

SECTION 300

WATER AND SEWER STUDY, DESIGN AND INSPECTION PROCEDURES

300.1 WATER AND SEWER STUDY

The Water and Sewer Study considers water demand and sewage generation from the proposed project to determine if the current water and sewer infrastructure is sufficient to accommodate the Project and provides recommendations for needed capital improvements to provide service.

300.1.1 **Submittals** - The following items are to be submitted to the Engineering Department by the applicant or the applicant's engineer prior to submittal of improvement plans:

1. One copy of the proposed site plan with proposed point of connection to existing water and/or sewer systems.
2. List of existing Assessor's Parcel Numbers
3. Total project acreage and acreage of each proposed land use
4. Number of dwelling units in each land use area
5. Project fire flow requirements from the local fire authority.
6. Tentative Map – map being reviewed and processed with the Lead Agency.

300.1.1.1 Water System Analysis - The Engineering Department will evaluate the following items:

1. Water distribution system, including the need to upsize pipelines, install new pipelines, or install flow control facilities
2. Water storage, including the need for additional storage and the adequacy of existing storage tanks and reservoirs to serve the proposed development
3. Water pump stations, including the need to install new pump stations or upsize existing pump stations to serve the proposed development

300.1.1.2 Sewer System Analysis - The Engineering Department will evaluate the following items:

1. Wastewater collection system, including the need to upsize pipelines and manholes, or the need to install new pipelines and manholes
2. Wastewater lift stations, including the need to install new lift stations or upsize existing lift stations to serve the proposed development
3. Wastewater land outfall, including the need to construct a parallel land outfall to serve this and other proposed developments

4. Wastewater treatment facilities, including the need for obtaining additional capacity at the Encina Water Pollution Control Facility (EWPCF) or for expanding the Meadowlark Water Reclamation Facility (MRF).

300.1.2 Conclusions – Based on the analyses of the project’s impacts to the water and sewer system, improvements to the District’s existing systems may be required to support and mitigate the proposed project. Such improvements will be summarized in this section.

300.2 IMPROVEMENT PLAN SUBMITTAL FOR REVIEW AND APPROVAL

300.2.1 First Plan Check Requirements

The applicant/engineer shall submit all items for first review of residential/ commercial/industrial subdivisions per Section 100 and the District’s Submittal Requirements Guidelines, available at the Engineering Department.

A hydraulic analysis for the project will be prepared as a part of the Water and Sewer Study. It is the responsibility of the developer/applicant to provide sufficient information prior to, or at the time of, improvement plan submittal.

The improvement plans will be checked against the tentatively approved master development plan and the minimum design standards. Tract maps and parcel maps will be checked against improvement plans for the required easements. After the first plan check, the District will return one red-lined set each of the utility improvement plan and the tract/parcel map. The returned sets will note any specific variations from the basic requirements. See Section 300.2.2 below.

300.2.2 Detailed Plan Requirements

All plans submitted to the District Engineering staff for plan checking and approval of water and sewer facilities shall be submitted on 24" X 36" sheet size. The plans shall conform to the local city or county having jurisdiction and/or the following requirements.

300.2.2.1 Required Details:

1. Title Sheet

- A. Project Title or Development Tract

- B. Index Map

- 1) Scale - 1" = 100'/200'
- 2) Show: Water mains - size, fire hydrants, valves and existing facilities. Sewer mains - size, flow direction, manholes, (number new M.H., show existing VWD M.H. # for connection points), reference as-built numbers and existing facilities, building/D.U./lots/"footprints."
- 3) North arrow
- 4) Street names
- 5) Legend of symbols and lines, including QTY and STD, separate PVT & Public, if multi-agency plan call out items with an agency reference.
- 6) Show existing and proposed easements for water, sewer and irrigation facilities. Show recorded doc#, who item is granted to and width if applicable. Proposed shall include a blank underline to be filled at as-built.

