

7 Construction Phase

The Construction Phase begins with the scheduling and completion of the Pre-Construction meeting and ends when: 1) all facilities have been installed per the approved plans, 2) all dwellings have been occupied, and 3) the final street cap paving is complete (for Tract Projects). For Individual and Parcel Map Projects, the end of the Construction Phase occurs when all facilities have been installed per the approved plan and final cap paving has been completed. During this phase, the Developer and key individuals such as the Project Superintendent and the Developer's Contractor along with key District personnel will attend a pre-construction meeting to be conducted by the District (see *Pre-Construction Meeting Procedures* contained in this section). After the pre-construction meeting is complete and the District issues the notice-to-proceed, the Developer's Contractor will then install the water and sewer facilities per the approved plan.

Early in the construction of the sewer facilities, as outlined in *Section 7.5 - Manhole Ring Tolerance Verification Procedure*, the District requires a verification of the difference in elevation between the top of the manhole cone and the manhole ring (and cover) to ensure that the construction of the manhole meets the District's specification. This is required early in the construction of the sewer facilities to avoid costly reconstruction of the manholes toward the end of the construction phase.

Note that during construction, the District will not allow jumpers to be installed in place of actual meters at any time. Also, during the construction of the project, the District will inspect all utilities where they cross District facilities during dry-utility installation and prior to back-fill of the excavations (for subject work) to ensure that the District's facilities are undisturbed, meet specification, and no damage has occurred. See the District's "Procedures Concerning Installation of Dry Utilities" (**Appendix Q**). As part of the construction procedures for all sewer and water facilities, a video inspection of the interior of the pipeline is used to verify that the material meets the District's standards and that the installation of the sewer and water facilities meet the District's specifications (see procedures for Video Inspections contained in this section). For Tract Projects, the Developer may wish to occupy and request the District's approval

of move-ins (into the homes) prior to completion and final acceptance of the entire project. The District will approve occupancy of the homes when: 1) the Developer makes a written request to the District's Development Representative detailing the lot number and addresses of the lots for the desired occupancies, and 2) the related water and sewer facilities successfully pass a Pre-Occupancy Inspection. After the request, the District's Inspector will conduct a Pre-Occupancy Inspection (see procedures for Occupancy Inspections contained in this section). Because the District's policy is to assume operational control of the water and sewer facilities once a paying customer moves into the home, the inspection is performed to ensure that all of water and sewer facilities (that serve the home) are completed to District's specifications. After successfully passing the Pre-Occupancy Inspection, the District's Development Representative will send the appropriate notification to the City or County approving the move-in of pre-described lots and addresses.

As part of the District's effort to comply with Fire Ordinances, it is the District's policy to prohibit hardscape improvements (such as decorative walks, driveways and walls) within three feet of District's facilities without written consent. The Developer will be responsible for adhering to this policy until the project is accepted by the Board. See the District's "Acknowledgement of Policy for Improvements around District's Facilities" (**Appendix R**).

7.1 Pre-construction Meetings for Developer-funded Projects

Pre-construction meetings are conducted for all Tracts, Parcel Map and Plot Plan projects after the District has received, signed, and approved plans prior to any work on District facilities. The Development Engineer or Representative (using the District's Pre-Construction Meeting Agenda) conducts the pre-construction meeting. The Development Engineer, the District's Inspector, the Developer's Contractor, and the Developer's Project Superintendent must be present at the pre-construction meeting. If any of these persons cannot attend, the meeting shall be rescheduled. It is desirable to have a Riverside County Transportation or a City representative present at the pre-construction meeting; but it is not a requirement.

7.2 Requirements for Pre-construction Meeting

The following requirements must be met prior scheduling a pre-construction meeting:

1. The District's Development Representative has insured that all fees have been paid, all agreements have been executed, all easements have been recorded (and accepted by the District), and the items on the pre-job checklist (**Appendix S**) have been completed.
2. All necessary material submittals for the project have been reviewed and approved by the Development Engineer and the District's Inspector a minimum of five working days prior to scheduling the pre-construction meeting.
3. A District Inspector has been assigned to the project.
4. The Developer has presented to the District:
 - a. "Certification of the Streets to Final Grade" form (**Appendix T**)
 - b. Complete cut-sheets for the first three hundred (300) feet for each crew's start location.
 - c. Completed "Contractor's Data Sheet" (**Appendix U**)
 - d. A copy of the current Contractor's safety program no older than 6 months old.
 - e. A list of the Certified Competent Persons who will be on the project.
 - f. A copy, from the contractor, of the certifications for each person and a Certified Competent Person for confined space entry on the job.
5. The Development Engineer who has reviewed the information supplied by the Developer and contractor will determine if the pre-construction meeting can proceed.
6. The District's Development Representative coordinates with the attendees to set a time and date for the pre-construction meeting to be conducted.

