

2012 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 _____
 Proposed Use: _____
 Owner/Authorized Agent: _____ Phone # (_____) _____ - _____ E-Mail _____
 Owned By: City/County Private State
 Code Enforcement Jurisdiction: City _____ County _____ State

PROJECT SUMMARY

Building description: _____

Scope of work details: (If phased construction, please see plan submittal guidelines.) _____

Code Compliance Summary: _____

Alternative Means of Compliance Request: _____

Industrial equipment with declaration document attached. [See www.Meckpermit.com (Electrical Services)]

RTAP (Revisions to approved plans.) [See www.Meckpermit.com (Commercial Plan Review Services)]

Date of Preliminary Review _____

LEAD DESIGN PROFESSIONAL: _____

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

2012 EDITION OF NC CODE FOR: New Construction Addition Upfit

EXISTING: Reconstruction Alteration Repair Renovation

CONSTRUCTED: (date) _____ **ORIGINAL USE(S)** (Ch. 3): _____

RENOVATED: (date) _____ **CURRENT USE(S)** (Ch. 3): _____

PROPOSED USE(S) (Ch. 3): _____

Building Code: 2012 North Carolina State Building Code (NCSBC)
 2009 NC Rehab Code 2012 Chapter 34 (attach summary)
 1995 Existing Building Code Vol. 9

New Building: New building Shell building
 First time interior completion (upfit)
 Addition

Existing Building: Change of use/occupancy
 Building/tenant space interior completion (renovation)

Please see 3411 NCSBC for compliance for Accessibility for Existing Buildings. A letter from the designer will be required to be attached or reproduced on the plans to verify how compliance will be achieved.

Year of construction _____ Original use _____

2009 NC REHAB CODE Information: Scope of work / work area must be listed and delineated on the plans.

Check all that apply: Repair Renovation Alteration Reconstruction Change of use Addition

Last known legal occupancy use _____ **Historic Property:** Yes No

Original Building Construction Date: _____ **Date of Preliminary Meeting** _____

Justifications for using the REHAB code:

Reviewers Notes for Field Inspector:

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 (Primary) **Flood Hazard Area:** No Yes

Building Height: (feet) _____

Gross Building Area:

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

ALLOWABLE AREA

Occupancy:

Assembly (303) A-1 A-2 A-3 A-4 A-5
 Business (304)
 Educational (305)
 Factory (306) F-1 Moderate F-2 Low

- Hazardous (307) H-1 Detonate H-2 Deflagrate H-3 Combust H-4 Health H-5 HPM
 Institutional (308) I-1 I-2 I-3 I-4
 I-3 Condition 1 2 3 4 5
 Mercantile (309)
 Residential (310) R-1 R-2 R-3 R-4
 Storage (311) S-1 Moderate S-2 Low High-piled
 Parking Garage Open Enclosed Repair Garage
 Utility and Miscellaneous (312)

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: _____ Hr. Exception: _____

- 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

- 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 = _____ (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 $I_f = 100 [F/P - 0.25] \times W/30 = \text{_____} (\%)$
- ² The sprinkler increase per Section 506.3 is as follows:
- a. Multi-story building $I_s = 200$ percent
 - b. 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 _____		Type _____	
Building Height in Feet		Feet = H + 20' = _____		
Building Height in Stories		Stories + 1 = _____		

FIRE PROTECTION REQUIREMENTS

THIS SECTION REQUIRED TO BE COMPLETED FOR ALL PROJECTS

Life Safety Plan Sheet #, if Provided _____ /

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							
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							
Roof Construction Including supporting beams and joists							
Shaft Enclosures - Exit							
Shaft Enclosures - Other							
Corridor Separation							
Occupancy Separation							
Party/Fire Wall Separation							
Smoke Barrier Separation							
Tenant Separation							
Incidental Use Separation							

