



Edgemont

Community Services District

DESIGN AND CONSTRUCTION STANDARDS MANUAL

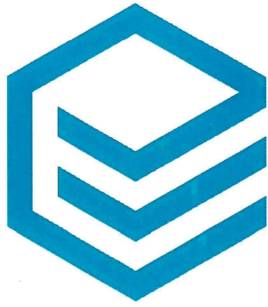
For

SEWERAGE FACILITIES

JANUARY, 2026



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Edgemont

Community Services District

DESIGN AND CONSTRUCTION STANDARDS MANUAL

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11/04/2022

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FOREWORD

To: All Parties Involved with the Planning, Design and/or Construction of Sewer Pipelines within the Boundaries of the Edgemont Community Services District.

From: Jessica Pfalmer, General Manager

Subject: Edgemont Community Services District's Design and Construction Standards Manual for Sewerage Facilities

The purpose of these standard specifications is twofold. The first purpose is to ensure that sewerage facilities constructed for the Edgemont Community Services District (District) are complete, correctly operating, and in compliance with government codes and good wastewater industry practice. The protection of public health and safety is of utmost importance. The second purpose of this Standards Manual is to provide interested parties with the District's procedures, policies, and requirements to aid in the cost effective planning, design and construction of wastewater facilities within the District.

Compliance with these requirements does not waive requirements of other governing bodies or agencies. Additionally, since these are "standard" procedures and requirements, they cannot apply to all conditions. The District will review all sewerage plans and may revise or modify any details, concepts, or plans submitted.

The design and construction of District sewerage plans shall conform to these standard specifications including standard drawings incorporated herein whether the work is to be constructed by developers or others for the District. When the District elects to contract work, these standard specifications shall become a part of the contract by reference.

Since these standards and specifications are to be used by the District when they directly contract for work, the District has incorporated certain payment procedures that only apply to District contracted work. Any statement regarding how a particular item is to be paid for within these specifications and standard drawings apply specifically to District contracted work. Work contracted by developers may or may not be applicable to the aforementioned payment statements dependent upon the agreement between the developer and his private contractor.

Please contact the District if you have any questions or comments.

EDGEMONT COMMUNITY SERVICES DISTRICT


Jessica Pfalmer
General Manager

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EDGEMONT COMMUNITY SERVICES DISTRICT STANDARDS MANUAL

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SECTION I

INTRODUCTION

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I. INTRODUCTION

A. GENERAL

The Edgemont Community Services District was formed in March, 1957, as a general purpose community services district of the State of California. The boundaries of the District are shown in Appendix A of Section VII.

If sewer service is desired within the District, service can normally be provided if the following conditions are met:

1. Developer must design (or contract with the District to design), pay for the construction of, have constructed and dedicate to the District the sewer facilities in accordance with the requirements of the Edgemont Community Services District. Sewer improvements must be provided in: (1) all interior development streets; (2) all streets on the boundary of the development (in order to provide for full frontage improvements); (3) any off-site improvements required to provide sewer service to the site.
2. Developer must obtain and dedicate sewer right-of-way to the District. Facilities must be in either dedicated road right-of-way or in specially deeded easements to Edgemont Community Services District having a minimum width of 20-feet for single pipelines. Private roads must meet public street width requirements for easement dedication purposes. No structures, buildings, or other obstructions can be constructed on these easements. Fencing across District easements shall be reviewed prior to any potential approval by the District. The District's standard GRANT OF PERMANENT EASEMENT form shall be used (Appendix B of Section VII); and shall be formally accepted by District pursuant to the CERTIFICATION OF ACCEPTANCE OF GRANT OF PERMANENT EASEMENT (Appendix B of Section VII).
3. Sewerage facilities may include sewer pipelines, fittings and appurtenances, laterals, manholes and lift stations as are necessary to provide sewerage service to the development.
4. The Developer must make the necessary financial arrangements with the District to accomplish the above stated conditions.

B. DEFINITIONS

Wherever words defined herein, or pronouns used in their stead, occur in any of the contract documents, they shall have the meanings here given:

1. "District" – The word "District" shall mean the Edgemont Community Services District, Riverside County, California. The term "Agent", when used with reference to the District, shall include the District's officers, agents, consultants and employees.

2. "Board of Directors" – The "Board of Directors" is the District's governing body, publicly elected by citizens residing in the District's service area. The Board of Directors, consisting of five members, oversee the management of the District and meets the fourth and/or second Thursday of the month. In order to be eligible to serve, Board members must reside within the District boundaries and be registered to vote.
3. "General Manager" – The term "General Manager" shall mean the person designated by the Board of Directors of the Edgemont Community Services District, Riverside County, California, to have charge, supervision, and administration of the Edgemont Community Services District, Riverside County, California and shall be hereinafter call the "Manager".

The Manager may, at the Manager's option, designate a person or persons to represent them for inspecting, and reporting on the work as it progresses.

4. "District Engineer" – "District Engineer" shall mean the California Registered Professional Engineer designated by the District to provide general engineering supervision. The term "Engineer" shall mean the independently contracting professional consultant retained by the District on an ongoing basis to perform engineering services on behalf of the District and to advise the District's Board of Directors and staff on engineering matters.
5. "Contractor" – The word "Contractor" shall mean the successful bidder who is entering into a contract with the Edgemont Community Services District, Riverside County, California, or the developer, for the furnishing of the material, equipment, and/or services specified in a contract with Edgemont Community Services District, and the legal representatives of said party, or the agent appointed for said party in the execution of the contract. Said party is referred to throughout the contract documents as if of the singular number and the masculine gender. The Contractor shall hold a valid Contractor's license in accordance with the provisions of Division 3, Chapter 9 of the Business and Professions Code of the State of California, and all amendments thereto.
6. "Developer's Engineer" – "Developer's Engineer" shall mean the Registered Professional Engineer designated by Developer to design the proposed sewer system facilities in accordance with District rules, regulations and standards.
7. "Owner Property" – "Owner Property" shall mean any work site upon which the Contractor shall be required to perform under the contract including private property, property owned in-fee by the District or upon which it holds an appropriate lease, right of way, license, or encroachment permit.
8. "Developer" – The term "Developer" shall mean the person, persons, or firm having legal authority to enter into agreements with the District as related to work performed within public rights of way and Public Utility

Easements and having legal responsibility of the Engineer and Contractor retained or contracted by Developer to perform the work.

9. "Owner" – The term "Owner" shall mean the administrator of the Contract, which may be the District or Developer of the overlying project or land development.
10. "County" – "County" whenever used shall mean Riverside County, California.
11. "City" – "City" whenever used shall mean Moreno Valley, California or Riverside, California depending on the location of the project. For projects located in both cities, provide the full name of each City.
12. "Contract" – The term "Contract" shall mean the written agreement covering performance of the work including, but not limited to, the formal Contract, bonds and insurance, notice inviting bids, bidder's plan for construction, statement of experience, financial condition and references, bidding sheet, certified data sheet, special requirements, as provided in the Edgemont Community Services District's Standard Manual - (Latest Edition) and Drawings.
13. "Work" – The term "work" means that which is proposed to be constructed or done under the Contract or permit, including furnishing of all labor and materials.
14. "Availability Letter" – The "Availability Letter" is the letter the District provides to the Developer requesting sewerage service for their project.
15. "Standards Manual" – The "Standards Manual" is the District's guidelines for the planning, design, and construction of District's sewerage facilities and lighting annexation.
16. "Public Right of Way" – The District's facilities which are in the "Public Right of Way" are constructed and maintained in lands which are owned and operated by public agencies such as the cities of Moreno Valley and Riverside or the Country of Riverside. These lands include but not limited to paved streets and parkway areas.
17. "Easement" – When the construction of the District's facilities cannot be fully located on Public Right of Way and the only alternative is to construct said facilities on private property, an "Easement" must be obtained granting the District construction and maintenance rights on the property.

C. GENERAL PROCEDURE

As an option, electronic submittals are acceptable for the entirety of the submittal package. All documents must be clear, legible, properly scaled and documents not legible will be returned without review.

Procedures for the development of sewer systems are shown below. The following includes the applicable minimum requirements:

1. Developer submits two (2) copies of a project site map showing the boundaries of the area requiring sewer service and a request for a sewer "Availability Letter" from District. The appropriate fees outlined in the "Availability Letter" shall be paid to the District.
2. Board of Directors approves or denies said service.
3. Developer has sewer plans prepared by California licensed civil engineer to District specifications in accordance with applicable provisions specified in the District's Standards Manual.
4. Developer provides for dedicated right-of-way.
5. Developer's Engineer submits engineered drawings along with plan check fees to District as outlined in Section II of this manual for first (1st) plan check. Drawings must be submitted within one (1) year of the issuance of the "Availability Letter"; otherwise, an updated "Availability Letter" will be required and drawings will not be plan checked until an updated "Availability Letter" is issued.
6. Plan checking process: District reviews and approves plans. The District's approval of the plans prepared by the Developer's Engineer denotes agreement with the Plans as prepared and is not an acceptance of responsibility as to accuracy. The Developer's Engineer shall be responsible for any errors, coordination with other facilities, and interpretation of Plans. The intent is that the completed facility shall be in general conformance with the approved Plan and in accordance with the requirements of these Specifications. All revisions and changes in the plans must be approved by the Engineer. Section I, Paragraph E entitled "Revising Approved Private Development Sewerage Improvement Plans" provides the procedure that shall be followed for changes on District approved Plans.
7. Developer's Engineer submits original mylars with all approval signatures to District.
8. Drawings approved by the District will be void 24-months from the date of District's signature unless construction of the proposed sewerage improvements commences before the 24-month period. If construction does not start within the 24-month period, drawings must be re-submitted for plan checking (see above Requirement No. 6). Also, drawings will need to be re-submitted for first (1st) plan check, for drawings submitted over one (1) year from the previous plan check submittal and anytime if the tract is split into separate tracts (example: -1, -2).
9. Developer posts deposits and necessary fees with District.

10. Developer enters sewer system construction agreement with District. (Section VII, Appendix C).
11. Developer contracts with an appropriately licensed Contractor who has a Contractor's Data Sheet (Section VII, Appendix D) on file with the District.
12. Developer/contractor provides Insurance forms to District (Section VII, Appendix E).
13. Developer/contractor coordinates pre-construction conference with District (Section VII, Appendix F).
14. District issues "Notice to Proceed" (Section VII, Appendix F).
15. District inspects construction of facilities.
16. Developer's Engineer submits complete set of "As-Built" mylar drawings immediately after construction.
17. District accepts improvement facilities and issues "Notice of Final Acceptance."
18. Developer dedicates improvement facilities to District.

In the event that the District makes revisions to any of its rules, regulations or standards as described and set forth herein, all such revisions shall be incorporated and be in effect as if they were in force from the beginning of the procedure and shall therefore be adhered to and/or constructed accordingly, unless otherwise approved by the District.

D. REQUIREMENTS OF OTHER PUBLIC AGENCIES

The requirements for the design of sewerage plans and systems specified herein do not waive, nor are they intended to contradict, any requirements required by any other legal governing public agencies.

Engineers designing said plans and systems for inclusion into the District shall be knowledgeable of and shall comply with the following regulations:

1. The California Waterworks Standards, of the California Administrative Code, Title 22.
2. City of Moreno Valley
3. City of Riverside
4. Riverside County Environmental Health Department Requirements.

E. REVISING APPROVED PRIVATE DEVELOPMENT SEWERAGE IMPROVEMENT PLANS

If a revision has to be made to an approved mylar (for private development project) which has been signed by the District, the proposed revisions should be made in "red lines" on a blueprint or PDF, then it should be submitted to the District for review and approval. Once the red line is approved, the Developer's Engineer may check out the original mylar by bringing in his signed reproducible plan or electronic copy (i.e., pdf) of the original mylar prior to release of the original mylar to the Engineer so the District can hold them while the originals are checked out to him to make the revision. Optionally, the District will make another set of reproducibles, at the Developer's Engineers expense, to hold. Once the Developer's Engineer revises the originals per the approved red line plans, he should resubmit both the originals and the red lines to the District for final review and signature. Once the originals are signed for the revision, then the procedure would be the same as any newly signed mylar.

Revisions to signed plans must be made by the original Developer's Engineer.

Should revisions be requested by another engineer who is not the original Developer's Engineer, the revising engineer has two options to follow:

1. The revising engineer should contact the original Developer's Engineer and inform him about the proposed revision and get his approval in writing to make the revisions and to check out the originals; then follow the above procedures. The revising engineer is required to have a signature block signed and sealed by him for that particular revision on each revised sheet.
2. The revising engineer may process new plans showing all the existing in dashed lines and label as existing, and showing the revisions in solid lines. He must sign and seal these plans and bring them in for District review and signature.

Following the second option does not require the revising engineer to contact and have approval of the Developer's Engineer.

Checking out original plans should be done only by the Developer's Engineer; otherwise, a letter from the Developer's Engineer authorizing changes to the plans is required.

It should be noted that if plan revisions are required prior to or concurrent with the construction of the project and if these changes will require an increase in the bond amount, the revised plans will be held until a new estimate has been prepared and a new bond has been placed with the District.

SECTION II

DEVELOPMENT REQUIREMENTS

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II. DEVELOPMENT REQUIREMENTS

A. DEVELOPMENT PROGRAM

The program mission is to meet the sewerage and street lighting needs of development occurring within the community through a comprehensive approach to planning, design, and construction of required facilities.

The Development Requirements section of the Design and Construction Standards Manual presents a detailed description of the procedures and policies to be followed during any Developer-funded project within the District.

Procedures for development of the sewerage system are similar for Tract Map developments, Parcel Map developments, and Plot Plan developments. Most procedures and policy requirements herein have been prepared for Tract Map developments, but certain portions apply to all sewerage system development work within the District's service area.

B. ABOUT THE DEVELOPMENT REQUIREMENTS

The Development Requirements section of the Design and Construction Standards Manual is a guide for persons and/or entities associated with the establishment of new developments within the District and are applicable to developers, design engineers, construction contractors, and other parties conducting development activities within the District. The requirements will commonly refer to this group of stakeholders as "Developer".

The Development Requirements contains descriptive preambles that describe the major phases of a project. These introductory sections refer to procedures, forms, and ancillary information in appendices that the Developer will need to successfully complete a project. This section is organized into the following individual sections that mirror key phasing in the development process:

1. Pre-Design
2. Design
3. Construction
4. Close-out

This phased approach provides Developers with a sequential and logical organization of information and requirements that pertain to each phase. Through a common understanding of these requirements, the Developer and the District can work together in identifying and implementing the appropriate sewer facilities needed to support the proposed development. Another objective of these requirements is to clearly identify the responsibilities and financial obligations of the Developer in this effort.

To initiate the development application process, please include the Request for Sewer Availability as part of your first submittal to the District.

C. DISTRICT FEES AND DEPOSIT

The District applies fees to offset the public-service cost of a new development. An initial upfront deposit of funds is applied to various phases of a project. The deposit of “Advance Payment Against Actual Cost”, funds various functions such as plan-check, inspection, and other services required to implement the project. The following section provides a description of sewer facility charges and advance payment against actual cost.

1. Sewer Facilities Charges (Fees)

Sewer Connection Fee

The sewer facility charges as shown in “Current Charges and Deposits” (Appendix G of Section VII) are used by the District to pay for related infrastructure to provide sewer service to the proposed development. These charges are based upon the development’s number of “Equivalent Dwelling Units (EDUs).” An EDU is a measurement equivalent to the wastewater effluent generation of one home. The sewer facility charge, sometimes referred to as a “sewer connection charge”, is based upon the total number of EDUs calculated for the development.

2. Advance Payment Against Actual Cost (Deposit)

The “Advance Payment Against Actual Cost” is essentially a deposit that is estimated based on project requirements. It is important to note that the deposit may or may not be adequate to complete all project tasking. For example, a project might require more plan-check review because the initial plans and subsequent drafts lack details or did not address prior comments. Some examples of project tasking requiring **additional deposits include:**

- Sewer Availability Determination (availability letter)
- Accessory Dwelling Unit
- Grease Interceptor Waiver Request
- Industrial Waste System Review
- Plan-check
- Streetlight Annexation
- Inspection

Items submitted to the District for review should be complete and of high quality to encourage cost-efficiency and reduce the need to collect additional funds beyond the initial deposit (as needed to complete tasking). **Unused portions of the deposit will be refunded back to the Developer. Should it be determined that the initial deposit is not adequate to complete the task, additional funds will be requested and the subject task will cease until additional funds are received.**

D. PRE-DESIGN PHASE

The Pre-design Phase of a Developer-funded project starts when the Developer approaches the District with a request for, and renders a deposit towards the actual cost of a Sewer Availability Letter; and ends prior to submitting the first plan-check for District review.

1. About the District's Design and Construction Standards Manual

Products, manufacturing techniques, construction methodologies, and District operational and design parameters are constantly evolving and improving. As such, the District's Design and Construction Standards Manual will be updated and revised periodically. It shall be the responsibility of the user of this manual to always apply the latest edition of the District's Standards Manual as can be found on the District's website (www.edgemontcsd.specialdistrict.org). **Failure to utilize the latest information contained on the website shall not be grounds for any claims against the District regarding non-compliance to current standards.**

2. Sewer Availability Letter Requests

The Developer makes the request for a Sewer Availability Letter using the "Sample Template – Availability Letter Request" (Appendix H of Section VII) and submits it to the District with the items identified on the "Requirements and Procedures for Requests of Availability Letter" (Appendix H of Section VII) along with the appropriate Advance Payment of Deposit. The District's Engineer will write the Sewer Availability Letter and submit it to the District. The District will schedule the Availability Request to be presented to the District's Board of Directors for consideration of approval at the next available meeting. Because of the State of California's Brown Act, which governs advance notification to the public of Board meeting agendas, the request may not necessarily be scheduled for the next calendared Board meeting. After approval from the Board of Directors, the District will inform the Developer of the approval.

E. DESIGN PHASE

The Design Phase begins when the Developer's Engineer submits the first plan-check with the appropriate deposit as determined by the District and ends when the District schedules the Pre-Construction meeting for the project. During this phase, the Developer's Engineer will submit design plans for the sewer facilities for the District's review and approval. The Developer will, if required by the Planning agency, initiate proceedings for street light annexation. The District may require the Developer to execute a Construction Agreement.

Only non-residential (e.g., commercial and industrial) projects will be required to undergo the District's Industrial Waste Review Process, which runs parallel to the plan-check process in the Design Phase, as detailed in this section.

1. Plan-Check Process

After the appropriate Plan-check Deposit is paid and the Developer's Engineer submits the proposed drawings for the first plan-check along with all of the items detailed on the "Plan Check Submittal Checklist" (Appendix N of Section VII), the District will follow the procedures outlined in Section III, Paragraph B entitled "Plan Check Procedural Guidelines".

When the District's Engineer is satisfied with the current plan-check submittal, the Developer's Engineer will be authorized to produce and submit Mylar drawings to the District for final review and signature by the District's General Manager.

Prior to mylars being approved and signed, the District will require that:

- Development Fees are calculated as of the date that design mylars are complete and ready for execution by the District.
- All appropriate fees and deposits be paid.
- All appropriate easements be executed using the "Grant of Permanent Easement" template (Appendix B of Section VII), and if required by the District, the execution of the Construction Agreement between the Developer and the District.

During the plan-check process it is important to note that the efficiency of the plan-check process and its timeliness is directly related to the quality of the design package submitted by the Developer's Engineer.

The deposits and fees owed by the Developer are required at the time the Mylars are signed.

The deposit for the District's inspection services, which is required for the Construction Phase of the Project, will be provided by the Developer after the Mylars are signed. The Inspection Deposit is calculated as a minimum deposit.

2. About the District's Construction Agreement

Some Developer-funded projects may require that the Developer enter into a construction agreement with the District (Appendix C of Section VII). As outlined in the sample agreement, the Developer will be required to provide the appropriate bonds securing the agreement. This determination will be made by the District on a case-by-case basis, at the discretion of the Board.

3. Proceedings for Street Lighting Annexation

The Developer's project may be required by the Planning Agency to annex into a Street Lighting District as part of a condition for approval. The District forms Lighting Districts to establish an annual levy of assessments to cover the cost of operating and maintaining street lights. The

assessment amount is based on the cost of electricity that the District purchases from Southern California Edison Company (SCE) and the District's administrative costs. SCE owns the street lights. The District acts as a liaison between the property owners and SCE to collect and remit funds to pay SCE's costs of providing street lights. SCE cannot collect payment directly from the homeowners for street lights. The District's Board of Directors has adopted a policy regarding street lighting annexation (Appendix I of Section VII), which outlines the procedures and requirements for initiating annexation. To initiate the proceedings for street light annexation, the Developer must follow the procedures detailed in the "Requirements of Developer for Street Lighting Annexation" (Appendix I of Section VII), along with the required fees.

4. Industrial Waste Review Process for Industrial, Commercial, and Non-Residential Projects

All Commercial, Industrial, and Non-Residential Developer Projects will be required by District ordinance, Federal and State regulation to undergo the District's Industrial Waste Review process. This process runs in parallel to the plan-check process. The Developer will submit to the District a completed "Wastewater Discharge Survey" form (Appendix J of Section VII), along with the items specified on the form to begin the process. The District's Industrial Wastewater section will review the information on the form to determine if the project will require on-site pre-treatment and to determine the sewer facility fees for the project. After determining the requirement for on-site pre-treatment, the Developer will submit plans for the on-site pre-treatment facilities to be reviewed and approved by the District's Industrial Waste Section. Once these plans have been approved, the Industrial Waste Inspector will oversee and inspect the installation of the on-site pre-treatment facilities to their completion and the District's approval. At the Final Close-out Phase of the project, and prior to the Final Inspection, all on-site pre-treatment facilities must be completed and approved by the District's Industrial Waste Section.

a. Assessment of Industrial Waste (Sewage) Fees for Non-Residential

The facility fees and monthly charges are based on the estimated volume of wastewater and the quality of the wastewater discharged using the information supplied to the District by the Developer on the Wastewater Discharge Survey form.

b. Re-assessment of Industrial Waste (Sewage) Fees for Non-Residential

Under certain situations (as described in the following), the District will re-assess the annual sewer charge.

The District will also re-assess the industrial waste requirements when there is a change in ownership and/or property use. Similar to a new development, the Developer or new business will submit

to the District a completed “Wastewater Discharge Survey” form (Appendix J of Section VII) along with the items specified on the form to begin the process. As described in the section above (re-assessment subsequent full occupancy), the annual sewer charge will be re-assessed and, if required, an adjustment in payment will be made.

F. 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 sewer facilities per the approved plan.

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. The District’s Inspector will be monitoring for quality assurance, all locations along the excavation that cross the District’s facilities such as, air evacuation valves, sewer laterals, along with any other facilities that will be accepted by the District. The Developer shall notify the inspector five working days in advance of any work on the dry utilities in order that inspection may be provided with minimal inconvenience to the District or delay to the Contractor. Any work done around the District’s facilities in the absence of the District’s Inspector without permission shall be subject to rejection.

As part of the construction procedures for all sewer facilities VCP or PVC pipe is used, 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 facilities meet the District’s specifications (see procedures for Video Inspections contained in this section).

1. Pre-Construction Meeting

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 District’s Engineer or his designee (using the District’s Pre-Construction Meeting Agenda) conducts the pre-construction meeting. The Development Supervisor, 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 City representative present at the pre-construction meeting, but it is not a requirement.

2. Requirements for Pre-construction Meeting

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

- a. The District's Engineer 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-Construction Conference and Notice to Proceed checklist (Appendix F of Section VII) have been completed.
- b. A District Inspector has been assigned to the project.
- c. All necessary material submittals for the project have been reviewed and approved by the District's Engineer or his designee a minimum of five working days prior to scheduling the pre-construction meeting.
- d. The Developer has presented to the District:
 - (1) Complete cut-sheets for the first three hundred (300) feet for each crew's start location.
 - (2) Completed "Contractor's Data Sheet" (Appendix D of Section VII)
 - (3) A copy of the Contractor's safety program.
 - (4) A list of the Certified Competent Persons who will be on the project.
 - (5) A copy, from the contractor, of the certifications for each person and a Certified Competent Person for confined space entry on the job.
- e. The District's Engineer who has reviewed the information supplied by the Developer and contractor will determine if the pre-construction meeting can proceed.
- f. The District's Engineer coordinates with the attendees to set a time and date for the pre-construction meeting to be conducted.

The pre-construction meeting is conducted in accordance with the requirements found in Appendix F of Section VII, 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 checklist are provided to those in attendance.

After the pre-construction meeting is complete, the District, along with the District's Inspector, sets a start-work date within two (2) working days; and the Development Supervisor will sign and issue a Notice to Proceed to the Developer.

3. Video Inspection of Sewer Pipe Lines

Video inspections of sewer lines on development projects are done to ensure that the newly installed sewer lines meet the District's standards and specifications for material and installation. 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 Contractor, using the Contractor's video inspection equipment, with the District's Representative present, conducts the video inspection per the requirements outlined in "Sewer Pipeline Construction Specifications" (Section V). 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 MM-DD-20YY. The Developer is responsible for contracting directly with a qualified video inspection company and shall submit said qualifications to the District for review and approval prior to initiating the subject work. Refer to the Section V, Basic Specifications, Section C entitled "Sewer Pipeline Construction Specifications" for said qualifications. If the District did not approve the video inspection company the District has the right to reject all work performed by the unapproved video inspection company.

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. All sewer lines, laterals and manholes have been installed per the approved plans.
- d. All lines have been cleaned to the satisfaction of the District Inspector.

- e. All manholes are accessible to the video truck and at the elevation and grade for base paving.

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 District 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 Engineer for the project file and a copy is given to the District 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.

After the District 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.

4. 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 proposed placement and location of these plugs and bulkheads will be submitted to the District for review. 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 Engineer.

Under no circumstances are these plugs or bulkheads to be removed without permission from the District.

5. 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.

G. CLOSE-OUT PHASE

The Close-out Phase of a Developer-funded project starts when: 1) all prior phases are complete, 2) all homes are occupied, 3) construction is complete on the project, 4) final street cap paving is complete, and 5) the District has received a written request from the Developer to conduct a final inspection for a Notice of Acceptance. During this phase, the Developer's Superintendent and Contractor will be working with the District's Inspector to correct any items related to the installation of the sewer and prepare the project for final inspection by the District's Engineer. Also, during this phase the District will be working with the Developer's Superintendent and Contractor to ensure that all of the items identified on the "Project Close-Out Checklist" (Appendix K of Section VII) are completed and that all outstanding financial obligations are met. Also included on the Project Close-out Checklist, in addition to the mylar plans, ECSD requires submission of three digital copies of the as-built drawings in the form of digital disks for Tracts, Plot Plans, and Parcel Maps, etc. After Board approval, the District will write a letter to the appropriate Planning Agency notifying them that the District has accepted the project. All activity and costs up to final acceptance will be calculated and a final invoice will be sent to the Developer for payment. In cases where a credit is due, the invoice will be accompanied with a check for the remainder of those funds that were deposited towards the project.

1. Final Inspection

The Final Inspection is a much more thorough inspection of the sewerage facilities compared to the pre-occupancy inspection. The Final Inspection is normally conducted after homes are occupied or construction has been completed on the project, and final street cap paving is complete. On Individual Project and Plot Plan Projects, this inspection is conducted after all the sewerage facilities have been installed and after final street cap paving is complete. The District's Engineer, the District's Inspector, and a representative of the Developer must be present to conduct the final inspection. The procedure for this inspection is as follows:

- a. The Developer requests final close-out and acceptance for the project by sending a letter request to the District.
- b. The District's Engineer will verify that all items on the Project Close-out checklist pertaining to the tract project (payment of fees, easement documents, as-built drawings and CDs, etc.) have been completed and have been presented to the District.
- c. The District's Inspector ensures that the project is ready for final inspection. After all items are complete to the District's specifications (and the approved plan) the Inspector contacts the District's Engineer and notifies them that the project is ready for a final inspection.
- d. The District's Engineer schedules a time for the final inspection.

- e. Once the required persons have accepted the time and date of the final inspection, the District's Engineer will notify the Developer and the Inspector of the time and date of the inspection. The Tract Superintendent, the District's Inspector, and the District's Engineer (or his designee) must be present to conduct the inspection. If any of these persons cannot attend, the inspection must be rescheduled. A copy of the as-built drawings and the completed and signed copy of the Inspector's punch-list must be present at the final inspection.
- f. The District's Engineer (or his designee) conducts the Final Inspection and identifies any items for correction. The District's Inspector will ensure that any items identified during the final inspection are corrected.
- g. The District's Inspector will verify that the as-built plan on the submitted CD is accurate and incorporates any changes identified on the final walk. The District's Engineer will request that the Developer resubmit the CD if any inaccuracies are identified.
- h. After review and approval by the District's Engineer, the District schedules the project for consideration of acceptance at the next Board meeting. Upon approval by the Board, the District will send the appropriate letter to the City notifying them of the District's acceptance of the facilities.

2. Issuance of Sewer Permit

This District will issue the Sewer Permit for the project upon the completion of all required close-out items, Board acceptance, final inspection, meeting all financial obligations, and final inspections of all other agencies. The Developer shall submit the following information to assist in permit issuance (Section VII, Appendix L).

- a. Provide Project Description (No. of Units, Residential, Commercial, Industrial, Retail, Restaurant, Other)
- b. Project Address, Lot No., Tract/Parcel Map No.
- c. Project's Assessor Parcel Number
- d. Owner's Name
- e. Owner's Mailing Address
- f. Owner's Telephone Number

This information must be provided and incorporated into the sewer permit. Once the sewer permit is completed it must be signed and fully executed

by the District and the District's Inspector in order for the project to be fully accepted and released.

SECTION III

GENERAL DESIGN REQUIREMENTS

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III. GENERAL DESIGN REQUIREMENTS

A. GENERAL

The sewerage systems shall be designed in accordance with the Edgemont Community Services District's Master Plans, Rules and Regulations, Ordinances, Standards, Specifications, and Standard Drawings, under the direction of a civil engineer licensed in the State of California. Abbreviations are used in the following commentary hence we refer the reader to Section G entitled "Abbreviations" for a description of the abbreviations. All District fees and facilities charges associated with the proposed sewer system shall be paid for by the Developer.

B. PLAN CHECK PROCEDURAL GUIDELINES

1. Processing Sequence. Refer to "General Procedure" in Section I.

After an Availability Letter has been issued and prior to Developer's Engineer commencing with development design engineering, it is **recommended** that the Developer's Engineer and the Developer's Representative meets with District Engineering personnel. The following plan check procedures will be followed:

- a. Developer's Engineer submits first plan check package to District; District transmits to District's Engineer.
- b. The District's Engineer conducts plan check, makes redline changes and transmits redline plans back to Developer's Engineer. **Note: If, at second plan check, the amount of redlines is excessive, the District will request the Developer's Engineer to meet to discuss any problems or deficiencies. The Developer will also be made aware of this meeting and is welcome to attend.**
- c. Developer's Engineer makes revisions and transmits back all subsequent plan checks to the District's Engineer along with the redline copy; Item b. above is then repeated etc. **Note: Redline set must accompany revised set, or plans will be returned to the Developer's Engineer.**
- d. Once all revisions are complete to the satisfaction of the District and District's Engineer, a recommendation that Mylars be printed will be submitted. This will be in the form of a written request from the District to the Developer's Engineer.

At the time the District receives the plans from the Developer's Engineer, if the changes have not been made, the plans are returned to the Developer's Engineer with a request to complete the redline changes.

If the Developer's Engineer is adhering to the District's standards and specifications outlined in this manual, and the above is followed, it is expected that the number of plan checks should not exceed four.

Approximate timing for each plan check turn-around, between the District and the District's Engineer, is three weeks for all submittals.

Note: Any changes to the original intent of the plans (such as adding phases to a tract) may be considered as a "new" plan check.

2. Format of Plans. Sewer plans shall be formatted as follows:

- a. All sheets shall be 24" x 36" (see Appendix M of Section VII for title block format), ink on reproducible mylar. Scale shall be 1" = 40' horizontal and 1" = 4' vertical.
- b. Index sheet shall include an overall layout of the sewerage system at a scale that clearly delineates the following: streets, lots, manholes, and any existing facilities involved; sewer certifications, general notes, legend, estimate of quantities and a location map.
- c. Plan and profile sheets shall include all proposed and existing utility lines, both plan view and elevation; existing ground surface and proposed street grade, existing and proposed sewer lines, with the flowline plotted in the profile, and the slope indicated between each vertical point of intersection. Sewer lines and appurtenances shall have stationing with respect to the center line street stationing.
- d. Self-adhesive or add on labels, certifications, details, etc. are not acceptable on final plans.

3. Requirements for First Plan Check*

a. RESIDENTIAL AND COMMERCIAL/INDUSTRIAL DEVELOPMENTS

1. Executed Project Identification Form (Appendix N of Section VII) signed and stamped by the Registered Engineer of Record
2. All applicable plan check attachments outlined in the Plan Check Submittal Checklist (Appendix N of Section VII) with the appropriate number of copies.

4. Subsequent Plan Checks

When the initial plan check is complete, the Developer's Engineer will be notified to pick up "red-lined" prints from the District Engineer's office at **3788 McCray**

* Incomplete submittals will not be accepted. If any of the above items are not applicable to the project, please note the reason in the transmittal letter.

Street, Riverside, California 92506. Whenever changes other than District corrections are made, these changes shall also be indicated on the check print in order to expedite the processing of the plans. Additionally, Developer shall resubmit all street plan, storm drain plan, etc., wherever revisions to these drawings occur.

5. Plan Approval

Upon approval, the original shall be submitted to the District for the signature of the General Manager or his agents.

- a. When the original has been signed by all agencies involved, send four (4) complete sets of prints along with one mylar reproducible transparency to the District office.

C. SEWERAGE PLAN CERTIFICATIONS

The following certifications shall be placed on the first sheet of the plans as appropriate:

Sewerage Certification

EDGEMONT COMMUNITY SERVICES DISTRICT

I certify that the design of the sewerage system in Tract/Plot Plan/Parcel Map No. _____ is in accordance with the sewerage system expansion plans of the Edgemont Community Services District, and that the waste disposal system is adequate at this time to treat the anticipated wastes from the proposed tract/plot plan/parcel map. This certification does not constitute a guarantee the sewerage system can transport or treat flows that exceed the District estimated flows for the specific type of land use proposed for this development.

General Manager

Date

CERTIFICATION VOID AFTER TWENTY-FOUR (24) MONTHS FROM ABOVE DATE.

Edgemont Community Services District Engineer
Recommended by:

District Engineer

Date

The following certification shall be placed on the first sheet of the plans for on-site sewerage plans:

Private Certification

The Edgemont Community Services District has reviewed the sewerage facilities within the public right-of-way for this project, said facilities are in conformance with District standards and are approved. Said approval does not include any on-site/private facilities.

Edgemont Community Services District
General Manager

Date

CERTIFICATION VOID AFTER TWENTY-FOUR (24) MONTHS FROM
ABOVE DATE

D. GENERAL NOTES AND REQUIREMENTS

1. The Contractor shall notify ECSD at least two working days prior to construction.
2. Separation requirements between sewer lines horizontally (10' minimum, 5' for laterals) shall conform to the County of Riverside Health Department and the California Department of Public Health (CDPH) Requirements. The Agency's specifications that are more restrictive shall govern in all cases.
3. All construction and materials shall comply with ECSD standards and specifications. Any construction and/or materials not covered in ECSD standards shall be approved by the District prior to construction.
4. Prior to construction of the sewer lines, the Contractor shall expose the existing sewer lines where connections will occur and verify their elevation and location. Approval of ECSD of a proposed connection to an ECSD facility does not imply approval of the correctness of the elevation and/or location shown on the Developer's sewer plans.
5. Contractor shall not backfill trench until the District's Inspector has obtained as-built stationing on all structures. It shall be the Contractor's responsibility to provide accurate record drawings to the District immediately after construction.
6. Approval by ECSD implies no permission other than that within the District's jurisdiction. All permits required by law shall be acquired by the applicant or his Contractor. Requirements of ECSD shall take precedence over requirements of other agencies only where ECSD requirements are more stringent.

7. Contractor shall shore all trenches and conduct all construction and operations in accordance with CAL-OSHA requirements and have all encroachment and excavation permits prior to the start of work.
8. Pipe joints **shall not** be pulled at any angle greater than the maximum angle recommended by the pipe manufacturer.
9. The proposed work shall be subordinated to any operations ECSD may conduct, and shall be coordinated with such operations as directed by ECSD
10. A pre-job meeting shall occur prior to construction. Attendees shall include the District's Engineer, the District's Inspector, Tract Superintendent, City of Moreno Valley representative and the Contractor who will perform the work. "Cut-Sheets" shall be provided to the District prior to this meeting for its review.
11. The Contractor shall notify Underground Service Alert (U.S.A.) and have all underground utilities marked two (2) working days prior to construction, per U.S.A. requirements.
12. Contractor shall furnish and install all facilities in accordance with the District's Standard Specifications and Standard Drawings for Sanitary Sewer Facilities (latest revision). The Specifications and Standard Drawings are available from the District. Contractor shall be in possession of District's Specifications and Standard Drawings on the job site at all times.
13. All permits required by law shall be acquired by the Applicant or their Contractor. Copies of the excavation and encroachment permits will be given to ECSD prior to the pre-job.
14. All construction shall conform to current CAL-OSHA safety requirements.
15. Contractor shall designate a qualified superintendent with full authority to act on behalf of the Contractor. Said superintendent shall be on the job site at all times during construction.
16. The District's ability to provide sewerage services to this tract may depend on the developers of other tracts completing the construction of facilities. The District assumes no responsibility for the construction of the facilities, which are to be constructed by such developers.
17. If District facilities are located on land which are private (i.e., outside public rights-of-way) legal descriptions and plats (easement documents) shall be prepared in accordance with District standards by the Engineer or Land Surveyor of Record. The easement documents shall be reviewed and approved by the District prior to final acceptance of the facilities by the District.

18. The construction of the sewer main, manholes, and laterals, and a successful first air test shall be completed prior to the commencement of the waterline installation.
19. Immediately upon completion of construction of the sewer pipelines, the Developer shall hire a District approved video company to video the pipelines in DVD format (video file format to be viewable on a standard DVD player/computer and/or as approved by the District). District or District representative shall review said DVD's for potential construction defects prior to acceptance of the project. Payment for all such services shall be borne by the Developer. Final DVD submitted to the District shall be edited, if necessary, to include only accepted reaches of the pipeline.
20. Inscribe an "S" on the face of the curb to indicate where sewer laterals services cross the curb line.
21. Compaction tests for sewer facilities shall be performed by a qualified geotechnical firm and paid for by the Developer. All compaction tests shall be made in accordance with District's specifications. Soils testing results shall be given to the District Inspector on a daily basis. At the conclusion of the project, a final compaction report shall be given to the District. The report shall be signed and stamped by a registered geotechnical engineer and shall certify all compaction results met the most stringent Agency's requirements.

E. SEWER NOTES

1. The sewer line shall be installed by a Private Contractor in accordance with ECSD Standards, Plans and Specifications. The Contractor shall be approved by ECSD
2. Type of sewer pipe used shall be vitrified clay pipe, (extra strength) and shall have Type "G" joints (bell and spigot) for sizes 4-inch diameter through 42-inch diameter pipe per Section 207-8, Standard Specifications for Public Works Construction, Latest Edition.
3. Upon review and approval by ECSD an alternate material, PVC plastic sewer pipe for 8-inch to 12-inch diameter, may be utilized. PVC plastic sewer pipe shall be SDR 35, minimum wall thickness per Section 207-17 of the Standard Specifications for Public Works Construction, latest edition.
4. All work and materials shall conform to requirements of City of Moreno Valley Standards and Specifications for the Improvements of Streets and subsequent amendments.
5. Grading over sewer mains shall be done in such a manner as to prevent the ponding of water.
6. The top of all manholes located in pavement shall be raised to pavement grade (within 5 working days) after streets are paved and/or capped.

7. House connections, wyes, and laterals shall be located in the field at the direction of the subdivider.
8. The minimum class bedding for VCP sewer shall be Class "B-2" in accordance with ECSD Std. Dwg. No. S-1, Section VI.
9. The minimum class bedding for PVC plastic sewer pipe shall be Class "I" in accordance with ECSD Std. Dwg. No. S-1A, Section VI.
10. Sewer Contractor shall successfully perform two air tests. The first air test shall be completed immediately after installation, backfill and compaction of the sewerage system. The second air test shall be conducted after installation of all the other utilities and prior to paving of the streets. All air tests shall be paid for by the Developer.
11. Sewer laterals crossing existing curb and gutter shall be backfilled with a 1 sack cement, sand slurry backfill.
12. Connections to existing pipelines shall only be made with District inspector present. Test plugs shall only be removed upon direction of the District.
13. Should modification and/or reconstruction (including raising manholes to grade) of an existing manhole be required, prior to the removal of the frame of the sewer manhole, the channel of the manhole shall be completely covered with planking or other suitable material as approved by the District so as to prevent debris from entering the channel. After the manhole reconstruction has been completed, all debris shall be removed from within the manhole and the cover over the channel shall be removed.
14. Sewer plug(s) shall be installed prior to commencement of sewer construction and shall be inspected on a weekly basis by the Contractor to ensure that sewer plug(s) are in place. In addition, the location of the sewer plug(s) shall be identified on the plans by the Contractor. The location of all test plugs and their removal shall be coordinated with the District Inspector.

F. IMPROVEMENT PLAN CHECK LIST

The following is a list of District requirements regarding sewerage improvement plan preparation. The Developer's Engineer should review this list prior to each plan check submittal to ensure conformance with the District's requirements.

The District's review of Plans and Engineering data will cover only general conformity of the design with the Standards and Specifications outlined herein. The District's approval of Plans and Engineering data will not constitute a blanket approval of all dimensions, quantities, physical properties, materials, equipment, devices, or items shown, and does not relieve the Developer's Engineer from any responsibility for errors, deviations, or defects in design therefor.

General

1. Project Identification Form (Appendix N of Section VII) must be completed, signed and stamped by the California Registered Engineer of Record for every plan submittal.
2. All sheets must be 24" x 36" and have the District's standard title block. Scale is 1" = 40' horizontal and 1" = 4' vertical.
3. The first sheet of the improvement plan set is an index sheet that includes an overall layout of the sewerage system at a scale that clearly delineates the following: streets, lots, manholes and any existing facilities involved. Additionally, the first sheet must include sewer certifications, general notes, legend, estimate of quantities and a location map.
4. Plan and profile sheets must show all proposed and existing utility lines, both plan view and elevation; existing ground surface (if facilities are to be constructed prior to mass grading) and proposed street grade, existing and proposed sewer lines, with the flowline plotted in the profile, and the slope indicated between each vertical point of intersection. Sewer lines and appurtenances shall have stationing with respect to the center line street stationing. Label all pipeline centerlines with bearings and distances.
5. Self-adhesive or add on labels, certifications, details, etc. are not acceptable on final plans (mylars).
6. Construction notes with reference to District standards shall be provided on each individual plan sheet
7. Plans must be in conformance with all District standards and specifications.
8. Proposed improvements must conform to State and County health separation requirements (horizontal and vertical). In case of conflict, the most stringent requirement shall prevail.
9. Show laterals to each lot.
10. Check that minimum cover is achieved for all pipelines (plot existing & proposed ground profiles where necessary).
11. Check to make sure quantity estimates are correct.
12. Each construction note should reference a ECSD Standard.
13. Prior to District approval, a California Registered Civil Engineer's signature and stamp is required.
14. Check master plans for proper pipeline sizing

15. Easements need to be shown on the Improvement Plans and on the Final Map. Additionally, submittal of a separate easement document (description and plat) conforming to District format is required.
16. North arrow orientation shall be to the upper half of the plan sheet; and stationing shall increase left to right across the plan street.
17. Topography with contours shall be provided by field survey or aerial photography in areas where pipelines are to be constructed in existing conditions (i.e., no proposed grading).
18. Provide USA notification note on each sheet.
19. Use private on-site certification wording for private sewerage systems.
20. Plot the locations (horizontal and vertical) of all existing utilities and agency facilities.
21. Check the effects of proposed cuts/fills over existing pipelines. Provide profile over existing pipeline where requested by the District.
22. Make sure curve radii are acceptable (allowable joint pulls).
23. Check centerline lengths from record maps.
24. Vertical curves for the pipelines are not allowed.
25. Provide support for existing utilities where sewerlines cross below.
26. Check grading, street, storm drain, and erosion control plans for possible affects to District facilities.
27. Check environmental clearances.
28. Review soils report.
29. Provide profiles of "stubbed" mainlines.
30. Provide definitive match lines between sheets.
31. Field check site
32. Identify "Master Planned" improvements on plans.

