

RULES OF OPERATION SEWER DIVISION



“The Green Sheets”

**SUN VALLEY GENERAL IMPROVEMENT DISTRICT
Washoe County – State of Nevada**

Adopted September 10th, 1981
Revised March 22nd, 1983
Revised November 10th, 1988
Revised June 14th, 1990
Revised October 10, 2002

For purposes of these Green Sheets, any definitions recognized for these Green Sheets, shall be those definitions set forth in Title 13, Chapter 13.03 of the City of Sparks Municipal Code, incorporated in these Green Sheets by reference.

I. REQUIRED SEWER CONNECTION

All houses, buildings, structures, or properties used for human occupancy, employment, recreation, or other purpose, located within the boundaries of the Sun Valley General Improvement District shall be caused, at the owner's expense, to have their wastewater discharge connected, in compliance with the District's wastewater and building sewer codes and regulations, directly to the District's public sewer system, pursuant to the Washoe County Health Department's Individual Waste Disposal System Regulations. Said connection must take place within six months from the time in which the public sewer system becomes available and Notice to Connect given.

II. USE OF THE PUBLIC SEWERS

A. Discharges prohibited from sanitary sewers:

Sewage, waste, or any matter having any of the following characteristics shall, under no conditions, be discharged into, be placed where they might find their way into, or be allowed to run, leak, or escape into any part of the sanitary sewer facilities:

1. Any liquids, solids or gases which by reason of their nature or quantity are, or may be, sufficient either alone or by interaction with other substances to cause fire or explosion or to be injurious in any other way to the facility or to the operation of the facility. At no time shall two successive readings on an explosion hazard meter at the point of discharge into the system (or at any point in the system) be more than five percent nor shall any single reading be over ten percent of the Lower Explosive Limit (LEL) of the meter. Prohibited materials include but are not limited to: gasoline, kerosene, naphtha, benzene, toluene, xylene, ethers, alcohols, ketones, aldehydes, peroxides, chlorates, perchlorates, bromates, carbides and hydrides;
2. Any substance containing or causing the promotion of toxic or poisonous solids, liquids, or gases that, alone or in combination with other waste substances, may create a hazard for humans, animals, or the environment, interfere with wastewater treatment processes, cause a public nuisance, or cause any hazardous condition to occur in the wastewater system;
3. Any substance having a pH lower than 5.5 pH units or having any corrosive or detrimental characteristic that may cause injury to wastewater collection or treatment systems including structures and

equipment, any substance with a pH greater than 9.0 pH units or high enough to cause alkaline incrustation on sewer walls or other adverse effects on the wastewater system;

4. Any substance or viscous wastes that may cause deposition, obstruction, damage or reduction of flow in the sewer, be detrimental to proper wastewater treatment plant operations, or other interference. These objectionable substances include, but are not limited to: asphalt, dead animals, offal, ashes, sand, mud, straw, industrial process shavings, metal, glass, rags, feathers, tar, plastics, wood, paunch manure, bones, hair fleshing, entrails, paper, dishes, paper cups, milk containers, or other similar paper products, either whole or ground;
5. Any substance which may cause the facilities to be in noncompliance with biosolid use or disposal criteria, guidelines or regulations developed under Section 405 of the Clean Water Act; any criteria, guidelines or regulations affecting biosolid use or disposal developed pursuant to the Solid Waste Disposal Act, the Clean Water Act, the Toxic Substances Control Act or state criteria applicable to the biosolid management method being used;
6. Any inflow sources, including rainwater, stormwater, groundwater, street drainage, surface drainage, subsurface drainage, roof drainage, yard drainage, and water from yard fountains, ponds or lawn sprays, or any other uncontaminated water;
7. Any water added for the purpose of diluting waste;
8. Any petroleum or mineral-based cutting oils commonly called soluble oil;
9. Any nonbiodegradable oil, petroleum oil, or refined petroleum products exceeding one hundred milligrams per liter (100 mg/l);
10. Any radioactive, radiological, or chemical/biological warfare, waste or material except as regulated by the State and Federal government;
11. Any substance that either singly or in combination with other discharges causes pass through, upset, interference, or limits disposal of municipal biosolids, or could cause a violation of the District's NPDES permit and/or the receiving stream water quality standards
12. Matter of any nature at a temperature above one hundred fifty degrees Fahrenheit