The pre-construction meeting is conducted using the District's "Pre-construction Meeting Agenda" (**Appendix V**), which lists pertinent discussion items. At the meeting, a copy of the pre-construction meeting agenda, along with copies of the pre-occupancy and final inspection check-list are provided to those in attendance.

During the pre-construction meeting, the District, along with the District's Inspector and the Contractor, sets a start-work date.

7.3 Video Inspection of Sewer Pipe Lines

Video inspections of sewer lines on tract projects are done to ensure that the newly installed sewer lines meet the District's standards and specifications for material and installation. Refer to **Appendix DD** (CCTV Inspection Guidelines for Acceptance of New Sewers) in order to understand and follow District guidelines for acceptance of new sewers. The video inspection is performed after the sewer lines and laterals have been installed, the streets are at final grade, and prior to the final air-test and base-paving. The District's Operations Representative or the Inspector shall be present during the video inspection. A minimum of five business days is required from the time of notification to set the video inspection date and time. A subsequent video inspection will be required if debris has been introduced into the sewer line or after required repairs have been completed. Videos are to be submitted to the District on one CD in DVD format with the completed and approved sewer system improvements for the project and an 11"x17" exhibit with all sewer manholes labeled according to the approved plans and video files will be named according to manhole numbers i.e. Manhole 10 to Manhole 11 Sewer Video dated xx-xx-xxxx. The Developer is responsible for contracting directly with a District approved video inspection company, if a District approved video inspection company is not used the District has the right to reject all work performed by the video inspection company.

7.3.1 Procedures for Video Inspection of Sewer Pipeline

1. The District Inspector will verify that:
 - a. Sewer video company performing the service is approved by the district prior to commencement. If the company is not approved by the District, then the District Inspector will not allow the company to proceed.
 - b. Sewer video equipment will be checked by the District Inspector in order to approve the equipment prior to commencement. If the District Inspector deems the video equipment inadequate, then the District Inspector will not allow the company to proceed.

- c. The sewer AutoCAD files must be submitted using the state plane coordinate system.
 - d. All sewer lines, laterals and manholes have been installed per the approved plans.
 - e. All lines have been cleaned to the satisfaction of the District Inspector.
 - f. All manholes are accessible to the video truck and at the elevation and grade for base paving.
2. After the District Inspector has verified all the above items have been completed, the District Inspector will conduct the video inspection with the assistance of the Developer's video company using the video inspection check sheet. If there are no items listed for correction, the Inspector will sign the video inspection check sheet verifying the designated sections have passed video inspection. However, if sewer line requires repairs then the contractor will be required to provide an additional sewer video after all repairs have been made. The completed and signed check sheets along with the videos and 11"x17" exhibit are given to the District's Development Representative for the project file and a copy is given to the Inspector. If there are any items listed for correction during the video inspection the District Inspector will make sure the items have been corrected prior to occupancy release.
3. After the Inspector verifies that all the items noted for correction on the Video inspection check sheet have been corrected a follow up video inspection is requested, using the steps outlined above.

7.4 Video Inspection of CML/CMC Potable Waterlines

Video inspections of CML/CMC waterlines on tract projects are done to ensure that the newly installed waterlines meet the District's standards and specifications for material and installation. The video inspection is performed after the waterlines and water services have been installed, the streets are at final grade, and prior to the hydrostatic testing and loading of the lines and prior to base-paving. The District's Operations Representative or the Inspector, using the District's video inspection (described in **Appendix V**) conducts the video inspection. A minimum of five business days is required from the time of notification to set the video inspection date and time. A

subsequent video inspection will be required if debris has been introduced into the waterline or after required repairs have been completed. Videos are to be submitted to the District on one CD in DVD format with the completed and approved sewer system improvements for the project. The Developer is responsible for contracting directly with the video inspection company. **The equipment used must be a dedicated rig for potable waterlines only. Any equipment used in sanitary sewer or non-potable waterlines will not be permitted.**

7.4.1 Procedures for Video Inspection of CML/CMC potable waterlines

1. The District Inspector will verify that:
 - a. All waterlines, water services, fire hydrants and other related facilities have been installed per the approved plans.
 - b. All waterlines have been cleaned.
2. After the Inspector verifies that all the items noted for correction on the Video inspection check sheet have been corrected a follow up video inspection is requested, using the steps outlined above.

