



**SECTION 4**  
**MAIN EXTENSIONS**

**A. EXTENDING MAINS**

In general, whenever extension of a water main within the District boundaries is required because a principal part of the Premises to be served does not lie along an available water main with adequate flow and pressure, the extension will be designed and installed after an agreement has been executed by the applicant and the District for payment by applicant of all applicable charges. The manner of determining the charges is set forth in this section and is based on the policy of the District that applicants for water service shall pay the full cost of facilities required to provide the service. The charges shall be as described in the Schedule of Rates and Charges.

1. MAIN EXTENSIONS LESS THAN 1,000 FEET IN LENGTH

A water main extension of less than 1,000 feet will be installed only by the District and in accordance with the terms and conditions of an agreement between the applicant and the District.

2. MAIN EXTENSIONS OF 1,000 FEET AND OVER IN LENGTH

A water main extension of 1,000 feet and over in length shall be installed by the applicant in accordance with the terms and conditions of an agreement between the applicant and the District. However, a water main extension of 1,000 feet and over in length involving multiple applicants acting as individuals, or where a public agency is the applicant, may be installed by the District in accordance with the terms and conditions of an agreement between the applicants and the District.

The District shall designate the pipe materials, fittings and other minor appurtenances such as valves, valve pot covers, blowoffs, etc. to be furnished by the District or the applicant, at the applicant's expense. Materials to be supplied by the District will be detailed on the District prepared drawings and specifications. However, in those few instances when an applicant installation requires 20-inch or larger pipe, the District may permit the applicant to furnish the pipe.

The pipe material supplied by the applicant and the work performed must comply with the drawings and specifications furnished by the District and shall be subject to District inspection at all times. The applicant will be required to pay in advance the charges for any District supplied materials, engineering and inspection services, and related overhead. The applicant must also furnish, in form and with sureties acceptable to the District, a faithful performance bond, or other security acceptable to the District, a payment bond, and certificates of insurance. Upon completion of the installation in accordance with the agreement, and acceptance by the District, title to the extension shall be transferred to the District by the applicant.



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Water service shall not be provided by the extension of a water main where the meter(s) for the premises concerned will be located at an elevation of less than 100 feet below the overflow level of the reservoir supplying such water main, except as provided in Sections 4.C.4 and 8-A.

Main extensions installed for general improvement of the distribution system will be financed by the District. Such improvements will not be installed upon the request of one or more applicants to serve particular premises.

**B. GENERAL PROVISIONS CONCERNING MAIN EXTENSIONS**

1. General

- a. The pipe specifications, point of commencement, and all other requirements for main extensions shall be determined by the District and in accordance with applicable State of California regulations.
- b. All water main extensions shall be sized and located to meet estimated water service requirements of District customers, including projected water demands and fire flows.
- c. In cases where water quality is a concern, such as low water use that could potentially lead to high water age or excessive residence time, new water mains shall be sized to minimize water quality degradation while meeting the estimated water service requirements, including projected water demands and, to the extent feasible, fire flows. The appropriate pipe material of new water mains shall also be evaluated in such cases.
- d. The appropriate pipe material to be used for new water mains shall also be evaluated for special circumstances, such as in steep terrain, narrow rights-of-way, seismic zones, potential landslide, liquefiable soil, corrosive soil areas, dead-end mains or creek, bridge, freeway, and railroad crossings where the use of conventional open-trench installation methods may not be feasible and/or where conventional installation methods may be cost prohibitive. Specific pipe material requirements for design of new water mains shall be in accordance with District Engineering Standards.
- e. A water main extension will not be permitted solely to supply a hydrant or private fire service unless it is determined by the District that such extension will not adversely affect the distribution system or degrade water quality.

2. Size of Water Mains

- a. The minimum size of water mains shall be as follows:
  - In low- and medium-density residential areas, except as provided below, the minimum size shall be 6 inches. If water quality is a concern, as solely determined by the District, a 4-inch main extension shall be considered if



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estimated water service requirements and fire flow can be met. An applicant shall be charged for the size of the main extension needed to meet the water service requirements, including fire flow, for the project.

