



COUNTY OF STAFFORD

DEPARTMENT OF PUBLIC WORKS

Plan Submission Requirements for Commercial Permits

When applying for a new construction, alteration, renovations, or Change-of-USE building permits, submit the required documentation listed below to the Department of Public Works, Community Development Service Center. County staff will direct you through the multi-agency review process.

If your project involves a food service establishment, school, swimming pool for transient lodging, or a daycare facility, you must begin your process at the Virginia Department of Health (540)288-9018.

Building Plan Review

Building Plan Review staff verifies code compliance of the plans. The status of your reviews and review comments are found online at <http://hello.stafford.va.us/Build> you will need the application (A/P) number assigned at submittal to check the status of your permit.

Site Plans vs. Building Plans

Since the development of your site plans and building plans take place at different times, the review processes for each may take place independently. If the site plan is not approved at the time of building permit application, simply submit an unapproved copy of the site plan with your building plans. **An approved site plan is required prior to building permit issuance.**

Plans Checklist

When applying for a permit, you must submit **the plan on disc; two separate discs are required when the building is greater than 10,000 square feet** as these projects require a Fire Marshal review. All associated documents must be included on the disc. Plans must clearly illustrate the nature of the work to be performed and must show the information or meet the requirements listed below. This is not to be considered an exhaustive and complete list. **Depending on the project, additional items or clarifications may be required.**

BUILDING

General

- If prepared by a Virginia registered architect or professional engineer (RDP), the plans must bear the **original** signature, seal, and date See Virginia Register Design Professional Licensing requirements and RDP requirements for when a plan is required to include a licensed RDP seal
- One full set of plans and **all** supporting data or documents listed below in its entirety **copied to disc, two discs required for projects 10,000 square feet or larger**
- Fully** completed *Statement of Special Inspections* form
- Completed Accessibility Compliance form

Cover Sheet

- Project Identification to include name and address with suite number if applicable
- Project location map
- Name and occupation of building designer with address, email, fax, and phone numbers
- Index of all plans included within the set being submitted
- Code year used for designs, Design Criteria – “Designed in Compliance with Virginia Uniform Statewide Building Code, ____ (year)”
- Type(s) of construction
- Occupancy Group(s)/**USE groups**. All occupancies/USES within must be listed. If an accessory or incidental to the main, specify as such with supporting calculations, if Mixed-Use specify as such along with Separated or Non-Separated.

Architectural

- Square footage of building area provided allowable building area square footage (provide area modification calculations, if applicable)
- Building height & number of stories provided versus Table 503’s allowable height & number of stories (provide height and number of stories modification calculations, if applicable)
- Design Criteria - occupant load(s) architectural plans showing the dimensions and use of all rooms, including **design occupant load**
- Provide overall occupant load
- Provide occupant load for each floor, and group
- Provide occupant load for each individual occupancy
- Design criteria - capacity of means of egress and life safety plan
- All fire resistance design numbers with original design copied to plans when fire rating is required - re-drawn plans of UL, USG, rated wall designs etc. will not be approved
- Provide rated wall and assemblies’ location plan to include a “key” for all wall types
- Design Criteria - fire sprinkler, fire alarm, and other fire protection or life safety system requirements
- Key Plans indicating location of work when multiple spaces are involved (e.g. malls, office building, etc.) **separate permits are required where multiple suites or floors are involved**
- When doing a build-out to an existing shell building, please provide entire square footage of existing building and occupancy type/USE group of adjacent suites; if doing a build-out in an existing multi-story building, please provide stairway analysis for existing occupancy with the new occupancy loads especially if large conference or meeting rooms are included
- Building elevations (all sides)
- R-values of building insulation components
- U-factor of fenestration
- Dimensions of all corridors and aisles
- Door and hardware schedule including special locking devices and manufactures specifications
- Partition schedule
- Floor to ceiling height and height from floor to underside of lowest structural member
- Fire sprinkler and system monitoring information
- For multi-story buildings, show calculations for stair exit capacity including existing floor occupancy load and any increases due to assembly/large meeting rooms on that floor

Structural

- Soils report
- Foundation plan
- Footing schedule
- Framing plan, cross sections, and detail showing all structural elements for each level and roof
- Connection details
- Material specifications
- Live and dead load reduction
- Roof live load
- Roof snow load and applicable factors
- Wind load and all applicable factors
- Earthquake design data

Systems furniture or Racking Permits

- A separate *Commercial Change* application is required when systems furniture or storage racking is installed in new, renovated, change of use, or tenant build-out buildings. Depending on the square footage for system furniture, a registered design professional may be required to seal the drawings. Depending on the size and height of the storage racking, fire suppression may be required within the racking, therefore a separate fire suppression permit may be required for the racking installation.

TRADE PERMITS

Mechanical, electrical plumbing and fuel gas permits can be issued only after the building permit has been issued.

Please note each trade contractor must have their own permit; for example, if one contractor is responsible for the HVAC and another is responsible for the refrigeration, two mechanical permits would be required.