- C. Location map; showing general area with project noted and Key Map
- D. Title Blocks: District Signature Block, District Pressure Zone Block, District As-Built Block, Reimbursement Block and Revision Blocks
- E. Fire Marshal signature in Local Fire Agency Block
- F. Bench Mark; description, elevation, datum in two formats:
 - Horizontal Datum of the California State Plane Coordinate System Zone VI (NAD83/88)
 - (NAVD29) North American Vertical Datum can be in brackets [] must be shown for District facilities
- G. City/County Engineer signature block
- H. Survey horizontal control and source of topography
- I. Name, address, and phone number of engineering firm
Name, address, and phone number of owner with signature line
Name, address, and phone number of developer
Legal description of property (Tract/Lot, Parcel Map No.)
- J. Work and Stds to be called out on plans and profile not just circles and numbers
- K. Index of sheets
- L. Water and Sewer Data Tables for mains, service lines and laterals
- M. VWD Water and Sewer General Notes
- N. Utility, addresses, and phone numbers, including but not limited to - Gas, Telephone, Power, Cable T.V., Water, Sewer, and Storm Drain
- O. U.S.A. Dig Alert notice per Section 4212/5217 of the Government code
- P. Assessor Parcel Number

2. Second Sheet (normally Sheet 2 includes):

- A. Legend with quantity estimates (if not shown on Title Sheet) and Standard Drawing Number
- B. VWD Standard Notes (Obtain from Engineering Dept. or www.vwd.org)
- C. Construction notes and Work to be Done
- D. Detail drawings

3. Plan and Profile Sheets

Separate plan and profile sheets are required for all water and sewer pipelines, as follows:

- i. Horizontal Scale: 1-inch = 40-feet Vertical Scale: 1-inch = 4-feet
- ii. The plan and profile should be on same sheet if possible and aligned.
- iii. Existing water and sewer facilities adjacent to development must be shown
- iv. Easements dedicated to the District for water and sewer facilities must appear on plans. Overall site plan sheet to be included.
- v. Building/dwelling unit pad elevation
- vi. Water, sewer, and storm drain crossing elevations
- vii. Private on site Plumbing Plan
- viii. Dry Utility Plan
- ix. Pothole Report: A pothole report shall be submitted during the plan check for proposed District facilities crossing dry utilities. The pothole report shall include agency, utility type, depth, material, size, and location of crossings.

300.2.3 Non-Residential Application Procedure Requirements.

In addition to the requirements described in Section 300.2.2, the following is required for all commercial or industrial developments:

300.2.3.1 Domestic Water Services

1. Site Utility Plans Showing:
 - A. Property lines
 - B. "Footprint" of building
 - C. All on-site public and private fire hydrants
 - D. Stamped/signed by the jurisdictional Fire Marshal
2. Items required for application for domestic service.
 - A. Completed Water Meter Demand form for both irrigation and domestic water service, with irrigation plans, if applicable. Separate irrigation meters required except for SFR. One meter required per legal parcel.
 - B. Address and Assessor's Parcel Number to be served

- C. Site Map showing buildings being served by each/specific meters
- D. All fees paid per current rules/regulations/Resolutions

300.2.3.2 Fire Service Requirements

1. All fire services will require at a minimum a double check detector check per VWD standard drawing, or a reduced pressure principle assembly. See Part 3, Technical Specifications, Section 15115.
2. Private fire services on site shall not be looped, or connected.

300.2.3.3 Industrial Waste Questionnaire

Applicant requesting service for a commercial or industrial project may be required to submit a completed industrial waste questionnaire. For further information concerning the discharge limitations or the questionnaire, contact the Encina Wastewater Authority (EWA) office at (760) 438-3941.

The industrial waste questionnaire is designed to provide necessary information so that the District, EWA, and its customers can comply with the Federal Clean Water Act's Pretreatment Regulations (40 CFR Part 403).

A site inspection by EWA and/or the District will be made to verify the information provided on the questionnaire.

300.2.4 **Additional Requirements, Standards, and Fees**

300.2.4.1 License Requirements

1. The applicant's contractor shall have a Class A license or, a C-16 (fire protection), a C-34 (water), or a C-42 (sewer) license, for the specific work being performed.
2. The applicant's contractor shall have a business license to operate within the city or county having jurisdiction.

300.2.4.2 Standards for Application

1. The developer will furnish and install all domestic and irrigation water meters for the project.
2. Sizing water meters:

<u>Meter Size</u>	-	<u>GPM - MAXIMUM</u>
3/4"	-	35
1"	-	55
1½"	-	120
2"	-	190
3"	-	435
4"	-	750

The District reserves the right to size meters per Ordinance.

