



CITY OF SALEM

Engineering Department

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Mayor

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Checklist for Site Plan Review/ Building Permit Routing Slip Sign Off

****please note that some of these requirements will not apply to every project****

- 1. Provide a site plan, stamped by a MA Professional Civil Engineer (hereinafter referred to as "the Engineer"), showing existing and proposed utilities**

Water

a. Existing

- i. Licensed plumber to complete building inspection to locate all water lines (noting location, size and material) connected to the building(s). The Engineer shall incorporate this information in the site plan, along with the water lines (location, size, material) in the abutting street(s).
- ii. If reuse is proposed, a formal letter from a licensed plumber is required confirming pipe is adequate for reuse.
- iii. If reuse is not proposed, services shall be cut and capped at main in the street, in accordance with City Building Demolition Regulations. Tee service connections shall be removed from the main and replaced with a minimum of 4 feet of new CLDI piece of pipe using repair clams that might need to be mechanical restrained.
- iv. Provide existing water demand peak flow.

b. Proposed

- i. The Engineer to provide a letter stating that the City watermains to serve the proposed development have adequate flow and pressure. Back-up data, including engineering calculations and the results of hydrant flow tests (within one year), shall be included in the letter.
- ii. Provide proposed water demand peak flows.
- iii. Provide detailed information on the water meter location in the building that demonstrates clear access for future maintenance. Provide plumbing plans.
- iv. Separate fire and domestic services (1 inch minimum) are required with valves on each service at the main for the fire and large domestic services (4 inch and above) and on the sidewalk for smaller domestic services (less than 4 inch).
- v. Individual service per building is required.
- vi. Provide fire sprinkler system design (note a backflow preventer is require).
- vii. Identify if an irrigation system will be installed. A backflow preventer will be required for an irrigation system is installed, provide location of backflow device.

- viii. If proposed service is only one diameter smaller than the City water main, a tee connection with a triple gate configuration will be required. A tee connection with a triple gate configuration may also be required if the City Engineer determines that the existing valves on the City water main at that location do not provide adequate control.
- ix. A Licensed Plumber and/ or Fire Protection Engineer shall certify in writing to the City Engineer and Plumbing Inspector whether a backflow prevention device is required for the proposed building.
- x. A containment backflow prevention device will be required for all commercial and mixed-use properties as well as residential properties with 10 or more units.
- xi. If a backflow device is required, the Licensed Plumber and/ or Fire Protection Engineer shall complete and submit the Backflow Prevention Device Design Data Sheet for each proposed device. The data sheet shall be submitted to the City Engineer for approval with a check, or money order, in the amount of \$100 made out to the City of Salem for the permit fee.

Sewer

a. Existing

- i. Licensed plumber to complete building inspection to locate all sewer lines (noting location, size and material) connected to the existing building(s). Engineer shall incorporate this information on the site plan, along with the sewer lines (location, size, material) in the abutting street(s).
- ii. Dye testing of all pipes leaving the building(s) shall be performed to confirm connectivity to sewer lines in the abutting street(s).
- iii. If reuse is proposed, Closed-Circuit Television (CCTV) inspection of sewer service will be required along with a letter from the Engineer stating that the sewer service is adequate for reuse.
- iv. If reuse is not proposed, services shall be cut and capped at the City main in the street.
- v. Provide existing sewer discharge peak flows.
- vi. Sump pump or roof drain connections to the sewer are not allowed and shall be redirected by the applicant at the applicant's expense.

b. Proposed

- i. The Engineer shall provide a letter to the City Engineer stating that the City sewer system to serve the proposed development has adequate condition and capacity to accommodate proposed flows. Back-up data, including engineering calculations and the results of all sewer inspections and existing sewer flow measurements, shall be included in the letter. Additionally, cleaning and CCTV inspections of the sewer main based on the Pipeline Assessment Certification Program (PACP) standards will be required showing the full circumference of the pipe. City Engineer to determine CCTV limits. A copy of the video and logs shall be submitted with the letter. (Note: Any deficiency identified in the system, shall be corrected by the applicant, at the applicant's expense, to the satisfaction of the City Engineer.)
- ii. Provide proposed sewer discharge peak flows.
- iii. Individual services per building required.
- iv. Illicit connections of sewer to drain system not allowed.
- v. Sump pump or roof drain connections to the sewer are not allowed.

