

## SECTION 5

### **MAIN EXTENSION PROCEDURES AND GENERAL REQUIREMENTS FOR PLAN REVIEW, CONSTRUCTION AND ACCEPTANCE**

#### ARTICLE I

##### PLAN SUBMITTAL AND REVIEW

- 5.100 It will be a violation of District policy for any person to construct a water, sewer or underdrain main within the boundaries of the District, without first making formal application to the District, obtaining District approval and complying with regulations of the District and any applicable regulations of Denver, Denver Water, Denver Wastewater, Jefferson County, Lakewood, Littleton, Platte Canyon and Southwest Metro, whichever may apply.
- 5.101 All plans for main extensions, improvements and modifications will be submitted to the District Engineer. All plans must be approved by the District Engineer and as applicable, Denver, Denver Water, Denver Wastewater, Jefferson County, Lakewood, and Littleton, prior to initiation of construction. If underdrain mains are to be constructed, they must be shown on the plans for the sewer mains.
- 5.102 In order to initiate construction plan review, the following items must be submitted by the owner-developer to the District Engineer and will be reviewed as indicated:
- \*2 A. Two copies of the Grant Water and Sanitation District Application and Agreement for Extension of Mains or Water Mains (see Exhibits A1 & A2). All copies must be signed, as originals, and must be executed exactly as the applicant is doing business. If the applicant is a corporation or a special district, the application must be executed by the president or vice president, and attested to by the secretary or assistant secretary, and stamped with the entity's official seal. If executed as a partnership, a copy of the recorded trade name affidavit or certificate of limited partnership must be furnished. A separate application must be submitted for each project and for each type of project, i.e., a water main or a sewer and/or underdrain main.
  - \*2 B. One sepia Mylar of the recorded subdivision plat and one blue or black line print and two 11" x 17" reduced copies. If the plat has not been recorded, two blue-line copies of the most current copy will be submitted. A sepia Mylar of the recorded plat must be furnished as soon as it becomes available, but not later than the date of Conditional Acceptance.
  - C. Two (2) sets of construction plans.

D. In the event any facilities lie within or impact a Flood Plain Overlay Zone District, proof that the owner-developer has applied for a Flood Plain Development Permit will be required. In addition, the owner-developer must furnish a statement from Denver, Lakewood, and/or Jefferson County approving the design of the facilities impacting the Flood Plain District.

5.103 Upon receipt of all applicable information described under Article 5.102 above, the District will initiate review of the construction plans and other pertinent information. The plans will be reviewed by the District Engineer. One set of construction plans will be returned to the applicant with redline marks, notes and corrections which must be made prior to the final submittal. Concurrent with the District's review, the applicant is encouraged to submit plans to the City and County of Denver Wastewater Management Division for all sewer projects that are located within the City and County of Denver and/or the Denver Water Department for all water projects. This will speed the review process and allow concurrent reviews and modifications to the plans as needed. Once all corrections have been made, the applicant will submit two (2) additional sets of blueprints to the District Engineer for review and comparison to the original submittal. This process will be repeated as needed until all corrections and comments have been addressed. The District Engineer will notify the applicant to submit original Mylar for signature. The District will sign the original Mylar on the cover sheet in the space provided for approval. The District will then transmit the original Mylar to the City of Littleton for their approval and, if applicable, to the City and County of Denver for their approval as necessary depending on the location of the development. It is the responsibility of the owner-developer and contractor to meet all the design specifications required by the City of Littleton, Denver Wastewater and the Denver Water Department pursuant to their contracts with the District. Once all agencies have approved the Mylar, construction documents will be reproduced from signed original Mylar.

