



The following steps are a general description of the process for water or sewer service requirements to receive approval for construction for commercial/industrial sites. **Contact the Commission's Engineering and Technical Services Office with any questions at 413-452-1300.**

**1. Application for Water and / or Sewer Services:**

**Apply at Commission's Operations Center at 71 Colton St.**

- **Fill out an application form(s): Commercial/Industrial water and sewer services.**
- **Pay service application fees.**
- **Submit draft Site Plan.**
- **Submit information on Fire Suppression System Plan**
- **Submit information on Backflow Prevention Devices**
- **Submit information on Grease Interceptors for FOG control.**

**2. Submittals - Site Plan and Others Submittals Required:** The applicant for any water or sewer service which is not a single family residence or duplex must submit a site plan for review, comments, and potential approval by the Commission.

The Commission's website at <http://waterandsewer.org> now has technical documents available for viewing and download: Rules and Regulations, Guidelines and Policies, Standard Construction Details, and Materials Specifications.

**Site Plans** - Site plan must be prepared by the Design Engineer, a Professional Engineer licensed in Massachusetts, who is hired by the project applicant.

- Plan must show, at a minimum:

1. Existing and proposed water and/or sewer main structures, fittings and appurtenances within the site and within any right of way which contains mains serving the project site. Design engineer may contact the Commission for copies of records of existing water and sewer mains and services. Water and sewer mains and all services must be shown accurately within the right of way layout.
2. Existing and proposed lots or parcels, right of way layout, labels of lots, and any existing street addresses of the project site.
3. All existing and proposed utilities, particularly underground, for the project area.
4. Any proposed easements through which water and or sewer services are proposed. Widths of proposed easements are to be determined by the Commission.
5. All services shall meet the requirements of the Commission's Rules and Regulations, Guidelines and Policies.

- Commission will review and generate comments on the draft site plan.

- The plan approval process may require several iterations of comments and plan revisions.



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**Other Submittals** - Additional submittals may be required based on the use of the site including but not limited to the following.

- **Water and Sewer capacity requirements** – Submit information on average daily and peak water and sewer use needs for the project. If any industrial processes require water use, describe.

- **Industrial Pretreatment Sanitary Survey** – Certain industries require pretreatment of sanitary flows before being discharged to the public sewer system. Contact the Commission's Industrial Pretreatment Program for specific requirements at 310-3501 x 213.

- **Fats Oils and Grease (FOG)** submittals must address the following:

1. Grease interceptor equipment design and sizing and construction details.
2. Plumbing plan and/or site plan showing location of installation.
3. FOG Maintenance Plan.

- **Backflow Prevention Submittal** – Any private threaded tap must be separated from the public water supply by a backflow prevention device (BFP) for certain water uses.

BFP submittals must include:

1. Plumbing plan showing location of the BFP.
2. Specification of BFP. Device must have double check valves with detection metering.
3. Location of BFP must be adequate for Commission inspectors to test as required.

- **Fire Suppression System Submittal** – The Commission reviews site plans and plumbing plans as appropriate to determine compliance with Commission Rules and Regulations.

1. Site plan and plumbing plans of fire suppression system.
2. Show all public and private hydrants existing and proposed. Show external Fire Department Connection on exterior of building.
3. Commission requirements and Fire Department requirements must both be met by the design engineer. Coordination meetings may be required to achieve this.

**3. Common Design Questions:** The following is a list of design elements or submittals which are frequently required for Commercial and Industrial Sites.

- 1) Water meter locations must be one of the outside walls of the building which is closest to a vehicle driving path for automatic meter reading purposes. Commission Rules and Regulations require the water service to come into the building through the foundation wall with the meter located on the wall or up through the floor within 12" of the outside wall. Water metering in interior rooms is not acceptable.
- 2) Domestic and Fire Suppression water services are separate all the way to the public water main.
- 3) The public water supply must be protected from cross connection by the installation of backflow prevention devices (BFP). The following is a partial list of water use which requires a backflow



prevention submittal to the Commission for review by the Cross Connection Manager. Any specific design questions may be directed to the Cross Connection Manager at 310-3501 x 214.

