

SPRING VALLEY SANITATION DISTRICT

RULES AND REGULATIONS

January 2020

(Revised January 2022)

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RULES AND REGULATIONS AMENDMENTS

<u>Date</u>	<u>Resolution Number</u>	<u>Section(s)</u>
May 12, 2020	Resolution No. 6, Series of 2020	Appendix A
November 9, 2021	Resolution No. 2, Series of 2021	Appendix A

ARTICLE 1. GENERAL POLICY, POWERS AND REGULATIONS

1.01 Scope and Purpose:

These Rules and Regulations shall govern the District's management and administration, and operation of the Sewer System, and shall serve the public in securing the District inhabitants' health, safety, prosperity, security and general welfare.

1.02 District Power:

The District's rights, powers, privileges, authorities, and functions are set forth in applicable law including, without limitation, the Act. Without limiting the generality of the forgoing, the District has the power: to enter into contracts and agreements; to sue and to be sued; to incur indebtedness with an election; to issue revenue obligations or refund outstanding indebtedness without an election; to fix and from time to time increase or decrease fees, rates, tolls, or charges for services, programs, or facilities furnished by or available from the District, and to pledge such revenue for the payment of any indebtedness of the District; to certify the levy and direct the collection of ad valorem property taxes; to acquire, dispose of, and encumber real and personal property, and any interest therein, including leases and easements; and to manage, control, and supervise the District's business affairs, and the construction, installation, operation, and maintenance of the Sewer System improvements within the District.

1.03 Penalty:

Unless otherwise specifically stated, the penalty for violation of any of these Rules and Regulations shall be a fine of \$500.00 for each day the violation continues. In addition, the Customer shall reimburse the District's actual costs, or damages incurred as a result of the violation, including, without limitation, legal and engineering fees.

1.04 Organization of Board and Designation of Officers:

The District is governed by a Board of Directors. The Board shall elect one Director as president of the Board and one Director as secretary. Any vacancy on the Board shall be filled by appointment by the remaining Director(s). The appointee shall serve until the next regular election, at which time, the vacancy shall be filled by election for any remaining unexpired portion of the term.

1.05 Ownership:

- A. Upon acceptance by the District, all Sewer Mains that connect with and form an integral part of the Sewer System shall become the District's property and responsibility; provided, however, the Board reserves the right to determine, in its sole discretion, whether acceptance of Sewer Mains is appropriate in all circumstances. Said ownership will remain valid whether the District or other Persons construct, finance, pay for, or otherwise acquire the Sewer Mains.

- B. That portion of all existing and future gravity Service Lines extending from the Sewer Main to each unit or building connected with and forming an integral part of the Sewer System shall be the Customer's privately-owned facilities. The Customer shall bear the expense of installing, maintaining, repairing, and replacing said Service Line whether the District or another Person constructs, finances, pays for, or otherwise acquires the Service Lines.
- C. That portion of all existing and future Service Lines from individual pressure sewer systems extending from the Sewer Main to the shutoff valve forming an integral part of the District Sewer System shall be deemed facilities owned by the District. The Service Line from the shutoff valve to each unit or building shall be deemed private facilities owned by the Customer.
- D. Notwithstanding the foregoing, the District reserves and shall at all times have a right of access to all Service Lines and other facilities necessary for the District to carry out its lawful functions.

1.06 Liability:

The District shall not be liable or responsible for interruption of Sewer Service. No damages shall be claimed against the District for the: breaking of any sewer line or connection by a third party, whether or not such third party relied on As-Built Drawings for the location of stub outs or sewer lines; breaking of any sewer line by any District employee or agent; unauthorized acts of any District employee; making of connections or extensions; broken or frozen Service Lines or other facilities not owned by the District; or for doing anything to the Sewer System that the Board deems appropriate. The District may disconnect sewer service at any time, for any reason including, but not limited to, any violation of these Rules and Regulations or Board policies as set forth in the District minutes. Nothing in these Rules and Regulations shall constitute a waiver of the Governmental Immunity Act (C.R.S. § 24-10-101, et seq.). Without limiting the generality of the foregoing, no claim for damage shall be made against the District for the following:

- A. Blockage in the Sewer System causing the backup of Sewage, whether or not the District caused said blockage;
- B. Damage caused by "smoking" of lines to determine drainage connections to District lines;
- C. Sewer Main breakage by District personnel or third parties;
- D. Sewer service interruption or resulting conditions where said interruption is requested by the claimant, an electrical service interruption or by circumstances beyond the District's control.

1.07 Powers and Authority of Agents:

Authorized Representatives may enter upon all properties for the purpose of inspection, observations, measurement, sampling, and testing, or any other reasonable purpose in

accordance with these Rules and Regulations. The right of entry shall include the right of Authorized Representatives to verify fixtures and use of areas or read or otherwise gather data from water meter(s) on a Customer's property in order to assist the District in analyzing the Customer's individual Sewage production. Upon request, a Customer shall provide the District with any applicable water meter records documenting the Customer's water usage and shall consent to the District obtaining the Customer's water meter records from applicable entities possessing such records.

- A. An application for sewer service shall be consent to the District's entry and to obtaining water usage records as set forth above. Reasonable notice must be given prior to entering a Customer's property, which shall occur during reasonable business hours, unless an emergency exists. Subject to the above provisions, all owners and tenants of property connected to the Sewer System shall be deemed to have agreed to the above described entry.
- B. In order to facilitate proper accounting of water use records, if the District determines that it is necessary to separately measure the water use data for a particular class of use located on a Customer's property, the District may, in its sole discretion, require the Customer to install a sub-meter by which water flow to the individual class of use can be separately measured. A remote readout shall be installed with all such sub-meters. The Customer shall be responsible for the installation, maintenance and repair of the sub-meter, and any defective or inoperable sub-meter shall be repaired or replace within thirty (30) days following the District's discovery or notice of the need of such repair. If the Customer does not repair or replace a defective sub-meter within the 30-day period, the District may complete such repair or replacement at the Customer's expense.

1.08 District Action at Customer Expense:

These Rules and Regulations require Customers to take certain actions at their own expense. If a Customer fails or refuses to take such action, the District shall mail a written notice to the Customer or the owner of the property on which District service is or will be received. The notice shall request that the required action be taken within the time specified in the applicable Rule or Regulation or, if no time is specified in these Rules and Regulations, then within the time set forth in the notice. If the Customer fails to act within the allotted time, the Customer shall subject to a penalty for violation of these Rules and Regulations. The District may, but is not obligated to, take the required action and bill the expense to the Customer. If the District must act immediately to protect the health, safety, and welfare of the general public, the District may act without notice to the Customer and bill the expense to the Customer. The District may pursue all remedies granted to it by these Rules and Regulations and Colorado law to collect the amounts due from the Customer.

1.09 Waiver for Cause:

The Board of Directors may waive or modify any requirement, penalty, or liability for costs imposed by these Rules and Regulations by motion made and passed at a regular or special

Board meeting and recorded in the minutes of that meeting. Such waiver or modification shall be only for good cause shown in an application to the Board, must not cause harm to other Customers, and must not violate applicable law. Good cause shown includes but is not limited to:

- A. Evidence that strict enforcement would result in severe hardship, financial or otherwise, which would outweigh the benefits of such strict enforcement; or
- B. Evidence that the applicant will provide or has provided a benefit to the District which outweighs the positive impacts of strict enforcement; or
- C. The Customer was acting in good faith and responded in a timely manner.

1.10 Effective Date:

These Rules and Regulations shall become effective January 14, 2020.

1.11 Amendment:

The Board may amend these Rules and Regulations at any time and such amendment shall be effective immediately upon adoption by the Board, or as the Board may otherwise prescribe.

1.12 Inspection or Purchase of Rules and Regulations:

These Rules and Regulations shall be available to the public for inspection at the District's office or the offices of the Attorney for the District. A copy shall also be available for purchase at a price listed in.

1.13 Conformance with Plant Development Agreement:

These Rules and Regulations, and any subsequent amendments thereto, shall not operate to defeat or materially alter the express rights and obligations of the parties to the Plant Development Agreement as defined in Article II, below. If any provisions of these Rules and Regulations conflict with the Plant Development Agreement, the terms and conditions of the Plant Development Agreement shall control.

ARTICLE 2. DEFINITIONS

As used in these Rules and Regulations, the following terms have the meanings given to them in this Article II.

- 1. **“Actual Cost”** means all direct costs applicable to the District’s acts including labor, surveys, construction, preliminary and design engineering, inspection, construction observation, administrative and legal costs, plan approval fees, As-Built Drawings, and other costs necessary for the administration and enforcement of these Rules and Regulation and Sewer System operations.

2. **“Applicant”** means any Person submitting an application to connect to the Sewer System including, without limitation, a sub-divider, a Developer or a property owner.
3. **“As-Built Drawings”** means accurate drawings representing the final installed location of sewer system lines or other appurtenant facilities which have been installed in accordance with these Rules and Regulations, and further described in of the Technical Specifications and Procedures in.
4. **“Authorized Representative”** means a Person employed or designated by the Board of Directors to conduct activities and other duties on behalf of the District.
5. **“Board of Directors”** or **“Board”** or **“District Board”** means the Board of Directors duly elected to act as the governing body of the District.
6. **“Conditional Tap Permit”** means the written receipt provided from the District to a Customer following the first closing of any lot by a Funding Landowner acknowledging Customer’s payment of the initial Tap Fee that states the EQR of service that has been purchased from the District and the property to which the service is appurtenant.
7. **“Connection”** means any Service Line connection to a pre-approved stubout or a Sewer Main, regardless of whether use actually commences at the time of connection, and regardless of whether the Service Line is connected to the structure to be served.
8. **“Contractor”** means any Person performing work or furnishing materials within the District who must hold the relevant license(s) to do so.
9. **“Customer”** means any Person connected or authorized to connect to the Sewer System under a permit issued by the District.
10. **“Dedication”** means an appropriation of an interest in land or chattels for public or District use, made by the owner, and accepted for such use by the public, or by the District on behalf of the public.
11. **“Deposit”** means cash, letters of credit, payment, or performance bonds, or other security for performance, as required by these Rules and Regulations, or as approved by the Board in its sole discretion.
12. **“Developer”** means any Person who seeks to have land served by the District.
13. **“District”** means the Spring Valley Sanitation District, a quasi-municipal corporation and political subdivision organized in District Court, Garfield County, Colorado Civil Action No. 5433 (1900CV5433) and acting, by and

through its Board of Directors pursuant to the Colorado Special District Act, *C.R.S. § 32-1-101 et seq.*

14. **“District Boundaries”** means a perimeter description of the property contained within the boundaries of the District as presently existing or property included pursuant to a Petition for Inclusion which is approved by the District and for which the District Court approves an Order for Inclusion. Property contained within the District Boundaries shall be subject to District taxation, including the imposition of a mill levy.
15. **“District Charges”** mean Tap Fees, service charges, surcharges, inactive tap service charge, cost recovery fees, fines for violation of these Rules and Regulations, together with late charges and interest on delinquencies, and the District’s cost and expenses incurred to collect any amount due, enforce or take any action permitted under these Rules and Regulations including, without limitation the District’s attorneys’ fees and costs.
16. **“District Court”** means the Garfield County District Court.
17. **“District Engineer”** means a Person that has been employed or contracted with to do engineering work for the District.
18. **“Duplex”** means residential structures composed of two Single-Family Residential Units.
19. **“Equivalent Residential Unit” or “EQR”** is the standard of measurement the District uses to calculate fees based on the estimated **maximum** hydraulic and chemical characteristics of the discharge of a single-family home with a statistical average of three (3) persons which is equivalent to three hundred (300) gallons of water per day.
20. **“Inclusion”** means the act of attaching, adding, joining, or uniting a parcel of land to the legal boundaries of the District.
21. **“Kitchen”** means any room used to cook, heat, or prepare food, as may be evidenced by the use or existence of any of the following items: sink, refrigerator, place for food storage, stove, oven, microwave oven, or hot plate. The Board reserves the right, in its discretion, to designate a given room within a residence as a kitchen; provided, however, that the existence of a stove, oven, or microwave oven within a room also containing a sink, or refrigerator shall conclusively establish said room as a kitchen.
22. **“Line Connection Agreement”** means an agreement between the District and a Customer which identifies the terms and conditions by which a Developer or Customer is permitted to connect to the Sewer System and receive sewer service therefrom.

23. **“Line Extension Agreement”** means an agreement between the District and a Person that identifies the terms and conditions by which the parties agree to extend the Sewer System and permit the Person to connect to the Sewer System and receive sewer service therefrom.
24. **“Line Extension Cost Recovery Fees”** means the fees charged by the District pursuant to these Rules and Regulations and as determined by the Board of Directors, based on the size in acres of the property to be served or that can be served by the new extension, the zoning of the property, the existing and potential uses of the property, the potential EQR demand from the property, and any other similar, relevant factors which the Board believes should be considered.
25. **“Multi-Family Residential Unit”** means apartments, condominiums, townhouses, and similar facilities in the same complex.
26. **“Person”** means any individual, limited liability company, society, corporation, association, partnership, organization, group, or other private or public entity.
27. **“Plant Development Agreement”** means that Pre-Inclusion and Wastewater Treatment Plant Development Agreement dated December 15, 1999 and recorded with the Garfield County Clerk and Recorder as Reception No. 587475, and any amendments thereto, which establishes District’s rights and obligations and of the various parties related to the 2001 construction of the District’s wastewater treatment plant, lift stations and appurtenant facilities, and subsequent operation of the Sewer System, including the provision of sewer service to various properties.
28. **“Secondary Residential Units”** means guest houses, separate apartments attached to Single Family Residential Units, accessory dwelling units, and other separate residential units associated with Single Family Residential Units and containing their own separate kitchens.
29. **“Service Line”** means the pipe or line owned, maintained and repaired, and which is the sole responsibility of the Customer, used to carry Sewage from the structure served to a Sewer Main.
30. **“Sewage”** means any liquid waste which may contain organic or inorganic material in suspension or solution originating within residential, commercial, or industrial structures, which is discharged into the Sewer System.
31. **“Sewer Main”** means a pipe or line owned by the District and installed in a public street or dedicated easement.
32. **“Sewer System”** means all facilities owned by the District and used for collecting, pumping, treating, and disposing of Sewage.

- 33. **“Single Family Residential Unit”** means any single-family dwellings, individually billed mobile homes, mobile homes on individual lots, and mobile homes established as permanent residences which have no more than one (1) kitchen.
- 34. **“Tap” or “Sewer Tap”** means the Service Line connection to a pre-approved stubout or Sewer Main.
- 35. **“Tap Fee (System Improvement Fee)”** means the fee charged for connecting to the Sewer System which represents the Customer’s investment in the Sewer System and is used to amortize the District’s capital investment.
- 36. **“Tap Permit”** means the District’s written permission for the connection to and discharge into the Sewer System given pursuant to these Rules and Regulations through a specified Sewer Tap.
- 37. **“Testing”** means the analysis of Sewage samples.
- 38. **“Unauthorized Connection”** means any connection to the Sewer System without approval from the District pursuant to these Rules and Regulations.
- 39. **“Violation”** means any failure to follow, uphold, or comply with the requirements of these Rules and Regulations, intentionally or unintentionally, by act of commission or omission, whether or not the Customer knew of the existence of the Rule or Regulation. Unless otherwise stated, each day that a Violation exists or continues shall be considered a separate Violation, subject to the penalties which apply.

ARTICLE 3. SEWER SYSTEM USE, CONDITIONS AND RESTRICTIONS

3.01 Use of Sewer System:

No Person shall use, alter, or otherwise disturb any Sewer Main or Sewer System without first obtaining a Tap Permit from the District. All work upon or in connection with any portion of the Sewer System or any Service Lines or facilities which connect thereto shall be by a Contractor and shall be made in accordance with these Rules and Regulations, the specifications and procedures set forth in, and all federal, state, county and local requirements. There shall be no shared use of Service Lines unless specifically authorized by the District with appropriate shared use agreements appurtenant to the properties served. **Every Service Line connected to the Sewer System must be inspected by an Authorized Representative before it is covered.** The fees set forth in shall be charged for such inspections, which shall be performed upon receipt of at least 24 hours’ notice to the District. If a permanent connection to the Sewer System is covered before inspection, it must be excavated by the Customer for inspection at their expense. If the connection is not excavated for inspection within ten (10) days after the District’s request is sent, the District

will excavate and inspect the connection at the Customer's expense. The Customer shall provide the District an As-Built Drawing meeting the requirements of Appendix B showing the location of the Service Line, including the distance from the nearest manhole to the Sewer Main Tap and the alignment of the Service Line from the Sewer Main to the structure(s) served.

3.02 Responsibilities of Customers:

Each Customer shall be responsible for maintaining the entire length of the Service Line serving the property and shall maintain the property in such a manner as to prevent damage to the Sewer System. Customers must repair Service Line leaks, stoppage, or breaks in a Service Line within seventy-two (72) hours after knowledge of such condition or notification by the District. If satisfactory progress toward repairing said leak, stoppage, or break has not been completed within such time period, an Authorized Representative may shut off the Customer's water service until the sewer leaks, stoppage, or breaks have been repaired. The Customer consents to the District's or other appropriate water service provider's authority to shut off a Customer's water service for such purposes by virtue of the Customer's connection to and use of the Sewer System. Any provision herein to the contrary notwithstanding, the District may, but is not required to, take immediate steps to repair any Service Line leak, stoppage or break which the District, in its sole discretion, considers to constitute a health hazard or emergency. In such event, the District shall recover the Actual Costs from the Customer owning the Service Line. If the Customer fails to pay any costs for which the Customer is responsible within thirty (30) days of the District mailing notice thereof, the District may take such action as is necessary to collect such costs, including the imposition and foreclosure of a lien on the Customer's property and recovery of all the District's collection costs, late charges and interest together with its reasonable attorneys' fees.

3.03 Tap Permit Provisions:

Sewer Tap Permits allow connection to and discharge of Sewage into the Sewer System not otherwise restricted or prohibited by these Rules and Regulations. Spot discharges of recreational vehicle wastes, portable toilet wastes, or any other wastes, and discharges of swimming pool water are generally prohibited unless specifically authorized by the Tap Permit or other written permit.

The Tap Permit for swimming pools shall specify the hours when and the rate (expressed in gallons per minute) at which such pools may be drained into the Sewer System and may include limits on the amount of chlorine (expressed as MG/L) in such discharge.

3.04 Discharge Restrictions - General:

Except as hereinafter provided, no Person shall discharge, or cause to be discharged, to any Sewer Main, any waste prohibited by these Rules and Regulations, or any harmful waters or wastes, whether liquid, solid, or gas, capable of causing obstruction to the flow in Service Lines, damage or hazard to structures, equipment or personnel of the Sewer System; inhibiting the biological activity in the wastewater treatment plant; otherwise

interfering with the Sewer System's proper operation; constituting a hazard through exposure to sewer effluent; or causing violation of federal, state or local laws.

3.05 Discharge Restrictions - Prohibited Wastes:

No Person shall discharge or cause to be discharged into the Sewer System the following wastes:

- A. Water from storm drains, roof runoff, drainage collection systems, foundation drains, sumps, surface runoff, sub-surface drainage, or cooling processes.
- B. Any oil, grease, or other similar petroleum product which is not water soluble. Such prohibited wastes shall include diluted wastes of such nature, including but not limited to, water or wastes containing grease, oil, hydrocarbons, fatty acids, soaps, fats, or waxes which exceed 50 mg/l as determined by solvent (Freon) extraction.
- C. Explosive materials, including but not limited to, gasoline, kerosene, naphtha, benzene, toluene, xylene, ethers, alcohols, ketones, aldehydes, peroxides, chlorates, perchlorates, bromates, carbides, hydrides and sulfides. Such limitation shall additionally include any waste capable of raising the Lower Explosive Limit (L.E.L.) of the ambient atmosphere in any Service Line to five percent (5%) for any two successive readings or to ten percent (10%) for any single reading on an explosion hazard meter.
- D. Any solid or viscous substances in quantities or sizes capable of causing obstruction to the flow in the Service Lines or other interference with the Sewer System's proper operation, such as, but not limited to, ashes, clothing, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, unground garbage, whole blood, cattle manure, hair and fleshings, entrails, grit, brick, cement, onyx, carbide, and shredded or whole paper products other than tissue, toilet paper, and other products intended for toilet disposal.
- E. Any waste having a temperature higher than one hundred fifty (150) degrees Fahrenheit (66°C).
- F. Any waste having a pH value lower than 5.5 or greater than 9.0.
- G. Any toxic substance, or substance requiring pretreatment, as those terms are defined in 40 Code of Federal Regulations § 403, as amended from time to time, unless otherwise covered under this Section.
- H. Any radioactive wastes or isotopes.
- I. Any noxious or malodorous substance capable of creating a public nuisance. Any animal wastes.
- J. Any wastes having a color concentration in excess of thirty (30) color units, based on the Platinum Cobalt Scale.

