SECTION 300

DESIGN AND INSPECTION PROCEDURES

300.1 CONCEPT DEVELOPMENT PLANS

300.1.1 Domestic Water Development Plan

300.1.1.1 Concept Plan - Two sets of concept water development plans are to be submitted to the Director of Engineering by the applicant or the applicant's engineer at least 30 days before filing any development map.

It is the recommendation of the District, but not a requirement, that the Orange County Fire Authority review a copy of the concept plan.

300.1.1.2 Water System Design Approval - The Director of Engineering will review for approval the water system concept plans for the development, taking into consideration the following:

1. Existing transmission main locations and sizes

2. City and/or County fire flow requirements. Whether or not general Fire Authority criteria have been met. It is the responsibility of the developer to meet with the Fire Authority separately, to determine specific Fire Authority concerns

3. District's Domestic Water Master Plan

4. District's design criteria (Section 500)

The District reserves the right to change proposed domestic water main sizes after considering the above criteria. The developer will be required to improve the existing distribution system, if necessary, to support the proposed project.

300.1.2 Sewer System Development Plan

300.1.2.1 Master Sewer Development Plan - Two sets of the tentative master development plan with the sewer main plan imposed on them, showing sizes and direction of flow, are to be submitted to the District by the applicant at the time sewer improvement plans are submitted for plan checking.

300.1.2.2 Sewer System Plan Approval - The Director of Engineering will approve the sewer system design for the tentatively planned development taking into consideration the following:

l. Existing trunk sewer locations

2. Slope and size of sewer collection mains and number of lots to be served

3. District's master plan for sewerage system

4. District's design criteria (Section 400)

300.1.3 Recycled Water System Development Plan
(See Section 600)

300.2 INDIVIDUAL TRACT IMPROVEMENT PLANS SUBMITTED TO DISTRICT FOR REVIEW AND APPROVAL

300.2.1 First Plan Check Requirements

The applicant/engineer shall submit the following items for first review of residential/ commercial/industrial subdivisions:

1. 2 sets of utility improvement plans
2. 2 sets of Tract/Parcel Map showing gross acreage
3. 1 set of grading plans
4. Engineer's quantity estimate for water, sewer and recycled water system. Each system shall be listed separately.
5. Transmittal from applicant's engineer
6. Improvement Plans – separate sets of improvement plans shall be prepared for domestic water, sewer, and recycled water facilities. Sheet size 24" X 36", no exceptions.

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, 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 Moulton Niguel Water District (District) Engineering staff for plan checking and approval of domestic water, sewer and recycled water facilities will be submitted on 24" X 36" overall size. These plans shall conform to the "Standard Procedure for Processing Maps and Improvement Plans" of the city having jurisdiction; and 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'
     2) Show: Water mains - size, fire hydrant, and valves and existing facilities Sewer mains -size, flow direction, manholes, (number M.H.) and existing facilities, building/D.U./lots/"footprints."
     3) North arrow
     4) Street names

5) Legend of symbols and lines

6) Show easements for water, sewer and irrigation facilities

C. Location map; showing general area with project noted

D. Signature block - the District's approval of facilities (form as provided by the District).

E. Fire Marshall approval

F. Bench Mark; description and latest elevations

G. City Engineer signature block

H. Survey horizontal control

I. Name, address, and phone number of engineering firm
Name, address, and phone no. of developer
Legal description of property (Tract/Lot, Parcel Map No.)

J. Quantity estimates may appear on Title Sheet. Water, sewer and recycled water facilities to be called out separately. Labeled and not mixed together.

K. Index of sheets

L. Revision block

M. 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

2. Second Sheet (Normally Sheet 2 includes):

A. Quantity estimates (if not shown on Title Sheet)

B. MNWD Standard Notes (See Sections 400.15, 500.11, and 600.6)

C. Construction notes

D. Detail drawings

3. Plan and Profile Sheets

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

A. Scale –1-inch = 40-feet

B. The plan and profile should be on same sheet if possible and aligned. Sewer profile may appear on a separate sheet.

C. Existing domestic water, sewer and recycled water facilities adjacent to development must be shown

D. Easements dedicated to the District for domestic water, sewer and recycled water facilities must appear on plans

E. Building/D.U. pad elevation

F. Water, sewer, recycled water system and storm drain crossing elevations

G. Provide a key map on each sheet at a scale of 1-inch = 400 feet

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 Orange County Fire Marshal

1) Services for other than residential development, may be required to have back flow prevention devices (minimum double check valve), as determined by the District.