13. Animal or vegetable greases, oils or matter containing animal or vegetable greases, or oils of any nature in excess of three hundred milligrams per liter, or any petroleum products;
14. Any substance that would be poisonous to or inhibit the biologic organism associated with any sewage treatment process and which, in the opinion of the general manager, might interfere with the satisfactory operation of any treatment facility or any portion of the sewer system;
15. All inflow sources defined in EPA Regulations, Section 40 CFR Part 35 including but not limited to roof leaders, cellar, yard and area drains, foundation drains, coolingwater discharges, drains from springs and swampy areas, manhole covers, cross-connections from storm sewer and combined sewers, catch basins, storm waters, surface runoff, street wash waters or drainage shall not be permitted to be connected to the sewer system;
16. Heat in amounts which will inhibit biological activity in the facility resulting in interference, or heat in such quantities that the temperature at the facility influent exceeds forty degrees centigrade or one hundred four degrees Fahrenheit;
17. Any wastewater with objectionable color not removed in the facilities treatment process;
18. Any pesticides or herbicides;

B. **Administration - Determination of Prohibited discharge:**

The General Manager shall make all discretionary determinations as may be required to administer this chapter and shall recover the cost incurred in making such determinations from the discharger, pursuant to the District's Rules & Regulations heretofore adopted.

C. **Prohibition on unpolluted water:**

Unpolluted water including, but not limited to, process cooling water, blow down from cooling towers or evaporator coolers, and swimming pool water, shall not be discharged through direct or indirect connection to the District's wastewater facilities.

D. **Prohibition of connection of inflow sources:**

All sources of inflow including but not limited to roof leaders, cellar, yard and area drains, catch basin, manholes, etc. shall be prohibited from connection to the sewer system.

E. **Exclusions from sanitary sewers:**

In addition to the matter excluded heretofore, all surface drainage water shall be excluded from all parts of the sewer system designated by the General Manager as the sanitary sewer system.

F. **Septic tank waste:**

It is unlawful to discharge any septic tank or cesspool waste to the District's wastewater facilities, unless specifically authorized in writing by the general manager. The time and place for the specific discharge and required characteristics of the matter discharged shall be designated by the general manager. No discharge shall violate any part of this section.

G. **Limitations on the use of garbage grinders, and required use of grease traps and interceptors.**

1. Limitations on the use of garbage grinders. Waste from garbage grinders shall not be discharged into the district's wastewater facilities except when the wastes are generated in preparation of food normally consumed on the premises and the grinders shred the waste to a degree that all particles will be carried freely under normal flow conditions prevailing in the wastewater facilities, and to a size not to exceed one-half inch in any dimension. Garbage grinders shall not be used for grinding plastic, paper products, inert materials or garden refuse. Upon effective date of these regulations all scullery or dish table wastes shall not be put through a garbage grinder unless the discharge is through an approved grease interceptor.

2. Grease Traps Interceptors and Separators. Grease traps, interceptors, and sand/oil separators, shall be constructed to prevent any bypass of matter prohibited in the wastewater system. Sand/oil separators shall be a minimum capacity of 1,000 gallons except when otherwise specified in chapter 10 of Uniform Plumbing Code. Grease traps shall be installed, utilized and properly maintained. All waste discharged from establishments which may generate grease shall install and maintain a grease interceptor. Sizing specifications for grease traps and interceptors are outlined in Chapter 7 and Appendix H of the Uniform Plumbing Code.

The General Manager may waive the required minimum size grease interceptor. The design, operation and sizing of all grease traps and interceptors must be approved by the District.