- K. Any wastes having a flash point lower than one hundred eighty-seven degrees Fahrenheit (187°F) (86°C) as determined by the Tagliabue (Tag.) closed-cup method.
- L. Any waste having a five (5) day Biochemical Oxygen Demand which may contain more than 1,000 parts per million by weight as averaged during any twelve (12) hour period.
- M. Any wastes containing phenolic compounds over 5 mg/l expressed as phenol.
- N. Any cyanides or compounds capable of liberating hydrogen cyanide in excess of 1 mg/l expressed as hydrogen cyanide from any individual outlet.
- O. Any wastes containing sulfides over 3 mg/l expressed as hydrogen sulfide.
- P. Any wastes containing toxic or poisonous substances having a twenty-four (24) hour proportionate composite sample concentration, at point of discharge, in excess of the following:

1.	Chromium	as Cr	7.5 mg/l
2.	Copper	as Cu	4.5 mg/l
3.	Nickel	as Ni	15.0 mg/l
4.	Cadmium	as Cd	1.2 mg/l
5.	Zinc	as Zn	12.0 mg/l
6.	Iron	as Fe	15.0 mg/l
7.	Lead	as Pb	15.0 mg/l
8.	Arsenic	as As	0.25 mg/l
9.	Manganese	as Mn	0.25 mg/l
10.	Selenium	as Se	0.05 mg/l
11.	Silver	as Ag	0.25 mg/l
12.	Mercury	as Hg	0.10g/l
- Q. Any waste that would cause a violation of the District's Discharge Permit.

3.06 Discharge Restrictions - Special Review:

Upon a Customer's written application, the Board of Directors may specially review a request to discharge into the Sewer System any prohibited waste. Said application shall include an analysis of the types, amounts, concentrations, and times of discharge of each prohibited waste and any other substance the District deems necessary, and an analysis of the impact of such discharge on the Sewer System. The District may, at its sole discretion, complete its own testing of certain discharges and the Customer shall reimburse the District

for those tests. After consultation with the District Engineer and Plant Superintendent, the Board may, in its sole discretion, allow discharge of the prohibited waste, provided such discharge does not violate, or cause the District to violate, federal, state, county or local laws.

- A. If approved, the Board may prescribe the times, places, concentrations, total amounts, fees and charges, and any other conditions under which such prohibited waste may be discharged. The Board may require the Customer to provide, at its expense, such pretreatment facilities as may be necessary to treat such prohibited waste prior to discharge to the Sewer Main. Plans, specifications, and any other pertinent information relating to proposed pretreatment facilities shall be submitted for the approval of the District and of the Colorado Department of Public Health and Environment, and no construction of such facilities shall be commenced until such written approval is obtained. Where pretreatment facilities are provided for any prohibited waste, they shall be maintained in continuously efficient operation by the Customer, at its own expense.
- B. When required by the District, the Customer shall install and maintain, at its expense, a suitable control access hole in the Service Line to facilitate observation, sampling and measurement of the wastes. If no special access hole has been required, the control access hole shall be considered to be the nearest down-stream access hole in the Sewer Main to the point at which the Service Line is connected.
- C. All measurements, tests, and analysis of the characteristics of waters and wastes shall be determined in accordance with "Standard Methods for the Examination of Water and Wastewater," latest edition, and shall be determined at the control access hole, or upon suitable samples taken at said control access hole. Test results shall be available to the Customer at the District office.

3.07 Grease Traps, Oil Separators Required:

Certain dischargers shall install grease traps or oil separators as part of their connection to the Sewer System as detailed in the specifications and procedures set forth in Part II, Section 6 of Appendix B.

3.08 Notice Required for All Service Line Cleaning:

No Person shall clean any Service Line without providing the District at least forty-eight (48) hours' notice of such cleaning to discuss the plan for collecting downstream debris and schedule the time of cleaning for District inspection. Any emergency Service Line cleaning shall utilize the District's after-hours contact number to accomplish the intent of this section.

3.09 Protection from Damage; Violations of Rules and Regulations:

No Person shall break, damage, destroy, uncover, deface or tamper with any portion of the Sewer System.

- A. Any Person who violates this Section may be charged pursuant to applicable State statute or local regulation, and if convicted, shall be fined in an amount as established by the court for each Violation. In addition to any other applicable penalties under these Rules and Regulations, any Customer violating this Section shall be subject to a fine of \$1,000.00 per occurrence.
- B. Any Person violating any of the provisions of these Rules and Regulations shall, in addition to any and all other remedies and penalties provided for herein or at law or equity, be liable for any expense, loss or damage resulting from such Violation, including attorneys' fees and costs.

ARTICLE 4. APPLICATION FOR SERVICE

4.01 Inclusion:

Except as otherwise provided in these Rules and Regulations, service shall be provided only to Persons whose property is included within the District. It shall be incumbent upon the applicant to furnish evidence of inclusion whenever requested by the District.

- A. An Applicant owning land both within and outside the District Boundaries, who desires service, must include into the District all of its land contiguous to the parcel upon which service is desired, unless the District determines, in its sole discretion, otherwise. The District's standard form of inclusion petition will be furnished to the applicant upon request. The Applicant shall be required to execute a Special Fee and Cost Reimbursement Agreement (in the form set forth in) prior to the District's review of the petition. Property inclusions shall be pursuant to C.R.S. § 32-1-401, *et seq.* The Applicant shall be responsible for all of the District's costs, including legal and engineering fees, publication and recording costs and all other actual costs, incurred as a result of an inclusion petition.
- B. Any Applicant for inclusion may be required to enter into a pre-inclusion agreement with the District pursuant to C.R.S. § 32-1-402(1)(c) as a condition of the District's approval of the inclusion petition. Said pre-inclusion agreement shall set forth the Applicant's and District's respective rights and obligations with respect to fees, charges, Sewer Main construction, and other terms and conditions under which the Applicant's property may be included in the District. Any inclusion petition, or pre-inclusion agreement that the District provides to the Applicant shall be signed and returned to the District within forty-five (45) days following its receipt. If the Applicant does not return the executed pre-inclusion agreement to the District within forty-five (45) days from receipt thereof, the District's prior approval of the agreement shall be null and void and of no further force and effect, and a new request for approval of the inclusion petition, or pre-inclusion agreement shall be required.

4.02 Service Outside the District:

The District may, in its sole discretion, furnish service to properties located outside the

District Boundaries, but under no circumstances shall the District construct any Sewer Mains at its expense to service such properties. No service shall be provided to properties located outside the District Boundaries, except upon the express written consent of the District.

- A. Service charges and Tap Fees for furnishing sewer service outside the District Boundaries shall be at the minimum rate of two (2) times the current service charges and Tap Fees for in-District service as provided for in the Fee Schedule in, or as the District and Customer may agree.
- B. These Rules and Regulations shall be applicable to all Persons outside the District Boundaries who are furnished sewer service by the District. No Sewer System
- C. connection shall be permitted until the property owner agrees in writing to comply with the Rules and Regulations and shall have granted the District lien rights as provided in C.R.S. § 32-1-1001(1)(j).

4.03 Application for Sewer Service:

Any Person who desires sewer service from the District shall submit an application for sewer service along with any supporting documentation the District requires.

- A. The application shall be on the District's standard form and shall contain at a minimum the following information:
 - 1. Applicant's name, address, and phone number;
 - 2. Name, address, and phone number of owner of the property where said Service Line connection is to be made or laid;
 - 3. Location of the proposed Connection and Service Lines;
 - 4. Size and type of material to be used and any other information required by these Rules and Regulations governing the particular installation proposed;
 - 5. Statement as to the type of connection and type of materials to be discharged into the Sewer System;
 - 6. The Applicant's consent to entry, water use record availability and consent to water shut off pursuant to these Rules and Regulations;
 - 7. Information about the structure(s) to be served to calculate the EQR of sewer service requested;
 - 8. The Applicant's consent to abide by and be bound by these Rules and Regulations, as amended from time to time.

- B. The application shall be accompanied by all Tap Fees and any other fees or deposits required by these Rules and Regulations.
- C. Each application for sewer service is subject to the District's approval. In order to obtain such approval, the Applicant shall submit such information that the District may require.
- D. Upon application approval and Tap Fee payment, the District shall issue the Applicant a Tap Permit containing all the information contained in the application. No Tap shall be allowed until: the required Tap Fee has been paid; a Tap Permit has been issued; and any and all other applicable fees have been paid. Tap Fees shall be non-refundable, unless the Board expressly agrees otherwise.

4.04 Denial of Service Application:

The District reserves the right to deny a service application for any or all of the following reasons:

- A. There has been misrepresentation in the application as to the property and fixtures contained in the property;
- B. The proper fees have not been paid;
- C. The service applied for would create an excessive demand or adverse impact on the Sewer System, unless the Applicant proposes a means to eliminate such excessive demand or adverse impact to the satisfaction of the District;
- D. The Applicant has violated these Rules and Regulations; and
- E. The District does not have any remaining, uncommitted capacity in the wastewater treatment plant, or the facilities to be utilized by the Applicant, as determined by the District.

4.05 Change in Customer Service:

A Customer shall file an amended application for Sewer Service with the District prior to increasing the size of a structure served by the District or the type of service received. Examples of such changes are the construction of additions to houses or other buildings, changes in use of an existing structure, or additional connections to Sewer Mains. The District shall collect any additional Tap Fees, or service charges due and owing retroactive to the date of any such change. Purchasers of real property in the District are strongly encouraged to verify that the amount and type of service for which the District is currently charging is consistent with the type and amount of service which the seller purports to have paid for and wishes to convey. At any time, the Board may review actual sewer usage to determine if such actual usage is greater than that implied by the number of EQR units assessed to the Customer at the time the application for sewer service was accepted. Winter water use records may be utilized for this purpose. If the Board finds greater actual sewer usage, the Customer shall be assessed a greater number of EQR units to reflect actual sewer

usage. In no event shall a refund, credit, or rebate of Tap Fees or Main Extension Cost Recovery Fees previously paid be permitted in the event of a decrease in the type or amount of service.

4.06 Transfer of EQR Credits:

On application and approval by the Board, EQR credits purchased under Prepaid Tap Agreements may be transferred to other District landowners in accordance with the requirements of said Agreements, including the requirements for written notice to the District. Subject to the terms and conditions of the Plant Development Agreement, EQR credits purchased directly from the District are considered appurtenant to the structure, or land for which they were obtained and are not transferrable.

4.07 Service Application for Subdivision Developers:

Any Developer who desires sewer service for a subdivision shall submit a written request to enter into a Sewer Main Extension Agreement to the District. All Developers shall be required to execute a Special Fee and Cost Reimbursement Agreement (in the form set forth in) with the District prior to its review of the application. The Developer shall comply with all conditions of Article V (Sewer Main Extensions) of these Rules and Regulations.

4.08 Temporary Connections:

At the Board's discretion, temporary connections to the Sewer System may be permitted, pursuant to terms and conditions established by the Board. Any person wishing to make a temporary connection must obtain a Tap Permit before making any connection and shall be subject to inspection by an Authorized Representative. Temporary connection of construction trailers or non-permanent construction buildings to the Sewer System may be made for periods not to exceed six months, or such longer period as the Board may approve. At the time of making the application for sewer service, the applicant shall either pay the Tap Fee for 1.0 EQR of sewer service or demonstrate that a Tap Fee for at least 1.0 EQR of sewer service has been paid for the building under construction. The construction trailer or non-permanent construction building shall thereafter be assigned an EQR value of 1.0 for purposes of calculating monthly sewer service charges, which charges shall be assessed at two (2) times the monthly rate then in effect.

4.09 Turn-Off Service:

Customers desiring that their service be turned off, disconnected, or blocked for such purposes as vacancy of rental property, inactive taps or construction shall pay the fees set forth in the Fee Schedule in, including reimbursing the District for any Actual Costs attributed to such disconnection. If any Customer fails to pay the applicable fees as set forth herein for a period of twelve (12) months, the tap shall be abandoned, and payment of a new Tap Fee shall be required prior to restarting service. Any unauthorized reconnection, unblocking, or turning back on of water or sewer service after it has been disconnected, blocked, or turned off pursuant to this Section shall constitute a Violation.

4.10 Reimbursement of Costs and Fees to District:

Any Person requesting inclusion or exclusion of property from the District, constructing a line extension project, or undertaking any other activity requiring preparation of plats or plans, legal and engineering review and advice, inspections, filing or recording fees, or other out-of-pocket expenses by the District shall be required to reimburse the District for all such costs and fees. Such Person shall be required, prior to commencement of the project or activity, to enter into a Special Fee and Cost Reimbursement Agreement substantially similar to that set forth in. Pursuant to that agreement, the Person shall make such deposit as the Board deems appropriate.

ARTICLE 5. SEWER MAIN EXTENSIONS

All Sewer Main extensions shall be made under the observation of the District Engineer and constructed according to the specifications and procedures set forth in, these Rules and Regulations, and all federal, state, county and local requirements.

5.01 Sewer Main Sizes:

The minimum size Sewer Main shall be 8 inches in diameter, except as specifically authorized by the District.

5.02 Line Extension/Connection Agreements:

All sewer line extensions shall require the execution of a Line Extension Agreement in a form approved by the District's attorney and the Board, prior to the commencement of any construction or the recordation of a final plat. Such Agreement shall set forth the respective rights and obligations of the parties regarding the provision of sewer service to the subject property.

- A. Any Line Extension or Line Connection Agreement approved by the District shall be executed and returned to the District by the Applicant within forty-five (45) days of approval.
- B. If the Applicant fails to execute and return the Line Extension or Line Connection Agreement within forty-five (45) days of approval, the agreement shall be void, and a new request for approval shall be required.

5.03 Location of Sewer Line Extensions:

Sewer line extensions shall be installed in roads or streets which the County, State Highway Department or other public agency has accepted for maintenance as public right-of-way, or in easements granted to the District. Prior to the District's acceptance of Sewer Mains, all easements necessary for the installation and maintenance of such mains, shall be platted or conveyed to the District by warranty deed, as appropriate, duly recorded in the Garfield County real estate records.

5.04 Procedure for Sewer Line Extension Construction by Developer:

Plans for line extensions shall be submitted to the District for its review and approval along with an application for a line extension no later than the date of preliminary plan submittal to the County. The plans shall be reviewed and approved for compliance with the District's service plan and Rules and Regulations, and the Developer shall be responsible the costs associated with the District's determination of compliance.

- A. Security/Sewer Improvements Guaranty: Subject to the exemption listed below, before recording a final plat, the Developer shall provide an improvement guaranty, such as a surety bond, cash or acceptable collateral, a letter of credit, or other security acceptable to the District, guaranteeing the completion of all of the Sewer System improvements necessary for the development, including engineering, construction observation, inspection and legal fees which may be required.

Construction costs shall include acquisition of rights-of-way or easements, valves, Sewer Mains, and Service Lines, and any other facilities and appurtenances. Such guaranty shall be deposited in an amount not less than the estimate of the entire cost to complete the Sewer System improvements, plus ten percent (10%). The Developer shall prepare cost estimates for the improvements for the Board's review and approval. If requested, Developer shall adjust such estimates to reflect actual costs and the Developer shall, upon ten (10) days' written notification, deposit the balance due to complete the work.

1. Any Developer constructing a Sewer Main extension may be exempted from posting a sewer improvements guaranty, if the District, in its sole discretion, determines such Developer satisfies the following requirements:
 - a) The Developer provides adequate assurances and documentation establishing that it has posted security with another public entity pursuant to a Subdivision Improvements Agreement (SIA) where such SIA provides for: (1) a guarantee amount sufficient to cover the cost of all necessary sewer improvements; (2) the District's written approval of sewer improvements prior to the public entity's release of the portion of the guarantee covering the sewer improvements; and (3) a provision requiring the District to be a named beneficiary as to the value of all improvements to be dedicated to the District.
 - b) The Developer requests and receives a written waiver of the sewer improvements guaranty from the District.
2. As improvements are completed, the Developer may petition the District for a release of part or all of the collateral deposited with the District as an improvement guaranty. Any such partial release shall be made at the District's sole discretion upon a determination that the partial improvements

are completed and have been approved by the District in writing. At such time the Developer determines that the sewer improvements have been completed in accordance with the approved plans and specifications, the Developer shall deliver its written request for full release of the security. Upon receipt of such request, the District shall have 45 days to deliver written acceptance of the improvements and release of security to the Developer. If the District determines that the Developer will not construct or complete any or all of the required sewer improvements within a reasonable period of time, the District may liquidate and withdraw and employ from the deposit of collateral such funds as may be necessary to construct or complete the improvements necessary to provide sewer service to Customers within the development.

3. The District reserves the right to terminate the sewer improvements guaranty exemption if a surety bond provided to another public entity is prematurely released and the District determines the necessary sewer improvements are not complete.

B. Construction Inspection and Observation: The Developer shall retain, at its sole expense, a licensed professional engineer for appropriate on-site inspection to ensure that all sewer improvements are constructed in accordance with the approved plans and specifications. The Developer shall be responsible for payment of any construction observation fees the District incurs including, without limitation, the costs of reasonable review of drawings and specifications, meetings, inspections, administration, and any other time reasonably required of the District Engineer, attorney, or other Authorized Representative.

C. As-Built Drawings: The Developer shall submit, at its sole cost reproducible As-Built Drawings prepared and submitted according to the specifications and procedures set forth in, a video tape of the Sewer Main interiors and written reports of lamp tests, vacuum tests and all other tests required by Appendix B (hereinafter collectively referred to as "Inspection Report") and a summary of the Developer's actual costs incurred for the improvement project. No Sewer Main extension project shall be approved, and no Sewer Mains shall be accepted until the District receive and approves satisfactory As-Built Drawings/Inspection Report. The District may deny service through any Sewer Main extension until the above requirements have been met and the Board accepts the Sewer Main extension.

1. In addition to the deposit required for the cost of a line extension project, the Developer shall deposit with the District an amount to be determined by the Board, but at least three percent (3%) of the estimated cost of the sewer improvements, to ensure that the As-Built Drawings and Inspection Report are submitted to and approved by the District. The Board shall determine the amount of the As-Built Drawings deposit based on the District Engineer's drawing preparation cost estimate for each line extension project. Said Deposit shall not be released back to the Developer until satisfactory

As-Built Drawings and Inspection Report are submitted and approved by the District Engineer.

2. If the District does not receive satisfactory As-Built Drawings and Inspection Report within sixty (60) days of the completion of construction, the District shall give the Developer written notice specifying the date, time, and place of a hearing in which the Board will consider forfeiture of the Deposit, and the reasons why forfeiture may be required. The notice shall be mailed to the Developer's last known address at least ten (10) days before the hearing. At the hearing, the Developer shall be allowed to present testimony and other evidence. If the Board determines that the Developer's failure to submit acceptable As-Built Drawings/Inspection Report is inexcusable, the Deposit shall be forfeited as liquidated damages. Forfeiture of the Deposit shall be ordered by formal written resolution of the Board and said Deposit shall be used to obtain acceptable As-Built Drawings/Inspection Report of the project. Additionally, the Developer shall be responsible for any expenses or costs that exceed the Deposit.
- D. Warranty: The Developer shall submit a warranty guaranteeing that the facilities have been constructed in a good and workmanlike manner and free of material defects for a period of two (2) years from the date of acceptance. The Developer shall also pay for the mitigation of any odor problems that the Board determines to exist for a period of five (5) years from the date of the acceptance. The above described warranty shall be in a format acceptable to the District and shall be secured, if required, in the form of security acceptable to the District.
- E. Acceptance of Sewer Main Extensions: Upon the completion of construction, installation, and connection of a Sewer Main extension, the Developer shall certify compliance with these Rules and Regulations and request that the District to accept the facilities. The Developer's engineer shall confirm in writing to the Board that such facilities have been constructed and installed in accordance with these Rules and Regulations and in accordance with the approved plans and specification and applicable provisions of federal, state, county, and local laws. Upon satisfactory completion of the above requirements, the District may formally accept the Sewer Main extension by a motion entered in the minutes of the Board of Directors. The District shall have no obligation to provide sewer service to Developer until acceptance and dedication. The Developer shall, upon the District's acceptance, convey such lines and all appurtenances to the District, free and clear of all liens and encumbrances, by bill of sale.

5.05 Oversizing:

The District may, when it determines it is appropriate to accommodate future service needs, require the construction of Sewer Mains of a size larger than the minimum sizes otherwise required for service to a Developer's property. Except as the District may otherwise agree, the Developer shall be responsible for the costs of installing oversized Sewer Mains.