2) Items required to make application for domestic service.

E. Either two complete sets of Plumbing Plans stamped by the city having jurisdiction, or two complete sets of Plumbing Plans, along with a letter from the developer or his agent requesting a _____ meter, not to exceed ___gpm, to serve ___(Company Name)__ at __(Address)__.

F. Domestic irrigation requires a site utility plan and a letter similar to above. It may be included in letter for domestic service.

G. Address to be served

H. All fees, stipulated in the agreement, must have been paid.

300.2.3.2 Fire Service Requirements

1. All fire services will require at a minimum a double check detector check per MNWD standard drawing W-15 or 15A, or a reduced pressure principle assembly per MNWD standard drawing W-17.

300.2.3.3 Recycled Water Service Requirements:

1. Landscape plans must be reviewed and approved by District.

2. MUST have an address for each service

3. One approved landscape plan -- showing each service's point-of-connection to District main

4. All fees, stipulated in the agreement, must have been paid.

5. The use of recycled water is mandatory per MNWD Resolution 88-8: It is the policy of the District that non-domestic water must be used within the District whenever it is available in conformance with Sections 13550 and 13551 of the Water Code of the State of California.

300.2.3.4 Industrial Waste Questionnaire

Applicant requesting service for a commercial or industrial project may be required to submit a completed industrial waste questionnaire (Appendix 6) with the initial design plans for the project's sewerage system. If only domestic wastewater is to be discharged from the project, only page 1 and items 6, 7, and 15 need to be completed.

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

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

A list of discharge prohibitions and effluent limitations for wastewater discharged to the District's sewers is included with the questionnaire. For further information concerning the discharge limitations or the questionnaire, contact the South Orange County Wastewater Authority (SOCWA) office at (949) 489-7735.

Where the industrial discharger becomes aware that relevant facts were omitted or incorrect information was submitted in the industrial discharge permit application, the facts or corrected information shall be promptly submitted to the SOCWA representative.

300.2.4 Additional Requirements, Standards, and Fees

300.2.4.1 License Requirements

1. The applicant’s contractor shall have a Class A or C-34 license.

2. The applicant’s contractor shall have a business license to operate within the city having jurisdiction.

300.2.4.2 Standards for Application

1. The developer will install all domestic and recycled water meters -- 5/8-inch through 2-inch purchased from the District.

2. Sizing water meters:

Meter Size		GPM - MAXIMUM
5/8" X 3/4"	-	15
1"	-	37
1½"	-	75
2" Disc	-	120
2" Turbine	-	160
2" Compound	-	160
3" Turbine	-	350
3" Compound	-	320
4" Turbine	-	1000
4" Compound	-	500
6" Turbine	-	2000
6" Compound	-	1000
8" Turbine	-	3500
10" Turbine	-	5500

District reserves the right to size meters unless written request is submitted at the time application is made.

3. Type of meter:

A turbine meter and strainer shall be used on all irrigation services 2-inch and larger or as determined by the District.

A compound meter and strainer shall be used on all master metered domestic multi-unit developments or as determined by the District.

300.2.5 District's Regulation Regarding Cross Connection

All domestic water services shall be subject to the provisions of the section in the District's 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 cross-connection Inspector 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 now required to have back-flow devices installed for:

- All commercial domestic water services
- All industrial domestic water services
- All fire lines where the commercial or industrial buildings are over two stories in height
- 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

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 Orange 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 copies forwarded to the District cross-connection inspector and local health agency.

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 On-Site Irrigation Systems

See separate document, MNWD Rules and Regulations for Users of Reclaimed Water for design criteria and detailed specifications regarding the construction and or conversion of on-site potable irrigation systems to on-site recycled water systems.

