

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: MIDGARD SELF STORAGE SPRING LAKE, NC LLC
 Address: 14396 NC 210 S SPRING LAKE, NC Zip Code 23890
 Owner/Authorized Agent: MATT GARCIA Phone # (404) 909 - 1443 E-Mail mgarcia@reliant-mgmt.com
 Owned By: City/County Private State
 Code Enforcement Jurisdiction: City _____ County CUMBERLAND State

CONTACT:

| DESIGNER | FIRM | NAME | LICENSE # | TELEPHONE # | E-MAIL |
|--------------------------|---------------------------------|----------------------------|---------------|----------------------|--|
| Architectural | <u>HENDRICK</u> | <u>CHRISTOPHER J HEARD</u> | <u>13274</u> | <u>(404)261.9383</u> | <u>cheard@hendrickinc.com</u> |
| Civil | <u>CONTINEO GROUP</u> | <u>RON CRUMP</u> | <u>037214</u> | <u>(404)556.7721</u> | <u>ronc@thecontineogroup.com</u> |
| Electrical | <u>MFP + FP ENGINEER</u> | <u>WILL KELLY</u> | <u>053853</u> | <u>(770)810.8800</u> | <u>wkelly@barrettwoodyard.com</u> |
| Fire Alarm | <u>BARRETT</u> | _____ | _____ | () _____ | _____ |
| Plumbing | <u>WOODYARD &</u> | _____ | _____ | () _____ | _____ |
| Mechanical | <u>ASSOCIATES, INC</u> | _____ | _____ | () _____ | _____ |
| Sprinkler-Standpipe | _____ | _____ | _____ | () _____ | _____ |
| Structural | _____ | _____ | _____ | () _____ | _____ |
| Retaining Walls >5' High | _____ | _____ | _____ | () _____ | _____ |
| Other | <u>RAPID BUILDING SOLUTIONS</u> | _____ | _____ | <u>(407)347.9614</u> | <u>info@rapidbuildingsolutions.com</u> |

("Other" should include firms and individuals such as truss, precast, pre-engineered, interior designers, etc.)

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) _____ **CURRENT OCCUPANCY(S)** (Ch. 3): _____

RENOVATED: (date) _____ **PROPOSED OCCUPANCY(S)** (Ch. 3): STORAGE (S1)

RISK CATEGORY (Table 1604.5): **Current:** I II III IV **Proposed:** I II III IV
BUINESS (B)
RESIDENTIAL (R3)

BASIC BUILDING DATA

Construction Type: I-A II-A III-A IV V-A
 (check all that apply) 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 **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 |
|-----------------------|------------------|-------------|-----------|
| 3 rd Floor | | | |
| 2 nd Floor | | 12,536 SF | |
| Mezzanine | | | |
| 1 st Floor | | 12,536 SF | |
| Basement | | | |
| TOTAL | | 25,072 SF | |

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 1 2
 I-2 Condition 1 2
 I-3 Condition 1 2 3 4 5
 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): B (BUSINESS) AND R-3 (APARTMENT)

Incidental Uses (Table 509): N/A

Special Uses (Chapter 4 – List Code Sections): N/A

Special Provisions: (Chapter 5 – List Code Sections): N/A

Mixed Occupancy: No Yes Separation: 1 Hr. Exception: SPRINKLERED

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 506.2 ⁴ AREA | (C) AREA FOR FRONTAGE INCREASE ^{1,5} | (D) ALLOWABLE AREA PER STORY OR UNLIMITED ^{2,3} |
|-----------|---------------------|-------------------------------------|---|--|---|
| 2 | SELF-STORAGE | 12,536 SF | 52,500 | 7.2% | 78,000 SF |
| | | | | | |
| | | | | | |
| | | | | | |

¹ Frontage area increases from Section 506.3 are computed thus:

- Perimeter which fronts a public way or open space having 20 feet minimum width = 161' (F)
- Total Building Perimeter = 474' (P)
- Ratio (F/P) = .34 (F/P)
- W = Minimum width of public way = 24' (W)
- Percent of frontage increase $I_f = 100[F/P - 0.25] \times W/30 = \underline{7.2}$ (%)

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 un sprinklered area value in Table 506.2.