3. Type of meter:
See Approved Material List, latest edition

300.2.5 District's Regulation Regarding Cross Connection

All domestic and irrigation water services shall be subject to the provisions of the applicable sections of the District's Cross Connection Ordinance. The following summarizes these provisions:

Cross connections of any type that permit a back flow condition from any source or system other than that of the District's domestic water mains are prohibited. A connection constituting a potential or actual back flow hazard is not permissible unless a back flow device or air gap, which is approved by the California State Department of Health and local Health Agency and complies with Title 17 of the California State Administrative Code, is installed. Such an installation shall at all times be subject to inspection and regulation by the District for the purpose of avoiding possibility of back flow.

The District has a backflow technician who is available for consulting on any questions regarding cross connections.

The District will not provide any water service to any premises unless the public domestic water supply is protected as required by State, County and District regulations. Except in special situations, it is required to have back-flow devices installed for:

- All residential domestic water services
- All commercial domestic water services
- All industrial domestic water services
- All fire lines to commercial or industrial buildings
- All domestic systems or fire line systems having two, or more, points of connection to District mains
- All irrigation services on the domestic water system
- All domestic services to sites with recycled water irrigation service or well water

Back-flow prevention devices shall be approved by the U.S.C. Foundation for Cross-Connection Control and shall be installed by and at the expense of the customer.

The customer shall have the device regularly tested (at least once a year) by a tester certified by the San Diego County Health Department and service such devices to maintain them in satisfactory operating condition and shall overhaul or replace such devices if they are found defective. Test results shall be provided before District will accept service as complete.

Records of such annual tests, repairs, and overhauling shall be kept by the customer and originals forwarded to the District cross-connection inspector.

Service of water to any premises may be discontinued by the District if a back-flow prevention device required by the District ordinance is not installed, tested, and maintained; or if any defect is found in an

installed back-flow prevention device; or if it is found that a back-flow prevention device has been removed or bypassed; or if unprotected cross-connections exist on the premises. Services will be restored only when such conditions or defects are corrected to the satisfaction of the District.

The District will further define how water lines must be marked where multiple water systems are in use and outline the duties and responsibilities of a property's water supervisor.

Additional reference for guidelines to when, why, and what types of back-flow and cross-connection control devices are approved may be found in:

- A. Regulations Relating to Cross-Connections, California Administrative Code - Title 17 - Public Health.
- B. Manual of Procedures and Practices for Public Water Suppliers (California Department of Health Services - Public Water Supply Branch).
- C. Manual of Cross-Connection Control, published by Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California, University Park, Los Angeles, California 90007.

300.2.6 Domestic Water Facilities

See Section 500 for detailed specifications regarding the construction of domestic water facilities.

300.3 PROVIDING REQUIRED EASEMENTS

If an easement outside of the public right-of-way is required for construction and/or maintenance of sewer mains or water facilities, including but not limited to, sewer mains, manholes, water mains, hydrants, meter vaults, and detector check vaults; its minimum width shall be 20 feet for sewer and water mains, 10 feet on all sides for manholes, 5 feet square for meters, 5 feet on all sides for fire hydrants, meter vaults, detector check vaults, and other appurtenances, unless otherwise determined by the District. Sharing of easements with other utilities is discouraged. An easement running parallel with a lot line shall not be split so as to occur on two lots. The easement, title report, and legal descriptions with accompanying plat and plans shall be prepared by the applicant's engineer, two copies of which shall be sent to the Engineering Department. Easement plats and descriptions shall be on the approved Easement Form utilized by the District and will be checked by the District. Easements and recording information shall be shown on the maps and construction plans. The District will approve the plans only after all required easements have been deeded to the District together with any necessary partial reconveyance or subordination agreements. Exhibits shall be 8-1/2" X 11", no exceptions.

Along public streets a three or five foot utility parallel easement on private property for District use may be required depending upon public right-of-way widths and sidewalk locations.

Applicant shall submit two copies of the easement description and plat to the District for review. If acceptable, the applicant shall furnish one original of the description and plat, signed by a registered engineer or surveyor, along with a completed "Grant of Right of Way" form to the District, a current (within 60 days) title report of the property reflecting all deeds of trust and encumbrances, and subordinations signed by the trustees shown on the title report. If not acceptable, the District will return the documents with the required corrections noted.

The easement plat must contain a vicinity map showing the location of the easement in relation to major streets and highways, as well as a sketch depicting the easement boundaries with bearings, distances, points of beginning, north arrow, and any other information required by the District.