300.2.7 Domestic Water Facilities

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

300.2.8 Off-Site Non-Domestic Water Facilities

See Section 600 for detailed specifications regarding the construction of off-site recycled 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 water facilities, including but not limited to, water mains, hydrants, meter vaults, and detector check vaults; its minimum width shall be 20 feet for water mains, 5 feet on all sides for meters, fire hydrants, meter vaults, detector check vaults, and other appurtenances, unless otherwise determined by the District. 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 sketch and plans shall be prepared by the applicant's engineer, two copies of which shall be sent to the Director of Engineering, or easements for the District shall be shown on a tract or parcel map. Easement descriptions shall be in a form acceptable to the District and will be checked by the Director of Engineering. Easements shall also be shown on the 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 will be 8-1/2" X 11", no exceptions.

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

Applicant shall submit two copies of the easement description and sketch to the District for review. If acceptable, the applicant shall furnish two additional copies of the description and sketch, signed by a registered engineer along with a completed "Dedication of Easement to Moulton Niguel Water District" form (see Appendix 5 for sample), a current (within 30 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.

All blanks in the documents, such as project identifications, title report number, map and book numbers and pages, dates, etc., must be filled in. The easement sketch 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 developer's engineer shall provide the quantities, to allow the District to project costs for the water, sewer and recycled water facilities to be dedicated to the District per the Bond Worksheet (Appendix 4). The items listed will include, but will not be limited to pipes, valves, meters & appurtenances, connections, hot taps, and facilities construction.

300.5 FIRE AUTHORITY APPROVAL

After the first utility plan check by the District, it will become the responsibility of the applicant's engineer to have the Orange County Fire Authority approval before submitting them for a second plan check. Fire flow requirements for the development shall be submitted with the second plan check submitted. The District reserves the right to require additional fire protection or modify water facility sizes as deemed necessary.

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 WATER FACILITIES

Upon receiving the corrected utility plans for a second plan check, quantities for the bond worksheet and the applicant's letter requesting domestic water, sewer and recycled water service, the Director of Engineering will compute the required development fees, based on the then governing District Rules and Regulations and will prepare the developer's agreement; Appendix 1.

The District will send a draft copy of the Agreement to the developer.

300.7.1 Surety

The Developer will provide a surety bond, a letter of credit, a certificate of deposit, of other form of surety acceptable to the District. This surety shall be of a type which is automatically renewed every year, at the developers expense, until released by the District.

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, 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 developer's 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.

300.10 FEES

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

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 acceptance the "AGREEMENT" (See Appendix 1).

300.12 SIGNED PLANS

Utility improvement plans must have the Director of Engineering's signature before any construction by the applicant begins.

300.12.1 Prerequisites for Signing Plans

1. AGREEMENT FOR THE CONSTRUCTION OF WATER FACILITIES must be signed by 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. The District will prepare an easement Certificate of Acceptance (Appendix 5B). The easement documents must have been recorded.
3. All fees and charges must be paid in full by the applicant.

4. Signatures of City Engineer and Fire Marshall, when required.

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:

1. Utility plan original 4-mil mylars shall be delivered to the Director of Engineering with two revised blue line sets.

2. One set of final development plans including:

   A. Horizontal control plot plan

   B. Street improvement plans

3. A copy of the drawings generated by AutoCad on a 3.5-inch diskette

300.12.2.2 Notification - District will notify applicant's engineer once the plans have been signed.

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 one year from date of 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 Re-permit Letter

In the event that construction does not start, and the approval could become null and void, as described in Section 300.12.3; the letter shown in Appendix 7 will be submitted by the developer's engineer, 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 facilities.

300.13.2 Special Details

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

300.13.3 Plans

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

300.13.5 District Standard Drawings

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

The "Standard Specifications for the Construction of Domestic Water, Sewer and Recycled Water Facilities are incorporated herein by this reference. Copies may be obtained from the Moulton Niguel Water District, 21616 Gordon Road, Laguna Hills, CA 92653.