Sewer Checking Criteria by Developer's Engineer

1. Make sure each lot can be served by gravity flow.
2. Check cover (7.0' minimum to top of pipe) unless otherwise approved by the District.
3. In general, sewer lines should be located per City of Moreno Valley Standard Plan No. MVSI-180A, Normal Location of Underground Utilities.
4. Stationing should be provided on all manholes.
5. Maximum manhole spacing is 350'; unless otherwise approved.
6. Manholes should be located near all BC's, EC's and PCC's. Manholes are mandatory at PRC's.
7. Make sure sewer line is deep enough to serve adjacent properties by gravity flow (3' drop out of building + (length from building to main x 2%) + 1' drop for wye).
8. Verify proper lateral size (4" diameter for single family residential, 6" diameter minimum for all other uses).
9. Manhole Fall: 0.1' on all bends 45° or greater; run "in-line" grades through manholes for grades of at least 2.5% (provide 0.1' fall on grades less than 2.5%).
10. Provide crossing elevations on plans for service laterals where they must cross storm drain facilities.
11. Whenever possible, in commercial and industrial areas, sewer laterals shall connect directly into a manhole.
12. Plot parallel storm drain profiles (dash) and make sure sewer laterals do not conflict.
13. Check street improvement plans where existing sewer lines occur for sewer lateral additions, relocations, manhole adjustments to grade, etc.
14. Check effects of proposed cuts/fills over existing pipelines.
15. Check to make sure system is set-up for future extensions and tributary drainage areas.
16. Check the effects of additional flow on downstream facilities.
17. Check manhole rim elevations from street plans.
18. For commercial and industrial developments, establish a flowline elevation of the lateral at property line.

19. Check for industrial waste provisions for all commercial and industrial projects.
20. Use as steep a slope as possible where the number of tributary dwelling units may not achieve 2 fps velocity in the pipe.
21. Check for potential lateral conflicts with other facilities. Plot unusual or critical crossings in profile.
22. Check bedding for sewer pipe depth per district standards. Prepare pipe loading calculations where required.
23. Encase the sewer for load carrying capability when top of sewer is within 3 feet of surface of street. (Ductile iron pipe as alternative).
24. Check pipeline alignment for future extensions, both vertically and horizontally.
25. Where pipe slope is at minimum, conduct a field survey to verify the location and elevation of point of connection.
26. Check the on-site system for the need of any required industrial waste clarifier, grease interceptor, or oil/sand separator.
27. Check to make sure the proposed and/or existing sewer has proper cover.
28. Curved sewers must meet the District's/manufacturer's requirements (minimum radius or maximum joint pull).
29. Backwater valves should be provided where required per Section 409 of the Uniform Plumbing Code.
30. Check that the design pipe slope (i.e., along pipe centerline) is based upon actual sewer main length and is greater than minimum.
31. When sewer is located in an easement, the manholes must be readily accessible by maintenance trucks. Bolt-down manhole covers are required when manholes occur on private property.
32. A detail or construction note should be provided for manholes the bottom of which need to be re-contoured for flow when sewer line joins existing manhole.
33. Sewer lines should be stubbed for future extension where required.
34. Manholes must be provided on the mainline where sewer laterals are 8" in diameter and larger.
35. Soffits must be matched where sewer mains of different diameters connect.

36. Rim elevations should be shown to the nearest 0.1' at all structures.
37. Make sure the street profile agrees with street plans and any revisions thereto.
38. Alternate pipe material or a protection encasement detail should be provided for VCP that will be crossed by proposed storm drains or other structures where clearance is within 18" of bottom of crossing.
39. Where possible, a minimum slope of 1% should be used on cul-de-sacs.
40. Check if plumbing fixtures are to be installed on a floor level that is lower than the next upstream manhole cover of the public sewer. If so, such drainage piping shall be protected from backflow of sewage by installing an approved type of backwater valve. Refer to Section 710 of the California Plumbing Code, Latest Addition for details. Also refer to Section IV, Sewer System Design Criteria, Paragraph I, Backwater Valves for additional requirements.

G. ABBREVIATIONS

ABAND	Abandon	FUT	Future
AH	Ahead Station	FLG	Flange or Flanged
ANSI	American National Standards Institute	G	Gas line or service
ASTM	American Society for Testing Materials	GPM	Gallons per minute
AV	Air Valve	GV	Gate Valve
AWWA	American Water Works Association	HPI	Horizontal Point of Intersection
BC	Begin Curve	MH	Manhole
BF	Blind Flange	PCC	Point of Compound Curve
BFV	Butterfly Valve	PE	Polyethylene
BK	Back Station	PRC	Point of Reverse Curve
BO	Blow Off	PROP	Proposed
BOT	Bottom	PVC	Polyvinyl Chloride
CL	Centerline	RED	Reducer
CML/CMC	Cement Mortar Lined/Cement Mortar Coated	RJ	Restrained Joint
CO	Clean Out	R/W	Right-of-way
CPLG	Coupling	S	Sewer main or house lateral
CTS	Cathodic Test Station	SD	Storm Drain
DIA	Diameter	STA	Station
DIP	Ductile Iron Pipe	ST. LT.	Street Light
DWG	Drawing	STD	Standard
EC	End Curve	SWR	Sewer
ECSD	Edgemont Community Services District	T	Telephone cable or conduit
ELEC	Electrical	UG	Underground
ESMT	Easement	VCP	Vitrified Clay Pipe
EX	Existing	VPI	Vertical Point of Intersection
FH	Fire Hydrant	W	Water main or service
FL	Flowline	WSP	Welded Steel Pipe

H. GUIDE FOR EASEMENT DRAWINGS

Maps for easements over private lands should contain sufficient information to reflect every call-out as it is recited in the description.

1. Required Information
 - a. North Arrow (orientation to upper half of plat)
 - b. Scale
 - c. Tract Numbers
 - d. Lot Numbers
 - e. Lot lines
 - f. Ownership Lines
 - g. Section Corner or Rancho Corner Data
 - h. Street R/W and Street Names
 - i. Section, Township & Range and Base & Meridian Data or Rancho Data
 - j. Call out of Easement
 - k. Parcel Numbers
 - l. Dimensions
 - m. Title Block
 - n. Drawing Number
 - o. Signature of General Manager
2. Additional Information When Bearings are Used
 - a. Basis of Bearings
 - b. T.P.O.B. (True Point of Beginning)
 - c. Bearing and Distances
 - d. Curve Data
 - e. Designated Point
 - f. Existing Easement Data
3. Right-of-Way Width Requirements for Easements are as follows: The minimum required width for all easements shall be 20 feet. Generally, all pipelines shall be installed at the centerline of the easement. When approved by the District, pipeline may be installed no less than 5 feet from either easement boundary.

4. Tract Maps

- a. Construction prior to Tract Map recordation will require acquisition of rights-of-way description. The description shall be originated by the tract engineer.
- b. Public Utility easements are not acceptable.

5. Areas Not Included in Tracts

Rights-of-way acquisition shall be completed prior to construction, and prior to Tract recordation where associated with Tract development.

6. Easements Within Subdivisions

- a. Public Streets - no separate easements are required.
- b. Private Streets or Easements across Private Lands - Easements shall be acquired by separate instrument.

7. District Acceptance of Permanent Easement

All easements offered to the District for acceptance shall be formally acknowledged by a "Certificate of Acceptance" as shown in Appendix B of Section VII.

The Certificate of Acceptance, which is required for the County Recorder of Riverside, will require the ECSD's Board of Director's authorization and be signed and notarized by the District.

I. ESTABLISHMENT OF LINE AND GRADE

The line and grade of the improvements shall be per the District approved drawings. Survey control ("staking") shall be necessary for all sewerline improvements and "cut sheets" shall be submitted to the District prior to pre-construction conference.

J. CONTRACTOR'S DATA SHEET

Owners, Developers and Developers' Engineers are advised that any contractors who intend to construct facilities for the District submit to the District a Contractor's Data Sheet before they may engage in construction. The data sheet must be submitted at least 10 working days prior to bidding on a project. A Contractor's Data Sheet is included for reference in Appendix D of Section VII.

K. CONSTRUCTION AGREEMENT

A sewer Construction Agreement must also be signed by Developer, Contractor, and District representative prior to the pre-construction meeting. A blank agreement form is included for reference in Appendix C of Section VII.

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SECTION IV

SEWER SYSTEM DESIGN CRITERIA

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IV. SEWER SYSTEM DESIGN CRITERIA

A. GENERAL

Sewer system improvements proposed for inclusion into the District's service area shall be designed in accordance with the criteria set forth herein, unless otherwise approved in writing by the District.

The design shall take into consideration physical conditions known to exist at the time and place of each installation and the probable operating requirements. Where such conditions render sections of these Specifications inapplicable, alternate methods of design may be submitted to the District, and upon approval thereof, may be incorporated in the Plan.

B. LOCATIONS OF MAINS

1. Alignment:
 - a. 6-foot north or east of centerline of street
 - b. Horizontal curves are allowed on pipe sizes from 8-inch to 24-inch diameter. All curved sewers shall have a minimum radius of 288-foot, but no less than the radius recommended by the pipe manufacturer. For curved sewers with pipe size larger than 24-inch diameter, the minimum radius shall be per the 2021 Standard Specifications for the Public Works Construction, Section 306-7.4.2.4 entitled "Straight Non-Beveled Pipe on Curves" with the minimum threshold radius of 288-foot. No reverse curves allowed between manholes. Manholes shall be constructed at or near all BC's, EC's, PRC's, and PCC's.
 - c. No vertical curves allowed
2. Depth: Minimum cover over pipe should be sufficient to service adjacent property by gravity, and cover shall not be less than 7.0-foot to finish grade of street, unless otherwise approved by District. In addition, sewer mains must be sufficiently deep in subdivisions to allow water lines to be set with 4-foot min. cover without interference from sewer laterals.

C. FLOW RATE COMPUTATIONS

1. All flows shall be computed on the basis that the area served by the extension or addition is completely improved to limits imposed by its present zoning required to allow construction of the proposed development.
2. Average Daily Rates:
 - a. Residential Unit: Single Family Residential, Apartments, Condominiums, and Mobile Home: 240 GPD/Unit¹

¹ One (1) EDU = One (1) Residential Unit = 240 GPD (gallons per day)

- c. Schools, Retail, Commercial and Industrial: Projects proposing developments such as schools, retail, restaurants, commercial, industrial, storage, etc., wastewater generation computation shall be based on the following Table 1.

**Table 1 – Equivalent Dwelling Units (EDU) Table of Values
by Proposed Building Use**

Tenant Type Description	Base Unit Description	Base Unit	EDU per Unit
AIRPORT HANGAR	HANGER	1	0.75
ANIMAL KENNELS / PET SHOPS	1000 SQ. FT.	1000	0.80
ANIMAL SHELTERS / ANIMAL ADOPTION CENTERS	1000 SQ. FT.	1000	2.74
AUDITORIUMS	1000 SQ. FT.	1000	1.30
AUTO SALES / REPAIR SHOPS	1000 SQ. FT.	1000	0.20
BARS	SEAT	1	0.07
BEAUTY / BARBER SHOP	SINK	1	0.25
BOWLING ALLEY / SKATING RINKS	1000 SQ. FT.	1000	0.80
BREWERY / TASTING ROOM	1000 SQ. FT.	1000	0.50
CAMPSITES (DEVELOPED)	SITE	1	0.25
CAR WASH - TUNNEL TYPE	1000 SQ. FT.	1000	14.00
CAR WASH - W/ RECYCLING UNIT	1000 SQ. FT.	1000	4.75
CAR WASH - WAND TYPE	1000 SQ. FT.	1000	2.65
CASINO	UNIT	1	1.00
CHILD / SENIOR DAYCARE FACILITY	PERSON	1	0.04
CHURCH / LIBRARY	1000 SQ. FT.	1000	0.20
CLUB HOUSE (APT/CONDO/TRACT)	UNIT	1	1.00
CLUBS	1000 SQ. FT.	1000	0.50
DEPARTMENT STORES	1000 SQ. FT.	1000	0.05
DIALYSIS CENTER	CHAIR	1000	1.20
DOCTOR / DENTIST / VET OFFICES	1000 SQ. FT.	1000	0.20
DRIVE-IN THEATERS	1000 SQ. FT.	1000	0.80
DRY CLEANERS - OFFICES	EMPLOYEE	1	0.07
DRY CLEANERS - PLANTS	MACHINE	1	1.62
DRY MANUFACTURER	1000 SQ. FT.	1000	0.04
FINANCIAL INSTITUTIONS	1000 SQ. FT.	1000	0.20
FIRE / POLICE STATION	EMPLOYEE	1	0.41

Table 1 (continued)

Tenant Type Description	Base Unit Description	Base Unit	EDU per Unit
GOLF COURSE / CAMP / PARK BUILDINGS	RESTROOM / CONCESSION STAND	1	0.20
GROCERY STORE / SPECIALTY FOOD MARKET	1000 SQ. FT.	1000	0.50
HEALTH SPAS / FITNESS CLUBS W/ SHOWERS	1000 SQ. FT.	1000	0.50
HEALTH SPAS / FITNESS CLUBS WITHOUT SHOWERS	1000 SQ. FT.	1000	0.30
HOSPITAL	BED	1	1.00
HOTEL / MOTEL ROOMS WITH KITCHENETTES	ROOM	1	0.65
HOTEL / MOTEL ROOMS WITHOUT KITCHENETTES	ROOM	1	0.31
INDOOR THEATERS	1000 SQ. FT.	1000	0.30
INDUSTRIAL SPECIALIZED	1000 SQ. FT.	1	1.00
JAIL / DETENTION CENTER	PERSON	1	0.41
LAUNDROMAT	MACHINE	1	0.63
MORTUARIES / CEMETERIES	1000 SQ. FT.	1000	0.51
NIGHT CLUBS	1000 SQ. FT.	1000	1.30
NURSING HOMES	BED	1	0.79
OFFICE BUILDINGS	1000 SQ. FT.	1000	0.20
PRE-SCHOOL	STUDENT	1	0.04
RESERVATION CENTERS	1000 SQ. FT.	1000	0.42
RESTAURANT - FAST FOOD	SEAT	1	0.07
RESTAURANT - FULL SERVICE	SEAT	1	0.09
RESTAURANT - QUICK FOOD SHOP	SEAT	1	0.04
RV CAMPS WITH SEWER HOOK-UPS	SITE	1	0.50
RV PARK W/OUT INDIVIDUAL SEWER HOOK-UPS	DWELLING UNIT	1	0.45
SCHOOL - NO CAFETERIA / NO SHOWERS	STUDENT	1	0.01
SCHOOL - NO CAFETERIA / WITH SHOWERS	STUDENT	1	0.01
SCHOOL - WITH CAFETERIA / NO SHOWERS	STUDENT	1	0.01
SCHOOL - WITH CAFETERIA / WITH SHOWERS	STUDENT	1	0.01
SERVICE SHOPS / STATIONS / STORES / WHOLESALE OUTLETS	1000 SQ. FT.	1000	0.20
SPECIAL EVENTS CENTER	ATTENDEE	1	0.04
SPORT CENTER - INDOOR	1000 SQ. FT.	1000	1.30
STORAGE FACILITY	DWELLING UNIT	1	1.00

Table 1 (continued)

Tenant Type Description	Base Unit Description	Base Unit	EDU per Unit
SPECIAL TENANT TYPE	1000 SQ. FT.	1000	1.00
WHOLESALE WAREHOUSE STORES	1000 SQ. FT.	1000	0.21
Open Storage Facilities/Warehouse: Sewer EDU's used by tiering of the total square footage as follows:			
OPEN STORAGE (SMALL) FACILITIES / WAREHOUSES - LESS THAN 100,000 SQ. FT.	1000 SQ. FT.	1000	0.07
OPEN STORAGE (MEDIUM) FACILITIES / WAREHOUSES - BETWEEN 100,000 AND 1,000,000 SQ. FT.	1000 SQ. FT.	1000	0.03
OPEN STORAGE (LARGE) FACILITIES / WAREHOUSES - 1,000,000 SQ. FT. OR LARGER	1000 SQ. FT.	1000	0.02

3. Peak Flow Rates:

- a. Residential Areas: $Q_{PEAK} = 2.5Q_{ADF}^{(0.91)}$
Where Q_{PEAK} & Q_{ADF} are in millions of gallons per day (mgd)
- b. Commercial & Industrial: Investigate each installation

D. PIPE SIZING

Pipe sizing for gravity mains shall be determined as shown below:

1. For 8-inch diameter mains and smaller:
 - a. $n = 0.013$;
 - b. D/d (depth of water to pipeline diameter ratio) ≤ 0.50 (ie 50% $\pm$ full)
2. For 10-inch diameter mains and larger:
 - a. $n = 0.013$
 - b. D/d ratio ≤ 0.75 (ie 91% $\pm$ full)
3. Connection Laterals
 - a. House Connection Laterals (at 2% slope, utilizing 45° connection at main)

- b. Connection laterals for commercial and industrial developments shall have a minimum 2% slope and utilize 45° connection at main. The diameter of the lateral shall be calculated based on peak flow rate of 2000 gpd/gross acre of the project with minimum pipe size of 6-inch diameter. If the pipe sizing calculation requires a lateral greater than 6-inch diameter, two manholes will be required. One manhole connecting to the existing sewer main and another manhole at the project's property line.

E. MANHOLES

1. Manhole Criteria:

- a. Manhole spacing shall not exceed 350' for all pipes; unless otherwise approved by District.
- b. Manholes shall be located at or near all BC's, EC's, PRC's and PCC's on curved sewers.
- c. Distance noted between manholes shall be measured to manhole centerlines.
- d. Minimum 48-inch inside diameter manholes shall be required for sewer diameters 12-inch and less. Minimum 60-inch inside diameter manholes shall be required for pipelines deeper than 15' and/or for sewer diameters 15-inch and larger. Minimum 72-inch inside diameter manholes shall be required for pipelines 30-inch in diameter and larger.

2. Inverts:

- a. Provide 0.1-foot fall through manholes for grades less than 2.5%. Show pipe flow line elevations at inlet and outlet of manhole. For grades greater than 2.5%, design grade may be continued through the manhole. Show pipe flow line elev(s). at centerline manhole station.
- b. Where manhole invert is formed in field, a drop of 0.1-feet on all bends 45 degrees or greater may be required.
- c. Unless otherwise approved by the District, junction manholes shall have the crowns (soffits) of the intersecting pipes at the same elevation where their projections intersect the manhole centerline.
- d. Connections to existing facilities shall be verified in the field during the design stage, or provisions made to verify them prior to construction.

- 3. Drop manholes may be utilized only upon prior approval by the District. Drops shall not be less than 3 feet. ("Steep" slopes from the first manhole upstream are preferred to drop manholes.)

4. Manholes shall not be buried except where approved by District. Manholes shall be raised above ground level where necessary to maintain them in selected areas such as farmed areas and in waterways.
5. Use of cleanouts on sewer mains are not permitted.
6. A manhole per District Standard Drawing No. S-7 shall be provided at the street right-of-way line for all laterals 6-inch in diameter and larger unless otherwise approved in writing by the District.

F. PIPE VELOCITIES

1. Minimum
 - a. Sewer Mains: 2 - 2.5 fps
 - b. Inverted Siphons: 3 fps
2. Maximum
 - a. Sewer Mains: 10 fps

G. SLOPES

1. House Connection Laterals:

Pipe dia.	4 (in.)	6 (in.)
Slope	0.020	0.020
(0.010 Extreme Minimum with prior approval only)		

2. Sewer Mains:

Pipe Diameter (in.)	Minimum Slope (ft/ft)
8	0.0040
10	0.0032
12	0.0024
15	0.0016
18	0.0014
21	0.0012
24	0.0010
27	0.0008
30	0.0007

Gradients should be set to 2 figures, evenly divisible by 4, wherever possible.

H. BEDDING

1. V.C.P. (extra-strength)

The following may be used as a guide only in determining the required class of bedding based upon maximum depth over top of sewer pipe. For other conditions of trench width, or for a wide trench condition, independent analysis must be made.

Bedding Class Guideline Table

Pipe Diameter (inch)	Maximum Trench Width (inch)	Depth Over Top of Sewer Pipe⁽¹⁾ (feet) Class B-2 Bedding^{(2) (3)}
8	32	30.1 +
10	34	28.1 – 30.0
12	38	18.1 – 30.0
15	42	19.1 – 30.0
18	46	19.1 – 29.0
21	50	20.1 – 30.0
24	54	20.1 – 30.0
27	56	22.1 – 30.0

⁽¹⁾ Engineer shall be required to provide structural loading calculations for pipeline installations deeper than 30-feet.

⁽²⁾ Refer to ECSD Std. Dwg. No. S-1

⁽³⁾ Assumptions: Ordinary clay backfill @ 120 lbs./CF; F.S. = 1.5, $K\mu' = 0.1$; and Load Factors Class B-2 = 2.2

2. PVC (SDR 26 or 35)

The trench width and pipe bedding requirements shall be per ECSD Standard Drawing No. S-1A based on the proposed pipe diameter. Pipe thickness is dependent on depth cover over top of pipe. For pipes installed with less than 14-feet of cover, pipe thickness to be minimum of SDR 35. For pipes installed with greater than 14-feet but less than 25-feet of cover, pipe thickness to be minimum of SDR 26. For other conditions such as deep cover (greater than 25-feet), ground water, additional live loads beyond H20 loading, other trench conditions, wide trench conditions, independent analysis must be conducted. The following assumptions apply:

a. Minimum Live Load: H20 Traffic Loads;

b. Unit Weight of Soil 120 lbs./ft³;

- c. Embedment Stiffness (E'): 1,000 lbs./ft²;
- d. Pipe Bedding: Class "I" (Full Crushed Rock);
- e. Maximum Diametric Deflection: 7.5%;
- f. Min. Factor of Safety: 2;
- g. Conduct independent analysis for pipes 18-inch dia. and greater;
- h. Refer to AWWA M23 for additional requirements.

I. BACKWATER VALVES

Backwater valves shall be required in accordance with the Uniform Plumbing Code, Latest Edition.

The backwater valves, where required, shall be installed in accordance with the City of Moreno Valley Building and Safety Department's requirements and shall be installed at shallowest location allowing access for future inspection and maintenance. Where backflow valves are required, they shall be installed on private property by the property owner or tract developer and are to be maintained by property owner.

J. SEWAGE INJECTORS

- 1. In some extreme circumstances, the ability to sewer an individual lot by gravity may be uneconomical based on excessive depths of the mainline sewer. The definition of these circumstances shall be determined by the District. Should the District determine these conditions exist for a lot, and upon District approval only, an individual sewage injector may be used.
- 2. The injector shall be constructed to District specifications for installation on private property by the property owner or tract developer. Maintenance of the injector shall be the responsibility of the property owner.

K. LATERAL CONNECTIONS TO MAIN

- 1. Direct connections of 4-inch and 6-inch diameter laterals to the mainline shall only be allowed when the sewer main has a diameter less than 15-inch and the connection is made per Standard Drawing No. S-2, S-5, or S-6 and S-8. Direct lateral connections to 18-inch diameter sewer lines and larger shall be allowed at the discretion of the District and only if approved in writing by the District.
- 2. All mainline connections, 8-inch and larger, shall be made with the installation of a manhole.

L. INDUSTRIAL WASTE PROVISIONS

The developers of all commercial/industrial projects shall provide the District with detailed information concerning the project's expected wastewater quality and quantity. The District will review this information and determine which of the following facilities are required.

1. Gravity Separator
2. Industrial Waste Clarifier
3. Pretreatment Facilities
4. Sewer Sampling Wye

Additionally, a separate irrigation meter and service shall be required to segregate the water quantity used for irrigational purposes so that equitable sewer user fees can be charged.

M. SEPARATION

For separation requirements and guidelines refer to the California Waterworks Standards, California Code of Regulations (CCR), Title 22, Division 4, Chapter 16, Section 64572, latest edition for establish criteria for separation of water mains from non-potable pipelines. For installations of pipelines with less separation distance than what is required by the regulations, alternatives may be proposed pursuant to CCR, Title 22, Section 64551.100. Refer to the December 14, 2017 State Water Resources Control Board Division of Drinking Water Request for Alternatives Letter. A copy of this letter is provided in Appendix O of Section VII.

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SECTION V

BASIC SPECIFICATIONS

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BASIC SPECIFICATIONS
SECTION A

GENERAL SPECIFICATIONS

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BASIC SPECIFICATION
SECTION A - GENERAL SPECIFICATIONS

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BASIC SPECIFICATIONS
SECTION A

GENERAL SPECIFICATIONS

A. REFERENCE SPECIFICATIONS

The following published reference specification shall hereby become part of these specifications.

1. State of California, Department of Transportation, "Standard Specifications", (Latest Edition).
2. The Greenbook "Standard Specifications for Public Works Construction", Latest Edition, published by Building News, Inc., 990 Park Center Drive, Suite E, Vista CA 92081. Part I of the "Standard Specifications for Public Works Construction" shall apply to work accomplished under the contract except as herein modified.

B CONTRACTOR'S SCHEDULE OF WORK

Within seven (7) days from the time the Contract is executed by all parties and at such other times as may be requested by the District, the Contractor shall submit to the District a detailed construction schedule which shall show the order in which the Contractor proposes to carry on the work, the dates at which the Contractor will start the several parts of the work, and the estimated dates of completion of the several parts. The District reserves the right to approve or alter the Schedule proposed by the Contractor, prior to the start of work.

The District may establish priorities for completion of certain parts of the work which may be necessary to provide certain services or which he may deem advisable in the interest of public safety and convenience.

The construction schedule and supplementary construction schedules submitted shall be consistent in all respects with the time requirements of the contract.

The receipt or written approval of any schedules by the Owner's Representative or the District shall not in any way relieve the Contractor of its obligations under the Contract Documents. The Contractor is fully responsible to determine and provide for any and all staffing and resources at levels which allow for good quality and timely completion of the Work. Contractor's failure to incorporate all elements of Work required for the performance of the Contract or any inaccuracy in the schedule shall not excuse the Contractor from performing all Work required for a completed Work within the specified Contract time period. If the required schedule is not received by the time the first payment under the Contract is due, Contractor shall not be paid until the schedule is received, reviewed and accepted by the Owner's Representative.

1. Schedule Contents. The schedule shall allow enough time for inclement weather. The schedule shall indicate the beginning and completion

dates of all phases of construction; critical path for all critical, sequential time related activities; and "float time" for all "slack" or "gaps" in the non-critical activities. The schedule shall clearly identify all staffing and other resources which in the Contractor's judgment are needed to complete the Work within the time specified for completion. Schedule duration shall match the Contract time. Schedules indicating early completion will be rejected.

2. **Schedule Updates.** Contractor shall continuously update its construction schedule. Contractor shall submit an updated and accurate construction schedule to the Owner's Representative whenever requested to do so by Owner's Representative and with each progress payment request. The Owner's Representative may withhold progress payments or other amounts due under the Contract Documents if Contractor fails to submit an updated and accurate construction schedule.

C. INSPECTION

All work and materials furnished under these specifications shall be subject to rigid District inspection and acceptance.

The Contractor shall notify the District at least two working days in advance of any work to be done, in order that inspection, including that of on-site materials, may be provided with a minimum of inconvenience to the District or delay to the Contractor. The Contractor shall perform construction only in the presence of an inspector unless written permission to work during the absence of an inspector has been granted by the District or inspector. Any work done in the absence of an inspector without permission shall be subject to rejection.

The District shall at all times have access to the work during its construction and shall be furnished with every reasonable facility for ascertaining that materials and workmanship are in accordance with the requirements of these Specifications.

When required, the Contractor shall notify the District a sufficient time in advance of manufacture or production of materials to be supplied, in order that the District may arrange for shop or plant inspection and testing. The District shall have access to all parts of the shop or plant where material subject to inspection is being manufactured.

All materials shipped prior to having satisfactorily passed such testing and inspection by the District shall not be used unless approved by the District.

The Contractor shall also furnish the District duplicate, certified copies of all factory and mill test reports when required by the District.

Work or materials failing to conform to these Specifications may be rejected at any time.

The District has made the necessary arrangements for inspection (general, geotechnical and specialties) of Contractor's work during the District's field services' regular (i.e. 7:00 a.m. to 3:30 p.m., Monday through Friday) 40 hour work week. If the Contractor works more than an 8 hour day, a 40 hour week, and/or District observed holidays, the financial responsibility for ALL added inspection shall be the responsibility of the Contractor. The prevailing hourly rates for inspection are on file with the District. Such prevailing rates will be applied at 1-1/2 times the regular rates for periods over 8 hours a day and/or 40 hours per week and/or District observed holidays and 2 times the regular rates for periods over 12 hours in one (1) day.

D. DEFECTIVE WORKMANSHIP AND MATERIAL

The Contractor shall promptly remove from the premises all work and materials condemned by the District as failing to conform to the contract, whether incorporated or not, and the Contractor shall promptly replace and re-execute his own work in accordance with the contract and without expense to the District and shall bear the expense of making good all work of other contractors destroyed or damaged by such removal or replacement and pay for reinspection costs.

If the Contractor does not remove such condemned work or materials within a reasonable time after notice, the District may remove them and store the materials at the expense of the Contractor. If the Contractor does not pay the expenses of such removal within 10 days' time after such removal, the District may, upon thirty days' written notice, sell such materials at auction or at private sale and shall account for the net proceeds thereof after deducting all the costs and expenses that should have been borne by the Contractor.

E. SANITATION

All parts of the work shall be maintained in a neat, clean, sanitary condition. Fixed and portable toilets, which are made inaccessible to flies, shall be provided wherever needed for use of employees, and their use shall be strictly enforced. Toilets shall be kept supplied with toilet paper, sanitary hand cleanser, and shall have workable door fasteners. Toilets shall be serviced no less than once weekly and shall be present in a quantity of not less than 1 per 20 workers as required by CAL-OSHA regulation. The toilets shall be maintained in a sanitary condition at all times. Use of toilet facilities in the Work under construction shall not be permitted. Any other sanitary facilities required by CAL-OSHA shall be the responsibility of the Contractor. All waste and refuse from sanitary facilities provided by the Contractor or from any source related to Contractor's operations shall be taken care of in a sanitary manner, satisfactory to the District, and in accordance with the laws and regulations pertaining thereto. Contractor shall rigorously prohibit and prevent committing of nuisance within the work site area or upon the District's right-of-way or adjacent to private property. Contractor shall furnish all facilities and means for proper sanitation of the work, and shall protect and save harmless the District, its officers and employees from any liability resulting from improper or insufficient sanitation.

F. FIRST AID AND PROTECTIVE FACILITIES

First aid facilities and supplies shall be kept on the jobsite. Instructions in first aid shall be given, and Contractor shall provide emergency first aid treatment and supplies for his employees sufficient to comply with all legal requirements.

G. CONTRACTOR TO PROVIDE FACILITIES FOR EMPLOYEES

Contractor shall, at his own expense, provide all labor, materials, equipment, and facilities which may be required to carry out effectively the provisions of these specifications. Contractor shall receive no additional payment therefore, and all compensation to be received for such work shall be included in the prices bid on the Bidding Sheet.

H. POWER

The Contractor shall provide, at his own expense, all necessary power required for his operations under the contract. The Contractor shall provide and maintain in good order such modern power equipment and installation as shall be adequate, in the opinion of the District, to perform in a safe and satisfactory manner the work required by the Contract.

I. CLEANUP

THROUGHOUT ALL PHASES OF CONSTRUCTION, INCLUDING SUSPENSION OF WORK, AND UNTIL FINAL ACCEPTANCE OF THE PROJECT, the Contractor shall keep the premises occupied by him and the project site in a neat and clean condition, and free from unsightly accumulation of rubbish, excess construction materials, and excess excavated materials. The Contractor shall also abate dust nuisance by cleaning, sweeping, and sprinkling with water, or other means as necessary. The use of water resulting in mud on public streets will not be permitted as a substitute for sweeping or other cleaning methods.

Materials and equipment shall be removed from the site as soon as they are no longer necessary.

Care shall be taken to prevent spillage on haul routes. Any such spillage shall be removed immediately and the area cleaned.

Excess excavated material from the pipe trench shall be removed from the site immediately. Sufficient material may remain for use as backfill. Forms and form lumber shall be removed from the site as soon as practicable after stripping.

FAILURE OF THE CONTRACTOR TO COMPLY WITH THE DISTRICT'S CLEANUP ORDERS MAY RESULT IN AN ORDER TO SUSPEND WORK UNTIL THE CONDITION IS CORRECTED. No additional compensation or extension of time will be allowed as a result of such suspension.

The Contractor shall not discharge smoke, dust, or any other air contaminants into the atmosphere in such quantity as will violate the regulations of any legally constituted authority.

Upon completion of work and before the final estimate is submitted, the Contractor shall, at his own expense and cost, satisfactorily dispose of or remove from the vicinity of the work all plants, buildings, rubbish, unused materials, concrete forms, and other equipment and materials belonging to him or used under his direction during the construction, and in the event of his failure to do so, the same may be removed and disposed of by the District at the Contractor's expense.

J. UTILITIES AND EASEMENTS

The plan portion of each sheet indicates the general location of underground utilities as shown on available records. No attempt has been made to show service connections other than those services improved as part of the contract work. The plans also indicate the location of public right-of-way lines and easements that will be acquired by the District. Easements for private development projects shall be acquired by the private developer. It shall be the Contractor's responsibility to conduct all his operations within the rights-of-way and easements as shown on these plans.

K. RELATIONSHIP WITH OTHER GOVERNMENTAL AGENCIES

Where the pipeline and structures are constructed within the rights of way under the jurisdiction of other governmental agencies, Contractor shall comply with all requirements of said agencies. Where the same subject matter is covered by the specifications of two or more agencies, the specifications more restrictive on the Contractor shall govern in all cases.

L. EXPOSURE OF UTILITIES IN ADVANCE OF WORK

It shall be the Contractor's responsibility to determine the exact location and depth of all utilities and service connections. He shall also determine the type, material, and condition of any utility which may be affected by or affect the work. The Contractor shall have all utility companies field locate all underground lines before start of construction.

In order to provide sufficient lead time to resolve unforeseen conflicts, order materials and take other appropriate measures to ensure that there is no delay in work, the CONTRACTOR SHALL POTHOLE ALL UTILITY MAINS THAT MUST BE CROSSED OR CLOSELY PARALLELED PRIOR TO ANY CONSTRUCTION. CONTRACTOR SHALL THEN IMMEDIATELY PROVIDE THE LOCATION AND DEPTH OF THE "POTHOLED" UTILITIES TO THE ENGINEER. The Contractor shall expose all service connections before excavation in the area. All cost incurred in exposing utilities shall be borne by the Contractor.

THE DISTRICT RESERVES THE RIGHT TO MAKE MINOR ADJUSTMENTS IN PIPELINE ALIGNMENT AND GRADE, ALL AT NO ADDITIONAL COST TO THE DISTRICT.

Failure of the Contractor to comply with these provisions will result in an order to suspend work until these provisions are complied with, and no additional compensation or extension of time will be allowed as a result of such suspension. Payment per bid item or spread.

M. ADVANCE NOTIFICATION OF AGENCIES

It shall be the Contractor's responsibility to determine and notify those agencies requiring advance notification for inspection or other purposes before beginning construction in any area of concern to said Agency. A minimum of two working days advance notice shall be given to the various agencies before beginning construction in the area unless specific advance times and requirements are stated in these detailed specifications or required by the Agency.

N. CROSSING, PROTECTION AND/OR RELOCATION OF UTILITIES

1. General

Utilities for the purpose of these specifications shall be considered as including, but not limited to, and irrespective of ownership; Pipelines (including irrigation mains), conduits, transmission lines, and appurtenances of "Public Utilities" (as defined in the Public Utilities Act of the State of California) and those of private industry, business, or individuals solely for their own use or for use of their tenants; and storm drains, sanitary sewer, street lighting, traffic signal systems, duct banks, telephone cable, transmission cables, and completely buried structures.

The District has made an earnest effort to locate and indicate on the drawings all utilities which exist within the limits of the work. However, the accuracy and completeness of the utilities indicated on the drawings are not guaranteed. If utilities are shown in profile, the depth indicated is based on general practice and is not guaranteed at any specific location. No attempt has been made to show service connections on the plans. It shall be the responsibility of the Contractor to determine the exact location of all utilities and their service connections. The Contractor shall have the utility companies field locate their utilities before excavation. The Contractor shall verify with each utility company the extent to which they will field locate their utilities. Where required, field location by Contractor forces shall be included in the contract price for which such work is appurtenant thereto and no additional allowance will be made therefore. The Contractor shall make his own investigation as to the location and type of existing utilities and their appurtenances and service connections which may be affected by the contract work, and shall notify the District as to any utility located by him which has been incorrectly shown or omitted from the drawings.

2. Utilities Shown on Plans

Where utilities cross or parallel the pipeline trench but do not conflict with the permanent work to be constructed, the Contractor shall protect the utility in place unless otherwise indicated on the plans. The Contractor shall notify the utility owner at least two working days in

advance of the crossing or parallel construction and will coordinate the construction schedule with the utility service requirements.

Unless otherwise provided in the specifications, full compensation for crossing or paralleling of utilities shown on the plans shall be included in the contract unit price for which such work is appurtenant thereto and no additional allowance will be made therefore. Said various contract prices shall include all labor, materials, tools and equipment necessary or incidental to the work.

3. Special Water/Sewer Crossings

At the locations shown on the plans or if the vertical separation between the outside of the sewer pipe and the outside of existing water pipes at crossings is less than one (1) foot, and when directed by the District, the Contractor shall provide the construction required per the detail shown on the plans and per the California Department of Public Health Water/Sewer Special Construction Requirements. The special construction will be deleted at locations shown if the vertical separation of the waterline above the sewerline is 1 foot or greater.

The District hereby reserves the right to increase or decrease this item from the quantity shown on the Proposal forms without altering the unit price bid per each. Payment will be made in accordance with the unit bid price provided on the Bidding Sheet; in the event no item for said special construction work is designated on the Bidding Sheet, Contractor shall be paid under the "Extra Work" provisions of the General Conditions.

4. Relocation of Utilities by the Contractor for His Own Convenience

The temporary relocation or the alteration of any utility desired by the Contractor solely for his own convenience in the performance of the contract work, to a position or condition other than that provided for in the specifications or shown on the drawings, shall be the Contractor's own responsibility, and he shall make all arrangements with the property owners regarding such work. Any costs of such work for the Contractor's own convenience shall be absorbed in the unit prices or included in the lump sum amounts bid for the various contract items.

5. Service Connections

Compensation for service connection crossings (not shown on the Plans) shall be included in the contract price for which such work is appurtenant thereto and no additional allowance will be made therefore.

6. Utility Conflicts with Proposed Improvements

If a utility, whether shown on the plans or not, should intersect the proposed improvement at grade anywhere along the line of the

improvement, the Contractor shall immediately notify the District. The Contractor may be advised to continue with the construction, leaving sufficient "gap" in his construction as determined by the District as may be necessary to accommodate resolution of the conflict, to be completed after the conflict has been resolved. In addition, the Contractor shall notify the District in writing, stating the nature of the conflict, location by schedule, sheet number, name of the street or location of easement and the station at which the conflict occurred. The District shall, within a reasonable time, make the necessary arrangements to resolve the conflict. Completion of the gap after the resolution of conflict shall not be just cause for additional compensation. Such completion of the "gap" shall be started within three working days after the Contractor has been notified of resolution of the conflict and completed in a workmanlike manner within reasonable time thereafter. When directed or approved by the District, changes in line or grade of any structure being built may be made in order to avoid utilities. Any additional costs because of such changes will be paid for as "Extra Work".

When a utility shown on the plans conflicts with the proposed improvements, the District will arrange for the relocation or alteration of said utility or require the Contractor to do same as "Extra Work". Work required in connection with unknown utilities will be performed and paid for as specified in the following paragraphs.

7. Unknown Utilities Disclosed During Contract Work

(Not including service connection)

In the event that a utility is disclosed or installed subsequent to the award of contract, such utility not being indicated on the drawings, the alteration, relocation or proper support and protection shall be done and paid for as follows:

- (a) When said utility is found to occupy the space required to be occupied by a part of the permanent works to be constructed under the Contract, the District will arrange for the relocation or alteration of said utility, or require the Contractor to do same as "Extra Work".
- (b) When the said utility is found to lie parallel to the permanent work and within the trench prism defined by the minimum allowable trench excavation consistent with safety and the rules, orders and regulations of local, State and Federal agencies having jurisdiction; the District will arrange for the relocation, protection or alteration of said utility, or require the Contractor to do same as "Extra Work".

(c) When said utility is more or less parallel with, and any portion of it does not lie within the trench prism specified hereinabove, the Contractor shall advise the District thereof, and in cooperation with the District of the utility, provide and place the necessary support, if any, for proper protection to ensure continuous and safe operation of the utility. All costs of such work shall be borne by the Contractor.

(d) Utilities found to cross the excavation but not intercepting the permanent works to be constructed, then the Contractor will be required to protect the existing facility in place and construct the proposed facility under the unknown utility.

Compensation for such crossings will be at a unit price per each in accordance with the proposal therefore. The number of such crossings is estimated and the District hereby expressly reserves the right to add to the number shown or decrease from the number shown or to totally delete the item for unknown utility crossings at no change in the unit price per each. The time extension for such crossings shall be determined by the District and shall be added to the total time for completion allowed and for which no liquidated damages will be assessed.

(e) Upon disclosing a utility in the course of excavation that was not indicated on the drawings or marked in the field, the Contractor shall protect it in place. However, he shall immediately investigate if it is abandoned. The Contractor will be compensated at the bid unit price for unknown utility crossings only for the initial crossing of abandoned lines; and only if he did protect the abandoned utility in place.

8. Responsibility of the Contractor

The Contractor shall be held responsible for all costs for the repair of any and all damage to the contract work or to any utility (whether previously known or disclosed during the work), as may be caused by his operations. Utilities not shown on the drawings to be relocated or altered by others, shall be maintained in place by the Contractor.

At the completion of the contract work, the Contractor will leave all utilities and appurtenances in a condition satisfactory to the utility owners and the District.

O. PROTECTION OF FACILITIES OTHER THAN UTILITIES

It shall be the Contractor's responsibility to protect in place or remove and replace to original condition all existing facilities. The existing natural and man-made features and elevations on the plans are shown by topography. The topography shown is not

guaranteed complete. It shall be the Contractor's responsibility to familiarize himself with the conditions of proposed work and to identify by field investigation those features, whether or not shown on the plans, which require removal and replacement or protection in place. These features include, but are not limited to, fences, cross gutters, roads, sidewalks, driveways, curbs and gutters, power poles, signs, drainage structures, trees, landscaping, etc.

The Contractor shall repair all existing structures which may be damaged as a result of the work under the contract. Reconstruction shall be of the same type and material as the existing facility and shall be of equal quality or better than the original work.

Full compensation for complying with these requirements shall be considered as included in the price bid for the various items of work, and no additional compensation shall be made therefore.

P. GROUND WATER

Contractor shall investigate the possibility of ground water prior to submitting bid and shall assume all cost and liabilities incurred, should a ground water problem arise.

Q. CONSTRUCTION WATER

The Contractor shall make all arrangements to furnish all construction water, all at no cost to the District.

R. WATER SUPPLY FOR COMPACTION AND DUST CONTROL

Contractor shall furnish and apply all water necessary for compaction and dust abatement purposes.

He shall apply water to construction areas where dust conditions so warrant, as directed by the District.

The water supply and payment of fees shall be the responsibility of the Contractor.

Full compensation for complying with these requirements shall be considered as included in the price bid for the various items of work, and no additional compensation shall be made therefore.

S. TRAFFIC CONTROL

It shall be the Contractor's responsibility to maintain traffic warning signs, barricades, flagmen, and other traffic control devices as required to maintain two-way traffic, and as required by agencies having jurisdiction over the roadways in the work area. It shall be the responsibility of the Contractor to investigate with various agencies having jurisdiction over the right-of-way in work area to determine the extent of traffic control that may be required by each agency.

Also, it shall be the Contractor's responsibility to provide all traffic control devices to ensure a safe working environment for any associated project work such as survey, geotechnical and materials testing, etc., that is required.

Full compensation for compliance with those provisions shall be considered as included in the bid unit price for various items, and no other compensation shall be made therefore.

T. ACCESS TO ADJACENT PROPERTIES

Contractor shall at all times provide access to the properties in the area of work, unless otherwise approved by District. The Contractor shall be responsible for providing adequate advance notice to properties that will not have access. It shall be the responsibility of the Contractor to provide such temporary structures in the area of work to provide reasonable access to the properties. At least one (1) lane on cross streets shall be available at all times for use of vehicles and emergency equipment.

Full compensation for compliance with these provisions shall be considered as included in the bid unit price for various items, and no other compensation shall be made therefore.