NOTE: Approval by the District will not be given for the tract water or sewerage systems until all

easements have been obtained.

300.4 COST ESTIMATE

The Engineer of Work shall provide the quantities, unit costs and totals to allow the District to project costs for the water, sewer and appurtenant facilities to be dedicated to the District per the District's Bond Worksheet. The items listed will include, but will not be limited to pipes, valves, meters & appurtenances, connections, hot taps, manholes, and facilities construction.

300.5 FIRE AUTHORITY APPROVAL

After the first plan check by the District, it will become the responsibility of the applicant or engineer to obtain the local jurisdictional Fire Authority approval before submitting for a second plan check.

300.6 SECOND PLAN CHECK

Upon satisfactory completion of items 300.1 through 300.5 the developer's engineer shall submit plans for the second plan check. This submittal will be checked against the corrections requested in the first plan check and the District's minimum design standards.

300.6.1 Corrected Plans Returned To Developer's Engineer

Upon review of the improvement plans for the total development, one red lined copy will be returned to the applicant's engineer, showing any corrections and/or comments.

300.7 AGREEMENT FOR THE CONSTRUCTION OF FACILITIES

Upon receiving the corrected plans for a second plan check and quantities for the bond worksheet and if the plans are deemed near complete, the Engineering Department will compute the required development fees, based on the then current fees and will prepare the Agreement for Construction of Facilities;

The District will send two copies of the Agreement to the developer for signature.

300.7.1 Security (Bonding) Requirements

All projects, including modifications to the District's existing systems, must include a 100% Faithful Performance Bond and 100% Labor and Material Bond based on the Engineer's Estimate of Cost. This surety shall be of a type which is automatically renewed every year, at the developer's expense, until released by the District. All completed projects must, before acceptance by the District, submit a Warranty Bond equal to 25% of the Contractor's actual construction cost for the water and/or sewer improvements. The Warranty Bond shall be in effect for one (1) year from the date of acceptance of the project by the District Board of Directors.

Acceptable Security Devices include:

1. Faithful Performance Bond, Labor and Material Bond, and Warranty Bond executed in favor of Vallecitos Water District by a reliable bonding company.
2. Cash Deposit with the District to replace either the Payment or Performance bond, or both.
3. Certificate of Deposit
4. Instrument of Credit on a form acceptable to the District. The Certificate of Deposit or Instrument of Credit requires Board approval prior to acceptance. The Certificate of Deposit or Instrument of Credit may replace either the Performance and/or Payment Bond.

300.7.2 Insurance Requirements

The Contractor shall purchase and maintain insurance in amounts equal to the requirements, and in the form and manner provided therefor, of the District's Agreement for Construction. The Developer shall provide certificates of insurance and endorsement showing that Developer has liability insurance coverage with an insurance company licensed to do business in the State of California, and acceptable to the District, providing the minimum coverage set forth in the Agreement for Construction.

300.8 FINAL PLANS

Upon completion of any remaining items noted in the plan check, the developer's engineer shall submit two blue line sets of improvement plans, along with the red line mark up, and a flash drive for final verification.

300.9 FINAL EASEMENTS

300.9.1 Submittal

The developer shall submit easement documents, which incorporate all changes caused by the review process, in accordance with Section 300.3.

300.9.2 Verification

The engineer will verify that the easements as listed in the easement documents remain valid. The engineer will then submit the final easement documents and the final title report for recordation by the District.

300.10 FEES AND DEPOSITS

The developer shall pay all fees and deposits as determined in the "AGREEMENT" between the developer and the District and per District Ordinance.

300.11 BOARD APPROVAL OF AGREEMENT

Upon satisfactory completion of items 300.1 through 300.10 the District will, at the request of the developer, submit to its Board of Directors for approval the "AGREEMENT".

300.12 SIGNED PLANS

Utility improvement plans must have the signature of the District Engineer or his designee before any construction by the applicant begins.

300.12.1 Prerequisites for Signing Plans

1. AGREEMENT FOR THE CONSTRUCTION OF FACILITIES must be signed and notarized (x2 original copies) by the developer, and approved by the District's Board of Directors.
2. Required signed easement documents or the Tract/Parcel Map must have been accepted for dedication by the District and recorded.
3. All fees and charges must be paid in full by the applicant, per District rules, regulations and Resolutions.