Other Utilities

a. Existing

- i. Provide information (location, size material) of existing gas, electrical and telecommunication services on site plan.

b. Proposed

- i. Provide location of proposed gas services and all electrical and telecommunication conduits on site and in the City right-of-way.
 - ii. A petition for grant of location through the City Council is required for all new electrical and telecommunications conduits within the City right-of-way.
- 2. Provide a grading and drainage plan, stamped by a MA Professional Civil Engineer (hereinafter referred to as "the Engineer"), showing how the runoff from impervious surfaces will be captured and kept on the private property as required by federal, state and local regulations**

Stormwater/Drainage

- a. Existing
 - i. Licensed plumber to complete building inspection to locate all drain lines (location, size and material) connected to the existing building(s) (including, but not limited to, sump pumps and roof drains). The Engineer shall incorporate this information on the plan, along with the drain lines (location, size, material) in the abutting street(s).
 - ii. Dye testing of all pipes leaving the building(s) shall be performed to confirm connectivity to drain lines in the abutting street(s).
 - iii. If reuse is proposed CCTV inspection of drain service will be required along with a letter from the Engineer stating that the drain service is adequate for reuse. Reuse only allowed if demonstrated that management of stormwater on site is not possible.
 - iv. If reuse is not proposed, services shall be cut and capped at the main in the street.
- b. Proposed
 - i. The Engineer shall provide a completed Massachusetts Stormwater Handbook Checklist & Report.
 - ii. Perform any field investigations necessary to provide complete understanding of runoff/stormwater management.
 - iii. Provide all calculations and plans (such as drainage areas, flow paths, etc.) from the Engineer in designing the stormwater system(s).
 - iv. If 100% recharge to groundwater cannot be obtained, the Engineer shall provide a letter to the City Engineer documenting the constraints limiting recharge as well as stating that the City drain system to serve the proposed development has adequate condition and capacity to accommodate proposed flows. Back-up data, including engineering calculations and the results of all drain inspections and existing drain flow measurements, shall be included in the letter. Additionally, cleaning and CCTV inspections of the City drain based on PACP standards will be required showing the full circumference of the pipe. City Engineer to determine CCTV limits. A copy of the video and logs shall be submitted with the letter. (Note: Any deficiency identified in the system, shall be corrected by the applicant, at the applicant's expense, to the satisfaction of the Engineering Department.)
 - v. If a connection to the City drainage system is proposed, demonstrate that the Municipal Separate Storm Sewer System (MS4) requirements have been met.
 - vi. Connection of site drainage to catch basins is not allowed.
 - vii. Stormwater discharge from private property to City property not allowed (e.g. downspouts, sump pumps cannot splash to sidewalks).
 - viii. Connection of storm drainage to City sewer system not allowed.

Grading

- a. Existing and proposed elevations/contours shall be included on site plans and/or grading and drainage plans. If plans indicate a change in elevation of more than two feet, a Drainage Alteration Permit is required. Per Chapter 38, Article VI. The "application" for this is a letter (and associated plans/calculations) from the applicant's engineer stating and demonstrating that the "conditions for

issuance” have been met. Here is an excerpt from the ordinance: “...ensure that the proposed grade changes will not adversely affect existing drainage and groundwater conditions, which would affect the public health, safety and welfare of any public way or adjoining real property.”

3. Provide a site layout and materials plan

- a. Connection to City sidewalks/roads – follow MassDOT standard.
- b. Public tree removal – follow tree ordinance requirements Chapter 43, Article III.
- c. Before any lot or area may be used as a parking lot for the accommodation of more than two vehicles, plans shall be submitted to determine compliance with prevailing standards for entry and exit provisions, curbing and drainage per Chapter 38, Article II, Section 38-62.
- d. The impervious surface area of a parking lot, and all entrance and exit drives, shall be set back a minimum of two (2) feet from all lot lines per Zoning Ordinance Section 5.1.6.2. This buffer/ set back shall consist of a pervious surface.
- e. Curb cuts openings shall be minimum 12 feet and not exceed 20 feet (residential) or 30 feet (commercial) per Zoning Ordinance Section 5.1.5.6.
- f. Provide dimensions of the building and parking areas for the existing and proposed conditions of the site.

4. Provide an erosion control plan

- a. Show erosion control protection and truck wash exit area (with detail) to ensure compliance with environmental requirements.
- b. Provide catch basin silt sacks in the catch basins adjacent to/receiving runoff from the site.
- c. Provide information on how dewatering of utility trenches will be handled during construction.

5. Temporary water for construction use

- a. Provide information on proposed source of water for demolition and construction activities.
- b. Temporary hydrant use is only allowed for demolition or short construction periods (less than 1 month). For water use longer than 1 month, a temporary connection will be required.
- c. An RPZ backflow preventor device and a Neptune water meter with an e-coder register head that measures in cubit feet will be required and shall be provided by the contractor.
- d. Submit detailed sketch of proposed temporary hydrant use or connection.

*****Disclaimers:**

1. Every effort has been made to create a comprehensive list of requirements; however, the Engineering Department may require additional information or services not included in this checklist.
2. This document is subject to change at the City’s discretion

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City Engineer/ DPW Director