

# Commercial Plan Submittal Requirements

## **GENERAL REQUIREMENTS:**

A building permit application must be completed in its entirety and must accompany each package of drawings to be submitted for review. The application must be signed by the qualifier of the license unless a notarized statement is on file or provided with the application prior to permit issuance.

Plan submittals must include three (3) copies of all project drawings to scale with sufficient detail to fully indicate the nature and scope of work to be performed under this permit.

Building Code Summary and Energy Code Summary (*NC Building Code, Appendix B, Volume 1-A*) must be reproduced on the first sheet of plans with all applicable sections filled out in their entirety.

All plans and specifications must contain information (*in the form of notes or otherwise*) on the technical properties of the building materials to be used where such properties are essential to show compliance with technical building codes.

Drawings must indicate the required fire resistive systems to be used in the project and their locations on the plans as well as how they are to be constructed in accordance with their UL/FM test procedures. All fire rated walls (*both existing and new*) must be shown on all sheets. A wall legend of each type of wall system to be used in the project must be provided on all floor plans throughout the set.

All plans must be dated and signed by the designer. Professional seals, when applicable to the project, must appear on each sheet and must be signed and dated by the designer.

Copy of state approved erosion control plan as necessary.

## **ARCHITECTURAL PLANS:**

The names and uses of each room must be provided.

A door schedule that defines the applicable rate doors, frames, and hardware should be provided.

Elevations with dimensions defining overall building height, floor-to-floor heights, or heights to ridge and eave as applicable to the type of building construction proposed should be shown.

A roof plan showing roof slopes, drainage system and through wall scuppers, if applicable to the project, must be provided.

For assembly occupancy only, provide three (3) drawings showing the seating layout for determination of occupancy posting.

Wall sections showing material sizes, construction, and fire-rated assemblies, as applicable to the project must be provided.

If the plans to be submitted are for a "shell building," show all proposed plumbing, HVAC and electrical rough-in work (*if any is to be included*) on the plans. Tenant demising walls must not be constructed under a "shell only" permit and must not be shown on the shell drawings.

New building construction must comply with the height and area requirements of Table 500 and the fire protection requirements of Table 600 of the North Carolina State Building Code.

If masonry construction is proposed, include the following information: Type of brick ties and spacing of weep holes. Control joints. Placement of wall flashing.

If appropriate for the proposed occupancy, submit complete data on types and amounts of materials to be stored, processed, manufactured or used in the manufacturing of products in this facility. State if such materials are corrosive, poisonous, under pressure, in a liquid or gaseous state, radioactive or other relevant properties. (Ref NCSBC Sec. 407 and NfiPA 30.)

A floor slab vapor barrier must be shown.

Floor slab insulation size and dimensions must be shown.

For any building constructed with any part of the structure below the regulatory flood plain elevation, flood-proofing certification must be provided at time of plan submittal.

For pre-engineered metal buildings, submit the manufacturer's letter of engineering certification, a sealed foundation plan and complete architectural plans. The letter of engineering certification shall state the model number, size and design loads for the building. The letter also should state that the structural integrity of the building will be maintained as shown in the architectural plans and that the building will be maintained as shown in the architectural plans and that the building meets the North Carolina State Building Code for live and dead loads for Lee County. These loads must be stated in the correspondence. The foundation plans must be designed by a registered architect or engineer and show the size and reinforcement of footings or turndown slab. Also specify reinforcing, bolt pattern and bolt size for the building. Please include a statement on the plans that the pre-engineered metal building erection plans will be maintained at the job site until erection of the building is complete.

As applicable to the project, provide all UL floor and ceiling and ceiling and roof fire-rated design assemblies.

All fabric awnings or canopies must be accompanied by a letter of certification of fire resistance from the manufacturer. Fabric awnings and canopies must meet the ground snow loads of Figure 1605 and be constructed to support all live and dead loads as specified in Chapter 16 of Volume I of the North Carolina State Building Code.

