

# 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: \_\_\_\_\_  
 Address: \_\_\_\_\_ Zip Code \_\_\_\_\_  
 Owner/Authorized Agent: \_\_\_\_\_ Phone # ( \_\_\_\_\_ ) \_\_\_\_\_ - \_\_\_\_\_ E-Mail \_\_\_\_\_  
 Owned By:  City/County  Private  State  
 Code Enforcement Jurisdiction:  City \_\_\_\_\_  County \_\_\_\_\_  State

**CONTACT:**

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural	_____	_____	_____	(____)_____	_____
Civil	_____	_____	_____	(____)_____	_____
Electrical	_____	_____	_____	(____)_____	_____
Fire Alarm	_____	_____	_____	(____)_____	_____
Plumbing	_____	_____	_____	(____)_____	_____
Mechanical	_____	_____	_____	(____)_____	_____
Sprinkler-Standpipe	_____	_____	_____	(____)_____	_____
Structural	_____	_____	_____	(____)_____	_____
Retaining Walls >5' High	_____	_____	_____	(____)_____	_____
Other	_____	_____	_____	(____)_____	_____

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

**2018 NC BUILDING CODE:**  New Building  Addition  Renovation  
 1<sup>st</sup> 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): \_\_\_\_\_

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

**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 <sup>rd</sup> Floor			
2 <sup>nd</sup> Floor			
Mezzanine			
1 <sup>st</sup> Floor			
Basement			
TOTAL			

**ALLOWABLE AREA**

**Primary Occupancy Classification(s):** Select one Select one Select one Select one Select one Select one

- 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):** \_\_\_\_\_

**Incidental Uses (Table 509):** \_\_\_\_\_

**Special Uses (Chapter 4 – List Code Sections):** \_\_\_\_\_

**Special Provisions: (Chapter 5 – List Code Sections):** \_\_\_\_\_

**Mixed Occupancy:**  No  Yes Separation: \_\_\_\_\_ 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.

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

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

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 506.2 <sup>4</sup> AREA	(C) AREA FOR FRONTAGE INCREASE <sup>1,5</sup>	(D) ALLOWABLE AREA PER STORY OR UNLIMITED <sup>2,3</sup>

<sup>1</sup> 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  $I_f = 100[F/P - 0.25] \times W/30 =$  \_\_\_\_\_ (%)

<sup>2</sup> Unlimited area applicable under conditions of Section 507.

<sup>3</sup> Maximum Building Area = total number of stories in the building x D (maximum 3 stories) (506.2).

<sup>4</sup> The maximum area of open parking garages must comply with Table 406.5.4.

<sup>5</sup> Frontage increase is based on the unsprinklered area value in Table 506.2.

### ALLOWABLE HEIGHT

	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE <sup>1</sup>
Building Height in Feet (Table 504.3) <sup>2</sup>			
Building Height in Stories (Table 504.4) <sup>3</sup>			

<sup>1</sup> Provide code reference if the “Shown on Plans” quantity is not based on Table 504.3 or 504.4.

<sup>2</sup> The maximum height of air traffic control towers must comply with Table 412.3.1.

<sup>3</sup> 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							
Bearing Walls							
Exterior							
North							
East							
West							
South							
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							
Party/Fire Wall Separation							
Smoke Barrier Separation							
Smoke Partition							
Tenant/Dwelling Unit/ Sleeping Unit Separation							
Incidental Use Separation							

\* 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 (%)

**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 #: \_\_\_\_\_

- 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

**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

**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	
TOTAL						

**PLUMBING FIXTURE REQUIREMENTS  
(TABLE 2902.1)**

USE		WATERCLOSETS			URINALS	LAVATORIES			SHOWERS /TUBS	DRINKING FOUNTAINS	
		MALE	FEMALE	UNISEX		MALE	FEMALE	UNISEX		REGULAR	ACCESSIBLE
SPACE	EXIST'G										
	NEW										
	REQ'D										

**SPECIAL APPROVALS**

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

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## 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)

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

**DESIGN LOADS:**

**Importance Factors:** Snow ( $I_s$ ) \_\_\_\_\_  
Seismic ( $I_E$ ) \_\_\_\_\_

**Live Loads:** Roof \_\_\_\_\_ psf  
Mezzanine \_\_\_\_\_ psf  
Floor \_\_\_\_\_ psf

**Ground Snow Load:** \_\_\_\_\_ psf

**Wind Load:** Ultimate Wind Speed \_\_\_\_\_ mph (ASCE-7)  
Exposure Category \_\_\_\_\_

**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**  $S_s$  \_\_\_\_\_ %g  $S_1$  \_\_\_\_\_ %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 \_\_\_\_\_ psf

Pile size, type, and capacity \_\_\_\_\_



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**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: \_\_\_\_\_

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:** \_\_\_\_\_

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**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  
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
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