U. STAKING OF LINE AND GRADE

The District will provide offset line and grade stakes at ground level and will furnish cut sheets therefore, unless otherwise indicated in the specifications. The Contractor shall be responsible for transfer of such offset line and grade into the trench for construction of the work and for the accuracy of such transfer. Cost of such transfer will be included in the unit prices bid for the work and no extra compensation will be made to the Contractor.

The Contractor shall inform the District a reasonable time in advance (at least three working days) as to his need for additional grades and lines, in order that the same may be furnished and all necessary measurements made for record and payment with the minimum of inconvenience to the District or of delay to the Contractor.

The Contractor shall examine carefully all construction stakes and by visual inspection of stakes, string lines and headers set therefrom, interpret and confirm that the line and grade information is in accordance with the Plans. If there is an apparent error or lack of understanding as to what is meant by the staking, the Contractor shall request an interpretation of staking before proceeding with any work.

The Contractor shall preserve bench marks, survey stakes, and points set for lines, grades, or measurement of the work in their proper places until authorized by the District to remove them. In case of their destruction or removal by him or his employees or agents, they shall be replaced at the Contractor's expense.

V. PROTECTION OF SURVEY MONUMENTS

It shall be the Contractor's responsibility to protect all of the existing survey monuments. Removal of such monuments or displacement thereof shall require their resetting per the existing type of monument. The cost of resetting such monuments shall be the financial responsibility of the Contractor. Contractor is advised that resetting of monuments must be done by a registered civil engineer or licensed land

surveyor. Should the Contractor anticipate removal of any survey monuments, he shall include the cost of resetting of the same in the various items of work.

W. RECORD DRAWINGS

The Contractor SHALL PROVIDE, and keep up-to-date, a complete "as-built" record set of blueline prints, which shall be corrected daily and show every change from the original Drawings and Specifications and the exact "as-built" locations, measurements, sizes, and kinds of equipment. Prints for this purpose shall be obtained from the Engineer at cost. This set of Drawings shall be kept on the work site and shall be used only as a record set. The Engineer shall require that these drawings be presented monthly for review prior to any progress payment being made. At the completion of construction, the Contractor shall deliver said record set of prints to the District and will be required to certify the accuracy of the Record Drawings.

X. RESEEDING

Where cultivated and maintained ground covers in lawns, parkways or easements have been removed for installation of pipelines, the Contractor shall restore or replace such ground cover in kind by reseeding or resodding, after the backfill in the trench or excavation has been consolidated and the construction area graded and cleared of rocks and other objectionable material as required by these specifications. After reseeding or resodding the areas shall be covered with a suitable mulch.

Where natural vegetation has been removed for installation of pipelines, after the installation, compaction, grading and clearing has been completed, the Contractor shall reseed such areas in accordance with the Basic Specifications, Section A, Paragraph Y entitled "Erosion Control". All costs to the Contractor for restoration, replacement, reseeding or resodding shall be absorbed in his bid for the applicable unit prices per linear foot of pipe and no other compensation will be made therefore.

Y. EROSION CONTROL

1. General

The Contractor shall provide erosion control measures as defined herewith on all areas where the natural vegetation has been disturbed by the construction of the facilities. If a ground cover other than natural vegetation has been disturbed, this section does not apply and the Contractor shall replace said ground cover in kind.

2. Preparation

After the backfill has been compacted and the pipe line tested, the Contractor shall remove and dispose of rocks and debris from the area to be reseeded. No seeding shall be performed during windy weather or when the ground is too wet or in an untillable condition. The fertilizer and seed shall be spread before the straw cover material is applied. Commercial fertilizer shall not be applied until after the seed has been sown.

3. Material

Materials shall consist of the following: Seed - The seed shall consist of the following mixture: Crested wheatgrass, 47 percent; Intermediate Wheatgrass, 27 percent; Wimmera Ryegrass, 13 percent; Blando Ryegrass, 13 percent. The seed shall be spread at the rate of 100 pounds per acre and shall be applied by the use of a "Cyclone Seed Sower" or equal. Fertilizer - The fertilizer shall be Ammonium Phosphate (16-20-0) spread at the rate of 300 pounds per acre and shall be applied by the use of a "Cyclone Seed Sower" or equal. Mulch - After the application of the seed and fertilizer, new straw (stable bedding straw shall not be used) shall be uniformly spread at the approximate rate of four tons per acre. The straw shall then be "Mulched" into the ground by use of a "wire" roller or other approved equipment.

4. Protection for Steep Slopes

In cases where the grade over the pipe line exceeds 25 percent slope the Contractor shall provide additional erosion control measures to stabilize the backfill material. The Contractor shall submit to the Engineer for his approval, special engineering details of the method to be used.

Full compensation for complying with the requirements of this section shall be included in the unit price per linear foot of pipe installed and no other compensation shall be made therefore. Bidder's attention is specifically called to the fact that the responsibility of determining the amount and the type of erosion protection shall rest with the prospective bidder.

Z. CONTRACTOR'S SUBMITTALS

Contractor shall check and verify all field measurements and shall submit with such promptness as to provide adequate time for review and cause no delay in his own Work or in that of any other contractor, subcontractor, or worker on the Work, three (3) hard copies together with one (1) electronic (pdf) copy of all shop or setting drawings, calculations, schedules, and materials list, and all other provisions required by the Contract.

Contractor shall make any corrections required by the District's Representative, and email to the District's Representative corrected copies in pdf format and furnish such other copies as may be needed for completion of the Work.

Whenever called for in these Specifications or on the Drawings, or where required by the District, the Contractor shall furnish to the Construction Manager, and District's Representative, for review an electronic submittal of good quality, color, in pdf format. The maximum total attachment file size can be no larger than 10 megabytes. If files are larger, submittals may be sent on a CD Rom to the Construction Manager and District's Representative via overnight mail or hand delivery. In the case where a good quality pdf is not available the Contractor will submit three (3) hard copies to the Construction

Manager and one (1) hard copy to the District's Representative, (four copies total). Copies of all shop drawings shall be submitted, accompanied by a letter of transmittal, and shall be addressed to the District.

The letter of transmittal, shall give a list of the numbers of the drawings submitted. All drawings must be marked with the name of the project and the name of the Contractor and be numbered consecutively. All drawings must be complete in every respect.

Responses and comments to the submittals will be e-mailed in PDF format. No hard copies will be sent. The Construction Manager will respond directly to the Contractor and will copy the District's Representative.

Revisions indicated on submittals shall be considered as changes necessary to meet the requirements of the Contract Drawings and Specifications and shall not be taken as the basis of claims for extra work. Submittals that are not approved will be returned to the Contractor for corrections and re-submittal. Incomplete submittals will not be accepted.

It is considered reasonable that the Contractor shall make a complete and acceptable submittal to the District by the second submission of a submittal item. The District reserves the right to withhold monies due the Contractor to cover additional costs of review beyond the second submission.

Approval of shop drawings will be general and shall not relieve the Contractor from the responsibility for proper fitting and construction of the work, nor from furnishing the material and work required which may not be indicated in the shop drawings when approved; neither does it relieve him from responsibility for errors in shop drawings.

Example submittals include, but are not limited to the following:

1. All materials provided by the Contractor
2. All appurtenances provided by the Contractor
3. Miscellaneous
 - (a) Pothole information for utilities
 - (b) Copies of permits required to be obtained by the Contractor
 - (c) SWPPP
 - (d) Pre-Construction Video
 - (e) Schedule of construction (with key milestones provided)
 - (f) Sewer bypass plan
 - (g) Safety program

AA. RESPONSIBILITY FOR MATERIAL FURNISHED BY THE DISTRICT

The Contractor's responsibility for material furnished by the District shall begin upon the Contractor's acceptance at the point of delivery to him. All material shall be examined by the Contractor and District. The Contractor shall immediately (upon delivery) notify the District of any material the Contractor perceives to be defective in manufacture or otherwise damaged. Should the District concur that the material should not be utilized the material will be replaced by the District. Material furnished by the District in good

condition and accepted by the Contractor which is later discovered to have been damaged, shall be replaced by the Contractor at his expense. The Contractor shall be responsible for the safe storage of all materials until they have been incorporated in the completed project.

BB. ERRORS OR DISCREPANCIES NOTED BY CONTRACTOR

If the Contractor, either before commencing work or in the course of the work, finds any discrepancy between these Specifications and Drawings, or between either of them and the physical conditions at the site of the work, or finds any error or omission in any of the Drawings or in any survey, he shall promptly notify the Engineer in writing of such discrepancy, error or omission.

CC. HANDLING AND STORAGE OF MATERIALS

All materials shall be handled in such a manner as to prevent damage and, in the case of water system work, maintain sanitary conditions. All materials for use in the work shall be stored by the Contractor in such a manner as to prevent damage from exposure to the elements, admixture of foreign materials or from any other cause. The Contractor shall be entirely responsible for damage or loss by weather or other causes as to work under the Contract

DD. GEOTECHNICAL SERVICES

All construction operations should be observed by a representative of the geotechnical engineer. The presence of the geotechnical engineer's field representative will be for the purpose of providing observation and field testing and will not include any supervising or directing of the actual work of the Contractor, his employees, or agents. Neither the presence of the geotechnical engineer's field representative nor the observations and testing by the geotechnical engineer shall excuse the contractor in any way for defects discovered in his work. It is understood that the geotechnical engineer will not be responsible for job or site safety on this project, which will be the sole responsibility of the contractor. CONTRACTOR TO PROVIDE SAFE ACCESS FOR GEOTECHNICAL IN CONFORMANCE WITH OSHA STANDARDS AT NO ADDITIONAL COST TO THE DISTRICT.

Dependent upon the circumstances of each particular project, as determined by the District, geotechnical services may include full time monitoring and testing or part time, periodic monitoring and testing.

EE. EARTHWORK

1, General

Earthwork shall conform to the requirements of the agency having jurisdiction, but shall not be less than herein specified. Earthwork shall be performed in accordance with the requirements of Section 19 of the Specifications entitled: "State of California, Department of Transportation, Standard Specifications", Latest Edition, insofar as the same may apply and except as herein modified.

All excavations and embankments required to complete the work as specified herein shall be unclassified and made to the lines and grades shown upon the plans, or as staked in the field. (ALL EXCAVATION SHALL BE UNCLASSIFIED AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY PRIOR TO SUBMITTING HIS PROPOSAL TO FAMILIARIZE HIMSELF WITH THE CONDITIONS THAT HE MAY ENCOUNTER DURING CONSTRUCTION.) Excavated materials not required for fill, embankments or backfills shall become the property of the Contractor, and shall be disposed of at his own expense.

All excavations shall be protected and supported as required for safety and in the manner set forth in the rules, orders and regulations prescribed by the Division of Industrial Safety of the State of California.

All trenches and excavations shall be backfilled overnight and on weekends and holidays. Barriers shall be placed at each end of all excavations, and at such places as may be necessary along excavations from sunset each day to sunrise of the next day until such excavation is entirely refilled. (UNLESS OTHERWISE SPECIFIED, BACKFILL SHALL BE COMPLETE AND STREETS OPEN TO TRAFFIC BY 5:00 P.M. UNLESS OTHERWISE APPROVED BY THE DISTRICT.)

No excavated material shall be deposited on private property unless written permission of the Property Owner thereof is secured by the Contractor, or specifically provided for on these plans and in these specifications. Copies of said written permission, duly signed by the Property Owners of the private property involved, shall be furnished to the District by the Contractor before any excavated material is placed outside the limits of the established right-of-way. Free access must be provided to all driveways, watergates, hydrants, etc.

Any water which may be encountered or may accumulate in the excavation shall be pumped out or otherwise removed as necessary to keep the bottom of the excavation free and clear of water during the progress of the work.

2. Clearing and Grubbing

Areas where construction is to be performed shall be cleared of all rubbish and other objectionable material of any kind, which, if left in place, would interfere with the proper performance or completion of the contemplated work, would impair its subsequent use or form obstructions therein. Trees and other landscaping, unless otherwise specifically identified on the plans for removal, shall not be destroyed, and such measures as are necessary shall be taken by the Contractor for the protection thereof. Organic material from clearing and grubbing operations will not be incorporated in excavation backfill.

It shall be the Contractor's responsibility to remove and dispose of all excess material resulting from clearing and grubbing operations at his own expense. The Contractor shall make his own arrangements for disposal sites at his own expense, at which said material may be wasted. Full compensation for clearing and grubbing shall be included in the contract unit price for which such work is appurtenant thereto, and no additional allowance will be made therefore.

3. Grading Along Pipeline

The Contractor shall perform all grading to provide a working pad along the pipeline. The pad grade shall follow the existing ground grade as nearly as possible. If unnecessary excessive overcutting occurs during this operation, the Contractor may be required to replace all such overcut material and recompact to 90%, or to do other remedial work as directed by the District, all at no cost to the District.

4. Trench Excavation

(a) General

Excavation for sewer pipe, fittings, and appurtenances shall be in open trench to the depth and in the direction necessary for the proper installation of the same as shown upon the plans or as otherwise directed by the District. Trench banks shall be kept as near vertical as is safe, and where necessary shall be properly braced and sheeted, in accordance with the provisions of the Basic Specifications, Section A, Paragraph EE.5 entitled "Trench and Excavation Shoring". The trench bottom shall be graded to provide a smooth, firm and stable foundation at every point throughout the length of the pipe. For sewer pipe, at each joint the bottom of the trench shall be recessed in such a manner as to relieve the bell or coupling of all load.

Where the excavation has been made deeper than necessary, the Contractor shall furnish crushed rock, sand, or other material approved by the District for bedding to provide uniform support under the lower third of the depth of the pipe barrel. The cost of the material and labor to place and compact to achieve a firm and stable foundation herein specified shall be included in the unit price bid for the size of pipe laid thereon.

(b) Limit of Excavation

Except with specific approval of the District's Engineer, no more than 500 feet of open trench shall be excavated in advance of laying of pipe.

(c) Tunneling

Tunneling will be permitted only where native earth is of such firmness that it will remain in its original position, without sloughing off, throughout the work of excavation and backfilling; if sloughing occurs, the roof of the tunnel shall be broken down and the trench excavated as an open trench as herein specified.

(d) Trench Widths for Sewer

The maximum allowable trench width, at the top of the pipe, is the outside diameter of the barrel plus ten (10) inches on either side of the exterior of the pipe barrel. Where the trench width at the top of the pipe is wider than ten (10) inches on either side of the exterior of the pipe barrel, the pipe shall be backfilled from the bottom of the trench to a level one-fourth (1/4) of the diameter above the center of the pipe with 3/4-inch crushed rock or as directed by the District. The cost of the labor and material to provide crushed rock encasement, if required, shall be the responsibility of the Contractor, and no additional compensation will be made therefore.

(e) Blasting

Use of explosives on the work shall be subject to approval of the District. All operations involving handling, storage and use of explosives shall be conducted with every precaution prescribed by Construction Safety Orders of Division of Industrial Safety, State of California, and by local laws and regulations. Only competent, reliable persons working under experienced supervision shall be permitted to use explosives. Contractor will be held responsible for and shall make good any damage caused by blasting or otherwise resulting from disposition or use of explosives on the work. Contractor shall obtain, at no additional cost to the District, blasting permit(s) that may be required.

5. Trench and Excavation Shoring

Pursuant to Section 6705 of the Labor Code of the State of California, in advance of any excavation pursuant to this contract, Contractor shall submit to the District for his acceptance a detailed plan showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during the excavation of such trench or trenches. If such plan varies from the shoring system standards, the plan shall be prepared by a registered civil or structural engineer. Nothing in this provision shall be deemed to allow the use of a shoring, sloping, or protective system less effective than that required by the "Construction Safety Orders". Reference shall also be

made to the rules, orders, and regulations of the Division of Industrial Safety of the State of California, latest edition, and the U.S. Department of Labor, Safety and Health Standards for Construction, latest edition.

FULL COMPENSATION FOR COMPLYING WITH THESE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED WITHIN THE CONTRACT UNIT OR LUMP SUM BID PRICES PAID FOR THE VARIOUS ITEMS ON THE BIDDING SCHEDULE, AND NO ADDITIONAL ALLOWANCE WILL BE MADE THEREFORE.

6. Pipe Bedding for Sewer

(a) General

All pipe bedding shall be of the type indicated on the plans and shall be in accordance with the pipe bedding Standard Drawings included in these Specifications.

Bedding shall be crushed rock bedding per Basic Specifications, Section A, Paragraph EE.7 entitled "Crushed Rock Bedding". (COMPENSATION FOR BEDDING MATERIAL AS INDICATED ON THE PLANS SHALL BE INCLUDED IN THE CONTRACTOR'S BID FOR THE APPLICABLE UNIT PRICES PER LINEAR FOOT OF PIPE AND NO ADDITIONAL COMPENSATION WILL BE MADE THEREFORE.) Minimum compaction for all pipe bedding shall be 90% relative compaction.

(b) Unstable Material

Where material at the bottom of the trench is found to be unstable, soft, or spongy, such material shall be removed to a depth as determined by a Geotechnical Engineer retained by the District Engineer and replaced with Special Crushed Rock Bedding as specified in the Basic Specifications, Section A, Paragraph EE.7 entitled "Crushed Rock Bedding".

(c) Rock

Where rock is encountered, it shall be removed below grade, and the trench backfilled with suitable material to provide a compacted earth cushion with a thickness under the pipe of not less than 1/2-inch per inch of nominal diameter of the pipe to be installed, with a minimum allowable thickness of 6-inches. Where a special bedding class is indicated on the plans, the depth indicated on the Standard Drawing shall be increased to that stated herein, all at no additional cost to the Owner.

CONTRACTOR SHALL RECEIVE NO ADDITIONAL COMPENSATION FOR ABOVE MENTIONED WORK.

7. Crushed Rock Bedding

When specified on the plans or when groundwater is encountered in the excavation, or when soft, spongy and unstable material is encountered in the bottom of the trench, and when approved by the District, the material in the bottom of the trench shall be removed to a depth directed by the District and replaced with well graded 3/4-inch maximum crushed rock bedding as specified below. The crushed rock bedding shall be installed and compacted as shown on the Standard Drawing attached to these Specifications, or with no standard drawing place crushed rock bedding 8" min. thickness (90% min. compaction) under bottom of pipe. The 3/4-inch maximum crushed rock material shall be approved by the District before use.

Crushed rock shall be the product of crushing rock or gravel. Fifty percent of the particles retained on a 3/8-inch sieve shall have their entire surface area composed of faces resulting from fracture due to mechanical crushing. Not over 5% shall be particles that show no faces resulting from crushing. Less than 10% of the particles that pass the 3/8-inch sieve and are retained on the No. 4 sieve shall be waterworn particles. Gravel shall not be added to crushed rock. Crushed rock shall have the following gradation:

Sieve Sizes	3/4-inch Max Crushed Rock % Passing
1"	100
3/4"	90-100
1/2"	30-60
3/8"	0-20
No. 4	0-5
No. 8	--

Crushed Rock Bedding, where ordered by the District, shall be paid for at the unit price per ton complete in place, if Bidding Sheet so indicates, otherwise total cost of crushed rock bedding shall be borne by the Contractor.

Payment for trench width for Crushed Rock Bedding shall be limited to a maximum width of three (3) outside pipe diameters or the actual width, whichever is less. Any trench excavation beyond the maximum width limit shall be filled and compacted with crushed rock per the Standard Drawing, and the COST OF THE ADDITIONAL BEDDING SHALL BE BORNE BY THE CONTRACTOR.

THE DISTRICT RESERVES THE RIGHT TO INCREASE OR DECREASE THIS ITEM WITHOUT CHANGE IN UNIT PRICE OF THIS ITEM OR ANY OTHER ITEM.

8. Trench Backfill and Compaction Requirements for Sewer

(a) Pipe Zone

After the sewer pipe has been laid and inspected as herein specified, the trench shall be backfilled from the level of the bedding shown on the Standard Drawings, to a height of one (1) foot above the top of the pipe with specially selected and carefully compacted material which shall be clean, crushed rock material (Basic Specifications, Section A, Paragraph EE.7 entitled "Crushed Rock Bedding"), free from large stones or lumps. Backfilling shall be carried on simultaneously on each side of the pipe to assure proper protection of the pipe. Minimum compaction for all pipe zone material shall be 90% relative compaction.

(b) Procedure Above Pipe Zone

For sewer mains in public right of way, backfill above the pipe zone shall be per the City or Agency having jurisdiction. The following summarized trench backfill requirements and their corresponding City or Agency:

City of Moreno Valley: Standard Plan MVSI-132 Series

City of Riverside: Standard Drawing No. 452

For all other locations not in public right of way, from the top of the pipe zone backfill to ground surface, the material for backfill shall be crushed miscellaneous base pursuant to the City of Moreno Standard Plan MVSI-132 Series.

For laterals, the entire trench above the pipe zone shall be backfilled with slurry backfill.

(c) Compaction Above Pipe Zone

Relative compaction in all streets and easements, public and private, from the pipe zone to the bottom of base material shall be 90% (95% to within 12 inches of the bottom of the base material). The base material shall be the thickness required and compacted to 95% relative compaction.

(d) Compaction Tests

The compaction test, as required by the District, that meets the required compaction, shall be paid for directly to the testing laboratory by the District. The minimum District requirements are as follows: Compaction tests shall be made at intervals not greater than 150' and one (1) test every 1' maximum vertical increment of trench backfill. Additionally at least 50% of all service laterals shall be tested. The tests shall be made in

accordance with a combination of the Sand Cone Method (ASTM D1556) and nuclear gauge testing methodology at rates (i.e. 1 sand cone method to "10" nuclear gauge tests) specified by the District and at varying depths.

It should be noted that dependent upon the circumstance of each project (e.g., quantity of earthwork involved), full time compaction testing could be required by the District.

It shall be the Contractor's responsibility to pay for all compaction tests that indicate insufficient compaction in the area where the Contractor has previously indicated that compaction was completed.

The Contractor shall provide, at his own expense, all labor and equipment necessary for all compaction test holes. Choice of location of all tests will be made by the District. The aforementioned labor and equipment shall be readily available to perform the necessary work when required. Should the Contractor not be ready to perform such work in support conducting the compaction test, and standby charges are incurred by the District for such a delay, the Contractor shall be responsible for payment of said standby charges.

It shall be the Contractor's responsibility to advise the District two working days prior to requiring compaction tests.

(e) Compaction Requirements under Agency Permit

Where the permit of a governing agency sets forth requirements for compaction more stringent than those stated herein, the Contractor shall adhere to the Agency requirements.

(f) Excess Excavated Material

The Contractor shall make the necessary arrangements for and shall remove and dispose of all excess or unsuitable material. All costs for the disposal of excess or waste material shall be borne by the Contractor.

It is the intent of these specifications that all surplus material of any kind shall be disposed of by the Contractor outside the limits of the public rights-of-way.

Excavated material shall not be deposited on private property unless written permission from the Property Owner thereof is secured by the Contractor. Copies of said written permission, duly signed by the Property Owner of the private property, shall be furnished to the District by the Contractor before such material is placed on private property.

(g) Imported Backfill Material

For work performed within the City of Moreno Valley right-of-way, ECSD's easements and other areas within the City of Moreno Valley, all trench backfill and pipe bedding material shall be imported. For all other areas (City of Riverside), all pipe bedding material shall be imported. For City of Riverside, trench backfill above the pipe zone may be native pursuant to the City of Riverside Standard Drawing No. 452. However, whenever the excavated material is, in the opinion of the Geotechnical Engineer retained by the District Engineer, unsuitable for backfill, the Contractor shall arrange and furnish imported backfill material. Such backfill material shall comply with the requirements of pipe bedding in the Basic Specifications, Section A, Paragraph EE.6 entitled "Pipe Bedding for Sewer" herein.

Full compensation for disposing of unsuitable material, as well as for providing suitable material as herein specified, shall be paid for at unit price per ton of such material delivered and placed in accordance with backfill requirements, if Bidding Sheet so indicates, otherwise total cost of Imported Backfill Material shall be borne by the Contractor.

Contractor is hereby notified that the actual quantity of imported backfill material specified herein cannot be determined at this time. The District is anticipating a condition that may not exist; therefore, the quantities are fictitious for the purpose of comparing bids and the District reserves the right to reduce, to totally delete, or increase, the quantity of imported backfill material required without any consideration for adjustment in unit price of this item or any other item if the material is not needed or the final quantities are substantially different from those shown on the bidding schedule.

9. Structure Excavation and Backfill

Structure excavation shall include the removal of all material of whatever nature necessary for the construction of foundations and other structures in accordance with the plans.

In operating compacting equipment near structures, care shall be used to prevent the displacement of, or injury to, the structure. Backfill shall be carried up evenly on all sides in accordance with the soils engineer's recommendations.

No backfilling shall be done until concrete is thoroughly set and is safe to withstand the load.

All excavation shall be unclassified and it shall be the Contractor's responsibility prior to submitting his proposal to familiarize himself with the conditions that he may encounter during construction.

Full compensation for complying with the above requirements for structure excavation and backfill shall be considered as included in the lump sum bid for a structure, and no other compensation shall be made therefore.

10. Control of Water

The Contractor shall provide and maintain at all times during construction, ample means and devices with which to promptly remove and dispose of all water entering the excavations or other parts of the work. No concrete footings or floors shall be laid in water nor shall water be allowed to rise over them until the concrete or mortar has set at least eight hours. Water shall not be allowed to rise unequally against walls for a period of 28 days. Ground water shall not be allowed to rise around pipe installations until jointing compound in the joints has set.

The Contractor shall dispose of the water from the work in a suitable manner without damage to adjacent property. No water shall be drained into work built or under construction. Water shall be disposed of in such a manner as not to be a menace to the public health.

Dewatering for structures and pipelines shall commence when ground water is first encountered, and shall be continuous until such times as water may be allowed to rise in accordance with the provisions of this Section.

11. Payment

Payment for earthwork and for conforming to all of the provisions of these specifications, unless otherwise specified herein and itemized in the bid schedule, shall be considered to be included in the contract unit or lump sum prices paid for the various items of work wherein earthwork is required, and no additional allowance will be made therefore.

FF. SUBSTITUTIONS

1. Pursuant to Public Contract Code Section 3400(b) the District may make a finding that is described in the invitation for bids that designates certain products, things, or services by specific brand or trade name.
2. Unless specifically designated in the Contract Documents, whenever any material, process, or article is indicated or specified by grade, patent, or proprietary name or by name of manufacturer, such Specifications shall be deemed to be used for the purpose of facilitating the description of the material, process or article desired and shall be deemed to be followed by the words "or equal." Contractor may, unless otherwise

stated, offer for substitution any material, process or article which shall be substantially equal or better in every respect to that so indicated or specified in the Contract Documents. However, the District may have adopted certain uniform standards for certain materials, processes and articles.

3. Contractor shall submit requests, together with substantiating data, for substitution of any “or equal” material, process or article no later than thirty-five (35) days after award of the Contract. To facilitate the construction schedule and sequencing, some requests may need to be submitted before thirty-five (35) days after award of Contract. Provisions regarding submission of “or equal” requests shall not in any way authorize an extension of time for performance of this Contract. If a proposed “or equal” substitution request is rejected, Contractor shall be responsible for providing the specified material, process or article. The burden of proof as to the equality of any material, process or article shall rest with the Contractor. The District has the complete and sole discretion to determine if a material, process or article is an “or equal” material, process or article that may be substituted.
4. Data required to substantiate requests for substitutions of an “or equal” material, process or article data shall include a signed affidavit from the Contractor stating that, and describing how, the substituted “or equal” material, process or article is equivalent to that specified in every way except as listed on the affidavit. Substantiating data shall include any and all illustrations, specifications, and other relevant data including catalog information which describes the requested substituted “or equal” material, process or article, and substantiates that it is an “or equal” to the material, process or article. The substantiating data must also include information regarding the durability and lifecycle cost of the requested substituted “or equal” material, process or article. Failure to submit all the required substantiating data, including the signed affidavit, to the District in a timely fashion will result in the rejection of the proposed substitution.
5. The Contractor shall bear all of the District’s costs associated with the review of substitution requests.
6. The Contractor shall be responsible for all costs related to a substituted “or equal” material, process or article.
7. Contractor is directed to the Special Conditions (if any) to review any findings made pursuant to Public Contract Code section 3400.

GG. WORKERS

1. Contractor shall at all times enforce strict discipline and good order among its employees. Contractor shall not employ on the Work any unfit person or any one not skilled in the Work assigned to him or her.
2. Any person in the employ of the Contractor whom the District may deem incompetent or unfit shall be dismissed from the Work and shall not be employed on this Work except with the written approval of the District.

HH. REMOVAL OF HAZARDOUS WASTE

Should Contractor encounter material reasonably believed to be polychlorinated biphenyl (PCB) or other toxic wastes and hazardous materials which have not been rendered harmless at the Work site, the Contractor shall immediately stop work at the affected Work site and shall report the condition to the District in writing. The District shall contract for any services required to directly remove and/or abate PCBs and other toxic wastes and hazardous materials, if required by the Work site(s), and shall not require the Contractor to subcontract for such services. The Work in the affected area shall not thereafter be resumed except by written agreement of the District and Contractor.

II. AIR POLLUTION CONTROL

Contractor shall comply with all air pollution control rules, regulations, ordinances and statutes. All containers of paint, thinner, curing compound, solvent or liquid asphalt shall be labeled to indicate that the contents fully comply with the applicable material requirements.

Without limiting the foregoing, Contractor must fully comply with all applicable laws, rules and regulations in furnishing or using equipment and/or providing services, including, but not limited to, emissions limits and permitting requirements imposed by the South Coast Air Quality Management District (SCAQMD) and/or California Air Resources Board (CARB). Although the SCAQMD and CARB limits and requirements are more broad, Contractor shall specifically be aware of their application to "portable equipment", which definition is considered by SCAQMD and CARB to include any item of equipment with a fuel-powered engine. Contractor shall indemnify District against any fines or penalties imposed by SCAQMD, CARB, or any other governmental or regulatory agency for violations of applicable laws, rules and/or regulations by Contractor, its subcontractors, or others for whom Contractor is responsible under its indemnity obligations provided for in the Conditions of the Contract.

JJ. COMPLIANCE WITH STATE STORM WATER PERMIT

1. Contractor shall be required to comply with all conditions of the State Water Resources Control Board ("State Water Board") National Pollutant Discharge Elimination System General Permit for Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction Activity ("Permit") for all construction activity which results

in the disturbance of in excess of one acre of total land area or which is part of a larger common area of development or sale. Contractor shall be responsible for filing the Notice of Intent and for obtaining the Permit. Contractor shall be solely responsible for preparing and implementing a Storm Water Pollution Prevention Plan ("SWPPP") prior to initiating Work. In bidding on this Contract, it shall be Contractor's responsibility to evaluate the cost of procuring the Permit and preparing the SWPPP as well as complying with the SWPPP and any necessary revision to the SWPPP. Contractor shall comply with all requirements of the State Water Resources Control Board. Contractor shall include all costs of compliance with specified requirements in the Contract amount.

2. Contractor shall be responsible for procuring, implementing and complying with the provisions of the Permit and the SWPPP, including the standard provisions, monitoring and reporting requirements as required by the Permit. Contractor shall provide copies of all reports and monitoring information to the Owner's Representative.
3. Contractor shall comply with the lawful requirements of any applicable municipality, the District, drainage district, and other local agencies regarding discharges of storm water to separate storm drain system or other watercourses under their jurisdiction, including applicable requirements in municipal storm water management programs.
4. Storm, surface, nuisance, or other waters may be encountered at various times during construction of the Work. Therefore, the Contractor, by submitting a Bid, hereby acknowledges that it has investigated the risk arising from such waters, has prepared its Bid accordingly, and assumes any and all risks and liabilities arising therefrom.
5. Failure to comply with the Permit is in violation of federal and state law. Contractor hereby agrees to indemnify and hold harmless District, its officials, officers, agents, employees and authorized volunteers from and against any and all claims, demands, losses or liabilities of any kind or nature which District, its officials, officers, agents, employees and authorized volunteers may sustain or incur for noncompliance with the Permit arising out of or in connection with the Work, except for liability resulting from the sole established negligence, willful misconduct or active negligence of the District, its officials, officers, agents, employees or authorized volunteers. District may seek damages from Contractor for delay in completing the Contract in accordance with the Contract Documents, caused by Contractor's failure to comply with the Permit.

KK. EXCESSIVE NOISE

1. The Contractor shall use only such equipment on the Work and in such state of repair so that the emission of sound therefrom is within the noise tolerance level of that equipment as established by CAL-OSHA.
2. The Contractor shall comply with the most restrictive of the following: (1) local sound control and noise level rules, regulations and ordinances and (2) the requirements contained in these Contract Documents, including hours of operation requirements. No internal combustion engine shall be operated on the Work without a muffler of the type recommended by the manufacturer. Should any muffler or other control device sustain damage or be determined to be ineffective or defective, the Contractor shall promptly remove the equipment and shall not return said equipment to the job until the device is repaired or replaced. Said noise and vibration level requirements shall apply to all equipment on the job or related to the job, including but not limited to, trucks, transit mixers or transit equipment that may or may not be owned by the Contractor.

LL. DOCUMENT RETENTION AND EXAMINATION

1. In accordance with Government Code Section 8546.7, records of both the District and the Contractor shall be subject to examination and audit by the State Auditor General for a period of three (3) years after final payment.
2. Contractor shall make available to the District any of the Contractor's other documents related to the Work immediately upon request of the District.
3. In addition to the State Auditor rights above, the District shall have the right to examine and audit all books, estimates, records, contracts, documents, bid documents, subcontracts, and other data of the Contractor (including computations and projections) related to negotiating, pricing, or performing the modification in order to evaluate the accuracy and completeness of the cost or pricing data at no additional cost to the District, for a period of four (4) years after final payment.

MM. SOILS INVESTIGATION

When a soils investigation report for the Work site is available, such report shall not be a part of the Contract Documents. Any information obtained from such report as to subsurface soil condition, or to elevations of existing grades or elevations of underlying rock, is approximate only and is not guaranteed. Contractor acknowledges that any soils investigation report (including any borings) was prepared for purposes of design only and Contractor is required to examine the site before submitting its bid and must

make whatever tests it deems appropriate to determine the underground condition of the soil.

NN. STATE LICENSE BOARD NOTICE

Contractors are required by law to be licensed and regulated by the Contractors' State License Board which has jurisdiction to investigate complaints against contractors if a complaint regarding a patent act or omission is filed within four (4) years of the date of the alleged violation. A complaint regarding a latent act or omission pertaining to structural defects must be filed within ten (10) years of the date of the alleged violation. Any questions concerning a contractor may be referred to the Registrar, Contractors' State License Board, P.O. Box 26000, Sacramento, California 95826.

OO. CHANGE IN NAME AND NATURE OF CONTRACTOR'S LEGAL ENTITY

Should a change be contemplated in the name or nature of the Contractor's legal entity, the Contractor shall first notify the District in order that proper steps may be taken to have the change reflected on the Contract.

PP. PROHIBITED INTERESTS

No District official or representative who is authorized in such capacity and on behalf of the District to negotiate, supervise, make, accept, or approve, or to take part in negotiating, supervising, making, accepting or approving any engineering, inspection, construction or material supply contract or any subcontract in connection with construction of the project, shall be or become directly or indirectly interested financially in the Contract.

QQ. PATENT FEES AND ROYALTIES

The Contractor shall include in its bid amount the patent fees or royalties on any patented article or process furnished or used in the Work. Contractor shall assume all liability and responsibility arising from the use of any patented, or allegedly patented, materials, equipment, devices or processes used in or incorporated with the Work, and shall defend, indemnify and hold harmless the District, its officials, officers, agents, employees and representatives from and against any and all liabilities, demands, claims, damages, losses, costs and expenses, of whatsoever kind or nature, arising from such use.

RR. OWNERSHIP OF DRAWING

All Contract Documents furnished by the District are District property. They are not to be used by Contractor or any subcontractor on other work nor shall Contractor claim any right to such documents. With exception of one complete set of Contract Documents, all documents shall be returned to the District on request at completion of the Work.

SS. NOTICE OF TAXABLE POSSESSORY INTEREST

In accordance with Revenue and Taxation Code Section 107.6, the Contract Documents may create a possessory interest subject to personal property taxation for which Contractor will be responsible.

TT. SUBMITTALS OF ALL SAMPLES, MATERIAL LISTS AND CERTIFICATIONS

1. Contractor shall furnish to the District's Representative for approval, prior to purchasing or commencing any Work, a log of all samples, material lists and certifications, mix designs, schedules, and other submittals, as required in the specifications. The log shall indicate whether samples will be provided in accordance with other provisions of this Contract.
2. Contractor will provide samples and submittals, together with catalogs and supporting data required by the District's Representative, to the District's Representative within a reasonable time period to provide for adequate review and avoid delays in the Work.
3. These requirements shall not authorize any extension of time for performance of this Contract. District's Representative will check and approve such samples, but only for conformance with design concept of work and for compliance with information given in the Contract Documents. Work shall be in accordance with approved samples and submittals.

BASIC SPECIFICATIONS
SECTION B

SEWER PIPELINE MATERIALS
SPECIFICATIONS

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BASIC SPECIFICATIONS
SECTION B-SEWER PIPELINE MATERIALS SPECIFICATIONS

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BASIC SPECIFICATIONS

SECTION B

SEWER PIPELINE MATERIALS SPECIFICATIONS

A. GENERAL

Where alternate pipeline materials are allowed by the District, the Contractor shall select such materials and construction methods as will result in a satisfactory completed project. All pipe materials shall be new and unused unless otherwise specified. Materials and strength of pipe shall be as shown on the plans or as specified herein.

B. GRAVITY MAINS

1. Vitrified Clay Pipe (VCP)

(a) General

Vitrified clay pipe and fittings shall be extra strength and shall conform in every respect with the requirements of the specifications and standards of the National Clay Pipe Institute and Sections 207-8 of the "Standard Specifications for Public Works Construction", Latest Edition, for the size of pipe indicated upon the plans. Vitrified clay pipe shall be of the best quality, vitrified, homogeneous in structure, thoroughly burned throughout the entire thickness, free from cracks or other imperfections and must give a clear metallic ring when struck with a hammer.

(b) Joints

Joints in vitrified clay pipe shall be made using a factory-made mechanical compression joint, consisting of a plastic material (Polyurethane), and shall be produced by Gladding McBean, Mission Clay Products or approved equal and shall conform with the requirements of Section 208-2.3 Type "G" Joints of the "Standard Specifications for Public Works Construction", Latest Edition. Note the requirements in the General Design Requirements, Paragraph E entitled "Sewer Notes", Note No.2.

2. Ductile Iron Pipe (DIP)

Ductile iron pipe shall comply with the provisions of Section 207-9 of the "Standard Specifications for Public Works Construction", Latest Edition.

All pipe/fittings shall be coated inside and outside per ANSI Standard A21.6 - (latest edition) unless otherwise noted. Ductile iron pipe shall be compression (slip) joint, conforming with ANSI A21.11 and A21.51, latest, and have a standard thickness class (minimum CL 50) based on internal pressures and external loadings as supported by engineering calculations signed by a professional engineer registered in the State of California. All ductile iron pipe shall be provided with double polyethylene encasement for the entire length of the pipeline, per AWWA Standard C105. The minimum bedding class shall be Class "C" per the Owners specifications and standards.

Where restrained joints are required, ductile iron pipe/fittings shall be U.S.-Pipe TR flex restrained joint or equal, conforming with ANSI A21.11 and A21.51, latest.

Unless otherwise specified, all ductile iron pipe shall be interior lined with 3M Scotchkote 134, fusion-bonded epoxy, 2 coats at 8 mils each for a total of 16 mils and then sealed with a bituminous coating in accordance with ANSI A21.6 or ANSI A21.51.

The weight, class or nominal thickness, and casting period shall be shown on each pipe/fitting. The manufacturer's mark, the year in which the pipe/fitting was produced and the letters "DI" or "DUCTILE" shall be cast or stamped on the pipe.

3. Polyvinyl Chloride (PVC) Plastic Pipe (4" to 12" Dia.)

PVC solid wall pipe shall meet the requirements of ASTM Designation D-3034, SDR 26 or 35. Whenever portions of the proposed sewer construction are to be installed on the radius of a curve, the minimum radius and installation of the pipe shall be in accordance with the manufacturer's recommendations.

4. Warning Tape

Warning tape shall be installed over all pipes (VCP, PVC, DIP) sewer mains placed on 3-ft below the ground along the pipeline alignment. Tape shall be green colored and a minimum of 8 mils thick and 6 inches wide. Tape shall bear a continuous, printed message every 16 to 36 inches warning of "CAUTION BURIED SEWER PIPE BELOW." Tape shall be Northtown Company, Terra Tape, or equal.

BASIC SPECIFICATIONS
SECTION C

SEWER PIPELINE CONSTRUCTION
SPECIFICATIONS

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BASIC SPECIFICATIONS
SECTION C - SEWER PIPELINE CONSTRUCTION SPECIFICATIONS

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BASIC SPECIFICATIONS
SECTION C

SEWER PIPELINE CONSTRUCTION SPECIFICATIONS

A. SEWER PIPE INSTALLATION

1. General

The Contractor shall furnish and install all sewer pipeline material required for the construction of the sewer and appurtenances as herein specified and shown on the Drawings. All pipeline material shall be installed per manufacturer's published recommendations and per the applicable published standards for the particular material being installed unless otherwise modified herein. In case of any conflict, the most stringent and highest requirement shall govern, and the Contractor shall adhere to said requirement, all at no additional cost to the District.

2. Installation of Pipelines

Pipe laying shall proceed up-grade with the spigot ends of bell-and-spigot pipe pointing in the direction of the flow. Each pipe shall be laid true to line and grade and in such manner as to form a close concentric joint with the adjoining pipe, following manufacturer's instructions for the specific jointing method being used. Any pipe which exceeds 1/2-inch from true alignment, settlement, or joint offset after laying shall be taken up and relayed at the Contractor's expense. The SAG measuring device shall be approved by the District. The SAG measuring device shall have a scale to measure the depth of flow to the invert of the pipe and shall be placed in front of the camera. The Contractor shall clean the pipe by balling.

Notwithstanding prior factory or yard inspection, the District shall have the right to reject any damaged or defective pipe found on the job which in his opinion will affect the durability of the installation, and the District may order its removal from the work.

3. Sewer Constructed on Radius

Proposed sewer construction to be installed on the radius of a curve shall be constructed in accordance with Section IV, Paragraph B.1.b.

4. Plastic Sewer System

(1) General

These provisions establish the requirements for the use of PVC plastic sewer pipe for house lateral and main line sewer construction. Use is limited to those projects which are approved in writing by the District.

Plastic pipe may only be used where indicated on plans approved by the District. Where plastic pipe is used, one type shall be used between consecutive manholes and shall include the house laterals in that system. When pipe and fittings are fabricated by the same manufacturer, Contractor will not be allowed to use fittings from other manufacturers.

Plastic pipe shall not be used for sewers serving industrial areas, or areas that, in the opinion of the District, are likely to be rezoned to industrial zones.

(2) Care & Handling

Pipe shall be stored at the jobsite in unit packages provided by the manufacturer. Caution shall be exercised to avoid compression, damage or deformation to bell ends of the pipe. If pipe is anticipated to be exposed to direct sunlight for more than 14 days, pipe must be covered with an opaque material while permitting adequate air circulation above and around the pipe to prevent excessive heat accumulation.

If pipe is strung along trench prior to installation, string only pipe to be used within a 24-hour period; all pipe is to be laid on a flat surface. The interior as well as all sealing surfaces of pipe, fittings, and other accessories shall be kept free from dirt and foreign matter. Gaskets shall be protected from excessive exposure to heat, direct sunlight, ozone, oil and grease. Solvent cement when used shall be stored in tightly sealed containers away from excessive heat.

(3) Mandrel Test of PVC Pipe

Following the placement and densification of backfill and prior to the placing of permanent pavement, all main line pipe shall be cleaned and then mandrelled to measure for obstructions (deflections, joint offsets and lateral pipe intrusions). A rigid mandrel, approved by the Engineer, with a circular cross section having a diameter of at least 95% of the specified average inside diameter, shall be pulled through the pipe by hand.

Ninety-five (95%) of the specified average inside diameter for flexible plastic pipe taken from the appropriate ASTM requirements are as follows:

Pipe Size Nominal Dia.	PVC Solid Wall (ASTM D-3034)	
	SDR 35	SDR 26
4"	3.975"	3.891"
6"	5.915"	5.793"
8"	7.920"	7.754"
10"	9.900"	9.692"
12"	11.78"	11.538"

5. Cleaning

Before final acceptance of sewer facilities or prior to putting any sewer into service, all sewer facilities shall be visually checked and all foreign objects, materials or obstructions removed from the facilities. The District shall require that the facilities be cleaned by flushing, balling, rodding or other means so that the materials may be removed from the system.