* Indicate section number permitting reduction

PERCENTAGE OF WALL OPENING CALCULATIONS

THIS SECTION FOR ADDITIONS, NEW CONSTRUCTION AND CHANGE OF USE

Allowable openings per T705.8

WALL LEGENDS

THIS SECTION REQUIRED TO BE COMPLETED FOR ALL PROJECTS

CHECK IF THE FOLLOWING ARE PRESENT AND INDICATED BY A WALL LEGEND ON ALL PLANS

- Fire Walls 706 Fire Barriers 707 Shaft Enclosure 708 Fire Partitions 709 Smoke Barriers 710 Smoke Partitions 711

LIFE SAFETY SYSTEM REQUIREMENTS

THIS SECTION IS REQUIRED TO BE COMPLETED FOR ALL PROJECTS

- Emergency Lighting: (S1006) No Yes
Exit Signs: (S1011) No Yes
Fire Alarm: (S907, NFPA 72-07) No Yes
Smoke Detection Systems: (S907) No Yes Partial _____
Panic Hardware: (S1008.1.10) No Yes
Life safety systems generator:(S2702.2) 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
- 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 (Table 1004.1.1)
- 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

EXIT REQUIREMENTS

THIS SECTION IS REQUIRED TO BE COMPLETED FOR ALL PROJECTS

NUMBER AND ARRANGEMENT OF EXITS

FLOOR, ROOM OR SPACE DESIGNATION	MINIMUM ² NUMBER OF EXITS		TRAVEL DISTANCE		ARRANGEMENT MEANS OF EGRESS ^{1,3} (SECTION 1015.2)	
	REQUIRED T1021.2	SHOWN ON PLANS	ALLOWABLE TRAVEL DISTANCE (TABLE 1016.1)	ACTUAL TRAVEL DISTANCE SHOWN ON PLANS	REQUIRED DISTANCE BETWEEN EXIT DOORS	ACTUAL DISTANCE SHOWN ON PLANS

¹ Corridor dead ends (Section 1018.4)

² Buildings with single exits (Table 1021.2), Spaces with one means of egress (Table 1015.1)

³ Common Path of Travel (Section 1014.3)

OCCUPANT LOAD AND EXIT WIDTH

THIS SECTIONS IS REQUIRED TO BE COMPLETED FOR ALL PROJECTS

USE GROUP OR SPACE DESCRIPTION ⁷	(a)	(b)	CALCULATED OCCUPANT LOAD (a÷b)	(c)		EXIT WIDTH (in) ^{2,3,4,5,6}			
	AREA ¹ sq. ft.	AREA ¹ PER OCCUPANT		EGRESS WIDTH PER OCCUPANT (SECTION 1005.1)		REQUIRED WIDTH (SECTION 1005.1) (a÷b) x c		ACTUAL WIDTH SHOWN ON PLANS	
				STAIR	LEVEL	STAIR	LEVEL	STAIR	LEVEL
				0.3	0.2				

¹ See Table 1004.1.1 to determine whether net or gross area is applicable.

See definition "Area, Gross" and "Area, Net" (Section 1002)

² Minimum stairway width (Section 1009.1); min. corridor width (Section 1018.2); min. door width (Section 1008.1.1)

³ Minimum width of exit passageway (Section 1023.2)

⁴ See Section 1004.5 for converging exits.

⁵ The loss of one means of egress shall not reduce the available capacity to less than 50 percent of the total required (Section 1005.1)

⁶ Assembly occupancies (Section 1028)

⁷ Spaces within occupancies or use groups shall be calculated independently. (Ex. Lobbies, lounges, break rooms, conference rooms.)

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						

STRUCTURAL DESIGN

DESIGN LOADS:

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 Dual w/Special Moment Frame
 Building Frame Dual w/Intermediate R/C or Special Steel
 Moment Frame 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

ENERGY SUMMARY

THIS SECTION FOR NEW CONSTRUCTION, ADDITIONS, CHANGE OF USE AND INTERIOR COMPLETION

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.

Climate Zone: 3 4 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

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: _____

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

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
-