIONS BELOW	18		1		1
1 SPACE / 300 GFA + 6 SPACES FOR DROP-OFF = 18 SPACES REQUIRED						
TOTAL	18	18		1		1

STRUCTURAL DESIGN

(NOT APPLICABLE – NO CHANGE TO EXISTING STRUCTURAL SYSTEMS)

Importance Factors: Wind (I_w) _____
 Snow (I_s) _____
 Seismic (I_E) _____

Live Loads: Roof _____ psf
 Mezzanine _____ psf
 Floor _____ psf

Ground Snow Load: _____ psf

Wind Load: Basic Wind Speed _____ mph (ASCE-7)
Exposure Category _____
Wind Base Shears (for MWFRS) $V_x =$ _____ $V_y =$ _____

SEISMIC DESIGN 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 (Table 1613.5.2) A B C D E F

Data Source: Field Test Presumptive Historical Data

Basic structural system (check one)

- Bearing Wall
- Building Frame
- Moment Frame
- Dual w/Special Moment Frame
- Dual w/Intermediate R/C or Special Steel
- Inverted Pendulum

Seismic base shear: $V_x =$ _____ $V_y =$ _____
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

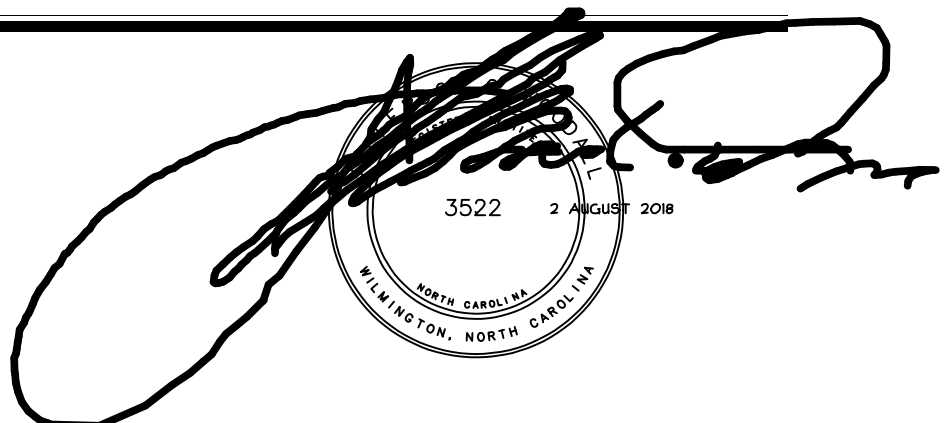
**PLUMBING FIXTURE REQUIREMENTS
(TABLE 2902.1)**

USE		WATERCLOSETS		URINALS	LAVATORIES		SHOWERS/ TUBS	DRINKING FOUNTAINS	
		MALE	FEMALE		MALE	FEMALE		REGULAR	ACCESSIBLE
SPACE	EXISTING	2	2	0	2	2	0	0	0
	NEW	0	0	0	0	0	0	0	0
	REQUIRED	2	2	0	2	2	0	PROVIDED IN KITCHEN	

SPECIAL APPROVALS

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

(NONE REQUIRED – VERIFY WITH LOCAL CODE ENFORCEMENT OFFICIALS)



ENERGY SUMMARY

(NOT APPLICABLE – NO CHANGE TO EXISTING THERMAL ENVELOPE)

Climate Zone: 3 4A 5

Method of Compliance:

- Prescriptive (Energy Code)
- Performance (Energy Code)
- Prescriptive (ASHRAE 90.1)
- Performance (ASHRAE 90.1)

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: _____



MECHANICAL SUMMARY

(NOT APPLICABLE – MINOR CHANGES TO EXISTING MECHANICAL SYSTEMS TO BE PERFORMED BY NC LICENSED MECHANICAL SUB-CONTRACTOR)

Thermal Zone

winter dry bulb: _____
summer dry bulb: _____

Interior design conditions

winter dry bulb: _____
summer dry bulb: _____
relative humidity: _____

Building heating load: _____

Building cooling load: _____

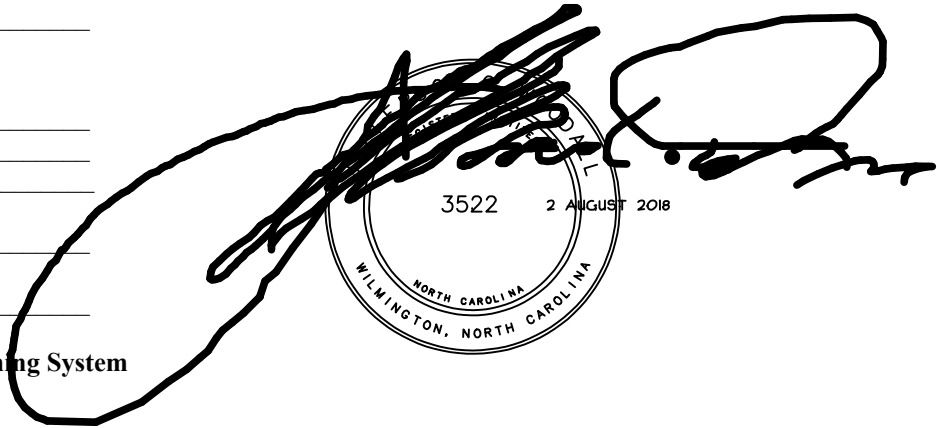
Mechanical Spacing Conditioning System

Unitary
description of unit: _____
heating efficiency: _____
cooling efficiency: _____
size category of unit: _____

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

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

List equipment efficiencies: _____



ELECTRICAL SUMMARY

(NOT APPLICABLE – MINOR CHANGES TO EXISTING ELECTRICAL SYSTEMS TO BE PERFORMED BY NC LICENSED ELECTRICAL SUB-CONTRACTOR)

Method of Compliance:

Energy Code: Prescriptive Performance
ASHRAE 90.1: Prescriptive Performance

Lighting schedule (each fixture type)

lamp type required in fixture
number of lamps in fixture
ballast type used in the fixture
number of ballasts in fixture
total wattage per fixture
total interior wattage specified vs. allowed (whole building or space by space)
total exterior wattage specified vs. allowed

Additional Prescriptive Compliance

- 506.2.1 More Efficient Mechanical Equipment
- 506.2.2 Reduced Lighting Power Density
- 506.2.3 Energy Recovery Ventilation Systems
- 506.2.4 Higher Efficiency Service Water Heating
- 506.2.5 On-Site Supply of Renewable Energy
- 506.2.6 Automatic Daylighting Control Systems