6. Measurement and Payment

Unless specifically otherwise provided for in these Specifications, full compensation for the work required for a complete installation of sewer pipeline shall be considered included in the bid unit price per linear foot of pipe, and no other compensation shall be made therefore.

Measurement for payment of pipe shall be on the basis of the horizontal linear footage constructed by the Contractor, complete in place. Measurement will exclude the space occupied by structures constructed by the Contractor. Pipe stubs of one pipe length or less installed in manholes shall be included in the price for manholes and will not be included in the measurement for pipe.

Where excavation depth breakdowns are indicated on the Bidding Sheet, the depths (sewer invert to ground surface) shall be determined by the cut sheets prepared by the survey crew.

Where the offset stake elevation varies more than 0.5 feet from the pipe centerline elevation (at the ground surface), the survey crew will take elevation shots to determine the actual cut from ground surface to invert of pipe. Using this procedure, the payment depth will be based upon average depth between 25 foot interval stations.

The District reserves the right to revise pipeline grades, and the Contractor shall trench and lay accordingly. Payment for said grade revisions shall be based upon the unit bid price for the appropriate size and depth category, and no additional compensation shall be made therefore.

7. Payments to Contractor for Completed Work

NO PARTIAL PAYMENT SHALL BE GIVEN TO THE CONTRACTOR FOR CONSTRUCTION OF THE SYSTEM UNTIL THE PORTION OF THE SYSTEM FOR WHICH THE PAYMENT IS TO BE MADE HAS BEEN TESTED AND THE ENGINEER HAS CERTIFIED THAT THE SYSTEM IS SUBSTANTIALLY COMPLETED AND READY FOR USE.

Consideration for partial payment may be given prior to the Contractor completing the permanent pavement (excluding AC Cap), provided the delay of placing the permanent paving was, in the opinion of the Engineer, due to causes beyond the control of the Contractor.

The Engineer may establish priorities for completion of certain parts of the work which may be necessary to provide certain services or which he may deem advisable in the interests of public safety and convenience.

B. MANHOLES

1. General

The manholes shall be constructed in accordance with the Standard Drawing, and at the locations shown on the plans. All concrete used in the manholes shall be Class "A" Concrete per the Basic Specifications, Section C, Paragraph E.2 entitled "Portland Cement Concrete Classification", unless otherwise indicated herein.

2. Precast Concrete Sections

Precast manhole sections shall conform to the size, shape, form and details shown on the Standard Drawing. The precast cylinder units and precast eccentric top sections shall meet the strength requirements for "Precast Reinforced Concrete Manhole Risers and Tops", ASTM C478. The Contractor shall submit shop drawings of the precast manhole Contractor proposes to use. Each manhole section shall be sealed with an approved preformed, permanently flexible gasket to form a watertight joint. Sealed joints shall conform to ASTM C-990; and shall not shrink, harden or oxidize upon aging. Precast concrete rings are to be joined and sealed with CS-102B butyl/bitumen blended sealant as

manufactured by ConSeal of New Carlisle, Ohio. Manhole sections shall be set perfectly plumb. Sections of various heights shall be used in order to bring the top of the manhole ring and cover to the elevation shown on the plans.

3. Manhole Bases

Manhole bases shall be constructed of Class "A" concrete (Basic Specifications, Section C, Paragraph E.2 entitled "Portland Cement Concrete Classification") poured against native undisturbed material and to the form and dimensions shown on the Standard Drawing. If the Contractor over-excavates beyond the vertical dimensions shown on the Standard Drawing, the depth of concrete below the invert of the pipe shall be increased to greater than the 9" minimum as required to meet undisturbed material; all at no additional cost to the District.

Concrete shall be poured to a level ring-section seating surface, with the base centered over the sewer intersection unless otherwise specified. A metal forming ring shall be used to form a level joint groove in the manhole base. The groove will receive the first precast section to form a watertight joint.

Concrete shall be allowed to reach sufficient compressive strength prior to the installation of the precast manhole sections.

Connections of plastic sewer pipe to a manhole shall be watertight. All PVC or other flexible pipes entering or leaving concrete structures, including manholes, shall have a rubber sealing gasket, as supplied by the pipe manufacturer, firmly seated perpendicular to the pipe axis, around the pipe exterior and cast into the structure as a water stop. Additional requirements may be imposed by the District for manhole connections in projects constructed in areas of high or potentially high groundwater.

Precast manhole bases WILL NOT be allowed.

4. Manhole Frames and Covers

Manhole frames and covers shall be in accordance with the Standard Drawing. All frames and covers shall be traffic strength and shall be monogrammed according to the Standard Drawings.

The elevations at which manhole frames and covers are to be set shall conform to the requirements set forth on the plans, but in all cases shall be governed by the District in the field. Manholes shall not be

constructed to final grade until final paving has been completed. Where the cover is in existing pavement or in the traveled way of the existing road shoulder, it is to be placed flush with the existing surface. Where the cover is in unpaved areas, it shall be set per the Standard Drawing.

Manhole frames shall be set at the required grade and shall be securely attached to the top precast manhole shaft unit with a grout bed and filled as shown on the Standard Drawing. After the frames are securely set in the place provided herein, covers shall be installed and all necessary cleaning and scraping of foreign materials from the frames and covers shall be accomplished to ensure a fine satisfactory fit. All costs of setting and securing manhole frame and cover sets in place as herein provided, including all necessary concrete work, shall be considered as included in applicable contract unit prices and no additional allowance will be made therefore.

5. Standard Manholes

Standard manholes shall be constructed in accordance with the Standard Drawing and at the locations shown on the plans. Materials and construction of standard manholes shall conform in all respects to the applicable provisions of these specifications.

Standard manholes shall be either four-(4)-foot, five-(5)-foot, or six-(6)-foot diameter as shown on the plans. Full compensation for a complete installation of standard manholes shall be paid for at bid unit price per each and no other compensation will be made therefore.

6. Joint Wrap in Groundwater Conditions

In conditions where groundwater exists (or where the soils report indicates it could potentially exist) external wrap all joints with an approved joint wrap impermeable to the groundwater. Joint wrap shall be a minimum of 65 mils thickness with width at least four (4) inches either side of concrete section joint. Product shall be ConWrap as manufactured by ConSeal of New Carlisle, Ohio. The external wrap shall be installed in addition to the required joint sealant per the Basic Specifications, Section C, Paragraph B.2 entitled "Precast Concrete Sections".

7. Testing of Manholes

(A) Ground Water Conditions - Infiltration Test

All manholes in areas where ground water exists over the top of the pipe shall be water tested. All pumping of ground water shall be discontinued for at least three (3) days, after which the manhole shall be tested for infiltration. The inlet(s) and outlet of each manhole shall be plugged. Test for a minimum of thirty (30) minutes. No visible leakage shall be allowed.

(B) Vacuum Testing

All manholes shall be vacuum tested. Refer to Basic Specifications, Section C, Paragraph N entitled "Vacuum Testing of Manholes" for specific requirements.

C. SEWER LATERALS

1. General

The sewer laterals shall be constructed as shown on the Standard Drawing. Sewer laterals of the size called for on the plans shall be installed at approximately the locations shown on the plans. The exact location will be determined in the field by the District or private developer. The Contractor shall field reference each lateral connection with a surface marker. The marker shall be as specified on the Standard Drawing.

2. Materials

Sewer laterals shall be constructed of PVC or VCP material and shall meet the requirements of the Basic Specifications, Section B entitled "Basic Sewer Pipeline Materials Specifications."

3. Tees and Wyes

Tees and wyes shall be of the same material as the sewer main and the longitudinal barrel of the tee or wye shall be of the same size as the sewer main. If the lateral pipe is PVC and is to be connected to VCP tees or wyes, provide proper transition adapter and band seal couplings with stainless steel band and straps. Tees or wyes of the size called for on the plans shall be installed at approximately the locations shown on the plans. The exact location will be determined in the field by the

District or private developer. A suitable plug shall be provided and installed prior to backfilling operations to ensure a watertight joint.

4. Construction

All sewer laterals shall be installed per the Standard Drawing. In no case shall any lateral be constructed at less than two percent (2%) slope unless shown on plans. The sewer lateral shall be constructed a minimum distance of five (5) feet horizontally from existing water services.

Unless otherwise approved by the District, any required saddle connections to existing mains shall be made with an approved sewer tapping machine. The Contractor shall submit to the District his proposed method for tapping, including manufacturer's tapping equipment descriptions, etc.

5. Payment

Unless otherwise specified, sewer laterals shall be paid for at the unit price per foot bid, measured in a horizontal plane along the centerline of the sewer lateral from the centerline of the main sewer to the property line. Said prices per linear foot shall be considered full compensation for furnishing all pipe and fittings, other materials, equipment and labor necessary to install the pipe; including clearing and grubbing, pavement removal and replacement, placement of bedding in the locations shown on the plans in accordance with the Standard Drawings and specifications, removal and/or replacement of existing interfering improvements; and all other work pertinent to installing the sewer lateral complete in place and for which no additional compensation shall be made therefore.

In payment for tees and wyes, compensation shall be made for each tee and wye installed at the unit price bid, excepting for tees and wyes installed for cleanouts, compensation for which shall be included in the price per cleanout. The portion of the tee or wye covered by such compensation shall be considered to be the branch portion.

D. TESTS FOR LEAKAGE IN SEWER

1. General

All the tests for exfiltration from, and infiltration into the system shall be in accordance with Section 306-1.4 of the "Standard Specifications for Public Works Construction", Latest Edition, except as modified herein.

The method of testing and testing equipment shall be approved by the District.

The Contractor shall, at his own expense, furnish all materials for making the tests required under the direction of the District.

If the leakage or infiltration, as shown by the tests, exceeds the standard set forth in said section, Contractor shall, at no additional cost to the District, make the necessary repairs by methods approved by the Engineer to correct the deficiencies. All tests must be completed before the street or trench is resurfaced with permanent pavement replacement, but after complete installation and trench compaction of all facilities within a particular section between manholes.

Full compensation for testing shall be included in the bid price of various items of work, and no other compensation shall be made therefore.

2. Air Testing

The Contractor shall test all sewers by means of the air test specified herein, unless otherwise directed by the District. The air test shall be in accordance with Section 306-1.4.4 of the Standard Specifications for Public Works Construction, Latest Edition, except as herein modified.

Air shall be introduced into the pipeline until 3-1/2 psi gauge pressure has been reached, at which time the flow of air to the pipe shall be shut off. After the temperature has stabilized the air pressure shall be permitted to drop and, when the internal pressure has reached 3.0 psi gauge, the time lapse required for the air pressure to drop to 2.0 psi gauge shall be measured. The time lapse (in seconds) required for the air pressure to decrease from 3.0 to 2.0 psi (gauge) shall not be less than that given in the following table:

Sewer Pipe Dia.	Minimum Time Lapse (Seconds)
8"	140
10"	170
12"	200
15"	260
18"	310
21"	360
24"	410
27"	460
30"	510
33"	560
36"	610

If the time lapse exceeds that shown in the table, the pipe shall be presumed to be within acceptable limits; if the time lapse is less, the Contractor shall make the necessary corrections to reduce the leakage to acceptable limits by repair methods approved by the District.

3. Water Infiltration Test

Where ground water conditions are encountered and the water level prior to any pumping or dewatering operations is above the top of the proposed sewer pipe, then the Water Infiltration Test shall be used in lieu of the air test (Basic Specifications, Section C, Paragraph 2 entitled "Air Test"). The Water Infiltration Test shall be in accordance with Section 306-1.4.3 of the Standard Specifications for Public Works Construction, Latest Edition, except as herein modified.

The infiltration shall not exceed 0.0016 gallons per hour per foot of sewer, per inch of pipe diameter. The test shall be run for a minimum period of two (2) hours. The Contractor shall furnish all labor, materials, equipment required for the infiltration test, at no additional cost to the District.

If ground water conditions are such that the ground water level is between the flow line of the proposed sewer pipe and the top of the pipe, both the air test and the water infiltration test shall be conducted at no additional cost to the District. In such a case, the section of pipe being tested shall be deemed acceptable only if it passes both the air test and the water infiltration test.

E. CONCRETE WORK

1. General

Concrete shall be composed of portland cement, natural aggregates, and water proportioned to produce required strength and well mixed into required consistency, Type II-V for all concrete in contact with wastewater.

Portland cement concrete for manhole bases, cradles, encasements, thrust blocks and structures shall be composed of portland cement, fine aggregate, coarse aggregate and water proportioned and mixed in accordance with the requirements of Section 90 of the State of California Department of Transportation Standard Specifications, except as may be herein modified.

Concrete for manhole bases, cradles and encasements, and all other concrete structures, shall be constructed to the lines and grades and in accordance with the design shown in the details on the plans.

Prior to placing any concrete, the Contractor shall submit to the District the design mix proposed to be used. Said mix shall set forth the weights of cement, sand, coarse aggregate and the amount of water to be used. (Source of supply shall also be furnished to the District.) The proposed mix shall be approved by the District prior to placing any concrete.

2. Portland Cement Concrete Classification

Concrete Class	Compressive Strength @ 28 days (psi)	Sack of Cement/CY
"A"	3,500	6
"B"	2,500	5
"C"	2,000	4
"D"	4,000	7

The amount of free water used in concrete shall not exceed 312 pounds per cubic yard, plus 20 pounds for each required 100 pounds of cement in excess of 564 per cubic yard.

Additional cement and a modified concrete mix, as approved by Engineer, will be required for situations requiring pumping of concrete.

3. Class "B" Concrete Encasement

Class "B" concrete shall be used for unreinforced concrete encasements that may be required by unforeseen field conditions. The quantity shown on the proposal is an estimate. The District hereby reserves the right to reduce this item to a small percentage of that shown on the proposal forms, delete it or increase it, without altering the unit price bid for cubic yard of concrete.

The unit price bid for cubic yard of concrete shall include furnishing all materials, labor, and equipment to properly place the concrete as may be required, and no other compensation shall be made therefore.

4. Reinforced Concrete Encasement

At the locations shown on the plans, and in accordance with the detail shown on the plans and/or Standard Drawing, and these Basic Specifications, the Contractor shall construct reinforced concrete encasement around the sewer carrier pipe. Concrete for reinforced concrete encasement shall be Class "A". Reinforcing steel (unless

otherwise indicated) shall be No. 4 bar, billet steel having minimum yield point of 60,000 psi, formed and spaced as shown on the plans or the Standard Drawing.

Payment for reinforced concrete encasement shall be at the unit price per cubic yard of concrete for the section as shown on the plans or Standard Drawing, and no other compensation will be made therefore.

F. PAVEMENT REMOVAL AND REPLACEMENT

1. General

Pavement removal and replacement for all public roads, including aggregate base and temporary paving where required, shall comply with all the requirements of the agency issuing the Encroachment Permit. In roads established under formation of a special road district, the specifications of the Encroachment Permit shall apply. Any private roads and streets, including driveways in which the surface is removed or damaged, shall be restored to the original grade and crown by the Contractor. Removed or damaged sections shall be restored with the type of improvements (or better) conforming to that which existed at the time the Contractor entered upon the work.

It shall be the responsibility of the bidder to satisfy himself as to the existing pavement sections prior to submitting his bid.

Full compensation for temporary and permanent resurfacing, including the replacement of base material as required, shall be included in the unit bid price for pavement removal and replacement per linear foot of mainline trench. Any required pavement removal and replacement for manholes, house connection laterals, or other appurtenances shall be considered included in the bid price for the various items, and no additional compensation shall be made therefore.

2. Pavement Cutting

Pavement shall be cut to a straight edge parallel to the pipe alignment prior to excavation. Method of pavement cutting shall be saw cut or as specified by the Agency having jurisdiction. Under no circumstances shall excavation be started prior to scoring of pavement. If the adjacent pavement is disturbed during the Contractor's operation, the pavement shall be recut on a straight line to remove the damaged pavement before resurfacing. Portland cement concrete pavement and sidewalk shall be saw cut. Pavement cutting shall be considered included in the bid price

for pavement removal, disposal and replacement, and no additional compensation shall be made therefore.

3. Permanent Trench Pavement

The permanent trench pavement shall be in accordance with the Agency having jurisdiction. If not specifically addressed by the road agency's permit, the existing pavement shall be saw cut and the permanent trench base paving shall be constructed to be flush with existing so that the asphalt concrete is smooth, true to grade and cross section thus providing an even driving surface without undulations. The completed base paving surface shall be provided as described herein whether an asphalt concrete cap is specified or not specified. Should an asphalt concrete cap be required, Contractor shall grind down the base paving prior to placement of A.C. cap.

4. Asphalt Concrete Cap

Where required by the agency issuing the Encroachment Permit or other agency having jurisdiction, an asphalt concrete cap shall be placed along the length of the trench. The installation of the asphalt concrete cap shall be in accordance with the specifications and policies of the agency having jurisdiction. Where the asphalt concrete cap is not specifically stated in the applicable permit or on the drawings, and when directed by the District, the minimum cap shall be a grinded 0.10-foot thick, 12-foot wide section centered over the center of the trench or the traveled way, and pulled with a "Barber Greene" or equivalent.

Full compensation for placement of asphalt concrete cap, where required, shall be included in the unit bid price per linear foot of mainline trench. Any required asphalt concrete cap for house connection laterals or other appurtenances shall be considered included in the bid price for the various items, and no additional compensation shall be made therefore.

G. CONNECTIONS TO EXISTING MANHOLES

The Contractor shall make connections to existing manholes at the location and elevation shown on the plans and as verified in the field by the Contractor. Where new flow-through channels have to be cut in the existing manhole base, they shall be cut so that the resulting section is smooth and conforms to the intended shape. Deviation from form and grade shall not be greater than 1/4 inch. The channel surface shall be smoothed with epoxy mortar. The new VCP or PVC sewer pipe shall be firmly embedded in epoxy grout where it joins the existing manhole.

Payment for connections to existing manholes shall be included in the contract price paid for the various items of work wherein connections to existing manholes are required, and no additional allowance will be made therefore.

H. TEMPORARY HANDLING OF SEWAGE

Certain work in connection with tying into existing sewers and manholes, may require the temporary handling of sewage either by temporary bypass lines, pumping, bulkheading at low flows, or other means, to be approved by the District. Sewage so diverted shall be handled in a manner such that all sewage shall be contained and properly disposed of so as not to create a public nuisance or health hazard. No extra compensation will be allowed in connection with the temporary diversion of sewage, and all such costs shall be included in the various contract unit prices.

Should the Contractor's operation result in fine(s) from other agency jurisdictions or result in the District's need for cleanup assistance, the payment of such fines and District assistance shall be the responsibility of the Contractor.

I. STEEL CASING

Steel casing shall be butt welded of sheets conforming to ASTM Specification A283/A283M and shall be constructed at the location shown on the plans or as directed by the District. Construction may be by open trench. If the Contractor elects to install the casing pipe by jacking, the provisions of these specifications for jacked steel casing pipe shall apply. However, payment shall be at the bid unit price for steel casing.

The casing pipe shall have a steel thickness not less than 1/4 inches. It shall be the Contractor's responsibility for selecting a size of casing, at or above the minimum specified, in order that the installation may be done with a sufficient degree of accuracy. Any and all increased costs resulting from the Contractor's use of steel casing pipe with greater diameter or thickness than the minimum specified, shall be borne by the Contractor.

Carrier pipe conforming to these specifications for the designated pipe shall be installed within the casing pipe to the lines and grades shown on the plans. The carrier pipe shall be supported on either Advanced Products & Systems Casing Spacers and Insulators, PSI Pipeline Seal and Insulator Inc., Cascade Waterworks Manufacturing Co., or equal. The ends of the steel casing shall be sealed with synthetic rubber end seals with stainless steel band straps with a weephole installed at the lower end for drainage. The annular space between the steel casings and carrier pipe shall be left empty unless grouting is specified by the Engineer or on the plans.

Measurement for payment for casing pipe, excluding carrier pipe within said casing, shall be made along the centerline of the casing pipe between the limits shown on the plans and/or staked in the field.

Payment for steel casing pipe will be at the contract unit price per linear foot for steel casing pipe placed in accordance with these plans and specifications. Payment shall be full compensation for furnishing all labor, excavation, backfill, steel casing pipe, shoring, equipment, services, transportation, sand cement, concrete, all grouting operations described herein, and other appurtenant items of labor and material required to complete the work. The carrier pipe will be paid for under the bid item for pipe.

J. JACKED STEEL CASING

The Work of this section includes furnishing and installing jacked steel casing under roadways, railroads, storm drain facilities and other major pipelines, facilities or structures; including all labor, excavation, backfill, boring, jacking, steel casing pipe, shoring, equipment, services, transportation, sand cement, concrete, grouting, and other appurtenant items of labor and materials required to complete the work. Jacked steel casings and bore installations shall be installed only by a qualified company regularly engaged in this specialty work.

Jacked steel casing shall be butt welded of sheets conforming to ASTM Specification A283/A283M and shall be constructed in accordance with the provisions of Section 306-2 of the "Standard Specifications for Public Works Construction", Latest Edition, except as herein specified or Northwest Pipe Co. Perma Lok steel casing conforming to ASTM A 36, ASTM A 515, grade 60 or ASTM A 572, grade 42.

The casing pipe shall have a steel thickness not less than 3/8 inch. The casing pipe shall be a minimum of 20 feet in length to a maximum of 40 feet in length. Any and all increased costs resulting from the Contractor's use of steel casing pipe with greater diameter or thickness than the minimum specified shall be borne solely by the Contractor.

Steel casing pipe of the minimum size and thickness specified shall be installed in place by jacking and boring methods without the use of water or air at the locations shown on the plans, and to grades required to install carrier pipe. If the bore casing is equal to or exceeds 18-inches in diameter and the length of the bore exceeds 80-feet in length, the Contractor shall bore using a track machine, unless otherwise directed by the Authority.

Voids, if developed outside the casing and within limits for boring or jacking, from any cause such as removal of rocks encountered in boring, shall be filled with lean grout forced in under pressure by insertion of a grout pipe outside of the casing. The lean grout shall consist of one part of portland cement to not more than four parts of sand by volume, placed at low pressure. Grout pressure is to be controlled so as to avoid deformation of the casing and installed product pipeline. Sand for grout to be placed outside the casing shall be of such fineness that 100% will pass a No. 8 sieve and no less than 35% will pass a No. 50 sieve.

If the Contractor is not ready to place the pipe in the casing at the time of completion of boring and jacking operations, the ends shall be bulk headed, and the approach trenches in public streets shall be backfilled, temporary surfacing placed thereon, and the affected portion of the street reopened to traffic. For short (overnight) duration, the trenches may be securely covered with armored plates to allow for uninterrupted traffic.

The Contractor shall be responsible for maintaining the specified line and grade, and preventing settlement of overlying structures, or other damage due to the boring and jacking operations. Except as otherwise indicated in this Section of the Specifications, the Contractor shall comply with the applicable provisions of latest adopted edition of the Standard Specifications for Public Works Construction (SSPWC) together with any latest Supplement Amendment. Additionally, jacked steel casing shall be in accordance with applicable ASTM Standards.

SUBMITTALS

1. The following shall be submitted:
 - (a) Submittals for jacking or boring operation shall be in accordance with SSPWC Section 306-2.1 unless indicated otherwise.
 - (b) The Contractor's attention is directed to the provisions for "Shoring and Bracing Drawings" in Section 6705 of the California Labor Code. If such plan varies from the shoring system standards established in the Construction Safety Orders of the State of California, such alternative systems plans shall be prepared by a civil or structural engineer licensed in the State of California.
 - (c) Casing installation schedules which include schedules of excavation, pipeline installation, and backfill operations.
 - (d) Material list including diameter, thickness, and class of steel casing.
 - (e) Detailed locations and sizes of all boring or jacking and receiving pits.
 - (f) Shop drawings of casing insulators (spacers) and end seals including manufactures' catalog information.
 - (g) Permits associated with the boring or jacking operations.
 - (h) Pressure concrete mix design and bracing plans to prevent the carrier pipe from shifting or floating in accordance with SSPWC Section 306-2.3.

- (i) Submittal approval of boring operation plan shall occur prior to excavation of boring operation.

POTHOLING OF EXISTING UTILITIES

Contractor shall be required to pothole any existing underground utilities crossing the proposed jacked steel casing installation that may potentially interfere with the installation. Refer to Special Conditions.

PERMIT PROVISIONS AND REQUIREMENTS

1. Contractor shall be responsible for obtaining any required permits other than those indicated in the Special Conditions to be obtained by the Authority. Contractor shall comply and adhere to all permit requirements at no additional cost to the Owner.
2. Where Agency permit provisions differ from the specification requirements stated herein, the highest and most stringent standard or requirement shall govern; and Contractor shall construct the installation to said higher standard at no additional cost to the Authority.

CASING SPACERS

Casing isolators/spacers shall have a minimum 14 gauge steel band and where required, 10 gauge risers. The band, risers and connecting studs shall be welded and cleaned at the factory before the application of a fluidized bed fusion bonded PVC coating of between 10-16 mils thickness. The PVC coating shall provide good resistance to acids and alkalies and excellent resistance under ASTM B117 salt spray tests. The isolators/spacers shall have a flexible PVC inner liner of 0.09 inch thickness with a durometer "A" 85-90 hardness and a minimum 58,000 volt dielectric strength. The runners shall be high pressure molded glass reinforced polymer with a minimum compressive strength of 18,000 psi per ASTM D638. The runners shall be 2.0 inch in width and a minimum of 7.0 inches long for C8G-2 models and 11" for C12G-2 models (polyethylene runners are not an acceptable alternative). The runners shall be attached to the band or riser by 3/8" welded steel studs and lock nuts which shall be recessed far below the wearing surface on the runner. The recess shall be filled with a corrosion inhibiting filler. The band section shall be bolted together with cadmium plated studs, nuts and washers. End seals shall be made of synthetic rubber. Banding straps shall be made of stainless steel.

Products of the type indicated shall be made by one of the following:

1. Casing Spacers – Pipeline Seal and Insulator Inc. Model C12G-2, Advance Products & Systems Inc. Model S/12, or approved equal.

2. End Seals – Pipeline Seal and Insulator Inc. Model S, C or W, Advance Products & Systems Inc. Model AC or AW, or approved equal.

The Contractor shall give the District a minimum of three (3) days advance notice of the start of an excavation or boring operation. All work shall be performed in the presence of the District unless the District has granted prior approval to perform such work in its absence. All welding procedures used to fabricate steel casings shall be pre-qualified under the provisions of ANSI/AWS D1.1. Welding procedures shall be required for, but not necessarily limited to, longitudinal and girth or special welds for pipe cylinders, casing joint welds, reinforcing plates and grout coupling connections. No exterior or interior joints of the carrier pipe shall have mortar grout applied over a seam until the seam has cooled. Exterior and interior joints of the carrier pipe shall be mortar coated and lined in the field.

INSTALLATION OF STEEL CASING

JACKING HEAD: A steel jacking head shall be fitted to the lead section of the casing in such a manner that it extends around the entire outer surface of the steel casing and projects at least 18 inches beyond the driving end of the casing. The jacking head shall not protrude more than 1/2 -inch outside of the outer casing surface. The head shall be securely anchored to prevent any wobble or alignment variation during the boring or jacking operations. To minimize voids outside the casing, excavation shall be carried out entirely within the jacking head and not in advance of the head. Excavated materials shall be removed from the casing as the boring or jacking operation progresses and no accumulation of excavated materials within the casing shall be permitted.

JACKING PIT: The excavations for the boring or jacking operations shall be adequately shored to safeguard existing substructures and surface improvements and to ensure against ground movement in the vicinity of the jack supports. Heavy guide timber, structural steel, or concrete cradles of sufficient length shall be provided to assure accurate control of boring or jacking alignment. The Contractor shall provide adequate space within the excavation to permit the insertion of the lengths of casing to be bored or jacked. Timbers and structural steel sections shall be anchored to ensure action of the jacks in line with the axis of the casing. A bearing block, consisting of a timber or structural steel framework, shall be constructed between the jacks and the end of the casing to provide uniform end bearing over the perimeter of the casing and distribute the jacking pressure evenly.

CONTROL OF ALIGNMENT AND GRADE: The Contractor shall control the application of the jacking pressure and excavation of materials ahead of the casing as it advances to prevent the casing from becoming earthbound or

deviating from the required line and grade. The Contractor shall restrict the excavation of the materials to the least clearance necessary to prevent binding in order to avoid loss of ground and consequent settlement or possible damage to overlying structures.

GROUTING: Not used.

INSTALLATION: The installation of the casing shall be in accordance with the SSPWC Section 306-2.1 and subject to the approval of the agency having jurisdiction over the area containing the boring or jacking operations.

In the event that due to unforeseen field conditions and impediments that impedes on the Contractor's ability to proceed with the jacking and boring of the steel casing, the Contractor shall immediately alert the District and provide data and information to assist the District in their review. The Contractor shall also alert all agencies affected such as City, flood control districts, railroad, transportation districts, etc. Depending on the issues and length of time to resolve, Contractor shall secure the site, excavations pits and trenches, and maintain all traffic control and security to ensure safe passage of traffic, pedestrians, etc.

INSTALLATION OF CARRIER PIPE

JOINTS: All joints of the carrier pipe within the casing shall be in accordance with District Standards.

INSTALLATION OF PIPE: The end seals shall be pulled on (in case of pull on type of seals) and the casing spacers shall be installed over the carrier pipe at the proper location, in accordance with the casing spacers manufacturer's instructions. Care shall be taken not to damage the carrier pipe coating or the inner coating of casing pipe while installing the carrier pipe. The position of the runners in the carrier pipe and casing shall be as indicated and shall be uniform throughout the casing length. Line and grade of the carrier pipe shall be installed as specified on the plans and deviations shall not be permitted. Contractor shall be aware that during installation, rifling (rotating) of the carrier within the casing can occur and can be a cause of line and grade discrepancies. Take necessary measures to prevent rifling. Guides may be installed as necessary to prevent rifling (rotating) of the carrier pipe during installation.

TESTING OF THE CARRIER PIPE: Testing of the carrier pipe shall be completed prior to strapping the end seals.

END SEALS: After the carrier pipe has been tested, the end seals shall be strapped by stainless steel bands in accordance with the manufacturer's instructions.

CLOSING OF PITS: After equipment and excavated materials from the boring or jacking operations have been removed from the jacking pit, the Contractor shall prepare the bottom of the jacking pit as a pipe foundation. The Contractor shall remove all loose and disturbed materials below pipe grade to undisturbed earth and re-compact the material.

Measurement for payment for casing pipe excluding carrier pipe within said casing shall be made along the centerline of the casing pipe between the limits shown on the plans and/or staked in the field.

Payment for jacked steel casing pipe will be at the contract unit price per linear foot for jacked steel casing pipe placed in accordance with these plans and specifications. Payment shall be full compensation for furnishing all labor, excavation, backfill, boring, jacking, steel casing pipe, shoring*, equipment, services, transportation, sand cement, concrete, all grouting operations described herein, and other appurtenant items of labor and material required to complete the work. The water carrier pipe will be paid for under the bid item for pipe. The ends of the casing pipe shall be closed using an end seal as manufactured by Advanced Products and Systems, Inc. or District approved equal. Brick and mortar is not acceptable.

L. VIDEO INSPECTION

Upon successful completion of the final leakage test for the sewer including manhole vacuum testing, and after base rock placement and compaction is complete, the contractor shall notify the District that the pipeline system is ready for video inspection. Said notification shall be made at least five working days in advance of the actual video inspection date. The video inspection will be made by a video inspection company approved by the District and hired by the Contractor. Video inspection shall be made in the presence of the District's Representative. Prior to the video inspection, the Contractor shall be responsible to provide the following items:

1. Clean sewer pipelines free of all dirt, rock, debris, etc.
2. Water source with an adequate amount water, pipe, hose, etc. to place enough water in the pipelines to evaluate pipeline alignment "SAGS".
3. Driveable truck access to each manhole within the system to be videoed.
4. Provide all traffic control methods required.

* Shoring shall be by steel shield from top of bore pit excavation to bottom, unless otherwise directed by Engineer.

5. Acceptable depth gauge.

Should any of the aforementioned items not be in compliance by the time the video inspection is to occur, the Contractor shall be subject to compensating the District for all costs incurred.

Full compensation to the Contractor for complying with the above requirements shall be considered as included in the contract lump sum provided for such work and no additional allowance will be made therefore.

Upon completion of the video for the subject sewerlines, the video inspection company will provide the District with the DVD (video file format to be viewable on a standard DVD player/computer and/or as approved by the District) and a written report detailing the condition of the interior of the mainline and joints. Subsequent to review of the DVD and report by the District, the District will notify the Contractor that he may then proceed with completion of the project; or the District will provide a list of corrective measures that must occur prior to acceptance.

Should remedial activities be necessary, the reconstruction methodology shall be approved by the District prior to commencement of the work. Upon completion of the remedial construction, the contractor shall once again notify the District that the sewerlines are ready for a video inspection. The District reserves the right to re-video any portions of the sewer system they determine may have been affected by the reconstruction work activities. Further, all related costs including but not limited to reconstruction materials, labor, equipment, video inspection, District and other agency inspection, and administrative costs shall be borne by the contractor.

M. VIDEO INSPECTION COMPANY REQUIREMENTS

The Sewer CCTV inspection work must be completed by a certified National Association of Sewer Service Companies (NASSCO) Pipeline Assessment Certification Program (PACP) operator(s) using established PACP coding and observations. Current certification shall be provided to the District a minimum of ten (10) days prior to the time work is performed.

CCTV inspection shall be performed by a certified NASSCO PACP certified operator; certification to be presented at the time work is performed and shall be submitted with the report.

(Closed Circuit Television Inspection - CCTV)

1. Rotating lens camera with articulating head.

2. Scanning capabilities of 360°.
3. Operative in 100% humidity conditions.
4. Lighting for the camera shall minimize reflective glare.
5. Lighting and camera quality shall be suitable to provide clear, in focus picture of the entire periphery of the pipe for all conditions.
6. Camera focal distance shall be adjustable through a range from 6" to infinity.
7. Remote reading distance (footage) counter shall be accurate to one percent (1%) over the length of the particular section being inspected.
Provide depth gauge for SAG measurement acceptable to District.
8. The camera, television monitor, and other components of the color video system shall be capable of producing a minimum of 350 line resolution.
9. Documentation consisting of a DVD (video file format to be viewable on a standard DVD player/computer and/or as approved by the District) and a written report detailing the condition of the mainline and joints shall be submitted to the District inspector immediately following the video inspection. Each disc shall be labeled with the project or subdivision name, number and pipe run numbers it contains. Each disc shall be delivered in a plastic case.
10. All video equipment used for domestic sewer systems shall be certified for domestic sewerline inspection only.
11. The CCTV camera operator shall stop at each defect, pipe joint, and televise the entire joint with the pan and tilt feature on the head of the camera, initially, in a complete counterclockwise direction followed by a complete clockwise direction. If a defect is found, the CCTV operator will "home up" the camera prior to defining the defect and determining it's size and location. The CCTV operator will also stop and record any questionable item such as a stain, crack, paint mark, shadow found or character change in a pipe being inspected. In other words, the CCTV operator must stop, record and note anything questionable no matter how minor. The Engineer, as defined by ECSD Standard Specifications, not the CCTV operator, will decide if a questionable items is a "problem event" when that Engineer reviews the video inspection.

N. VACUUM TESTING OF MANHOLES

1. General

All manholes shall be vacuum tested unless otherwise waived in writing by the District. Vacuum testing shall be performed either pre or post backfilling in accordance with the criteria stated herein. In all cases vacuum testing shall be performed prior to video inspection.

Contractor shall be solely responsible for safe access to the manholes and all necessary safety measures required for the vacuum testing.

2. Pre versus Post Backfilling Test Criteria

- (a) All manholes with depths from rim to pipe flowline less than or equal to twelve (12) feet shall be vacuum tested prior to backfilling.
- (b) All manholes with depths greater than twelve (12) feet from rim to pipe flowline shall be vacuum test post backfilling.

3. Reference Standard

Unless otherwise modified herein, vacuum testing shall be in accordance with ASTM C1244-11.

4. Manhole Preparation

- (a) Plug and seal all lift holes.
- (b) Care shall be taken to affect a seal between the vacuum base and the manhole rim. Pipe plugs shall be secured to prevent movement while the vacuum is drawn.
- (c) All pipe entering the manhole shall be temporarily plugged, taking care to securely brace the pipes and plugs to prevent them from being drawn into manhole.

5. Basic Field Testing Procedure

- (a) The test head gauge shall be placed at the top of the manhole in accordance with the manufacturer's recommendations.
- (b) A vacuum of 10 inches of mercury shall be drawn on the manhole, the valve on the vacuum line of the test head closed,

and the vacuum pump shut off. The time shall be measured for the vacuum to drop to 9 inches of mercury.

- (c) The manhole shall pass if the time for the vacuum reading to drop from 10 inches of mercury to 9 inches of mercury meets or exceeds the values indicated in the table in Section C of the Basic Specifications Paragraph 6 entitled “Minimum Test Times – Standard Manholes” in Section C of the Basic Specifications.
- (d) If the manhole fails the initial test, necessary repairs shall be made in accordance with a submitted plan and method approved by the District. The manhole shall then be re-tested until a satisfactory test is obtained. All repairs shall be the sole responsibility of the Contractor.

6. Minimum Test Times – Standard Manholes

- (a). Testing Criteria

Depth of Manhole (feet)	Minimum Test Times (sec.) Based on Diameter of Manhole (feet)		
	4' dia.	5' dia.	6' dia.
Up to 8'	20 sec.	26 sec.	33 sec.
10'	25 sec.	33 sec.	41 sec.
12'	30 sec.	39 sec.	49 sec.
14'	35 sec.	46 sec.	57 sec.
16'	40 sec.	52 sec.	67 sec.
18'	45 sec.	59 sec.	73 sec.
20'	50 sec.	65 sec.	81 sec.
22'	55 sec.	72 sec.	89 sec.
24'	59 sec.	79 sec.	97 sec.
26'	64 sec.	85 sec.	105 sec.
28'	69 sec.	91 sec.	113 sec.
30'+	74 sec.	98 sec.	121 sec.

For manholes deeper than thirty (30) feet or larger than six (6) feet in diameter contact District for specific requirements.

- (b) Testing Form and Certification
Submit testing form to District for approval. Include the following as a minimum:

- Date of Test
- Project Description
- General Contractor
- Agent/Company Performing Test
- Specific Location, Including Station and Manhole Number
- Detailed Test Results
- Certification Signed by Testing Company

7. Inspection and Re-Testing

The Inspector shall be notified when the testing will be performed and by whom. The inspector shall witness testing to verify procedures are being followed correctly, and must be given at least 48 hours notice.

Retesting manholes more than once may result in additional inspection fees chargeable to the Contractor.

8. Approved Vacuum Testing Companies

Vacuum testing shall be performed by Old Castle Precast of Riverside, California or other qualified testing organization approved by the District. Submit qualified testing company along with suitable documentation if alternate is proposed.

O. SEWAGE SPILL CONTAINMENT PLAN AND SEWER BYPASS/PHASING PLAN

1. General

The provisions stated herein shall apply whenever:

- (a) Existing residential/commercial sewer laterals are specified or indicated on the drawings to be disconnected from the existing sewer line and reconnected to the new line.
- (b) An existing sewer main is to be removed and replaced with a new sewer main at or near the same location.

Under either of the two cases, flows from the residential/commercial customers shall be contained and bypassed so that service is not interrupted.

2. Sewage Spill Containment Plan and Sewer Bypass Phasing Plan

The Contractor shall generate, and submit to the District at the Pre-Construction Meeting, a "Sewage Spill Containment Plan and Sewer Bypass Phasing Plan" that details the general order of construction, complete with details of where, when, and how the Contractor plans to bypass the existing sewer lateral and mainline flows. Proposed sewer bypass shall only be utilized during normal working hours, and the existing sewer shall be put back into service each day. The temporary bypass will be allowed to operate overnight only with specific written approval by the District. Requests for overnight bypass shall be detailed in the submitted plan. Unless otherwise approved by the District, residential customers may have their service interrupted for no more than 8 hours. Contractor shall provide sanitary sewer services, in accordance with the Basic Specification, Section A, Paragraph E entitled "Sanitation", to residential customers (services for each home) during construction if their service will be interrupted. Sewer service for commercial customers along the proposed alignment shall not be interrupted by construction. Contractor shall identify all commercial customers in the plan.

3. Sewer Bypass

The Contractor shall arrange for, furnish, install and maintain all required bypass equipment, pumps, generators, piping, fittings, connections, etc. required to bypass the existing sewer flows during construction. All bypass equipment shall be installed and be made immediately operable to provide complete redundancy (primary and backup systems) to handle peak flow. Contractor shall provide for personnel to continuously monitor the bypass system.

4. Existing Sewer Flows

Refer to the Special Requirements section of the specifications for existing sewer flows. If information is not provided in Special Requirements, contact the District.

SECTION VI

STANDARD DRAWINGS

SECTION VI

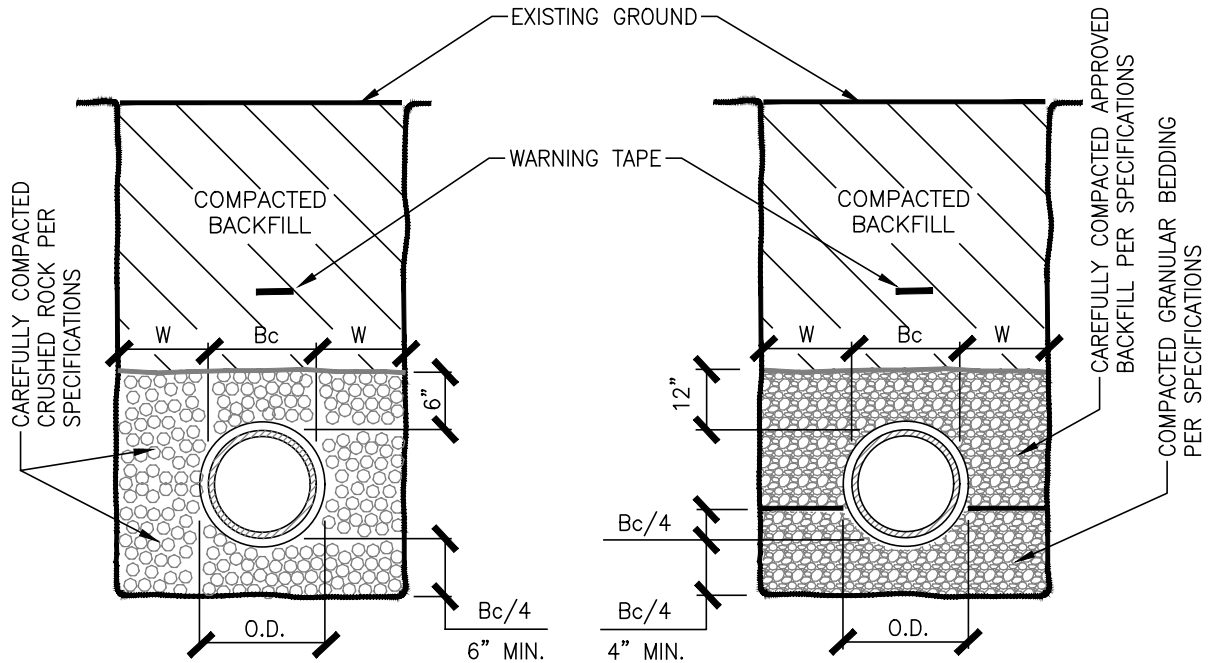
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CLASS "B-2"

ROCK ENCASEMENT

"B-2" NOTE:

FOR INSTALLATIONS OF VCP THAT EXCEED THE LOADING CAPACITIES OF CLASS "B-2" BEDDING, THE DISTRICT MAY REQUIRE THE USE OF DIP THAT CONFORMS TO THE DISTRICT'S SPECIFICATIONS FOR SEWER PIPE.

CLASS "C"

FOR DUCTILE IRON PIPE ONLY

NOTES:

1. ALL BACKFILL SHALL BE PLACED IN ACCORDANCE WITH THE SPECIFICATIONS.
2. O.D. = OUTSIDE DIAMETER OF BELL
3. Bc = OUTSIDE DIAMETER OF PIPE BARREL
4. W = 10 INCHES MAXIMUM
5. CONCRETE SHALL BE ALLOWED TO DEVELOP SUFFICIENT STRENGTH BEFORE BACKFILLING.
6. ENCASE CRUSHED ROCK WITH APPROVED FILTER FABRIC WHEN ENCOUNTERING WATER.
7. WARNING TAPE "CAUTION BURIED SEWER BELOW" BY NORTHTOWN COMPANY
8. WARNING TAPE PLACED 3' BELOW GROUND ALONG PIPELINE ALIGNMENT.