5.06 Preservation of Gravity Sewer System:

In those instances where pumping stations and force mains are required, the Sewer System may be designed to permit eventual connection into a gravity system with a minimum of expense. Where practicable, easements shall be provided, and lines constructed to connect into the gravity system. The District may, in its discretion, require deposits to ensure the eventual construction of gravity lines.

5.07 Extension of Sewer Main to Designated Point Required:

The Developer or Customer shall extend any Sewer Main constructed pursuant to this Article to a point on the property to be designated by the Board, so that the Sewer System may continue beyond such property. The Board shall determine the point to which each new Sewer Main shall be extended based on the District Engineer's advice, in accordance with the District service plan and the logical extension of service to adjoining properties. The Board shall also consider pre-existing easements and rights-of-way, and Developer-dedicated easements and rights-of-way in designating the Sewer Main extension point.

5.08 Soil Compaction Tests:

Whenever a Developer or Customer seeking sewer service is required to obtain a road cut permit from a governmental entity to install a Sewer Main in an existing public road, such person shall provide the District Engineer with soil compaction tests from a registered soils engineer. The soils engineer shall conduct a minimum of one test for each layer or lift for each 250 linear feet or less of trench during construction as the District Engineer determines to confirm that ninety-five percent (95%) of maximum density based upon ASTM D69 or AASHTO T99 has been achieved. The District Engineer shall not accept Sewer Mains or approve Service Lines which have been installed in public roads if such compaction test results are not submitted and approved by the District Engineer.

ARTICLE 6. DISTRICT FEES AND CHARGES

6.01 Application of this Article:

To adequately maintain, preserve and protect the Sewer System, the District must impose and collect Tap Fees, System Development Fees, Service Charges, Surcharges, Inactive Tap Service Charges, Recovery Fees, Fines for Violation of these Rules and Regulations, together with late charges and interest on delinquencies, and the District's cost and expenses incurred to collect any amount due, enforce or take any action permitted under these Rules and Regulations including, without limitation the District's attorneys' fees and costs ("District Charges"). The District has a duty to ensure payment of District Charges from Customers and other Persons that seek to benefit from the Sewer System. The Board shall establish rates and charges, which shall remain in effect until modified by the Board pursuant to these Rules and Regulations, the Plant Development Agreement, or law. Nothing contained herein shall limit the Board from modifying rates and charges or from modifying any classification.

6.02 Type of Service:

Unless otherwise stated, rates, charges and fees for sewer service shall be based on EQRs of service calculated in accordance with the EQR Schedule in. The charge per EQR shall be at the rates in the Fee Schedule, as the same may be amended from time to time.

6.03 Tap Fees:

A Tap Fee shall be charged to all Customers prior to any Connection to the Sewer System and no Tap onto, or service from, the Sewer System shall be allowed until all required Charges have been paid and a Tap Permit has been issued. Tap Fees are non-refundable. In those situations where a Person applies for a Tap Permit for service to a structure not defined in these Rules and Regulations, or where, in the Board's opinion, said structure represents a classification not contemplated, the Board shall establish an EQR value for said structure.

- A. Single family lots subject to the Plant Development Agreement shall be subject to a Tap Fee of at least one (1) EQR of service due upon the closing of the first sale of any lot by a Funding Landowner that is a party to the Plant Development Agreement, or upon application for a Tap Permit, whichever first occurs. Multi-family and commercial lots subject to the Plant Development Agreement shall be subject to a Tap Fee based on the number of EQR of sewer service the Funding Landowner allocates to serve the lot, which shall be due upon closing of the first sale of any portion of the lot by a Funding Landowner. Upon receipt of the initial Tap Fee, the District will issue a Conditional Tap Permit stating the EQR of service purchased that is appurtenant to the subject lot.
- B. Prior to the issuance of a building permit, the Customer shall apply for sewer service pursuant these Rules and Regulations, at which time the total Tap Fee due shall be calculated according to Appendix A. Any Tap Fee due in excess of the purchased EQR of service appurtenant to a single-family lot as stated on the Conditional Tap Permit shall be paid to the District prior to the issuance of a building permit. Any EQR of service requested in excess of the purchased EQR the Funding Landowner allocates to a multi-family or commercial lot shall be a request for sewer service from the unallocated taps below. If no unallocated taps are available, the Funding Landowner may obtain additional EQR of service by agreeing to allocate additional EQR to the lot under the Plant Development Agreement. Any additional Tap Fee due for the multi-family or commercial lot shall be paid prior to the issuance of a building permit. The District shall provide a Tap Permit to the Customer upon receipt of payment for all Tap Fees.
- C. Pursuant to the Plant Development Agreement, the District maintains a certain number of unallocated Taps. Unallocated Taps are available on a first come, first serve basis at the rate identified in Appendix A. Any person seeking to utilize the unallocated Taps shall apply for sewer service pursuant to these Rules and Regulations.

6.04 Service Charge:

Full service charges, calculated under the Rules and Regulations and EQR Schedule, shall commence and accrue six (6) months from the date a building permit is issued or upon the issuance of a temporary certificate of occupancy or certificate of occupancy for the structure being served, whichever first occurs. Each Customer shall be charged a minimum service charge based upon one (1) EQR. The Customer shall be liable for payment of service charges regardless of whether the Customer actually uses the Connection for sewer service.

- A. Any owner of a Tap appurtenant to a lot subject to the Plant Development Agreement that is not paying full-service charges shall pay an Unconnected Tap Service Charge identified in Appendix A.
- B. The Funding Landowners identified in the Plant Development Agreement shall pay an Operational Reserve Fee established in Appendix A for each unsold EQR listed in the Plant Development Agreement, Table B, paragraph 19.
- C. If the Board determines that the monthly service charges shown in the previous articles do not represent a fair charge for the intended use, the Board, at its sole discretion, may adjust said rates.

6.05 Zone or Other Surcharges:

Where any defined part of a property's sewer service depends on a pumping station or other discrete facility that the District owns and maintains, or where certain Customers receive particular District provided benefits, the Board may establish and charge such Customers a zone surcharge. The zone surcharge shall be based on the pro rata cost to each applicable Customer of the pumping station or other facility and its operation, maintenance, repair or replacement, or other District provided service.

6.06 Standby Fees:

Customers who have purchased EQRs of sewer service pursuant to Tap Purchase Agreements, shall begin paying the monthly standby fees equal to thirty-five percent (35%) of the standard service charge when a Sewer Main is extended to within one-hundred feet (100') of the Customer's property line, and the Customer has not connected to such Sewer Main. However, any such fees shall be assessed solely for purpose of paying principal and interest on the District's outstanding indebtedness or bonds and shall not be used to pay any operation or maintenance expenses or capital improvements within the District. As used in this section "standard monthly service charge" shall not include the zone surcharges. Additionally, it shall be assumed that the first EQRs a Tap Purchase Agreement Customer purchases shall be the first EQRs that Customer uses when any connection to the Sewer System is made. If any Customer fails to pay the required standby fees, the District may pursue all remedies provided by statute or under the applicable Tap Purchase Agreement.

6.07 Line Extension Cost Recovery Fees:

In order to recover the District's costs incurred extending a sewer line, the District may charge a Line Extension Cost Recovery Fee to any Person desiring to connect to the Sewer System utilizing the sewer line extension.

- A. The Line Extension Cost Recovery Fee shall be based on the size in acres of the property to be served by the extension, the zoning of the property, the existing and potential uses of the property, the potential EQR demand from the property, and any other similar, relevant factors which the Board believes should be considered in arriving at an equitable reimbursement; provided, however, the collection of Line Extension Cost Recovery Fees shall not be construed as an obligation to provide operations, maintenance, repair, or replacement of such sewer line extensions.
- B. The Line Extension Cost Recovery Fee shall not exceed the actual cost, including engineering fees, of the extension, including interest. All Line Extension Cost Recovery Fees shall be due and payable at the time a Tap Permit is issued or a Line Extension Agreement is executed. The District may charge an administrative fee for collection and reimbursement of Line Extension Cost Recovery Fees. The District will use its best efforts to collect such fees but shall not be liable for the failure to collect such fees.

6.08 Line Extension Cost Reimbursements:

The District may pay Line Extension Cost Recovery Fees collected on a Sewer Main constructed by a Developer for a period of five (5) years after the execution and pursuant to the terms of the Line Extension Agreement. Upon application made prior to the termination of the initial five- year period, and upon District approval, such reimbursements may continue for a maximum of five (5) additional years. The right to such reimbursement shall permanently cease at that time, regardless of the amount of reimbursement received. The reimbursement shall not exceed the Sewer Main's actual construction cost.

6.09 Cost Recovery Provision in Line Extension Agreements:

No Line Extension Cost Recovery Fee shall be collected or reimbursed to any Developer unless the District and Developer have previously entered into a written Line Extension Agreement containing the following provisions:

- A. The amount of each Line Extension Cost Recovery Fee to be charged.
- B. The Developer's right to reimbursement by means of the Line Extension Cost Recovery Fees.
- C. The District's procedure for collection of the Line Extension Cost Recovery Fees and forwarding them to the Developer, including time limitations, and the District's right to retain an administrative fee from each Line Extension Cost Recovery Fee collected.

- D. The District's obligation to use its best efforts to collect Line Extension Cost Recovery Fees, and the Developer's agreement to not hold the District liable for non-payment of the Line Extension Cost Recovery Fees, or for any failure to collect the same.

6.10 Payment Obligation:

All Customers or other Persons benefitting from the Sewer System are legally obligated to pay the District Charges. It is imperative for the Sewer System's proper operation, maintenance and repair that all District Charges be paid in full and on time. The District shall deliver statements for District Charges to Customers no more frequently than monthly but not less frequently than quarterly, or in such other intervals that the Board may establish. Statements shall be sent to the property owner unless the District approves the property owner's written request for statements to be delivered to an occupant.

- A. Except as specifically provided for in these Rules and Regulations, District Charges shall be due and payable fifteen (15) days after the date of the statement. Payments will be deemed late twenty-one (21) days after the date of the statement.
- B. When a Customer receives service for two or more units that are provided water service through one water meter, only one statement shall be sent for sewer service for such properties.
- C. Nothing herein shall constitute a waiver of the owner's liability for District Charges, including penalties and interest, nor a waiver of the District's statutory lien rights.

6.11 Liability for Nonpayment; Perpetual Lien:

All District Charges shall be paid by the owner of the property served. The District shall not be bound by any agreement between an owner and occupant concerning payment of District Charges, regardless of whether the District has been notified of the agreement. Until paid, all District Charges shall constitute a first and perpetual lien on or against the property served, and any such lien may be foreclosed in the manner provided by law. The District shall have the right to collect from any Customer who is delinquent in payment of its account all legal, court and other costs and expenses necessary or incidental to the collection of said account, including reasonable attorneys' fees, filing fees and other costs, and recording fees. A fee in the amount set forth in the Fee Schedule in shall be imposed on any payment tendered to the District which, upon presentment to the bank for payment, is returned unpaid due to insufficient funds, an overdrawn or closed account, or for whatever reason. Such fee shall accrue each time a check is returned unpaid.

6.12 Miscellaneous Costs and Expenses:

Customers shall be responsible for all costs and expenses incident to Service Line installation and connection shall be borne by the Customer. In addition, Customers shall indemnify the District for any loss or damage that may directly or indirectly occur as a result of Service Line installation. No Service Line installation or connection District personnel shall not perform any work on Saturdays, Sundays, or holidays unless written permission

is granted by an Authorized Representative. The fees and charges that shall apply to District services are listed in the Fee Schedule in Appendix A.

6.13 Late Charges, Interest and Collection Remedies.

Each District Charge, installment thereof, or other amount due to the District that is not paid in full when due shall be subject to a late charge of five percent (5%) of the amount due, or \$15.00, whichever is greater, for each month or part thereof in which such District Charge remains unpaid. Additionally, such delinquent amount shall bear interest from the due date at the rate of twelve percent (12%) per annum. Notwithstanding the foregoing, no Customer shall be assessed late charges or interest exceeding twenty five percent (25%) of the amount due. If any District Charges remain unpaid for thirty (30) days or more from the date of the statement, the District may terminate the Customer's service. In addition to the District's right to shut off service, the District may enforce the Customer's payment obligations by any and all other lawfully available means, including suits for collection, foreclosure of the District's lien on the Customer's property, or certification of amounts due to the County Treasurer for collection along with taxes.

6.14 Seller's and Buyer's Responsibilities:

The District assumes no responsibility for agreements between sellers and buyers of property within the District. The buyer shall be responsible for determining whether appropriate District Charges have been paid by the seller. Regardless of ownership, any unpaid District Charges shall constitute a first and perpetual lien on and against the property and such amounts may be collected pursuant to these Rules and Regulations.

ARTICLE 7. VIOLATIONS AND ENFORCEMENT

7.01 Violations:

This Article shall apply to all Violations for which the District may revoke services or impose the fines described herein. However, the District shall not be required to comply with this Article prior to imposing late charges or interest on delinquent District Charges or pursuing judicial remedies for collection of District Charges.

7.02 Fines and Revocation of Service:

Unless otherwise specifically stated, a fine in the amount of \$500.00 per EQR shall be levied for each Violation. Repeat or continuing violations shall be subject to a daily fine of \$500.00 per EQR until the violation cease. Additionally, the District may revoke Sewer Service for any Violation including, without limitation, non-payment of District Charges. Except as otherwise provided in this Article, the Customer shall be given written notice of a hearing prior to revocation of sewer service. Any Person that commits a Violation shall be liable for reimbursement of any and all actual costs or damages the District incurs as a result of the Violation, including, without limitation, legal and engineering fees.

7.03 Unauthorized Connections or Use:

Any connection to, or discharges into the Sewer System without first paying the appropriate fees and obtaining the appropriate permits shall constitute a Violation, and each day of such use or connection shall constitute a continuous or repeat Violation. Any such fines shall be in addition to the District's right to charge for all services used and shall not limit any and all other remedies which the District may have. In such circumstances, the District may require, or carry out immediate disconnection, and shall be entitled to collect any and all of its resulting costs and damages, including the fees set forth in the Fee Schedule in; or the District may authorize connection on such terms and conditions as the District may approve.

7.04 Notice of Violation and Right to Hearing.

If the Board determines that notice and hearing is necessary, it shall send a written notice of violation ("Notice") to the Customer's last known address by registered or certified mail, or first-class U.S. mail. The Notice shall: (i) describe the Violation; (ii) explain whether the Violation is a Continuous Violation (as described below); (iii) direct that the Customer immediately cease the Violation; (iv) explain that a fine may be imposed, water and sewer service may be revoked, or other action may be taken. Additionally, the Notice shall state the date, time and location of a regular or special Board meeting at which a hearing will be held where the Customer may present evidence to the Board, and explain that, if the Customer fails to appear at the hearing or otherwise respond, the Board may proceed to make a determination based on the known facts and circumstances. The Notice shall also state that the Customer will be charged \$250.00 for the cost of the hearing if they fail to appear. Such hearing shall be no less than ten (10) days after the date of the Notice.

7.05 Hearing.

Each hearing shall be held by the Board and the Board shall introduce the case by describing the Violation. The Board shall determine the procedure to be followed during the hearing, subject to the following:

- A. The Board may impose rules of conduct as may be appropriate under the circumstances.
- B. Each party may make an opening statement, present evidence and witness testimony, and make a closing statement.
- C. The Customer is not required to be in attendance at the hearing if represented by counsel.
- D. The Board's decision, either for or against the Customer, will be by a majority. The Board shall base its decision on the credible evidence presented at the hearing.
- E. The Board may give its decision at the conclusion of the hearing and shall give written notice of its decision as set forth below.

- F. Failure to strictly follow the hearing procedure set forth above will not constitute grounds for appeal of the decision absent a showing of denial of due process.

7.06 Notice of Decision.

Within fifteen (15) days of after hearing, the Board shall issue a written Memorandum of Decision, which decision shall be final. Thereafter, the District may revoke service by turning off, disconnecting, severing or blocking the Service Line to the property and may provide written notification to the property's water service provider that water service should be discontinued and cooperate with the water service provider regarding the disconnection of service. Such actions shall be subject to the fees set forth for inspection, disconnection, and reconnection as described in the Fee Schedule in, and upon disconnection of sewer service, the District shall notify the local building authority.

7.07 Repeat or Continuous Violations.

Two or more Violations that are interrupted by one day or more are repeat violations. Continuous Violations are violations of Customer obligations that are uninterrupted by time, as determined by the Board. Each day of a repeat or continuous violation constitutes a separate Violation. Any Person that is determined as having a repeat or continuous Violation may be subject to a fine of \$500.00 per EQR for each day that the Violation persists following delivery of Notice and completion of a hearing as set forth above. Separate Notices and hearings are not required for a Person to be subject to the daily fine for a repeat or continuous Violation.

7.08 Waiver of Fines.

The Board may waive all, or any portion, of the fines if, in its sole discretion, such waiver is appropriate under the circumstances. Additionally, the Board may conditionally waive of all or part of a fine upon the Customer coming into and staying in compliance with the Rules and Regulations.

APPENDIX A

**SPRING VALLEY SANITATION DISTRICT FEE SCHEDULE
AND EQR SCHEDULE**

I. FEE SCHEDULE:..... 1

II. EQR SCHEDULE: 3

I. FEE SCHEDULE:

A. Standard Tap Fee (Tap Fee charged for Funding Landowner EQR allocation designated in Table B, paragraph 19 of the Plant Development Agreement, which Tap Fee is calculated pursuant to paragraph 20(A) of the Plant Development Agreement.)	2022: \$8,970/EQR
	2023: \$9,200/EQR
	2024: \$9,430/EQR
	2025: \$9,660/EQR
	2026: \$9,890/EQR
	2027: \$10,120/EQR
	2028: \$10,350/EQR
	2029: \$10,580/EQR
B. Unallocated Tap Fee (Tap Fee charged for all additional EQRs not purchased under the Tap Fee allocations of Tables A and B, paragraph 19 of the Plant Development Agreement)	Standard Tap Fee X 1.5
C. Standard District Service Charge (Subject to applicable zone or other surcharge adjustments)	\$160.00/quarter/EQR Effective April 1, 2022: \$171.00/quarter/EQR
D. Unconnected Tap Service Charge (Fee charged to private tap owners who are not paying full-service charges per paragraph 25(B) of the Plant Development Agreement)	\$60.00/quarter/EQR Effective April 1, 2022: \$64.00/quarter/EQR
E. Operational Reserve Fee (Fee charged to Funding Landowners for each unsold EQR identified in Table B, paragraph 19 of the Plant Development Agreement, which fee is required by paragraph 25 of the Plant Development Agreement)	\$16/quarter/EQR
F. Existing User Loan Reimbursement Surcharge Original District Users Auburn Ridge/Pinon Pines	\$30/quarter/EQR \$60/quarter/EQR
G. Location, excavation, and materials; inspection of sewer connection and turning on or turning off service; sewer connection or disconnection, line blocking, or unblocking; or any physical work performed by the District billable to a Customer	Actual Cost + 15% fee (to cover administrative costs)

H.	Name change of property due to sale to be paid by buyer, final billings	\$20.00/each
I.	Copy of the current Rules and Regulations of the District	\$25.00/each
J.	Returned Check Fee (for each time a check is returned unpaid)	\$20.00
K.	Administrative Fee for Line Extension Cost Recovery Fee	up to \$100.00
L.	Pinyon Mesa Lift Station Surcharge Lift Station Tap Fee Surcharge	\$30.00/month/EQR \$5,630.00 at the issuance of a Tap Permit for Lots 1, 4, 7, 9, 10, 11, 13, 17, 21, 22, 24, 25, 28, 30, 31, 32, 33, 34, 42, 45, 46, 48-80 Pinyon Mesa Subdivision

II. EQR SCHEDULE:

NOTE: Pursuant to these Rules and Regulations, all Tap Fees shall be paid prior to the issuance of a building permit by Garfield County, and prior to physical connection to the District Sewer System, whichever first occurs. Full-service charges shall begin accruing six (6) months from the date the building permit is issued or upon the issuance of a certificate of occupancy, whichever first occurs, in accordance with these Rules and Regulations.