- a) restaurants and commercial kitchens
  - b) fire suppression systems
  - c) custodian utility equipment
  - d) medical facilities
  - e) installations which use water piped directly into equipment
- 4) Any of the uses above with backflow prevention on the domestic service at the meter should install two backflow devices, in parallel, so that continuous water service may be provided during future testing and maintenance of the device.
- 5) Fire Suppression water services must meet Commission, DEP, and Fire Department requirements. The design engineer is responsible for any hydraulic analyses, and to make all required submittals to the Springfield Fire Department. The following is a partial list of requirements to meet. Contact the Fire Marshall with any specific questions about fire suppression requirements.
- a) Hydrants:
    - i) Public hydrant locations will follow Fire Department and Commission requirements.
    - ii) Public hydrants are connected directly to public water mains.
    - iii) Public water mains are only found in street right of ways or easements given to the Commission by the property owner.
    - iv) Private hydrants within a site must have back flow prevention to protect the public water supply per DEP requirements. Work with the Commission review engineer on possible options. The design engineer must provide information to the Fire Department as required on flow characteristics.
    - v) Private hydrants are owned, operated, and maintained by the property owner, however, working with the Fire Department for any private hydrants to become part of the hydrant certification process is encouraged.
  - b) External Fire Department Connections (FDC) must be shown on the site plan and meet Fire Department location requirements. Typically FDC's must be located within 100 feet of a public hydrant per the Fire Department.
- 6) Fire Flow Testing – Water system pressure and flow information are not available from the Commission. The project must hire professional design staff to perform fire flow testing and to design the fire suppression and domestic water systems. The Commission does not review or approve fire suppression systems for adequacy of flow or pressure
- 7) Fire Flow Test results only represent the conditions of the public water system at the time of the test. Public water system functioning may vary from day to day and hour to hour within the parameters of DEP requirements.
- 8) Fire flow testing may be scheduled through the Commission's Operations Center at 71 Colton St. The project designer must perform the test and Commission inspectors must observe. Fees are \$200 for Commission inspectors to observe the test and a \$100 refundable deposit, which is refunded when the Commission receives a copy of the engineer's test results.



- 9) FOG – The sewer collection system must be protected from fats, oils, and grease entering and clogging sewer mains which can cause sewer backups. The Commission’s rules and regulations have a 100 mg/l effluent limitation for any sanitary flows entering the public system. Project designers must submit internal grease trap specifications, or if approved by the Commission’s Executive Director, external grease interceptors. Internal grease traps must be automatic self cleaning units. External grease interceptors must have a minimum of two chambers, adequate manholes for access to inspect and clean. FOG trap/interceptor inspection and maintenance plans must be submitted for Commission review. See Commission Rules and Regulations, Guidelines and Policies for FOG requirements.
- 10) Sanitary / Combined Mains - The existing sanitary and combined sewer system can potentially surcharge at certain times during normal operations of those systems. Sanitary and combined system piping is designed to allow surcharging potentially up to the roadway surface elevation during peak use or during certain rain/runoff events. This normal system surcharging can impact sanitary services and potentially cause problems with any floor drains, piping or plumbing fixtures within the building structures which are below roadway grade elevations. The designer must perform their own analysis of the public system being connected to compared to the proposed building structures and make appropriate design decisions. Check valves which are accessible for inspections and maintenance on a regular basis are an option. Check valves will close during surcharging of the public main and not allow water use within the building plumbing system to discharge to the main until the main surcharging subsides. Appropriate storage capacity must be available within the building’s plumbing system to allow continued water use. Sanitary flows from the proposed building may also be pumped with a low pressure sanitary service grinder pump into the sanitary/combined main to allow continued plumbing system functioning during surcharge conditions.

The Owner of the building is responsible for the installation, location, operation, and maintenance of the plumbing fixtures, sinks, toilets, floor drains, and any other associated appurtenances located in the building. The normal operation of the public sanitary system includes possible surcharging to the elevation of the street during peak flows or rain events in combined sewer areas. The installation of any plumbing fixtures by the Owner below the sill elevation of the elevation of the top of the building foundation is at their own risk.
- 11) Drainage To Combined Sewer Mains - When designing a drainage service to be connected to a combined sewer main the drainage service pipe shall be as high an elevation as possible so that future separation of combined and sanitary flows at the main is as efficient as possible. **The project’s design of the site drainage should work towards the goal of 20% reduction of runoff volume, and peak rate for the 2-year design storm. Drainage submittals will be required to the Commission in addition to any DPW requirements.** Each volume of runoff that can be removed from the combined sanitary system during rain events results in an equal decrease in Combined Sewer Overflows into water bodies during certain rain events.
- 12) Existing Water and/or Sewer Service Discontinuances – Existing services which will no longer be used must be discontinued as part of the development project.
- 13) Water service discontinuances must be performed at the water main.
- 14) A water service under 4-inches diameter is discontinued at the main. The contractor secures any required permitting from other agencies, provides all excavation, trenching and shoring and exposes the service at the main. The Commission performs the discontinuance. The contractor restores the site.