The introduction of emulsifiers, bacteria, enzymes or any other product into the grease trap or interceptor which would cause oil and grease to pass through the trap or interceptors is prohibited. Grease traps and interceptors shall be cleaned regularly to ensure proper operation.

H. Limitation on point of discharge:

No person shall discharge any substances directly into a manhole or other opening in a sewer other than through an approved building sewer, unless he has been issued a permit by the General Manager, in advance. If a permit is issued for such direct discharge, the user shall pay the applicable charges and fees and shall meet such other conditions as required by the General Manager.

I. Limitation on wastewater strength:

No person shall discharge wastewater containing constituents in excess of:

<u>Constituent</u>	<u>Maximum Concentration</u>
Arsenic	2.0 mg/l
Barium	4.0 mg/l
Boron	1.00 mg/l
Cadmium	0.01 mg/l
Chromium (total)	0.50 mg/l
Copper	0.50 mg/l
Cyanide	0.23 mg/l
Iron	25 mg/l
Lead	0.30 mg/l
Manganese	0.70 mg/l

Mercury	0.01 mg/l
Nickel	1.80 mg/l
Selenium	0.04 mg/l
Silver	0.05 mg/l
Sulfate	240 mg/l
Zinc	1.0 mg/l
Phenol	.005 mg/l
Alkali	430 mg/l
Chloride	110 mg/l
Fluoride	4.0 mg/l

**Pesticides and
Herbicides**

Maximum Concentration

Total chlorinated Hydrocarbons	0.04 mg/l
Chlordane	
Lindane	
Heptachlor	
Methoxychlor	
Toxaphene	
2-4D	
2-4-5T	
Parathion	0.0016 mg/l
Malathion	0.004 mg/l
Guthion	0.004 mg/l

III. REVISION OF WASTEWATER REGULATIONS

Effluent limitations promulgated by the Clean Water Act, and regulations and guidelines promulgated thereunder, shall apply in any instance where they are more stringent than those in these regulations.

Limitations on wastewater strength in Section 13.36.090 of the City of Sparks chapter, may be supplemented with more stringent limitations pursuant to Section 13.39.030 of that title:

- A. If the General Manager determines that the limitations in Section 13.36.090 of the City of Sparks chapter are not sufficient to protect the operation of the City of Sparks treatment works:
- B. If the General Manager determines that the limitations in Section 13.36.090 of the City of Sparks chapter may not be sufficient to enable the City's treatment works to comply with water quality standards or effluent limitations specified in the City of Sparks NPDES permit:
- C. If any matter of any nature may be discharged into the sewer system, which discharge might reasonably be considered a violation of the City of Sparks chapter, the controlling characteristic of such matter shall be determined to the satisfaction of the General Manager. The responsibility of initiating such determinations of any costs involved and of submitting the results of the determination to the General Manager for his or her approval lie solely with the party or parties desiring to discharge the matter into the sewer system. Verification of these results and the decision as to whether or not a permit shall be issued shall be the sole responsibility of the General Manager. The adoption of this ordinance amending this title of the code, or ordinances adopted subsequent hereto but without objection from the General Manager, does not constitute a waiver of the General Manager's right to regulate or prohibit the discharge of such matter.

IV. ACCIDENTAL SPILL/DISCHARGE

- A. Users shall notify the General Manager immediately upon becoming aware of an accidental spill or discharge into the environment, sanitary sewer system in violation of these regulations. Notification shall enable the General Manager to take proper measures to reduce the impact of the spill or discharge. This notification shall be followed by a detailed written statement within fifteen days of the date of the occurrence.