***NOTE:** The District is not performing engineering services for the owner-developer. The **owner-developer** is responsible for ensuring that the construction plans are designed to accommodate the service requirements of the planned development. The District reviews construction plans in order to promote compliance with the minimum standards of the District and does not guarantee the adequacy of the plans to perform any certain function nor to protect against any specific condition applicable to the proposed construction site. The design engineer will be fully responsible for the adequacy and satisfactory performance of the design. It is the responsibility of the owner-developer, the design engineer and the contractor to prepare the design and plans, determine the material specifications and soil conditions, and construct the project in accordance with the specifications of the District and all applicable governing authorities. The approval of construction plans signifies only that the plans meet the minimum requirements of the District's standards and specifications based on the information provided by the design engineer, owner-developer, and contractor.*

5.104 Plans and specifications are approved for a period of one year only, unless a longer period is approved, in writing, by the District. If construction has not begun within the one year period, or if it has been halted and not restarted prior to expiration of the one year period, the plans, a new application, and an additional deposit must be resubmitted for review and approval.

- \*2 5.105 When the construction plans have been approved by the District and all other applicable governing authorities and the following information has been submitted to and approved by the District Engineer, a preconstruction meeting will be coordinated by the District Engineer:
- A. One copy of a legal description and an 8½" x 11" drawing of each proposed easement. The drawing must be prepared in 1" = 50 feet or 1"=100 feet scale. The legal description and drawing must be signed and sealed by a Registered Land Surveyor or Registered Professional Engineer in the State of Colorado.
  - B. A current title insurance commitment or non-concurrent title insurance commitment on all easements to be granted to the District will be submitted upon plan approval. For offsite easements, a title commitment specific to the legal description is required. A title insurance policy will be provided for each easement on or before Conditional Acceptance.
  - C. A contractor's maintenance bond of \$5,000 or 5% of the contract, whichever is greater, will be furnished to ensure performance by the Owner-Developer of the requirements of Articles 5.402 and 5.403. The bond shall be furnished prior to start of any construction. A copy of the bid tabulation, showing the total bid price on which the bond is based, shall be attached to the bond.

The approved plans will be retained by the District Engineer until the preconstruction meeting is held. Representatives of the District, the owner-developer, and the contractor must be in attendance at the preconstruction meeting. Representatives of all other applicable governing authorities will be invited to attend the preconstruction meeting.

- 5.106 The District Engineer will send minutes of the preconstruction meeting to all parties in attendance and to other interested parties the District Engineer considers appropriate. All provisions and requirements stipulated in the minutes must be complied with. Any questions or disagreements with the minutes should be brought to the attention of the District Engineer. The terms and conditions outlined in the preconstruction meeting minutes will be final unless modified in writing by the District Engineer.

## **ARTICLE II**

### **EASEMENT REQUIREMENTS**

- 5.200 Each landowner, subdivider or developer who desires sewer or underdrain service will, at no cost to the District, in consultation with, and with the approval of the District, plat or grant to the District appropriate easements and rights-of-way in which to construct mains for same. Easements are required wherever a sewer and an underdrain main are not in a public right-of-way. All easement deeds must be in the form of Exhibit B attached hereto. Where mains are to be located in a public right-of-way, the plat should specifically recognize the existence of the District's sewer and underdrain facilities therein.

- 5.201 All sewer main easements must be a minimum of thirty feet (30') in width, unless otherwise agreed to by the District's Engineer. Any underdrains not constructed in a sewer easement will have a minimum easement width of thirty feet (30'). No sewer or underdrain main will be located less than five feet (5') from the edge of an easement. Where construction easements are required, which are larger than the permanent easements, separate easement documents must be submitted for each construction easement.
- 5.202 Each separate property ownership requires a separate legal description and drawing. Legal descriptions and drawings will be numbered consecutively as parcel number 1, parcel number 2, etc. All legal descriptions and drawings must have ties to recognized land corners. The acreage of the proposed easements will be indicated on the legal descriptions and drawings.
- 5.203 Denver Water owns, operates and maintains all water mains, including all system valves within the District's boundaries. Easement requirements for all water mains in the District will be governed by the rules and procedures established by Denver Water.
- \*5 5.204 The District shall notify the adjacent landowner two business days in advance of any construction or maintenance work to be performed within the easement located on landowner's property. If the construction or maintenance work is considered by the District to be of an emergency nature, the District shall notify the landowner as soon as practical after the emergency has been addressed.