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- 15) Any water service 4 inches in diameter or larger must be discontinued by shutting down the main, cutting out a section of main, replacing with a new small section of pipe and securing with couplings. The Commission crews or the contractor may perform the discontinuance depending on the project and its location at the Commission's discretion.
- 16) Sewer service discontinuance may be performed outside of the street right of way within the first 10 feet of the property by cutting, capping, or bricking shut the service pipe. Any service which extends into a manhole must be bricked up at the manhole. This work is performed by a Commission Approved Contractor.
- 17) Existing water or sewer services may be re-used at the Commission's discretion and according to the Commission Rules and Regulations. Any sanitary services to be re-used must be CCTV'd by the owner/engineer/contractor with a SWSC Inspector present. Inspections must be scheduled and prepaid at \$175 per site visit, through the Commission's Operations Center at 71 Colton St.
- 18) Main extensions may be required if existing water or sewer mains do not meet the Commission's requirements to serve a lot being developed. Main extensions may or may not be part of the subdivision process.
- 19) Subdivisions are projects which involve the creation of new right of way and the lots associated with the new street. This process must go before the Planning Board for approval.

#### **4. Water and/or Sewer Service Approval Memo/ Payment of Fees**

- An approval memo by the Commission is distributed for all associated water and sewer services once the plan is approved and all Commission requirements are met.
- The project applicant is notified, by phone or email, once the approval memo and package is complete and available for pick-up at the Commission's Operations Center, 71 Colton St., Springfield, MA.
- The project applicant must pick up the approval package and pay all required fees as described in the memo. Those fees may include but not be limited to:
  - remaining application fees,
  - connection fees,
  - tapping main fees,
  - main shut down / turn on fees,
  - service discontinuance fees,
  - inspection fees, other construction related fees.
- All Commission fees are listed in the Rules and Regulations and are available on line at <http://waterandsewer.org/>
- It is highly recommended that the site contractor receive the Contractor's Copy of the approval package as there are important records and instructions included.

#### **5. Construction, Scheduling Commission Inspections, Commission Construction Crews, and Backflow Prevention Device Inspections.**

- Construction of the new water and sewer services is performed only by a Commission Approved Contractor hired by the project applicant.



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- All construction materials and methods must adhere to the Commission Rules and Regulations and Policies and Guidelines documents.
- Inspections may be scheduled after the project is approved and all fees paid by calling the Commission's Inspection Services Office at 310-3501.
- Commission Construction Crews may be scheduled for main taps, discontinuances, and main shutdowns by calling the Commission's Operations Center at 310-3501.
- The number of Commission inspections is estimated in the approval memo. If more inspections are required the applicant will be billed at a rate of \$175 per visit. If fewer inspections are performed than the estimated amount, the applicant may request a refund.
- Backflow prevention device inspections may be scheduled by calling the Cross Connection Manager at 310-3501 x 214.
- The Commission will be undertaking major Combined Sewer Overflow construction work throughout Springfield for the next several years. This work involves the separation of sanitary and drainage flows. All contractors should be aware the sewer separation projects may impact the approved construction of water and sewer services.

#### 6. Water Service Turn-On

- After the main has successfully passed all required testing, construction inspections, and backflow prevention device approvals, the contractor must schedule the installation of a water meter with the Commission Field Services Office. The contractor should also work with the Commission Inspector to get the water service turned on.

**Special Permits by the City of Springfield** – If a project requires Special Permit approval by the Springfield City Council, the Commission will comment generally on the availability of water and sewer service to a particular site and project. **A general statement of sewer and/or water availability for a project does not constitute final approval for the water and sewer services proposed by the developer.**

#### **Commission Projects On-Going in Springfield and Ludlow**

**Combined Sewer Overflow Projects** - The Commission will be undertaking major Combined Sewer Overflow construction work throughout Springfield for the next several years. This work involves the separation of sanitary and drainage flows. The sewer separation projects may impact commercial and industrial projects.

**Water Main Upgrades** – The Commission will be undertaking water main improvement projects throughout Springfield and Ludlow. The construction phase scheduling and locations are highly variable. Water main improvements may impact commercial and industrial projects.