Provide on the plans the calculations for the means of egress widths for the entire floor occupancy load and the exiting capacity of all exits including all stairs, doors,

corridors and ramped exits. Refer to Tables 1004 and 1003.1 of the North Carolina State Building Code.

**STRUCTURAL PLANS:**

Structural plans with the following information must be provided as the information relates to the particular project.

Provide complete footing and foundation plans

A footing schedule defining footing sizes and the required reinforcing must be provided.

The established footing depth below grade must be shown.

The thickness of the floor slab and size of reinforcing must be shown.

Provide location, size and amount of reinforcing steel.

Show foundation corner reinforcing bars and minimum overlapping (*as applicable to project structure*).

Provide strength of concrete according to design.

Beams, joists, girders, rafters and/or truss layouts and details of connections must be shown.

The sizes and species of all members and design strength must be provided.

All columns, girders, joists, purlins, beams and base plates must be provided. In wood construction, all headers must be shown on the structural plans.

A complete lintel schedule must be provided.

Indicate the type of anchoring for steel bearing directly on masonry.

The total of dead and live loads for floor areas, roofs, balconies, porches, breezeways, corridors, stairs, mezzanines and platforms must be shown. Also show concentrated loads, such as file rooms, machinery and forklift area, if greater than those shown on the Code Summary Sheet. Identify shear walls, bracing, strapping, fastening, reinforcement and any special anchoring required.

Indicate on roof framing plan where concentrated loads (*such as mechanical equipment, cranes, etc.*) may be placed.

Complete structural plans for canopies over entrances, exterior exit stairs and gas pumps, if applicable, should be included in the submittal.

**PLUMBING PLANS:**

Plumbing plans with the following information must be provided as the information relates to the particular project:

Indicate all supply and waste piping on the plans for each floor.

Indicate roof drainage plan including secondary drains.

The number of water closets must be shown for each sex with their location indicated on each floor plan. Calculations must be shown for fixture distribution for each floor area.

Grease interceptors (as applicable to project) shall be provided and sized by the flow rate per minute.

All applicable UL/FM penetrating procedures used to maintain integrity of rated assemblies shall be detailed for each type of penetration. The penetration details must be exactly as tested by an approved testing laboratory or agency and they must include their system numbers.

**MECHANICAL PLANS:**

Mechanical plans with the following information must be provided as the information on the plans relates to the particular project.

Mechanical floor plans must be provided for each floor.

The size of all duct runs must be clearly labeled and delineated on the drawings.

Controls for fan shutdown must be indicated on the plans.

The location and installation details of all fire dampers, smoke dampers and fire doors must be provided.

**All fire-rated walls** (*both existing and new*) must be shown on each applicable floor plan with a corresponding wall legend.

All applicable UL/FM penetrating procedures used to maintain the integrity of the rated assemblies must be detailed for each type of penetration. The penetration details must be exactly as tested by an approved testing laboratory or agency and they must include their system numbers.

**ELECTRICAL PLANS:**

Electrical plans with the following information must be provided as the information relates to the particular project:

Power plans must be provided for each floor.

Provide lighting plans (*on reflected ceiling plans*) for each floor. Exit lights and emergency lighting must be shown.

All life safety requirements, such as special power requirements, exit sign placement, emergency illumination and fire alarm system, must be indicated.

Indicate location of all panels.

Show all panel schedules.

Load calculation for all panels and all services, per NEC 220 and NEC 230, must be shown.

A single line riser diagram showing service and feeder wire sizes and conduit sizes in accordance with NEC 215-5, must be provided.

Indicate that the number of services is acceptable per NEC 230-2.

Show that the distance from point of entrance is acceptable per NEC 230-70a.

Indicate that all transformers are in compliance with NEC 450 and NEC 110-16.

**All fire-rated walls** (*both existing and new*) must be shown on each applicable floor plan with a corresponding wall legend.

All applicable UL/FM penetrating procedures used to maintain the integrity of the rate assemblies must be detailed for each type of penetration.