	<u>CLASS OF USE</u>	<u>EQR VALUE</u>
A.	<u>RESIDENTIAL CLASSIFICATIONS</u>	
1.0	<u>Single-Family Residential Units.</u> Single-family homes individually billed mobile homes, mobile homes on single lots, and mobile homes established as permanent residences. Single-Family Residential Units shall contain no more than 6,500 square feet of floor area, which calculation shall include the sum of the gross horizontal surfaces of each floor of the residential structure, excluding garages, porches, patios, and decks, and shall contain no more than one (1) kitchen.	1.00
2.0	<u>Large Single-Family Residential Units.</u> Single-family homes which contain more than 6,500 square feet of floor area, which calculation shall include the sum of the gross horizontal surfaces of each floor of the residential unit, excluding garages, porches, patios, and decks, and shall contain no more than one (1) kitchen.	
	(a) Base EQR Value for first 6,500 square feet and one kitchen.	1.00
	(b) Each additional 2,500 square feet, or fraction thereof, of floor area, which calculation shall include the sum of the gross horizontal surfaces of each floor of the residential unit, excluding garages, porches, patios, and decks.	0.25
3.0	<u>Secondary Residential Units.</u> Guest houses, accessory dwellings units, other separate residential units associated with Single-Family Residential Units or Large Single-Family Residential Units, containing no more than one (1) kitchen. The EQR calculation of Secondary Residential Units are separate calculations and independent of the size of the primary residential unit.	
	(a) Studio (under 800 square feet)	0.60

(b)	One (1) bedroom (under 800 square feet)	0.80
(c)	Two (2) bedroom and/or over 800 square feet	1.00
4.0	<u>Duplexes</u> . Residential structures composed of two (2) Single-Family Residential Units.	2.00

NOTE: If a residence has more than one kitchen, then additional EQR values shall be assigned

5.0	<u>Multi-Family Residential Units</u> . Apartments, condominiums, townhouses, and similar facilities in the same complex, and small cabin clusters not associated with motels.	1.00/unit
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NOTE: Assumes no more than one kitchen per unit. Values include common laundry facilities or individual laundry hook-ups.

6.0	<u>Transient Residential Units</u> . Hotels, motels, mobile home parks, dormitories, recreational vehicle parks, short-term rental units in residences, bed and breakfast establishments, and similar facilities.	
(a)	Manager's unit.	1.00
(b)	Motels, hotels, and rooming houses without kitchen facilities.	
(i)	Rooms having no more than two (2) beds.	0.25
(ii)	Rooms having more than 2 beds per rental unit (per additional bed)	0.15
(c)	Motels with cooking facilities in rooms.	
(i)	Units having no more than two (2) available Beds.	0.35
(ii)	Rooms having more than 2 beds per rental unit (per additional bed).	0.15
(d)	Mobile home parks (per each available space or per living unit). Values include laundry facilities in mobile homes.	1.00
(e)	Dormitories without cooking facilities (per bed).	0.25

(f)	Recreation Vehicle Parks. Spaces filled by recreational vehicles on a year-round basis shall be evaluated as a “mobile home” under the Single-Family Residential Units category.	
(i)	Camping or vehicle space without sewer hookup (per space).	.20
(ii)	Camping or vehicle space with sewer hookup (per space).	.35
(iii)	Camping dump station.	Special Review
(iv)	Small cabin without kitchenette (up to 2 beds).	0.25
(v)	Small cabin with kitchenette (up to 2 beds).	0.35
(vi)	Small cabin with more than 2 beds (with or without kitchenette) (Per additional bed).	0.15
(vii)	Single tent sites with common restroom and showers (no central kitchen facility).	0.15
(viii)	Park with swimming pool and bathhouse per site	0.05
(g)	Add for central laundry facilities (per washing machine or available hookup).	1.35
(h)	Central kitchen	Special Review

B. COMMERCIAL CLASSIFICATIONS

Restaurants, Bars, Lounges, Banquet Rooms and Drive-Ins.

(a)	Restaurants, Bars and Lounges (per 10 seats).	0.65
(b)	Banquet Rooms (per 10 seats).	0.35
(c)	Fast Food Restaurants (per 10 seats).	1.20
2.0	<u>Laundromats</u> (per washing machine or available hookup).	1.35
3.0	<u>Service Stations.</u>	
(a)	Per fuel nozzle.	1.0
(b)	Garage space (per 1,000 sq. ft).	0.3
(c)	Food retail/office sales (per 1,000 sq. ft)	0.5

4.0	<u>Vehicle and/or Equipment Washes</u> . Bay, rack or area where cars, trucks, construction machinery or similar equipment can be washed. NOTE: Installation of a submeter is required.	
(a)	For each self-service bay or rack with wand and/or foaming brush	3.0
(b)	For each automatic car wash bay	13.0
5.0	<u>Commercial or Public Buildings</u> . Non-grocery stores, offices and industrial warehouses (having no process water or non-domestic waste loads, and which use the sanitary sewer only for nonsolid waste disposal):	
(a)	Office buildings (per 1,000 sq. ft.).	0.30
(b)	Retail sales areas (per 1,000 sq. ft.).	0.50
(c)	Nonretail work areas such as garages, machine shops, and warehouses (per 1,000 sq. ft.).	0.20
6.0	<u>Barber/Beauty Shops</u> (per chair).	0.30
7.0	<u>Theaters</u> (per 25 seats or part thereof).	0.60
8.0	<u>Grocery Stores</u> (per 1000 square feet or part thereof).	0.50
9.0	Commercial establishments which discharge process water to the collection system.	Special Review

NOTE: In any instance in which it is unclear which EQR category to assign to a commercial structure, an estimated EQR value for commercial classifications may be initially used, subject to later adjustment at the Board's sole discretion. Any change in use of a commercial structure may be subject to increased fees and charges in accordance with these Rules and Regulations.

C. CHURCH AND SCHOOL CLASSIFICATIONS

1.0	<u>Churches</u> (per 100 seats; rectories, living areas or other areas are additive).	1.00
2.0	<u>Day care centers, public and private day schools</u> . (including administrative centers, warehouses, buildings for equipment repair and/or storage (such as for buses). Swimming pools, hot tubs, spas and similar facilities are additional. Staff includes teachers, librarians, custodians, and administrative personnel associated with school functions.	

(a)	Without gym or cafeteria (per 50 potential students and staff).	1.50
(b)	Without gym but with cafeteria, or with gym but without cafeteria (per 50 potential students and staff).	1.85
(c)	With gym and cafeteria (per 50 potential students and staff).	2.10
3.0	<u>Colleges and Higher Education Campuses</u> (including colleges, junior colleges, and post-secondary higher education campuses). Includes administrative centers, classrooms, laboratories, veterinary technical centers, laundry facilities, warehouses, motor pools, buildings for equipment repair and/or storage (such as for buses). Uses of such campuses for private (i.e., non-public) purposes, and swimming pools, hot tubs, spas and similar facilities are additional. Staff includes teachers, librarians, custodians, and administrative personnel associated with school functions. Calculation based upon State of Colorado definition of Full-Time Equivalent students ("FTE").	11.00 per 100 FTE
	Dormitory Rooms without kitchen facilities (per bed space).	0.25
D.	<u>SPECIAL CLASSIFICATIONS AND CONSIDERATIONS</u>	
1.0	<u>Unclassified Uses.</u> For any sewer use or sewer-generating structure or appliance not otherwise covered by this schedule, the Board of Directors shall determine the EQR value on a case-by-case basis according to anticipated sewer generation.	
2.0	<u>Change in Use.</u> If at any time during the Board's provision of sewer service to a user, such user adds to an existing structure, enlarges a building, or alters the nature of the use of the property so that a larger number of EQR units could be assessed to the use in accordance with the schedule set forth in this Appendix A, the Board shall review the proposed addition, enlargement, or usage increase, calculate the additional number of basic units attributable to such addition, enlargement, or usage increase, calculate the additional number of EQR units attributable to such addition, enlargement, or usage increase, and assess such greater number of EQR units to the user from the time the change in use occurred.	
3.0	<u>Sewer Usage Review and Recalculation.</u> For purposes of computing and re-computing the number of EQR units attributable to a particular use and the assessment and collection of Tap Fees and service charges in connection therewith, the Board shall have the following authority:	

- (a) At any time, the Board may review actual sewer usage to determine if such actual usage is greater than that implied by the number of EQR units assessed to the user at the time application for service was accepted. Winter water use records may be utilized for this purpose. If the Board finds greater actual sewer usage the user shall be assessed a greater number of EQR units to reflect actual sewer usage.
- (b) Upon any recalculation and increase in the number of EQR units attributable to use pursuant to the terms of this Section, the user shall pay additional Tap Fees for each additional EQR unit assessed to its use at the rate set forth in this Appendix A prior to the issuance of any necessary permit from the Board or within thirty (30) days of the increased assessment of EQR units, whichever is earlier. The user's monthly service fee will henceforth be based upon the revised number of EQR units.
- (c) Notwithstanding the general provisions of this Appendix A or the particular provisions of this Section, nothing herein is intended to automatically modify, revise or amend the terms of any prior individualized assessment or agreement memorialized by a writing or reflected in District minutes, motions or resolutions, nor shall it prevent such modification, revision or amendment at the sole discretion of the Board.
- (d) Mixed use facilities shall be calculated according to the classifications above for each use on an additive basis, unless otherwise specifically noted and in circumstances where one of the uses does not clearly fall into one of the classifications described above, the EQRs shall be determined by Special Review.

Swimming Pools, Hot Tubs, Spas.

- (a) Separate buildings which house swimming pools or hot tubs, and which are not covered by any other classification in this fee schedule, shall be evaluated under Section B (4), above, as well as the following:
- (b) Swimming pools, per 20,000 gallons of capacity (lesser amounts shall be prorated accordingly). 1.00
- (c) Hot tubs and spas. 0.20 per 300 gallons

E. MODIFICATION AND REVISIONS

The Board reserves the right to classify and reclassify establishments and change rates as the needs of the District require.

APPENDIX B
SPRING VALLEY SANITATION DISTRICT
TECHNICAL SPECIFICATIONS AND PROCEDURES

INDEX

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I. SUBMITTAL INFORMATION

1.00 GENERAL

- .01 Scope. This Section shall cover the required submittal material necessary for the Spring Valley Sanitation District to review a sewer project to ensure that it conforms to these regulations. Included in this Section are the requirements on preliminary, final and as-built drawings, specifications, soils reports, and other supporting documents. Finally, this Section will cover the submission and review procedures to be followed for the District. Upon request of a Developer, and after consultation with the District Engineer, the District may approve variances from the Technical Specifications and Procedures contained herein. Detailed drawings of certain facilities are appended to this Appendix B.

2.00 PRELIMINARY DRAWING REQUIREMENT

- .01 General. This Section shall include the requirements necessary for preliminary drawing submittal, specifications, calculations and soils reports.
- .02 Title Sheet. The first sheet of the drawings shall be the title sheet and shall have the following shown thereon.
- (A) Location map. North arrow, numerical and graphical scale.
 - (B) Index to sheet of the drawings.
 - (C) General notes.
 - (D) Title block. The title block should not include the words "Title Sheet," but should contain the project name and a description of the information shown thereon.
- .03 Plan. The following items shall be included on all plan drawings.
- (A) Scale: One inch (1") = fifty feet (50'). Show scale numerically and graphically.
 - (B) North arrow.
 - (C) Show outline of sewer main and service lines. Show centerline of sewer line with appropriate ties to centerline of street or survey control lines, curbs, property lines or right-of-way lines.
 - (D) Show right-of-way or easement lines, street centerline and name, property lines, curbs, gutters, cross gutters, sidewalks, driveways, paving and other improvements, existing and proposed.

- (E) On each sheet of the plan, show a sufficient number of typical sections to give the relative location of surface and underground improvements with respect to proposed sewer main. Indicate size, type and other appurtenant data for all improvements.
- (F) Drawings shall be on standard 24" x 36" sheets.
- (G) Utilities, sewers and storm drains.
 - 1. Indicate the type, size and ownership of all existing utilities in streets or rights-of-way or rights-of-way in which the sewer line is to be connected. Tie utilities, sewers, house connections and stormdrains to streets rights-of-way centerline or to street property line.
 - 2. Indicate portions of existing utilities that are to be abandoned because of sewer construction.
- (H) Details. At intersections where tees, crosses, valves and concrete reaction blocks are to be provided, or at any other sections of the lines where a large number of fittings will be involved, show a large-scale view of the appurtenances with dimensions to each separate fitting.
- (I) Calculations. Two sets of calculations supporting the design criteria used shall be furnished with the preliminary drawings. Each sheet of calculations shall be dated and have the name or initials of individual making the calculations. All calculations shall be by a professional engineer registered in the State of Colorado.
- (J) Soils Report. A soils investigation report shall be provided with the preliminary drawings only upon special request by the Spring Valley Sanitation District. If such a report is requested, sufficient subsurface exploration borings and analyses shall be made to permit the Spring Valley Sanitation District to make an adequate assessment of any soil problems which may be encountered. The soil investigation report shall contain the findings and supporting data for the following:
 - 1. The relative density type and extent of material to be encountered. Excavation problems.
 - 2. Location and extent of excavation.
 - 3. The suitability of excavated materials for use as backfill or bedding.
 - 4. The compaction characteristics of the soils.
 - 5. The groundwater level and conditions.

6. The earth resistivity, moisture content, pH, degree of variation, presence of sulfates, and the likelihood of stray, direct currents.
- (K) Test Holes. The depth of test holes shall be at least two feet below the proposed pipeline elevation. The spacing of test holes shall be a minimum of 600 feet or where unusual conditions exist. The spacing shall be such to adequately define soil.
- .04 Surveys. All the existing conditions, including rights-of-way easements and horizontal and vertical control information, shall be prepared by a registered land surveyor in the State of Colorado.

3.00 SUBMISSION AND REVIEW PROCEDURE

- .01 Procedures. This Section shall cover the procedures and time frame necessary to submit sewer drawings to the Spring Valley Sanitation District.

- .02 Preliminary Drawing Review.

- (A) Four sets of blueprints and specifications of the proposed Sewer System accompanied by two sets of supporting data shall be submitted to the District at least forty-five (45) days prior to a regular meeting of the District Board. The preliminary drawings and specifications of *the* proposed Sewer System shall be reviewed in general and, if in acceptable form for processing, shall be referred by the Sewer System supervisor to the following offices and interested persons for study and recommendation at least 30 days prior to a regular Board meeting.

1. The District Engineer
2. Garfield County
3. Spring Valley Sanitation District

When transmitting the preliminary drawings and specifications for review, the District shall indicate to the reviewing agency the date and time of the District meeting at which the proposed Sewer System will be discussed, and formal action taken by the Board.

- (B) At the regular meeting of the Spring Valley Sanitation District Board at which the proposed Sewer System is to be considered, the Board shall review all written and oral recommendations presented and shall, upon diligent evaluation of the facts, approve or disapprove the preliminary plans for the proposed Sewer System.
- (C) Should the Board approve the preliminary plans, written notice of said approval shall be transmitted to the Applicant along with any modifications required by the District. Such approval of preliminary plans shall permit the

Applicant to prepare final construction drawings in accordance with the standards established by the Board and incorporate any modifications required by the District.

.03 Final Drawing Review.

- (A) Final drawings and specifications shall be prepared in the form prescribed for preliminary drawing requirements. In addition, the title sheet shall provide a space for certification of approval by the Board of the Spring Valley Sanitation District.
- (B) Final drawings consisting of two sets of prints, one set of drawings in electronic format and the AutoCAD file for the project shall be submitted to the Board for final review at least ten (10) days prior to a regular meeting of the Board.
- (C) If the final drawings are found to be in compliance with *the* District's standards and these regulations and any modifications requested by the Board, the District shall recommend approval of the plans at the next regular Board meeting.
- (D) If the final drawings and specifications are found not be to be in compliance with the District standards and any modifications requested by the Board, the District Engineer shall recommend disapproval of the plans and submit a written itemization of the deficiencies at the next regular meeting of the Board. Non-conformity of the final plans with the District's standards and requirements of the Board may result in disapproval of the project by the District.
- (E) The Applicant is strongly advised against receiving construction bids or beginning construction until certification of approval of final plans and specifications has been received from the Spring Valley Sanitation District.

.04 Construction Procedures. Following final approval of the plan(s) by the District, the Applicant may proceed with construction. In addition, to all construction requirements contained in other portions of the Specifications, the Applicant and the Contractor shall observe the following:

- (A) A mandatory pre-construction meeting shall occur 48 hours prior to any excavation. Participants may include, but are not limited to, the following: Representatives of the Contractor, Excavator, Engineer, Applicant, and District.
- (B) In the event that said construction does not commence within 6 months of the approval date, the plans must be resubmitted for review and approval. If construction on the main installation is halted for more than 6 months, plans must be resubmitted for review and approval.

- .05 Record Drawings. Two sets of record drawings, one set of drawings in an acceptable electronic format and the AutoCAD file of the project shall be submitted to the District within thirty (30) days of completion of construction. Said drawings shall be prepared according to the following general requirements:
- (A) A certified survey shall be provided to the District which shall show the location of the sewer line to permanent physical objects located in the field. All valves, tees, curb boxes, hydrants, storage tanks and pump stations and other major appurtenances shall be given two swing ties to a physical permanent object in the field. In all cases, the distance from sewer line and appurtenance items shall be dimensioned to rights-of-way easements and property lines.
 - (B) The benchmarks or benchmarks used on the project to determine sewer line depth shall be shown on the drawings and shall be based on U.S.G.S datum.
 - (C) All sewer lines shall have manhole rim and invert elevations, percent slope and horizontal distance of each line between manholes shown. Sewer service lines stubbed to property lines shall have to swing ties provided to permanent objects and shall be marked with fence posts.
 - (D) Manufacturer's literature and product data, including catalog sheets and descriptive literature for all materials and equipment used, shall be provided with as-built drawings.
 - (E) CADD files shall be submitted to the District in AutoCAD format, either on an acceptable electronic media or e-mailed. Data shall contain GPS points that can be easily incorporated into the District's GIS database.
 - (F) All sewer main lines 8 inch or larger shall be televised. The video shall have a running footage meter showing the exact footage from the entry manhole. The video shall be provided with a log showing the location of all defects and service lines.

II. SANITARY SEWER LINES

1.00 GENERAL

- .01 Scope. Work under this Section shall include furnishing all materials, labor and tools necessary to perform all installation, cleaning and testing of all sanitary sewer lines and appurtenances as specified herein and shown on the Drawings.
- .02 Protection of Work. All pipe, fittings and equipment shall be carefully handled, stored and protected in such a manner as to prevent damage to materials. At no time shall such materials be dropped or dumped into trench.

Precaution shall be taken to prevent foreign matter from entering the pipe and fittings prior to and during installation. Place no debris, tools, clothing or other

materials in the pipe during installation.

At such time as pipe installation is suspended, either temporarily or overnight, the open end of the pipe shall be sealed with a water-tight plug to prevent entrance of trench water, debris or foreign matter. A mechanical-type fitting shall be used for this seal. At no time shall duct tape or any other tape be used for this seal.

Under no circumstances shall trench water be allowed to enter the pipeline. When water is present in the trench, the seal shall remain in place until such time the trench is pumped dry. Whenever trench water becomes evident, adequate measures shall be taken to prevent pipe flotation. Contractor shall bear all costs associated with keeping trench free of liquids.

If, in the opinion of the Engineer, the Contractor is incapable of keeping the pipe free of foreign matter during installation, the Engineer shall require the Contractor to cover the pipe ends with close woven bags until the start of the jointing operation.

2.00 MATERIALS

This item covers the types of materials that will be allowed for the construction and installation of sewer lines. All materials used shall be new, of the best quality available and conform with applicable standards as indicated herein.

.01 Ductile Iron Pipe and Fittings. Not permitted for gravity lines.

.02 Polyvinyl Chloride (PVC Pipe and Fittings) (Gravity Main)

(A) PVC Pipe, through 15" diameter.

1. Material Reference Standard - ASTM D1784
2. Pipe Reference Standard - ASTM D3034
3. Class - SDR35
4. Markings - Manufacturer's name, nominal size, PVC classification, Type PSM, SDR-35, PVC gravity sewer pipe, ASTM D3034 and code number, green coloring dyed into PVC.

(B) PVC Pipe, 18" to 27" diameter.

1. Material Reference Standard - ASTM D1784
2. Pipe Reference Standard - ASTM F679
3. Markings - Manufacturer's name, nominal size, PVC cell classification, PS 46 PVC Sewer Pipe and ASTM F679. Green coloring dyed into PVC.

4. Variance - PVC piping meeting the stiffness requirement of ASTM F679 but not meeting wall thickness requirement will be allowed under this specification. Manufacturers will be required to provide a list of at least five (5) similar projects with references in which pipe has been successfully used and laboratory testing data showing the pipe meets the structural requirements of ASTM F679.

(C) Restrained Joint PVC Pipe, through 16-inch diameter.

1. Material Reference Standard - ASTM D1784
2. Class – SDR-32.5
3. Manufacture's Reference – CertainTeed - Certa-Lok Yelomine
4. Markings - Manufacturer's name, nominal size, PVC classification, SDR-32.5, PVC gravity sewer pipe.