### **ARTICLE III**

#### **CONSTRUCTION PROCEDURES AND GENERAL REQUIREMENTS**

- 5.300 Authorization to commence construction will be granted by the District Engineer upon final approval of plans by the District and completion of the preconstruction meeting. It is the responsibility of the contractor to notify the District and all other applicable governing authorities, prior to initiation of construction. The District Engineer requires a minimum of two working days notice prior to initiation of construction. If any other governing authorities require more than two working days notice, then the contractor will meet the notice requirements of the authority whose notice requirement is the longest.
- 5.301 Both the District and, as applicable, the City of Littleton, Denver Wastewater and the Denver Water Department will provide inspection during construction. Inspection of construction assists in quality control and achieving conformance with the District's and the other governing authorities' specifications. The District's agents, officials and other duly authorized persons will be permitted to enter upon all properties for the purpose of inspection, observation, measurement, sampling and testing in accordance with the provisions of these Rules and Regulations.

Inspection should in no way be considered a guarantee of the contractor's work. Construction inspection does not relieve the contractor of his obligation to construct facilities in accordance with the District's and all governing authorities' specifications and the approved construction plans.

- 5.302 All contractors, plumbers and others doing work on any main or structures in the District will comply with Denver, Lakewood and/or Jefferson County and State Highway Department regulations, as applicable, on excavation, backfill, compaction and restoration of surfacing.

During construction, no work is allowed to be backfilled, including bedding material above the spring line of the pipe, until construction has been inspected and accepted by the District's Engineer and, as applicable, Denver's and Littleton's inspectors. It is the sole responsibility of the contractor to assure that all construction is inspected before backfilling.

Any pipe covered prior to inspection and acceptance will be excavated by the contractor to allow for inspection. This will be accomplished at no expense to the District.

All excavations for service installations will be adequately guarded with barricades and lights so as to protect the public from hazard. Streets, sidewalks, parkways and other public or private property disturbed in the course of the work will be restored in a manner satisfactory to the District.

- 5.303 All construction work must be accomplished in accordance with the approved construction plans and the specifications of the District, Denver Wastewater, Denver Water, Littleton, Platte Canyon, Southwest Metro and any other applicable governing authority. Any modifications, field changes, etc., to the approved plans must be approved by the District Engineer and all applicable governmental authorities prior to accomplishing construction contemplated by the modifications. Failure of the District and all applicable governmental authorities to approve proposed changes in writing will require that construction be completed in accordance with the approved plans.

- 5.304 At all points of connection of new mains to existing mains, the contractor will be responsible for excavating and verifying the location of existing mains prior to the installation of new facilities. It is further the responsibility of the contractor to obtain and verify the location of the other utilities such as natural gas, electrical, telephone and cable television.

- 5.305 If construction work is halted for more than three (3) working days, 24 hours notice must be given to the District Engineer and all applicable governmental authorities prior to restarting construction.

- 5.306 Unless designated on the Application and Agreement for Extension of Mains and the approved construction plans phasing of a construction project will generally not be allowed. A desire to obtain acceptance and release for taps on only a portion of a construction project designated on the approved plans requires the written approval of the District Engineer, and where applicable, the Denver Water Department. A request for said approval must be

submitted in writing and should include a description and drawing of the exact limits of the phased construction and a revised Exhibit B to the Application and Agreement for Extension of Mains which clearly and separately identifies each phase on a separate page.

- 5.307 Owner-developers are cautioned that all construction is undertaken at their risk. Approval of construction plans does not constitute a guarantee that construction will be accepted or a guarantee that facilities will be accepted by the District and the other governing authorities.
- 5.308 All costs involved with the District's construction inspection services will be charged to the owner-developer by the District.

All permits, fees and licenses will be paid for by the owner-developer, contractor, plumber or others doing work in the District prior to the start of construction.

- 5.309 Worker's Compensation Insurance will be carried by plumbers and contractors in accordance with the provisions of the Worker's Compensation Act of the State of Colorado, as amended. Liability insurance will be carried as required by the District's Application and Agreement for Extension of Mains to protect the District against any and all claims that may be occasioned by the work of the plumber or contractor.