EDGEMONT COMMUNITY SERVICES DISTRICT

SCALE: NONE

DATE: NOVEMBER, 2022

GENERAL BEDDING DETAILS

DRAWING NO.

S-1

APPROVED BY: *Sinnaro Yos*
Sinnaro Yos, P.E. 68607

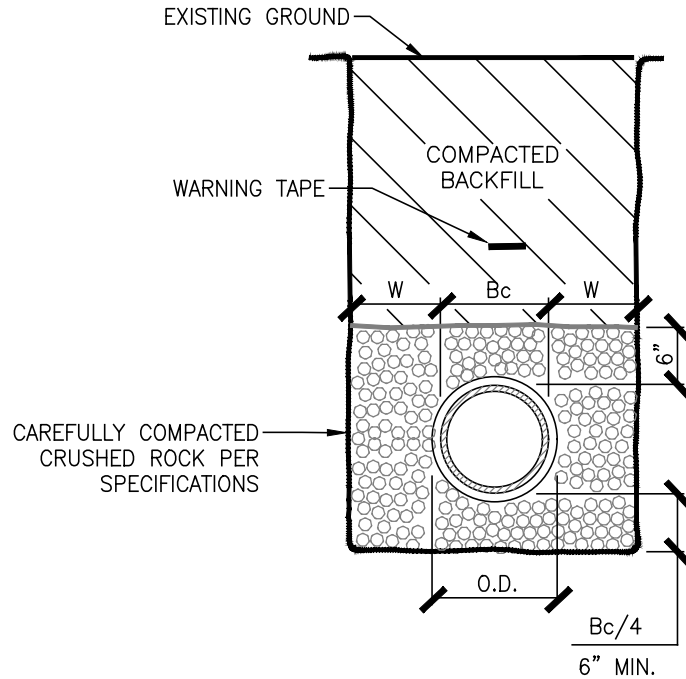
ALBERT A. WEBB ASSOCIATES
CONSULTING ENGINEERS

RIVERSIDE

CALIFORNIA

W.O. 21-0230

REV.



DEPTH "D"	
FOR PIPE DEPTH < 14'	"D" = 6"
FOR PIPE DEPTH > 14'	"D" = 12"

CLASS "1"

DEPTH > 14 FEET
PVC SDR 26 ONLY

NOTES:

1. ALL BACKFILL SHALL BE PLACED IN ACCORDANCE WITH THE SPECIFICATIONS.
2. O.D. = OUTSIDE DIAMETER OF BELL
3. Bc = OUTSIDE DIAMETER OF PIPE BARREL
4. WT = TRENCH WIDTH MEASURED AT TOP OF PIPE
5. W = 10 INCHES MAXIMUM
6. ENCASE CRUSHED ROCK WITH APPROVED FILTER FABRIC WHEN ENCOUNTERING GROUND WATER.
7. WARNING TAPE "CAUTION BURIED SEWER BELOW" BY NORTHTOWN COMPANY
8. WARNING TAPE PLACED 3' BELOW GROUND ALONG PIPELINE ALIGNMENT.

EDGEMONT COMMUNITY SERVICES DISTRICT

SCALE: NONE

DATE: NOVEMBER, 2022

GENERAL BEDDING DETAILS FLEXIBLE GRAVITY PIPE

DRAWING NO.

S-1A

APPROVED BY:

Sinnaro Yos
Sinnaro Yos, P.E. 68607

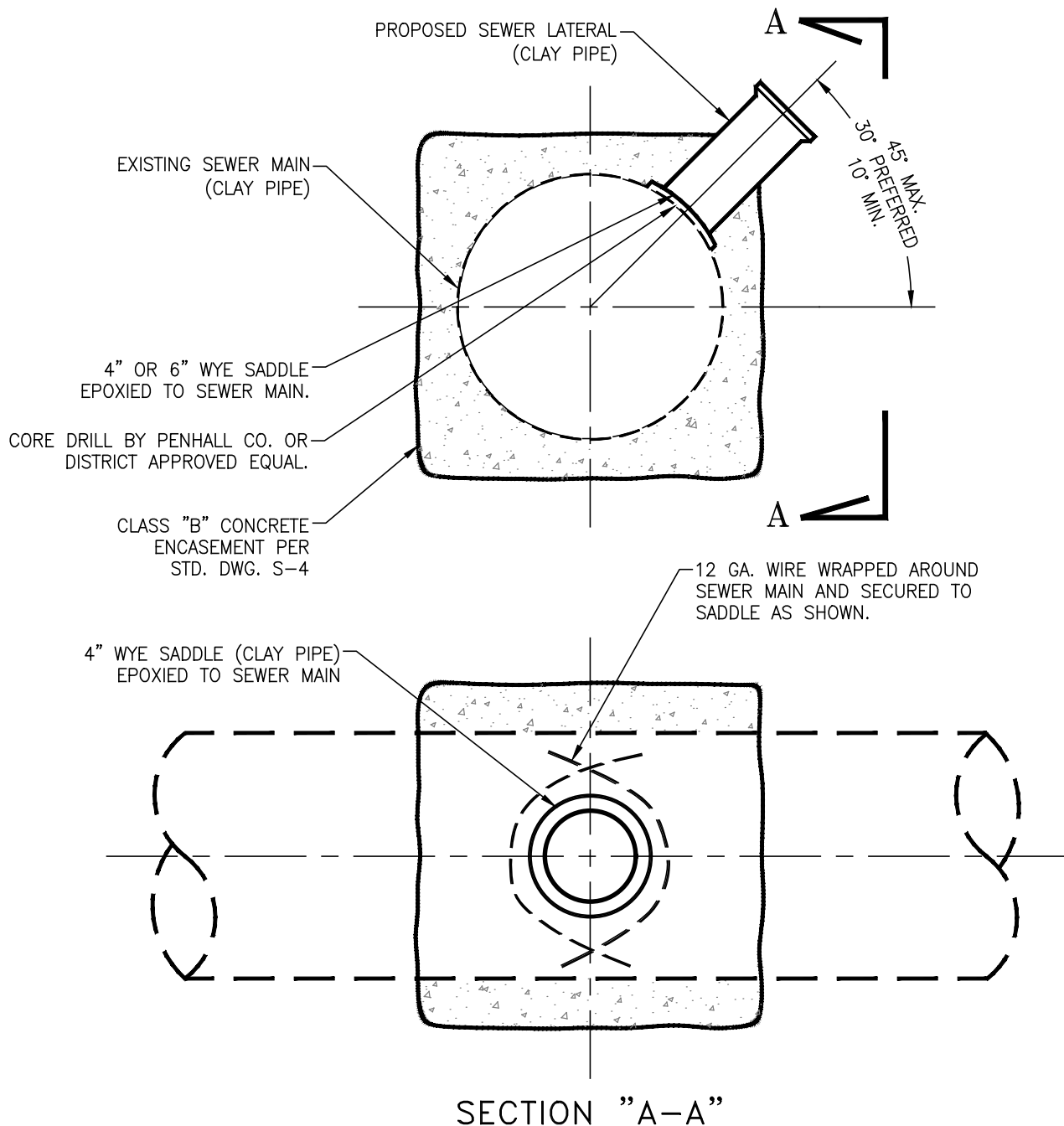
ALBERT A. WEBB ASSOCIATES
CONSULTING ENGINEERS

RIVERSIDE

CALIFORNIA

W.O. 21-0230

REV.



NOTES:

1. NO TAPPING OF EXISTING SEWER MAINS WILL BE ALLOWED WITHOUT SPECIFIC APPROVAL BY DISTRICT. IF APPROVAL IS GRANTED, WORK SHALL BE PERFORMED UNDER CONTINUOUS DISTRICT INSPECTION.
2. MAXIMUM SEWER MAIN SIZE FOR TAPPING SHALL BE 15" DIA., UNLESS OTHERWISE APPROVED BY DISTRICT.
3. TYPE AND MANUFACTURER OF EPOXY TO BE APPROVED BY DISTRICT.

EDGEMONT COMMUNITY SERVICES DISTRICT

SCALE: NONE

DATE: NOVEMBER, 2022

SEWER LATERAL CONNECTION TO EXISTING MAIN

DRAWING NO.

S-2

REV.

APPROVED BY:
Sinnaro Yos
Sinnaro Yos, P.E. 68607

ALBERT A. WEBB ASSOCIATES
CONSULTING ENGINEERS

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W.O. 21-0230

PVC SEWER LATERAL, ROTATED FOR CLARITY,
SEE NOTE 3 FOR INSTALLATION ANGLE

FERNCO FLEXIBLE TAP SADDLE

CLASS "B" CONCRETE
ENCASEMENT PER STD.
DWG. S-4

EXISTING SEWER
FLOW

"SLIP-LOCK" CLAMPS OF
300 SERIES STAINLESS
STEEL

CORE DRILL BY
PENHALL CO. OR
DISTRICT APPROVED
EQUAL

EX. VCP SEWER PIPE

NOTES:

1. NO TAPPING OF EXISTING SEWER MAINS WILL BE ALLOWED WITHOUT SPECIFIC APPROVAL BY DISTRICT. IF APPROVAL IS GRANTED, WORK SHALL BE PERFORMED UNDER CONTINUOUS DISTRICT INSPECTION.
2. MAXIMUM SEWER MAIN SIZE FOR TAPPING SHALL BE 15" DIA., UNLESS OTHERWISE APPROVED BY DISTRICT.
3. REFER TO ECSD STD. DWG NO. S-5 FOR ROTATION ANGLE OF WYE.

EDGEMONT COMMUNITY SERVICES DISTRICT

SCALE: NONE
DATE: NOVEMBER, 2022

PVC SEWER LATERAL CONNECTION
TO EXISTING VCP MAIN

DRAWING NO.

S-2A

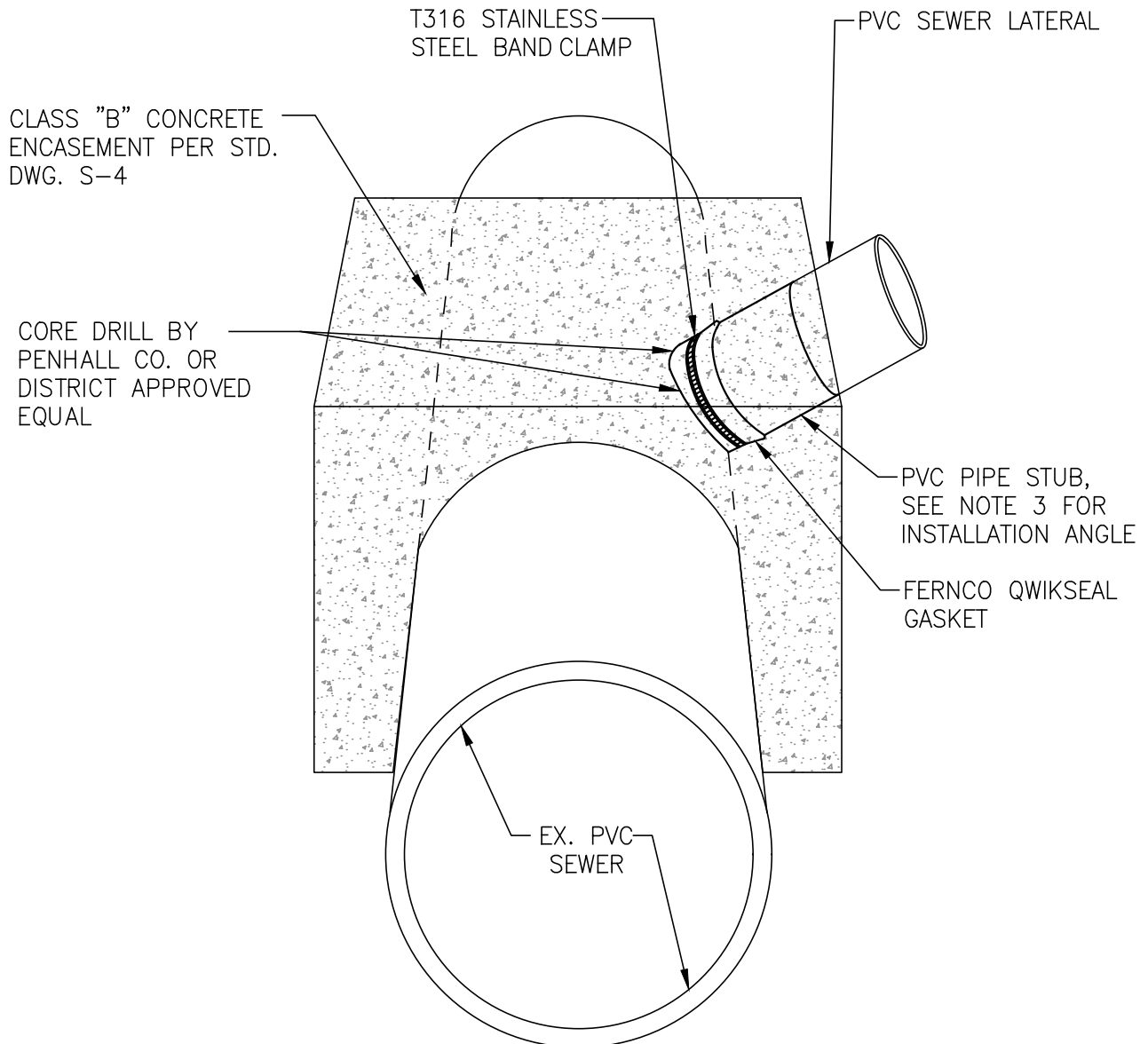
REV. APPROVED BY:
Sinnaro Yos
Sinnaro Yos, P.E. 68607

ALBERT A. WEBB ASSOCIATES
CONSULTING ENGINEERS

RIVERSIDE

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W.O. 21-0230



NOTES:

1. NO TAPPING OF EXISTING SEWER MAINS WILL BE ALLOWED WITHOUT SPECIFIC APPROVAL BY DISTRICT. IF APPROVAL IS GRANTED, WORK SHALL BE PERFORMED UNDER CONTINUOUS DISTRICT INSPECTION.
2. MAXIMUM SEWER MAIN SIZE FOR TAPPING SHALL BE 15" DIA., UNLESS OTHERWISE APPROVED BY DISTRICT.
3. REFER TO ECSD STD. DWG NO. S-5 FOR ROTATION ANGLE OF WYE.

EDGEMONT COMMUNITY SERVICES DISTRICT

SCALE: NONE
DATE: NOVEMBER, 2022

PVC SEWER LATERAL CONNECTION
TO EXISTING PVC MAIN

DRAWING NO.

S-2B

REV.

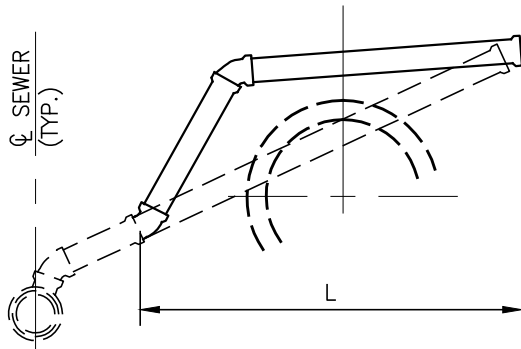
APPROVED BY:
Sinnaro Yos
Sinnaro Yos, P.E. 68607

ALBERT A. WEBB ASSOCIATES
CONSULTING ENGINEERS

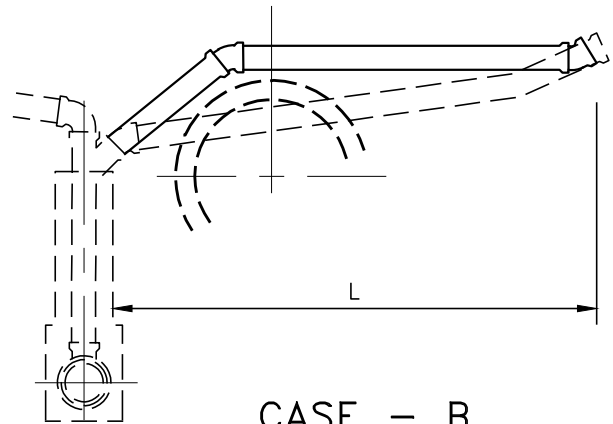
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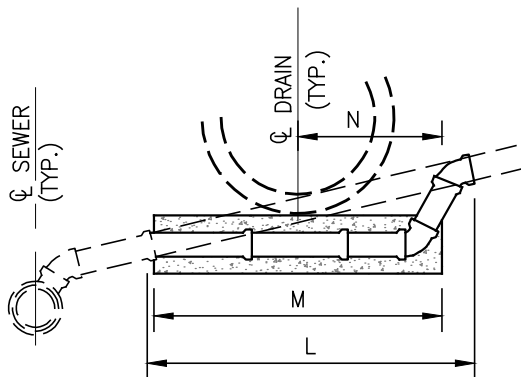
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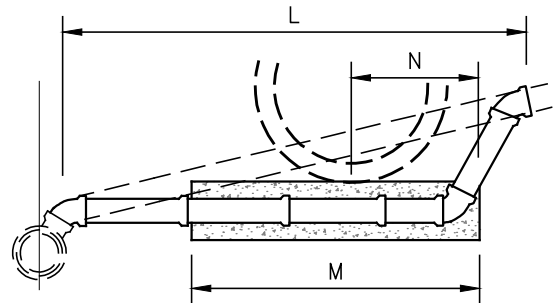
CASE - A



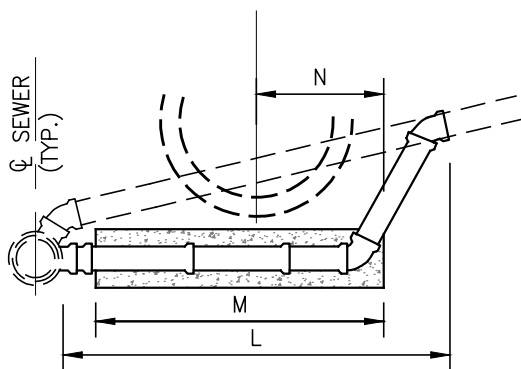
CASE - B



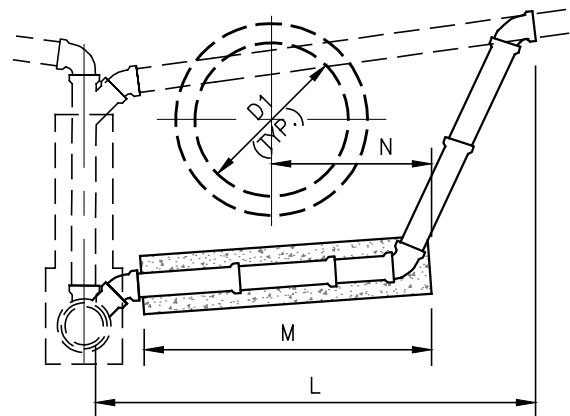
CASE - C



CASE - D



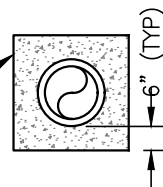
CASE - E



CASE - F

SEE SHEET 2 OF 2 FOR
NOTES AND DESCRIPTION
OF CASES

CLASS "A" CONC.
(3500 PSI)



CROSS SECTION OF
CONCRETE REINFORCEMENT
FOR PIPE

EDGEMONT COMMUNITY SERVICES DISTRICT

SCALE: NONE

DATE: NOVEMBER, 2022

APPROVED BY:
Sinnaro Yos
Sinnaro Yos, P.E. 68607

REMODELING DETAILS FOR SEWER LATERALS

ALBERT A. WEBB ASSOCIATES
CONSULTING ENGINEERS

RIVERSIDE

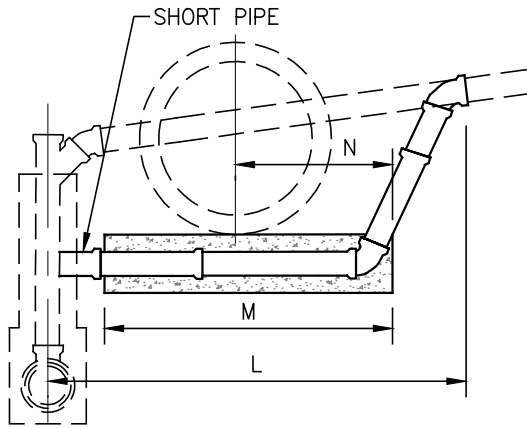
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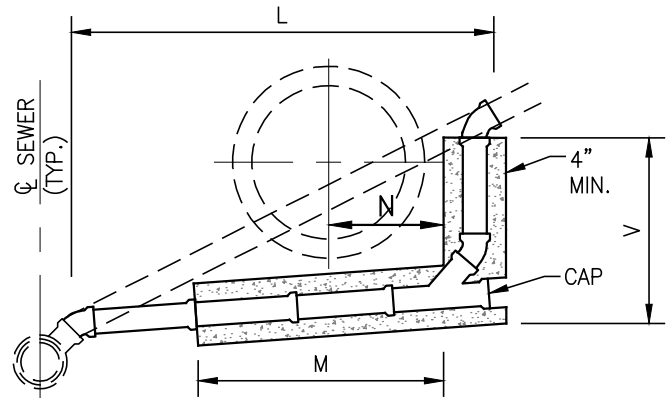
S-3

SHEET 1 OF 2

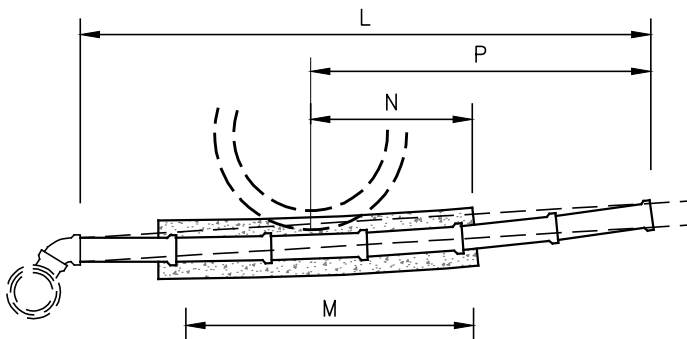
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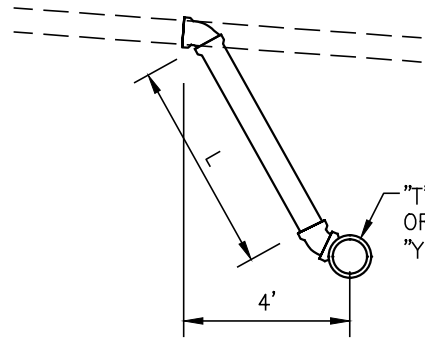
CASE - G



CASE - H



CASE - K



CASE - R

NOTES:

1. THESE DETAILS DO NOT APPLY TO CONFLICTS BETWEEN SEWER LATERALS AND WATERLINES.
2. EXISTING PIPES ARE INDICATED BY BROKEN LINES.
3. PIPES TO BE CONSTRUCTED ARE INDICATED BY SOLID LINES.
4. ALL PIPE DIAMETERS SHALL MATCH EXISTING LATERAL.
5. ALL BENDS SHALL BE 1/8 BENDS UNLESS SPECIFIED OTHERWISE.
6. CONCRETE REINFORCEMENT, CROSS SECTION SHOWN ON SHEET 1, SHALL BE USED ON ALL PIPES TO BE CONSTRUCTED UNDER STORM DRAIN, TOP PORTION WITHIN 1" OF STORM DRAIN TO BE OMITTED.
7. DIMENSIONS:
L - IS SPECIFIED ON PLAN AS THE AVERAGE TOTAL LENGTH.
M - (d, + 24") LESS ENOUGH TO AVOID A FRACTION OF A FOOT.
N - 1/2 M, EXCEPT WHERE SPECIFIED OTHERWISE ON PLAN.
P - (CASE K) IS SPECIFIED WHERE L DOES NOT EXTEND TO THE BEND.
V - (CASE H) IS SPECIFIED TO THE NEAREST FOOT AND IN SUMMARY IS ITEMIZED AS CONCRETE REINFORCEMENT FOR 6" PIPE.
8. NEW CONNECTION TO MAIN LINE SHALL CONFORM TO STD. DWG. S-2.

CASES:

- A. ABOVE DRAIN TO HOUSE CONNECTION-SPECIALS REQUIRED: 2 1/8 BENDS.
- B. ABOVE DRAIN TO CHIMNEY - 2 1/8 BENDS.
- C. BELOW DRAIN TO HOUSE CONNECTION-2 1/8 BENDS.
- D. BELOW DRAIN TO "Y" - 3 1/8 BENDS.
- E. BELOW DRAIN TO FLAT SADDLE - 3 1/8 BENDS, 1 SADDLE.
- F. BELOW DRAIN TO SADDLE - 3 1/8 BENDS, 1 SADDLE.
- G. BELOW DRAIN TO CHIMNEY - 2 1/8 BENDS.
- H. BELOW DRAIN TO "Y" - 3 1/8 BENDS, 1 "Y".
- K. BELOW DRAIN TO HOUSE CONNECTION, SLOPE SLIGHTLY MODIFIED.
- R. CONNECTION WITH NEW SEWER - 2 1/8 BENDS WITH "Y" - 14" 1/8 BEND WITH "T".

EDGEMONT COMMUNITY SERVICES DISTRICT

SCALE: NONE

DATE: NOVEMBER, 2022

REMODELING DETAILS FOR SEWER LATERALS

DRAWING NO.

S-3

APPROVED BY:
Sinnaro Yos
Sinnaro Yos, P.E. 68607

ALBERT A. WEBB ASSOCIATES
CONSULTING ENGINEERS

RIVERSIDE

CALIFORNIA

SHEET 2 OF 2

W.O. 21-0230

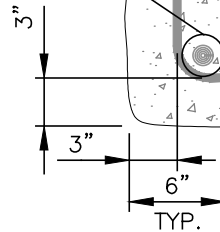
REV.

CLASS "A" CONCRETE
(3000 PSI)

NO. 4 TIE BAR
24" O.C. MAX.

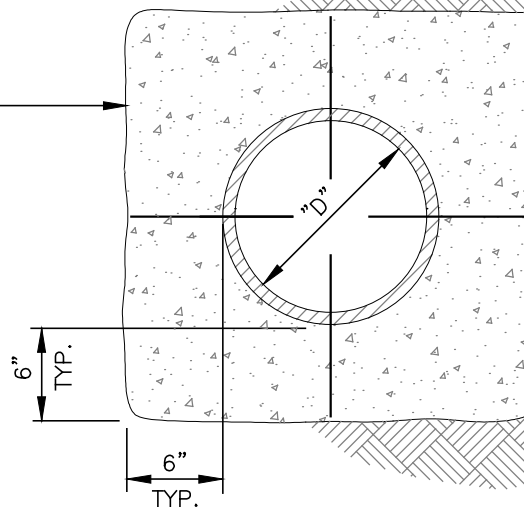
*NO. 4 BAR LONGITUDINAL
(TYP. OF 4)

*NOTE:
USE (8) NO. 4 LONGITUDINAL
BARS EQUALLY SPACED FOR
PIPES LARGER THAN 15"Ø



REINFORCED CONCRETE ENCASEMENT

CLASS "B" CONCRETE
(2500 PSI)



NOTES:

CLASS "B" CONCRETE ENCASEMENT

1. ALL REBARS SHALL BE FABRICATED AND PLACED IN POSITION PER A.C.I. SPECIFICATIONS.
2. PROVIDE FLEXIBLE JOINTS AT EACH END OF CONCRETE ENCASEMENT, WITHIN 12" FROM EACH END.
3. EXPANSION JOINTS SHALL BE CONSTRUCTED AT EVERY 50'± INTERVAL FOR THE CONCRETE ENCASEMENT: EACH JOINT SHALL COINCIDE WITH THE BELL AND SPIGOT JOINT OF THE PIPE.
4. CONTRACTOR SHALL TAKE ANY PRECAUTIONARY MEASURES NECESSARY TO PREVENT PIPE FROM FLOTATION.

EDGEMONT COMMUNITY SERVICES DISTRICT

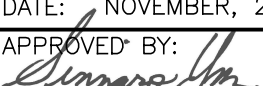
SCALE: NONE

DATE: NOVEMBER, 2022

TYPICAL CONCRETE ENCASEMENT DETAIL

DRAWING NO.

S-4

APPROVED BY:

Sinnaro Yos, P.E. 68607

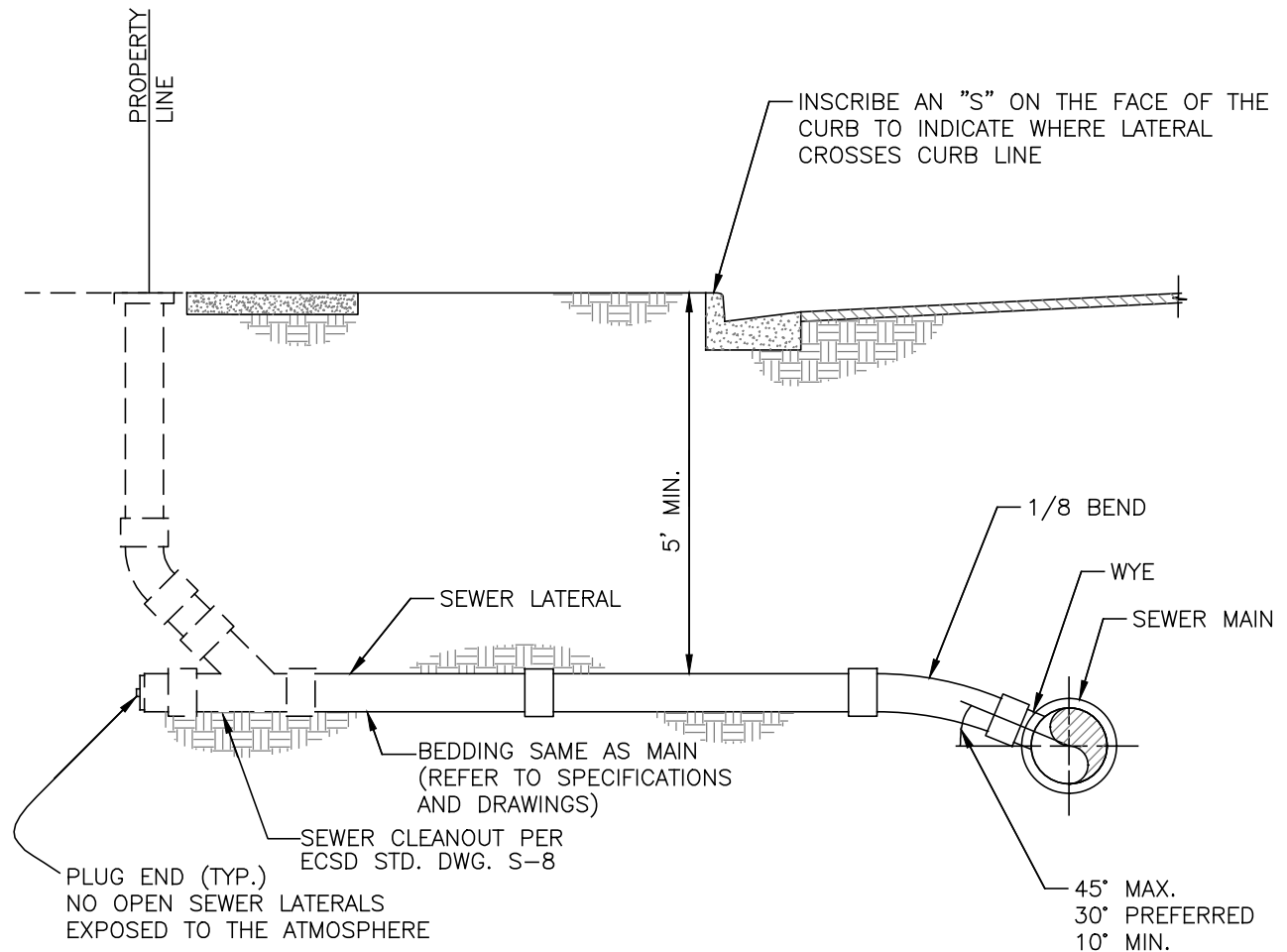
ALBERT A. WEBB ASSOCIATES
CONSULTING ENGINEERS

RIVERSIDE

CALIFORNIA

W.O. 21-0230

REV.



NOTES:

1. 4" PIPE FOR SINGLE DWELLINGS, 6" MIN. FOR ALL OTHER LATERALS.
2. LATERAL LOCATIONS SHALL BE MEASURED AT RIGHT ANGLES TO STREET CENTERLINE FROM THE CENTERLINE OF THE NEAREST DOWNSTREAM MANHOLE COVER.
3. WHENEVER DEPTH OF COVER OVER LATERAL IS LESS THAN 4'-0", SPECIAL BEDDING OR CONCRETE CRADLE SHALL BE USED.
4. CONTRACTOR SHALL REFERENCE EACH LATERAL IN THE FIELD WITH A SURFACE MARKER. MARKER SHALL BE METAL STAKE PLACED AT TIME OF BACKFILLING. MARKER SHALL BE VERTICAL AND CUT OFF 6" ABOVE GRADE.
5. SEWER LATERALS FOR ALL LOTS WHICH HAVE PAD ELEVATIONS AT OR BELOW STREET GRADE SHALL BE CONSTRUCTED AT 2% SLOPE. IN NO CASE SHALL ANY SEWER LATERAL BE CONSTRUCTED AT LESS THAN 2% SLOPE UNLESS OTHERWISE SHOWN ON PLANS.
6. SEWER PLUGS TO BE INSTALLED INTO LATERAL STUBOUTS AND INFLATED WHILE MAKING HOUSE CONNECTIONS TO THE SEWER MAIN. CONNECTIONS TO BE MADE WITH DISTRICT INSPECTOR PRESENT.
7. MANHOLES PER DISTRICT STANDARD DRAWING NO. S-7 SHALL BE PROVIDED AT THE STREET RIGHT-OF-WAY LINE AND THE CONNECTION TO THE SEWER MAIN FOR ALL LATERALS 6" IN DIAMETER AND LARGER.

EDGEMONT COMMUNITY SERVICES DISTRICT

SCALE: NONE

DATE: NOVEMBER, 2022

TYPICAL SEWER LATERAL

DRAWING NO.

S-5

REV.

APPROVED BY:
Sinnaro Yos
Sinnaro Yos, P.E. 68607

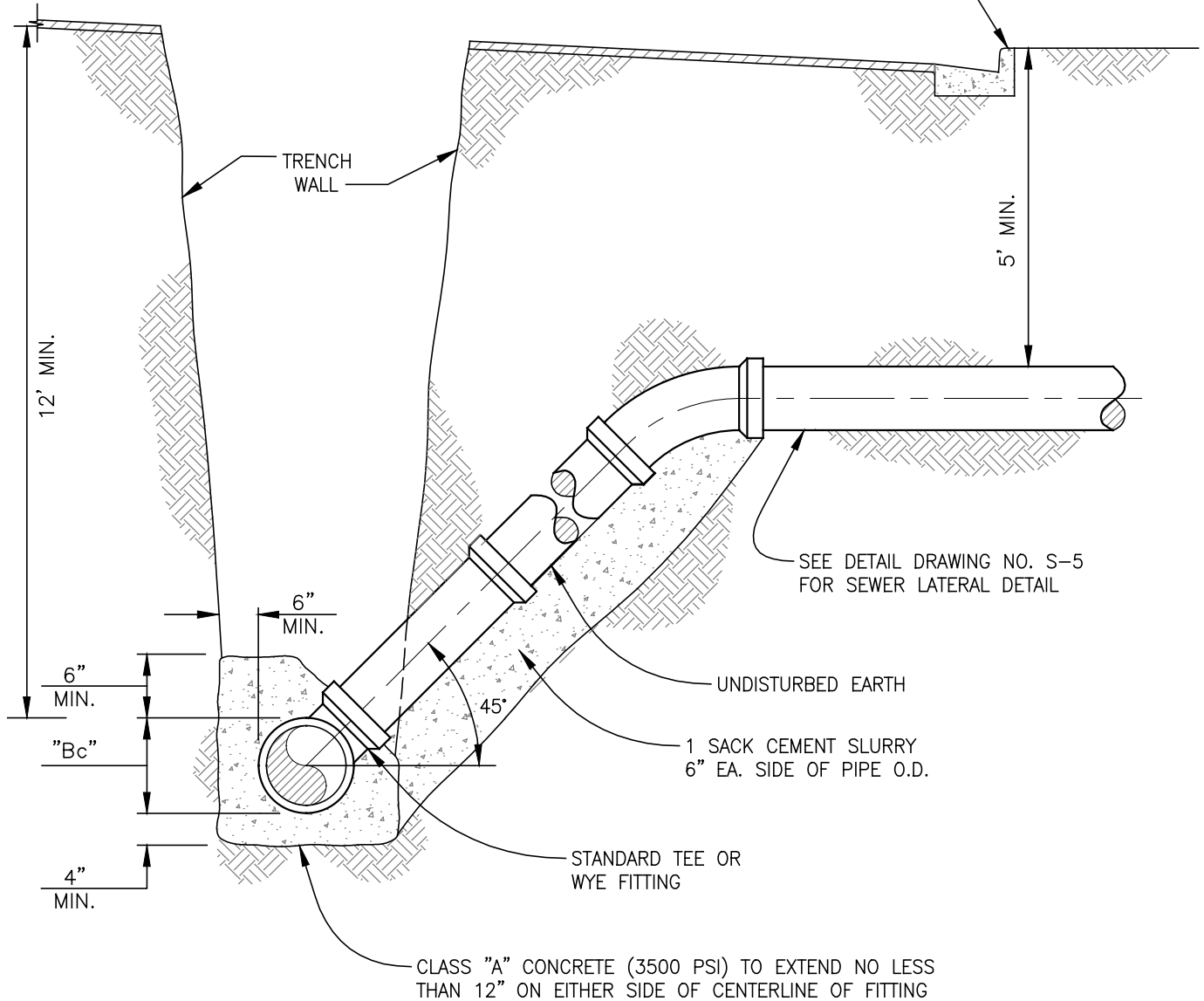
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CONSULTING ENGINEERS

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W.O. 21-0230

INSCRIBE AN "S" ON FACE OF
THE CURB TO INDICATE WHERE
LATERAL CROSSES CURB LINE



EDGEMONT COMMUNITY SERVICES DISTRICT

SCALE: NONE

DATE: NOVEMBER, 2022

DEEP LATERAL

DRAWING NO.

S-6

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12' MIN.

TRENCH WALL

5' MIN.

BEDDING PER S-2A

6" MIN.

"Bc"

4" MIN.

45°

STANDARD TEE OR WYE FITTING

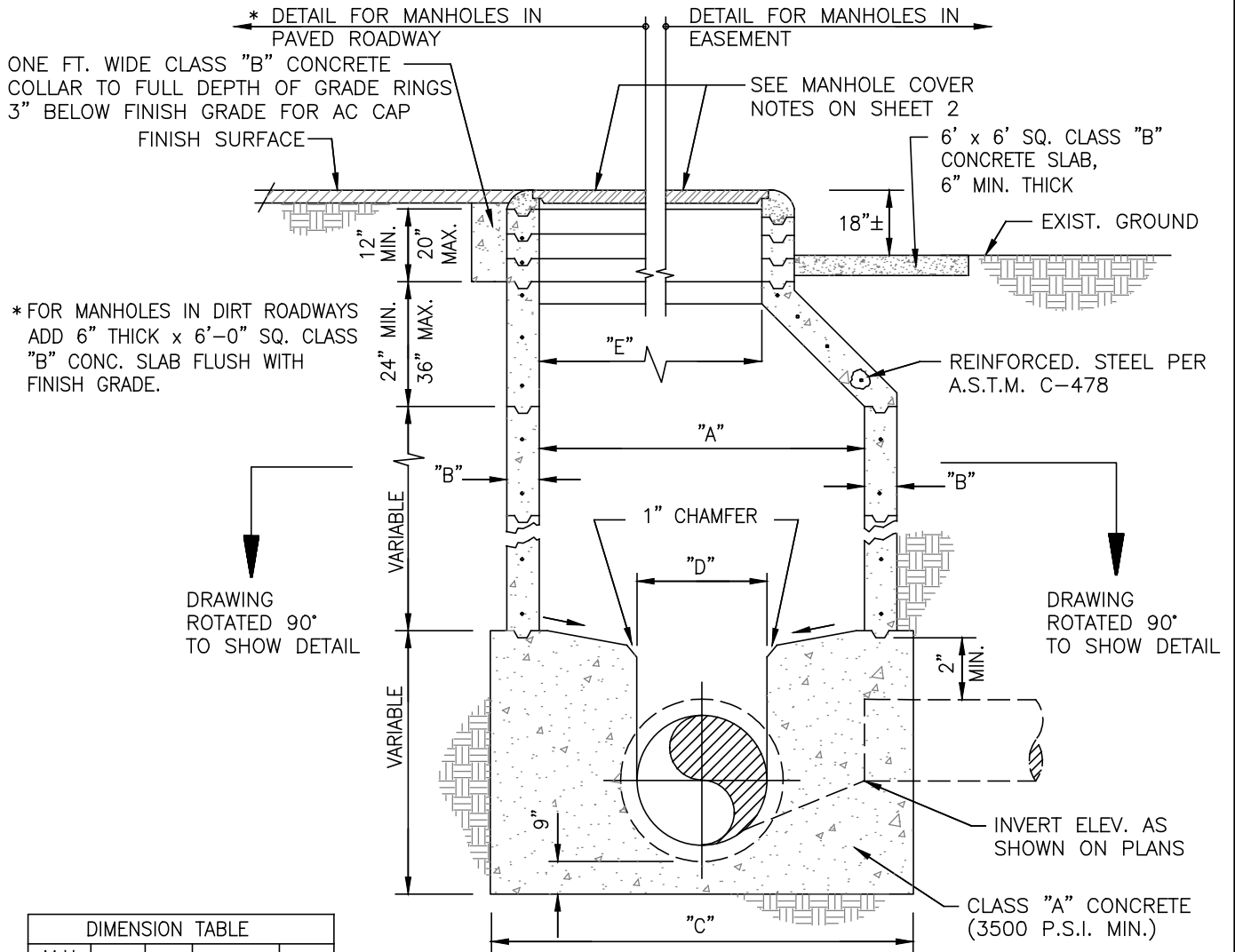
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PVC SDR35 MIN. SEE DETAIL DRAWING NO. S-5 FOR SEWER LATERAL DETAIL

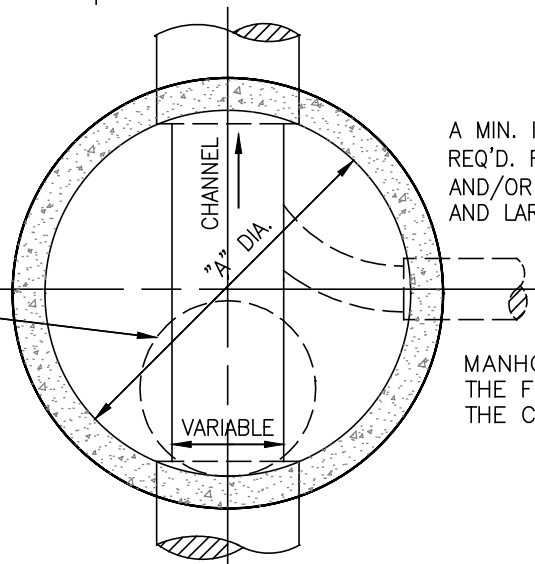
EDGEMONT COMMUNITY SERVICES DISTRICT

W.O. 21-0230

FRAME & COVER SETTING CONDITIONS



DIMENSION TABLE				
M.H. DIA.	A	B	C	E
4'	48"	6"	5'-6"	30"
5'	60"	6"	6'-6"	30"



A MIN. INSIDE DIA. OF 60" SHALL BE REQ'D. FOR PIPELINES DEEPER THAN 15' AND/OR FOR SEWER DIAMETERS 15 INCH AND LARGER

ALL MANHOLE TOPS SHALL BE INSTALLED WITH MANHOLE COVER LOCATED OPPOSITE THE DOWNSTREAM SIDE, EXCEPT AS OTHERWISE NOTED.

MANHOLE COVERS SHALL HAVE THE FOLLOWING WRITING ON THE CENTER OF THE COVER :

ECSD
SEWER

EDGEMONT COMMUNITY SERVICES DISTRICT

SCALE: NONE

DATE: NOVEMBER, 2022

PRECAST CONCRETE MANHOLE

DRAWING NO.

