



DPS

Montgomery County
Department of Permitting Services



2425 Reedie Drive, 7th Floor
Wheaton, MD 20902
240-777-0311
montgomerycountymd.gov/dps

REQUIREMENTS FOR THE SUBMITTAL OF NFPA 13D SPRINKLER SYSTEMS. (ePLANS)

Effective: June 1, 2016

Supersedes: October 1, 2014

A. PERMIT PROCEDURES

1. Permit applications shall conform to all applicable codes and standards enforced by the State of Maryland and Montgomery County.
2. For systems designed using other standards or codes please refer to requirements as appropriate. (e.g. NFPA 13D, NFPA 13R, NFPA 14, and NFPA 20)
3. For projects within the [City of Gaithersburg](#), contact their Fire Marshal at (301) 258-6330
4. For projects within the [City of Rockville](#), contact their Fire Marshal at (240) 314-8240.

B. GENERAL SUBMITTAL REQUIREMENTS

1. Drawing files shall be submitted separately (one drawing per file). The site plans are drawings. Drawings shall be submitted in landscape format.
2. Equipment submittal files shall be combined into a PDF book and submitted together as a single file.
3. Calculation files shall be submitted separately (one calculation per file). Provide a list showing the file number, area/floor, and the drawing number for plans with more than 5 calculation files.
4. When submitting for “sticks” or “rows” of townhouses only one ePlan project (plans and calculations) shall be submitted for the row. All building and fire protection permit numbers shall be included on the plans and shall be associated with the appropriate unit. Additional information regarding this requirement can be obtained by emailing dps.eservices@montgomerycountymd.gov.

C. INFORMATION REQUIRED ON DRAWINGS-

1. General

- a. Information on plans shall conform to this list and the requirements of [NFPA 13D](#) as well as the Montgomery County Executive Regulations.
- b. The minimum acceptable scale for plans is 1/8”=1’.
- c. Plans shall include floor elevations and building section elevations (as applicable) above sea level corresponding with the required gradient information.

- d. Project name and address (each address shall be included if more than one building or unit). Where project is townhouses see section B-4 of this document.
- e. Project owner's name and address including zip code.
- f. Building permit number (for each building where multiple units/buildings)
- g. Montgomery County and Maryland State sprinkler contractor license and expiration dates.
- h. Contractor name and contact information.
- i. Symbol and abbreviation key which includes the number of heads on each sheet. Each sprinkler type shall be afforded a distinct symbol which includes the sprinkler identification number accompanying the symbol.
- j. Overall use of building(s) (e.g. SFD, townhouse, board and care, etc.) and the occupancy/use of all rooms and areas.
- k. The location of all partitions, rooms and doors.
- l. Ceiling construction, height and features (e.g. trays, coffers, beams, etc.) Where ceilings are not smooth or level more than 2 sprinklers may need to be calculated.
- m. Full height cross sections showing all conditions.
- n. Lintel depth and location for cased openings without doors.

2. WSSC Approved Site Plan

- a. Must be to scale and/or dimensioned.
- b. Contact [WSSC](#) or call to obtain low and high hydraulic gradients. You can convert low gradient to pressure available by the lowest floor elevation and multiplying by .433. Where project consists of a row of townhouses the low and high hydraulic gradient shall be provided for the entire stick.

3. Sprinkler Layout

- a. Center to center dimensions or cutting lengths of pipe and distances of sprinklers to walls in all areas & rooms.
 - i. Sloped ceilings; give flat & sloped dimensions
 - ii. Above & below ceiling protection shall have dimensions for both above and below sprinklers.
- b. Pipe sizing shall be by pipe schedules or as proven by calculations and hydraulic reference points corresponding to the calculations shall be present on plans.
- c. All pipe fittings and types shall be included on the plans or in the supporting documentation.
- d. If using plastic pipe the hanger intervals (as listed by the manufacturer) and restraint method at sprinkler shall be provided by means of details on the plans.
- e. All ceiling obstructions such as lights, bulkheads, etc. shall be shown in detail on the plans.
- f. The elevation of all sprinklers and supply points shall be provided.
- g. Sprinklers shall show and dimension all danger areas near heat producing devices with the more stringent of the manufacturer's recommendations or code required clearances governing sprinkler head placement.
- h. Plans shall include maximum coverage dimension on the plans.
- i. Plans shall have each calculated area clearly noted and all areas shall be coordinated with the calculation(s).
- j. Dry sprinklers shall be provided in all garages under living areas as required by [Montgomery County Executive Regulations](#).
- k. Sprinklers, when required in closet like spaces, shall not be installed above shelving.

1. High temperature corrosive resistant sprinklers shall be provided in saunas and similar spaces.
- 4. Riser Diagram**
- a. Riser size(s)
 - b. Backflow prevention and meter (show make, model and size).
 - c. ½” drain test connection.
 - d. All sprinkler and domestic shutoff valves.
 - e. Pressure guage

D. DESIGN/CALCULATION REQUIREMENTS

1. Calculation methodology shall conform to NFPA 13D and shall include any devices which are not noted in the support documentation (e.g. valves).
2. Calculation cover sheet shall include the following information:
 - a. Date
 - b. Project name and address
 - c. Contractor name and contact information
 - d. Calculation identification which shall be consistent with the information shown on plans.
3. The following calculations shall be provided (as applicable):
 - a. One head flowing at required pressure
 - b. Two heads flowing at required pressure
 - c. Garage head calculation(s) where heads are different K factor.
 - d. Any other calculations required to demonstrate system operation (spacing, pipe size and or pipe type changes)
4. Water pressure shall be based on information obtained from [WSSC](#). Documentation shall be provided from [WSSC](#) for water meters larger than 1”.
5. All calculations shall include a 10% safety factor as required by [Montgomery County Executive Regulation](#) unless a pump is needed to obtain the safety factor.
6. If pumps and/or tanks are used in areas with a public water supply, calculations shall be submitted evidencing that the system cannot be designed to function on the public water supply system. All design variations including head spacing, orifice size, pipe sizing, looping, and gridding (owner occupied only) must be ruled out prior to employing pumps and/or tanks into the design
7. Where pumps are used the following information shall be provided:
 - a. Pump make and model
 - b. The pump performance curve shall be provided
 - c. A pump piping detail arrangement shall be shown on the plans.
8. Where tanks are used the following information shall be provided:
 - a. Tank details and arrangement shall be shown on the plans
 - b. Tank capacity shall be provided on the plans and/or calculations
9. Where a well is used the static pressure at slab and a completed well information sheet shall be provided with the calculations.