- B. When the General Manager deems it necessary, dischargers shall provide protection from an accidental spill or discharge of incompatible substances, regulated materials or wastewater into the environment, sanitary sewer system. This protection at a minimum shall consist of the following:
1. A written spill/discharge prevention, control and countermeasure plan (SPCC) containing operating procedures implemented to prevent an accidental spill/discharge.
 2. Control measures installed to prevent a spill/discharge into the sanitary sewer system or environment.
 3. Countermeasures to contain, cleanup and mitigate the effects of a spill/discharge. Review and approval of such plans and operating procedures shall not relieve the user from the responsibility to modify the user's facility as necessary to meet the requirements of this title: nor shall it relieve the user of any other responsibility of liability imposed by law.
- C. When the General Manager deems it necessary to reduce the risk of exposing the populace, environment, sanitary sewer system to incompatible substances, secondary containment shall be installed. The General Manager may waive secondary containment requirements if a substance poses no hazard and/or the quantity is less than sixty (60) gallons.

V. **EXCESSIVE DISCHARGE**

No user shall ever increase the use of process water or in any way attempt to dilute a discharge as a partial or complete substitute for adequate treatment to achieve compliance with the limitations enforceable under these regulations.

VI. **CONSTRUCTION REQUIREMENTS**

These requirements are applicable to the building of sewer service lines from the property or easement line to the house or building.

These sewer lines shall be constructed and maintained by the property owner and shall be constructed in accordance with these requirements.

A. Identification of Process Chemicals and Industrial Wastes

All process chemicals and industrial wastes shall be properly labeled for identification purposes.

B. Codes

These lines shall be constructed and maintained by the property owner and shall be constructed in accordance with the latest edition of the Uniform Plumbing Code as prepared by the International Association of Plumbing and Mechanical Officials, except for particular requirements in excess of the Code, as stated herein.

For these purposes, the following is required among other terms in such code:

1. Grease traps, interceptors, and sand/oil separators shall be constructed to prevent any bypass of matter prohibited in the wastewater system. Grease interceptors shall be a minimum capacity of seven hundred fifty (750) gallons. Sand/oil separators shall be a minimum capacity of one thousand (1000) gallons except when otherwise specified in Chapter 10 of the Uniform Plumbing Code;
2. Trash enclosures containing a grease rendering receptacle shall include a trench drain connected to a grease interceptor. The District shall determine location of the trench drain.
3. Facilities using water for cooling shall not discharge the cooling water to the wastewater system or storm drain system; recirculation of such cooling water shall be required;
4. Industrial/commercial process water shall be pretreated, if necessary, to meet discharge requirements. If process water can be recirculated or reused, equipment shall be installed to accomplish the recirculation or reuse.
5. When deemed necessary by the District to prevent storm water pollution, petroleum fueling stations shall install a sand/oil separator connected to the sanitary sewer system.

C. Permits & Agreements

All Facility fees must be paid before the District will inspect service lines or allow connection to the District's system. A "Tap Service Installation Agreement" must be filed with the District. In addition, the District must issue a "Sewer Construction Permit". A copy of the Lot Development Permit issued by Washoe County must be made available to the District prior to the issuance of the Sewer Construction Permit. The Washoe County Building Department requires evidence that the District has examined and approved the plans prior to building permit issuance.

D. Inspections

1. No backfilling shall be performed until the installation has been inspected, tested, and approved by District personnel. The District shall be notified at least, 24 hours prior to the installation completion for inspection. All testing shall be performed in the presence of an authorized representative of the District.

E. Utility Connections

All building sewer connections shall comply with one of the following conditions, whichever is applicable:

1. All utility connections from the tap on the District main lines to the property line or easement line and the required clean-out at the property line or easement line shall be made by District personnel at the property owner's expense.
2. Single Family Residence: Where a single-family residence is constructed on a single parcel, direct connection to the District's sewer system shall be made by District personnel only. Should the applicant parcel not border upon the easement or dedicated right of way containing the District utilities, it is the responsibility of the property owner to obtain the necessary easements and/or construct main extensions as determined by the District and to provide to the District such proof.

3. Multiple Residential and Commercial Units with Common Land Ownership: A development with more than one residential or commercial unit with common land ownership may be served by communal sewer systems. The location and size of service shall be determined by the District. The operation and maintenance of the systems beyond the point of the service shall be the responsibility of the owner(s) of the property served or of the association having legal responsibility for the buildings and grounds.