4. Signatures of the Engineer of Work, the Fire Marshal, and any other utility or governmental entity having interest in the project, are required. Signatures of the City Engineer/County Engineer normally follow District signature.

300.12.2 District Signing Plans.

300.12.2.1 Submittal for Signature - Once the requirements detailed in Sections 300.1 through 300.11 are satisfied, the applicant shall submit to the District the following:

Improvement/utility plan original mylars shall be delivered to the Engineering Department with one bond copy set.

300.12.2.2 Notification - District will notify applicant's engineer once the plans have been signed. A preconstruction meeting will be scheduled by the District inspector after receipt of three sets of signed bond copies of the plans have been submitted to the Engineering Department.

300.12.3 Validity of Signed Plans

Plans will be valid for two (2) years from the date of District approval. If construction has not started within eighteen (18) months from the date of plan approval, the signed plans shall become "null and void". The District will require rechecking of the plans and it reserves the right to charge additional plan check fees.

300.12.4 Project Extension Letter

In the event that construction does not start within eighteen (18) months, and the approval becomes null and void, as described in Section 300.12.3; a project extension letter shall be submitted by the Developer/Owner, by registered mail, to request a one year extension of the approval.

300.13 ORDER OF PRECEDENCE OF STANDARDS

In the case of conflict between the specifications, drawings, and permit requirements, with regard to construction of facilities, the following order of precedence will apply: The permit requirements of other agencies, special details, plans, special conditions, District standard drawings, technical specifications, general conditions, the Standard Specifications for Public Works Construction and the Cal Trans Manual.

Figured dimensions of the drawings shall govern, but work not dimensioned shall be as directed. Work not particularly shown or specified shall be the same as similar parts that are shown or specified or as directed. Full-size details shall take precedence over scale drawings as to shape and details to construction. Scale drawings, full-size details, and specifications are intended to be fully cooperative and to agree; but should any discrepancy or apparent difference occur between plans and specifications, or should errors occur in projects being constructed by others affecting the work, and the contractor proceeds with the work affected without instruction from the District, the contractor shall be fully responsible for any resultant damage or defect.

300.13.1 Permit Requirements

The permit requirements, as approved by the agency having jurisdiction, will take precedence over the below listed details and standards with regard to the construction of water and sewer facilities.

300.13.2 Special Details

The special details, as approved by the signature of the District Engineer, will take precedence over the below listed details and standards with regard to the construction of water and sewer facilities.

300.13.3 Plans

The plans, as approved by the signature of the District Engineer, will take precedence over the below listed details and standards with regard to the construction of water and sewer facilities.

300.13.4 Special Conditions

The special conditions, for the specific project and incorporated into the project contract documents, as approved by the Districts Board of Directors, will take precedence over the below listed standards with regard to the construction of water and sewer facilities.

300.13.5 District Standard Drawings

Districts' standard drawings, as approved by the signature of the District Engineer, will take precedence over the below listed details and standards with regard to the construction of water and sewer facilities.

300.13.6 District Standard Specifications

Districts' standard specifications, detailed below, as approved by the Board of Directors, will take precedence over the below listed standards with regard to the construction of water and sewer facilities.

The "Standard Specifications for the Construction of Water and Sewer Facilities" are incorporated herein by this reference. Copies may be obtained from the Vallecitos Water District, 201 Vallecitos De Oro, San Marcos, CA 92069, or on-line at www.vwd.org.

300.13.7 Technical Specifications

The technical specifications, of the District's "Standard Specifications of the Construction of Water and Sewer Facilities," as detailed above, of the contract documents, as approved by the District's Board of Directors, will take precedence over the below listed standards with regard to the construction of water and sewer facilities.

300.13.8 Standard Specifications for Public Works Construction

The Standard Specifications for Public Works Construction as referenced by the District's details, standards and specifications, will take precedence over other standards with regard to the construction of water and sewer facilities.

The "Standard Specifications for Public Works Construction," (Green Book), are included herein by this reference. Copies may be purchased from Building News, Inc., 3055 Overland Avenue, Los Angeles, California 90034.

300.13.9 The Cal-Trans Manual

The Cal-Trans Manual, as referenced by the District's details, standards and specifications, will take precedence over other standards with regard to the construction of water and sewer facilities.