Mechanical

- Duct, piping layout for the HVAC system to include:
 - Main trunk and branch lines
 - Size and CFM of all registers
 - Locations of all new and existing equipment, outside air intake, and exhaust air openings
- Symbol and abbreviation list
- Calculations demonstration compliance with the International Energy Conservation Code
- Details demonstrating compliance with the UL design numbers of the required fire-rated floor, roof assemblies
- Details for boilers and safety devices
- Fire and smoke dampers and fire/smoke detection devices
- Equipment data for the HVAC system to include
 - Make and model number, BTU rating for heating and cooling
 - Total supply and outdoor air capacities of each air handler
- Identify economizer cycle when required by code. Provide sequence of operation

- Detailed shop drawings for commercial hoods, which include:
 - Hood dimensions
 - Construction material
 - Size, number, and type of filters
 - Output of exhaust
 - Size and number of ducts
 - Method of providing make-up air and amount
 - Evidence of compliance with Chapter 5 of the international Mechanical Code or a report by an approved testing agency indication compliance with UL 710 for factory-built hoods

Electrical

- Floor plans showing luminaires, receptacles, branch circuits (and home-runs), panels, equipment and battery packs
- Symbol legend
- Panel schedule to include:
 - Panel size, phases, and voltage
 - Breaker/fuse and conductor sizes
 - Indicating if MCB (main circuit breaker) or MLO (main lug only) if MLO, indicate the size of the overcurrent protection, if MCB, indicate sizes
 - Feeder conductor sizes and insulation types
 - Clear, evident, and specific circuit identification directories
- Load calculations broken into total connected and demand loads, and continuous and non-continuous load
- Equipment schedules
- Riser diagrams to include
 - Size of feeder conductors and insulation types, conduits and overcurrent protection
 - Connections and sizes, shunt trip of emergency/stand-by generator;
 - Fire and jockey pumps
 - Ratings of transformers, conductor sizes, voltage levels, grounding conductor sizes and overcurrent protection sizes
 - Size of motors
 - Main grounding at the service
- Exit, emergency, and battery pack luminaire locations and branch circuits
- Provide approved fire-stop details for all penetrations to or through fire resistance rated assemblies
- Attach a completed energy certification form
- Number of site lighting poles with wire, insulation type, and calculations for voltage drops
- Manufacturer's specifications package of equipment or devices with grounding/bonding requirements if required

Plumbing

- Provide a plumbing site plan drawn to no less than 1:20 scale with connection to potable water supply, piping ASTM numbers and size of water and sewer service piping
- Demolition plan indicating fixtures to be relocated or removed and location of the capped piping
- Minimum required plumbing facilities

- Floor plans and riser diagrams showing the location of all plumbing fixtures, sanitary, water, storm piping, drawn to no less than 1/8 inch scale
- Identify size, slope, and type of all piping material and location of all required valves
- Fixture connection schedule including waste, vent, gas, hot and cold-water connection sizes
- Identify all fixture symbols used on plans and risers. Include backflow preventers and other water control equipment
- Provide approved fire-stop details for all penetrations to or through fire resistance rated assemblies
- Label fixtures intended for food preparation to ensure indirect waste connections
- Clearly label fixtures that will be drained to a grease interceptor
- Illustrate the handicap accessible clear floor space, elevation details, and dimensions for all plumbing fixtures
- Provide plumbing roof drain plan drawn at no less than 1/8 inch scale
- Illustrate and provide details on plumbing roof plan primary roof drains, secondary roof drains, and scuppers if applicable with vent terminations
- Provide specifications and installation details for traps and interceptors
- Provide specifications & installation details for backflow device(s.) The approval of specific main water service backflow devices is required from the Utilities department **Contact Utilities for backflows in mains @ 658-5200**

Fuel Gas

- Fuel-gas site plan showing the connection to the onsite fuel-gas storage tank; indicate above ground or underground storage tank, size and type of fuel-gas; natural gas does not mandate site plan
- Floor plans and riser diagrams showing the location of all gas piping drawn to no less than 1/8 inch scale
- Fuel oil piping in building
- Fixture connection schedule and connection sizes of piping material, piping ASTM numbers
- Point of connection to fuel-gas supply and type of fuel gas
- Indicate on the fuel-gas site plan the maximum fuel-gas demand in cubic feet per hour
- Provide approved fire-stop details for all penetrations to or through fire resistance rated assemblies

Low Voltage Electrical System

Requires a separate electrical permit if “...when any such installations are located in a plenum, penetrate fire rated or smoke protected construction or are a component of a fire alarm system...”

- Provide general information box with fire alarm system specified; or note if none provided
- Low voltage electrical floor plan(s, electrical riser diagram) no less than 1/8 inch scale for all floor levels including basements, mezzanines, and useable attic spaces
- Indicate the electrical code edition that plan(s) are designed (VUSBC)
- Illustrate and identify all fire resistance rated assemblies and the ratings; to include as a minimum rated partitions, rated walls, rated shaft enclosures, rated horizontal assemblies, and rated exterior walls

- Provide approved fire-stop details for all penetrations to or through fire resistance rated assemblies
- Illustrate and identify all low voltage outlet locations
- Provide conductor/cable type; including wire gauge and insulation type
- Plans show if any part of the low voltage system located in a plenum or penetrating a fire rated assembly

Fire Protection

- For minimum required plan review submittal information, fire suppression, monitoring, and alarm, please contact or see the website for Fire and Rescue Department