S-7

SHEET 1 OF 2

APPROVED BY: *Sinnaro Yos*
Sinnaro Yos, P.E. 68607

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CONSULTING ENGINEERS

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W.O. 21-0230

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NOTES:

1. ALL SECTIONS TO BE WASHED TO REMOVE ANY LOOSE MATERIAL. PRECAST MANHOLE SECTIONS AND GRADE RINGS SHALL BE SEALED WITH CS-102B BUTYL/BITUMEN BLENDED SEALANT AS MANUFACTURED BY CONSEAL OF NEW CARLISLE, OHIO OR DISTRICT APPROVED EQUAL TO FORM WATERTIGHT JOINTS.
2. CONCRETE FOR MANHOLE SECTIONS SHALL BE 3,500 P.S.I. MIN. USING TYPE V CEMENT.
3. PROVIDE REPAIR BAND COUPLING WITH ADJUSTABLE S.S. SHEAR RING JOINT IN ALL SEWER PIPES OUTSIDE OF MANHOLE BUT WITHIN 12" OF CONCRETE BASE.
4. WHEN INSTALLING REINFORCED CONCRETE GRADE RING(S) 3"-6" THE GRADE RINGS MUST BE CLEAN AND ANCHORED TO BOTH THE FRAME AND GRADE RING(S) OR CONE WITH A SUITABLE EPOXY OR OTHER METHOD AS APPROVED BY THE DISTRICT. INTERIOR OF GRADE RINGS SHALL BE SMOOTHLY MORTARED.
5. MORTAR AROUND AND UNDER FRAME SHALL BE CURED WITH A PIGMENTED CURING COMPOUND MEETING THE REQUIREMENTS OF SECTION 90-7 OF STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, 2006 EDITION.
6. FOR PVC CONNECTIONS TO EXISTING AND NEW PRECAST REINFORCED CONCRETE MANHOLES. A HOLE SPECIFIC TO THE NEW PIPE'S O.D. DIA. SHALL BE CORED INTO THE CONCRETE MANHOLE WALL TO RECEIVE THE PIPE. A KOR-N-SEAL BOOT OR ENGINEER APPROVED EQUAL SHALL BE CLAMPED INTO THE CORED HOLE AND USED TO MAKE THE CONNECTION.
7. SHELF AND GROOVE SHALL BE FORMED MONOLITHICALLY WITH THE MANHOLE BASE. CHANNELS TO BE SMOOTH FINISH.

MANHOLE COVER NOTES:

1. MANHOLE FRAME AND COVER ALHAMBRA FDY. CO. TYPE A-1270 (24"), A-1252 (30"), A-1325 (36") OR APPROVED EQUAL. APPLICATION - IN STREETS WHERE SECURITY OR FLOODING IS NOT A DISTRICT CONCERN.
2. WHEN SPECIFIED: GMI SERIES - COMPOSITE MANHOLE COVER AND FRAME, (24") 2600, (30") 3200 AND (36") 3800 WITH FOUR (4) TITUS TWISTLIFT STAINLESS STEEL LOCKS, PER COVER. "NOTE" AFTER SETTING A COMPOSITE FRAME IN PLACE AND PRIOR TO POURING THE CONCRETE COLLAR AND/OR CONCRETE SLAB, INSTALL ONE (1) #4 REBAR SHAPED INTO A FULL CIRCLE THREE (3") INCHES LARGER IN O.D. THAN THE COMPOSITE FRAME. AFTER FORMING THE #4 REBAR CIRCLE, IT SHALL THEN BE SET TO THREE (3") INCHES BELOW THE FRAME RIM ELEVATION THEN ENCAPSULATED IN THE CONCRETE COLLAR AND/OR CONCRETE SLAB.
3. CAST "ECSO SEWER" ON ALL MANHOLE COVERS.

SPECIAL MANHOLE COVER CONDITIONS:

1. FOR MANHOLES IN EASEMENTS, UNPAVED AREAS, OR ANY AREA WHERE SECURITY IS A DISTRICT CONCERN BUT WATER INFLOW IS NOT AN ISSUE USE ALHAMBRA FDY. A-1176 OR APPROVED EQUAL.
2. FOR MANHOLES IN EASEMENTS, UNPAVED AREAS, STREET OR ANY AREA WHERE WATER INFLOW IS A POTENTIAL ISSUE AND/OR WHERE SECURITY IS A DISTRICT CONCERN USE ALHAMBRA FDY. A-1250B WITH LOCKING DEVICE OR APPROVED EQUAL.

EDGEMONT COMMUNITY SERVICES DISTRICT

SCALE: NONE

DATE: NOVEMBER, 2022

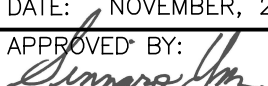
PRECAST CONCRETE MANHOLE

DRAWING NO.

S-7

SHEET 2 OF 2

APPROVED BY:


Sinnaro Yos, P.E. 68607

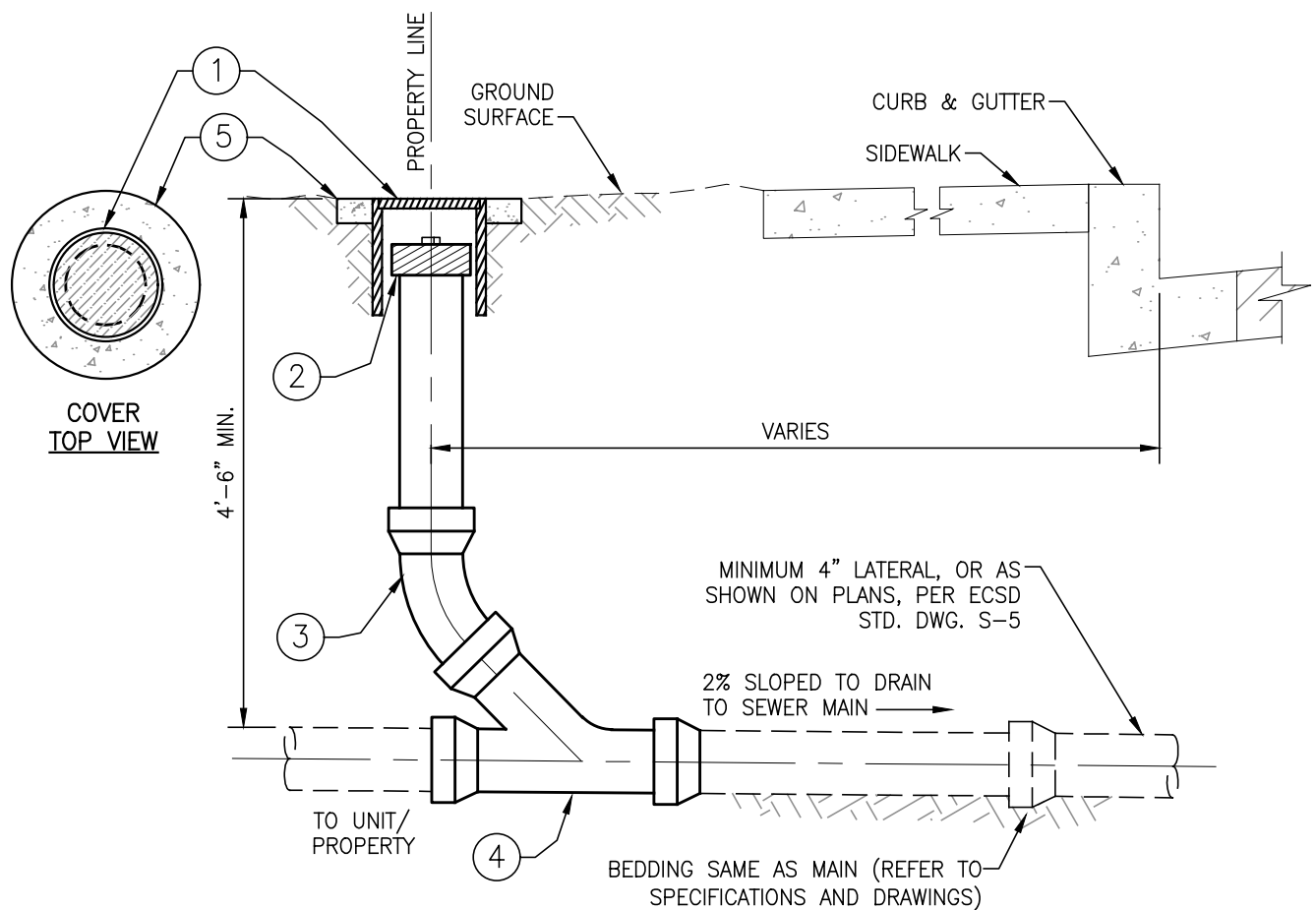
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CONSULTING ENGINEERS

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W.O. 21-0230

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MATERIALS LIST

①	J&R NO. V3-RT CIRCULAR BOX WITH LID INSCRIBED WITH "SEWER" (H-20 LOADING)
②	THREADED CAP WITH SQUARE NUT.
③	MINIMUM 3-1/2" SEWER PIPE PER UNIFORM PLUMBING CODE.
④	WYE PER UNIFORM PLUMBING CODE.
⑤	24" DIA. x 6" THK. CONCRETE PAD, CLASS "A" CONCRETE, FOR NON-PAVED AREAS

NOTES:

1. PLACE CLEANOUT AT PROPERTY LINE OR EDGE OF EASEMENT.
2. LID MUST BE CAST IRON FOR LOCATING PURPOSES, MARKED "SEWER".
3. CLEANOUT SHALL BE FIELD VERIFIED BY DISTRICT INSPECTOR.

EDGEMONT COMMUNITY SERVICES DISTRICT

SCALE: NONE
DATE: NOVEMBER, 2022

SEWER LATERAL CLEANOUT

DRAWING NO.

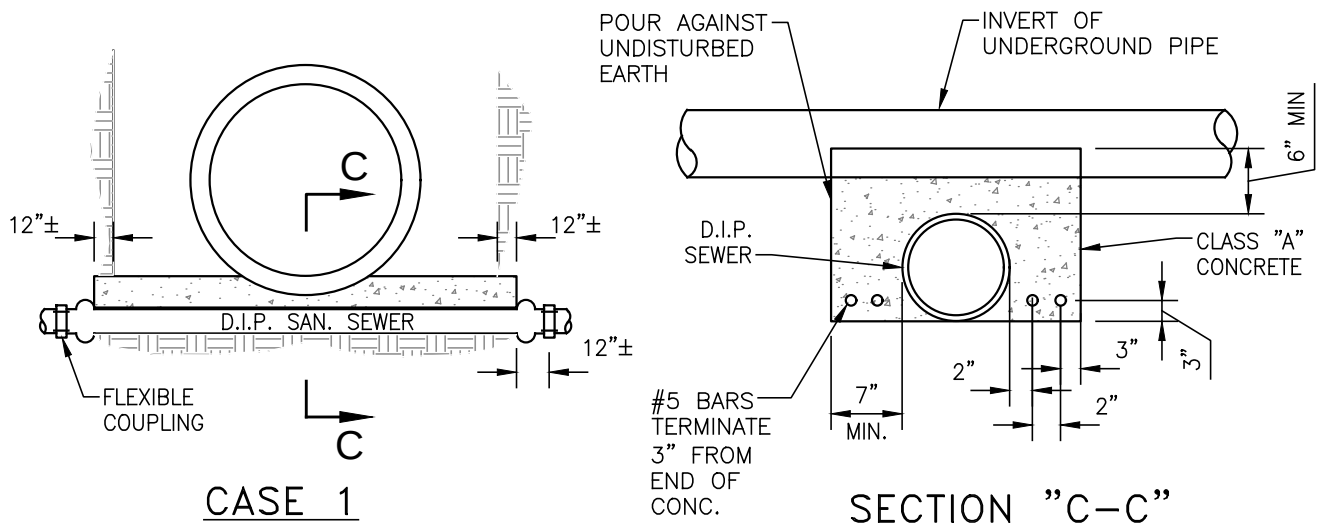
S-8

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Sinnaro Yos, P.E. 68607

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CONSULTING ENGINEERS
RIVERSIDE

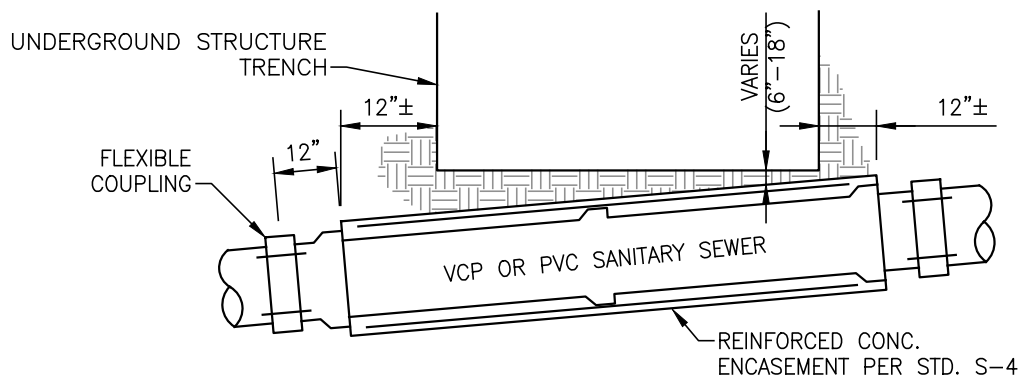
CALIFORNIA

W.O. 21-0230



CASE 1 NOTES:

1. WHERE CLEARANCE BETWEEN BOTTOM OF UNDERGROUND PIPE OR STRUCTURE AND TOP OF SANITARY SEWER IS LESS THAN 6" CASE 1 APPLIES.
2. SANITARY SEWER SHALL BE DUCTILE IRON PIPE, CLASS 50 (MIN.) IN CONFORMANCE WITH DISTRICT SPECIFICATIONS.



CASE 2 NOTES:

1. WHERE CLEARANCE BETWEEN BOTTOM OF UNDERGROUND PIPE OR STRUCTURE AND TOP OF SEWER IS 6" TO 18", CASE 2 APPLIES.

GENERAL NOTES:

1. THIS STANDARD APPLIES TO LOADING PIPE PROTECTION CASES.

EDGEMONT COMMUNITY SERVICES DISTRICT

SCALE: NONE

DATE: NOVEMBER, 2022

SEWER PROTECTION DETAIL

DRAWING NO.

S-9

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Sinnaro Yos
Sinnaro Yos, P.E. 68607

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CALIFORNIA

W.O. 21-0230



W.O. 21-0230

NOTES:

1. DOMESTIC SEWAGE CONNECTION IS TO BE MADE DOWNSTREAM OF CLARIFIER'S SAMPLE BOX.
2. PRECAST CONCRETE VAULT INCLUDING TOP AND COVERS TO BE DESIGNED FOR A MIN. H-20 TRAFFIC LOADING.
3. ALL PIPE AND FITTINGS TO BE PVC.
4. MINIMUM APPROVED CAPACITY IS 750 GALLONS. A LARGER CLARIFIER MAY BE REQUIRED BASED ON INDUSTRIAL EFFLUENT QUANTITY AND QUALITY.
5. WASTE DISCHARGE APPLICANT IS RESPONSIBLE FOR THE PURCHASE, INSTALLATION, OPERATION AND MAINTENANCE OF THE CLARIFIER.
6. APPROVED SUPPLIERS FOR CLARIFIER:
 - a. PYRAMID PRECAST CO. INC., RIALTO, CA.
 - b. M.C. NOTTINGHAM CO., PASADENA, CA.
 - c. UTILITY VAULT CO., FONTANA, CA.
 - d. JENSEN PRECAST CO., FONTANA, CA.
7. LOCATION OF CLARIFIER IS SUBJECT TO APPROVAL BY DISTRICT.
8. SAMPLE BOX IS REQUIRED AND SHALL BE ACCESSIBLE TO DISTRICT PERSONNEL WITH LOCATION TO BE APPROVED BY THE DISTRICT.
9. GRADE RING JOINTS ARE TO BE SEALED WITH 1:2 MORTAR, TRIMMED TO A SMOOTH FINISH INSIDE AND OUT.
10. THE MANHOLE FRAME IS TO BE SEALED WITH AND SECURED BY A MOTOR RING.

* DIMENSIONS TYPICAL OF 1000 GALLON CAPACITY CLARIFIER.

** DIMENSION VARIES DEPENDING ON DEPTH OF EFFLUENT LINE BELOW FINISHED GRADE.

*** INVERT ELEVATION SHALL BE AS SHALLOW AS POSSIBLE, NOT DEEPER THAN 4' FROM FINISH SURFACE ELEVATION.

EDGEMONT COMMUNITY SERVICES DISTRICT

SCALE: NONE

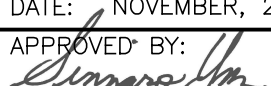
DATE: NOVEMBER, 2022

INDUSTRIAL WASTE CLARIFIER THREE COMPARTMENT

DRAWING NO.

S-10

APPROVED BY:


Sinnaro Yos, P.E. 68607

ALBERT A. WEBB ASSOCIATES
CONSULTING ENGINEERS

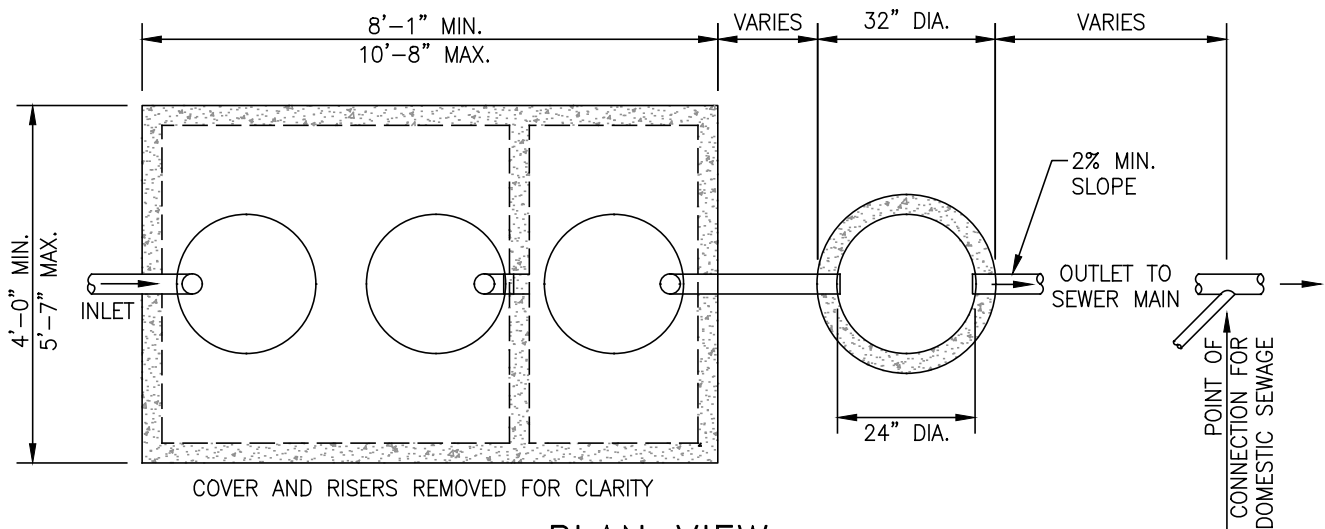
RIVERSIDE

CALIFORNIA

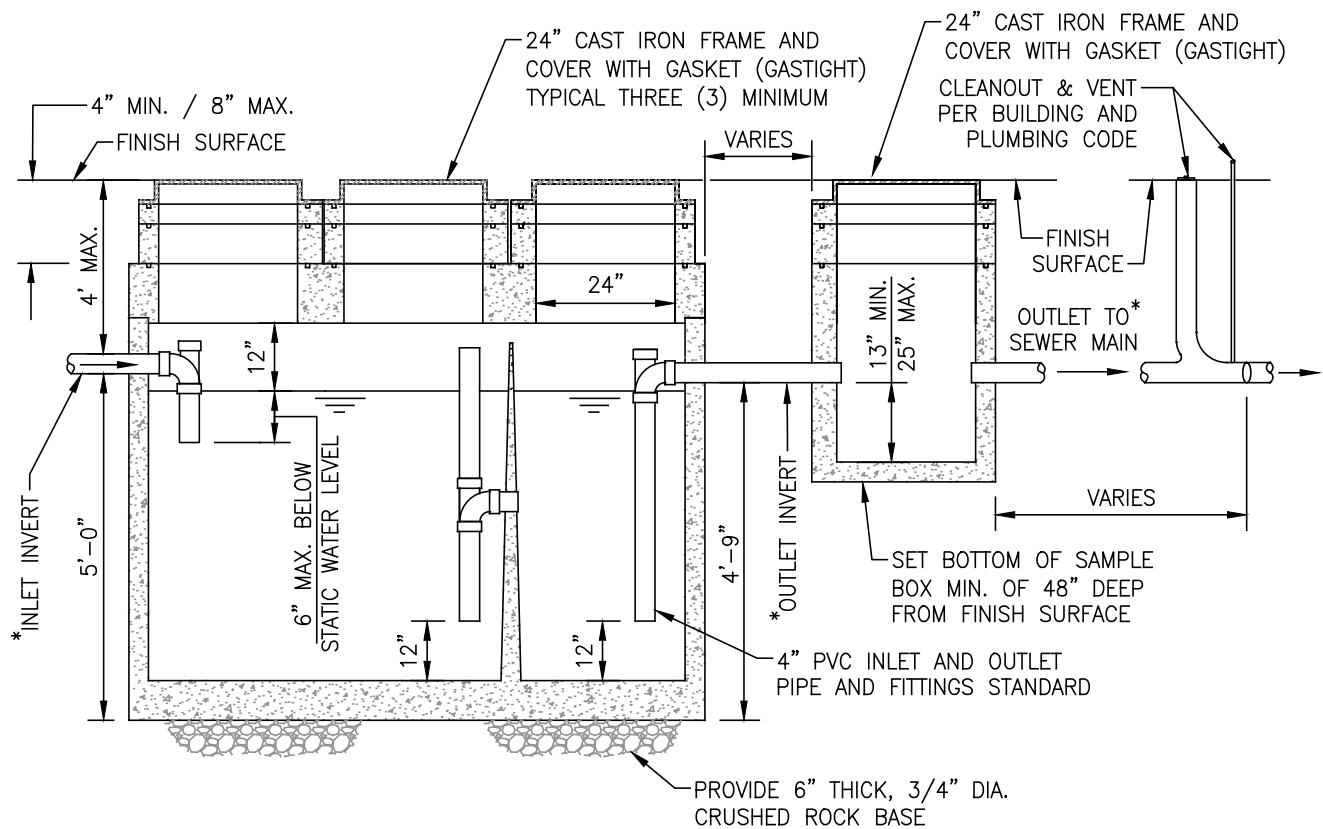
SHEET 2 OF 2

W.O. 21-0230

REV.



PLAN VIEW
N.T.S.



SECTION VIEW
N.T.S.

EDGEMONT COMMUNITY SERVICES DISTRICT

SCALE: NONE

DATE: JANUARY, 2026

APPROVED BY:
Sinnaro Yos
Sinnaro Yos, P.E. 68607

GRAVITY SEPARATOR
750 GAL. TO 1500 GAL.

ALBERT A. WEBB ASSOCIATES
CONSULTING ENGINEERS

RIVERSIDE

CALIFORNIA

DRAWING NO.

S-11

SHEET 1 OF 2

W.O. 21-0230

NOTES:

1. DOMESTIC SEWAGE CONNECTION IS TO BE MADE DOWNSTREAM OF GRAVITY SEPARATOR SAMPLE BOX.
 2. PRECAST CONCRETE VAULT INCLUDING TOP AND COVERS TO BE DESIGNED FOR A MIN. H-20 TRAFFIC LOADING. SQUARE COVERS ARE NOT ACCEPTABLE.
 3. ALL PIPE AND FITTINGS TO BE PVC.
 4. THE REQUIRED CAPACITY FOR THE GRAVITY SEPARATOR SHALL BE BASED UPON APPENDIX H OF THE UNIFORM PLUMBING CODE.
 5. WASTE DISCHARGE APPLICANT IS RESPONSIBLE FOR THE PURCHASE, INSTALLATION, OPERATION AND MAINTENANCE OF THE GRAVITY SEPARATOR.
 6. APPROVED SUPPLIERS FOR CLARIFIER:
 - a. PYRAMID PRECAST CO. INC., RIALTO, CA.
 - b. M.C. NOTTINGHAM CO., PASADENA, CA.
 - c. UTILITY VAULT CO., FONTANA, CA.
 - d. JENSEN PRECAST CO., FONTANA, CA.
 7. LOCATION OF CLARIFIER IS SUBJECT TO APPROVAL BY DISTRICT.
 8. PROVIDE LABEL INDICATING MANUFACTURER OF GRAVITY SEPARATOR AND CONFORMANCE WITH THE UNIFORM PLUMBING CODE.
 9. SAMPLE BOX IS REQUIRED AND SHALL BE ACCESSIBLE TO DISTRICT PERSONNEL WITH LOCATION TO BE APPROVED BY THE DISTRICT.
 10. GRADE RING JOINTS ARE TO BE SEALED WITH 1:2 MORTAR, TRIMMED TO A SMOOTH FINISH INSIDE AND OUT.
 11. THE MANHOLE FRAME IS TO BE SEALED WITH AND SECURED BY A MOTOR RING.
 12. FOR GREASE INTERCEPTOR STRUCTURE, MINIMUM OF 3 MANHOLES REQUIRED, ONE MANHOLE PLACED OVER EACH PIPE (INLET, MIDDLE, AND OUTLET).
- * INVERT ELEVATION SHALL BE AS SHALLOW AS POSSIBLE, NOT DEEPER THAN 4' FROM FINISH SURFACE ELEVATION.

EDGEMONT COMMUNITY SERVICES DISTRICT

SCALE: NONE

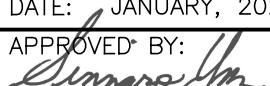
DATE: JANUARY, 2026

GRAVITY SEPARATOR
750 GAL. TO 1500 GAL.

DRAWING NO.

S-11

APPROVED BY:


Sinnaro Yos, P.E. 68607

ALBERT A. WEBB ASSOCIATES
CONSULTING ENGINEERS

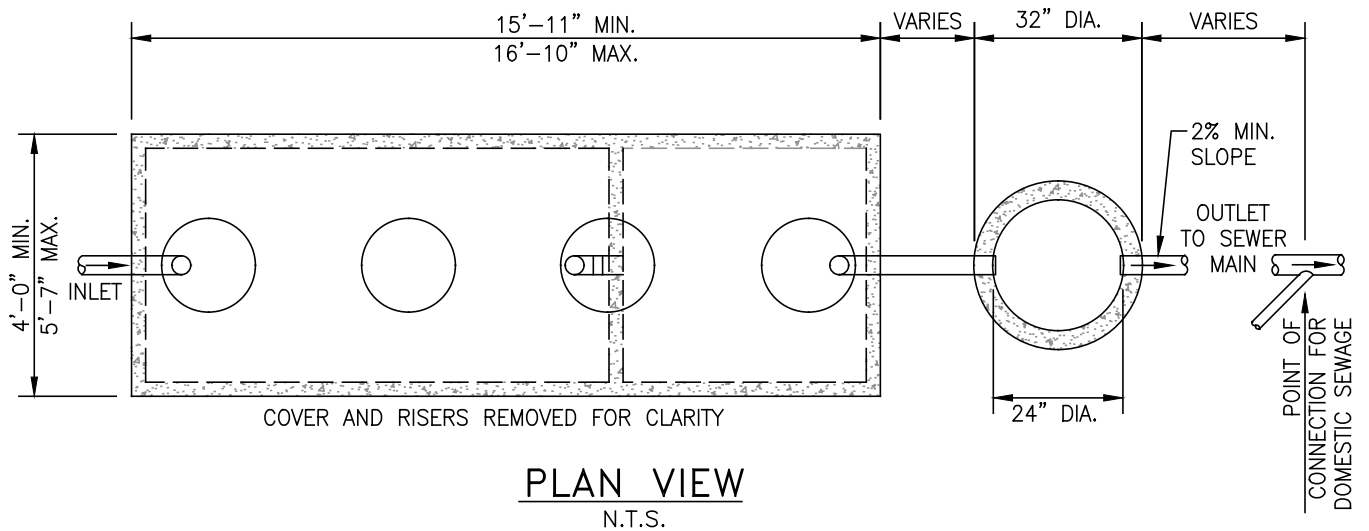
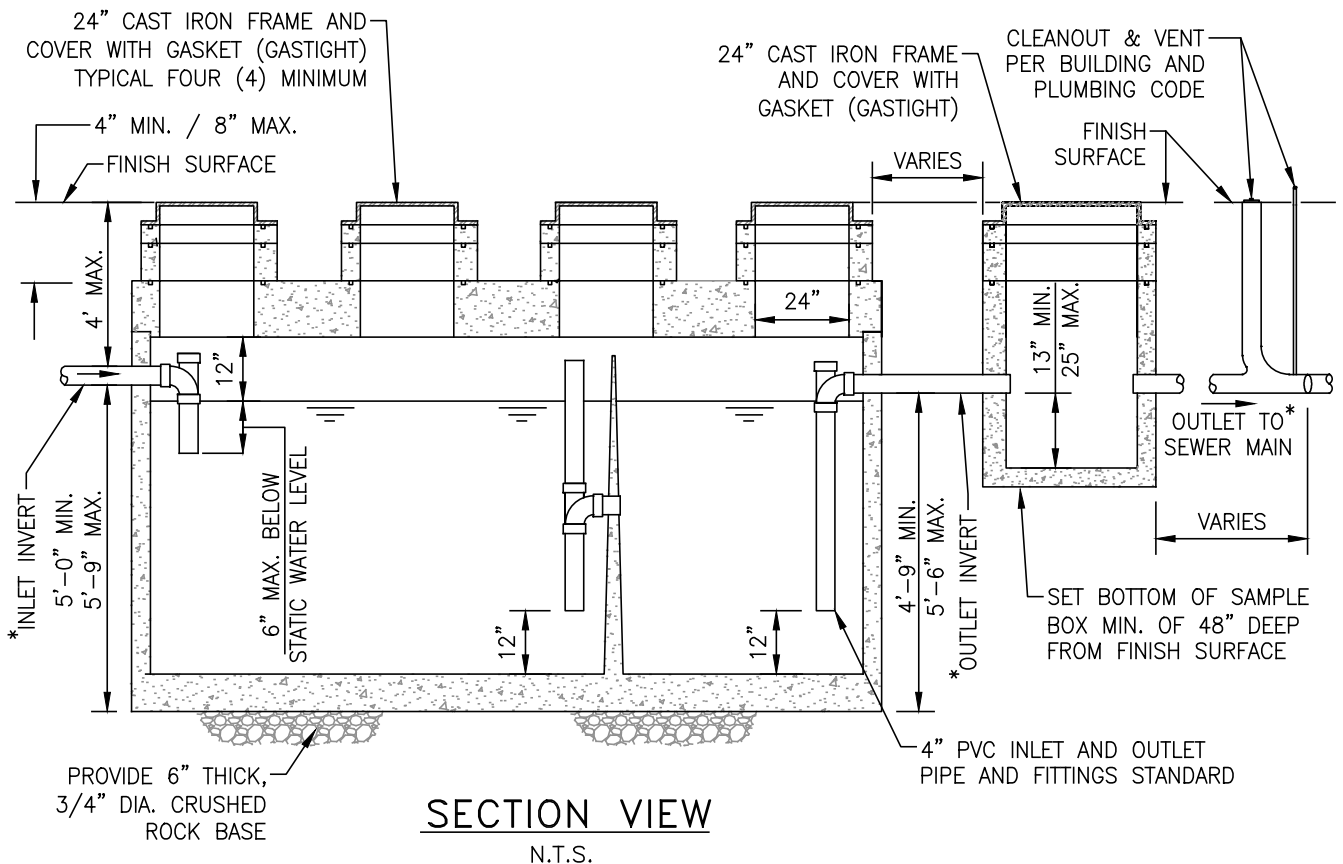
RIVERSIDE

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SHEET 2 OF 2

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EDGEMONT COMMUNITY SERVICES DISTRICT

SCALE: NONE

DATE: JANUARY, 2026

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Sinnaro Yos, P.E. 68607

GRAVITY SEPARATOR
2000 GAL. TO 3000 GAL.

ALBERT A. WEBB ASSOCIATES
CONSULTING ENGINEERS

RIVERSIDE

CALIFORNIA

DRAWING NO.

S-12

SHEET 1 OF 2

W.O. 21-0230

REV.

NOTES:

1. DOMESTIC SEWAGE CONNECTION IS TO BE MADE DOWNSTREAM OF GRAVITY SEPARATOR SAMPLE BOX.
2. PRECAST CONCRETE VAULT INCLUDING TOP AND COVERS TO BE DESIGNED FOR A MIN. H-20 TRAFFIC LOADING. SQUARE COVERS ARE NOT ACCEPTABLE.
3. ALL PIPE AND FITTINGS TO BE PVC.
4. THE REQUIRED CAPACITY FOR THE GRAVITY SEPARATOR SHALL BE BASED UPON APPENDIX H OF THE UNIFORM PLUMBING CODE.
5. WASTE DISCHARGE APPLICANT IS RESPONSIBLE FOR THE PURCHASE, INSTALLATION, OPERATION AND MAINTENANCE OF THE GRAVITY SEPARATOR.
6. APPROVED SUPPLIERS FOR CLARIFIER:
 - a. PYRAMID PRECAST CO. INC., RIALTO, CA.
 - b. M.C. NOTTINGHAM CO., PASADENA, CA.
 - c. UTILITY VAULT CO., FONTANA, CA.
 - d. JENSEN PRECAST CO., FONTANA, CA.
7. LOCATION OF CLARIFIER IS SUBJECT TO APPROVAL BY DISTRICT.
8. PROVIDE LABEL INDICATING MANUFACTURER OF GRAVITY SEPARATOR AND CONFORMANCE WITH THE UNIFORM PLUMBING CODE.
9. SAMPLE BOX IS REQUIRED AND SHALL BE ACCESSIBLE TO DISTRICT PERSONNEL WITH LOCATION TO BE APPROVED BY THE DISTRICT.
10. GRADE RING JOINTS ARE TO BE SEALED WITH 1:2 MORTAR, TRIMMED TO A SMOOTH FINISH INSIDE AND OUT.
11. THE MANHOLE FRAME IS TO BE SEALED WITH AND SECURED BY A MOTOR RING.
12. FOR GREASE INTERCEPTOR STRUCTURE, MINIMUM OF 4 MANHOLES REQUIRED, ONE MANHOLE PLACED OVER EACH PIPE (INLET, MIDDLE, AND OUTLET) AND AT THE CENTER OF THE FIRST CHAMBER.

* INVERT ELEVATION SHALL BE AS SHALLOW AS POSSIBLE, NOT DEEPER THAN 4' FROM FINISH SURFACE ELEVATION.

EDGEMONT COMMUNITY SERVICES DISTRICT

SCALE: NONE

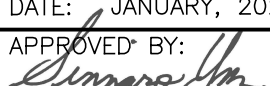
DATE: JANUARY, 2026

GRAVITY SEPARATOR
2000 GAL. TO 3000 GAL.

DRAWING NO.

S-12

APPROVED BY:


Sinnaro Yos, P.E. 68607

ALBERT A. WEBB ASSOCIATES
CONSULTING ENGINEERS

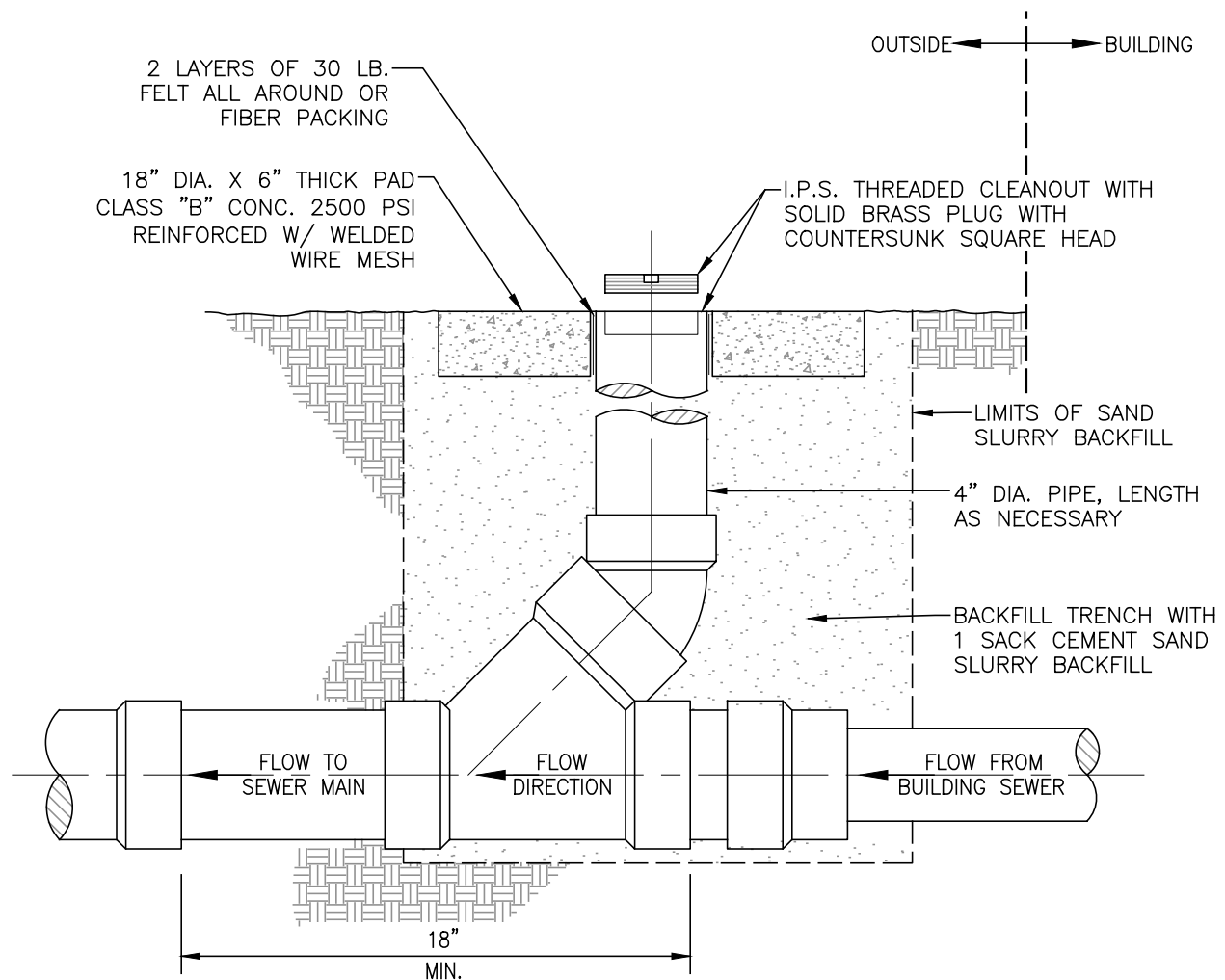
RIVERSIDE

CALIFORNIA

SHEET 2 OF 2

W.O. 21-0230

REV.



NOTES:

1. BARREL DIAMETER OF SAMPLING WYE SHALL BE A MINIMUM OF 2" LARGER THAN BUILDING DISCHARGE LINE.
2. DIAMETER OF RISER PIPE SHALL BE 4".
3. THE LOCATION OF THE SAMPLING WYE MUST BE ACCESSIBLE AT ALL TIMES TO DISTRICT PERSONNEL.
4. THE SAMPLING WYE SHALL NOT BE LOCATED IN TRAFFIC AREAS.
5. ALL MATERIALS UTILIZED SHALL CONFORM TO DISTRICT STANDARDS.

EDGEMONT COMMUNITY SERVICES DISTRICT

SCALE: NONE

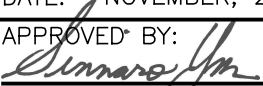
DATE: NOVEMBER, 2022

SEWER SAMPLING WYE DETAIL

DRAWING NO.

S-13

REV.

APPROVED BY:

 Sinnaro Yos, P.E. 68607

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W.O. 21-0230

SECTION VII

APPENDICES

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F	Pre-Construction Conference & Notice to Proceed
G	Charges and Deposits
H	Availability Letter Request
I	Street Lighting Annexation Policy & Guidelines
J	Wastewater Discharge Survey and Grease Interceptor Waiver Request
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N	Plan Check Forms and Checklist
O	December 14, 2017 Separation of Water Mains and Non-Potable Pipelines – Requests for Alternatives to the Waterworks Standards

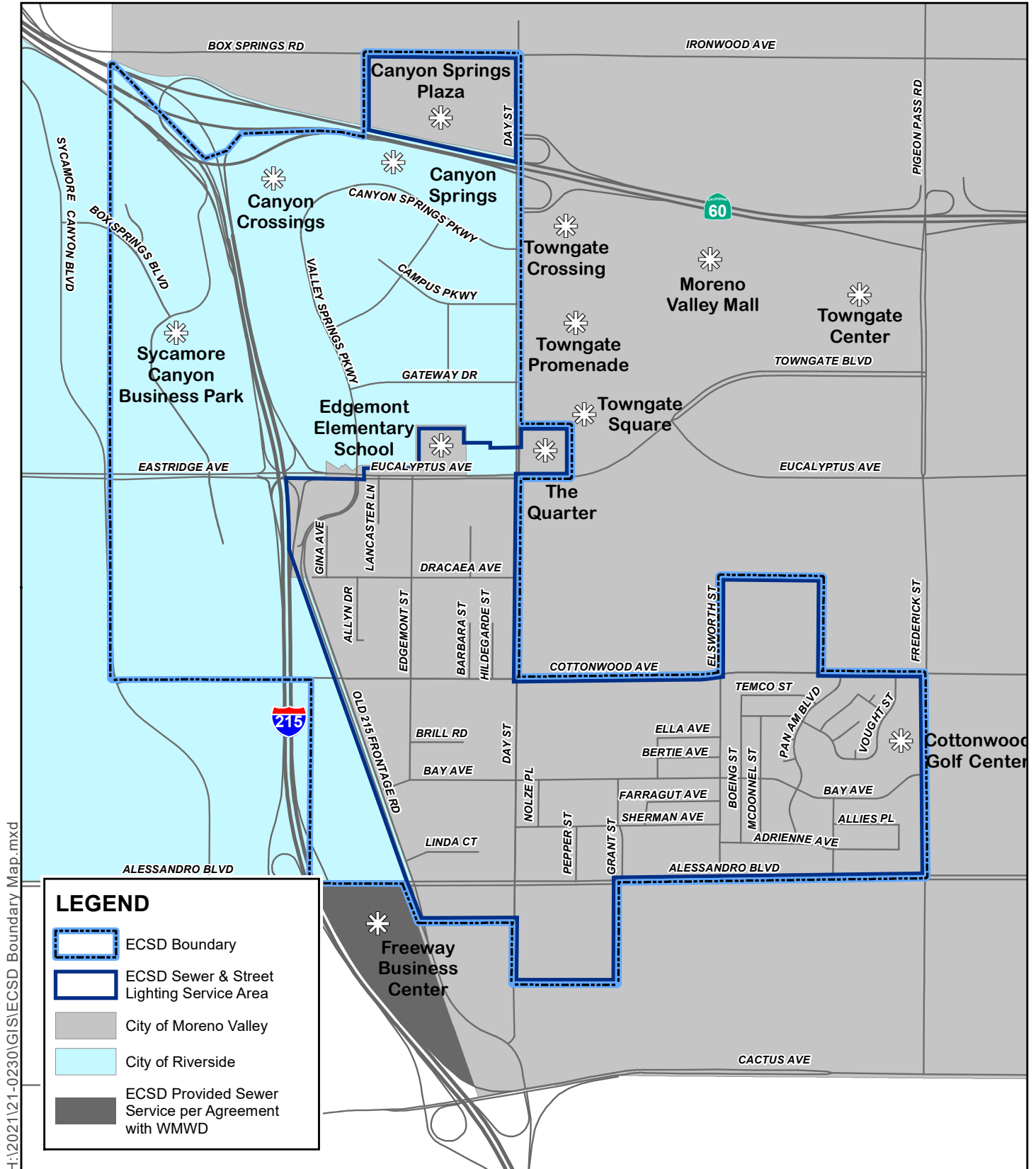
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APPENDIX A

ECSD Boundary Map

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FIGURE 1



ECSD Boundary Map



0 1,000 2,000 3,000 Feet

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APPENDIX B

Grant of Permanent Easement

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Recording requested by

When recorded mail to:

EDGEMONT COMMUNITY SERVICES DISTRICT
PO Box 5436
Riverside, CA 92517

APN

EXEMPT FROM RECORDING FEES PER GOVT. CODE §27383

NO DOCUMENTARY TRANSFER TAX PER R&T CODE §11922

GRANT OF PERMANENT EASEMENT

For valuable consideration, (enter name here) ("**Grantor**"), hereby grants to EDGEMONT COMMUNITY SERVICES DISTRICT of RIVERSIDE COUNTY, a public agency ("**Grantee**"), its successors and assigns, a permanent easement and right of way in, over, upon, under and across the lands hereinafter described to construct, reconstruct, install replace, remove, repair, alter, operate, maintain, inspect and utilize a sewer lift station, together with any easement roads and appurtenances within the right of way including, but not limited to, cable for communication purposes, and for the ingress and egress throughout the entire easement area and right of way (collectively, "**Easement Area**") in connection with the exercise of any of the foregoing rights. The property subject to this easement is located in the County of Riverside, State of California, described as follows:

See Exhibits "A" (Description) and "B" (Plat) attached hereto and made a part hereof.