## **ARTICLE IV**

### **ACCEPTANCE PROCEDURES AND GENERAL REQUIREMENTS**

- 5.400 The following conditions must be met and approved by the District prior to Conditional Acceptance of the construction and initiation of the warranty period.
- A. The main(s) and all appurtenances have been installed to the satisfaction of the District's and, as applicable, Denver's and Littleton's inspectors. All notes and field measurements have been made, and two full-size blue-line prints and two full-size reproducible Mylar prints of the record drawings, certified correct and with the date of completion marked thereon, have been supplied to, and approved by, the District Engineer.

\*2 The record drawings shall include the following data:

1. Rim elevations
2. Invert elevations for all pipes
3. Horizontal location for all manholes
4. Easement lines and widths
5. Distance from each manhole to the closest easement line to the closest 0.5 feet
6. All physical improvements crossing the easement (both existing and proposed, if known)

7. Slopes of all sewer lines, recalculated if the inverts have changed since design (slopes shall be calculated to 2 places to the right of the decimal point.)

\*2 The following statement shall be included on the record drawings and signed by a licensed PE or PLS:

The horizontal and vertical data shown for the sanitary sewer is based on actual field measurements and is tied to the District's vertical datum and horizontally to recognized section corners.

\*2 B. The following procedures and tests shall be completed by the District prior to the sewer mains being conditionally accepted:

1. All sewer mains shall be jet cleaned. All underdrains shall be flushed. All debris shall be removed from the system. All connection points to the active system shall be plugged until the cleaning operations are complete.
2. Once the sewer mains are cleaned, they shall be TV'd and a video tape record made of the TV inspection for the District's records. The video tape shall show the location of all taps from manholes and the total length of each run of pipe, clearly identifying the starting and ending manholes. Underdrain mains shall not be TV'd.

C. All compaction test results required by the District Engineer have been submitted and accepted.

D. All easement deeds in the form of Exhibit B attached hereto with legal descriptions have been accepted and recorded by the District and title insurance has been provided by the owner-developer. The accuracy of the easement must be certified by a registered land surveyor.

\*2 E. Address listings, and if available, maps have been submitted, clearly identifying the project's street addresses and legal addresses.

F. One full-size reproducible Mylar of the recorded subdivision plat has been provided.

\*2 G. All invoices for reimbursement of engineering, legal and administrative costs have been paid to the District Manager.

\*2 H. The owner-developer has submitted a Bill of Sale (see Exhibit C) accepted by the District for all sewer and underdrain mains which documents the detailed cost breakdown of the construction costs of all mains constructed.

\*2 Detailed costs estimates shall include the following data:

1. Pipeline costs - List costs per lineal foot for each size of pipe line installed.
2. Manhole costs - List cost for manholes.
3. Specialty items - List costs for any specialty items that are eligible for inclusion in the bill of sale costs.

See sample of Exhibit A to Bill of Sale for an example of acceptable format.

- 5.401 Upon District approval of all items listed in Article 5.400 above, the Application and Agreement for Extension of Mains will be dated and signed by the District Engineer and District Manager and a copy sent to the owner-developer. Execution of the applications will constitute the District's conditional acceptance of the facilities for probationary maintenance and initiation of the warranty period.
- 5.402 The probationary maintenance and warranty period will be as designated in the Application and Agreement for Extension of Mains. The owner-developer guarantees all facilities against failure for a period of approximately one year from the date of the Conditional Acceptance. The owner-developer will be responsible for the correct alignment, cleanliness and operation of all pipelines and manholes during the warranty period or until the streets are paved and all facilities inspected and accepted by the District, whichever is longer. Written notification of deficiencies discovered during this period will be provided by the District Engineer to the owner-developer. These deficiencies must be corrected within 30 days of such notice. If the deficiencies are not corrected within 30 days, the corrections may be completed by the District at the expense of the owner-developer.
- 5.403 Maintenance performed by the District during the warranty period consists of inspection and routine maintenance of the facilities. All remedial repairs and non-routine maintenance remain the responsibility of the owner-developer during the warranty period. The District reserves the right to perform any remedial repairs or non-routine maintenance during the warranty period at the expense of the owner-developer. Failure of the owner-developer to have all repairs carried out when requested by the District may result in the District conducting the repairs at the owner-developer's expense and billing the owner-developer for the cost of the repairs incurred by the District.
- \*2 5.404 No sewer, water or underdrain tap will be issued nor sewer, water, underdrain tap allowed until the Application and Agreement for Extension of Mains has been executed and Conditional Acceptance of construction has been granted. In certain circumstances, the District may issue a Conditional Non-Use sewer tap permit prior to conditional acceptance of the main construction. See Article 6.304 for the requirements.
- 5.405 Final acceptance and conveyance of the facilities to the Grant Water and Sanitation District for sewer and underdrain mains or to the Denver Water Department for water mains will occur after street paving or approximately one year after Conditional Acceptance, whichever is later. Final acceptance will be subject to re-inspection of all facilities by the District and/or Denver Water and correction of any deficiencies by the owner-developer.