ALLOWABLE HEIGHT

| | ALLOWABLE | SHOWN ON PLANS | CODE REFERENCE ¹ |
|---|-----------|----------------|-----------------------------|
| Building Height in Feet (Table 504.3) ² | 75FT | 35FT | TABLE 504.3 |
| Building Height in Stories (Table 504.4) ³ | 4 | 2 | 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 | | DETAIL # AND SHEET # | DESIGN # FOR RATED ASSEMBLY | SHEET # FOR RATED PENETRATION | SHEET # FOR RATED JOINTS |
|--|---------------------------------|--------|-------------------------------|----------------------|-----------------------------|-------------------------------|--------------------------|
| | | REQ'D | PROVIDED (w/_____* REDUCTION) | | | | |
| Structural Frame, including columns, girders, trusses | | 0 | 0 | | | | |
| Bearing Walls | | | | | | | |
| Exterior | | | | | | | |
| North | 35ft | | | | | | |
| East | 15 ft | | | | | | |
| West | 27ft | | | | | | |
| South | 12 ft | | | | | | |
| Interior | | | | | | | |
| Nonbearing Walls and Partitions | | 0 | 0 | | | | |
| Exterior walls | | | | | | | |
| North | | | | | | | |
| East | | | | | | | |
| West | | | | | | | |
| South | | | | | | | |
| Interior walls and partitions | | 0 | 0 | | | | |
| Floor Construction | | | | | | | |
| Including supporting beams and joists | | 0 | 0 | | | | |
| Floor Ceiling Assembly | | 0 | 0 | | | | |
| Columns Supporting Floors | | 0 | 0 | | | | |
| Roof Construction, including supporting beams and joists | | 0 | 0 | | | | |
| Roof Ceiling Assembly | | 0 | 0 | | | | |
| Columns Supporting Roof | | N/A | N/A | | | | |
| Shaft Enclosures - Exit | | 1 | 1 | | | | |
| Shaft Enclosures - Other | | 1 | 1 | | | | |
| Corridor Separation | | 0 | 0 | | | | |
| Occupancy/Fire Barrier Separation | | 1 | 1 | | | | |
| Party/Fire Wall Separation | | 2 | N/A | | | | |
| Smoke Barrier Separation | | 1 | N/A | | | | |
| Smoke Partition | | 1 | N/A | | | | |
| Tenant/Dwelling Unit/ Sleeping Unit Separation | | 1 | 1 | | | | |
| Incidental Use Separation | | 1 | 1 | | | | |

* Indicate 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 (%) |
|---|---|--------------------|---------------------------|
| 27 ft | UP, S | NO LIMIT | 15% |
| | | | |
| | | | |

LIFE SAFETY SYSTEM REQUIREMENTS

- Emergency Lighting: No Yes
Exit Signs: No Yes
Fire Alarm: No Yes
Smoke Detection Systems: No Yes Partial RESIDENTIAL
Carbon Monoxide Detection: No Yes

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: A-0.1.1

- 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 sign locations (1013)
- 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)**

| UNIT CLASSIFICATION | 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 | | # OF ACCESSIBLE SPACES PROVIDED | | TOTAL # ACCESSIBLE PROVIDED |
|---------------------|---------------------------|----------|---------------------------------|-------------|-----------------------------|
| | REQUIRED | PROVIDED | 96" SPACES | 132" SPACES | |
| | 4 | 4 | 1 | | 1 |
| | | | | | |
| | | | | | |
| | | | | | |
| TOTAL | | | | | |

**PLUMBING FIXTURE REQUIREMENTS
(TABLE 2902.1)**

| USE | | WATER CLOSETS | | | URINALS | LAVATORIES | | | SHOWERS /TUBS | DRINKING FOUNTAINS | |
|--------------|---------|---------------|--------|--------|---------|------------|--------|--------|---------------|--------------------|------------|
| | | MALE | FEMALE | UNISEX | | MALE | FEMALE | UNISEX | | REGULAR | ACCESSIBLE |
| SPACE S-2 | EXIST'G | | | | | | | | | | |
| | NEW | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| | REQ'D | 1 PER 100 | | - | - | 1 PER 100 | | - | - | - | - |

SPECIAL APPROVALS

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

| USE | | WATER CLOSETS | | | URINALS | LAVATORIES | | | SHOWERS /TUBS | DRINKING FOUNTAINS | |
|--------------|---------|---------------------|--------|--------|---------|---------------------|--------|--------|---------------|--------------------|------------|
| | | MALE | FEMALE | UNISEX | | MALE | FEMALE | UNISEX | | REGULAR | ACCESSIBLE |
| SPACE R-2 | EXIST'G | | | | | | | | | | |
| | NEW | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| | REQ'D | 1 PER DWELLING UNIT | | | - | 1 PER DWELLING UNIT | | | 1 | - | - |

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: 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
ASHRAE 90.1 Performance Prescriptive
(If "Other" specify source here) _____

THERMAL ENVELOPE (Prescriptive method only)

[E] 1301.1.1 Criteria

Buildings shall be designed and constructed in accordance with the International Energy Conservation Code.

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: _____

Exception: Per G.S. 143-138 (b18), no energy conservation code provisions shall apply to any structure for which the primary occupancy classification is Group F, S, or U. This exclusion shall apply to the entire building area.

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: _____

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
STRUCTURAL DESIGN

(PROVIDE ON THE STRUCTURAL SHEETS IF APPLICABLE)

DESIGN LOADS:

Importance Factors: Snow (I_S) 1.0
Seismic (I_E) 1.0

Live Loads: Roof 20 psf
Mezzanine 0 psf
Floor 125 psf

Ground Snow Load: 10 psf

Wind Load: Ultimate Wind Speed 119 mph (ASCE-7)
Exposure Category B

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 S_s 0.147 %g S₁ 0.069 %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

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 2,000 psf

Pile size, type, and capacity _____

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 3A
winter dry bulb: 18
summer dry bulb: 94

Interior design conditions
winter dry bulb: 70
summer dry bulb: 75
relative humidity: 50%

Building heating load: 128 MBH

Building cooling load: 192 MBH

Mechanical Spacing Conditioning System

Unitary
description of unit: N/A
heating efficiency: N/A
cooling efficiency: N/A
size category of unit: N/A

See schedule on sheet M0.1.

Boiler
Size category. If oversized, state reason.: N/A

Chiller
Size category. If oversized, state reason.: N/A

List equipment efficiencies: N/A

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) **SEE E0.1**

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 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
-
-