The "Standard Specifications," CALTRANS, are incorporated herein by this reference, copies of which may be purchased from the State of California, Department of Transportation, Central Publications Distribution Unit, P.O. Box 1015, North Highlands, California 95660.

300.14 RECORD DRAWINGS

Record drawings documenting “as-built” changes will be provided to the District as detailed in Section 500.13 for water and sewer facilities.

300.15 SIGNED UTILITY PLANS BOTH BY DISTRICT AND CITY

The District shall have completely signed and approved domestic water and sewer and irrigation improvement plans. Four sets of bond copies shall be furnished to the Engineering Department at least five working days before the preconstruction meeting. Work may not commence until a preconstruction meeting is held.

300.16 USE OF DISTRICT SEWERAGE FACILITIES

The District has regulations on the types of wastes that are allowed to be discharged into its sewers in order to protect the facilities of the District and its operations to meet its discharge requirements. The section on the use of District sewerage facilities in the District's Ordinances, including a separate supplement, sets forth these requirements. These provisions establish conditions under which certain users are required to obtain permits for use of District sewerage facilities. Applicants whose sewage discharges qualify them for a permit shall not be allowed to connect the building sewer to the District lateral sewer or sewer main until a written notification is provided by the District allowing the hookup. All users must comply with the discharge prohibitions established in the District's Ordinances.

300.17 PROJECT CONSTRUCTION

300.17.1 Notification

Signed plans must be delivered to the inspector at least five working days before a preconstruction meeting is scheduled. The contractor will be allowed to start construction only after the preconstruction meeting. The City or County inspector shall be notified prior to work within public right-of-way. Notice shall be given to the District inspector at least 48 hours before starting construction.

300.17.2 Preconstruction Meeting

A preconstruction conference is to be held a minimum of 2 working days before starting construction. The purpose of the meeting will be to answer any questions regarding the District's specification requirements, to obtain the contractor's construction schedule and emergency contact information, and to discuss any circumstances that may affect the work. The following attendees must be present: Contractor's job foreman and/or job superintendent, Subcontractor(s) if applicable, Developer/Owner's engineer, District Inspector, Federal, State or Local regulatory or enforcement agency representative, and other parties deemed appropriate by the District.

300.17.2.1 Preconstruction Meeting Agenda

Without relieving the developer of responsibilities outlined elsewhere in the specifications; the District will present to the developer a list of requirements that may contain, but will not be limited to, the following items:

1. Order of work
2. Working hours
3. Operation manuals
4. Manufacture's specifications
5. Pressure test results
6. Bacterial test results

7. Compaction Reports
8. Meter Records
9. Record Drawings

300.17.2.2 Order of Precedence

The order of precedence as defined in Section 300.13 will be reviewed in the pre-construction meeting.

300.17.3 **Water for Construction Purposes**

The contractor will be furnished construction water at a connection point designated by the District after payment of fees and deposits. The water shall be taken through a metered delivery and the developer shall pay all costs related thereto, including (but not limited to) District's standard deposit for temporary meter and actual costs of water used, pumping costs, loading, hauling and the use thereof. The developer shall make all arrangements for transporting the water to the construction site. A backflow device is required for all construction meters.

300.17.4 **Inspection of Work**

300.17.4.1 Access

All work shall be subject to inspection by the District and shall be left open and uncovered until approved by appropriate District personnel. Any work done in the absence of the District Inspector shall be subject to rejection.

300.17.4.2 Water and Sewer System Inspections

The Contractor shall not proceed with any subsequent phase of work until the previous phase has been inspected and approved by the District. Inspection shall be made at the following intervals of work:

1. Water System
 - A. Review of material submittal and / or plan submittal
 - B. Delivery of materials to job site
 - C. Check construction stakeout by surveyor to ensure compliance with improvement plans.
 - D. Trench excavation and bedding
 - E. Placing of pipe, fittings, and structures
 - F. Pouring all concrete anchors and thrust blocks
 - G. Placing and compacting the pipe zone back fill
 - H. Backfilling balance of trench to grade. Compaction tests shall be performed by private soils consultant retained by the applicant and acceptable to the District in public and private streets and easements. Copies of test results shall be provided to the District, and the governing agency, by the applicant for approval before final acceptance of the work. Backfilling and repaving shall be in accordance with the requirements of the agency having jurisdiction.