F. Building Materials

1. Materials: Acceptable piping materials are ductile iron pipe in accordance with AWWA C150 and C151. Polyvinyl chloride pipe (PVC) shall be solid wall, SDR 35, in accordance with ASTM D3034. Class 150 PVC pipe in accordance with AWWA C900 may be used for force mains or at water line crossings, all of which shall also conform to the specifications set forth in the Uniform Plumbing Code. Joints shall be of the same material as the pipe using internal rubber or plastic gaskets, or an external rubber sleeve using stainless steel bands, all as manufactured strictly for use with the particular type of pipe. In all cases the pipe shall be designed for the internal and external loads that will be applied.

Where different pipe materials are jointed, the joint shall be made by the use of an approved mechanical coupling specifically manufactured for use with the different pipes to be joined. These couplings shall be similar and equal to Caulder couplings and shall be approved by the District.

2. Size: Building sewers shall be a minimum diameter of 4 inches for single family residences. Building sewers for apartments, motels, and commercial establishments shall be sized in accordance with the requirements of the Uniform Plumbing Code and shall be 6 inches minimum size. The size sewer required for serving more than one parcel shall be 6 inches minimum and public utility easements shall be provided as required by the District. Lines 6 inches or larger must have a flushing clean out installed on the upper end.

3. Installations: The grade of horizontal drainage piping shall be no less than 1/8" per foot in any case, as per Section 407, Uniform Plumbing Code. The pipe shall be laid at a true and uniform grade. There shall be no change in grade or alignment of the pipe, which is unnecessary to a proper installation, unless first approved by the District: Changes in direction of flow shall be in accordance with Section 405, Uniform Plumbing Code. All work shall be done in a workman-like manner that will satisfy the requirements of a quality installation in accordance with the District's preferred maintenance practices.
4. Cleanouts: A cleanout shall be provided by the property owner where the building sewer joins the lateral sewer at the property or easement line. All cleanout requirements shall be in accordance with Sections 406 and 1107, Uniform Plumbing Code. All cleanouts at the property line shall be cut to grade and enclosed in a Christy G-5 cement box marked "sewer" or approved equal.
5. Bedding and Backfill: Building sewers shall be installed on a uniformly prepared bed of sand, gravel or native material with no rocks greater than 3/4 inch. The bedding shall be a minimum depth of 6 inches below the pipe. Before testing, the sewer pipe shall be bedded three quarters of the way to the top of the pipe with similar material. Width of the trench shall be equivalent to the outside pipe diameter plus 12" at the bottom of the trench. After testing, the trench shall be backfilled and hand-tamped to a depth of 12 inches above the top of the pipe with bedding material.
6. Backwater Valves: Installation of backwater valves on lots with fixtures lower than the curb (edge of pavement) or property line, as more specifically explained in the Uniform Plumbing Code, shall be required and strictly enforced.

7. Lateral Sewer Construction: Where lateral sewer (service stubs) have not been provided by the District to the property or easement line, the property owner shall assume the cost of providing the required lateral extension to the District system. Work within the public right-of-way or easement shall be under the direction of the District. The owner shall be responsible for obtaining the necessary Washoe County street cut permit and also coordination with other utility agencies for their utility locations. Connection to the existing sewer main shall be done by District personnel only and through the use of an approved double strap saddle or approved equivalent only. Where the property is too low to be served by gravity to an existing sewer line, the property owner will install an individual pump station as approved by the District.