300.13.7 Technical Specifications

The technical specifications, of the District's "Standard Specifications of the Construction of Domestic Water, Sewer and Recycled Water 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 facilities.

300.13.8 Standard Specifications for Public Works Construction

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

The "Standard Specifications for Public Works Construction," (Green Book), are incorporated 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 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 domestic, sewer and recycled off-site facilities.

300.15 SIGNED UTILITY PLANS BOTH BY DISTRICT AND CITY

The District shall have completely signed and approved domestic water, sewer, recycled water and irrigation improvement plans. Two sets of blue lines and one set of mylars shall be furnished to District at least two working days before the preconstruction conference and commencing work.

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 Rules and Regulations, 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 Rules and Regulations.

300.17 PROJECT CONSTRUCTION

300.17.1 Notification

Notice shall be given to the District inspector at least 48 hours before starting construction. Signed utility plans must be delivered to the inspector at least two working days before the contractor will be allowed to start construction. The city, or County inspector shall be notified prior to work within public right-of-way.

300.17.2 Preconstruction Meeting

A preconstruction conference is to be held 24 hours before starting construction, at which will be present the applicant's contractor's working foremen and/or job superintendent, the applicant's engineer, and the District inspector. The purpose of this meeting will be to answer any questions on District specification requirements, to obtain the contractor's construction schedule, and to discuss any known circumstances that might affect job installation.

300.18.2.1 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. 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 Curbs Installed Before Starting Water Facilities

It is a basic requirement of the District that the curbs be installed in tracts prior to starting the installation of water facilities. They act as positive grade control for setting services and fire hydrants. The District may approve an exception if the developer signs Appendix 8, agreeing to comply with the following requirements:

1. All requirements shall be met before the excavation of pipeline trenches.
2. The owner is to submit engineered drawings showing both the plan and profile of the proposed pipelines for District review and acceptance.
3. The owner is to provide survey staking. The proposed pipelines per the profile with cuts to flow line at a maximum of 25-foot stationing showing all horizontal and vertical grades breaks, tees, and valves, fire hydrant, blow-offs, air vacs, services, and all other appurtenances indicated on the plans.
4. Prior to backfill, the engineer shall certify line and grade of the pipeline and all the appurtenances and provide the District inspector with a copy of the certification.
5. In the event that a portion or any part of the pipeline and its appurtenances is not installed to the satisfaction of the District inspector, the owner agrees to expose and re-lay the pipeline accordingly.

300.17.4 Water for Construction Purposes

The contractor will be furnished construction water at a connection point designated by the District after payment of fees. 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. Recycled water shall be used for construction purposes when possible.

300.17.5 Inspection of Work

300.17.5.1 Access

All work shall be subject to inspection by the District and shall be left open and uncovered until approved by appropriate District personnel.

300.17.5.2 Domestic Water, Sewer and/or Recycled Water 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. Domestic and Recycled Water System

   A. Delivery of materials to job site

   B. Trench excavation and bedding

   C. Placing of pipe, fittings, and structures, including warning tape on recycled irrigation water main and service lines

D. Pouring all concrete anchors and thrust blocks

E. Placing and compacting the pipe zone back fill

F. Backfilling balance of trench to grade. Compaction tests are to be performed by governing agency road departments in public right-of-way or by private soils consultant retained by the applicant and acceptable to the District in private streets and easements. Copies of test results shall be given 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 city having jurisdiction.

G. Pressure testing all mains and services

H. Disinfecting and flushing

I. Health samples

J. Repaving trench cuts

K. Raising valve box covers to finish grade and paint to District standards

L. Fire hydrants painted and pads poured

M. Installation of service lines, appurtenances meter boxes, and customer service valves

N. Connection to the existing system

2. Sewer Inspections

A. Trench excavation and bedding

B. Placing of pipe, fittings, and structures

C. Placing and compacting of the pipe zone backfill

D. Backfilling of the balance of the trench to grade. Compaction tests to be taken by the city and/or county road departments in public right-of-way and by private soils consultant retained by the applicant and acceptable to the District in private streets and easements. Copies of test results shall be given to the District by the applicant for approval before final acceptance of the work.