### **FIRE PROTECTION PLANS:**

Fire Protection plans with the following information must be provided as the information relates to the particular project.

A site plan must be provided with fire department connection and all hydrants shown, with placement approved by fire official.

A sprinkler design data sheet must be completed and included on the fire plan of the sprinkler drawings.

Floor plans must be provided for each floor. They should show sprinkler and/or standpipe, piping, layout, pipe sizes, pipe hanger details, piping materials, doors, walls and room identities.

Ceiling plans showing sprinkler head(s) layout, walls, soffits, openings, doors, dimensions and room identities must be provided.

Verify system design by providing hydraulic calculations along with the following information: Recent water flow test. 10 psi safety margin. Type of backflow preventer or reduced pressure zone showing equivalent foot loss. Fire pump summary.

**All fire-rated walls** (both existing and new) must be shown on each applicable floor plan along with a corresponding wall legend.

All applicable UL/FM penetrating procedure details used to maintain the integrity of the rated assemblies for each type of penetration must be shown. The penetration details must be exactly as tested by an approved testing laboratory or agency and they must include their system numbers.

Show Fire App access roadways with turning radii and vertical clearances (*where applicable*).

One (1) extinguishing system plan for commercial cooking operations, heat treating, or other operations shall be submitted along with copies of equipment specifications.

Fire protective signaling system plans must be submitted, as a separate sheet of the electrical plans, and must show placement of all, signaling, and control devices. Equipment specification sheets shall accompany plans.

Fire protection and/or building plans shall show designation of fire official approved location for Knox – Key box rapid access system and fire alarm remote enunciator panel for fire department from Chief or Asst. Chief of fire department.

Four (4) plans and specifications for standpipe systems shall be submitted just as sprinkler plans.

**SITE AND ZONING PLANS:**

Site plans with the following information must be provided:

**TITLE BLOCK:**

- Development name and address.
- Property owner and mailing address.
- Designer, map preparer and mailing address.
- Graphic scale, north arrow and date of plan.

**SITE DATA BLOCK:**

- Tax map and parcel identification number.
- Site and surrounding zoning.
- Site area and disturbed area.
- Existing use and proposed use.
- Number of lots and lot sizes.
- Parking spaces required and provided.
- Landscape Ordinance requirements.
- Data for Watershed Regulations (*If located in watershed*).

**EXISTING FEATURES TO BE INCLUDED IN SITE PLAN:**

- Property boundaries with labeled metes and bounds.
- Adjacent intersecting boundaries.
- Topography at two feet intervals.
- Floodways / Floodplains, and water elements.
- Drainageways and Drainage facilities.
- Site structures and improvements.
- Right of Ways, roadways and drives.
- Easements, Utilities; Type, location and size.
- Existing vegetation and natural features.
- Watershed information.
- Zoning of all adjacent properties.

**PROPOSED FEATURES TO BE INCLUDED IN SITE PLAN:**

NOTE: Additional information may be required depending upon proposed application.

- Lot layout indicated with dimensions, acreage and square footage.
- Setbacks and Buffer / screening requirements indicated.
- Proposed Structures and Improvements: Indicate setbacks, size, height, access, elevations, and relationship/dimensions to other buildings.
- Right of ways, public/private streets, drives: Indicate location, material, and dimensions.

Parking locations and layout: Indicate materials, dimensions, setbacks, curbing/wheel stops.

Handicap access on site, detailed with parking locations and layout.

Truck loading / unloading areas.

Refuse collection area(s).

Utility Layouts / Connections.

Completed Backflow Prevention/Grease Trap installation applications

Contact Terry Windham @ 775-8247

Easement location: Indicate type and width.

Storage areas: Indicate type and location.

Site lighting, signage, fencing, walls and amenities located in detail.

Proposed topography.

Natural features and existing vegetation indicate and that is left undisturbed.

Landscape Ordinance and screen plantings located on plan and detailed in schedules.

Public / Private recreational areas and facilities located in detail.