G. Testing

All sewer lines must be successfully tested in the presence of a District authorized inspector prior to connection to the District's sewer system:

1. Air Testing: After installation, but prior to backfilling, plug the end of the sewer pipe at the property line, pump in 4 lbs. of air pressure and hold for at least 15 minutes. The minimum allowable time for the gauge to fall from 4 psi to 3 psi is 0.2 seconds per foot for 4-inch sewers. See Uniform Plumbing Code for larger size sewers.
2. Hydrostatic: After installations, but prior to backfilling, plug the end of the sewer pipe at the property line. A hydrostatic test equivalent to a maximum head of 10 feet above; (1) the invert at the lowest portion of the line being tested; or (2) the ground water level at the time of the test, whichever is the higher. The test head at the upper section of the service line shall be a minimum of 5 feet above the top of the pipe. Prior to the start of the test, the service line shall be filled with water and an appropriate pre-soak period allowed, following which the hydrostatic head shall be maintained for a period of at least one hour, or for such length of time as may be necessary to satisfy the District, if the loss due to leakage does not exceed the following amounts: the maximum allowable leakage in the service line shall not exceed 500 gallons per mile per day per inch of diameter of pipe at 5 feet of head. For heads above 5 feet, the allowable leakage will be increased at the rate of 80 gallons for each foot of increase in head.

H. Requirements for Communal Utility Systems

In addition to the above requirements, the design and construction of communal utility systems for condominiums and multiple residential and commercial units, shall be in accordance with the Design and Construction Standards and the Standard Specifications and Details of the District.

The Developer shall also be required to comply with certain portions of the District's General Requirements for Development as follows:

1. Two complete sets of plans and specifications shall be submitted to the District Engineer for final review. These plans shall indicate the location of water, sewer, and all other utilities, facilities, and details pertaining to these facilities. A plan checking fee shall be paid per Rule #23. If plans need corrections or additions as a result of this review, then two additional revised sets of plans and specifications shall be submitted, and additional plan checking fees will be required in accordance with the District's Rules and Regulations. These plan checking fees are in addition to, and separate from, the District's established facilities fees.
2. The District shall inspect the construction of water and sewer facilities and shall have the final authority in determining whether the work is being done in accordance with the plans and specifications. Forty-eight hours notice shall be given to the District prior to the beginning of construction of the water and sewer facilities, which will be allowed only after the approval of such construction by the District.
3. If at any time during construction, the work is not being done in accordance with District standards, as interpreted by the District Engineer or Inspector, the property owners will be so notified. If such deficiencies are not corrected, the work will not be accepted and the new development will not be given water and sewer service.

I. As-Builts of Completed Work

At the completion of construction, the property owner shall have the plans revised to AS-BUILT. For all subdivisions, the District shall furnish owner with a markup of the revised plans, as prepared by the engineer. A CD providing GIS locations for utilities, parcels, streets, and any other pertinent information deemed necessary by the District shall be provided for all subdivisions. A clean reproducible set of AS-BUILT drawings shall be given to the District. For individual lots or simple parcel splits, a legible drawing acceptable to the District shall suffice.

J. Joint Trenching

Joint trenching of utility service lines is allowed; however, District standards must be met within the public right-of-way and District Easements. The water service shall be installed a minimum of one foot above and one foot horizontally away from the sewer lateral on undisturbed soil. Water mains constructed within the public right-of-way and District easements shall be installed at an elevation above the sewer main and a minimum of ten feet horizontally away from the sewer. Joint trenching is not allowed with the District main systems. No other utilities shall be installed or be within three feet horizontally of District main lines and one foot from services.

K. DETAILED NOTES AND REFERENCES

1. Line sizes shall be a minimum of 4 inches in diameter for each single family dwelling. When two or more single family dwellings are contributing to a service line, that line must be a minimum of 6 inches in diameter. When ten or more units, or dwellings, are contributing to the service line, the District shall calculate and determine the line size.
2. A two-way clean out installation where the sewer service line exits the residence is not required, but is very strongly recommended for the convenience of the occupant.
3. State law requires that all mobile homes have a flexible coupling on the sewer line between ground level and connection to the home. The purpose is to eliminate damage to a rigid sewer line in the event of movement such as earthquake or high winds. The District requires a caulder coupling or a District-approved equal.