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The following test shall be completed by the owner-developer's contractor prior to the sewer and underdrain mains being suitable for final acceptance:

- A. The developer shall perform a mandrel test on 1/3 of the sanitary sewer lines or a minimum of five runs within the development. Prior to mandrel testing, the tester shall jet clean the sanitary sewer line to remove debris that may affect testing. In the event a line fails the mandrel test, the developer shall perform the same test and cleaning throughout the entire development.

After proper notice, failure of the owner-developer to correct deficiencies found during final inspection will be cause for the District to correct the deficiencies at owner-developer expense. Final acceptance of the facilities will not be granted until the District has been reimbursed by the owner-developer for any costs the District incurred to correct the deficiencies found during the final inspection.

- 5.406 All sewer and underdrain mains constructed in the District become the property of the District and will be conveyed to the District by a Bill of Sale in the form of Exhibit C attached hereto.

All water mains constructed in the District become the property of Denver Water.

- 5.407 In the event the owner-developer employs the engineering services of an engineer or engineering firm that is retained by the District, then the Board will have the right to have the engineering services and design reviewed by an independent engineer. Expense of such review will be borne by the owner-developer.

- 5.408 Connection to sources of water supply or sewer or underdrain systems other than those approved by the Board will not be allowed.

## **ARTICLE V**

### **REIMBURSABLE COSTS**

\*2

- 5.500 The owner/developer will be charged for all reasonable costs incurred by the District in connection with a main extension project for services performed by the District's Engineer, Attorney, Manager and other agents in accordance with such persons' then current fee schedules. The services will include but not be limited to the following items of work when applicable:

- A. Review of plans and specifications in accordance with the district plan approval procedures provided herein.

- B. General field observations will be made of the work of the contractors including all main and service lines as construction progresses. The field observation will not be continuous, but daily inspection is recommended.
- C. General administration of the project including, but not limited to, all necessary record keeping, correspondence, and reports, and attendance at all necessary meetings pertaining to each construction project.
- D. Review of contracts, proposals, easements, right-of-way descriptions, title commitments, and other legal documents involving the owner-developer's project and the District.

\*2 E. Removal of debris and jet cleaning of all sewer and underdrain mains for conditional and final acceptance.

\*2 F. TV'ing and a video tape made of the TV inspection for the District's records.

\*2 An estimate of the costs for the project administration, plan review and legal review will be submitted to the owner/developer upon the District's approval of the application. An estimate of the costs of construction administration and inspections will be submitted to the owner/developer upon the District's approval of the plans. The District's actual costs may be higher than the estimates provided.

\*2 All costs will be assessed monthly, with the final costs being assessed after all construction inspections have been completed and the main(s) have been conditionally accepted by the District Engineer. The final invoice will include an estimate of the job closeout costs. Conditional Acceptance of the main(s) by the District is contingent upon the District receiving payment of the final invoice.

\*2 If the final invoice for the project is not paid within 60 days of receipt of the invoice, the entire project will be subject to suspension of sewer and/or water service and the suspension of additional taps being sold for the project until payment of the final invoice is received.

5.501 Any other fees charged to the District by others for the owner-developer's benefit will be paid for by the owner-developer.