7.5 Use of Sewer Plugs and Bulkheads

During the construction and phasing of a project it will be necessary to use one or more sewer plugs or bulkheads to protect the District's existing sewer system from a section currently under construction. The placement and location of these plugs and bulkheads will be at the direction of District. Prior to sewer construction commencement the District shall require that all developments install sewer plug (s) downstream of the approved tie-in point or as directed by District staff,

Under no circumstances are these plugs or bulkheads to be removed without permission from District staff. The District has established a GIS based tracking system and procedure for these plugs and bulkheads to ensure they are not removed prematurely. In addition the assigned inspector (s) will be required to inspect and insure that the sewer plug (s) are in place on a weekly basis and will take photos of the sewer plug (s) and include the sewer plug (s) inspection with the daily inspection report.

7.6 Pre-Occupancy Inspection for Tract Projects (Only)

This is performed when the Developer notifies the District's Inspector that homes are ready for occupancy and the Developer is requesting that the District sign-off on the occupancy of those homes. Alternatively, the Developer may request that the District send an approval of occupancy to Riverside County, City of Jurupa Valley or the City of Eastvale, allowing new homeowners to move in prior to completion of and acceptance of the Tract project. The purpose of the Pre-Occupancy Inspection is to ensure that the water and sewer facilities that serve the homes are complete, operational, and ready for service. **The Pre-Occupancy Inspection is not a final inspection and it is not a final acceptance by the District of the Tract Project.** Once the homes are approved for occupancy, it is the District's responsibility to operate the facilities servicing those homes. The "Pre-Occupancy Inspection Check Sheet" (**Appendix X**) details the items to be inspected. The Pre-Occupancy Inspection is one of the discussion points listed on the pre-construction meeting agenda for tract projects. The District's Inspector will provide a copy of the pre-occupancy inspection check sheet to the Tract Superintendent (upon request) as a guide to prepare for move-ins. Pre-Occupancy Inspections are typically not performed on Parcel Map or Plot Plan Projects.

7.6.1 Procedures for the Pre-occupancy Inspection

The Procedure for the Pre-Occupancy Inspection is as follows:

1. The Tract Superintendent notifies the District's Inspector that they request District approval for occupancy of designated homes.
2. The District's Inspector notifies the District's Development Representative to schedule the inspection.
3. The District's Inspector performs the pre-occupancy inspection using the pre-occupancy inspection check sheet. If there are no items listed for correction, the District's Inspector will sign the inspection sheet verifying the homes are ready for occupancy; and provide the completed and signed check sheet to the District's Development Representative for the project file. If there are any items listed for correction, the District's Inspector will ensure that the listed items are corrected prior to signing the inspection sheet, verifying the homes are ready for occupancy.

4. The District's Inspector provides the completed and signed check sheet to the District's Development Representative for the project file and notifies them that the homes are ready for occupancy.
5. After being notified that the homes are ready for occupancy, the District's Development Representative will send a letter to the County/City in which the District is approving the occupancy of the designated homes.

7.7 Manhole Ring Tolerance Verification Procedure

In order to ensure the manhole ring tolerance dimensions as shown on District Standard Drawing No. S-7 are adhered to, the following procedure shall be performed. Prior to installation of the manhole rings, a measurement shall be taken from the manhole inlet flow-line to the top of the manhole cone. Adding this dimension to the inlet flow-line elevation will provide a top of manhole cone elevation. This elevation shall then be subtracted from the manhole rim elevation provided on a grade stake or as shown on the plans. The resulting dimension must be within the 12" – 20" tolerance shown on the reference standards drawing. If not within tolerance, additional work on the manhole shaft must be performed until met. This procedure shall be documented by the use of the form in **Appendix W**.



Manhole construction during JCSD's Florine Lift Station capital improvement project