4. A backflow valve is required for all dwellings that are below curb or street level. This will prevent sewage from backing up into the dwelling in case of an emergency.
5. The Uniform Plumbing Code requires a minimum depth of 12 inches for sewer service lines, however, the District recommends 20 inches of cover as a minimum.
6. "Hard" 90-degree turns encourage the build up of solids and are not advised.
7. It is advisable to have your pipe and materials approved prior to installations. (See table below).
8. **Do not backfill any pipe or installations before District inspection.**
9. Please be sure all items on the inspection checklist on your permit are ready for inspection before you call for a specific inspection time.
10. Clean outs must be installed:
 - A – at property line
 - B - at intervals not exceeding 100 feet
 - C – at all bends and or turns in service line
 - D – within 4 feet of dwelling
 ***SEE ATTACHED DETAIL SHEET
11. All pipes under dwellings shall be suspended unless rigid pipes are used.
12. Any material connecting to existing cast iron pipe shall be concrete encased.

PIPE MATERIAL TABLE

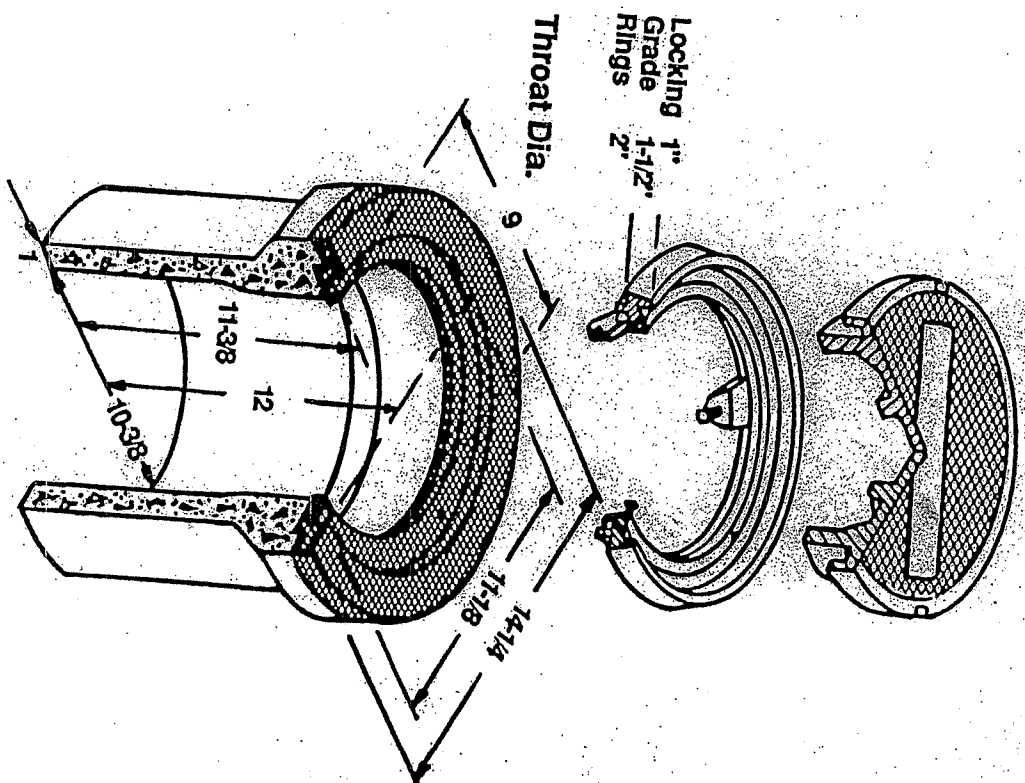
TYPE	SCHEDULE	MAX LENGTH	BEDDING
PVC	SDR 35	20'	6" under 12" over
Ductile Iron	No Hub	10'	6" under 12" over
ABS	40	20'	6" under 12" over