(D) Fittings

1. Type - PVC push-joint
2. Materials - ASTM D1784
3. Reference Standard - ASTM D3034 or ASTM F679

(E) Joints

1. Type - push-on rubber gasket
2. Gasket reference standard - ASTM F477

(F) Restraint-type Glands.

.03 Force Main.

(A) PVC Pipe.

1. Materials - ASTM D 1784, Type 1, Grade 1, PVC 1120, 2000 psi design stress.
2. Reference Standard - AWWA C-900.
3. Class- 150 (DR-18).
4. Markings - Manufacturer's name, nominal size, class pressure rating, PVC1120, NSF logo, identification code.

5. Specialties - Electrical tracing wire, 14-gauge solid copper insulated wire.
6. Size - Shall conform to outside diameter of DIP.
7. Fittings
 - a) Type - All fittings shall be restrained mechanical joint except where specifically shown or detailed otherwise. Fittings in a vault shall be flanged.
 - b) Reference Standard - AWWA/ANSI C153/A 21.53
 - c) Pressure Rating - 350 psi
 - d) Gasket Reference Standard - AWWA C-111

(B) Ductile Iron Pipe.

1. Reference Standard - ANSI 21.51/AWWA C151, latest edition.
2. Thickness Class - 52
3. Pipe joints shall be push on joints, except where specifically shown or detailed otherwise.
4. Pressure Rating - 350 psi

(C) Fittings

1. Type - All fittings shall be mechanical joint, except where specifically shown or detailed otherwise.
2. Reference Standard - ANSI/AWWA C153, latest edition, for mechanical "compact" joints.
3. Material - Ductile iron
4. Pressure Rating - 350 psi

(D) Joints

1. Mechanical, Reference Standard - ANSI A. 21.53/AWWA C153, latest edition.
2. Push-on, Reference Standard - ANSI A 21.15/AWWA CI 15, Class 125.
3. Flanged, Reference Standard - ANSI B 16.1, Class 125

(E) Gaskets

1. Type - Rubber-ring gasket for gravity main.
2. Type - Rubber-ring field lock gasket, or equal, for force main shall be suitable for the specified pipe sizes and pressure
3. Reference Standard - AWWA C 111, latest edition.
4. Lubricant - A non-toxic vegetable soap lubricant shall be supplied with the pipe.

(F) Protective Coating

1. Underground Service - Manufacturer's standard bituminous coating – minimum 1 mil thickness.
2. Polyethylene Film Envelope - Polyethylene encasement shall conform to AWWA C105, latest edition, or ANSI A.21.5. Film shall be Class C with a nominal thickness of 8 mils. Tape for securing the film shall have a minimum thickness of 8 mils and a minimum width of 1 inch. The polyethylene film shall be free of streaks, pinholes, tears or blisters.

(G) Protective Lining - Gravity Main

1. Type - Cement mortar
2. Reference Standard - ANSI A 21.4/AWWA C104, latest edition.
3. Thickness – Standard

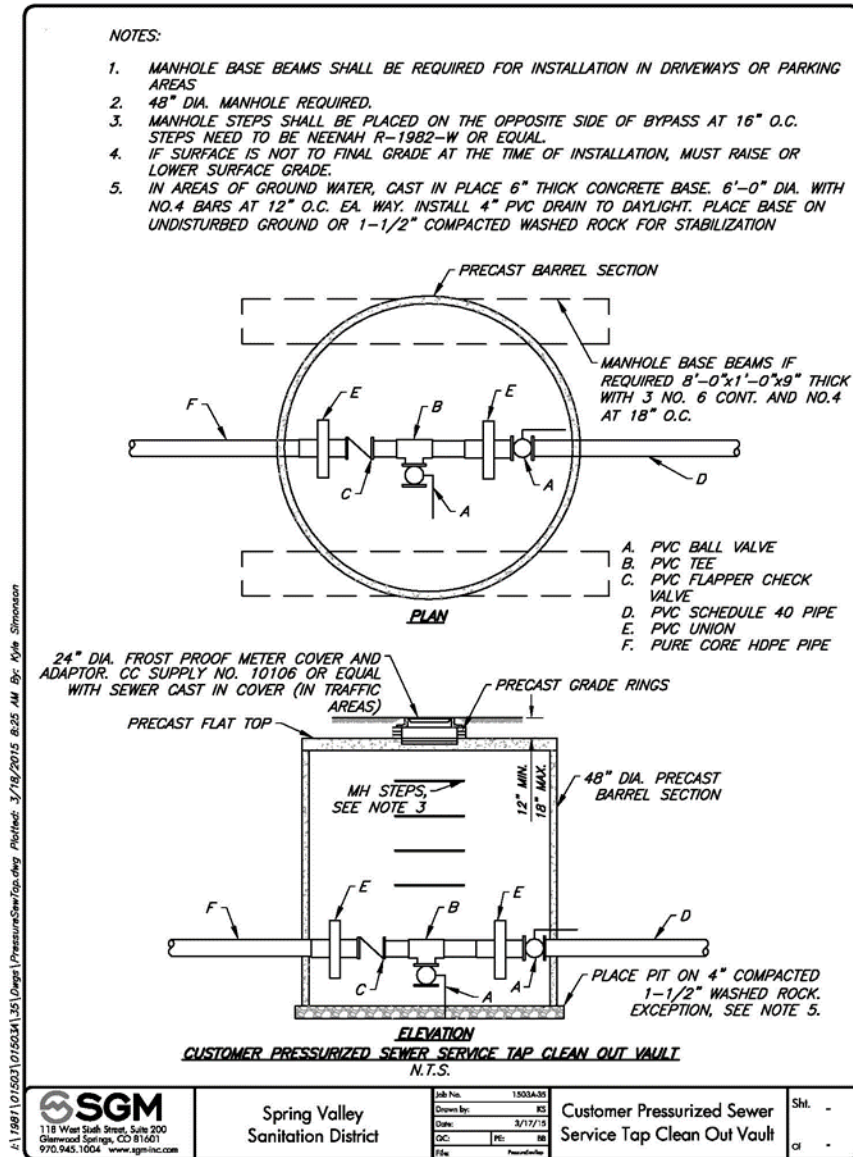
(H) Protective Lining - Force Main

1. Type - Lining designed for sewer service equal to Protecto 401 by Clow.

(I) Individual Pressure Systems

1. All individual sewer service connections to a force main must utilize an E-One Grinder Pump Station with the following components; provided, however, all pre-existing individual pressure systems that do not have an E-One Grinder Pump Station on March 11, 2014 are grandfathered as non-conforming and need not comply until such pump system is replaced unless such replacement to an E-One Grinder Pump Station is not practical as determined by the Board of Directors.
2. No substitutions will be allowed.

3. The E-One Grinder Pump Station shall include either a Sentry Protect or Sentry Protect Plus alarm control panel or equivalent.
4. All individual sewer service connections to a force main made after April 1, 2015 shall install a customer service cleanout vault as detailed below:



.04 Small Diameter. Low Pressure Sewer line.

(A) Pipe Materials

1. High density Polyethylene pipe & fittings DPE 3408 Plastics Pipe Institute, DR9

2. Polyvinyl chloride pipe (PVC) ASTM D-1784 & D-2241, DR 21,200 psi
- (B) Joints
1. Butt fusion for HDPE
 2. Gasketed for PVC, 2" and larger; solvent weld for 1-1/2" and smaller.
- (C) Appurtenances
1. Air/Vacuum valve Crispin SU20 sewage air/vacuum or approved equal
 2. Isolation valve PVC ball valve or approved equal.
- .05 Concrete for Thrust Blocks and Encasing of Pipe. Concrete for thrust blocks and for encasing the sewer pipeline shall have 28-day compressive strength of not less than 3000 psi.
- .06 Manholes.
- (A) Concrete Rings/Cones
1. Type - Precast
 2. Reference Standard - ASTM C478
 3. Size - Four-foot or five-foot inside diameter
- (B) Manhole Bases
1. Shall be precast or cast-in-place, depending upon local jurisdiction standards, with integrally cast-in water stops. Tee tops of base shall be at least 12 inches above top of pipe.
 2. Reference Concrete Standard - ASTM C150 Type II modified or Type V.
- (C) Manhole Steps. Manhole steps shall conform to ASTM C-478-94 and shall be steel reinforced copolymer polypropylene with materials conforming to the following:
1. The deformed steel reinforcing bar shall be 2-inch conforming to ASTM A-615 Grade 60.
 2. The copolymer polypropylene shall conform to ASTM D4101-92bPP0344B33534Z02.

3. Manufacturer's Reference: M.A. Industries Model PS1-PF or approved equal.

(D) Joints

1. Type – Rubber preformed gasket as manufactured by K.T. Snyder Co., Inc., Houston, Texas or equal.
2. Cement Mortar Material Reference Standard - One-part Portland Cement, Type II, modified with three parts of sand. Cement mortar to be used with concrete grade rings only.

(E) Grade Adjustment Rings

1. Type - Precast ASTM C150 Type II modified concrete.
2. Size - Not less than 6" wide x heights to allow for two-inch adjustments.
3. Alternate - HDPE grade rings.
4. Manufacturer's reference: Ladtech, Inc., or approved equal.

(F) Frame and Cover

1. Material Reference - Grey Iron, ASTM A48-83, Class 35B, traffic bearing.
2. Cover - Stamped with "SEWER", machined bearing surface with ring.
3. Type - Heavy, weight of cover greater than 140 pounds.
4. Manufacturer Reference - Castings MH-400-24CI.

.07 Service line Materials.

(A) Wyes - Required for all new sewer line construction.

1. Material - ASTM D3034 PVC
2. Strength - for use with SDR-35
3. Joint - Slip-on rubber gasket

(B) Saddles (Required for tapping existing mains).

1. Material - ASTM D3034 PVC

2. Joint - Rubber seal to main with stainless steel compression bands. Slip-on service joint with rubber gasket.
- .08 Shear Gates. Not applicable. Flap Gate. Not applicable.
- .09 Butterfly Valves. Not applicable. Gate Valves. Not applicable.
- .10 Valve Boxes. Not applicable.
- .11 Tracer Wire. Tracer wire shall be 12-gauge insulated copper wire. Tracer Wire shall be installed on all force main or pressure sewer pipe and where curvilinear pipe installations occur. Wire continuity to be tested prior to pipeline being accepted.

3.00 METHODS AND PROCEDURES

- .01 Cleaning and Inspection. Clean all pipe, fittings and related materials thoroughly of all foreign material and inspect for cracks, flaws or other defects prior to installation. Mark all defective, damaged or unsound materials with bright marking crayon or paint and remove from job site.

The Contractor shall take all necessary precautions to prevent any construction debris from entering the sewer lines during construction. If this debris should enter the pipeline system, the Contractor shall furnish all labor and materials necessary to clean the system. Under no circumstances will the Contractor flush the debris into an existing sanitary sewer system.

- .02 Placement of Pipe.

(A) Laser Beam. All sanitary sewer pipe must be installed with a laser. If bending of the beam due to air temperature variations becomes apparent with "in pipe" units, a fan shall be provided to circulate air in the pipe. Air velocity shall not be so excessive as to cause pulsating or vibrating of the beam. If, in the opinion of the Engineer, the beam cannot be accurately controlled, this method of setting line and grade shall be abandoned.

- .03 Pipe Embedment.

- (A) Placing embedment material - Refer to Section III for placement methods.
- (B) Embedment Classes - Refer to Section III and Construction Drawings for embedment materials for each class listed below:
 1. Class A - Use of all PVC, DIP, CMP and Concrete Pipelines.
 2. Class B - Use where indicated on the Drawings and where improper trenching or unexpected trench conditions require its use as determined by the Engineer.

.04 Pipe Installation.

(A) Installation of Ductile Iron Pipelines. Not applicable.

(B) Installation of Polyvinyl Chloride (PVC) Pipe.

1. Pipe Handling. Pipe should be carefully lowered into the trench to avoid pipe falling into trench.
2. Pipe Laying. Pipe shall be laid true to line and grade, in an uphill direction, with bell ends facing in the direction of laying. When pipe laying is not in progress, the open end of the pipe shall be closed by a watertight plug.
3. Jointing the Pipe. The outside of the spigot and the inside of the bell shall be thoroughly wiped clean. Set the rubber ring in the bell with the marked edge facing toward the end of the bell. Lubricate the spigot end using a thin film of the manufacturer-supplied lubricant. Push the pipe spigot into the bell. Position the completed joint so that the mark on the pipe end is in line with the end of the bell.
4. Pipe Cutting. The cutting of pipe for manholes or for fittings, or closure pieces shall be done in a neat and workmanlike manner without damage to the pipe or lining and so as to leave a smooth end at right angles to the axis of the pipe. Bevel the end of the pipe with a beveling tool after the pipe is field cut. Place a clearly visible position mark at the correct distance from the end of the field-cut pipe.
5. Curved Sewer line. Pipe shall be curved uniformly throughout its length with no additional deflection at joints. The pipe ends at joints shall be secured using stakes, blocking or side thrust restraint to prevent joint deflection.
6. Solvent Weld or Butt Fusion Joints. All cutting and field fabrication shall be done according to printed recommendations of the pipe manufacturer or associated pipe manufacturer organizations. Piping shall be cleaned to the extent required for joint completion.

(C) Installation of Slip line Pipe. Not applicable.

.05 Sewer Manhole Installation.

- (A) General. Manholes shall be furnished and installed to depths and dimensions shown on the Construction Drawings and/or staked in the field. Manholes shall be constructed of precast concrete rings in accordance with details shown on the Construction Drawings.

- (B) Connections to Manholes. Connection of manhole with pipe shall be made with flexible connector detail. See details on Construction Drawings. In addition, extra care shall be taken by grouting or other means of sealing to assure positive water-tight manholes around the inlet or outlet pipes.
- (C) Manhole Floor and Inverts. Manhole bases shall be constructed to conform to the details shown on the Drawings. The invert channels shall be smooth and semi-circular in shape, conforming to the inside of the incoming and outgoing sewer pipelines. Changes in direction of flow shall be made with a smooth curve of as large a radius as the size of the manhole will permit. Changes in size and grade of the channels shall be made gradually and evenly. Where large differences in invert elevations exist, sloped flow channels shall be formed so the wastewater does not undergo a vertical drop.

The invert channels may be formed directly in the concrete of the manhole base. The floor of the manhole outside the channel shall be smooth and shall slope toward the channels.

- (D) Finish Grade and Adjustment. To bring the manhole cover to the correct elevation, the top section of each manhole shall be constructed of pre-cast concrete grade adjustment rings. These rings shall be not less than six inches (6") wide and furnished in heights to allow for two-inch (2") adjustments. Grade adjustment with rings shall be eight inches (8") maximum and two inches (2") minimum. All rings shall be grouted in place.
- (E) Finish Grade and Adjustment HDPE Alternate. High-density polyethylene grade rings may also be used to bring manhole cover to correct elevation. Grade rings shall be molded from HDPE as defined in ASTM Specification D 1248-84. Available thicknesses are 1.25", 1.50", 2.00" 4.00" and a sloped thickness .75" x1.50". When this alternate is used, pavement slope should be matched using one or more sloped rings. Manufacturer's reference - Ladtech, Inc., or approved equal.
- (F) Manhole Stubs. All pipe stubs required from manholes are shown on the Drawings. Stubs shall extend approximately 24" from the outside face of the manhole and shall be capped or plugged with manufactured fittings to form a water-tight installation.

- .06 Connection to Existing Sewer Facilities. Connections to existing sewer facilities where live flows exist shall be made only after prior consultation with and receipt of written permission from the Engineer. No bypass of sewage to the surface will be allowed in the completion of this connection. Connections shall be made as shown on the Drawings. All connections between pipes of different materials shall be made with approved manufactured connectors.
- .07 Protection of Water Supplies. Sewer lines shall be located a minimum of ten feet (10') horizontally from existing or proposed water mains. Where the sewer line

crosses above the waterline, or is less than eighteen inches (18") vertically below the invert of the water line, or is less than ten feet (10') horizontally from the water main, the sewer line shall be made impervious by either of the methods listed below:

- (A) The sewer pipe shall be reinforced with a concrete encasement. The encasement shall be at least six inches (6") thick on all sides of the sewer pipe and extend ten feet (10') on either side of the water main. Use three No. 4 rebar the length of the encasement.
- (B) Install one piece of C-900 PVC pipe centered over the waterline.
- (C) Install a ground collar over the two sewer joints on either side of the water crossing. The grout collar shall be around the entire perimeter of the joint.

If clearance is less than 12 inches vertically, the space between the water and sewer mains shall be filled by 3000 psi concrete.

In all cases, bedding material shall be used to prevent any settling of the higher pipe.

- .08 Service Connections. Customer service connections shall be installed in accordance with the details set forth on the construction Drawings. After the service connection is installed, the end shall be plugged water-tight with a manufactured plug and marked with a stake except as shown otherwise on the Drawings.

4.00 FIELD QUALITY CONTROL

- .01 Alignment and Grade. Sewer pipelines will be checked by the Engineer to determine whether any displacement of the pipe has occurred after the trench has been backfilled. The test will be as follows:

A light will be flashed between manholes, or if the manholes have not as yet been constructed, between the locations of the manholes, by means of a flashlight. If the illuminated interior of the pipeline shows poor alignment, displaced pipe, earth or other debris in the pipe, or any other kind of defect, the defects determined by the Engineer shall be remedied by the Contractor at its own expense. Test will be repeated after completion of backfilling and any poor alignment, displaced pipe, or other defects determined by the Engineer, shall be corrected.

- .02 Leakage Test. Sewer lines shall be tested using a low-pressure air test only; water tests will not be allowed. Only after the sanitary sewers, including appurtenances and sanitary laterals have been installed, backfilled and cleaned, shall the Contractor proceed with an air test on the installed facilities.

- (A) Low Pressure Air Test Procedure. The section of sewer line to be tested should be flushed and cleaned prior to conducting the low-pressure air test. This serves to clean out any debris, wet the pipe, and produce more

consistent results. Isolate the section of sewer line to be tested by means of inflatable stoppers or other suitable test plugs. One of the plugs should have an inlet tap, or other provision for connecting a hose to a portable air control source.

If the test section is below the groundwater level, determine the height of the ground water above the spring line of the pipe at each end of the test section and compute the average. For every foot of groundwater above the pipe spring line, increase the gauge test pressure by 0.43 pounds persquare inch. Connect the air hose to the inlet tap and a portable air control source. The air equipment should consist of necessary valves and pressure gauges to control the rate at which air flows into the test section and to enable monitoring of the air pressure within the test section. Also, the testing apparatus should be equipped with a pressure relief device to avoid the possibility of loading the test section with the full capacity of the compressor. Locate valves and gauges above ground.

Add air slowly to the test section until the pressure inside the pipe is raised to 5.0 psig greater than the average back pressure of any groundwater that may be over the pipe. After a pressure of 5.0 psig is obtained, regulate the air supply so that the pressure is maintained between 4.5 and 5.0 psig (above the average groundwater back pressure) for a period of two minutes. This allows the air temperature to stabilize in equilibrium with the temperature of the pipe walls. The pressure will normally drop slightly until temperature equilibrium is obtained.

Determine the rate of air loss by the time/pressure drop method. After the two-minute air stabilization period, the air supply is disconnected, and the test pressure allowed to decrease to 4.5 psig. The time required for the test pressure to drop from 4.5 psig to 4.0 psig is determined by means of a stopwatch and this time interval is then compared to the required time in the attached table to determine if the rate of air loss is within the allowable time limit. If the tune is equal to or greater than the times indicated in the tables, the pipeline shall be deemed acceptable.

MINIMUM DURATION FOR AIR TEST PRESSURE DROP

Nominal Pipe Size (Inches)	Minimum Test Time (min/100 feet)
3	0.2
4	0.3
6	0.7
8	1.2
10	1.5
12	1.8
15	2.1
18	2.4

21	3.0
24	3.6
27	4.2
30	4.8
33	5.4
36	6.0

Upon completion of the test, open the bleeder valve to allow air to escape. Plugs should not be removed until all air pressure in the test section has been released. During this time, no one should be allowed in the trench or manhole while the pipe is being decompressed. Air test shall also include service lines and appurtenances.

.03 Manhole Inspection. During the construction of the manholes, the Contractor shall, in accordance with good practice, ensure that no earth, sand, rocks or other foreign material exists on the joint surfaces during assembly of the section. The Engineer shall check each manhole to determine whether the manhole fulfills the requirements of the Drawings and Specifications.