- In high-density residential, commercial, and industrial areas, and on long streets without side connections, such as on terraced hillsides, the minimum size shall be 8 inches. If water quality is a concern, as solely determined by the District, a 6-inch main extension shall be considered if estimated water service requirements and fire flow can be met. An applicant shall be charged for the size of the main extension needed to meet the water service requirements, including fire flow, for the project.
  - Four-inch main extension may be used in short cul-de-sacs, shallow side courts, or similar areas where all of the following conditions exist: (1) there is no possibility of further extensions or looping; (2) there are no required hydrants or potential for future hydrants; and (3) the service conditions provided in Section 2.b below can be met. An applicant shall be charged for the size of the main extension to be installed.
  - Two inch pipe may be used in private driveways or roads where all the following conditions exists: (1) there are no more than three possible service connections; (2) there is no possibility of further extension or service connections; (3) there is no requirement for a fire hydrant; and (4) standard service is reasonably available from the extension to all premises to be served.
- b. New water mains shall be sized to meet the following water service requirements:
- Projected maximum day demand (MDD) with a residual pressure of at least 40 pounds per square inch (psi) in the main, where feasible;
  - Projected MDD plus the project's design fire flow with a residual pressure of at least 20 psi in the main and at existing service connections throughout the pressure zone;
  - Projected maximum pumping rate with the pressure not exceeding 140 psi at the nominal lower elevation of the pressure zone (equivalent to 300 feet below reservoir overflow elevation); and
  - Pressure fluctuation in the main limited to a maximum of 30 psi under normal operating extremes, not including fire flow.

Exception: Low-pressure service shall be governed by Section 8 and Section 8A of the Regulations Governing Water Service to Customers of EBMUD.



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- c. Main extensions, and replacements for service, shall be sized to provide capacity for the applicant and the potential future demand beyond that of the applicant. The applicant shall be charged only for the size of main required for the applicant's project as determined above.

3. Length and Location of Water Mains

- a. To the extent practicable, water mains shall be located within the paved area of streets or roads.
- b. With the exception of the nonpotable water distribution system and to the extent practicable, the distribution system network shall consist of closed loops so each section of main can be supplied from either end, dead ends shall be avoided, existing dead ends shall be eliminated, and areas with a large number of service connections shall have more than one supply. An applicant shall not be charged for the additional water main necessary to close a loop in the existing distribution system unless it is required to meet estimated water service requirements including fire flow and/or to minimize water quality degradation. When a closed loop system is required for a new development project, the charge for these water mains shall be included in the applicant's water service estimate.
- c. For operational reasons, a water main 20 inches or larger, which has the primary purpose of transmission of water between major facilities and/or significant areas of the distribution system shall not be available for installation of service connections or fire hydrants. Service shall be granted from a smaller parallel main extended from the nearest available main in the distribution system or from a turnout on the larger main at a location consistent with the orderly development of the distribution system grid in the vicinity of the applicant's premises. An applicant shall be charged for the parallel main extension required for service. If the existing larger main carries a front foot charge, the District shall reimburse the original applicant based on the front footage of the properties that shall be served by the smaller parallel main, provided that the front foot charge is payable.

Exceptions: Installation of a service connection or fire hydrant on a 20-inch or larger water main which has the primary purpose of transmission of water between major facilities and/or significant areas of the distribution system may be considered (1) for an isolated service that can be interrupted for long periods, such as an irrigation service under a conditional service agreement, or (2) for an isolated service or fire hydrant where the District determines that the installation of a smaller parallel water main would be impractical because an available main does not exist and the development of a distribution system to serve other properties in the vicinity is not anticipated in the foreseeable future.



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- d. A separate parallel water main may be required in a street or road if the following conditions are met for a situation where one or more service laterals or hydrant laterals would be required on the opposite side of the existing water main:
1. The laterals cross three or more traffic lanes in a heavily travelled way.
  2. The laterals cross five or more traffic lanes under all other traffic conditions.
  3. The road is divided or contain a subsurface structure or facility interfering with the normal installation of a service lateral.

Note: The number of traffic lanes includes bicycle and curb parking.

An applicant shall be charged for a parallel main extension if it is required for service. The existing mains are available for service connections only to premises with frontage on the same side of the street or road.

**C. EXCEPTIONS**

The preceding provisions shall not apply to main extensions under the following conditions:

1. Where the District finds that there is inadequate capacity in the existing system, the applicant will be advised of the terms and conditions under which an extension may be installed.
2. If the construction of major facilities is required before service can be granted, in which case the conditions of Section 3-B shall govern.
3. If the District determines that a majority of adjacent premises fronting on the same street or road are already served by the District at locations other than the principal frontage, and such service exists without agreements allowing for such non-standard service, a water main extension may not be required. The owner(s) of the Premises shall agree in writing to the conditions of service, including relocation of the service and payment of any applicable costs if standard service later becomes available at the principal frontage. This agreement may also include applicable provisions for limited or low pressure service (see Sections 8 and 8A) and, shall be a covenant against the premises to be served, running with the land. The agreement shall be recorded by the District at the County Recorder's Office, thereby providing notice to subsequent owners.
4. Where unusual conditions exist, in which case the applicant will be advised of the terms and conditions under which an extension may be installed.
5. If in the determination of the District it is not in the best interests of the District to extend a water main with standard pressure and flow or to construct major facilities for a new



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pressure zone, the District may, in its sole discretion, authorize water service from a water main that is not adjacent to the principal frontage of the premises to be served. The following conditions must prevail in order for service to be authorized pursuant to this subsection:

- The project is for a small number of premises.
- The premises can be served from a water main in the immediately adjacent lower pressure zone, or higher pressure zone. Service from a higher pressure zone will be considered only if pressures to the premises are not too high.
- The District has determined that a standard distribution system to provide the premises with water service is not presently feasible.
- The proposed method of service has been reviewed and is recommended by the Manager of Water Distribution Planning and approved by the Director of Engineering and Construction.
- The applicant has agreed to all terms and conditions set forth in these Regulations with respect to Limited, Low Pressure or High Pressure Services (see Sections 8, 8A, and 8B), if applicable.
- The applicant has agreed to all terms and conditions necessary to provide water service including, but not limited to, applicant installation and District inspection of pumping and/or storage facilities; restrictions on pumping capacity and operation; agreement to pay a proportionate share of the cost of installing flow control valves or other equipment necessary to provide service without adversely affecting the pressure and flow to existing customers; and acknowledgement that District may install flow restricting devices and/or terminate water service if the restrictions on pumping capacity and operation are exceeded.
- The applicant has agreed to pay a proportionate share of the cost of a main extension and the cost to relocate services in the event that a water main is installed immediately adjacent to the premises at some future date.
- Applicant has also agreed to notify subsequent owners of the premises of the conditional nature of the water service.
- The applicant has further agreed that the location of the water service connection shall be subject to District approval and shall not be located in the traveled way of private roads or driveways and shall be readily accessible for purposes of meter reading and routine maintenance.
- The applicant has provided written evidence of the following:



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- a. Satisfaction of all requirements applied to the development by the fire protection agency;
- b. Evidence that local agencies responsible for issuance of building and occupancy permits have been fully informed of the nature and conditions of water service to the development;
- c. Acquisition of all necessary property rights as determined by the District.

For purposes of this subsection, “feasible” shall mean that the District has determined that standard water service configurations under these Regulations are not economical due to the costs of operating and maintaining the water service facilities in relation to the small number of premises to be served. In making this determination, factors to be considered by the District include, but are not limited to: (a) the projected revenue from new services in the development as compared to the costs of operating and maintaining water service facilities that would otherwise be required to serve the development and (b) the anticipated additional costs that would be incurred by the District to maintain water quality in such water service facilities.

6. In certain unusual circumstances as solely determined by the District, a water main extension may not be required and the premises may be served at a location other than the principal frontage, provided that:
  - The premises fronts on an existing main of adequate flow and pressure, but is separated from the main by a strip of land used solely for landscaping purposes that is owned by a third party, that has been determined by the District to be unsuitable for development, and across which the applicant has an easement for service and no other utility easement is reasonably available;
  - The applicant meets the requirements for a conditional service and agrees in writing to the conditions of such service as set forth in Section 3; and
  - The District has determined that a main extension is not desirable because of geotechnical factors or not necessary to facilitate system operation.

**D. FRONT FOOT CHARGES AND REFUNDS**

**1. FRONT FOOT CHARGES**

The District will collect a front foot charge, where applicable, before granting a standard service or a private fire service to premises which lie along and may be served directly from any main extension installed under the provisions of this regulation or financed by the District. The front foot charge for a main extension shall be in effect for a period of twenty years from (1) the date of execution of the contract if the extension is financed by an applicant, or (2) the date of the official completion of the extension if financed by the District.



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The front foot charge shall not be applied more than once to any premises. Except for unusual conditions, premises already served at the date of installation of the extension will be excluded in determining the front foot charge. Unusual conditions include, but are not limited to, premises served under a special service agreement, premises for which relocation of the service connection to the extension is requested, and premises already served but later subdivided requiring additional service connections.

Whether a main extension is installed by an applicant or by the District, the front foot charge will be determined by dividing the charge for the extension by the front footage of all premises which lie along and may be served directly from the extension. When installed by the applicant, the charge for the extension for purposes of determining the front foot charge shall be computed as if installed by the District.

To equitably distribute extension costs to the premises served from the extension, when a premises has an average lot width with more than a nominal difference when compared to the principal frontage, such as on road curves and cul-de-sacs, the average lot width, as determined by the District, shall be the front footage for that premises. The District may also include, in determining the charge, premises which do not have principal frontage on the extension but will have service connections on the extension under special service agreement.

**2. FRONT FOOT CHARGE REFUNDS**

The applicant who has financed a main extension (or the applicant's assignees) is entitled to the front foot charges collected by the District for permitting the connection of a standard service or a private fire service to such extension. The amounts collected will be refunded without interest within 90 days following the date of collection.

No front foot charge refunds will be made after twenty years from the date of execution of the contract for an applicant-financed extension except those refunds which have accrued during such twenty-year period. The terms of this refund provision shall apply to all water mains installed under contracts executed on or after April 1, 1955.

The total amount of all refunds made by the District to the applicant (or the applicant's assignees) may not exceed the installation charge for the main used to compute the front foot charge.