CLEAN OUT
SEE ATTACHED DETAIL

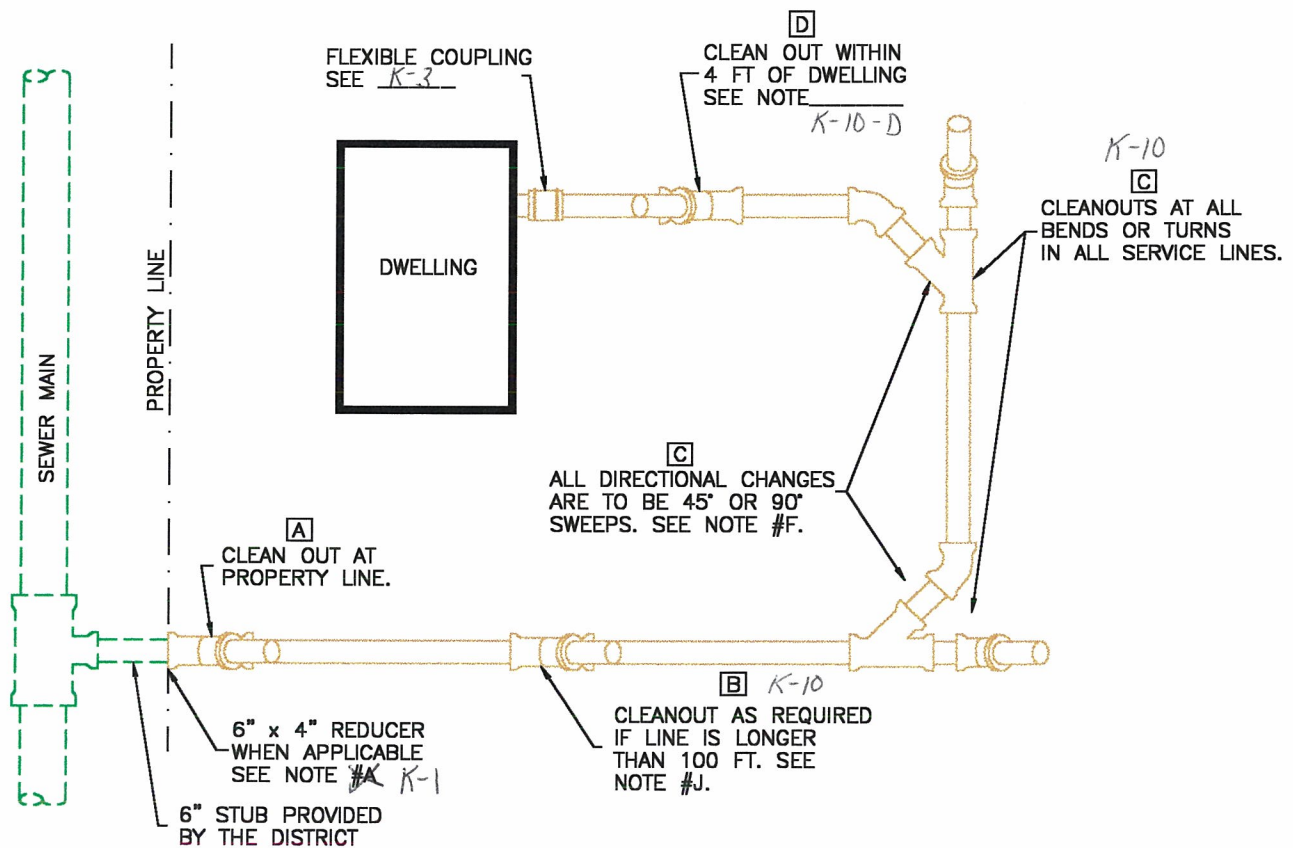
Concrete box, traffic rated,
Example: G-5, or District-approved equal.

IMPORTANT:

All work will require a permit, issued in advance. The District will issue permits for the excavation and installation of sewer service lines on private property and the hookup of those lines to the dwelling unit and the sewer main. Any work or construction that results in structural changes to mobile home and buildings or new lot setups will require an additional permit from the Washoe County Building Department. The appropriate sewer facilities fee must be paid prior to the District's approval of either the District or County permits.



SINGLE FAMILY RESIDENTIAL HOUSE CONNECTION DETAIL



PLAN VIEW
NOT TO SCALE