- I. Pressure testing all mains and services
 - J. Disinfecting and flushing
 - K. Health samples
 - L. Repaving trench cuts
 - M. Raising valve box covers to finish grade and paint to District standards
 - N. Fire hydrants painted, and pads poured
 - O. Installation of service lines, appurtenances meter boxes, and customer service valves
 - P. Connection to the existing system
2. Sewer Inspections
- A. Trench excavation and bedding
 - B. Check construction stakeout by surveyor to ensure compliance with improvement plans.
 - C. Placing of pipe, fittings, and structures
 - D. Placing and compacting of the pipe zone backfill
 - E. Backfilling of the balance of the trench to grade. Compaction tests shall be taken by a private soils consultant retained by the applicant and acceptable to the District in public and private streets and easements. Copies of test results shall be provided to the District by the applicant for approval before final acceptance of the work.
 - F. Testing and video inspection after backfill compaction of all utilities is approved by the city and/or county road departments and must be obtained before paving.

300.17.5 District Authority

300.17.5.1 Access

The District shall at all times have access to the work during construction and shall be furnished with every reasonable facility for ascertaining full knowledge with respect to the progress, quality of labor, and character of materials used and employed in the work. No pipe, fittings, or other materials shall be installed or backfilled until inspected and approved by the District representative. The contractor shall give due notice in advance of backfilling to the District inspector so that proper inspection may be provided.

300.17.5.2 Obligation

Inspection of the work shall not relieve the contractor of any obligations to complete the work as prescribed by the Standard Specifications. Any known defective work shall be corrected before testing or final inspection will be permitted. Unsuitable materials may be rejected, even though they may have been previously overlooked by the inspector.

300.17.5.3 Suspension of Work

The District shall have the authority to suspend the work wholly or in part for such time as it may deem necessary if the contractor fails to carry out orders given by the District's inspector or to perform any work required in provisions of the plans and specifications. The contractor shall immediately comply with a written order of the District to suspend the work wholly or in part. The work shall be resumed when methods or defective work are corrected as ordered and approved in writing by the District.

300.17.6 **Pressure Test**

A pressure test of the newly constructed water lines and sewer mains shall be conducted as detailed in Section 15042 and Section 15043, respectively.

300.17.7 **Water for Flushing, Testing and Sterilization**

Water for flushing, testing and sterilization of the completed pipelines or sections thereof will be available from the District at the point, or points, of connection with the existing water mains via the construction water meter connection.

The developer shall make all arrangements for this water with the Vallecitos Water District, which shall designate the exact location of the outlet or outlets and the time periods those connections may be used.

300.17.8 **Chlorination and Bacteriological Testing**

After a passing pressure test, the water lines shall be chlorinated and tested for bacteria as detailed in Section 15041.

300.17.9 **Final Water Facilities Inspection**

Before final acceptance, the District's inspector will make a final inspection of all work, accompanied by the contractor's superintendent or representative, to verify that:

1. All phases of the job are complete in accordance with plans and specifications
2. All valve boxes are raised to finish grade and that all repairs are completed.
3. All valves are referenced and the inspector has been given all reference measurements
4. All right-angle meter stops, and the meters, are properly positioned and all meter boxes are positioned and raised to proper grade
5. Fire hydrants are raised to proper grade, are in a vertical position, painted; and its concrete pad is poured
6. Backfill has passed all compaction testing
7. All system valves are turned and left open (except those specifically required to be normally closed), turns required for complete open/close cycle are recorded on the record drawings
8. Domestic water lines have been chlorinated
9. Water line pressure testing and flushing have been completed
10. The job site is clean and cleared of all the contractor's equipment and materials
11. All service line locations have been marked on curbs with a "W"
12. Certified test results have been provided for all backflow prevention devices

13. Meter number and Address form is completed
14. A mylar and a bond copy of the water facility plans labeled "RECORD DRAWINGS" with the "As-Built" revisions have been delivered to the District
15. Digital submittal of plan information in a format acceptable to the District

300.17.10 Final Sewer Inspection

Before final acceptance, the District, even though the sewers have been wayne-balled once, may require the contractor to flush and wayne-ball all sewer mains again. The District, accompanied by the contractor's foreman or superintendent, will make a final inspection of all work to check the following items:

1. All phases of the job are complete in accordance with plans and specifications
2. All bulkheads and plugs have been removed
3. The concrete base and channels in manholes are smooth
4. Manhole interiors are clean of all debris and excess concrete mortar
5. All manhole concrete grade rings are adequately grouted and properly set
6. Pavement around manhole cover has been properly blacktopped to correct grade
7. Proper field tests have been made on all sewer main sections and manholes, particularly where sections of manholes had to be repaired
8. Backfill has passed all compaction requirements
9. The job site is clean and cleared of all the contractor's equipment and materials
10. Lateral locations have been mark with a "S" on curb
11. A mylar and a bond copy of the water facility plans labeled "RECORD DRAWINGS" with the "As-Built" revisions have been delivered to the District
12. Digital submittal of plan information in a format acceptable to the District

300.17.11 Raising of Valve Boxes and Manhole Rims

For paved areas in the applicant's development, it shall be the responsibility of the applicant to raise to grade all valves and manholes and provide temporary ramping or feathering around valve boxes or manholes between pavement lifts.

300.18 RECORD MYLARS

Record drawings shall be completed and submitted by the developer's engineer, or a registered land surveyor, as detailed in Section 500.13. The applicant shall furnish to the District record drawings (1 marked set of bond copy, 1 set of mylar, and 1 set of digital format (.dwg) showing all revisions to the original approved plans. All future extensions of water transmission mains and sewer mains shall have the invert elevation of the terminal pipe verified by the applicant and posted on the drawings. Failure to comply with these requirements will necessitate withholding final approval.

300.19 EASEMENT VERIFICATION

The developer's engineer will verify in writing that the facilities to be accepted by the District were constructed within the easements as listed in the easement documents. In the event the facilities were not

constructed within the designated easement, the engineer will submit revised easement documents, quitclaim documents, and the final title report for recordation.

300.20 FINAL COSTS, BOND, AND FEE VERIFICATION

With the record drawings, the applicant is to furnish the District a cost breakdown of the newly installed facilities for District accounting purposes. A warranty bond in the amount of 25% of the actual installation costs for District facilities shall be submitted. Any adjustments to the deposits and fees will be made at this time.

The District will also re-evaluate the plans for compliance with the "AGREEMENT" and reserves the right to re-assess the development fees if deviations from the originally approved plans have been made. Changes include, but are not limited to: the number of service connections, meter sizes, building square footage, the irrigated area, the number of dwelling units, and any other measure used to calculate the original fees. All fees and/or deposits shall be made current prior to forwarding the project for acceptance.

300.21 BOARD ACCEPTANCE

After satisfactory completion of the items in Section 300.1 through 300.20, the District will, upon the request of the developer, place the project on the District Board's agenda for acceptance, said date of acceptance being the commencement of the one year warranty period.

300.22 RELEASE

300.22.1 Bond Release

All final inspection requirements shall be fulfilled before the District will give its final acceptance notice to the City and/or County for release of the applicant's bond to those agencies, if applicable. The applicant's bond with the District shall remain in effect in accordance with Section 100.5 and the Agreement.

300.22.2 Water and Sewer Service in service prior to Acceptance

The District Engineer, at his sole discretion, may approve placing newly installed water and sewer systems into service prior to Board acceptance after compaction has been approved by the governing agency and the portions have been pressure tested, chlorinated, flushed, and have passed the bacteriological test and inspection for domestic water mains. This partial acceptance may be granted only upon written request from the applicant and subsequent approval by the District Engineer. Upon this written approval for partial acceptance of facilities, the applicant shall be relieved of the duty to maintain the portions so used or placed into operation provided, however, that nothing in this section shall be construed as relieving the applicant of full responsibility for completing the work in its entirety, for making good any defective work and materials, for protecting the work from damage, and for being responsible for damage and for work as set forth in the agreement and other contractual documents; nor shall such action by the District be deemed completion and acceptance, and such action shall not relieve the applicant of the guarantee provision of the Agreement with the District.

Meters shall remain locked and there shall be no occupancy until capital facility fees have been paid and the District signs the building permit card, per current District rules and regulations. Final acceptance of the project shall be subject to all District fees and charges being paid current.

300.23 SECURITY RELEASE

If in the time period of one year from the date of Board acceptance no failure of the system has occurred, which has gone unrepaired by the developer, to the satisfaction of the District, the District will release the surety. The sewer system will be video inspected prior to the one year anniversary of the surety bond.

END OF SECTION