- (A) Visual Examination. The Engineer shall visually check each manhole, both exterior and interior, for flaws, cracks, holes, or other inadequacies which might affect the operation or water-tight integrity of the manhole. Should any inadequacies be found, the Contractor, at its own expense, shall make any repairs deemed necessary by the Engineer.
- (B) Leakage Test. All manholes shall be tested for leakage and all tests shall be witnessed by the Engineer. The leakage test shall be conducted prior to backfilling around the manhole and shall be carried out in the following manner:
 - 1. Stubouts, manhole boots and pipe plugs shall be secured to prevent movement while the vacuum is drawn.
 - 2. Installation and operation of vacuum equipment and indicating devices shall be in accordance with equipment specifications for which performance information has been provided by the manufacturer and approved by the Engineer.
 - 3. A measured vacuum of 10" of mercury shall be established in the manhole. The time for the vacuum to drop to 9" of mercury shall be recorded.
 - 4. Acceptance standards for leakage shall be established from the elapsed time for a negative pressure change from 10" to 9" of mercury. The maximum allowable leakage rate for a 4' diameter manhole shall be in accordance with the following:

MANHOLE DEPTH	MINIMUM ELAPSED TIME FOR A PRESSURE CHANGE OF 1 INCH Hg
10 ft. or less	60 seconds
> 10ft. but < 15 ft.	75 seconds
> 15 ft. but < 25 ft.	90 seconds

For manholes 5' in diameter, add an additional 15 seconds and for manholes 6' in diameter, add an additional 30 seconds to the time requirements for 4-foot diameter manholes.

5. If the manhole fails the test, necessary repairs shall be made, and the vacuum test and repairs shall be repeated until the manhole passes the test or the manhole shall be tested in accordance with the standard exfiltration test and rated accordingly.
6. If a manhole joint mastic is completely pulled out during the vacuum test, the manhole shall be disassembled, and the mastic replaced.

- .04 Deflection Test for Non-Rigid Pipe. The maximum allowable pipe deflection for a completely backfilled, non-rigid sewer pipe shall not exceed five percent (5%) of the nominal internal pipe diameter. Deflections in non-rigid pipe shall be checked by measurement or by pulling a mandrel with the minimum allowable diameter through the pipe. The minimum allowable diameter shall be equal to the minimum interior diameter of the pipe, as specified in the applicable portions of the ASTM Standard Specifications or the pipe manufacturer's recommendations, minus five percent of the minimal interior diameter of the pipe. Those sections of non-rigid pipe with deflections greater than the maximum allowable five percent shall not be acceptable and the Contractor will remove and replace these sections at its own expense.

Deflection tests will be run if in the opinion of the Engineer testing is warranted. The program for testing shall be mutually determined by the Engineer and the Contractor. The Contractor shall furnish all labor, tools and equipment necessary to make the tests and to perform any work incidental thereto.

- .05 Pressure Testing of Force Main and Low Pressure. Small Diameter Sewer line. Make pressure and leakage tests on all newly laid pipe. Furnish all necessary equipment and material, make all taps in the pipe as required, and conduct the tests. The tests shall be conducted between valved sections of the pipeline, or as approved by the Engineer. The Engineer will monitor the tests.

Furnish the following equipment and material for the tests:

Amount	Description
--------	-------------

2	Approved graduated containers
2	Pressure gauges
1	Hydraulic force pump approved by the Engineer
1	Additional 1/2-inch pressure tap for Engineer's test gauge
	Suitable hose and suction pipe as required

Conduct the tests after the trench has been partially backfilled with the joints left exposed for inspection, or when completely backfilled, as permitted by the Engineer. Where any section of pipe is provided with concrete reaction blocking, do not make the pressure test until at least 5-day shave elapsed after the concrete thrust blocking is installed. If high-early cement is used for the concrete thrust blocking, the time may be cut to 2 days.

Conduct pressure test in the following manner, unless otherwise approved by the Engineer: after the trench has been backfilled or partially backfilled as hereinbefore specified, fill the pipe with water, expelling all air during the filling. The test pressure shall be 1 1/2 times normal working pressure at the point of lowest elevation of the test gauge.

(A) Duration

1. The duration of each pressure test shall be 2 hours, unless otherwise directed by the Engineer.

(B) Procedure

1. Slowly fill the pipe with water and allow to stand for 24 hours. Expel all air from the pipe. Allow and maintain the specified test pressure by continuous pumping if necessary, for the entire test period. The test pressure shall be calculated for the point of lowest elevation, or as specified by the Engineer. The pump suction shall be in a barrel or similar device or metered so that the amount of water required to maintain the test pressure may be measured accurately.
2. Before the line is pressurized, the Engineer shall verify that all necessary main valves are open or closed with regard to the section of line being tested. In addition, the Engineer shall verify that all hydrant valves are open.

(C) Leakage

1. Leakage shall be defined as the quantity of water necessary to hold the specified test pressure for the duration of the test period. No pipe installation will be accepted if the leakage is greater than the number of gallons per hour as determined by the following formula:

$$L = \frac{SD\sqrt{P}}{148,000}$$

In the above formula:

L = Allowable leakage, in gallons per hour. S = The length of pipe being tested, in feet. D = Nominal diameter of pipe, in inches.

P = Average test pressure during the leakage test, in pounds per square inch gauge.

(D) Corrections of Excessive Leakage

1. Should any test of pipe laid disclose leakage greater than that allowed, locate and repair the defective joints or pipe until the leakage of a subsequent test is within the specified allowance.

- .06 Televising Main. All sewer connection lines eight inches (8") or larger shall be televised. The tape shall have a running footage meter showing the exact footage from the entry manhole. Tapes shall be provided with a log showing the location of all defects and service lines.

Current sewer line shall be re-televised at the end of the warranty period to verify that no movement has occurred.

5.00 DESIGN CRITERIA - GRAVITY SEWER

- .01 Sizing. All collection sewer lines shall be designed to flow approximately half full at peak flow. One hundred gallons per capita day shall be used as the per capita contribution for average daily flow. A peaking factor of 4.0 shall be used for peak flow. Minimum line size shall be eight inches (8").
- .02 Velocities. All velocities shall be maintained between 2.5 fps and 15 fps. Minimum velocity shall be 2 fps.
- .03 Slope. Minimum sewer line slopes shall be as follows:

8"	.004 ft/ft
10"	.003 ft/ft
12"	.0022 ft/ft
15"	.0015 ft/ft
18"	.0012 ft/ft
21"	.0010 ft/ft
24"	.0009 ft/ft

27"

.0008 ft/ft

- .04 Distances. The distance between manholes shall not exceed four hundred feet (400'), unless approved by the District Engineer. Manholes shall be required on all changes in grade or alignment.
- .05 Small Diameter Pressure Sewer lines. Under special conditions, such as low tributary population, or areas where it may be determined by the District, that central lift stations are not applicable, small diameter pressure sewer technology may be used. Small diameter technology may include pressure, vacuum and small diameter, gravity sewers.

An integrated plan shall be submitted for review and approval by the District. That plan shall include the design of sewer mains and their appurtenances, service lines and on-site pumping systems. Components of the integrated design shall include, but not be limited to, the following:

- (A) The District will maintain a list of acceptable manufacturers for these integrated systems. Those manufacturers' lists may be obtained from the District office.
- (B) The on-site pumping system shall include a simplex or duplex, effluent or grinder pump, alarm and monitoring controls, an effluent pipe check valve, a means to isolate the on-site pumping systems during maintenance and a minimum 20-foot usable access easement to allow inspection by District personnel.
- (C) The service line shall include a shutoff means to allow extension of the service line onto individual properties after the main system is in operation.
- (D) The main line sewer system shall include air and vacuum release valves with vaults at high points, pressure clean outs at high points (in combination with air release and vacuum valve vault), pressure clean outs at intersections and pressure clean outs at minimum 1000-foot intervals. Pressure clean outs shall be installed in a standard manhole for access.
- (E) The system design shall provide for minimum cleansing velocities of 2 fps at design conditions. Minimum cleansing velocities shall be maintained at less than design flow conditions where excessive headloss at design flows are not introduced. It is recognized that minimum cleansing flows may not be maintained during the early stages of buildout. A plan shall be prepared to address operations during the times when cleansing velocities cannot be maintained. This plan should investigate multiple main lines, odor control facilities and increased maintenance requirements.

6.00 GREASE INTERCEPTORS

- .01 General. Because of the impact of grease on the District's lines and treatment plant, grease interceptors are required on establishments preparing or serving food.

All grease interceptors shall be new, and the interceptor and its installation shall be in conformance with the latest edition of the Uniform Plumbing Code except as modified herein.

- .02 Requirements for Grease Interceptors. An approved type grease interceptor complying with the provisions of this Section shall be installed in the waste line leading from sinks, drains and other fixtures or equipment in the following establishments: Restaurants, cafes, lunch counters, cafeterias, bars and clubs; hotels, hospitals, factory or school kitchens, or other establishments where grease may be introduced into the drainage or sewage system. A grease interceptor is not required for individual dwelling units or for any private living quarters.

- .03 Specifications and Procedures for Grease Interceptors.

- (A) Plans shall be submitted to and approval obtained from the District prior to the installation of any grease interceptor in any establishment set forth in Subsection 6.02.
- (B) No grease interceptor shall be installed which has an approved rate of flow of more than fifty-five (55) gallons per minute, except when specially approved by the District.
- (C) No grease interceptor shall be installed which has an approved rate of flow of less than twenty (20) gallons per minute.
- (D) Each plumbing fixture or piece of equipment connected to a grease interceptor shall be provided with an approved type flow control or restricting device installed in a readily accessible and visible location in the tail piece or drain outlet of each such fixture. Flow control devices shall be so designed that the total flow through such device or devices shall at no time be greater than the rated capacity of the interceptor. No flow control device having adjustable or removable parts shall be approved.
- (E) Each grease interceptor required by this Section shall have an approved rate of flow which is not less than that given in the District's EQR schedule for the total number and size of fixtures connected thereto or discharging thereunto. The total capacity in gallons from fixtures discharging into any interceptor shall not exceed two and one-half (2-1/2) times the flow rate of the subject interceptor.

Any grease interceptor installed or located in such a manner that the inlet is more than four feet (4') lower in elevation than the outlet of any fixture discharging into such interceptor, shall have an approved rate of flow which

is not less than fifty percent (50%) greater than that given in the District's EQR schedule.

- (F) No more than four (4) separate fixtures shall be connected to or discharged into anyone (1) grease interceptor.
- (G) For the purpose of this Section, the term "fixture" shall mean and include each plumbing fixture, appliance, apparatus or other equipment required to be connected to or discharged into a grease interceptor by any provision of this Section.
- (H) Each grease interceptor shall be vented as required by the Uniform Plumbing Code and each fixture discharging into a grease interceptor shall be individually trapped and vented in an approved manner, except that an approved type grease interceptor may be used as a fixture trap for a single fixture when the horizontal distance between the fixture outlet and the grease interceptor does not exceed four (4) feet and the vertical tail pipe or drain does not exceed two (2) feet.
- (I) Each grease interceptor shall be installed and connected so that it shall be at all times easily accessible for inspection, cleaning and removal of the intercepted grease.
- (J) Interceptors shall be maintained in efficient operating conditions by periodic removal of the accumulated grease. No such collected grease shall be introduced into any drainage piping, public or private sewer, and it shall be disposed of in an environmentally safe manner.
- (K) Each grease interceptor shall be constructed of durable material satisfactory to the District and shall have a full size, gas tight cover which can be easily and readily removed.
- (L) No water jacketed grease interceptor shall be approved or installed.
- (M) Each grease interceptor shall have an approved water seal of not less than two inches (2") in depth or the diameter of its outlet, whichever is greater.
- (N) No grease interceptor required by this Section shall be installed until the type and model of each size thereof has been approved by the District.
- (O) The District may require such tests as may be necessary to determine the grease collecting efficiency of the various types and kinds of grease interceptors to establish the rate of flow or other rating thereof. Such test requirements may be revised or modified from time to time as may be deemed necessary by the District. A list of approved and acceptable interceptors shall be kept on file in the office of the District.

- (P) No grease interceptor shall be installed which does not comply in all respects with a type or model of each size approved and accepted by the District. Whenever it shall come to the attention of the District that any grease interceptor does not so comply, the District shall immediately suspend or revoke such approval.

7.00 CLEANOUTS

All service lines shall have a minimum of one (1) cleanout per one hundred feet of pipeline length. A cleanout consisting of a vertical 90° tee the diameter of the service line shall be provided at the property line between the building being served and the main line. The upper 24" of the vertical riser shall be cast or ductile iron and terminate 4" below grade in unimproved areas and at grade in finished driveways, sidewalks, etc., and be plugged with a water-tight cast iron plug (see Standard Detail).

III. TRENCHING, BACKFILLING AND COMPACTION

1.00 GENERAL

- .01 Scope. Work to be performed under this Section shall include all labor, equipment, materials and miscellaneous items necessary to perform all excavation, backfilling and compaction of underground pipelines, conduits, cables and appurtenances shown on the Drawings and specified herein.

All work within the rights-of-way of the Federal Government of the Colorado Division of Highways, County Governments or Municipal Governments shall be done in compliance with requirements issued by those agencies. All such requirements shall take precedence over these Specifications. It shall be the Contractor's responsibility to secure all required excavation permits and pay all costs thereof. Contractor will be required to obtain necessary road cut permits.

- .02 Field Conditions.

- (A) Existing Utilities. Underground utilities, except service lines, known to the Engineer have been shown on the Drawings. Locations are approximate only and may prove to be inaccurate. The Contractor is responsible for verification of the existence, location and protection of all utilities within the construction area.

Before commencing with work, the Contractor shall notify all public and private companies who may have utilities within the project limits. The Contractor shall coordinate with these entities all excavation performed. The Contractor shall obtain all permits required by utility owners.

In the event of damage to any existing utility, the Contractor shall be solely responsible for the repair and payment for repair of all such damage.

The Contractor shall make arrangements for and pay all costs for relocation of utilities requiring relocation as indicated on the Drawings. Should utility obstructions, not shown on the Drawings, be encountered and require

relocation, the Contractor shall notify the Owner and the Engineer and shall make arrangements necessary for such relocation. The Owner shall pay the costs for such relocation.

- (B) Existing Improvements. The Contractor shall restore or protect from damage all existing improvements encountered in performance of the work. Improvements damaged as a result of this work shall be restored to original condition or better, as determined by the Engineer.
- (C) Adjacent property shall be protected by the Contractor from any damage. The Contractor shall be held solely liable for any damage to adjacent property and shall be responsible for all costs resulting from repair of such damage.
- (D) Soil Conditions. It shall be the responsibility of the Contractor to examine soil conditions and characteristics, including the presence of groundwater that will be countered within the limits of construction.

.03 Protection of Work.

- (A) Safety. All excavation shall be protected by barricades, lights, signs, etc., as required by governing federal, state and local safety codes and regulations.
- (B) Sheet piling, Shoring and Bracing. Where trench walls are not excavated at a stable slope, the Contractor shall provide and maintain support sufficient to prevent caving, sliding or failure and property or bodily damage. Any damage due to inadequate support shall be repaired at the sole expense of the Contractor.

Under normal construction conditions, support shall be removed as work progresses. Support shall remain installed if directed by the Engineer or if pipe does not have sufficient strength to support backfill based on trench width as defined by the sheet piling. Sheet piling shall not be removed after the start of backfilling.

Use of a movable trench shield or coffin box will not be allowed where pipe strength is insufficient to support backfill as defined by the trench width after the trench shield is removed.

The Contractor shall be held solely responsible for any violation of applicable safety standards. Particular attention is called to minimum requirements of OSHA and COSH (Colorado Occupational Safety and Health).

- (C) Site Drainage. Excavation to be protected from surface water at all times. At no time shall excavated area be allowed to fill with storm water runoff. Contractor shall provide proper, temporary drainage structures at their cost to detour run off from excavated areas.
- .04 Blasting. No blasting shall be permitted without written consent of the Engineer. Blasting shall be done only after Engineer receives permission from the appropriate governmental authority(ies). Blasting shall be performed only by properly licensed, experienced individuals and in a manner such that no damage to any property or persons will occur due to either the blast or debris. Contractor shall provide proof of insurance as required by these Specifications, the governing authority or as required by Engineer prior to any blasting. All damage as the result of blasting shall be repaired, at the Contractor's expense, to the satisfaction of the Engineer. All earth or rock loosened by blasting shall be removed from excavations prior to proposed construction.
- .05 Construction in Streets. When construction operations are located within streets make provisions at cross streets and walks for free passage of vehicles and pedestrians. Do not block streets or walks without prior approval.
- .06 Submittals.
 - (A) Bedding Material
 - 1. Submit sieve analysis
 - (B) Select Fill
 - 1. Submit sieve analysis

2.00 MATERIALS

- .01 Embedment Material. Pipeline embedment material shall comply with the appropriate classes as listed below and as illustrated in the Construction Drawings:
 - (A) Class A - Use for all PVC, DIP, CMP and concrete pipe under normal construction conditions.
 - 1. Characteristics - Densely compacted Class 6 aggregate granular foundation of depth shown on Typical Details with densely compacted Class 6 aggregate 12" above top of pipe.
 - (B) Class B - Use where improper trenching or unexpected trench conditions require its use as determined by the Engineer.
 - 1. Characteristics - Concrete cradle foundation with densely compacted Class 6 aggregate base backfill to 12" above top of pipe,

or densely compacted Class 6 aggregate granular foundation with concrete arch cover to 6" above top of pipe.

*3/4" screened rock shall not be used unless approved by the Engineer.

- .02 Select Material. Subject to approval by the Engineer, select material shall be allowed in place of the aggregate backfill for Class B when excavation and soil conditions allow, but only if approved by Engineer. Contractors shall bid project based upon Class A. If Class B or select material is used, price adjustments shall be made.

(A) Characteristics - Soil materials free from rocks, clods, and organic material.

- .03 Concrete for Embedment. Shall be 2000 psi concrete (28- day compressive strength).

- .04 Backfill Material.

(A) Characteristics - Native materials free from debris, organic matter and frozen material. Uniformly graded sufficient to allow proper compaction.

(B) Gradation - No boulders greater than 6-inch diameter in top 12 inches of backfill. Generally, no boulders greater than 12-inch diameter in remainder of trench. Limited number of boulders not exceeding 24-inch diameter to be allowed at discretion of Engineer provided boulders can be uniformly dispersed and will not interfere in compactive effort.

3.00 METHODS AND PROCEDURES

- .01 Site Preparation.

(A) Clearing. Remove all vegetation, stumps, roots, organic matter, debris and other miscellaneous structures and materials from project site. Dispose of offsite.

(B) Topsoil Removal. Strip existing topsoil from all areas to be disturbed by construction. Topsoil to be stockpiled separately from excavated materials.

- .02 Trench Excavation.

(A) Limits of Excavation. Trenches to be excavated along lines and grades shown on the Drawings, or as modified in the field by the Engineer. Trench widths for pipe loading to be measured 12 inches above top of pipe.

Minimum trench width to be the outside diameter of the pipe or conduit plus 16 inches.

Maximum trench width to be the outside diameter of the pipe or conduit

plus 24 inches for all pipes or conduits with outside diameter of 24 inches or less, and plus 30 inches for all pipes or conduits with outside diameters greater than 24 inches.

If maximum trench width is exceeded, Contractor will provide at its expense, higher strength pipe or special bedding including concrete at the direction of the Engineer.

Trench excavation not to be completed more than 100 feet in advance of pipe installation. Backfill to be completed within 100 feet of pipe installation.

- (B) Groundwater Control. Contractor to maintain facilities on-site to remove all groundwater from trench and keep water at least 12 inches below the trench bottom to a point such that a firm base for pipe or conduit installation exists. Facilities shall be maintained until all concrete is cured and backfilling is in place at least 24 inches above anticipated water levels before water removal is discontinued; all water removal shall be subject to approval by the Engineer.
- (C) Stockpile Excavated Material. Excavated material to be stockpiled so as not to endanger the work or public safety. Maintain existing vehicular and pedestrian traffic with minimum disruption. Maintain emergency access and access to existing fire hydrants and water valves. Maintain natural drainage courses and street gutters.

Backfill material to be segregated from stockpiled topsoil and unusable backfill materials.

- (D) Excavation for Appurtenances. Excavation to be done in accordance with these Specifications and as shown on the Drawings. Adequate working clearances to be maintained around appurtenances. Provisions for base and bottom preparations shall apply to all appurtenances.

Precautions to be taken to maintain trench widths in the vicinity of adjacent pipelines and conduits.

.03 Bottom Preparation.

- (A) Undisturbed Foundation. Where soils are suitable and have adequate strength, bottom to be graded and hand-shaped such that pipe barrel rests uniformly on undisturbed soil. All rocks or stones which may result in a point bearing on the pipe shall be removed.

Undisturbed grades shall be within 0.1 feet ∇ tolerance. Soils for final pipe grade placed within these limits shall be fine granular (100% passing No. 4 sieve) or maybe native materials, hand compacted to 95% maximum density.