It is further understood and agreed that no other easement or easements shall be granted on, under, or over said Easement Area by the Grantor to any person, firm, corporation, or other entity without the previous written consent of said Grantee.

Grantor, and his successors and assigns, shall not increase or decrease, or permit to be increased or decreased, the now existing ground elevations of said Easement Area and right of way without the prior written consent of Grantee.

Grantor, and Grantor's successors and assigns, further agree that no building, fences, walls or other structures of any kind, or trees, shall be installed, constructed, erected, placed planted or maintained in any portion of the Easement Area, and no shrubs or other plants or vegetation shall be placed, planted or maintained in the portion of Easement Area which is included within any travel way, and that no changes in the alignment of grading of any such road will be made without prior written consent of the Grantee.

The Permanent Easement, as applicable, shall include, without limitation, the right and privilege of Grantee and its employees, agents, representatives, contractors, subcontractors, and workmen to: (i) perform all activities as may be necessary to facilitate the purposes of the Permanent Easement; (ii) use, control and occupy the Easement Area (iii) have access to, ingress to, and egress from the Easement

Area; (iv) construct and utilize an access road within said Easement Area, and to use gates in all fences which now cross said Easement Area; (v) use and temporarily place and operate tools, equipment, machinery, and materials on the Easement Area, and (vi) trim, cut, remove, or clear away any trees, brush, or other vegetation or flora, including the roots thereof, located within the Easement Area. No additional fences or gates or gates shall be constructed across said Easement Area unless approved in writing by the Grantee. Grantee shall also have the right to mark the location of this easement in a manner which will not interfere with Grantor's reasonable and lawful use of said Easement Area.

The covenants contained herein shall run with the land.

Since the construction and installation of the facilities (the "**Facilities**") provided for under the terms of this Grant of Easement will require incidental entry and construction activities upon a portion of the Grantor's property adjacent to the Easement Area, the purpose of the following Grant of Temporary Easement is to provide for such incidental activities. Therefore, subject to the provisions described below, Grantor hereby grants to Grantee a temporary, non-exclusive easement over the Grantor's adjacent property (the "**Temporary Construction Easement**") described and depicted in Exhibits "C" and "D" for the purposes of enabling Grantee to construct and install the Facilities. This Temporary Construction Easement is intended to be temporary and will remain in effect until completion of the construction and installation of the Facilities, which will occur not later than____() days after such construction and installation commences. Following completion of such construction and installation of the Facilities, Grantee will execute, acknowledge and provide to Grantor a quitclaim deed or other release to confirm the termination of the Temporary Construction Easement only.

This Grant shall inure to the benefit of and be binding upon the Grantor and Grantee and their respective assigns, heirs and voluntary and involuntary successors in interest.

IN WITNESS WHEREOF, Grantor has executed this instrument this____day of_____, 20__.

GRANTOR: (Enter name of entity/person here)

By: (Enter name of authorized person)

Its: (Enter title as stated in paragraph 1)

NOTARY ACKNOWLEDGMENT

(California All-Purpose Acknowledgment)

STATE OF CALIFORNIA)

) ss.

COUNTY OF)

On _____, 20____ before me, _____, notary public, personally appeared _____, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature of Notary Public

EXHIBIT "A"

LEGAL DESCRIPTION

OF EASEMENT AREA

[INSERT LEGAL DESCRIPTION HERE]

EXHIBIT "B"

PLAT

[INSERT PLAT HERE]

EXHIBIT "C"

TEMPORARY CONSTRUCTION EASEMENT DESCRIPTION

[INSERT LEGAL DESCRIPTION HERE]

EXHIBIT "D"

PLAT OF TEMPORARY CONSTRUCTION EASEMENT

[INSERT PLAT HERE]

CERTIFICATE OF ACCEPTANCE

This is to certify that the interest in real property conveyed by that certain Grant of Easement to which this Certificate is attached from _____, to EDMONT COMMUNITY SERVICES DISTRICT, a public agency ("Grantee"), is hereby accepted by the undersigned officer or agent on behalf of the Grantee, pursuant to authority conferred by resolution of the Board of Directors adopted on _____, 20____, and the Grantee consents to recordation thereof.

Dated: _____, 20____

EDMONT COMMUNITY SERVICES DISTRICT,

a public agency

By: _____

_____(Name)

_____(Title)

NOTARY OF ACKNOWLEDGMENT

STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

On _____, 20__ before me, _____ notary public, personally appeared _____, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his / her / their signature on the instrument the person or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature of Notary Public

APPENDIX C

Construction Agreement

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CONTRACT NO. _____

CONSTRUCTION AGREEMENT

(DEVELOPER INITIATED/ CONTRACTOR INSTALLED)

1. Parties and Date

THIS AGREEMENT is made on this _____ day of _____, 20 ____, by and between the EDMONT COMMUNITY SERVICES DISTRICT OF RIVERSIDE COUNTY, a public agency of the State of California, with its principal mailing address at P.O. Box 5436, Riverside, California 92517 (hereinafter referred to as the "District") and the following ☐ Corporation or ☐ Partnership ☐ Business ☐ Individual registered in _____:

Name

Address

City State Zip Code

Telephone

(hereinafter referred to as the Developer"). Developer is represented by:

Name

Address

City State Zip Code

Telephone

2. Recitals

WHEREAS, Developer is planning a development of _____ lot(s) located in a portion of Section _____, Township _____ South, Range _____ West, San Bernardino Base and Meridian, and such development is referenced within records of the County of Riverside, State of California as:

Lot(s) _____ of Tract _____

Parcel(s) _____ of Parcel Map _____

Lot(s) _____ of _____

Assessor's Parcel No. _____

and is further identified on the map attached hereto as Exhibit "A: and incorporated herein by reference (hereinafter sometimes referred to as the "Property"); and

WHEREAS, said Property will require a water and/or sewer system (hereinafter collectively Referred to as the "System") to provide such service to the Property; and to the Property, and is willing to convey the System to the District after the construction thereof and

WHEREAS, Developer is desirous of having the District provide water and/or sewer service contingent upon the District's acceptance of such conveyance and agreement to provide water and/or sewer service to the Property on the terms and conditions set forth herein.

3. Terms

1. *Compliance with Laws and Regulations:* Developer will comply with all applicable State, federal and local laws and regulations, as well as all District rules, regulations and policies as they currently exist or as they may be amended from time to time. The District rules, regulations and policies are incorporated herein by reference.
2. *Deposit to Cover Up-Front Costs:* Developer shall deposit funds with the District sufficient to cover all necessary engineering, permit, inspection and system connection fees and costs. The amount of the deposit shall be determined by the District in its sole discretion.
3. *Licensed Engineer:* Developer shall contract for the design of the System by a licensed engineer in the State of California experienced in the design of similar systems.
4. *System Specifications:* The water and sewer System providing service to the Property shall comply with the District's specifications. Construction plans shall be approved by the District prior to the presentation thereof to contractors for bidding purposes.

5. *Licensed and Qualified Contractor:* Developer shall contract for the services of a licensed and qualified Contractor to construct the System. The contract shall be in writing, signed by Developer and the licensed contractor, and reviewed and approved by the District. The Contractor shall have a valid, current license through the State of California with either of the following specifications: (1) a specialty contractor ("C-34") pipeline license; or (2) a General Engineering Contractor ("A") license. The Contractor shall be experienced in the construction of domestic water supply and sewer systems, and shall be reviewed and approved by the District as a qualified Contractor before a contract is signed and actual System construction begins.
6. *Cost and Commencement of Construction:* Developer shall be solely responsible for the entire cost of the construction of the System. Construction shall not begin until the District issues a "Notice to Proceed" and the Developer, or other authorized party, completes a "Certification of Streets to Final Grade" for the streets in which System is to be constructed. The System specifications, as well as District rules, regulations and policies. District inspection is solely for the purpose of maintaining conformance of construction with all District requirements, and is not for purposes of insuring compliance by the Contractor with safety requirements. Inspection or final acceptance shall not constitute a waiver by the District of any claims against Developer and/or Contractor for any defects in the work performed hereunder.
7. *Indemnification:* Developer shall indemnify and hold harmless the District, its directors, officers, employees, agents and volunteers from any and all claims, demands, loss, damages, costs or liability, including reasonable attorneys fees, expert fees, and any other fees and costs of suit, arising from or connected with this Agreement or the construction of the System.
8. *Time for Completion:* Developer shall guarantee the completion of System construction within _____ (_____) calendar days from the time material is delivered to the jobsite.
9. *District Costs:* Developer agrees to pay all costs incurred by the District as may be necessary to complete construction of the System, including administrative costs, or to secure compliance with the provisions of this Agreement.
10. *Insurance Requirements:* Developer shall require its contractor and subcontractors to procure and maintain, for the duration of System construction, insurance against claims for the injuries to persons or damages to property which may arise from or in connection with the performance of the Contractor, its officers, agents, representatives, employees, consultants or subcontractors. Such insurance shall be issued by an insurers having A.M. Best Company ratings of no less than A:VIII and licensed to do business in California, shall be satisfactory to the District, and shall meet the following requirements:
 - A. *Coverage shall be at least as broad as the latest version of the following:*
 - i. *General Liability:* Insurance Services Office Commercial General Liability coverage (occurrence form CG 0001).

- ii. *Automobile Liability*: Insurance Services Office Business Auto Coverage form number CA 0001, code 1 (any auto).
 - iii. *Workers' Compensation and Employers Liability*: Workers' Compensation insurance as required by the State of California and Employer's Liability Insurance.
 - iv. *Course of Construction*: Course of Construction insurance covering for all risks of loss (including earthquakes and floods if requested by Owner).
- B. *Minimum Limits of Insurance*: Contractor shall maintain limits no less than:
- i. *General Liability*: \$2,000,000 per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit.
 - ii. *Automobile Liability*: \$1,000,000 per accident for bodily injury and property damage.
 - iii. *Workers' Compensation and Employers Liability*: Workers' compensation limits as required by the Labor Code of the State of California. Employers Liability limits of \$1,000,000 per accident for bodily injury or disease.
 - iv. *Course of Construction*: Completed value of the project.
- C. *Course of Construction Policy Requirements*: The course of construction insurance shall provide that the District be named as loss payee. In addition, the insurer shall waive all rights of subrogation against the District.
- D. *Deductibles/Retentions*: Any deductibles or self-insured retentions must be declared to and approved by the District. Developer shall guarantee that, at the option of the District, either: (1) the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the District, its directors, officers, employees, agents and volunteers; or (2) the Contractor shall procure a bond guaranteeing payment of losses and related investigation costs, claims and administrative and defense expenses.
- E. *Separation of Insureds*: No Special Limitations: All insurance required by this Agreement shall contain standard separation of insureds provisions. In addition, such insurance shall not contain any special limitations on the scope of protection afforded to the District, its directors, officers, employees, agents and volunteers.

- F. *Insurance Endorsements:* Contractor shall provide endorsements on forms supplied by the District to add the following provisions to the insurance policies:
- i. *General Liability:* (1) the District, its directors, officers, employees, agents and volunteers and Albert A. Webb Associates, shall be covered as additional insureds with respect to the work or operations performed by or on behalf of the Contractor, including materials, parts or equipment furnished in connection with such work; and (2) the insurance coverage shall be primary insurance as respects the District, its directors, officers, employees, agents and volunteers, or if excess, shall stand in an unbroken chain of coverage excess of the contractor's scheduled underlying coverage. Any insurance or self-insurance maintained by the District, its directors, officers, employees, agents and volunteers shall be excess of the Contractor's insurance and shall not be called upon to contribute with it.
 - ii. *Automobile Liability:* (1) the District, its directors, officers, employees, agents and volunteers and Albert A. Webb Associates, shall be covered as additional insureds with respect to the ownership, operation, maintenance, use, loading or unloading of any auto owned, leased, hired or borrowed by the contractor or for which the contractor is responsible; and (2) the insurance coverage shall be primary insurance as respects the district, its directors, officers, employees, agents and volunteers, or if excess, shall stand in an unbroken chain of coverage excess of the contractor's scheduled underlying coverage. Any insurance or self-insurance maintained by the District, its directors, officers, employees, agents and volunteers shall not be called upon to contribute with it.
 - iii. *Workers' Compensation and Employers Liability Coverage:* the insurer shall agree to waive all rights of subrogation against the District, its directors, officers, employees, agents and volunteers and Albert A. Webb Associates, for losses paid under the terms of the insurance policy which arise from work performed by the contractor.
 - iv. *All Coverages:* Each insurance policy required by this clause shall be endorsed to state that coverage shall not be canceled except after thirty (30) days prior written notice by certified mail, return receipt requested, has been given to the District, its directors, officers, employees, agents and Albert A. Webb Associates.
- G. *Verification of Coverage:* Contractor shall furnish district with original certificates of insurance and endorsements effecting coverage required by this Agreement. The certificates and endorsements for each insurance policy shall be signed by a person authorized by that insurer to bind coverage on its behalf, and shall be on forms provided by the district. All certificated and endorsements must be received and approved by the

District before work commences. The District reserves the right to require complete, certified copies of all required insurance policies, at any time.

- H. *Subcontractor Requirements:* All subcontractors shall meet the requirements of this Section before commencing work. In addition, Contractor shall include all subcontractors as insureds under its policies, or shall finish separate certificates and endorsements for each subcontractor. All coverages for subcontractors shall be subject to all requirements stated herein.
- 11. *Professional Liability Insurance:* Developer shall require its licensed engineer contracted to design the System, as well as any other architects, engineers, consultants or design professionals utilized by Developer pursuant to or in furtherance of this Agreement, to procure and maintain for a period of five (5) years following completion of the system, errors and omissions liability insurance with a limit of not less than \$1,000,000. This insurance shall name the District, its directors, officers, employees, agents and volunteers as additional and insureds with respect to work performed, and shall otherwise comply with all requirements of paragraph 10 including, but not limited to, subparagraphs 10(D), 10(E), 10(F)(iv), 10(G) and 10(H).
 - 12. *Bonding Requirements:* Developer shall require its contractor to provide the District with the following types of bonds which shall name the District as the obligee therein:
 - A. *Performance Bond:* A performance bond from an admitted corporate surety satisfactory to the district. The performance bond shall be for not less than one hundred percent (100%) of the total contract price, as referenced in Paragraph 13(E).
 - B. *Labor and Materials Payment Bond:* A labor and materials payment bond from an admitted corporate surety satisfactory to the District. The payment bond shall be for not less than one hundred percent (100%) of the total contract price, as referenced in Paragraph 13(E).
 - C. *Warranty Bond:* A warranty bond from an admitted corporate surety satisfactory to the District. This bond shall guarantee the performance of the installed System against failures of any type for one (1) year from the date of filing of a Notice of completion. The warranty bond shall be in an amount equal to at least ten percent (10%) of the total contract price, as referenced in Paragraph 13(E), and shall provide for the payment of all costs incurred by the District for the repair of such failures within the one (1) year guarantee period.
 - D. *Acceptability of Sureties:* Bonds shall be obtained from sureties with a current A.M. Best's rating no less than A:VIII, licensed to do business in California, and satisfactory to the District
 - 13. *Final Inspection; Documents:* The District's Inspector shall complete a "Notice of Final Inspection" when all work has been completed in accordance with this

Agreement and District requirements, and prior to the acceptance of the System by the District. In addition, before acceptance of the system by the District, Developer shall furnish to the District any and all requested documents, including but not limited to, the following:

- A. *Deeds:* Easement Deeds or Grant Deeds to any rights-of-way or other real property interests necessary for roads, ingress and egress, and for System maintenance and operation.
 - B. *Declaration of Full Payment:* A Declaration by the Contractor that it has been paid in full, and that all persons employed by the Contractor or who have furnished material for the construction of the water system have been paid in full.
 - C. *Notice of Completion:* The executed Notice of Completion to be filed by the District.
 - D. *Title to System:* A Grant Deed/Bill of Sale executed by the Developer vesting title of the System and appurtenances to the District.
 - E. *Costs of Construction:* A copy of the contract between Developer and its Contractor, and any other documents requested by the District to verify the actual cost of the system.
14. *Final Inspection; Service:* District may, by written notice to Developer, terminate this agreement in whole or in part upon the breach of the terms of this Agreement by Developer, which terms shall include Developer's obligations with respect to its contractor. For example, Developer's failure to prosecute the construction of the System in a timely manner which will, according to the District, allow the System to be completed within the number of calendar days provided as the "Time for Completion" of the System, shall be grounds for termination.
15. *Termination:* District may, by written notice to Developer, terminate this Agreement in whole or in part upon the breach of the terms of this Agreement by Developer, which terms shall include Developer's obligations with respect to its contractor. For example, Developer's failure to prosecute the construction of the System in a timely manner which will, according to the District, allow the System to be completed within the number of calendar days provided as the "Time for Completion" of the System, shall be grounds for termination.
16. *Successors and Assigns:* This Agreement is binding on the assigns of the District, and on the assigns, successors and representatives of the Developer and the contractor. Developer shall not assign this Agreement without the prior written consent of the District.
17. *Attorneys Fees:* If either party commences an action, legal or otherwise, against the other party arising out of or in connection with this Agreement, the prevailing party in such action shall be entitled to have and recover from the losing party reasonable attorneys fees and costs of suit.

18. Notices: All notices permitted or required under this Agreement shall be given to the respective parties at the addresses listed on Page 1 of this Agreement, or at such other address as the parties may provide in writing for this purpose. Such notice shall be deemed made when personally delivered or forty-eight (48) hours after deposit in the U.S. mail, first class postage prepaid.
19. Copies of Materials: District shall have the right to obtain for its records copies of all materials which may be prepared by or on behalf of the Developer and its contractor or subcontractors pursuant to or in furtherance of this Agreement. District shall not be limited in any way in its use of such materials at any time, provided that any such use not within the purposes intended by this Agreement shall be at the District's sole risk.
20. Entire Agreement: This agreement contains the entire agreement of the parties with respect to the subject matter hereof, and supersedes all prior negotiations, understandings or agreements. This Agreement may only be modified by a writing signed by both parties.

EDGEMONT COMMUNITY SERVICES
DISTRICT OF RIVERSIDE COUNTY

DEVELOPER

Name of Developer

By: _____
Signature

By: _____
Signature

Name (Printed)

Name (Printed)

Title

Title

Date

Date

EXHIBIT "A"

Map of Property

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APPENDIX D

Contractor's Data Sheet

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CONTRACTOR'S DATA SHEET

Name of Contractor or Organization: _____
(Corporation, Partnership, Individual)

Principal Office Address _____

Phone Number (_____) _____

Names of Officers of Organization _____
(Name) (Title)

(Name) (Title)

License Number(s) _____ Classification : Engineering Class "A"
C-34 Specialty

1. How many years has your organization been in business as a general contractor under your 1) present business name? _____; and, 2) present license(s)? _____
2. How many years experience in sewer pipeline construction work has your organization had (a) as a general contractor _____ (b) as a sub-contractor _____
3. List below the applicable projects your organization has completed most recently.

Project Completed			Pipe Sizes	Total Length	Type of Pipe	Contract Cost
No.	Year	For				
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

(Use additional sheet if necessary)

4. List names and addresses of person to be contacted for information on projects listed in Item 3.

No.	Name of Owner	Name, Address & Telephone of Person to be Contacted
1		
2		
3		
4		
5		
6		
7		
8		
9		

(Use additional sheet if necessary)



5. Have you ever failed to complete any work awarded to you? If so, where, when and why?
6. Have you ever filed bankruptcy? If so, state details on separate sheet.
7. Have you ever been cited for violation of Cal-OSHA regulations? If so, state on separate sheet where, when, why, and whether a minor or major violation.
8. Have you ever had a lien against you? Have you ever had to obtain a lien against someone? If so, where, when and why?
9. Can you provide letters of recommendation from previous contractual agreements? If so, please attach letters to this form.

I hereby authorize EDGEMONT COMMUNITY SERVICES DISTRICT of Riverside County to obtain information concerning me or my organization from any source including former clients. I certify that the foregoing information obtained in this Experience Questionnaire is true and correct to the best of my knowledge.

Signature _____

Date _____

Type or print name clearly _____

APPENDIX E

Insurance Forms

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COMMERCIAL GENERAL LIABILITY ENDORSEMENT

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS

Insurer:	<i>This Endorsement Changes The Policy</i> <i>Please Read it Carefully</i>
Policy Number:	
Endorsement Number:	

POLICY TYPE: This endorsement modifies insurance provided under the following:

Commercial General Liability Coverage

SCHEDULE:

Name of Public Entity ("Additional Insured")

Name of Engineer ("Additional Insured")

If no entry appears above, the information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.

WHO IS AN INSURED is amended to include as an Additional Insured the person or organization shown in the Schedule, but only with respect to liability arising out of "your work" for that Additional Insured by or for you.

Modifications to Policy:

1. The Additional Insured shown in the Schedule above includes the members of its governing body, its officers, employees, agents and volunteers.
2. This insurance shall be primary as respects the Additional Insured shown in the Schedule above, or if excess, shall stand in an unbroken chain of coverage excess of the Named Insured's scheduled underlying primary coverage. In either event, any other insurance maintained by the Additional Insured shown in the Schedule above shall be in excess of this insurance and shall not be called upon to contribute with it.
3. This insurance shall afford coverage at least as broad as the latest version of Insurance Services Office Commercial General Liability coverage (occurrence form CG 0001).
4. The insurance afforded by this policy shall not be canceled except after thirty days prior written notice by certified mail return receipt requested has been given to the Additional Insured.

AUTHORIZED REPRESENTATIVE:

☐ Broker/Agent ☐ Underwriter ☐ _____

I, _____, (print/type name) warrant that I have authority to bind the above-mentioned insurance company and by my signature hereon do so bind this company to this endorsement.

Signature of Authorized Representative

Address

Phone Number

Date Signed

AUTOMOBILE LIABILITY SPECIAL ENDORSEMENT		
SUBMIT IN DUPLICATE		
For _____ (The Owner)	ENDORSEMENT NO.	ISSUE DATE (MM/DD/YY)
PRODUCER	POLICY INFORMATION: Insurance Company: Policy No.: Policy Period: (from) _____ (to) _____ LOSS ADJUSTMENT EXPENSE ☐ Included in Limits ☐ In Addition to Limits	
	☐ Deductible ☐ Self-Insured Retention (check which) of \$ _____	
NAME INSURED	APPLICABILITY. This insurance pertains to the operation and/or tenancy of the named insured under all written agreements and permits in force with the Additional Insured unless checked here ☒ in which case only the following specific agreements and permits with the City are covered: ADDITIONAL INSURED AGREEMENTS/ PERMITS	
TYPE OF INSURANCE	OTHER PROVISIONS	
☐ Commercial Auto Policy ☐ Business Auto Policy ☐ Other _____		
LIMIT OF LIABILITY	CLAIMS: Underwriter's representative for claims pursuant to this insurance.	
\$ _____ per accident, for bodily injury and property damage.	Name: _____ Address: _____ Telephone: (____) _____	
In consideration of the premium charged and notwithstanding any inconsistent statement in the policy to which this endorsement is attached or any endorsement now or hereafter attached thereto, it is agreed as follows: 1. ADDITIONAL INSURED. The Owner, Engineer, the members of its governing body, its officers, employees, agents and volunteers are included as insureds with regard to damages and defense of claims arising from: the ownership operation, maintenance, use, loading or unloading of any auto owned, leased, hired or borrowed by the Named Insured or for which the Name Insured is responsible. 2. CONTRIBUTION NOT REQUIRED. As respects work performed by the Named Insured for or on behalf of the Additional Insured, the insurance afforded by this policy shall: (a) be primary insurance as respects the Additional Insured; or (b) stand in an unbroken chain of coverage excess of the Named Insured's primary coverage. Any insurance or self-insurance maintained by the Additional Insured shall be excess of the Named Insured's insurance and not contribute with it. 3. CANCELLATION NOTICE. With respect to the interests of the Additional Insured, this insurance shall not be canceled, except after thirty (30) days prior written notice, by receipted delivery, has been given to the Additional Insured. 4. SCOPE OF COVERAGE. This policy affords coverage at least as broad as: (1) If primary, Insurance Services Office form number CA0001, Code 1 ("any auto"); or (2) If excess, affords coverage which is at least as broad as the primary insurance forms referenced in the preceding section (1). Except as stated above, nothing herein shall be held to waive, alter or extend any of the limits, conditions, agreements or exclusions of the policy to which this endorsement is attached.		
ENDORSEMENT HOLDER		
OWNER	AUTHORIZED REPRESENTATIVE ☐ Broker/Agent ☐ Underwriter ☐ _____ I, _____, (print/type name) warrant that I have authority to bind the above mentioned insurance company and by my signature hereon do so bind this company to this endorsement. Signature _____ (original signature required) Telephone: (____) _____ Date Signed: _____	

WORKERS' COMPENSATION AND EMPLOYER'S LIABILITY SPECIAL ENDORSEMENT

WORKERS' COMPENSATION AND EMPLOYER'S LIABILITY SPECIAL ENDORSEMENT		SUBMIT IN DUPLICATE	
For _____ (The Owner)		ENDORSEMENT NO.	ISSUE DATE (MM/DD/YY)
PRODUCER	POLICY INFORMATION: Insurance Company: Policy No.: Policy Period: (from) _____ (to) _____		
NAMED INSURED	OTHER PROVISIONS		
CLAIMS: Underwriter's representative for claims pursuant to this insurance. Name: _____ Address: _____ Telephone: _____	EMPLOYERS LIABILITY LIMITS \$ _____ (Each Accident) \$ _____ (Disease – Policy Limit) \$ _____ (Disease – Each Employee)		
<p>In consideration of the premium charged and notwithstanding any inconsistent statement in the policy to which this endorsement is attached or any endorsement now or hereafter attached thereto, it is agreed as follows:</p> <p>1. CANCELLATION NOTICE. This insurance shall not be canceled, except after thirty (30) days prior written notice, by receipted delivery, has been given to the Owner.</p> <p>2. WAIVER OF SUBROGATION. This insurance company agrees to waive all rights of subrogation against the Owner, the members of its governing body, its officers, employees and volunteers for losses paid under the terms of this policy which arise from the work performed by the Named Insured for the Owner.</p> <p>Except as stated above, nothing herein shall be held to waive, alter or extend any of the limits conditions, agreements or exclusions of the policy to which this endorsement is attached.</p>			
ENDORSEMENT HOLDER			
OWNER		<p>AUTHORIZED REPRESENTATIVE ☐ Broker/Agent ☐ Underwriter ☐ _____</p> <p>I, _____, (print/type name) warrant that I have authority to bind the above-mentioned insurance company and by my signature hereon do so bind this company to this endorsement.</p> <p>Signature _____ (original signature required)</p> <p>Telephone: (_____) _____ Date Signed: _____</p>	

CERTIFICATE OF INSURANCE					ISSUE DATE (MM/DD/YY)	
PRODUCER		THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.				
		COMPANIES AFFORDING COVERAGE				
		Company Letter A				
		Company Letter B				
INSURED		Company Letter C				
		Company Letter D				
		Company Letter E				
COVERAGES						
THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.						
CO LTR	TYPE OF INSURANCE	POLIC Y NO.	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
	GENERAL LIABILITY ☐ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS MADE ☐ OCCURANCE ☐ OWNER'S & CONTRACTOR'S PROT. ☐ _____ ☐ _____				GENERAL AGGREGATE \$ PRODUCTS-COMP/OP AGG. \$ PERSONAL & ADV. INJURY \$ EACH OCCURRENCE \$ FIRE DAMAGE (Any one fire) \$ MED. EXPENSE (Any one person) \$	
	AUTOMOBILE LIABILITY ☐ ANY AUTO ☐ ALL OWNED AUTOS ☐ SCHEDULED AUTOS ☐ HIRED AUTOS ☐ NON-OWNED AUTOS ☐ GARAGE LIABILITY ☐ _____				COMBINED SINGLE LIMIT \$ BODILY INJURY (Per Person) \$ BODILY INJURY Per Accident \$ PROPERTY DAMAGE	
	EXCESS LIABILITY ☐ UMBRELLA FORM ☐ OTHER THAN UMBRELLA FORM				EACH OCCURRENCE \$ AGGREGATE \$	
	WORKER'S COMPENSATION AND EMPLOYERS' LIABILITY				STATUTORY LIMITS EACH ACCIDENT \$ DISEASE -- POLICY LIMIT \$ DISEASE -- EACH EMPLOYEE \$	
THE FOLLOWING PROVISIONS APPLY: 1. None of the above-described policies will be canceled until after 30 days' written notice has been given to the Owner at the address indicated below. 2. The Owner, Engineer, the members of its governing body, its officers, employees, agents and volunteers are added as insured on all liability insurance policies listed above. 3. It is agreed that any insurance or self-insurance maintained by the Owner will apply in excess of and not contribute with the insurance described above. 4. The Owner is named as a loss payee on the property insurance described above, if any. 5. All rights of subrogation under the property insurance policy listed above have been waived against the Owner 6. The worker's compensation insurer named above, if any, agrees to waive all rights of subrogation against the Owner for injuries to employees of the insured resulting from work for the Owner or use of the Owner's premises or facilities.						
CERTIFICATE HOLDER ("OWNER")		CANCELLATION SHOULD ANY OF THE ABOVE-DESCRIBED POLICIES BE CANCELED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL MAIL THIRTY (30) DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES AUTHORIZED REPRESENTATIVE				

APPENDIX F

Pre-Construction Conference & Notice to Proceed

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DEVELOPMENT PROJECT PRE-CONSTRUCTION CONFERENCE REQUIREMENTS

All construction projects involving facilities that will be owned and operated by the Edgemont Community Services District shall require a pre-construction conference. A pre-construction conference shall always be held prior to issuance of a Notice to Proceed. Prior to the District scheduling a pre-construction conference, the District requires the following information:

1. Project Name _____
(Tract, P.M., P.P. #, etc.)

2. Developers Name _____
Address _____

Phone No. _____
License Type & No. _____
Contact's Name _____

3. Contractors Name _____
Address _____

Phone No. _____
License Type & No. _____
Contact's Name _____

Has the Contractor completed a Contractor's Data Sheet, including the experience portion of Appendix D of the District's Standards Manual? YES NO (Circle One)

If No, it is necessary for the Contractor to complete this form and submit it to the District prior to scheduling the pre-construction conference.

4. Subcontractors Name(s) _____
Address _____

Phone No. _____
License Type & No. _____
Name _____
Address _____

Phone No. _____
License Type & No. _____

5. Attach copies of all applicable permits (i.e. Encroachment Permits, OSHA, etc.)
6. Provide 3 sets of District Approved Plans.
7. Provide 3 sets of District Approved Submittals.
8. Provide 24-hr. emergency phone no. of the Contractor's responsible party.

Name of Contact _____

Phone No. _____

Relationship to Project (i.e., Contractor, Project Manager,
Superintendent, etc.) _____

9. Geotechnical Consultants Name _____
 Address _____

 Phone No. _____
 Contact _____

10. Provide all applicable information as delineated in Appendix H of the Standards Manual.

Subsequent to District review and approval of the required information, the District will contact the developer and inform him/her that a pre-construction conference may be scheduled at his/her convenience during normal District office hours.

PRE-CONSTRUCTION CONFERENCE AND NOTICE TO PROCEED

The following outlines the general requirements and the expectations of the Pre-construction Conference and Notice to Proceed and shall apply to all developer-paid sewer facility construction within the District's jurisdiction.

1. Sequence of Events: A Pre-construction Conference shall always be held prior to issuance of a Notice to Proceed. Prior to the Pre-construction Conference, the District must have the following applicable items indicated as complete and checked off:
 - a. SEWER PLANS: Drawings, complete, signed as approved by the District, and signed by the required officials of Riverside County (Health Department, Road Department, Fire Marshall, etc.).
 - b. Recorded Tract Map/Parcel Map and applicable street improvement plans and grading plans.
 - c. Applicable fees and deposits made to the District, Deposit Agreement signed, and appropriate Work Order Numbers opened and assigned.
 - d. Environmental Assessment completed.
 - e. A fully signed Construction Agreement with signatures of the Developer, Contractor, and the District's General Manager.
 - f. Agreement for PARTICIPATION/REFUND WAIVER OR AGREEMENT for participation and refund SIGNED.
 - g. Streets shall have been constructed to final subgrade and Certification signed by the Developer that streets are to final subgrade.
 - h. Easements shall be properly obtained, if required, and dedicated to the District.
 - i. Property corners shall be surveyed and set by owner/developer's surveyor to identify lot lines which will assist in proper location of mains and appurtenances.
 - j. District certification of contractor for intended size job.
 - k. A copy of tentative Bid between contractor and developer shall be submitted to the District.
 - l. Necessary permits have been obtained.
 - m. Required 100% Performance Bond and 100% Labor & Materials Bond must be posted and District approved.
 - n. Required Insurance form naming District as additionally insured must be executed and on file with the District (See Appendix E).
2. Pre-construction Conference: A pre-construction conference shall be scheduled by the District prior to issuance of Notice to Proceed and commencement of work. The Pre-construction Conference shall allow all parties to present their views and requirements, and provide a forum for satisfactory solution to all anticipated problems.

a. Parties to be invited:

- 1) District, District Inspector, and District Representative
- 2) Developer (and owner if different)
- 3) Developer's Engineer
- 4) Contractor and Foreman
- 5) County and/or City Construction Inspector
- 6) Other affected agencies and utilities: (if their facilities are involved)
- 7) Material Suppliers (If Required)

b. Items to be Discussed:

- 1) Review of plans and fabrication drawings. Verify main footage and location of fittings and appurtenances.
- 2) Material deliveries, quantities, and problems
- 3) Construction schedule
- 4) Connection to existing facilities
- 5) Street grading and staking. Verification for final subgrade elevations and satisfactory subgrade compaction
- 6) Curb and gutter/berm placement
- 7) Project phasing
- 8) Temporary services
- 9) Other Public Agency requirements. Check compliance with standard requirements for other public agencies.
- 10) Plans for testing
- 11) Clearance of other utilities
- 12) Blasting/rock removal
- 13) Traffic control and public convenience
- 14) Dust control and site cleanliness
- 15) Safety and OSHA requirements. (Contractor's responsibility)
- 16) Review of possible field conflicts and method of solution
- 17) As-built dimensions and drawings
- 18) Job Security and Storage of Materials and Equipment

3. Notice to Proceed: If all the District requirements have been met and no outstanding problems exist, the District will issue a written Notice to Proceed to the Developer and Contractor with copy to District Inspector at the Pre-construction Conference.

If any requirements remain to be completed or if there is any problem with the above-listed items, such problems shall be resolved by cognizant parties. When completed to District satisfaction, a written Notice to Proceed will be issued to the Developer and Contractor.

No sewer system construction shall commence until the written Notice to Proceed is issued. After the Notice to Proceed is issued, the Developer may then finalize bid requirements with contractor or sub-contractors, sign the acceptance of bid and forward a copy of the firm BID CONTRACT to the District.

ITEMS REQUIRED PRIOR TO SCHEDULING PRE-CONSTRUCTION MEETING

- ☐ Updated Availability Letter
- ☐ Blacklines/Mylars
- ☐ Easements recorded (if applicable)
- ☐ Electronic Copy of Plans on CD
- ☐ Maps with Street Names and Addresses of Lots
- ☐ Fees Paid
- ☐ Inspector Assigned
- ☐ Contractor Data Sheet Complete
- ☐ Sewer Construction Agreement
- ☐ Material Submittals Approved
- ☐ Sewer Facility Agreement
- ☐ Cut Sheets (minimum of 300 Ft. for each start point)
- ☐ Confined Space Certification
- ☐ Safety Manual
- ☐ Copy of Certifications for Confine Space and Competent Persons

APPENDIX G

Charges and Deposits

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Charges and Deposits ⁽¹⁾ January, 2026

Sewer Facility Charges (Fees)

Connection Fee ⁽²⁾ \$5,350 per Equivalent Dwelling Unit (EDU)

Planning, Development, and Construction Deposit

Sewer Availability Letter ^(3,4)

Plot Plan/Parcel Map/Tracts	\$4,500
Residential Dwelling Unit	\$3,500

Accessory Dwelling Unit (ADU) Review ^(3,5)

Accessory Dwelling Unit	\$1,500
-------------------------	---------

Industrial Waste and Non-Residential Improvements Review ^(3,5)

Tenant Improvement Release	\$1,500
Industrial Waste Review and Waiver	\$3,500

Plan Checking ⁽³⁾

Plot Plan/Parcel Map/Tracts	\$7,000 (Minimum)
Residential Dwelling Unit	\$5,000 (Minimum)
Accessory Dwelling Unit	\$4,000 (Minimum)
Industrial Waste and Non-Residential	\$4,000 (Minimum)

<u>Streetlight Annexation ^(3,6)</u>	\$5,000 (Minimum)
--	-------------------

Construction Inspection ⁽⁷⁾

Plot Plan/Parcel Map/Tracts	\$15,000 (Minimum)
Residential Laterals and Cleanouts	\$8,000 (Minimum)
Grease Interceptors and Sample Wyes	\$5,000 (Minimum)

Standards Manual

Available online ⁽⁸⁾: <https://edgemontcsd.specialdistrict.org/design-and-construction-standards-manual>

Notes:

- ⁽¹⁾ Contact the General Manager to confirm the latest charges and deposits amounts.
- ⁽²⁾ The permit fees for a connection to the District's sewer system shall be adjusted annually commencing July 1, 2026, based upon the Engineering News Record Construction Cost Index Los Angeles starting with the July 1, 2025 ENR CCLA Index of 15,997.64.
- ⁽³⁾ These costs are advance payment deposits against the actual cost of the task performed and are required to initiate the project review process. Additional payments may be required as a result of the complexity of the project or multiple plan check resubmittals.
- ⁽⁴⁾ Sewer availability letter does not include the detailed plan review of the project and a separate plan check process is required along with associated payment deposits.
- ⁽⁵⁾ Depending on the complexity of the project and plans provided, a separate plan check process may be required and will be determined upon initial review of the proposed improvements.
- ⁽⁶⁾ The cost for the street light annexation process should be taken into consideration.
- ⁽⁷⁾ The construction inspection deposit will be determined based on the project plans and complexity of the project. Additional funds may be required. Notification will be provided before funds are depleted.
- ⁽⁸⁾ The Standards Manual is available online at no cost. Please contact the General Manager to request a printed copy of the manual. Reasonable cost of printing to be paid by the requestor at the time of receipt.

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APPENDIX H

Availability Letter Request

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SAMPLE TEMPLATE - AVAILABILITY LETTER REQUEST

(Date)

EDGEMONT COMMUNITY SERVICES DISTRICT
PO Box 5436
Riverside, CA 92517

Attn: Ms. Jessica Pfalmer, General Manager

RE: Request for Sewer Availability Letter

As evidenced by this letter, I hereby request a Sewer Availability letter for (Tentative Tract, Parcel Map or Plot Plan No, include assessor's parcel No.) .

This project is part of Specific Plan (name) , City of Moreno Valley, California, located (Location of Development) .

The proposed development consists of (Number of Dwelling units if know) , on approximately (number) acres. Proposed sewer connections are to be made to existing lines located in (Point of connection to District line if known) as shown on the attached map.

As a part of this Request for Sewer Availability Letter, the following attachments are also included per the Districts request:

- One copy of the tentative map, plot plan, or vicinity map
- Deposit of (Refer to Appendix G for current charges and deposits).

Should you have any questions or require any further information, please do not hesitate to call.

Sincerely,

REQUIREMENTS AND PROCEDURES FOR REQUESTS OF AVAILABILITY LETTER

Items Needed for Availability Letters

1. Letter requesting availability with information regarding type of project.
2. Advance payment of Deposit determined by the District for processing request.
3. Tentative Tract, Parcel Map or Plot Plan or Assessor's Parcel Number and two (2) copies of a map showing area and boundaries of property requiring water and/or sewer service.
4. Proof of Property Ownership/Grant Deed or Title Report.

Procedures for Availability Letter Request

1. Developer submits a request for an Availability Letter using the Request of Availability Letter Template along with all of the items specified above to Edgemont Community Service District (District).
2. All items are transmitted to the District's Engineer.
3. The District's Engineer writes the Availability Letter transmits them to the District.
4. The District's will then schedule the request for the next available board meeting for consideration of approval by the Board.
5. **Note: Because of State of California Brown Act which governs advance notification to the public of Board meeting agendas, the request may not be scheduled for the next calendar Board meeting.**
6. After Approval of the Board of Directors the District will write the appropriate cover letter and transmit it to the Developer.

APPENDIX I

Street Lighting Annexation Policy & Guidelines

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Requirements of Developer for Street Lighting Annexation

1. Letter from Owner requesting the creation of a new Zone to the Street Lighting District (see sample letter on next page)
2. A deposit for street light annexation (Refer to Appendix G for current charges and deposits).
3. Owner/Engineer to obtain and provide ECSD with the Approved Street Improvement Plan or Approved Street Lighting Plan, which cites the location and wattage/lumens for each of the street lights to be installed.

A separate Street Lighting Plan is not necessary if a letter from the City of Moreno Valley's Engineering Division Manager is received by ECSD stating that they have no objections with the street lights being shown on the Street Improvement Plans.

4. Number of street lights to be installed and the wattage/lumens of each of the lights.
5. Assessor Parcel Numbers for all parcels affected, which will be annexed into the Lighting District.
6. The most current Title Report or Grant Deed.
7. The Signature block of the legal owner, and any relevant information.

Example:

Signature Block: The Smith Limited Partnership,
an Indiana limited partnership

By: The Smith Corporation,
an Indiana corporation,

Its: General Partner

8. Authorized Signatory.

Example:

Signatory: Sally Johnson,
West Coast Vice President

9. Contact name, phone, e-mail address, and mailing address.
10. Southern California Edison Streetlight Authorization form (a sample has been provided in this Appendix; refer to your SCE Project Packet for the most current version of this form). SCE has valuable information on its website for new development project management. Please refer to SCE's website for further information or contact the Local Planning main line at 951-928-8290.

<https://www.sce.com/partners/consulting-services/new-development-project-management>

Note: Developer will pay for installation of the streetlights per the conditions of approval. Once the creation of the new zone is complete, ECSD will sign the Authorization form.

Requirements of Developer for Street Lighting Annexation

11. Consent form for property owner to have electricity charges included on the tax bill (signed by Owner and provided to ECSD). Consent form will be provided by District Counsel.
12. District's Engineer will review street light count, lumens, and Street Improvement/Street Lighting Plans so annual maintenance cost can be determined.
13. District Engineer submits documents and recommendations to ECSD for approval.

(PLEASE PUT ON YOUR LETTERHEAD)

(Insert Date)

Edgemont Community Services District

P.O. Box 5436

Riverside, CA 92517

Attn: Jessica Pfalmer (General Manager)

RE: Street Lights along (Insert Street Name) in the City of Moreno Valley

Dear Ms. Pfalmer,

On behalf of (Insert Owner's Name), please accept this letter as a request for the portion of our project adjacent to (Insert Street Name), referenced on the Street Improvement Plan previously submitted to your office, to be placed into Edgemont Community Services District Lighting District.

Should you have any questions regarding this request, please let me know as soon as possible.

Sincerely,

(Insert Name & Title)

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SOUTHERN CALIFORNIA EDISON STREETLIGHT AUTHORIZATION

DEVELOPER/APPLICANT MUST PROVIDE THIS FORM

COMPLETED BY THE PUBLIC AUTHORITY

FOR ANY SCE-OWNED STREETLIGHT INSTALLATION, REMOVAL OR CHANGE REQUESTS

Incomplete forms will be returned and not processed

PUBLIC AUTHORITY NAME: Edgemont Community Services District

Builder/Developer Name: Phone #:

Tract/Ref # Streetlight Location

Please Check one: ☐ Installation ☐ Removal ☐ Change

Number of Lamp(s)	Lamp Size	Lamp Type

New Installations

Public Authority Responsibility for Streetlight Monthly Billing

Please Check one and fill out appropriate dates:

☐ Upon Energizing
☐ If Public Authority is collecting for Developer/Developer financed Energy Payment, indicate date collected. ()

Monthly Billing: ☐ Establish new Service Account (SA) Use existing SA #

☐ Commitment Date-
Agreed by SCE and Public Authority () or no later than 36 months from first streetlight energized whichever is earlier.