E. Testing after backfill compaction of all utilities is approved by the city and/or county road departments and must be obtained befor paving.

300.17.6 District Authority

300.17.6.1 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 respecting 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 or its representative. The contractor shall give due notice in advance of backfilling to the District inspector so that proper inspection may be provided.

300.17.6.2 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.

300.17.6.3 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 required 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.

300.17.7 Pressure Test

A pressure test of the newly constructed domestic and recycled water lines shall be conducted as detailed in Section 15042.

300.17.8 Water for Flushing, Testing and Sterilization

Domestic 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 domestic water mains via the construction water connection.

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

If, due to construction problems or for any other reason, the developer desires to use water from some other source for testing, flushing, or chlorination, it shall be the responsibility of the developer to obtain the source of water, which water shall be tested and approved by the County Health Department prior to the use thereof. All expenses for obtaining and using another source of water shall be paid by the developer.

Cannon flushing operations shall be conducted with a residual line pressure not less than 30 psi and a District representative will be present. Adequate connections to conduct the flushing, testing and sterilization operations shall be furnished by the contractor and reviewed by the engineer, at no added cost to the District, and the developer shall pay for any and all costs for flushing, testing and sterilization.

300.17.9 Chlorination and Bacteriological Testing

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

300.17.10 Final Domestic Water and Recycled 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. Valves shall be located by a 2-inch "V" chiseled in the adjacent curb face

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 lateral locations have been marked on curbs

12. Certified test results have been provided for all backflow prevention devices

13. A mylar and a blue line copy of the water facility plans labeled "RECORD DRAWINGS" with the "As-Built" revisions have been delivered to the District

14. Digital submittal of plan information in a format acceptable to the District

300.17.11 Final Sewer Inspection

Before final acceptance, the District, even though the sewers have been balled once, will require the contractor to flush and 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. That all bulkheads and plugs have been removed

2. The concrete base and channels in manholes are smooth

3. That manhole interiors are clean of all debris and excess concrete mortar

4. That all manhole concrete grade rings are adequately grouted and properly set

5. That pavement around manhole cover has been properly blacktopped to correct grade

6. That proper field tests have been made on all sewer main sections and manholes, particularly where sections of manholes had to be repaired

7. That backfill has passed all compaction requirements

8. That lateral locations have been mark with a "S" on curb

300.17.12 Raising of Valve Boxes and Manhole Rims

For paved areas in the applicant's development, the District will raise all valves and manholes for District constructed facilities to the first lift of pavement. For succeeding pavement lifts, it shall be the responsibility of the applicant to raise to grade all valves and manholes after each lift of pavement.

Applicant is required to raise all valves and manholes constructed by applicant after each pavement lift.

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 set of blueline and 1 set of mylar) showing all revisions to the original approved plans. All future extension of water transmission mains will 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 the letter of acceptance.

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 a the final title report for recordation.

300.20 METER USE 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 (refer to Appendices 3A, 3B and 3C). This is to be furnished to the District before an acceptance letter releasing bond will be written (refer to Appendices 2A, 2B and 2C). The District will verify the quantities used in the calculation of the fees for the “AGREEMENT.” Any adjustments to the fees will be made at this time.

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, petition the District's governing board for acceptance of the project, and the commencement of the one year warranty period.

The District will also re-evaluate the plans for compliance with the "AGREEMENT” and reserves the right to re-assess the development impact 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 impact fees.

300.22 RELEASE GIVEN TO CITY AND/OR COUNTY

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. The applicant's bond with the District shall remain in effect in accordance with Section 100.5 and the Agreement.

300.22.2 Domestic Water, Sewer and Recycled Water Service in service prior to Acceptance

District Director of Engineering may approve putting newly installed domestic water, sewer and recycled water system 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 shall be granted only upon written request from the applicant and subsequent approval by the Director of Engineering. Upon this written approval for partial acceptance of facilities, the applicant shall be relieved of the duty to maintain the portions so used or place 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.

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 developer may petition the District to request final acceptance of the project by the Board and release of the surety.

END OF SECTION