- (B) Bell Holes. Material to be removed to allow installation of all fitting and joint projections without affecting placement of pipe.
- (C) Over excavation. Whenever trench is over excavated to eliminate point bearing by rocks or stones or when undisturbed grade tolerances of 0.1' are exceeded, the Contractor is to re-establish grade using Class 6 aggregate bedding material. Compaction shall be 95% maximum density. All work to re-establish grade shall be at the Contractor's expense.
- (D) Unstable Materials. Materials which are not capable of supporting superimposed loadings are defined as unstable materials. Should unstable materials been countered during excavation, immediately notify Engineer. If, in the opinion of the Engineer, unstable soil excavation is required and the Contractor could not have reasonably been expected to discover the existence of such materials during its site investigation, then a contract price for Unstable Soil Excavation shall be negotiated between Owner and Contractor. No payment shall be made for materials excavated prior to notification of the Engineer and negotiation of payment for extra work.

Inclusion of a bid item for Unstable Soil Excavation indicates such excavation is anticipated. The Contractor is to notify the Engineer prior to any unstable soil excavation; no payment shall be made for excavation prior to authorization of Engineer.

- (E) Rock Excavation. Rock excavation shall be defined as removal of boulders in excess of three (3) cubic yards of solid or fractured rock, which makes hand shaping of the bottom impossible and which requires techniques, such as blasting or jacking for removal, other than those which are being employed by the Contractor or are normally used in trench excavation, such as use of backhoes, trenchers, draglines, etc. Should unanticipated rock conditions be encountered, immediately notify the Engineer. If in the opinion of the Engineer, rock excavation is required and the Contractor has in fact made a diligent and determined effort to remove the material using normal excavation procedures as stated above, and the Contractor could not have reasonably been expected to determine the existence of such material during its site investigation, then a contract price for rock excavation shall be negotiated between the Contractor and the Owner. No payment shall be made for excavation performed prior to determination of a negotiated price.

Rock shall be removed to a 4" depth below grade. Additionally, all rock loosened during jacking, blasting, etc., shall be removed from the trench. For payment purposes, maximum trench width to be paid for shall be as defined in Subsection 3.02, (A). Maximum depth to be paid for shall be 12" below required grade. All over excavation shall be replaced as specified in Subsection 3.03, (C).

Inclusion of a bid item for rock excavation indicates such excavation is

anticipated. Contractor to notify Engineer prior to any rock excavating; no payment shall be made for excavation prior to notification.

.04 Backfilling.

- (A) Tamping Equipment. Except immediately next to the pipe, mechanical or air operated tamping equipment to be used. Hand equipment such as T-bar to be used to pipe if necessary. Care to be taken when compacting under, alongside and immediately above pipe to prevent crushing, fracturing or shifting of the pipe. The Contractor is to note densities required for materials being backfilled and shall use appropriate approved equipment to obtain those densities.

Wheel rolling is not considered to be an adequate compaction technique to meet these Specifications and will not be allowed. Where 85 % compaction is required, wheel rolling may be considered. Before acceptance, the Contractor shall backfill a portion of the trench and pay for density testing to verify adequacy of the proposed backfill techniques.

A hydro hammer may be allowed to obtain the specified density up to 4' in depth. The Contractor will be required to re-excavate those areas that have been tamped so that density tests can be taken to ensure that the specified density is being obtained full depth.

- (B) Moisture Control. Generally, maintain moisture of backfill material with ∇ 2% of optimum moisture content as determined by ASTM D698. Maintain closer tolerances as needed to obtain densities required.
- (C) Compaction. Maximum density (100%) based on ASTM D 698 or AASHTOT 99.
1. Bedding Material, including material used for over-excavation of any kind: 95%
 2. Select Material: 95%
 3. Backfill beneath existing or proposed pavement, roadways, sidewalks, curbs, utility lines and other improvements or within 5' horizontally of such improvements: 95%
 4. Backfill within public or designated right-of-way: 90% or as shown on the Drawings.
 5. Backfill within undeveloped, green or undesignated area: 85%
 6. Backfill for any fill over overcut grading in areas of lot/home construction: 95%.

- (D) Placing Backfill. The maximum loose lifts of backfill material to be as follows: use smaller lifts where necessary to obtain required densities:
 - 1. Bedding and select material: 6" (or see Section 3.03(A)).
 - 2. Backfill Material: 12" where 95% compaction required; 24" where less than 95% compaction required.
- (E) Backfilling Appurtenances. Backfilling to be done generally at the same time as adjacent pipelines. Backfilling procedure to conform to this Section. Use special techniques or materials as shown on drawings.
- (F) Disposal of Excess Excavation. Contractor to dispose of excess excavation off-site. The Owner shall have the right to elect to have the excess excavation disposed of at a designated site within the project limits. Excavation may be wasted on-site only if approved by the Engineer. Disposal in any case shall be the sole responsibility of the Contractor.
- (G) Jetting. Jetting and water inundation are generally not permitted methods of compaction. The Engineer may allow jetting under certain field conditions. Techniques including depth of lifts, amount of water to be used, penetration of hose jet, etc., shall be at the direction of the Engineer. No jetting will be allowed on materials with a 200 minus gradation of greater than 15%. Contractor shall pay cost of all water used, soil classification testing and a retesting or recompacting required. No jetting shall be done prior to written approval and direction of the Engineer.
- (H) Maintenance of Backfill. Contractor to maintain all backfill in a satisfactory condition during the extent of the contract and warranty period. All surface deterioration determined to be the responsibility of the Contractor and all settlement shall be repaired at once by the Contractor upon notice by the Owner. All costs for repair and all liability as a result of surface deterioration or settlement shall be the responsibility of the Contractor.
- (I) Clay Barrier Water Stops. Because of the presence of ground water, a clay barrier may be required to be installed full depth in trench in place of all bedding material and backfill. This barrier shall be full depth and two feet thick and installed every 500 lineal feet of trench. Clay barrier installation shall be considered incidental to the pipe installation and not paid for separately.

.05 Surface Restoration. All existing surface improvements and site conditions disturbed or damaged during construction to be restored to a condition equal to pre-construction condition. All restoration costs are considered incidental to excavation and backfill.

- (A) Improvements. Replace, repair or reconstruct all improvements as required. Work will not be accepted until restoration is accepted by Engineer and all

affected property owners. Improvements include, by example, other utilities, culverts, structures, curb and gutter, mailboxes, signs, sprinkler systems, etc.

- (B) Final Grading. The Contractor is to re-establish existing final grade or finish final grades as modified and shown on the Drawings. The Contractor is to backfill to proper subgrade elevation with backfill material to allow placement of surface improvements or materials.
- (C) Roadways. All roadways to be restored to original condition with material types removed. Materials and methods to conform to applicable portions of current Colorado Department of Transportation (CDOT) specifications. Additional requirements are:
 - 1. Minimum base course material on gravel roadways or minimum depth gravel on hard surface roadways to be 8", unless shown otherwise on Drawings.
 - 2. Minimum bituminous surfacing to be 3" unless shown otherwise on Drawings.
 - 3. Minimum concrete pavement surfacing to be 6", unless shown otherwise on Drawings.

4.00 QUALITY CONTROL - FIELD

.01 Compaction. It should be fully understood that it will be the sole responsibility of the Contractor to achieve the specified densities for all embedment and backfill material placed. Contractor will be responsible for ensuring that correct methods are being used for the placement and compaction of said materials. Correct backfill methods include, but are not limited to:

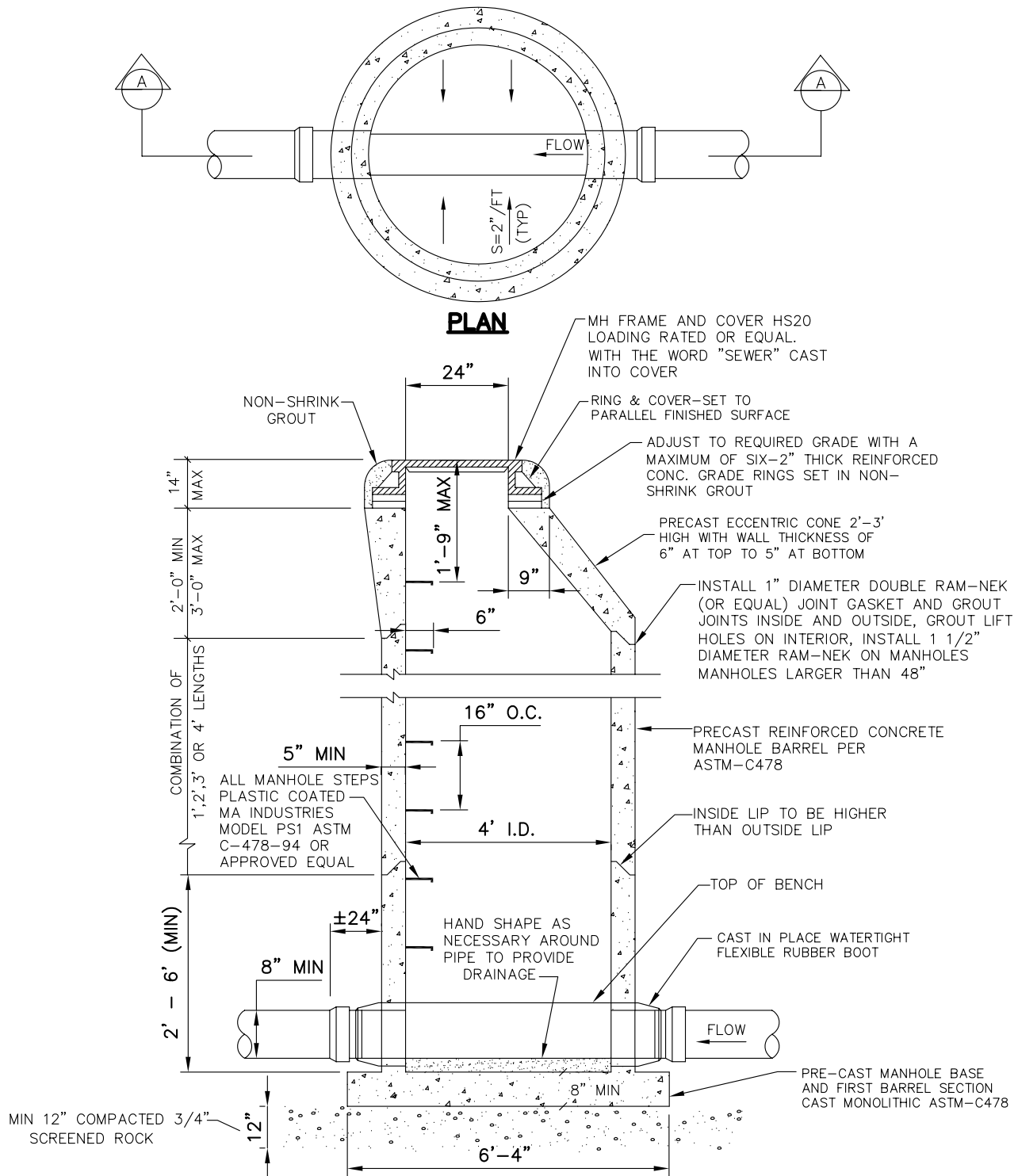
- (A) Use of proper equipment for existing soil condition encountered.
- (B) Moisture content of existing soils; determination if water should be added or if soil should be air dried to reduce moisture content.
- (C) Thickness of backfill lift.

Contractor may, at its own expense, have an approved geotechnical engineer monitor the methods of backfill and compaction used to ensure that the desired densities are being obtained.

Inspection and testing will be performed as directed by the District. Testing will be conducted as a quality control check to verify the Contractor's compliance with the standards indicated in the Specifications.

- .02 Inspection and Testing. Inspection and testing to be performed at the direction of the Engineer. Contractor to cooperate fully with all persons engaged in testing. Contractor to excavate as required to allow testing. Contractor to backfill all test excavations in accordance with these Specifications. Any areas which require a specified density, including fill, backfill, trenches, embankments, road base, hot bituminous pavement, backfill for structures, shall be tested.
- .03 Density Testing and Control.
- (A) Reference Standards. Density/moisture relationships to be developed for all soil types encountered according to ASTM D698 or AASHTO T99.
 - (B) Field Testing. Testing for density during compaction operations to be done in accordance with ASTM D2922 using nuclear density methods.
 - (C) Frequency of Testing. Minimum of one (1) test every 250' trench per lift or as directed by Engineer. Contractor to excavate to depths required by District for testing and backfill test holes to density specified.
 - (D) Retesting. In the event of failure to meet compaction criteria. Contractor shall re-excavate and re-backfill at direction of District. All retesting to be paid for by Contractor and to be performed by soils testing firm approved by the District.

TECHNICAL DESIGN DRAWINGS



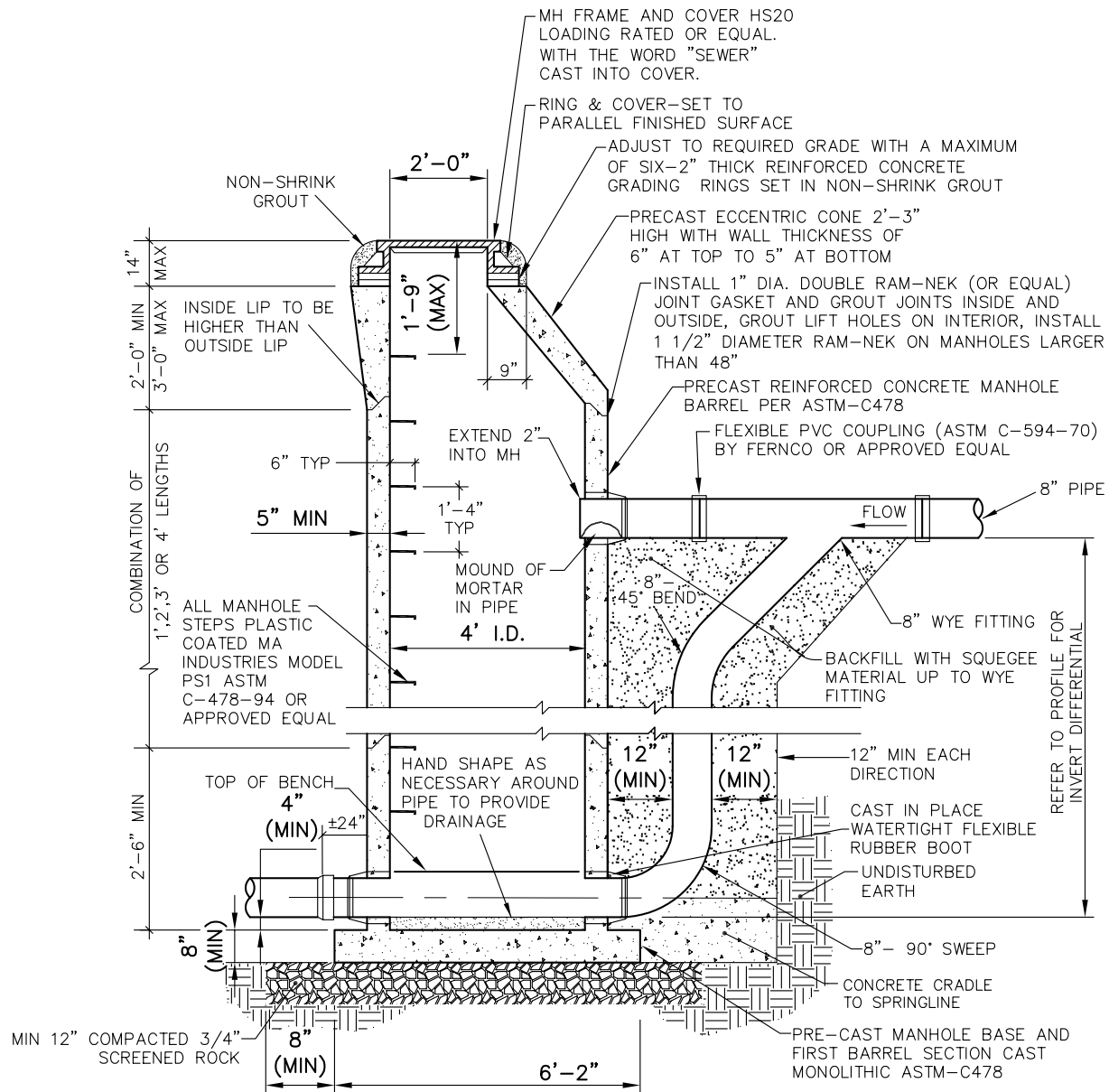
SECTION A

STANDARD MANHOLE

GENERAL NOTE

1. ALL CONCRETE WORK SHALL COMPLY WITH LATEST CI-318 SPECIFICATIONS
2. USE 5' I.D. WHEN PIPE SIZE 15"- 24".

DETAIL "A"

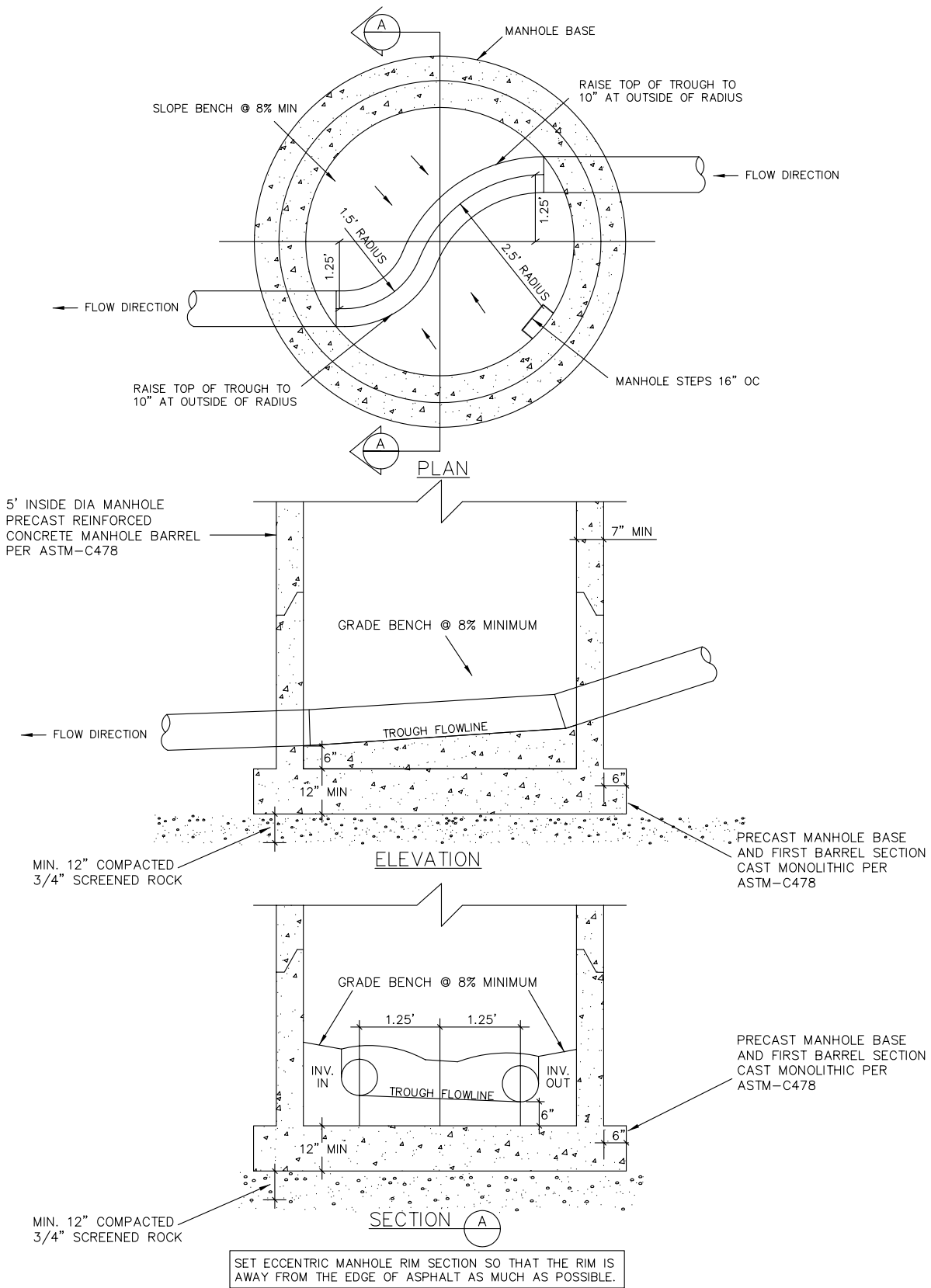


DROP MANHOLE

GENERAL NOTES:

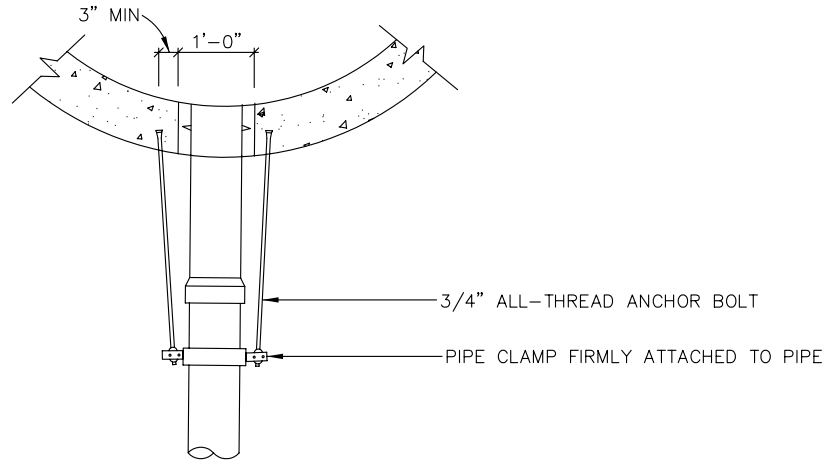
1. ALL CONCRETE WORK SHALL COMPLY WITH LATEST CI-318 SPECIFICATIONS
2. USE 5' I.D. WHEN PIPE SIZE 15" - 24"

DETAIL "B"

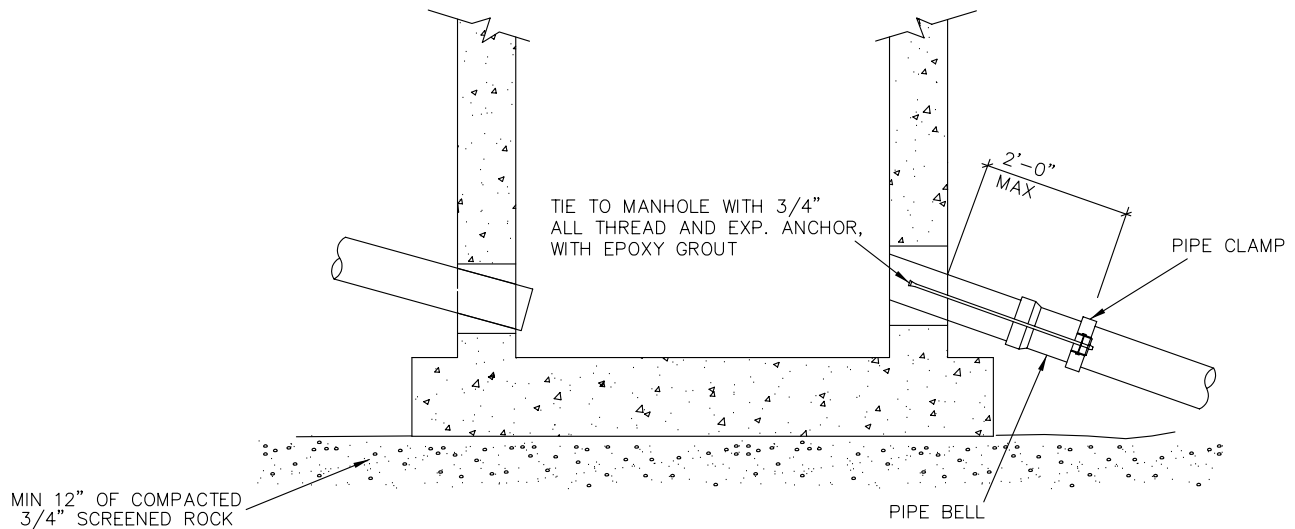


ENERGY DISSIPATOR MANHOLE

DETAIL "C"



TOP VIEW



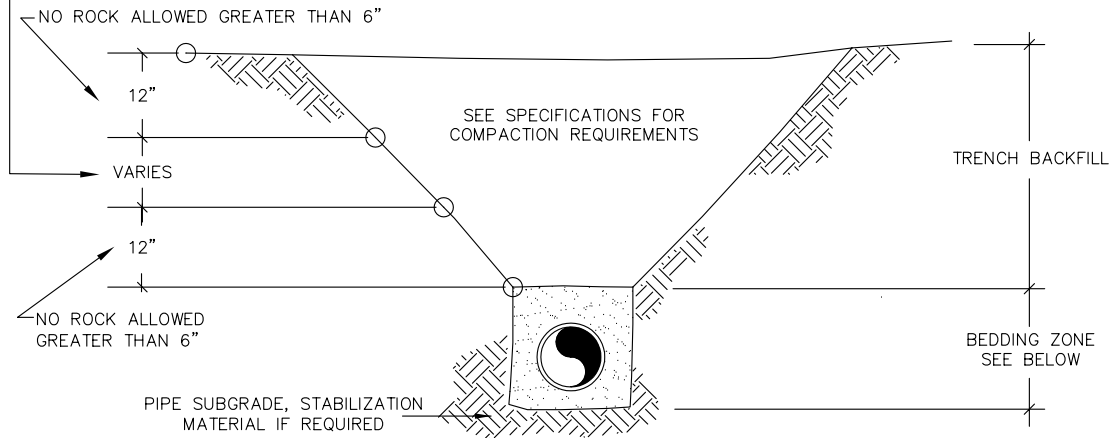
ELEVATION

NOTE: ANCHOR MANHOLES ARE REQUIRED WHERE PIPE SLOPE EXCEEDS 20% EXITING THE MANHOLE ONLY

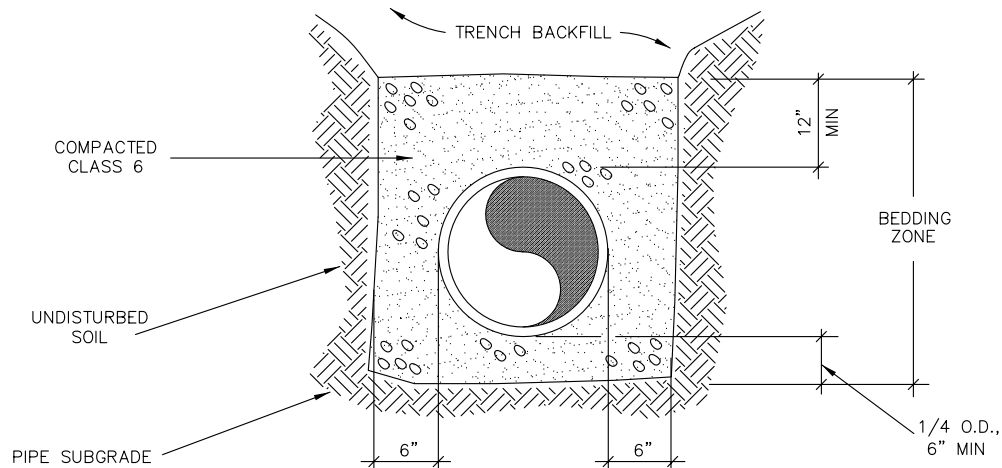
ANCHOR MANHOLE

DETAIL "D"

DISPERSE LARGE ROCKS IN THIS ZONE PROVIDED ROCKS DO NOT INTERFERE WITH BACKFILL COMPACTION REQUIREMENTS BOULDERS GREATER THAN 18" TO BE REMOVED FROM BACKFILL AND DISPOSED OF OFF SITE.



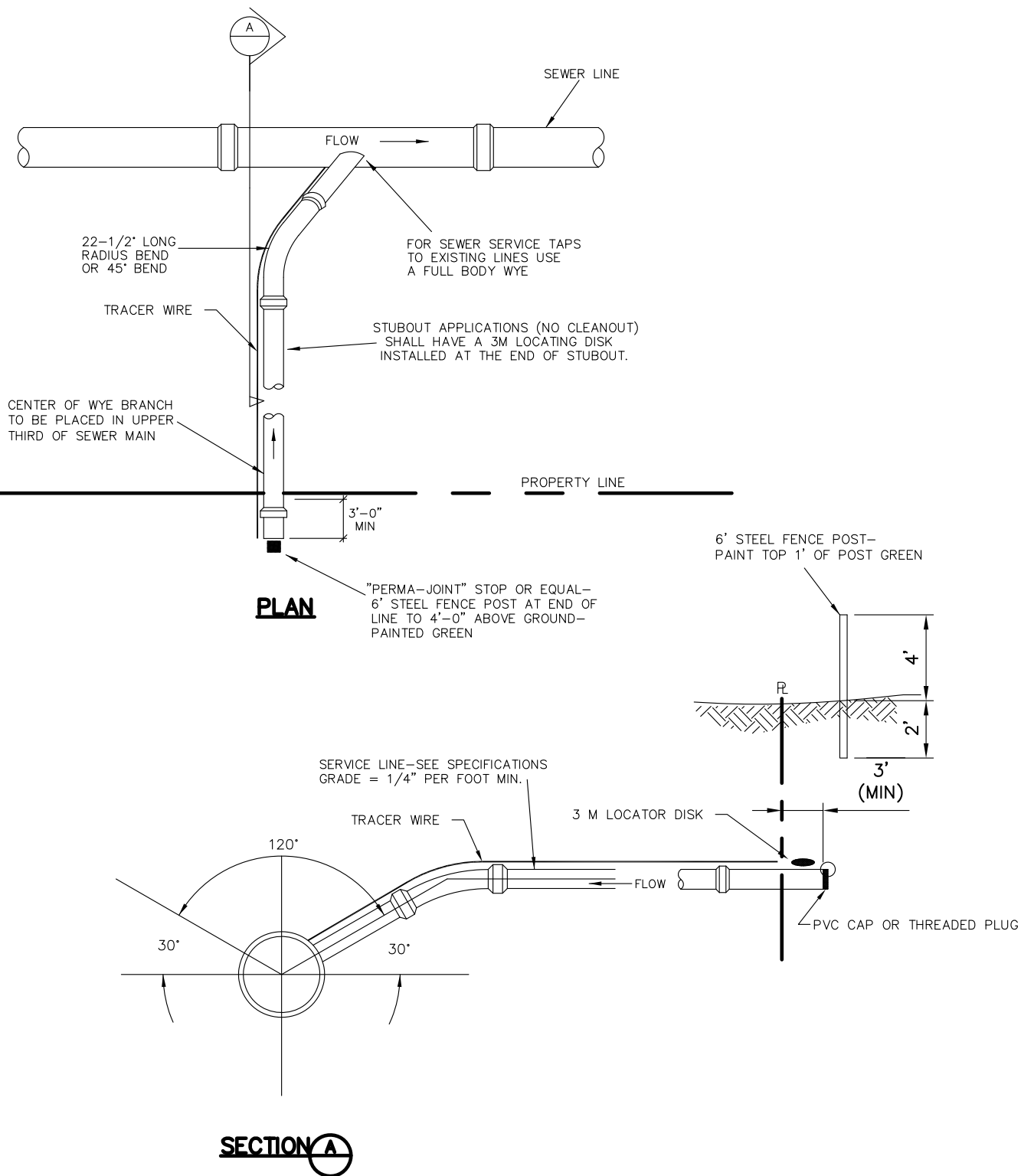
TRENCH ZONES



PIPE BEDDING ZONE

SEWER PIPE BEDDING

DETAIL "E"

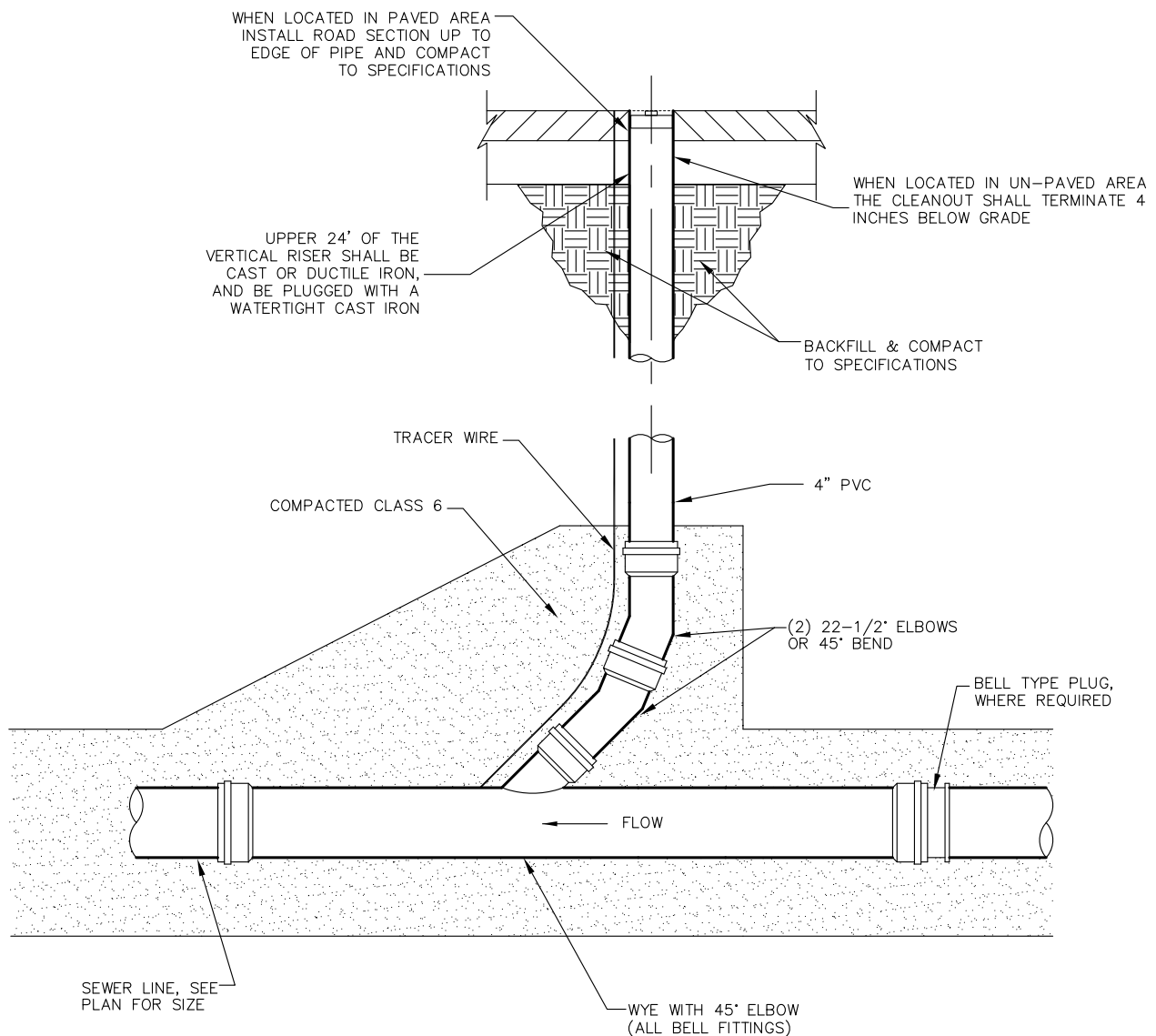


SEWER SERVICE CONNECTION

NOTES:

1. MINIMUM SEPARATION BETWEEN TAPS SHALL BE 18"
2. BACKFILL UNDER WYE TO BE CLASS 6 AGGREGATE BASE COURSE. 95% COMPACTION DENSITY PER ASTM D-698.

DETAIL "F"



SEWER CLEAN-OUT

NOTES:

1. FOR SKIWAY APPLICATIONS WHERE MANHOLE AND RINGS ARE USED TO COVER CLEANOUT, 3M LOCATING DISK SHALL ALSO BE INSTALLED 1' TO 2' BELOW MANHOLE RING AND COVER

DETAIL "G"

APPENDIX C

SPRING VALLEY SANITATION DISTRICT SPECIAL FEE AND COST REIMBURSEMENT AGREEMENT

This Special Fee and Cost Reimbursement Agreement is entered into by and between the Spring Valley Sanitation District, whose address is P.O. Box 1461, Rifle, Colorado 81650 (hereinafter "District") and _____, whose address is _____ (hereinafter "Petitioner");

W I T N E S S E T H:

WHEREAS, the District is a Colorado special district and quasi-municipal corporation formed and functioning under the authority of C.R.S. § 32-1-101, *et seq.* and § 31-35-401, *et seq.*, providing sanitary sewer service to the area around Spring Valley, Colorado; and

WHEREAS, Petitioner is the owner of that certain real property described in Exhibit A, attached hereto and incorporated herein by this reference, and desires to undertake the projects or activities described in Paragraph 1; and

WHEREAS, the above activity or project will require the District to provide the special services and incur the costs set forth in Paragraph 2; and

WHEREAS, pursuant to C.R.S. §§ 32-1-1001(1)(d), (j-m) and § 31-35-402(1)(f), the District has the authority to require reimbursement of its out-of-pocket costs in providing services to District Customers, including but not limited to sewer connections, inclusions and exclusions from the District, and planning and review of line extensions; and

WHEREAS, the Rules and Regulations of the District provide that the District may charge legal, engineering, publication, recording, inspection, and other fees of Customers desiring services from the District; and

WHEREAS, the special fees paid and collected by virtue of this Agreement shall be used solely to pay for the cost of planning, engineering review and inspection, legal review, administrative review, and actual out-of-pocket costs incurred by the District in relation to the anticipated project; and

WHEREAS, the Board of Directors of the District and Petitioner desire to set forth their agreements and understandings concerning this matter.

NOW, THEREFORE, in consideration of the mutual covenants and promises of the parties, and for other good and valuable consideration, the adequacy and sufficiency of which is hereby acknowledged, the parties agree as follows:

1. Petitioner desires to undertake the following projects or activities involving the District or its Sewer System:

_____ Inclusion into the District

- _____ Exclusion from the District
- _____ Sewer line extension
- _____ Other (describe) _____

2 The activity or project being undertaken by Petitioner will require the District to provide the following special services or incur the following costs:

- _____ Engineering review and advice
- _____ Legal review and advice
- _____ Preparation of plats or plans
- _____ Inspections
- _____ Recording fees
- _____ Filing fees
- _____ Publication costs
- _____ Other (describe) _____

3. Petitioner agrees to pay the District in full for all special services provided or actual costs incurred by the District in relation to the project or activity described above on receipt of an itemized billing for those services from the District. All such amounts are due within thirty (30) days of the date of the bill, with interest on any overdue amounts to be assessed at one percent (1%) per month. In the event that such amounts remain unpaid thirty (30) days after the date they are billed, the District reserves the right to cease supplying any and all sewer services being provided, review and processing of applications for service, inclusion, exclusion, and line extension. In the event the District is forced to pursue collection of any amounts due and unpaid under this provision, it shall be entitled to collect attorney's fees, filing, and recording fees incurred in such collection efforts in addition to the unpaid amounts due, plus interest.

4. Petitioner agrees to provide a deposit to the District in the amount of \$ _____ at the time of making the initial application for the _____. The District shall not commence to provide any of the services desired by the applicant, or advance any costs, until this deposit is received by the District. Any amount by which the applicant's deposit exceeds the cost assessed under this Section shall be refunded to the applicant within a reasonable time after final action has been taken on the project. Any amount by which the deposit is less than the total costs due to the District under this Agreement shall be due and payable subject to the provisions of Paragraph 2, above.

5. The District specifically does not agree to act favorably on the application made by Petitioner in exchange for payment of the special fees set forth above.

6. This Agreement constitutes the entire and complete agreement of the parties on the subject matter herein. No promise or undertaking has been made by any party, and no understanding exists with respect to the transaction contemplated, except as expressly set forth herein. All prior and contemporaneous negotiations and understandings between the parties are embodied and merged into this Agreement.

7. This Agreement may be amended from time to time by amendments made by the parties in written form and executed in the same manner as this Agreement.

8. This Agreement shall be binding upon and inure to the benefit of the parties and their assigns and successors in interest.

9. If any covenant, term, condition, or provision under this Agreement shall for any reason be held to be invalid or unenforceable, the invalidity or unenforceability of such covenant, term, condition, or provision shall not affect any other provision contained herein.

10. The parties agree and intend that this Agreement shall run with the land described in Exhibit A, attached hereto, and be a burden upon that property until final payment has been made to the District of all fees due and payable under this Agreement, or until the earlier termination of this Agreement.

IN WITNESS WHEREOF, the parties have executed this SPECIAL FEE AGREEMENT on the day and year adjacent to their respective signatures.

SPRING VALLEY SANITATION DISTRICT:

Date: _____

By: _____
President

ATTEST:

Secretary

[Signature on Following page]

PETITIONER:

Date: _____

By: _____

STATE OF COLORADO)
) ss.
COUNTY OF _____)

Acknowledged, subscribed, and sworn to before me this _____ day of _____ 202____
by _____, as Petitioner.

WITNESS my hand and official seal.

My commission expires: _____.

Notary Public