Monthly Billing: ☐ Establish new Service Account (SA) Use existing SA #

☐ Public Authority is not responsible
☐ HOA Area Name Other Entity (please define)

Public Authority Notes:

Authorized Public Authority Agent

Print name	Date	Signature
Phone #		Title

TO BE COMPLETED BY SCE

ACTION: ENTER TRACT/REF# ON DM PROGRAM NAME FIELD.

District Planning AOR PLANNER NAME (PRINT)

DM SR # Product # (one per SLA)

FORWARD COMPLETED COPIES OF THE SLA FORM, MAP AND CSD272 CONTRACT, IF APPLICABLE TO:

"Street & Outdoor Lighting Organization" Santa Ana Bldg. D

SCE: SOLO-003 Rev 04-20-15

EXPLANATION SHEET:

Explanation

1. **BOX 1:**

Public Authority Name: Fill in the name of the Government Agency
i.e.: City of Glendora

Builder/Developer Name: Fill in the name of the BD if applicable

Phone# : Phone# of the Builder/Developer

Tract/Ref # : Use a Tract # if applicable otherwise use reference # provided by government agency or default to the "Date" (this document was signed by Authorized Agent (Box 5).

Streetlight Location : Job Address
2. **BOX 2:**

Installation, Removal or Change: Check box to indicate lamp installation, removal or change.

Number of Lamps, Lamp Size, Lamp Type: Indicate all lamps, sizes and type (mult/ser) that are to be installed, removed or changed.
3. **BOX 3:**

Builder/Developer or Advanced Energy Payment Collected by:
If applicable, indicate who is collecting this fee, SCE or the Government Agency. If collected by the Government Agency, indicate date paid by the Builder/Developer.

*** Edison will not continue job until all fees are paid up front by the Builder/Developer as required by the government agency.**

Who is the Public Authority responsible for streetlight energy charges?
Indicate if the government agency is going to accept financial responsibility for streetlight energy and when or will the lamps be going to a private party.
4. **BOX 4:**

Terms of Acceptance or Special Notes (By Government Agency):
Indicate any special conditions, terms or timeliness that must be adhered to prior to the government agency taking financial responsibility for the energy charges.
5. **BOX 5:**

Energy Billing:
Check if a new billing statement account number is required. If an existing account number will be used, fill in the service account number.

Print the name of the Public Authority Agent:
Enter the name of authorized person to sign streetlight authorization form. Enter date and sign authorization form also, include title and phone number.
6. **BOX 6:**

TO BE COMPLETED BY SCE

Refer to your Southern California Edison Project Packet for the current version of these instructions.

APPENDIX J

Wastewater Discharge Survey and Grease Interceptor Waiver Request

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MEMORANDUM

To: Business Owner/Manager

From: Jessica Pfalmer
General Manager

Re: Wastewater Discharge Survey

Edgemont Community Services District (District) currently administers an industrial wastewater pretreatment program in accordance with federal and state regulations and the District's Pretreatment Ordinance. Implementation of this program includes completion of a Wastewater Discharge Survey by all commercial and Industrial businesses.

Many industrial facilities produce industrial wastewater discharge which could potentially harm the District's wastewater treatment plant and poses health risk to the entire community of Riverside and Moreno Valley. Please complete and return the enclosed form to the District at P.O. Box 5436 Riverside, CA 92517, email to jessica@edgemontcsd.org or FAX it to the District at (951) 787-2411 within 14 days of receiving this letter.

If you have any questions, contact Jessica Pfalmer at (951) 784-2632; or at jessica@edgemontcsd.org. Thank you for your prompt attention to this matter.

WASTEWATER DISCHARGE SURVEY

COMPANY INFORMATION

1. Company Name: _____ Date: _____
2. Site Address: _____ Telephone: _____
City, State: _____ Zip: _____
3. Mailing Address: _____
City, State: _____ Zip: _____

RESPONSIBLE PARTY

1. Responsible Party: _____ Telephone: _____
2. Contact: _____ Telephone: _____
3. Emergency Contact: _____ Telephone: _____

EMPLOYEES

# OF EMPLOYEES ON DUTY	SHIFT (Day, Swing, Graveyard)	TIME OF SHIFT (8 a.m. – 5 p.m. Etc.)	DAYS OF WEEK (Circle)
			M T W T H F S S
			M T W T H F S S
			M T W T H F S S

This information is primarily used to determine the sewer flow generated by employees. Typically, this is 20 gallons per full time employee / day.

DESCRIPTION OF BUSINESS ACTIVITIES

Provide a brief description of all operations at this facility, including primary products or services. *(Attach additional sheet if necessary).*

SOFTWATER SYSTEM

Do you have an Ion exchange resin tank service: Yes [] No []

If yes, provide vendor's name and address: _____

All self-regenerative water softeners are illegal for use in commercial businesses in the City of Riverside, unless the regenerative brine wastewater is hauled off-site for disposal. No regenerative brine wastewater can be discharged to the sewer, storm drain, or ground.

SEWER FLOW CALCULATIONS

Appurtenance	DFU's	Quantity	Total
Drinking Fountain	0.5		
Floor Drain	2		
Floor Drain (Emergency)	0		
Drinking Fountain (Public Use)	1		
Urinal	2		
Water Closet (Employee Only Toilet)	4		
Water Closet (Public Toilet)	6		
Lavatory (Bathroom Sink)	1		
Shower	2		
Bar Sink, Break Room Sink	2		
Floor Sink (1.5" Trap)	3		
Floor Sink (2" Trap)	4		
Floor Sink (3" and 4" Trap)	6		
Food Waste Grinder	3		
Hand Sink	1		
Mop Sink	3		
Clothes Washer	2		
Dish Washer	1		
AC Condensate (1.5" Pipe - 3 Units)	3		
AC Condensate (2" Pipe - 4 Units)	4		
AC Condensate (4" Pipe - 6 Units)	6		
One-Compartment Sink (Don't Count Floor Sink)	2		
Two-Compartment Sink (Don't Count Floor Sink)	4		
Three-Compartment Sink (Don't Count Floor Sink)	6		
Total Drainage Fixture Units (DFU's)			
Total Flow ("Total" x 21 gal = Total Flow)			

Instructions: The table above can be used to calculate the estimated flow from a facility. Count the number of each type of fixture connected to the sewer and enter it in the "Quantity" column. To calculate the total of each row multiply the DFU's by the Quantity of Fixtures. Then add up the totals to provide a total drainage fixture unit (DFU) count. Then multiply the total drainage fixture unit by 21 to determine the Total Flow from the facility.

Estimated Gallons Per Day – For additional review and verification, provide water bills from similar businesses. If this business is franchised, provide the water bills of similarly sized franchised business for review and consideration. Water bills are reviewed to estimate the wastewater generated from the business.

For restaurants, complete, sign and return the attached "Schedule 1: Restaurant Wastewater Discharge Survey" as part of this survey.

For other non-residential business, sign and return the attached "Schedule 2: Non-Residential Wastewater Discharge Survey" as part of this survey.

SCHEDULE 1:

RESTAURANT WASTEWATER DISCHARGE SURVEY

MENU AND FOOD ITEMS

Attach a menu or indicate foods prepared on site and method of preparation.

RESTAURANT OPERATIONS

1. Maximum Seating Capacity: _____
Maximum Meals Served @ Peak Hour: _____
2. Percent of Single Service (i.e., disposable plates, utensils, etc.): _____%
3. a. Number of sinks, and floor drains **excluding restroom sinks and drains**:
 Floor drains ____ Floor sinks ____ Mop sinks ____ Hand sinks ____
 Three compartment sinks: ____
 Two-compartment sinks: ____
 One-compartment sinks: ____

All floor sinks and floor drains must have a mesh screen or other suitable insert with a maximum opening of 3/8".

- | | | | | |
|----|------------------------|--------|---------|----------|
| b. | Garbage Grinders | [] NO | [] YES | QTY ____ |
| c. | Hot Grills | [] NO | [] YES | QTY ____ |
| d. | Automatic Dishwasher | [] NO | [] YES | QTY ____ |
| e. | Deep Fryers | [] NO | [] YES | QTY ____ |
| f. | Broilers | [] NO | [] YES | QTY ____ |
| g. | Rotisseries | [] NO | [] YES | QTY ____ |
| h. | Oil/Grease Interceptor | [] NO | [] YES | QTY ____ |

(If yes, provide size and location.)

- i. Grease Disposal Method: _____
- j. Grease Disposal Company: _____



4. Chemical usage: YES NO
- Are any chemicals or enzymes used in the washing of dishes? [] []
- Are any chemicals poured down the drains to keep them clean? [] []
- Are any chemicals, enzymes, bacteria, or emulsifiers added to the interceptor? [] []

If yes to any of the questions in 4 above, please attach a copy of the MSDS sheets for the specific product. MSDS sheets can be obtained from the chemical supplier.

5. Meat Cutting Facilities:
- a. Pounds of meat cut per day: _____
- b. Equipment cleaning procedure: _____
- c. Method of (meat scrap) disposal: _____

AUTHORIZED REPRESENTATIVE STATEMENT

Certification Statement: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name

Title

Signature

Date

Name of Document Preparer

Document Preparer Company

Phone Number of Document Preparer

E-Mail of Document Preparer

SCHEDULE 2:**NON-RESIDENTIAL WASTEWATER DISCHARGE SURVEY**DISCHARGE OF WASTES INTO THE SEWER

_____ I will only discharge domestic wastewater into the ECSD sewer.

_____ I anticipate discharging the following waste materials into the ECSD sewer in addition to domestic wastewater. *(Attach extra sheet if necessary).*

Material to be Discharged (GPD)

Estimated Gallons Per Day

STORAGE OF HAZARDOUS MATERIALS

Is storage of hazardous materials proposed?

_____ Yes

_____ No

If yes, describe all flammable liquids, solids or gases, oxidizers, corrosives, poisons and explosives that will be stored on the property, along with estimated quantities of the chemical waste to be stored. *(Attach extra sheet if necessary).*

Name of Chemical/Flammable

Estimated Quantity

AUTHORIZED REPRESENTATIVE STATEMENT

Certification Statement: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name

Title

Signature

Date

Name of Document Preparer

Document Preparer Company

Phone Number of Document Preparer

E-Mail of Document Preparer



GREASE INTERCEPTOR WAIVER REQUEST

I, _____, representing
(Proprietor Name)

_____ at _____
(Facility Name) (Facility Address)

do hereby confirm that at no time shall any greases, fats, oils, solids, or any wastewater or material be discharged to **Edgemont Community Services District's** sewer collection system to impair the functional operations of same. If at any time non-compliance with the discharge limitations is detected, I do hereby consent to install, within ninety (90) days, an oil/grease separator of sufficient size to be acceptable to the District. The minimum size of the interceptor shall not be less than 750 gallons in capacity and shall be equipped with a monitoring station.

If deemed necessary by the District, I consent to install a monitoring station in lieu of an oil and grease interceptor for the purpose of sampling all non-domestic wastewater discharged from my facility (i.e., kitchen sinks, mop sink, floor sinks, industrial wastes, etc.).

The District's oil/grease interceptor waiver, if issued, is issued to the proprietor stated herein, and is not transferable.

Signed _____

Date _____

Approved _____

Date _____

Denied _____

Date _____

Interceptor Requirement _____ gallons

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APPENDIX K

Project Close-Out Checklist

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PROJECT CLOSE-OUT CHECKLIST

The following items must be submitted to ECSD before Projects are accepted by the Board:

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APPENDIX L

Permit for Installation for Connection to Sewer Main

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EDGEMONT COMMUNITY SERVICES DISTRICT

Post Office Box 5436
Riverside, CA 92517
Telephone: (951) 784-2632

Permit No.: _____

PERMIT FOR INSTALLATION OF CONNECTION TO SEWER MAIN

Permit Property Information

Provide Description (No. of Units, Residential, Commercial, Industrial, Retail, Restaurant, Other): _____

Address: _____, Moreno Valley, CA _____

Lot No.: _____ Tract/Parcel Map No.: _____

Assessors Parcel No.: _____

Owners Name: _____

Owners Address: _____

Owners City/State/Zip Code: _____

Owners Telephone No.: _____

In compliance with the applicable rules, regulations and Ordinances and in conformance with Edgemont Community Services District's Standards and Specifications, permission is granted to the above referenced owner to install:

_____ Building Sewer Connection	_____ Other (Describe Below)
_____ Street Sewer Connection	_____
_____ Sewer Main Extension	_____

The Owner and/or his agent shall be responsible for the following: providing a one year performance bond to the Edgemont Community Services District in an amount established by the District; obtaining any and all other permits from appropriate agencies that any be required for referenced construction including but not limited to building permits, encroachment permits, etc.; and providing construction of the necessary sewer facilities by a contractor duly licensed to perform such work in the City of Moreno Valley and State of California.

Permit Fee Calculation

Permit/Connection Fee	\$ _____	\$3,600.00 _____ EDUs
Inspection Deposit	\$ _____	
Other Deposits	\$ _____	
Total Fees & Deposits (this che	\$ _____ 0.00	

EDGEMONT COMMUNITY SERVICES DISTRICT

Issued By: _____ Date: _____

Title: _____

This permit shall become void sixty (60) calendar days from the date of issue and shall be renewable in accordance with District provisions.

CERTIFICATE OF INSPECTION

I hereby certify that the work described in this permit has been constructed according to District Standards and Specifications and are in compliance with the provisions of Ordinance No's. 277, 278, 279, 280 and 283, and I hereby approve and accept this work for the Edgemont Community Services District. Refer to attached drawing for location of facilities.

Completion and Acceptance Date: _____ By: _____

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APPENDIX M

Standard Title Block Format for 24" x 36" Design Drawing

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GENERAL NOTES

3. THE CONTRACTOR SHALL NOTIFY ECSD AT LEAST TWO WORKING DAYS PRIOR TO CONSTRUCTION.
2. SEPARATION REQUIREMENTS BETWEEN SEWER LINES HORIZONTALLY (10' MINIMUM, 5' FOR LATERALS) SHALL CONFORM TO THE COUNTY OF RIVERSIDE HEALTH DEPARTMENT AND THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH (CDPH) REQUIREMENTS. THE AGENCY'S SPECIFICATIONS THAT ARE MORE RESTRICTIVE SHALL GOVERN IN ALL CASES.
3. ALL CONSTRUCTION AND MATERIALS SHALL COMPLY WITH ECSD STANDARDS AND SPECIFICATIONS. ANY CONSTRUCTION AND/OR MATERIALS NOT COVERED IN THE ECSD STANDARDS SHALL BE APPROVED BY THE DISTRICT PRIOR TO CONSTRUCTION.
4. PRIOR TO CONSTRUCTION OF THE SEWER LINES, THE CONTRACTOR SHALL EXPOSE THE EXISTING SEWER LINES WHERE CONNECTIONS WILL OCCUR AND VERIFY THEIR ELEVATION AND LOCATION. APPROVAL OF ECSD OF A PROPOSED CONNECTION TO AN ECSD FACILITY DOES NOT IMPLY APPROVAL OF THE CORRECTNESS OF THE ELEVATION AND/OR LOCATION SHOWN ON THE DEVELOPER'S SEWER PLANS.
5. CONTRACTOR SHALL NOT BACKFILL TRENCH UNTIL THE DISTRICT'S INSPECTOR HAS OBTAINED AS-BUILT STATIONING ON ALL STRUCTURES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ACCURATE RECORD DRAWINGS TO THE DISTRICT IMMEDIATELY AFTER CONSTRUCTION.
6. APPROVAL BY ECSD IMPLIES NO PERMISSION OTHER THAN THAT WITHIN THE DISTRICT'S JURISDICTION. ALL PERMITS REQUIRED BY LAW SHALL BE ACQUIRED BY THE APPLICANT OR HIS CONTRACTOR. REQUIREMENTS OF ECSD SHALL TAKE PRECEDENCE OVER REQUIREMENTS OF OTHER AGENCIES ONLY WHERE ECSD REQUIREMENTS ARE MORE STRINGENT.
7. CONTRACTOR SHALL SHORE ALL TRENCHES AND CONDUCT ALL CONSTRUCTION AND OPERATIONS IN ACCORDANCE WITH CAL-OSHA REQUIREMENTS AND HAVE ALL ENCROACHMENT AND EXCAVATION PERMITS PRIOR TO START OF WORK.
8. PIPE JOINTS **SHALL NOT** BE PULLED AT ANY ANGLE GREATER THAN THE MAXIMUM ANGLE RECOMMENDED BY THE PIPE MANUFACTURER.
9. THE PROPOSED WORK SHALL BE SUBORDINATED TO ANY OPERATIONS ECSD MAY CONDUCT, AND SHALL BE COORDINATED WITH SUCH OPERATIONS AS DIRECTED BY ECSD.
10. A PRE-JOB MEETING SHALL OCCUR PRIOR TO CONSTRUCTION. ATTENDEES SHALL INCLUDE THE DISTRICT'S ENGINEER, THE DISTRICT'S INSPECTOR, TRACT SUPERINTENDENT, CITY OF MORENO VALLEY REPRESENTATIVE AND THE CONTRACTOR WHO WILL PERFORM THE WORK. "CUT-SHEETS" SHALL BE PROVIDED TO THE DISTRICT PRIOR TO THIS MEETING FOR ITS REVIEW.
11. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (U.S.A.) AND HAVE ALL UNDERGROUND UTILITIES MARKED TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION, PER U.S.A. REQUIREMENTS.
12. CONTRACTOR SHALL FURNISH AND INSTALL ALL FACILITIES IN ACCORDANCE WITH THE DISTRICT'S STANDARD SPECIFICATIONS AND STANDARD DRAWINGS FOR SANITARY SEWER FACILITIES (LATEST REVISION). THE SPECIFICATIONS AND STANDARD DRAWINGS ARE AVAILABLE FROM THE DISTRICT. CONTRACTOR SHALL BE IN POSSESSION OF DISTRICT'S SPECIFICATIONS AND STANDARD DRAWINGS ON THE JOB SITE AT ALL TIMES.
13. ALL PERMITS REQUIRED BY LAW SHALL BE ACQUIRED BY THE APPLICANT OR THEIR CONTRACTOR. COPIES OF THE EXCAVATION AND ENCROACHMENT PERMITS WILL BE GIVEN TO ECSD PRIOR TO THE PRE-JOB.
14. ALL CONSTRUCTION SHALL CONFORM TO CURRENT CAL OSHA SAFETY REQUIREMENTS.
15. CONTRACTOR SHALL DESIGNATE A QUALIFIED SUPERINTENDENT WITH FULL AUTHORITY TO ACT ON BEHALF OF THE CONTRACTOR. SAID SUPERINTENDENT SHALL BE ON THE JOB SITE AT ALL TIMES DURING CONSTRUCTION.
16. THE DISTRICT'S ABILITY TO PROVIDE SEWERAGE SERVICES TO THIS TRACT MAY DEPEND ON DEVELOPERS OF OTHER TRACTS COMPLETING THE CONSTRUCTION OF FACILITIES. THE DISTRICT ASSUMES NO RESPONSIBILITY FOR THE CONSTRUCTION OF THE FACILITIES, WHICH ARE TO BE CONSTRUCTED BY SUCH DEVELOPERS.
17. IF DISTRICT FACILITIES ARE LOCATED ON LAND WHICH ARE PRIVATE (I.E. OUTSIDE PUBLIC RIGHTS-OF-WAY) LAND DESCRIPTIONS AND PLATS (EASEMENT DOCUMENTS) SHALL BE PREPARED IN ACCORDANCE WITH DISTRICT STANDARDS BY THE ENGINEER OR LAND SURVEYOR OF RECORD. THE EASEMENT DOCUMENTS SHALL BE REVIEWED AND APPROVED BY THE DISTRICT PRIOR TO FINAL ACCEPTANCE OF THE FACILITIES BY THE DISTRICT.
18. THE CONSTRUCTION OF THE SEWER MAIN, MANHOLES, AND LATERALS, AND A SUCCESSFUL FIRST AIR TEST SHALL BE COMPLETED PRIOR TO THE COMMENCEMENT OF THE WATERLINE INSTALLATION.
19. IMMEDIATELY UPON COMPLETION OF CONSTRUCTION OF SEWER PIPELINES, THE DEVELOPER SHALL HIRE A DISTRICT APPROVED VIDEO COMPANY TO VIDEO THE PIPELINES IN DVD FORMAT (VIDEO FILE FORMAT TO BE VIEWABLE ON A STANDARD DVD PLAYER/COMPUTER AND/OR AS APPROVED BY THE DISTRICT). DISTRICT OR DISTRICT REPRESENTATIVE SHALL REVIEW SAID DVD'S FOR POTENTIAL CONSTRUCTION DEFECTS PRIOR TO ACCEPTANCE OF THE PROJECT. FINAL DVD SUBMITTED TO THE DISTRICT SHALL BE EDITED, IF NECESSARY, TO INCLUDE ONLY ACCEPTED REACHES OF THE PIPELINE.
20. INSCRIBE AN "S" ON THE FACE OF THE CURB TO INDICATE WHERE SEWER LATERALS SERVICES CROSS THE CURBLINE.
21. COMPACTION TESTS FOR SEWER FACILITIES SHALL BE PERFORMED BY A QUALIFIED GEOTECHNICAL FIRM AND PAID FOR BY THE DEVELOPER. ALL COMPACTION TEST SHALL BE MADE IN ACCORDANCE WITH DISTRICT'S SPECIFICATIONS. SOILS TESTING RESULTS SHALL BE GIVEN TO THE DISTRICT INSPECTOR ON A DAILY BASIS. AT THE CONCLUSION OF THE PROJECT, A FINAL COMPACTION REPORT SHALL BE GIVEN TO THE DISTRICT. THE REPORT SHALL BE SIGNED AND STAMPED BY A GEOTECHNICAL ENGINEER AND SHALL CERTIFY ALL COMPACTION RESULTS MET THE MOST STRINGENT AGENCY'S REQUIREMENTS.

EDGEMONT COMMUNITY SERVICES DISTRICT
RECOMMENDED BY:

SAM I. GERSHON, DISTRICT ENGINEER R.C.E. 14489	DATE
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REVIEWED BY CITY STAFF	BENCHMARK	BASIS OF BEARING	<div><p>Know what's below. Call 811 before you dig.</p></div> <div><p>NOTE:</p><p>WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT PERMIT AND/OR A GRADING PERMIT HAS BEEN ISSUED.</p><p>THE PRIVATE ENGINEER SIGNING THESE PLANS IS RESPONSIBLE FOR ASSURING THE ACCURACY AND ACCEPTABILITY OF THE DESIGN HEREON. IN THE EVENT OF DISCREPANCIES ARISING AFTER ECSD APPROVAL OR DURING CONSTRUCTION, THE PRIVATE ENGINEER SHALL BE RESPONSIBLE FOR DETERMINING AN ACCEPTABLE SOLUTION AND REVISING THE PLANS FOR APPROVAL BY ECSD.</p></div>	<div><table><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td>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1. THE SEWER LINE SHALL BE INSTALLED BY A PRIVATE CONTRACTOR IN ACCORDANCE WITH ECSD STANDARDS, PLANS AND SPECIFICATIONS. THE CONTRACTOR SHALL BE APPROVED BY ECSD.
2. TYPE OF SEWER PIPE USED SHALL BE VITRIFIED CLAY PIPE (EXTRA STRENGTH) WITH TYPE "G" JOINTS (BELL AND SPIGOT) FOR SIZES 4-INCH THROUGH 42-INCH DIAMETER PIPE PER SECTION 207-8, STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION.
3. UPON REVIEW AND APPROVAL BY ECSD, AN ALTERNATE MATERIAL, PVC PLASTIC SEWER PIPE FOR 8-INCH TO 12-INCH DIAMETER, MAY BE UTILIZED. PVC PLASTIC SEWER PIPE SHALL BE SDR 35 MINIMUM WALL THICKNESS PER SECTION 207-17 OF THE STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION.
4. ALL WORK AND MATERIALS SHALL CONFORM TO REQUIREMENTS OF THE CITY OF MORENO VALLEY ROAD STANDARDS AND SPECIFICATIONS FOR THE IMPROVEMENTS OF STREETS, AND SUBSEQUENT AMENDMENTS.
5. GRADING OVER SEWER MAINS SHALL BE DONE IN SUCH A MANNER AS TO PREVENT THE PONDING OF WATER.
6. THE TOP OF ALL PROPOSED MANHOLES LOCATED IN PAVEMENT SHALL BE RAISED TO PAVEMENT GRADE (WITHIN 5 WORKING DAYS) AFTER STREETS ARE PAVED AND OR CAPPED.
7. HOUSE CONNECTIONS, WYES, AND LATERALS SHALL BE LOCATED IN THE FIELD AT THE DIRECTION OF THE SUBDIVIDER.
8. THE MINIMUM CLASS BEDDING FOR VCP SEWER SHALL BE CLASS "B-2" IN ACCORDANCE WITH ECSD STD. DWG. NO. S-1, SECTION VI.
9. THE MINIMUM CLASS BEDDING FOR PVC PLASTIC SEWER PIPE SHALL BE CLASS "I" IN ACCORDANCE WITH ECSD STD. DWG. NO. S-1A, SECTION VI.
10. SEWER CONTRACTOR SHALL SUCCESSFULLY PERFORM TWO AIR TESTS. THE FIRST AIR TEST SHALL BE COMPLETED IMMEDIATELY AFTER INSTALLATION, BACKFILL AND COMPACTION OF THE SEWERAGE SYSTEM. THE SECOND AIR TEST SHALL BE CONDUCTED AFTER INSTALLATION OF ALL THE OTHER UTILITIES AND PRIOR TO PAVING OF STREETS. ALL AIR TEST SHALL BE PAID FOR BY THE DEVELOPER.
11. SEWER LATERALS CROSSING EXISTING CURB AND GUTTER SHALL BE BACKFILLED WITH A 1 SACK CEMENT, SAND SLURRY BACKFILL.
12. CONNECTIONS TO EXISTING PIPELINES SHALL ONLY BE MADE WITH DISTRICT INSPECTOR PRESENT. TEST PLUGS SHALL ONLY BE REMOVED UPON DIRECTION OF THE DISTRICT.
13. SHOULD MODIFICATION AND/OR RECONSTRUCTION (INCLUDING RAISING/LOWERING MANHOLES TO GRADE) OF AN EXISTING MANHOLE BE REQUIRED, PRIOR TO THE REMOVAL OF THE FRAME OF THE SEWER MANHOLE, THE CHANNEL OF THE MANHOLE SHALL BE COMPLETELY COVERED WITH PLANKING OR OTHER SUITABLE MATERIAL SO AS TO PREVENT DEBRIS FROM ENTERING THE CHANNEL. AFTER THE MANHOLE RECONSTRUCTION HAS BEEN COMPLETED, ALL DEBRIS SHALL BE REMOVED FROM WITHIN THE MANHOLE AND THE COVER OVER THE CHANNEL SHALL BE REMOVED.
14. SEWER PLUG(S) SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF SEWER CONSTRUCTION AND SHALL BE INSPECTED ON A WEEKLY BASIS BY THE CONTRACTOR TO ENSURE THAT SEWER PLUG(S) ARE IN PLACE. IN ADDITION, THE LOCATION OF SEWER PLUG(S) SHALL BE IDENTIFIED ON THE PLANS BY THE CONTRACTOR. THE LOCATION OF ALL TEST PLUGS AND THEIR REMOVAL SHALL BE COORDINATED WITH THE DISTRICT INSPECTOR.

THE EDMONTON COMMUNITY SERVICES DISTRICT HAS REVIEWED THE SEWERAGE FACILITIES WITHIN THE PUBLIC RIGHT-OF-WAY FOR THIS PROJECT, SAID FACILITIES ARE IN CONFORMANCE WITH DISTRICT STANDARDS AND ARE APPROVED. SAID APPROVAL DOES NOT INCLUDE ANY ON-SITE/PRIVATE FACILITIES.

CERTIFICATION VOID AFTER TWENTY-FOUR (24) MONTHS FROM THE ABOVE DATE

CERTIFY THAT THE DESIGN OF THE SEWERAGE SYSTEM IN TRACT/PLOT PLAN/PARCEL MAP NO. _____ IS IN ACCORDANCE WITH THE SEWERAGE SYSTEM EXPANSION PLANS OF THE EDMONTON COMMUNITY SERVICES DISTRICT, AND THAT THE WASTE DISPOSAL SYSTEM IS ADEQUATE AT THIS TIME TO TREAT THE ANTICIPATED WASTES FROM THE PROPOSED TRACT/PLOT PLAN/PARCEL MAP. THIS CERTIFICATION DOES NOT CONSTITUTE A GUARANTEE THE SEWERAGE SYSTEM CAN TRANSPORT OR TREAT FLOWS THAT EXCEED THE DISTRICT ESTIMATED FLOWS FOR THE SPECIFIC TYPE OF LAND USE PROPOSED FOR THIS DEVELOPMENT.

CERTIFICATION VOID AFTER TWENTY-FOUR (24) MONTHS FROM THE ABOVE DATE.

EDGEMONT COMMUNITY SERVICES DISTRICT ENGINEER
RECOMMENDED BY:

DISTRICT ENGINEER DATE

SHEET 1 – TITLE SHEET
SHEET 2 – XXXXX STREET
SHEET 3 – XXXXX STREET
SHEET 4 – XXXXX AVENUE
SHEET 5 – XXXXX AVENUE



EDGEMONT COMMUNITY SERVICES DISTRICT

SEWER PLANS
PROJECT NAME

TITLE SHEET

1

SHEET 1 OF XX

CITY I.D. NO. #####

XX% SUBMITTAL – FOR REFERENCE ONLY

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APPENDIX N

Plan Check Forms and Checklist

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PROJECT IDENTIFICATION FORM

PROJECT TITLE: _____

For First (1st) Check Only: "All information required pursuant to Section II.B.3 of the District's Standards Manual is attached."

Name of Registered Engineer

Signature of Registered Engineer

PE No. and Expiration Date

Date

For Subsequent Plan Checks: The attached plan set(s) is/are being submitted to the Edgemont Community Services District.

I certify that the following statements are correct:

Yes No N/A

- | | | | |
|--|--------------------------|--------------------------|--------------------------|
| ☐ All "redlined" corrections from the previous plan check have been made or the reason they have not been made has been explained directly on the previous plan check sheets. | ☐ | ☐ | ☐ |
| ☐ Changes made by the Developer's Engineer to the water and sewer plans, other than those corrections indicated by the District during plan check, have been highlighted. | ☐ | ☐ | ☐ |
| ☐ Revisions to the reference plans (i.e. street plans, storm drain plans, grading plans, etc.) have been made. If changes have been made, the revised plans are attached. | ☐ | ☐ | ☐ |

This Submittal is for Plan Check Number:

Name of Registered Engineer

Signature of Registered Engineer

PE No. and Expiration Date

The District plan check process and approvals on improvement plans are not a guarantee or warranty that the design is complete and without error, but that an appropriate amount of time was spent on reviewing the plans for general engineering designs commensurate with the engineering standards of the District. Pursuant to state law, the civil engineer of records is the engineer of work and bears full responsibility for his design. This is signified by State law that requires the design engineer to apply his "seal" to the plans. Please refer to the Business and Professions Code (Engineers' Act) Section 6703, Responsible Charge; Section 6735, Preparation of Plans and Other Documents, et. al.

PLAN CHECK SUBMITTAL CHECKLIST

RESIDENTIAL DEVELOPERS – TRACT MAPS/ PARCEL MAPS / PLOT PLANS		
1.	Project Identification Forms with each plan check	1 copy
2.	Water and Sewer Plans	3 copies
3.	Record Map	1 copy
4.	Street Plans	1 copy
5.	Storm Drain Plans	1 copy
6.	Grading Plans	1 copy
7.	Erosion Control Plans	1 copy
8.	Conditions of Approval of Tentative Map /Parcel Map / Plot Plan	1 copy
9.	Easement Document and Plats	2 copies
	a. Title Reports, Deeds, Etc.	1 copy
	b. Easement Boundary Closure (to 3 decimal point min.)	2 copies
	c. Coordinate List	2 copies
	d. Any Appropriate Survey Notes	1 copy
	e. Any Reference PM/RS/Etc.	1 copy
10.	Geotechnical Report	1 copy
11.	Signed Developer's Handbook Acknowledgement Form	1 original
12.	Fees Payable to Edgemont Community Services District In the Amount Established by the District	
COMMERCIAL / INDUSTRIAL DEVELOPMENT		
1.	Items Listed in above requirements	
2.	Site Plan / Plot Plan (with sewer system shown and provide private "on-site" certification)	2 copies
3.	Building Floor Plan / Plumbing Plan	1 copy
4.	Landscape Irrigation Plan	1 copy
5.	Complete District Industrial Plan	1 copy
6.	Submittal of Data Indicating Typical Waste Discharge Constituents	1 copy
7.	Total Fixture Unit Calculations (Sewer)	1 copy
8.	Grease Trap / Industrial Waste Clarifier Sizing Calculations	1 copy
9.	Number of Employees	1 copy
10.	For Restaurants: Number of Seats, Daily Meals and/or Peak Hour Meals	1 copy

NOTE: INCOMPLETE SUBMITTALS WILL NOT BE ACCEPTED.

APPENDIX O

December 14, 2017 Separation of Water Mains and Non-Potable Pipelines – Requests for Alternatives to the Waterworks Standards

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State Water Resources Control Board

Division of Drinking Water

December 14, 2017

Separation of Water Mains and Non-Potable Pipelines – Requests for Alternatives to the Waterworks Standards

Dear Public Water System Owners and Operators:

This letter supersedes prior guidance regarding the separation of water mains and non-potable pipelines, including Guidance Memo 2003-02, dated October 16, 2003. Guidance Memo 2003-02 and previous versions should be discarded.

The California Waterworks Standards (California Code of Regulations (CCR), Title 22, Division 4, Chapter 16, Section 64572) establish criteria for the separation of new water mains from non-potable pipelines. Public water systems should ensure that these distances are met, whenever feasible, for all new construction. The Division of Drinking Water (Division) recognizes that certain conditions may call for the installation of pipelines with less separation distance than what is required by the regulations. In these situations, the water system may propose an alternative pursuant to CCR, Title 22, Section 64551.100:

§64551.100. Waivers and Alternatives.

- (a) A water system that proposes to use an alternative to a requirement in this chapter shall:
- (1) Demonstrate to the State Board that the proposed alternative would provide at least the same level of protection to public health; and
 - (2) Obtain written approval from the State Board prior to implementation of the alternative.

In proposing an alternative to the Waterworks Standards, water systems should observe the following:

- The water system must accept responsibility for the adequacy of the proposed alternative. The Division may require a written statement, signed by the water system's management, certifying that the proposed alternative adequately protects public health.
- In most circumstances, the Division cannot offer technical assistance with pipeline or infrastructure design. The water system proposing an alternative must demonstrate adequate expertise on the part of its own personnel or its hired consultants.

- The water system should describe how the proposed alternative provides at least the same level of protection to public health as the minimum separation distances prescribed in the regulation.
- While exorbitant cost may present a hardship in meeting the regulatory separation requirements and can be considered, public health must be prioritized above construction costs in determining an acceptable alternative.

The Division has prepared an application checklist that may be used by water systems in proposing an alternative to the Waterworks Standards (Enclosure). The purpose of the checklist is to ensure that the Division has sufficient information to evaluate the proposal. **The water system may submit the information in a different format from the checklist, provided that the submittal provides adequate information.** The checklist may also be used to provide written certification that the proposed alternative adequately protects public health.

If you have any questions, please contact the Division office that oversees your water system.

Sincerely,

[Original signed by Darrin Polhemus]

Darrin Polhemus, P.E.
Deputy Director
Division of Drinking Water

Enclosure: Waterworks Standards Main Separation Alternative Request Example Checklist

STATE WATER RESOURCES CONTROL BOARD
Division of Drinking Water
Waterworks Standards Main Separation Alternative
Request Checklist

Water System Name/Number: [Click here to enter text.](#)

Name of Applicant: [Click here to enter text.](#)

Phone Number and Email Address: [Click here to enter text.](#)

Project Name and Location: [Click here to enter text.](#)

Attach Plans or field drawings to show the standard installation and the proposed installation for which the alternative is being requested. (e.g. vertical profile and horizontal alignment, specifications, and other exhibits, as possible)

The Waterworks Standards in the California Code of Regulations (CCR) Title 22, Chapter 16, Section 64572 provide separation criteria for new construction. When buried water mains are in close proximity to non-potable pipelines, the water mains are vulnerable to contamination that can pose a risk of waterborne disease outbreaks.

Per CCR Title 22, Chapter 16, Section 64551.100, a water system that proposes to use an alternative to a requirement in Chapter 16 shall: 1) demonstrate to the State Board that the proposed alternative would provide at least the same level of protection to public health; and 2) obtain written approval from the State Board prior to implementation of the alternative. Requests for alternatives to the Waterworks Standards must consist of information outlined in at least four of the attachments below. Information contained in Attachments A, B and E will be required for all alternative requests. Information contained in Attachments C and/or D will also be needed depending on your particular situation. Please review all the attachments and submit the information for your specific project. The information must be submitted to your local Division of Drinking Water District Office for review and approval prior to construction.

Attachment A represents the standard pipe material and construction that would be used if the standard separation criteria can be met by the utility.

Attachment B represents information on the current pipe in the ground that is being crossed by a new pipeline or being paralleled by a new pipeline.

Attachments C and D represent information on the new pipeline being installed. Attachment C is for parallel construction and Attachment D is for crossings.

Attachment E is certification language that is needed to consider the Waterworks Standard alternative application.

Please Note: The information may be submitted using this checklist or another format, but all relevant information must be provided to the Division of Drinking Water District Office for consideration. If multiple crossings or parallel pipelines in multiple locations are part of the application, please indicate in the comments field of the applicable attachment or submittal. Alternatively, the applicant can provide an attachment or separate submittal for each location.

Attachment A (All Cases)

Water System's Standard Pipe Material and Construction Details

Attach the water system's standard pipe specification and construction details to this as Exhibit 1 and describe below.

Liquid Conveyed By New Pipeline:

- ☐ Domestic Water ☐ Raw Water ☐ Recycled Water
☐ Sewer ☐ Force Sewer ☐ Storm Drain
☐ Other (describe) [Click here to enter text.](#)

Nominal Size: [Click here to enter text.](#) inches

Operating Pressure: [Click here to enter text.](#) psi or ☐ Gravity flow/atmospheric

Pipe Material: ☐ Ductile Iron ☐ Cast Iron ☐ Welded Steel
 ☐ HDPE ☐ PVC ☐ Concrete ☐ Clay
 ☐ Other describe [Click here to enter text.](#)

AWWA Material Designation Code: [Click here to enter text.](#)

Pressure Class/Thickness/Coating [Click here to enter text.](#)

Joint Type Construction: ☐ Push On ☐ Restrained ☐ Welded Joints ☐ Fused
 ☐ Other describe [Click here to enter text.](#)

Depth of Cover: [Click here to enter text.](#)

Comments:

[Click here to enter text.](#)

Attachment B (All Cases)

Existing Pipeline Material – Paralleling or Crossing the Proposed Pipe

List the condition of the existing pipeline being paralleled or crossed.

Liquid Conveyed By Existing Pipeline:

- ☐ Domestic Water ☐ Raw Water ☐ Recycled Water
☐ Sewer ☐ Force Sewer ☐ Storm Drain
☐ Other (describe) [Click here to enter text.](#)

Nominal Size: [Click here to enter text.](#) inches

Operating Pressure: [Click here to enter text.](#) psi or ☐ Gravity flow/atmospheric

Pipe Material: ☐ Ductile Iron ☐ Cast Iron ☐ Welded Steel
☐ HDPE ☐ PVC ☐ Concrete ☐ Clay
☐ Other (describe) [Click here to enter text.](#)

AWWA Material Designation Code: [Click here to enter text.](#)

Pressure Class/Thickness/Coating [Click here to enter text.](#)

Joint Type Construction: ☐ Push On ☐ Restrained ☐ Welded Joints ☐ Fused
☐ Other (describe) [Click here to enter text.](#)

Length of Project: [Click here to enter text.](#)

Age/Condition: [Click here to enter text.](#)

Depth of Cover: [Click here to enter text.](#)

Separation from proposed pipeline

Note: all distances are measured from the outside walls of both pipelines.

Vertical: [Click here to enter text.](#)

Horizontal: [Click here to enter text.](#)

Have there been many repairs on the existing pipeline in this area? ☐ Yes ☐ No

If yes, explain: [Click here to enter text.](#)

COMMENTS:

[Click here to enter text.](#)

Attachment C

Proposed Parallel Pipeline Material and Construction Information

Where the Waterworks Standards cannot be met, it is the responsibility of the water system proposing an alternative to demonstrate that its proposed construction will have at least the “same level of protection to public health” as the minimum separation distances prescribed in the regulations.

Intended Use of New Pipeline: ☐ Distribution ☐ Transmission ☐ Storage
☐ Other (describe) [Click here to enter text.](#)

Liquid Conveyed:

☐ Domestic Water ☐ Raw Water ☐ Recycled Water
☐ Sewer ☐ Force Sewer ☐ Storm Drain
☐ Other (describe) [Click here to enter text.](#)

Nominal Size: [Click here to enter text.](#) inches Flow rate: [Click here to enter text.](#) gpm
Operating Pressure: [Click here to enter text.](#) psi or ☐ Gravity flow/atmospheric

Pipe Material: ☐ Ductile Iron ☐ Cast Iron ☐ Welded Steel
☐ HDPE ☐ PVC ☐ Concrete ☐ Clay
☐ Other describe [Click here to enter text.](#)

AWWA Material Designation Code: [Click here to enter text.](#)

Pressure Class/Thickness/Coating [Click here to enter text.](#)

Joint Type Construction: ☐ Push On ☐ Restrained ☐ Welded Joints ☐ Fused
☐ Other describe [Click here to enter text.](#)

Length of Project: [Click here to enter text.](#)

Depth of Cover: [Click here to enter text.](#)

Separation From Existing Non- Potable Pipeline

Note: all distances are measured from the outside walls of both pipelines.

Vertical: [Click here to enter text.](#)

Horizontal: [Click here to enter text.](#)

Is this a temporary installation? ☐ Yes ☐ No

If yes, how long will it be in place? [Click here to enter text.](#)

Can the new pipeline be installed in accordance with the Waterworks Standards? If not explain below:

[Click here to enter text.](#)

Proposed additional protective measures (*material construction methods, operational considerations, etc.*):

Attachment C

[Click here to enter text.](#)

Attach additional exhibits as necessary

Attachment D

Proposed Pipeline Crossing Material and Construction Information

Where the Waterworks Standards cannot be met, it is the responsibility of the water system proposing an alternative to demonstrate that its proposed construction will have at least the “same level of protection to public health” as the minimum separation distances prescribed in the regulations.

Intended Use of New Pipeline: ☐ Distribution ☐ Transmission ☐ Storage
☐ Other (describe)_[Click here to enter text.](#)

Liquid Conveyed:

☐ Domestic Water ☐ Raw Water ☐ Recycled Water
☐ Sewer ☐ Force Sewer ☐ Storm Drain
☐ Other (describe) [Click here to enter text.](#)

Nominal Size: [Click here to enter text.](#) inches
Operating Pressure: [Click here to enter text.](#) psi or ☐ Gravity flow/atmospheric

Pipe Material: ☐ Ductile Iron ☐ Cast Iron ☐ Welded Steel
☐ HDPE ☐ PVC ☐ Concrete ☐ Clay
☐ Other describe [Click here to enter text.](#)

AWWA Material Designation Code: [Click here to enter text.](#)

Pressure Class/Thickness/Coating [Click here to enter text.](#)

Joint Type Construction: ☐ Push On ☐ Restrained ☐ Welded Joints ☐ Fused
☐ Other describe [Click here to enter text.](#)

Length of Project: [Click here to enter text.](#)

Depth of Cover: [Click here to enter text.](#)

Number of Crossings: [Click here to enter text.](#)

Angle of Crossings: [Click here to enter text.](#)

Description of crossing pipelines:
[Click here to enter text.](#)

Attachment D

Can the new pipeline be installed in accordance with the Waterworks Standards? If not explain below:

[Click here to enter text.](#)

Proposed additional protective measures (*material construction methods, operational considerations, etc.*):

[Click here to enter text.](#)

Attach additional exhibits as necessary

Attachment E Certification

CERTIFYING SIGNATURE:

For consultants, contractors, and developers: attach written concurrence from the governing water system and pipeline owners stating that the selected project alternative is the preferred alternative.

Attached concurrence?: ☐ YES ☐ NO ☐ N/A

I certify that the forgoing information is true and correct to the best of my ability, and that I believe this alternative would provide at least the same level of protection to public health as the minimum separation distances prescribed in the California Waterworks Standards (CCR, Title 22, Section 64572)..

Signature

Name and Title [Click here to enter text.](#)

Date [Click here to enter a date.](#)